MAXTENA®
WIRELESS INNOVATIONS COMPANY

# PRODUCTS & SERVICES CATALOG 21/22

www.maxtena.com

GNSS/GPS (L1/L2/L5)
GLONASS/ BEIDOU/ Galileo
5G/4G/LTE

Wi-Fi/ Bluetooth/ ZigBee/ ISM
LoRa/Sigfox/NB-IoT/ISM
SATCOM

Combination
Accessories
Antennas services

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# Maxtena at Glance

Controlling wireless networks and energy distribution in the spatial domain on the RF level is the final frontier of wireless communications.

Maxtena provides advanced beamforming antennas, RF and Cybersecurity products & solutions for terrestrial and satellite-based networks. Our Dynamic Aperture Technology TM (DAT) and CybeRF technologies empower our customers to develop unparalleled solutions for GNSS, SATCOM, LTE, WIFI, IOT, OT, Military and terrestrial applications which are used on Land, Air or Sea.

We use proprietary and patented technologies to design extremely lightweight and high-performance RF antennas and systems for a  variety of communications spectrums.

Headquartered in Washington DC Metro, and having additional offices in North America and Europe, Maxtena is at the forefront of wireless innovation.

# Our Values

## Commitment to Innovation

Our management team has a proven record of delivering innovative products to the marketplace. We have the ability to define a market need, research and develop a product, set up production, and execute on production.

## Commitment to Our Customers and Partners

We believe that each product we deliver and service we render should not only meet, but exceed the expectation of our customer. We have a strong record of maintaining existing business relationships in the government and commercial sectors and protecting critical intellectual property through patents and trade secrets.

## Commitment to Our Team

We pride ourselves on building a diverse workforce with exciting opportunities and exceptional benefits for our team members. Our core values – creative, involved, exceptional, and innovative – are the foundation of our collaborative and inventive work environment. We believe that by promoting teamwork and cooperation we will be able to find continued success and promote professional growth.

*Deal Valued Customer,*

*MAXTENA Incorporated is the recognized global leader in developing and producing innovative wireless solutions. We are engaged in designing, manufacturing and marketing a comprehensive range of embedded, external and custom Advanced RF antennas & systems for GNSS, ISM, SATCOM, MSS and 5G LTE applications.*

*Furthermore, Maxtena beamforming solutions combine software define radios with artificial intelligence and complex electromagnetics to create cutting edge products and solutions for our customers. Maxtena commitment to innovation is unprecedented. Our technologies power some of today's most cutting-edge wireless solutions.*

*Maxtena devices enable range of products from satellite phones to Unmanned Arial Vehicles. These solutions allow our customers to seamlessly access data from anywhere in the world. Here we have taken an approach where the next advances in wireless communications will come from looking at fundamental problems from the electromagnetics perspective. This new perspective lends itself to novel technologies which we hope will drive the new Internet infrastructure with smaller and higher efficiency devices, enable higher data rates and combat interference.*

*With our leading customer support, design capabilities, and highest quality manufacturing we work passionately to exceed your expectations.*

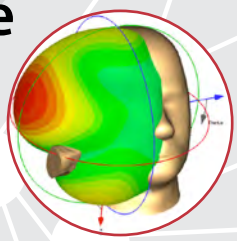
*With warm regards,*

*Stani Licul*
*Chief Executive Officer Maxtena Inc.*

# Why Maxtena is your antenna supplier of choice?

- **Patented Technology**
- **REACH**
- **Certifications**
- **Quality assurance**
- **RoHs compliance**
- **ISO 9001**

Manufacturing **cutting-edge antenna** solutions for the connected world



State-of-the **art design** and test Chambers facilities

**Support** off-the-shelf orders & **fully customized** integrations

**Large Portfolio** of External & Embedded antennas

# Products Overview

## Helix Antennas

We offer a unique set of patented helix antennas for satellite communications. Our advanced helical antennas operate across several satellite networks from GNSS, Iridium, Inmarsat, Thuraya and Globalstar to C-band, S-band and X-band frequencies. We also offer several antennas that work across multiple networks. The antennas are available in different sizes and form factors. We produce both external antennas that come in a range of rugged housings, as well as embedded antennas. Our embedded antennas are custom built to fit perfectly in your device's own housing. We have developed countless first-to market helix innovations, and our antennas are currently being used in multiple major SATCOM & IOT Applications, Tracking and Navigation Devices and Military Communications Equipment.

## Microstrip Antennas

We offer a large portfolio of both active and passive advanced conformal wave microstrip antennas. The antennas are available in several different sizes and configurations depending on customer requirements. This included externally mounted and or embedded antenna solutions. The active antennas can be customized with different filtering, LNA, cable lengths and connectors upon request. All of our microstrip antennas offer high performance with a very low profile. The antennas are ideal for various professional IOT applications. The compact size and lightweight features of the microstrip antennas make them perfect for various commercial and industrial uses. By utilizing various RF and material advances, Maxtena is the leader in conformal antenna solutions used for IOT, Automotive and Autonomous applications.

## Iridium solutions

From maritime and military, to mining and UAV's and IOT, Maxtena offers Iridium technology to empower OEMs, customers, and end users across various industries to manage their heavy equipment fleets more efficiently — optimizing overall performance, improving safety for equipment and crews, and remote communication and beyond line of sight control and command. The Iridium antennas and modems are available in several different sizes depending on customer requirements. We produce both external antennas that come in a range of rugged housings, as well as embedded antennas. These antennas can be customized with different cable lengths and connectors upon request. Iridium modems are provided for embedded designs along with complete plug and play products with cloud connected services. We provide also complete Iridium IOT solutions including trackers and value add products. Iridium provides real time access to high-value data letting you or your customers take actions to prevent potential failures and avoid costly consequences.

# Products Overview

## Cellular /Wifi/4G Antennas

We offer a wide selection of antennas across a broad range of frequencies between 700- 960 MHz, 1710-2170 MHz and 2500-2700 MHz, dual-band 2.4GHz/5GHz, cellular, and Bluetooth antennas. It enhances connectivity for multiple devices in nearly any location. Our antennas are purpose-built to provide compact, high gain, and a constant worldwide connectivity. The antennas are available in several different sizes depending on customer requirements. We produce both external antennas that come in a range of rugged housings, as well as embedded antennas. These antennas can be customized with different cable lengths and connectors upon request. We have developed countless high-performance antennas, and they are currently being used in multiple IOT devices (Wearables, Routers, Smart Home, UAV/Drone, and Connected Vehicles).

## 5G Antennas

We offer high performing 5G antennas that provide coverage for all lower and mid 5G bands along with custom solutions for mm wave frequencies. By offering the most comprehensive portfolio of external antennas with different mounting options, omnidirectional radiation patterns for easy integration in wireless communication devices, we are the leaders of 5G antenna solutions. Our 5G antennas are great for telematics systems, remote surveillance, asset tracking and any IOT system applications. All of our 5G antenna solutions are fully customizable and optimized for the customers system.

## LTE & MIMO Antennas

Our advanced patented LTE & MIMO antennas are available in rugged, low profile form factors. We utilize the latest advances in antenna designs and bring to market the best performing LTE/MIMO antennas in the world. Our antennas are optimized for outstanding isolation specifications and performances. This allows our customers to have the best and most innovative solutions on the market. We have developed cutting edge MIMO antennas and our antennas are currently being used in multiple major commercial transport, HD video monitoring, buses, and trains.

## SigFox/LoRA/ISM Antennas

We offer a wide selection of SigFox/LoRA/ISM antennas that operate within the 902-928 MHz, 2.4 GHz and 5.7-5.8 bands and include a wide variety of indoor and outdoor antennas. ISM antennas are ideal for various installations for IOT, smart metering, digital signage, and industrial monitoring. The antennas are available in several different sizes depending on customer requirements. These antennas can be customized with various cable lengths and connectors upon request. All of our external antennas are IP67 rate which allow for the most environmentally challenging installations.

# Products Overview

## Rail & Transportation Antennas

Our patented & fully EN 50155 Certified Rail 4x4 MIMO LTE antennas are the most advanced solutions available. They ensure the most optimal data aggregation connectivity by providing outstanding RF performances.
As technology capabilities increase, the world is becoming more connected and so does the demand for a smart, and fastest growing transportation market. Maxtena is the industry leader in developing new antenna technologies for vehicle – to – vehicle (V2V) and vehicle – to – anything (V2X) applications. We have developed cutting edge dedicated short-range communications (DSRC) antennas which are vehicle and DSRC transponder agnostic. All DSRC antennas are available for external and internal automotive applications. At Maxtena, we offers the most advanced train and rail antennas in rugged, low profile form factors.

## GNSS Timing Antennas

Our GNSS Timing antennas are state of the art designed and developed rugged solutions which are IP69K rated and vertisile for any installation necessary. The antennas are fully customizable and feature high gain LNA's along with superb filtering capabilities.
Precise time is crucial to a variety of economic activities around the world. Communication systems, electrical power grids, and financial networks all rely on precision timing for synchronization and operational efficiency. GNSS enables users to determine the time to within 100 billionths of a second, without the cost of owning and operating atomic clocks. Maxtena has the latest antenna technology and products for professional precision timing applications.

## Accessories

Maxtena offers a high variety of antenna accessories including mounting brackets, RF Cable, cable sub assemblies, pins, connectors and value added services. Custom solutions are available upon request. Our mounting applications: Magnet, wall, screw, pole, and adhesive mounting antennas.

# Markets

## Industrial IOT

Our antennas are designed for reliable performance in high precision, heavy-duty GNSS tracking applications and various IOT communications. They support a diverse range of applications such as precision agriculture, IOT, Smart City, Asset management, asset tracking, mobile computing devices and mining equipment.

## Military

Our ruggedized antennas can be integrated externally or internally with Military/ Defense applications including Military Radios, UAVs, soldier worn communication gear and satellite phones and radios. They can support forces on the ground, in the air, or on the sea.

## Autonomous & Automotive

Drones, Robotics, Autonomous Vehicles are some of the many products you can find that are using our antenna solutions. Our compact antennas provide OEMs with fewer mechanical constraints to compensate for when designing cutting-edge equipment.

# Market opportunities

**The antenna Market opportunities is segmented by type (helical antenna, patch antenna, MIMO Antenna, 5G antenna, and DSRC antenna),by application (GNSS, LTE-Wifi, Military, Maritime, and transportation), by product (Drone, trackers, automotive devices, and DAS applications), and also by geography.**

# Our mission

"Our mission is to design and manufacture cutting-edge antenna solutions for the connected world. We'll support off-the-shelf orders as well as fully customized integrations."

# Basics for choosing the applicable antenna

MAXTENA

## Technology

- Frequency bands(WIFI, GPS, …)
- Technology (helix, patch, conformal antennas, Smart antennas, MIMO, UWB, Connected Array, Aperture antenna…)
- Features (Antenna gain, directivity, VSWR, bandwidth, Impedance, axial ratio …)

## Applications

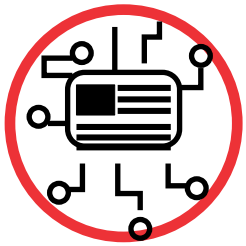
- Mounting options (Screw mount, Magnet Mount, Adhesive mount …)
- Connector Type (SMA, TNC, U. FL ….)
- Dimensions
- Certifications

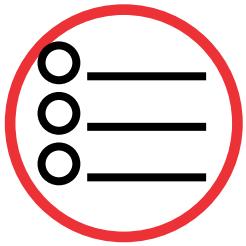
## Requirements

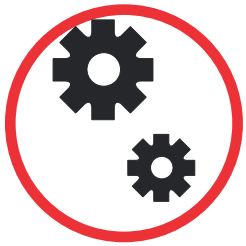
- Polarization
- Radiation patterns
- High spectral efficiency & high throughput
- Frequency range signal

## Others

- Additional mounting options
- Custom connector & cable
- Mounting brackets







# Applications

Some commons applications include autonomous, M2M, and asset tracking. While many of our products are multi-platforms, some specific antennas are more suitable with regards certain applications.

# Maxtena Technology

*Our commitment to innovation is unprecedented. Our technologies power some of today's most cutting-edge wireless solutions. These solutions allow consumers to seamlessly access data from anywhere in the world. Here we take an approach where the next advances in wireless communications will come from looking at fundamental problems from the antenna/electromagnetic perspective. This new perspective lends itself to novel technologies to drive the new Internet infrastructure with smaller and higher efficiency devices, enable more bandwidth and combat interference. Two of our most successful and highly sought-after technologies include Helicore and Microstrip Patch. We are proud to present you with the technologies on which our products are designed and engineered.*

## Helicore

Our patented Helicore technology provides an extremely exible and low-cost platform for designing dierent antenna products where pattern, polarization purity, eciency and size are the driving design parameters. Patented Helicore technology uses air as the dielectric core and minimizes typical losses associated with ceramic materials. Helicore technology is pushing antenna limits in terms of axial ratio, bandwidth, and pattern stability. The design itself allows easy active circuitry and ltering addition due to the independent nature of feed and antenna structure. Helicore technology addresses widely known issues with ceramic materials and ceramic antenna manufacturing processes which create wide dielectric constant variations due to material, temperature, and humidity variations. Those variations are reected in reduced performance of ceramic antennas and low manufacturing yields.

KEY ADVANTAGES AND FEATURES:

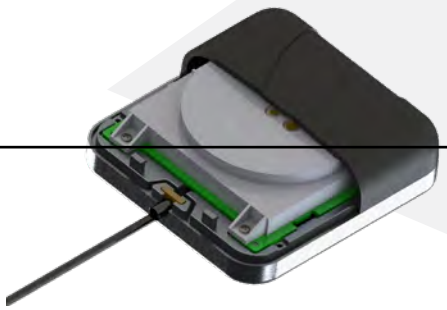
- Active circuitry and filtering integrated with antenna
- Differential of single-ended architecture
- Smaller in size
- Lower manufacturing cost
- Lighter in weight compared to ceramic solutions
- Superb axial ratio at lower elevation angles for significant multipath rejection
- Multiband and wideband capabilities (e.g. L1-L2, GPS-GLONASS, etc…)
- Meets 200 V/m susceptibility requirements
- Superb noise figure performance
- Ground-plane independent design

## Microstrip

Our Microstrip technology offers a truly optimized wireless system. We are pioneering the optimization of the microstrip antenna by using proper electromagnetic grounding schemes to optimize solutions for the highest efficiency and axial ratio purity. Our technology incorporates the ground plane and creates highly optimized solutions for the application. Microstrip antennas are typically low performance and do not give the desired performance to the customer in more complex integrations where the antenna ground plane is reduced, or other parts of the device are interfering. This results in significantly lower efficiency and deteriorated axial ratio purity. We offer a technology that uses an electromagnetically co-optimized antenna and ground plane combination that enhances the system performance.

KEY ADVANTAGES AND FEATURES:

- Antenna and ground plane co-optimization for maximum performance
- Efficiency can be as much as 40% higher than regular patch technology
- Axial ratio purity improved by as much as 3 dB compared to conventional technology



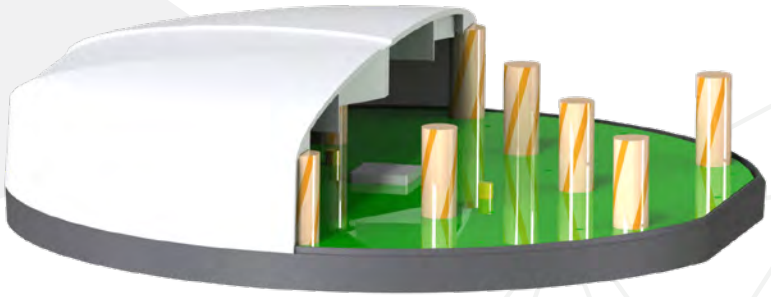
# Maxtena Technology

## DAT

DAT™ (Dynamic Aperture Technology) is an advanced platform designed for building a new generation of low-cost user terminals that will enable higher data throughputs, stronger link integrity, and lower power consumption for aerial, maritime, and land mobile communications. One of the major impediments in mobile communications is the antenna technology. To deliver "rich" data content a new technology is required. The major complication is that in a mobile environment communication happens between moving objects. Things get significantly more complicated with satellite communications where a satellite is also moving with the respct to the end user on Earth. The current state of the art user terminals is still relying on mechanically steered or fixed solutions. These solutions either exhibit poor efficiency or are cost prohibitive. Maxtena has created the DAT™ platform to address these issues. The applications for our DAT™ platform are numerous. The typical applications are for mobile satellite communications on the move, including land, aerial, and maritime applications. However, other applications such as radar and direction-finding systems are also possible. Our DAT™ platform allows for low cost, small size, and low weight applications, which could be ideal for high-data terminals for UAV's and other aeronautical platforms.

KEY ADVANTAGES AND FEATURES:

- Achieves omni-directional coverage with the high performance of a directional antenna
- Single beam or multi-beam in single aperture/multibeam aggregation – higher throughput even on legacy systems
- Software configurable/software controlled aperture for a variety of applications and reconfigurations
- Digital sensor and gyroscopic control for accurate tracking of satellites and platform dynamics
- Interference nulling for better signal to noise
- Tracking and performing interference detection for link integrity and sustained high throughput
- Extremely low power design due to distributed power amplifier approach
- Fast satellite acquisition and tracking from computationally efficient algorithms
- Digitally steered beams eliminate all moving parts
- Scalable platform accommodates wide range of frequencies and satellite networks – L to Ka band
- Mobile platform dynamics over 360 degrees per second turning ratios



# MAXTENA KEY NUMBERS

**50+ patents**
and continued IP portfolio growth

**#1 SATCOM**
Antenna Provider

**2.5B Antenna**
solutions sold and shipped to market

**24 Antenna**
Measurement Systems

**3000 Platforms**
designed with leading customers

**5 Global**
Design Centers

**300+**
Advanced RF antennas

# Support

## Feasibility support

### Our Approach

The design of new products relies on the extensive use of accurate computer simulation models. Our technical staff has a unique knowledge in electromagnetic simulation and numerical modeling gained through years of experience working on embedded antenna designs and general RF problems in both industry and academia.

Every aspect of the electrical design is considered by our proprietary simulation models – from the geometry and material characteristics of the antenna enclosures to the effects of parasitic reactance on printed circuit board traces. We also consider the statistical variation of component tolerances in actual production.

### Benefits to Our Approach

Our simulation techniques and methodologies have been validated successfully over a wide range of products. It has always been our goal to leverage innovative computer simulations to dramatically reduce the product design cycle and to minimize prototyping expenses. Throughout development our customers can expect:

- Added risk mitigation
- Decreased prototyping costs
- Schedule acceleration

### What Our Customers Can Expect

- Development of simplified 3-D simulation model
- Investigation into design trade-offs
- Antenna optimization based off customer provided bounds
- Estimation of user proximity effects on antenna performance
- Preliminary assessment of compliance with respect to performance requirements

## Antenna Measurement

### Our Approach

By investing in the SATIMO Starlab Anechoic Chamber we have state of the art measurement capabilities at our fingertips. We use the SATIMO Starlab Anechoic Chamber to measure radiative characteristics of the antenna for both passive and active systems. We are also equipped to provide customers with TRP and TIS measurements.

### Benefits to Our Approach

Our advanced measurement capabilities ensure that product development cycle progresses without setbacks. Additional value to our measurement approach include:

- Quick troubleshooting
- Customized radiation pattern data post processing
- Radiated performance tracking throughout product development cycle

### What Our Customers Can Expect

- TRP measurements
- TIS measurements
- Multiple antenna correlation and efficiency
- 3-D complex antenna pattern

# Support

## Antenna Integration

### Our Approach

By leveraging the most advanced electromagnetic simulation software available, we can accurately predict the performance of new designs before any hardware is built. Prototyping is then used to verify the correlation between the design and final product. Our in-house measurement capabilities allow for quick turn prototype validation. In addition to antenna design, we provide antenna integration support for customers that require a high level of device integration.

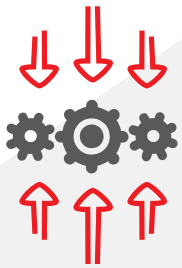
### Benefits to Our Approach

Our integration services include both the electrical path, from the antenna to receiver and beyond, as well as the mechanical and industrial design support for devices that are either space or geometry limited. The benefits also include:

- Accurate first design
- Minimization of design iterations
- Quick turnaround
- Fast assessment of design modifications and adaptation
- Predictable results

### What Our Customers Can Expect

- Import devices full 3-D mechanical database
- Development of fully featured simulation model
- Determination of the optimal grounding map
- PCB RF layout optimization
- Complete assessment of compliance and requirements
- Result verification through initial prototyping



## Antenna Manufacturing

### Our Approach

Maxtena's philosophy for manufacturing is to provide minimal overhead and more competitive price points. As a result of this philosophy we are committed to outsourced manufacturing capabilities where capital investment and overhead costs are minimized due to their distribution across a large customer base. Our strategy uses both oversea and US based facilities and we only use ISO certified contract manufacturers. Each prospective CM is required to complete a quality questionnaire and submit to a full quality audit.

### Benefits to Our Approach

Our diversified manufacturing strategy allows us to support production ranging from a few units to large volume manufacturing. Additional value to our manufacturing approach include:

- Quality Assurance
- Fully capable of meeting all production requirements

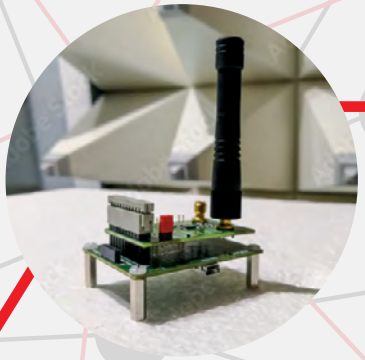
### What Our Customers Can Expect

- Cost effective low volume production
- Competitive high volume manufacturing
- Scalable production model
- ITAR registered CM
- Quality assurance with innovative and proprietary end of line testing methodologies

The high precision of Maxtena's antennas relies on the cutting-edge testing and measurement capabilities of our company. Our antenna designs are approved before manufacturing, using ultra high accuracy testing, and measurements.

## *Key Components Of Our Measurement system*

The Anechoic Chamber

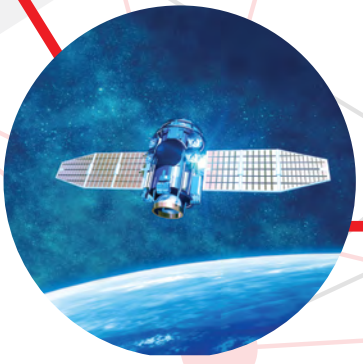


Vector Network Analyzers (Up To 20 Ghz)

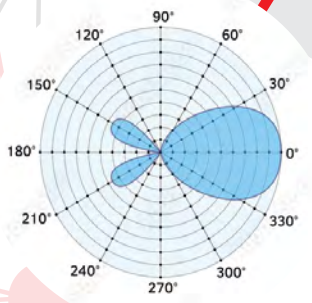
Environment Test Equipment

Positioning Controller

GPS Satellite Recognition



Antenna Measurement Software



# Antenna development process

## FEASIBILITY STUDIES

The design of new products relies on the extensive use of accurate computer simulation models. Our engineering staff has a unique knowledge in electromagnetic simulation and numerical modeling gained through years of experience working on embedded antenna designs and general RF problems in both industry and academia. Every aspect of the electrical design is considered by our proprietary simulation models – from the geometry and material characteristics of the antenna enclosures to the effects of parasitic reactance on printed circuit board traces. We also consider the statistical variation of component tolerances in actual production.

WHAT TO EXPECT

- Development of simplified 3-D simulation models
- Investigation into design trade-offs
- Antenna optimization based off customer provided bounds
- Estimation of user proximity effects on antenna performance
- Preliminary assessment of compliance with respect to performance requirements

## CHAMBER TESTING

Maxtena has in-house the latest in antenna and RF measurement capabilities. We use the SATIMO Starlab Anechoic Chamber to measure radiative characteristics of the antenna for both passive and active systems. We are also equipped to provide you with TRP and TIS measurements.

WHAT TO EXPECT

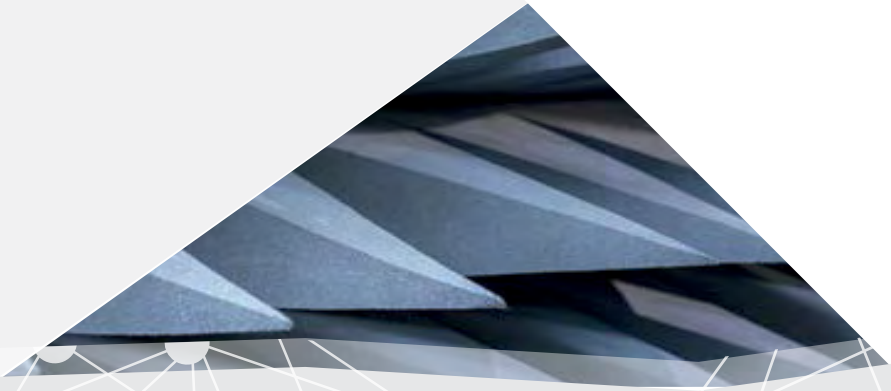
- Multiple antenna correlation and efficiency
- 3-D complex antenna pattern
- Antenna input response
- TRP/TIS measurements

## PROTOTYPING

By leveraging the most advanced electromagnetic simulation software available, we can accurately predict the performance of new designs before any hardware is built. Prototyping is then used to verify the correlation between the design and final product. Our in-house measurement capabilities allow for quick turn prototype validation. In addition to antenna design, we provide antenna integration support for clients that require a high level of device integration.

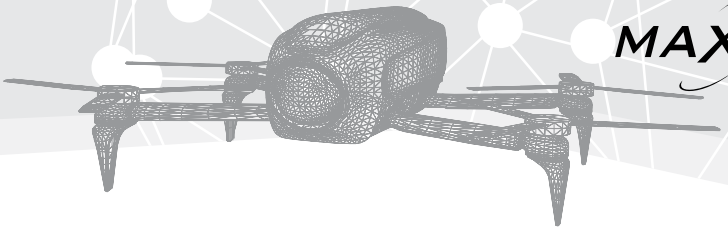
WHAT TO EXPECT

- Import devices full 3-D mechanical database
- Development of fully featured simulation models
- Determination of the optimal grounding map PCB RF layout optimization
- Complete assessment of compliance and requirements
- Result verification through initial prototyping



# Helix Antennas

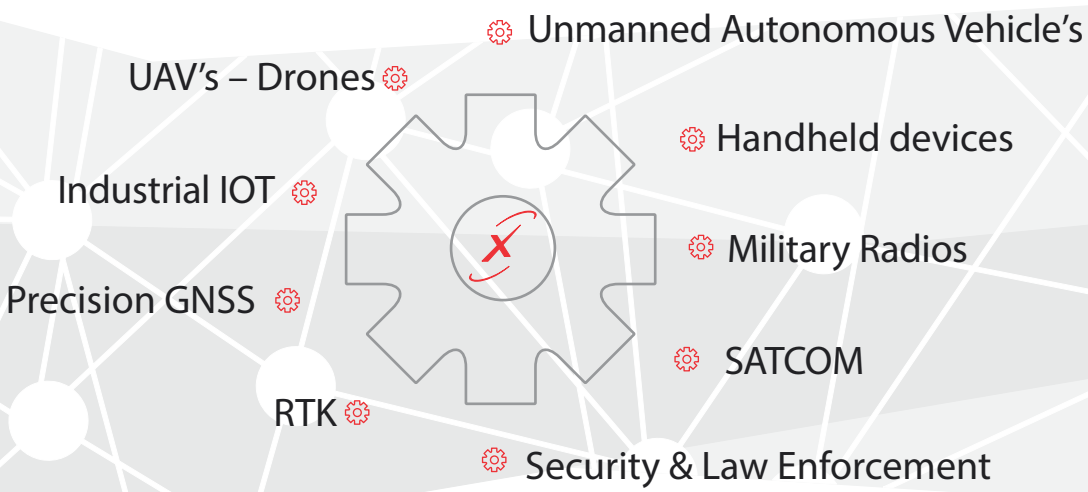
# Helix antennas



We offer the most advanced patented and innovative RF antenna solutions for a variety of GNSS, IOT, LTE and ISM applications. Our Helicore ™ antennas are the best performing and lightest helix solutions available. The patented Helicore ™ technology offers both a weight advantage and performance advantage for the most demanding applications and environments. The antennas can be used for GNSS,

LTE, ISM and SATCOM networks and can either be embedded or used externally with a device. Our helix antennas can get a signal in many more orientations compared to a block ceramic antenna. If the orientation of the unit is not always toward the sky then one of our helix antennas will be the ideal choice as an antenna ground plane is not required.

## Applications



## M1575HCT-22P-SMA

**High Performance Passive GPS Antenna**

Part #: 100 00043-01

GPS band Very low axial ratio IP-67 mounted and unmounted Ultra-light weight Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz |
| Antenna element peak gain | 1dB (typical)/ 1.5db (max) |
| Axial Ratio | -0.5 dBic (typical) |
| VSWR | 1.5 (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 38 mm (height) x 18.5 mm (diameter) |

## M1575HCT-22P-MR

**High Performance Passive GPS Antenna**

Part #: 100-00042-01

GPS band Very low axial ratio IP-67 mounted and unmounted Ultra-light weight Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz |
| Antenna element peak gain | -0.5 dBic (typical) |
| Axial Ratio | 1dB (typical)/ 1.5db (max) |
| VSWR | 1.5 (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 47.1 mm (height) x 18.5 mm (diameter) |

## M1575HCT-15A-SMA

**High Performance Active GPS Antenna**

Part #: 100-00028-07

GPS band Very low axial ratio IP-67 mounted and unmounted Ultra-light weight Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz (GPS) |
| Antenna element peak gain | 28 dBic (typical) @ 3.3 V |
| Axial Ratio | 1dB (max) @ zenith |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 38 mm (height) x 18.5 mm (diameter) |

# Helical GPS L1
# External

## M1575HCT-GN

**High performance GPS Passive Antenna**

Part #: 100-00146-01

Very low axial ratio | IP-67 mounted | Ultra light weight - 45 grams | Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz |
| Antenna element peak gain | 1.8 dBic (GPS) |
| Axial Ratio | 0.2 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 38 mm (height) x 18.5 mm (diameter) |

# Helical GPS L1
# Embedded

## M1516HCT-22-P

**High performance GPS GLONASS Antenna**

Part #: 108-00073-01

GPS band · Very low axial ratio · Easy integrate 3 pin connectors · Ultra light weight - 2 grams · Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (GLONASS) |
| Axial Ratio | 1 dB (typical) / 1.5 dB (max) |
| Polarization | RHCP |
| VSWR | ≤ 1.5 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | 3 Pin OR U.FL |
| Weight | 2 grams |
| Dimensions | 35.2 x 24mm |

## M1575HCT-22P-MR

**High Performance Passive GPS Antenna**

Part #: 100-00042-01

GPS band · Very low axial ratio · Easy integrate 3 pin connectors · Ultra light weight - 2 grams · Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz |
| Antenna element peak gain | -0.5 dBic |
| Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 24.30 x 22 x 12.85 mm |

# Helical GPS/GLONASS L1
# External

## M1516HCT-15A-SMA

**High-Performance Active Antenna**

Part #: 100-00107-01

✓ High performance dual stage LNA active antenna ✓ GPS and GLONASS L1 band ✓ A screw-on design ✓ An integrated SMA connector ✓ Ultra-light design ✓ IP67 ✓ VERY LIGHT: 10.6 grams

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz |
| Antenna element peak gain | -0.5 dBic |
| Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 24.30 x 22 x 12.85 mm |

## M1516HCT-GN

**GPS GLONASS Passive Antenna**

Part #: 100-00150-01

✓ Very low axial ratio ✓ IP-67 mounted ✓ Ultra-light weight-45 grams ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS) / 1602 MHz (Glonass) |
| Antenna element peak gain | 1.8 dBic (GPS) / -1.7 dBic (Glonass) |
| Axial Ratio | 0.2 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 135 mm (height) x 18.5 mm (diameter) |

## M1516HCT-P-EXT

**GPS GLONASS Passive Antenna**

Part #: 100-00114-01/02/03/04

✓ Very low axial ratio ✓ Ground plane independent ✓ Magnet mount ✓ 1,500 mm LRM100 coaxial cable ✓ TNC, SMA, SMB, MCX connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS) / 1602 MHz (Glonass) |
| Antenna element peak gain | 1.8 dBic (GPS) / -1.7 dBic (Glonass) |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount/ TNC, SMA, SMB, MCX connectors |
| Dimensions | 52.2 mm (height) x 36 mm (diameter) |

# M1516HCT-P-SMA

**High Performance L1 GPS GLONASS Passive Antenna**

Part #: 100-00002-02

Very low axial ratio ✓ IP-67 mounted ✓ Ultra-light weight ✓ Ground plane independent ✓

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS) / 1602 MHz (Glonass) |
| Antenna element peak gain | 1.5 dBic (GPS) / 1.5 dBic (GLONASS) |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA connector |
| Dimensions | 2.20 mm (height) x 36 mm (diameter) |

# Explore

## Our product

## M1516HCT-P-EXT

# M1516HCT-P-EXT

The M1516HCT-P-EXT is a dual band, high performance antenna designed for both GPS and GLONASS, and built on Maxtena proprietary Helicore® technology. This technology provides exceptional pattern control, polarization purity and high efficiency in a very compact form factor.

The M1516HCT-P-EXT is an external magnet mount antenna, featuring a 1,500 mm LRM100 coaxial cable with integrated connector. This product is ideal for applications requiring high quality reception of both GPS and GLONASS signals.

The M1516HCT-P-EXT will be available either as an off-the-shelf antenna housed in rugged housing or as an embedded antenna option which is mounted on the inside of a customer's designed enclosure

For the embedded version, Maxtena provides support for installation and integration of the embedded antenna to offer an exceptional antenna performance. Maxtena can embed the antenna in any housing, then tune the antenna to match their housing's materials, electronics, and space.

### Features

- Very low axial ratio
- Ground plane independent
- Magnet mount
- 1,500 mm LRM100 coaxial cable
- TNC, SMA, SMB, MCX connector

### Suggested Applications include

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- Mining equipment
- LBS & M2M applications
- Handheld devices
- Law enforcement

## M1561HCT-22-P

**Passive GPS GLONASS Beidou Antenna**

Part # : 108-00073-02

GPS, GLONASS and Beidou bands Very low axial ratio Easy integrate 3 pin connectors Ultra light weight - 2 grams Ground plane independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS) 1602 MHz (GLONASS) 1561 MHz (Beidou) |
| Axial Ratio | 1 dB (typical) / 1.5 dB (max) |
| Polarization | RHCP |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | 3 Pin OR U.FL |
| Weight | 2 grams |
| Dimensions | 26.9 x 12.8mm |

## M1516HCT-P-UFL

**High Performance L1 GPS GLONASS Passive embedded Antenna**

Part #: 108-00072-01

Very low axial ratio IP-67 mounted Ultra-light weight (3 grams) Ground plane independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS) / 1602 MHz (GLONASS) |
| Antenna element peak gain | 1.5 dBic (GPS) / 1.5 dBic (GLONASS) |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ U.FL connector |
| Dimensions | 33 mm (height) x 13.2 mm (diameter) |

# M1580HCT-P-SMA

**GPS/BEIDOU/GLONASS PASSIVE ANTENNA**

Part #: 100-00180-01

✓Very low axial ratio ✓Superb multipath rejection ✓IP-67 Rated ✓Ground plane independent ✓Omni Directional ✓High Gain & Efficiency

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Passive gain | -2.5 dBic (typical) |
| Axial Ratio | 1 dB (max) @ zenith |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | SMA |
| Dimensions | Ø 18.5 × 38 mm |

# Helical GPS/GLONASS/ Beidou Embedded

## M1580HCT-22-P

**Passive GPS GLONASS Galileo Antenna**

Part #: 108-00073-03

GPS, GLONASS and Galileo (E1) bands Very low axial ratio Easy integrate 3 pin connectors Ultra light weight - 2 grams Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (GLONASS)<br>1176.45 MHz (Beidou) |
| Antenna element peak gain | 1 dB (typical) / 1.5 dB (max) |
| Polarization | RHCP |
| VSWR | ≤ 1.5 |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Connector | U. FL coaxial 50 Ohm termination |
| Weight | 2 grams |
| Dimensions | 26.9 x 12.8 mm |

## MULTIBAND-HELIX-1539

**High Performance Omnistar/GPS/GLONASS/Beidou Embedded Antenna**

Part #: 100-00049-01

Ultra Compact 8 Element Multiband RHCP Helix Multiple Operating bands 1539MHz-1610 MHz - Beidou/GPS L1/GLONASS/Omni-star Maxtena patented Helicore™ light-weight air-dielectric design U. FL coaxial 50 Ohm termination

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1539 MHz-1610 MHz |
| Antenna element peak gain | 1.5 dBic (typical) @1575MHz /<br>0.2 dBic (typical) @1575 MHz |
| Axial Ratio | 2.0 dB (typical) @bore-sight |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | U. FL coaxial 50 Ohm termination |
| Dimensions | 29.20 mm (height) x 17 mm (diameter) |

# Discover

Our new L1 L2 L5 L-Band

## Multi-Frequency Active Antenna

# M9HCT-A-SMA


Maxtena introduces the world's most advanced, smallest, patented GNSS antenna for high precision and autonomous multi-frequency applications. The M9HCT-A-SMA antenna is a high accuracy, multi-frequency active helix
GNSS antenna + L-band corrections services. The revolutionary design will offer simultaneous GNSS reception on L1: GPS, GLONASS, Galileo, Beidou, L2: GPS L2C, Galileo E5B and GLONASS L3OC and L5: GPS + L-band corrections in a rugged, compact and ultra-lightweight form factor. The antenna is a perfect match for high precision applications.
The M9HCT-A-SMA is a great fit for the UAV markets where high performance and low weight are driving features in antenna selection. The M9HCT-A-SMA active helix design features Maxtena's patented compact and lightweight Helicore® technology.This technology provides excellent pattern control, polarization purity and high efficiency in a very compact form factor.The M9HCT-A-SMA is ground plane independent and offers extremely low power consumption and minimal phase center variation over azimuth crafted for high precision applications. The antenna offers superb axial ratio ensuring multipath error is mitigated.
For the embedded version, Maxtena provides support for installation and integration of the embedded antenna to offer an exceptional antenna performance. Maxtena can embed the antenna in any housing, then tune the antenna to match their housing's materials, electronics and space.

### Features

- GNSS/QZSS-L1/L2,QZSS-L6, GLONASS-G1/G2,Galileo-E1/E6, Beidou-B1/B3 + L-band
- Rugged IP67 rating with SMA mount
- Small form factor
- Ground plane independent
- GIS, RTK and other high accuracy GNSS applications
- Low power consumption
- Low phase center variation over azimuth and elevation and among different samples
- Ultra-lightweight
- Automotive grade electronics

### Suggested Applications include

- UAV/ Drones
- Unmanned Ground Vehicles (UGV)
- Unmanned Systems
- High Precision Navigation
- Military & Security
- Agriculture & FarmTech
- Handheld GNSS Devices

# M1580HCT-GN

**GPS Beidou Glonass Passive Antenna**

Part #: 100-00151-01

Very low axial ratio IP-67 mounted Ultra light weight - 45 grams Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1561 MHz (Beidou)<br>1575 MHz (GPS)<br>1602 MHz (Glonass) |
| Antenna element peak gain | 1.3 dBic (Beidou)<br>1.8 dBic (GPS)<br>-1.7 dBic (Glonass) |
| Axial Ratio | 0.2 dB (typical) |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 135 mm (height) x 18.5 mm (diameter) |

## M1580HCT-22-P

**Passive GPS GLONASS Galileo Antenna**

Part #: 108-00073-03

GPS, GLONASS and Galileo (E1) bands Very low axial ratio Easy integrate 3 pin connectors Ultra light weight - 2 grams
Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (GLONASS)<br>1176.45 MHz (Beidou) |
| Axial Ratio | 1 dB (typical) / 1.5 dB (max |
| Polarization | RHCP |
| VSWR | ≤ 1.5 |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Connector | 3 Pin OR U.FL |
| Weight | 2 grams |
| Dimensions | 26.9 x 12.8mm |

## M4HCT-22-P

**Passive GPS GLONASS Galileo Beidou Antenna**

Part #: 108-00073-04

GPS, GLONASS ,Galileo, Beidou bands Very low axial ratio Easy integrate 3 pin connectors Ultra light weight - 2 grams
Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (GLONASS)<br>1176.45 MHz (Beidou) |
| Axial Ratio | 1 dB (typical) / 1.5 dB (max |
| Polarization | RHCP |
| VSWR | ≤ 1.5 |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Connector | 3 Pin OR U.FL |
| Weight | 2 grams |
| Dimensions | 26.9 x 12.8mm |

# M4HCT-A-SMA

**Multi-Frequency Active Antenna**

Part #: 100-00117-01

✓ Quadrifilar helix antenna ✓ Rugged IP67 rating with SMA mount ✓ Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 3 0 dB ±3 dB |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

# Helical L1 GPS/GLONASS/ Galileo/Beidou Embedded

## M4HCT-22-P

**Passive GPS GLONASS Galileo Beidou Antenna**

Part #: 108-00073-04

GPS, GLONASS ,Galileo, Beidou bands Very low axial ratio Easy integrate 3 pin connectors Ultra light weight - 2 grams Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (GLONASS)<br>1176.45 MHz (Beidou) |
| Axial Ratio | 1 dB (typical) / 1.5 dB (max) |
| Polarization | RHCP |
| VSWR | ≤ 1.5 |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Connector | 3 Pin OR U.FL |
| Weight | 2 grams |
| Dimensions | 26.9 x 12.8mm |

## M4HCT-A-EMB

**Embedded L1 GPS/GLONASS/Galileo/Beidou Active Antenna**

Part #: 108-00074-01

Quadrifilar helix antenna Small form factor Ground plane independent GIS, RTK and other high accuracy GNSS applications Low power consumption Low phase center variation over azimuth and elevation and among different samples Ultra-lightweight Automotive grade electronics

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz<br>(L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 3 0 dB ±3 dB |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

# Helical L1/L2 GPS/GLONASS External

## M1227HCT-A2-SMA

**Rugged L1/L2 GPS GLONASS Active Antenna**

Part #: 100-00004-02

✓L1/L2 GPS-GLONASS bands ✓Rugged IP-67 rating ✓Superior out-of-band rejection ✓50 V/m jamming resistant ✓Very low noise figure ✓SMA mount ✓Ground plane independent ✓GIS & RTK applications ✓Ultra-light weight - 24 grams (typical)

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1217-1250 MHz (L2) / 1565-1610 MHz (L1) |
| Antenna element peak gain | 1217-1250 MHz (L2) / 1565-1610 MHz (L1) |
| Axial Ratio | 0.5dB (L1), 0.5dB (typical) 1dB (max) |
| Conducted Gain | 30 dBic @ 1227MHz (typical)<br>28 dBic @ 1575 MHz (typical)<br>28 dBic @ 1602 MHz (typical) |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 50x30 mm |

## M1227HCT-SMA-GN

**L1/L2 GPS GLONASS ACTIVE ANTENNA/SMA**

Part #: 100-00105-01

✓Very low axial ratio ✓IP-67 mounted ✓Ultra lightweight - 45 grams ✓Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1565-1610 MHz (L1)<br>1217-1250 MHz (L2) |
| Antenna element peak gain | 2 dBic @ 1227 MHz 2 dBic @ 1575 MHz |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | ≤ 1 dB (0.5 dB typical) (L2)<br>≤ 1 dB (0.5 dB typical) (L1) |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Connector | SMA Connector |
| Dimensions | Ø 18.5 × 135 mm |

## M1227HCT-TNC-G

**L1/L2 GPS GLONASS ACTIVE ANTENNA/TNC**

Part #: 100-00133-02

✓Very low axial ratio ✓IP-67 mounted ✓Ultra lightweight - 45 grams ✓Ground plane independent

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 3 0 dB ±3 dB |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

# M7HCT-A-SMA

**Rugged L1/L2 GPS GLONASS Active Antenna**

Part #: 100-00069-01

Quadrifilar helix antenna Rugged IP67 rating with SMA mount Small form factor Ground plane independent GIS, RTK and other high accuracy GNSS applications Low power consumption Low phase center variation over azimuth and elevation and among different samples Ultra-lightweight Automotive grade electronics

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1 |
| Antenna element peak gain | Max 1.2 dB @ the Zenith<br>Max 0.9 dB @ the Zenith |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 30 dB ±3 dB |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

# Helical L1/L2 GPS/GLONASS Embedded

## M1227HCT-A-EMB

**Embedded L1/L2 GPS GLONASS Active Antenna**

Part #: 108-00044-01

✓L1/L2 GPS-GLONASS bands ✓ Superior out-of-band rejection ✓ 50 V/m jamming resistant ✓ Very low noise figure ✓ SMA mount ✓Ground plane independent ✓ GIS & RTK applications ✓ Ultra-light weight

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1217-1250 MHz (L2) / 1565-1610 MHz (L1) |
| Antenna element peak gain | L1 28 dBic / L2 30 dBic |
| Axial Ratio | L1 0.5 dB (typical) / 1 dB (max) L2 0.5 dB (typical) / 1 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 35.2 x 24mm |

## M7HCT-A-EMB

**Embedded L1 GPS/GLONASS/Galileo/Beidou**

Part #: 108-00075-01

✓Quadrifilar helix antenna ✓ Rugged IP67 rating with SMA mount ✓ Small form factor ✓ Ground plane independent GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ Zenith |
| Conducted Gain | 30 dB ±3 dB |

### Key mechanical specifications: ✓

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

# M9HCT-A-SMA

**Rugged L1/L2/L5 GPS GLONASS/ L-band corrections Active Antenna**

Part #: 100-00124-01

✓Quadrifilar helix antenna ✓ Rugged IP67 rating with SMA mount ✓Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics


## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz 1559-1606 MHz<br>1164-1189 MHz (L5) 1539 - 1559 MHz |
| Antenna element peak gain | 1.3 dB / 0.5 dB / 0.5 dB / 1.5 dB |
| Axial Ratio | ≤ 1.2 dB @ Zenith ≤ 0.9 dB @ Zenith<br>1.1 dB @ Zenith ≤ 0.5 dB |
| Conducted Gain | 30 dB ±3 dB |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

# M9HCT-A-SMA

**Embedded active Antenna (L1, L2, LL5, & L-band)**

Part #: 100-00124-01

✓Quadrifilar helix antenna ✓Small form factor ✓Ground plane independent ✓GIS, RTK and other high accuracy GNSS applications ✓Low power consumption ✓Low phase center variation over azimuth and elevation and among different samples ✓Ultra-lightweight ✓Automotive grade electronics

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 1.1 dB / 0.5 dB |
| Axial Ratio | Max 1.2 dB @ Zenith<br>Max 0.9 dB @ Zenith |
| Conducted Gain | 30 dB ±3 dB |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

## M1227HCT-A2-SMA

**Rugged L1/L2 GPS GLONASS Active Antenna**

Part #: 100-00004-02

L1/L2 GPS-GLONASS bands Rugged IP-67 rating Superior out-of-band rejection 50 V/m jamming resistant Very low noise figure SMA mount Ground plane independent GIS & RTK applications Ultra-light weight - 24 grams (typical)

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1217-1250 MHz (L2) / 1565-1610 MHz (L1) |
| Antenna element peak gain | 2 dBic @ 1227 MHz (typical) / 2 dBic @ 1575 MHz (typical) |
| Axial Ratio | 0.5dB (L1), 0.5dB (typical) / 1dB (max) |
| Total Gain | 30 dBic @ 1227 MHz (typical)<br>28 dBic @ 1575 MHz (typical)<br>28 dBic @ 1602 MHz (typical) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 50x30 mm |

## M4HCT-A-SMA

**Multi-Frequency Active Antenna**

Part #: 100-00117-01

Quadrifilar helix antenna Rugged IP67 rating with SMA mount Small form factor Ground plane independent GIS, RTK and other high accuracy GNSS applications Low power consumption Low phase center variation over azimuth and elevation and among different samples Ultra-lightweight Automotive grade electronics

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 30 dB ±3 dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | No cable, male SMA connector |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

## M7HCT-A-SMA

**Rugged L1/L2 GPS GLONASS Active Antenna**

Part #: 100-00069-01

Quadrifilar helix antenna Rugged IP67 rating with SMA mount Small form factor Ground plane independent GIS, RTK and other high accuracy GNSS applications Low power consumption Low phase center variation over azimuth and elevation and among different samples Ultra-lightweight Automotive grade electronics

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1 |
| Antenna element peak gain | Max 1.2 dB @ the Zenith<br>Max 0.9 dB @ the Zenith |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 30 dB ±3 dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

# Helical Multi-Frequency bands
# External

## M8HCT-A-SMA

**Rugged L1/L2/L5 GPS GLONASS Active Antenna**

Part #: 100-00124-01

Quadrifilar helix antenna ✓ Rugged IP67 rating with SMA mount ✓ Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics


**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1<br>1164-1189 MHz (L5) |
| Antenna element peak gain | 1.1 dB / 0.5 dB / 0.5 dB |
| Axial Ratio | Max 1.2 dB @ Zenith<br>Max 0.9 dB @ Zenith<br>1.1 dB @ Zenith |
| Conducted Gain | 30 dB ±3 dB |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | No cable, male SMA connector |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

## M9HCT-A-SMA

**Rugged L1/L2/L5 GPS GLONASS/ L-band corrections Active Antenna**

Part #: 100-00124-01

Quadrifilar helix antenna ✓ Rugged IP67 rating with SMA mount ✓ Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics


Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz 1559-1606 MHz<br>1164-1189 MHz (L5) 1539 - 1559 MHz |
| Antenna element peak gain | 1.3 dB / 0.5 dB / 0.5 dB / 1.5 dB |
| Axial Ratio | ≤ 1.2 dB @ Zenith ≤ 0.9 dB @ Zenith<br>1.1 dB @ Zenith ≤ 0.5 dB |
| Conducted Gain | 30 dB ±3 dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 51 mm (height) x 34 mm (diameter) |

# Helical Multi-Frequency bands
# Embedded

## M1227HCT-A-EMB

**Embedded L1/L2 GPS GLONASS Active Antenna**

Part #: 108-00044-01

✓L1/L2 GPS-GLONASS bands ✓ Superior out-of-band rejection ✓ 50 V/m jamming resistant ✓ Very low noise figure ✓ SMA mount ✓Ground plane independent ✓ GIS & RTK applications ✓ Ultra-light weight

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1217-1250 MHz (L2) / 1565-1610 MHz (L1) |
| Antenna element peak gain | L1 28 dBic / L2 30 dBic |
| Axial Ratio | L1 0.5 dB (typical) / 1 dB (max) L2 0.5 dB (typical) / 1 dB (max) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA |
| Dimensions | 35.2 x 24mm |

## M4HCT-A-EMB

**Embedded L1 GPS/GLONASS/Galileo/Beidou Active Antenna**

Part #: 108-00074-01

✓Quadrifilar helix antenna ✓ Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓Low power consumption ✓Low phase center variation over azimuth and elevation and among different samples ✓Ultra-lightweight ✓Automotive grade electronics

**Key electrical Specifications:**

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ the Zenith |
| Conducted Gain | 3 0 dB ±3 dB |

**Key mechanical Specifications:**

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

## M7HCT-A-EMB

**Embedded L1 GPS/GLONASS/Galileo/Beidou**

Part #: 108-00075-01

✓Quadrifilar helix antenna ✓ Rugged IP67 rating with SMA mount ✓ Small form factor ✓ Ground plane independent GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1559-1607 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 0.5 dB |
| Axial Ratio | Max 0.9 dB @ Zenith |
| Conducted Gain | 30 dB ±3 dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

## M8HCT-A-EMB

**Embedded L1/L2/L5 GPS GLONASS Active Antenna**

Part #: 108-00076-01

✓ Quadrifilar helix antenna ✓ Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz<br>1559-1606 MHz<br>1164-1189 MHz (L5) |
| Antenna element peak gain | 1.1 dB / 0.5 dB / 0.5 dB |
| Axial Ratio | Max 1.2 dB @ Zenith<br>Max 0.9 dB @ Zenith<br>1.1 dB @ Zenith |
| Conducted Gain | 30 dB ±3 dB |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

## M9HCT-A-SMA

**Embedded active Antenna (L1, L2, LL5, & L-band)**

Part #: 100-00124-01

✓ Quadrifilar helix antenna ✓ Small form factor ✓ Ground plane independent ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Low phase center variation over azimuth and elevation and among different samples ✓ Ultra-lightweight ✓ Automotive grade electronics

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1192-1231 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1) |
| Antenna element peak gain | 1.1 dB / 0.5 dB |
| Axial Ratio | Max 1.2 dB @ Zenith<br>Max 0.9 dB @ Zenith |
| Conducted Gain | 30 dB ±3 dB |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 34.60 mm (height) x 28.50 mm (diameter) |

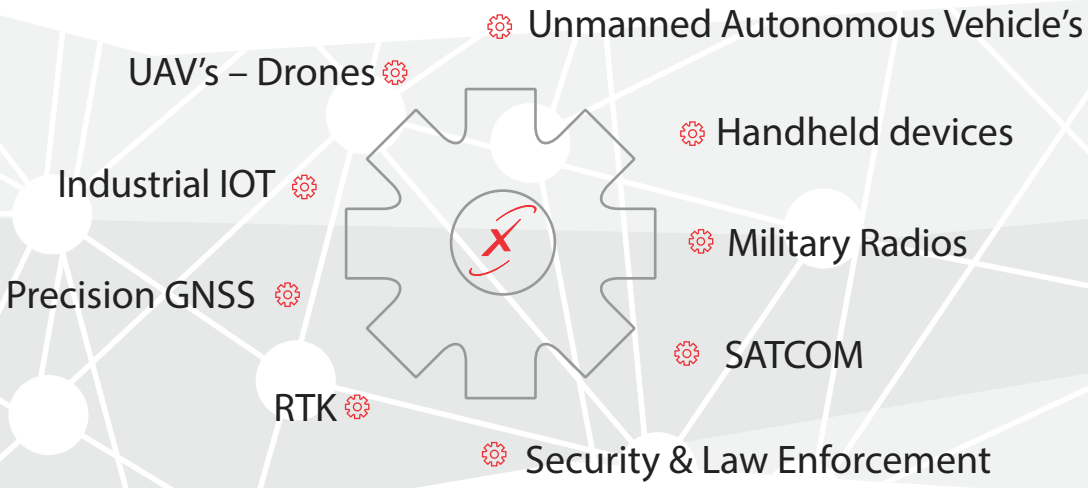
# Iridium/GPS/GLONASS

# Iridium/GPS/GLONASS

Maxtena's line of GPS and GLONASS helix antenna can get a signal in many different orientations compared to a block ceramic antenna. If the orientation of the unit containing the antenna is not always toward the sky then one of our helix antennas will be the ideal choice as an antenna ground plane is not required.

Maxtena's line of Iridium antennas are fully Iridium network certified and designed to complement a wide range of applications, including fleet, asset and personal tracking, handheld devices, satellite telephony, utility monitoring, and more.

## Applications



# Helical Iridium/ GPS/GLONASS
# External

## M1610HCT-GN

**GPS GLONASS Iridium Passive Antenna**

Part #: 100-00149-01

✓ Very low axial ratio ✓ IP-67 mounted and unmounted ✓ Ultra-light weight-45grams ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (Glonass)<br>1621 MHz (Iridium) |
| Antenna element peak gain | 3.8 dBic (GPS)<br>-1.7 dBic (Glonass)<br>2.0 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 135 mm (height) x 18.5 mm (diameter) |

## M1600HCT-P-SMA

**High Performance Iridium/GPS/GLONASS Passive Antenna**

Part #: 100-00003-02

✓ Very low axial ratio ✓ IP-67 mounted and unmounted ✓ Ultra-light weigh- 11grams ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium)<br>1575 MHz (GPS)<br>1602 MHz (GLONASS) |
| Antenna element peak gain | 2.8 dBic (Iridium)<br>-3 dBic (GPS)<br>0 dBic (GLONASS |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 48 mm (height) x 18.5 mm (diameter) |

## SatFleet

**Low Prole, Iridium Certied, Active GPS Fleet Antenna for Iridium Voice/Data and GPS**

Part #: 100-00045-01

✓ Superior Iridium Voice/Data performance ✓ Iridium ground plane independent ✓ High performance helix Iridium antenna ✓ Rugged IP-67 housing ✓ Low profile with screw mount ✓ Superb low elevation performance ✓ Low weight

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1621 MHz<br>1575.42 MHz |
| Antenna element peak gain | 1.4dBic (typical) @ broadside<br>5.5 dBic |
| Axial Ratio | 1.5 dB (typical)<br>1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design |
| Dimensions | 61 x 50 x 116 mm |

# SatFleet 3in1

**Low Prole, Iridium Certied, Active GPS Fleet Antenna for Iridium Voice/Data and GPS**

Part #: 100-00131-01

✓ Superior Iridium Voice/Data performance ✓ Iridium ground plane independent ✓ High performance helix Iridium antenna ✓ Rugged IP-67 housing ✓ Low profile with screw mount ✓ Superb low elevation performance ✓ Low weight

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1621 MHz<br>1575.42 MHz<br>1602 MHz (Glonass) |
| Antenna element peak gain | 1.6 dBic (typical) @ broadside<br>5.5 dBic<br>5.5 dBic |
| Axial Ratio | 1.7 dB (typical)<br>1.5 dB (typical) / 2.5 dB (max)<br>1.5 dB (typical) / 2.5 dB (max) |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design |
| Dimensions | 61 x 50 x 116 mm |

# M1600HCT-P-UFL

**High Performance Iridium Passive Embedded Antenna**

Part #: 100-00032-01

✓ Very low axial ratio ✓ Iridium bands ✓ Ultra light weight - 3 grams ✓ Ground plane independent

## Key electrical specifications:

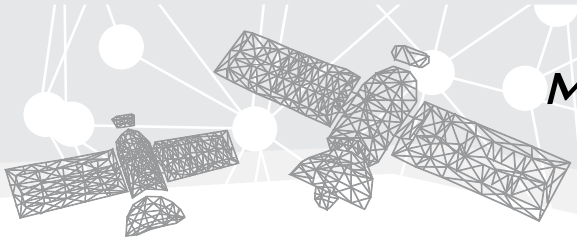
| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium) |
| Antenna element peak gain | 2.8 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical) / 0.5 dB (max) |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design |
| Dimensions | 61 x 50 x 116 mm |

# SATCOM Antenna Systems

# Iridium



From maritime and military, to mining and oil and gas, Maxtena oers Iridium technology to empower OEMs, customers, and end users across various industries to manage their heavy equipment eets more eciently — optimizing overall performance, improving safety for equipment and crews, and connecting to meet intelligence. The antennas are available in several dierent sizes depending on customer requirements.

Maxtena's line of Iridium antennas are fully Iridium Network Certied and designed to complement a wide range of applications, including feet, asset and personal tracking, handheld devices, satellite telephony, utility monitoring and more.

We produce both external antennas that come in a range of rugged housings, as well as embedded antennas. These antennas can be customized with dierent cable lengths and connectors upon request. Iridium provides real time access to high-value data letting you or your customers take actions to prevent potential failures and avoid costly consequences.

## Applications

- LBS & M2M applications
- Handheld devices
- Law enforcement
- Mining equipment
- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- Iridium (SBD) Short Burst Data

# Discover

## Our bestseller

## M1621HCT-P-SMA Iridium Certified Passive Antenna

# M1621HCT-P-SMA

The M1621HCT-P-SMA is a high performance Iridium Certified passive antenna designed for wireless applications.

The antenna is built on proprietary Maxtena Helicore® technology. This technology provides exceptional pattern control, polarization purity and high efficiency in a very compact form factor.

The M1621HCT-P-SMA is a screw-on design, featuring an integrated SMA connector and is rated IP-67 when mounted for added protection. This product is designed for applications requiring high quality reception of the Iridium network.
Compliant with any Iridium Modem (9602, 9603, and 9523)
Measures: 48 mm (height) x 18.50 mm (width)

### Features

- Optimized for Iridium network
- Very low axial ratio
- IP-67 mounted and unmounted
- Ultra-light weight
- Ground plane independent

### Suggested Applications include

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Iridium (SBD) Short Burst Data
- Oil & gas industries
- Navigation devices
- Mining equipment
- LBS & M2M applications
- Handheld devices

For the embedded version, Maxtena provides support for installation and integration of the embedded antenna to offer an exceptional antenna performance. Maxtena can embed the antenna in any housing, then tune the antenna to match their housing's materials, electronics, and space.

## M1621HCT-GN

**High performance Iridium Antenna**

Part #: 100-00147-0

Very low axial ratio IP-67 mounted and unmounted Ultra-light weight-45grams Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1621 MHz (Iridium) |
| Antenna element peak gain | 2.0 dBic (Iridium) |
| Axial Ratio | 0.25 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 135 mm (height) x 18.5 mm (diameter) |

## M1621HCT-P-SMA

**High Performance Iridium Passive Antenna**

Part #: 100-00003-02

Very low axial ratio IP-67 mounted Ultra light weight - 11 grams Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium) |
| Antenna element peak gain | 2.8 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical)/ 0.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design/ SMA male |
| Dimensions | 48 mm (height) x 18.5 mm (diameter) |

## M1621HCT-P-EXT

**Iridium Certied Passive External Magnet Mount Antenna**

Part #: 100-00044-01/02/03/04

Optimized for the Iridium network Very low axial ratio TNC, SMA, SMB, MCX connector Ground plane independent Magnet mount Ultra-light weight - 52 grams

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium) |
| Antenna element peak gain | 1 dBic (typical) |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount<br>/TNC, SMA, SMB, MCX connectors |
| Dimensions | 52.20 mm (height) x 36 mm (diameter |

## M1600HCT12-UFL

**Thuraya helical Passive Antenna**

Part #: 100-00108-01

✓ Very low axial ratio ✓ Ultra light weight - 11 grams ✓ Ground plan independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1525 MHz - 1660.5 MHz |
| Antenna element peak gain | 3.5 dBic @ 1540 MHz (typical)<br>3.5 dBic @ 1640 MHz (typical) |
| Axial Ratio | 1.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | U. FL |
| Dimensions | 100 mm (height) x 12 mm (diameter) |

## M1590HCT-HP-TH

**Thuraya Rugged high-performance Antenna**

Part #: 100-00137-01

✓ Optimized for Thuraya network ✓ Very low axial ratio ✓ IP66 and RoHS compliant ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1525 MHz - 1660.5 MHz |
| Antenna element peak gain | 3.0 dBic (typical) |
| Axial Ratio | 2.2 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | a mast mount design/TNC connector |
| Dimensions | 125 mm (height) x 45 mm (diameter) |

## M1580HCT-SMA

**Inmarsat high-performance Active Antenna**

Part #: 100-00068-01

✓ Superior out-of-band rejection ✓ Very low axial ratio ✓ Pattern constant with frequency ✓ Ultra-light weight ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1525 MHz - 1660.5 MHz |
| Antenna element peak gain | 1.5 dBic @ 1540 MHz (typical)<br>1.5 dBic @ 1640 MHz (typical) |
| Axial Ratio | 1.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Connector |
| Dimensions | 51 mm (height) x 30 mm (diameter) |

## M1590HCT-LP-MM

**Inmarsat Low Prole Antenna – Magnet Mount**

Part #: 100-00183-02

✓ Very low axial ratio ✓ Ground plane independent ✓ Magnet mount ✓ 1,500 mm LRM100 coaxial cable ✓ TNC, SMA, SMB, MCX connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS) /<br>1602 MHz (GLONASS) |
| Antenna Peak Gain | 1.5 dBic (GPS) /<br>1.5 dBic (GLONASS) |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount/<br>TNC, SMA, SMB, MCX connectors |
| Dimensions | 52.20 mm (height) x 36 mm (diameter) |

## M1590HCT-LP-SM

**Inmarsat Low Prole Antenna – Hole Mount**

Part #: 100-00183-01

✓ Optimized for the Inmarsat Network ✓ IP66 and ROHS compliant ✓ Ground plane independent ✓ High gain & low axial ratio ✓ Through hole mount ✓ Low profile

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1525-1560 MHz (GPS)<br>1625-1660MHz |
| Polarization | RHCP |
| Antenna Peak Gain | 2 dBic |
| Axial Ratio | 2.0:1 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ TNC connector |
| Weight | 125 grams |
| Dimensions | Ø 79.5 x 38mm |

# Iridium Solutions

# Iridium Solutions

Maxtena's line of Iridium antennas are fully **Iridium Network Certified** and designed to compliment a wide range of applications, including fleet, asset and personal tracking, handheld devices, satellite telephony, utility monitoring and more. Maxtena designs and manufactures advanced antenna solutions based on our patented Dynamic Aperture Technology™ (DAT). Our antennas empower our customers to develop unparalleled solutions for GNSS, Terrestrial and Satellite M2M and MSS applications.

## Applications

- LBS & M2M applications
- Handheld devices
- Law enforcement
- Mining equipment
- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- Iridium (SBD) Short Burst Data

# IRIDIUM 9603 TRANSCEIVER

**Iridium 9603 Transceiver**

Part #: 100-00069-01

✓ Smallest form factor of any commercial satellite transceiver available ✓ Only 11.4 grams ✓ Single board transceiver ✓ Simple AT Command interface ✓ No SIM required ✓ Automatic notification that mobile-terminated messages are queued ✓ No SIM required

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616 to 1626.5 MHz |
| Duplexing method | TDD (Time Domain Duplex) |
| Input/output impedance | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Weight | 11.4g |
| Dimensions | 31.5 mm x Width: 29.6 mm x 8.1 mm |

# IRIDIUM 9602 TRANSCEIVER

**Iridium 9602 Transceiver**

Part #: 208-00001-02

✓ Single board transceiver ✓ No SIM required ✓ Designed to be incorporated in an OEM Solution ✓ GPS RF Pass-through technology ✓ Simple AT command interface

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616 to 1626.5 MHz |
| Duplexing method | TDD (Time Domain Duplex) |
| Input/output impedance | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Weight | 30 g |
| Dimensions | 41 mm x Width: 45 mm x 13 mm |

# IRIDIUM 9603 TRANSCEIVER

**Iridium 9603 Transceiver**

Part #: 208-00002-01

✓ Ultra-compact form factor ✓ Single-board transceiver ✓ Voice and Circuit Switched Data capable ✓ Larger SBD buer size than the 9602 or 9603 ✓ Iridium Push-to-Talk options available ✓ Direct PCB integration ✓ Pole-to-pole global coverage ✓ FCC, Industry Canada, and ITU approval ✓ SMS ✓ LBS

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616 to 1626.5 MHz |
| Duplexing method | TDD (Time Domain Duplex) |
| Input/output impedance | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Weight | 32 g |
| Dimensions | 70.44 x 36.04 x 14.6 mm |

# Explore

## the Iridium Edge® Pro,

## GPS TRACKING SHORT BURST DATA (SBD)

# Iridium Edge® Pro


Iridium Edge Pro oers a simplied way to innovate, customize, and deploy smarter solutions for remote asset management. Create customizable end-to-end monitoring solutions for vessels, vehicles, and remote equipment using Iridium's best in class two-way network and truly global coverage.

The Iridium Edge® Pro is a standalone device with Short Burst Data® (SBD) that o ers real-time GPS tracking capabilities, and a exible programming platform that allows developers to create and run their own custom-made applications. Example uses include sheries, vessel and eet management, and remote monitoring.

### Benefits

**Highly Mobile**
The Iridium® satellite network provides communications and connectivity for mobile applications like oil and gas, transportation, agriculture and surface mining anywhere on the planet allowing tracking and monitoring of vehicles and assets operating in remote areas.

**Reliable Coverage**
Devices using the Iridium satellite network are enabled by a constellation of 66 Low-Earth Orbit (LEO) mobile satellites that provide service anywhere on the planet.

**Low Latency**
The Iridium satellites in Low-Earth Orbit (~800 km), enable signals to travel in 1/40 the time compared to geostationary satellites (36,000 km), resulting in low-latency, always-on connections ideal for Internet of Things (IoT) deployments.

### Features

- Quick partner (VAR) development using Java
- Common services including geofencing, event logging and position reporting
- Easily paired with cellular solutions using programmable interfaces
- Standalone fi nished product for GPS tracking
- Programming over the air
- Eclipse based IDE and Virtual Device emulators
- Multiple interfaces: RS232, CANBus and BLE

# IRIDIUM EDGE SOLAR

**Iridium Edge Solar**

Part #: 106-00002-01

✓ Bluetooth capability for wireless sensor integration and local device connectivity ✓ Over-the-Air Configuration Changes ✓ Interval and Scheduled Reporting Modes ✓ Start/Stop Reporting ✓ In Motion Reporting ✓ Fully Encapsulated, No External Connectors, Water Ingress Protected ✓ Accelerometer and Magnetometer ✓ LED Status Indicator

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Reliability | IPC9592a |
| Internal Non-rechargeable & Solar Chargeable Batteries | |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Weight | 470 grams |
| Dimensions | 164.2 mm x 71.2 mm x 32.9 mm |

# IRIDIUM EDGE

**ridium Edge**

Part #: 106-00002-01

✓ Connectivity beyond cellular limits for 100% global IOT coverage ✓ Hardware-ready device for simple, low risk integration ✓ Ready to install for quick time-to-market ✓ Robust power supply for industrial installations ✓ 180˚ line of site for compromised locations ✓ Iridium 9602 Transceiver ✓ Power Requirements: 9-32v input voltage ✓ Power Consumption (Average): Transmit Slot Max. 1.6W ✓ Power On Max. Current 0.5A ✓ Operational Max. Current 0.3A

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Iridium Devices | Iridium 9603 Short Burst Data modem<br>Iridium Core 9523 Transceiver<br>Iridium 9602 Transceiver |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Weight | 330 grams |
| Dimensions | 130 x 80 x 30 mm |

# IRIDIUM EDGE PRO

**GPS TRACKING SHORT BURST DATA (SBD)**

Part #: 106-00001-01

✓ Quick partner (VAR) development using Java ✓ Common services including geofencing, event logging and position reporting ✓ Easily paired with cellular solutions using programmable interfaces ✓ Standalone finished product for GPS tracking ✓ Programming over the air ✓ Low-cost development kits available ✓ Eclipse based IDE and Virtual Device emulators ✓ Multiple interfaces: RS232, CANBus and BLE

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616 to 1626.5 MHz |
| Duplexing method | TDD (Time Domain Duplex) |
| Input/output impedance | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Weight | 200 g |
| Dimensions | 127 mm x 90 mm x 41 mm |

# Iridium Modems

| | Iridium Edge | Iridium Edge Pro | Iridium Edge Solar |
|---|---|---|---|
| Form Factor | Standalone | Standalone with GPS, Java Programmable | Standalone with GPS, Configurable Profiles |
| Dimensions (L x W x H) | 130 x 80 x 30 mm | 127 x 90 x 41 mm | 164 x 71 x 33 mm |
| Weight | 330 g | 200 g | 470 g |
| Interfaces | AT+ Command, RS 232 | 4 I/O, CANbus, RS 232, RS 485 | BLE |
| Power Requirements | 9-32 V | 7-32 V | Internal Non-rechargeable & Solar Chargeable Batteries |
| Power Consumption (Average) | Transmit Slot Max. 1.6W<br>Power On Max. Current 0.5A<br>Operational Max. Current 0.3A | Receive 0.6W<br>GNSS +0.6W | Harvests Energy from the Sun |
| Operating Temperature | -40ºC to +55ºC | -40ºC to +85ºC | -40ºC to +85ºC |
| Environmental Specs | SAE J1455,* IP 67 | SAE J1455,* IP 67 | SAE J1455,* MIL-STD-910, IP 68 |
| Typical Applications | Asset Tracking, Fleet Management, Environment & Safey Monitoring, Remote Automation & Control | Fisheries, Vessel & Fleet Management, Remote Monitoring | Oil & Gas, Transportation, Agriculture, Surface Mining, Asset & Vehicle Tracking |
| Development Kit | Yes | Yes | Yes |
| Services | SBD® | SBD® | SBD® |
| Average Latency | <20 Seconds Per 340 Bytes (MO) | <20 Seconds Per 340 Bytes (MO) | <20 Seconds Per 340 Bytes (MO) |
| Certifications* | US (FCC), EU (CE Mark) | US (FCC), EU (CE Mark) | US (FCC), EU (CE Mark) |
| Data Speed | 2.4 Kbps | 2.4 Kbps | 2.4 Kbps |

# Iridium Developer Kits

## M9523N-KIT

**Iridium 9523N Developer Kit**

Part #: 401-00005-01

✓M9523N Test Interface Card ✓ 2x 9523N Core Modules ✓2x SIM Cards ✓ Supplied Mounting Screws ✓ AC/DC Power Adapter ✓Kit contains an antenna

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | 70.44 mm x 36.04 mm |

## M9602N-KIT

**Iridium 9602N Developer Kit**

Part #: 401-00003-01

✓9602N SBD Module ✓ AC Adapter (with international connectors) ✓Test Interface Card (the development board itself) ✓9602N Development CD – which contains a test tool and all the documentation one would need to get started ✓ Mounting Screws & PCB Spacers/Risers ✓ Kit contains an antenna

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | 31.5 mm x 29.6 mm x 8.10 mm |

## M9603N-KIT

**Iridium 9603N Developer Kit**

Part #: 401-00004-01

✓9602N SBD Module ✓ AC Adapter (with international connectors) ✓Test Interface Card (the development board itself) ✓9602N Development CD – which contains a test tool and all the documentation one would need to get started ✓Mounting Screws & PCB Spacers/Risers ✓ Kit contains an antenna

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | 31.5 mm x 29.6 mm x 8.10 mm |

## SatFleet

**Low Prole, Iridium Certied, Active GPS Fleet Antenna for Iridium Voice/Data and GPS**

Part #: 100-00045-01

✓ Superior Iridium Voice/Data performance ✓ Iridium ground plane independent ✓ High performance helix Iridium antenna ✓ Rugged IP-67 housing ✓ Low profile with screw mount ✓ Superb low elevation performance ✓ Low weight

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1621 MHz<br>1575.42 MHz |
| Antenna element peak gain | 1.4dBic (typical) @ broadside<br>5.5 dBic |
| Axial Ratio | 1.5 dB (typical)<br>1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design |
| Dimensions | 61 x 50 x 116 mm |

## SatFleet 3in1

**Low Prole, Iridium Certied, Active GPS Fleet Antenna for Iridium Voice/Data and GPS**

Part #: 100-00131-01

✓ Superior Iridium Voice/Data performance ✓ Iridium ground plane independent ✓ High performance helix Iridium antenna ✓ Rugged IP-67 housing ✓ Low profile with screw mount ✓ Superb low elevation performance ✓ Low weight

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1621 MHz<br>1575.42 MHz<br>1602 MHz (Glonass) |
| Antenna element peak gain | 1.6 dBic (typical) @ broadside<br>5.5 dBic<br>5.5 dBic |
| Axial Ratio | 1.7 dB (typical)<br>1.5 dB (typical) / 2.5 dB (max)<br>1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design |
| Dimensions | 61 x 50 x 116 mm |

## M1621HCT-P-SMA

**High Performance Iridium Passive Antenna**

Part #: 100-00003-02

✓ Very low axial ratio ✓ IP-67 mounted ✓ Ultra light weight - 11 grams ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium) |
| Antenna element peak gain | 2.8 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical)/ 0.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design/ SMA male |
| Dimensions | 48 mm (height) x 18.5 mm (diameter) |

# Discover

Our best- seller

## M1621HCT-P-EXT, Iridium Certied Passive External Magnet Mount Antenna

# M1621HCT-P-EXT

The M1621HCT-EXT is a high-performance Iridium certified passive external magnet mount antenna designed for wireless applications. The antenna is built on proprietary Maxtena Helicore® technology.
This technology provides exceptional pattern control, polarization purity and high efficiency in a very compact form factor.
The M1621HCT-EXT is an external magnet mount antenna, featuring a 1,500 mm LRM100 coaxial cable with integrated connector. The very small size and light weight make this helical Iridium antenna unique in the market and perfect for various commercial and industrial applications.
This antenna is the ideal solution for the most extreme and demanding applications where reliable satellite reception and high accuracy are required. It can be used to boost the performance of the Iridium handsets among other uses.

For the embedded version, Maxtena provides support for installation and integration of the embedded antenna to offer an exceptional antenna performance. Maxtena can embed the antenna in any housing, then tune the antenna to match their housing's materials, electronics, and space.

### Features

- Optimized for the Iridium network Very lo
- axial ratio
- TNC, SMA, SMB, MCX connector Ground
- plane independent
- Magnet mount
- Ultra-light weight - 52 grams

### Suggested Applications include:

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- PDAs and laptops
- Oil & gas industries
- Navigation devices
- Law enforcement
- LBS & M2M applications
- Iridium (SBD) Short Burst Data

## M1621HCT-P-EXT

**Iridium Certied Passive External Magnet Mount Antenna**

Part #: 100-00044-01/02/03/04

Optimized for the Iridium network Very low axial ratio TNC, SMA, SMB, MCX connector Ground plane independent Magnet mount Ultra-light weight - 52 grams

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium) |
| Antenna element peak gain | 1 dBic (typical) |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount<br>/TNC, SMA, SMB, MCX connectors |
| Dimensions | 52.20 mm (height) x 36 mm (diameter |

## M1610HCT-GN

**GPS GLONASS Iridium Passive Antenna**

Part #: 100-00149-01

Very low axial ratio IP-67 mounted and unmounted Ultra-light weight-45grams Ground plane independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (Glonass)<br>1621 MHz (Iridium) |
| Antenna element peak gain | 3.8 dBic (GPS)<br>-1.7 dBic (Glonass)<br>2.0 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 135 mm (height) x 18.5 mm (diameter) |

## M1600HCT-P-SMA

**High Performance Iridium/GPS/GLONASS Passive Antenna**

Part #: 100-00003-02

Very low axial ratio IP-67 mounted and unmounted Ultra-light weigh- 11grams Ground plane independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium)<br>1575 MHz (GPS)<br>1602 MHz (GLONASS) |
| Antenna element peak gain | 2.8 dBic (Iridium)<br>-3 dBic (GPS)<br>0 dBic (GLONASS |
| Axial Ratio | 0.5 dB (typical) / 1 dB (max) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 48 mm (height) x 18.5 mm (diameter) |

## M1600HCT-P-UFL

**High Performance Iridium Passive Embedded Antenna**

Part #: 100-00032-01

✓ Very low axial ratio ✓ Iridium bands ✓ Ultra light weight - 3 grams ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz (Iridium) |
| Antenna element peak gain | 2.8 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical) / 0.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design |
| Dimensions | 61 x 50 x 116 mm |

## M1610HCT-GN

**GPS GLONASS Iridium Passive Antenna**

Part #: 100-00149-01

✓ Very low axial ratio ✓ IP-67 mounted and unmounted ✓ Ultra-light weight-45grams ✓ Ground plane independent

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (Glonass)<br>1621 MHz (Iridium) |
| Antenna element peak gain | 3.8 dBic (GPS)<br>-1.7 dBic (Glonass)<br>2.0 dBic (Iridium) |
| Axial Ratio | 0.2 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 135 mm (height) x 18.5 mm (diameter) |

## MEA-1621-SM

**External Iridium Passive Antenna – Screw Mount**

Part #: 189-00060-01

✓ Frequency coverage: 1616-1627 MHz ✓ Easy mounting: Screw Mount ✓ Optimized for Iridium network ✓ High Performance ✓ Ground Plane Independent ✓ Anti-Rotation Mechanism ✓ Customizable Cable and Connector ✓ ROHS Certified ✓ Small size: Dimensions 80 × 74 × 25.6 mm ✓ Rugged housing ✓ IP69 /IP67

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1627 MHz |
| Antenna element peak gain | 4.5 dB |
| Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 x 74 x 43 mm |

# Iridium Antennas

## MEA-1621-GGG

**External Iridium Passive Antenna – Screw Mount**

Part #: 100-00098-01

✓ Optimized for GPS/GLONASS/IRIDIUM/ Cellular networks ✓ Easy mounting ✓ 1m cable length RG-174, CFD-200 cables ✓ Rugged housing ✓ Customer specification connectors ✓ IPX7 waterproof housing

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz / 1602 MHz<br>824-960 MHz / 1710-2170 MHz<br>1621 MHz |
| Antenna element peak gain | 2dBiTyp. @1575MHz /<br>2.5dBi Typ. @1602MHz<br>-0.56~2.69dBi@824~960MHz<br>1.69~5.2dBi@1710~2170MHz<br>3.5dBic Min. @1621MHz |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | Diameter 145 x (H) 32.8 mm |

## MEA-1600-SM

**External Iridium/GNSS Passive Antenna – Screw Mount**

Part #: 189-00059-01

✓ 2in1 antenna: GPS/GLONASS/Galileo and Iridium ✓ High performance ✓ Low Profile ✓ Cable 1: GPS/GLONASS /Galileo - 1575-1606 MHz ✓ Cable 2: Iridium - 1616-1627 MHz ✓ Easy mounting: Screw Mount ✓ Iridium certified antenna ✓ Anti-Rotation Mounting Customizable ✓ Cable and Connector ✓ Low profile 80 × 74 × 25.6 mm ✓ IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz / 1602 MHz |
| Antenna element peak gain | 28 dB @ 2.7 V |
| Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-LGI-SMA

**5GNR & Iridium GNSS Antenna – Screw Mount**

Part #: 189-00059-01

✓ 3in1 antenna: 5GNR, Iridium and GNSS ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Anti-Rotation Mounting ✓ Optimized for Iridium network ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low profile 80 × 74 × 25.6 mm ✓ IP69

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 617-960 MHz<br>3300-5000 MHz<br>1616 - 1627 MHz | 1427-2690 MHz<br>5150-5925 MHz<br>1559 - 1608 MHz |
| Antenna element peak gain | 2.3 dBi<br>2.6 dBi<br>5.2 dBic | 5.1 dBi<br>2.7dBi<br>28 dB @ 2.7 V |
| Polarization | Linear | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

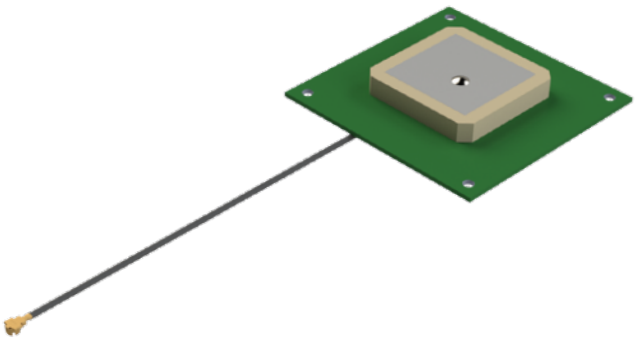
# Discover

## Our exclusive Iridium Passive Antenna

# MPA-D254-1621

Our patch antenna offerings are perfect for projects with a smaller scope and budget for which high-performance and lower weight is not a primary factor for consideration for the antenna. They are ideal for less demanding applications where extreme performance and battery life can be sacrificed at the expense of device cost.

The antenna MPA-D254-1621 product designed for Iridium-based embedded applications, and is used in GPS handheld units, mobile devices, and tracking devices. It features higher upper hemisphere efficiency and a lower axial ratio as compared to regular patch antennas. The antenna comes standard with a 100 mm cable and U. FL connector, custom alternatives can be requested.



### Features

- Iridium frequency band
- U. FL connector or other
- Compact size
- Custom tuning

### Suggested Applications include:

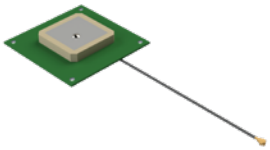
- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Iridium (SBD) Short Burst Data
- Oil & gas industries
- Navigation devices
- Mining equipment
- LBS & M2M applications
- Handheld devices

# MPA-D254-1621

**Iridium Passive Antenna – 25mm**

Part #: 100-00024-02

✓Iridium frequency band ✓U. FL connector or other ✓Compact size ✓Custom tuning



## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz |
| Antenna element peak gain | 2.5 dBic |
| Axial Ratio | 4 dB (typical) |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | U. FL connector |
| Dimensions | 25 mm x 25 mm x 4 mm |

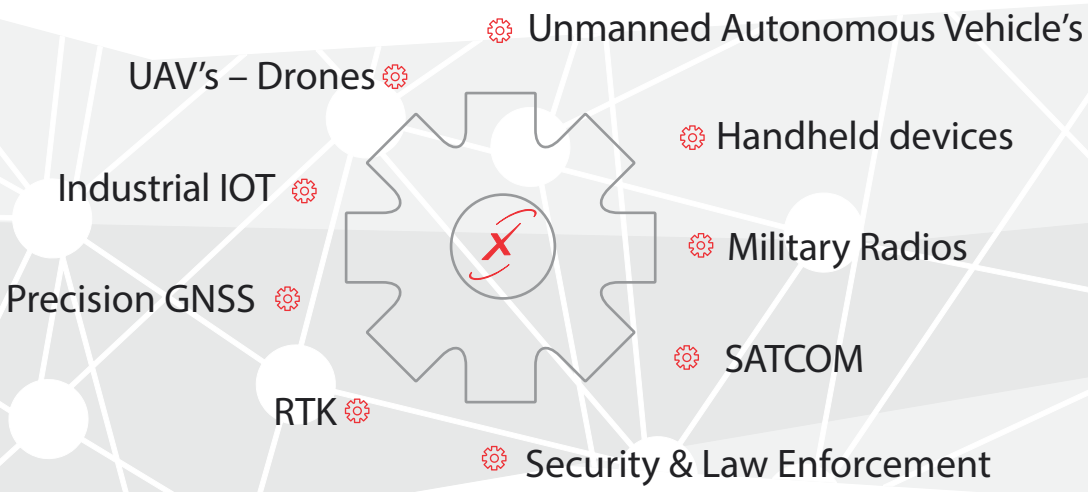
# Microstrip Patch Antennas

# Microstrip Patch Antennas

We offer a large portfolio of both active and passive advanced conformal wave microstrip antennas. The antennas are available in several different sizes and configurations depending on customer requirements. This included externally mounted and or embedded antenna solutions.

The active antennas can be customized with different filtering, LNA, cable lengths and connectors upon request. All of our microstrip antennas offer high performance with a very low profile. The antennas are ideal for various professional IOT applications. The compact size and lightweight features of the microstrip antennas make them perfect for various commercial and industrial uses. By utilizing various RF and material advances, Maxtena is the leader in conformal antenna solutions used for IOT, Automotive and Autonomous applications.

## Applications



# Explore

## Our best seller

## L1 PASSIVE GPS MICROSTRIP ANTENNA

# MPA-254


The MPA-254 is a 25 mm ceramic GPS passive patch antenna based on Maxtena technology.
Our patch antenna offerings are perfect for projects with a smaller scope and budget for which high-performance and lower weight is not a primary factor for consideration for the antenna. This antenna is designed for embedded applications such as GPS handheld units, mobile devices, and tracking devices. It features higher upper hemisphere efficiency and a lower axial ratio as compared to regular patch antennas.
The MPA-254 ceramic patch antenna is a low profile (25x25x4mm), designed for combined GPS applications. The MPA-254 is designed to provide excellent performance in the 1575.42 range frequency.
This 25 mm square embedded ceramic patch offers a typical peak gain of 5.5 dBi for frequency covered. The interface connector is mounted through pin solution, and double-sided adhesive.
Maxtena offers custom tuning service based on customer request depending on the customer device and ground plane mounting.


### Features

- GPS L1 frequency
- Adhesive mounting
- Pin-Connector
- Compact size
- Custom tuning 25 mm x
- 25 mm x 4 mm
- Realized gain: 5.5 dBic

### Suggested Applications include:

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Iridium (SBD) Short Burst Data
- Oil & gas industries
- Navigation devices
- Mining equipment
- LBS & M2M applications
- Handheld devices

## MPA-104-C

**GPS Passive Antenna – 10mm**

Part #: 189-00008-01

GPS L1 frequency Adhesive mounting Pin connector Compact size Custom tuning

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1583-1597 MHz |
| Gain at Zenith | -3.5 dBic typ. |
| Axial Ratio | 1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 10 mm x 10 mm x 4.76 mm |

## MPA-124-C

**GPS Passive Antenna – 12mm**

Part #: 189-00079-01

GPS L1 frequency Adhesive mounting Pin connector Compact size Custom tuning

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | -3.0 dBic typ |
| Axial Ratio | 1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 12 mm x 12 mm x 4.2 mm |

## MPA-134-GPS

**GPS Passive Antenna – 12mm**

Part #: 189-00056-01

GLONASS frequency Easy mounting Pin-Connector Compact size Advanced Ceramic Material Ground Plane Dependent Dimensions 13 x 13 x 4 mm

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1595 - 1610 MHz |
| Gain at Zenith | -1.5 dBic typ. |
| Axial Ratio | 5 dBi |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 13mm x 13mm x 4mm |

## MPA-152-C

**GPS Passive Antenna – 15mm x 2mm**

Part #: TBD

✓GPS L1 frequency ✓Adhesive mounting ✓Pin connector ✓Compact size ✓Custom tuning

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | -2.0 dBic typ. |
| Axial Ratio | 3 dB typ. |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 15 mm x 15 mm x 2.2 mm |

## MPA-154-C

**GPS Passive Antenna – 15mm**

Part #: 189-00081-01

✓GPS L1 frequency ✓Adhesive mounting ✓Pin connector ✓Compact size ✓Custom tuning

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | -1.0 dBic typ |
| Axial Ratio | 3 dB (max) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 15 mm x 15 mm x 4.2 mm |

## MPA-182-C

**GPS Passive Antenna – 18mm x 2mm**

Part #: 189-00052-01

✓GPS L1 frequency ✓Adhesive mounting ✓Pin connector ✓Compact size ✓Custom tuning

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1595 - 1610 MHz |
| Gain at Zenith | -1.5 dBic typ. |
| Axial Ratio | 5 dBi |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 25 mm x 25 mm x 2.2 mm |

## MPA-184-C

**GPS Passive Antenna – 18mm**

Part #: 189-00082-01

GPS L1 frequency Adhesive mounting Pin connector Compact size Custom tuning

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1573 - 1585 MHz |
| Gain at Zenith | +2.5 dBic typ |
| Axial Ratio | 3 dB typ. |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 18 mm x 18 mm x 4.26 mm |

## MPA-254

**GPS Passive Antenna – 25mm**

Part #: 189-00003-01

GPS L1 frequency Adhesive mounting Pin connector Compact size Custom tuning

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | 5.5 dBic |
| Axial Ratio | 1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 25 mm x 25 mm x 4 mm |

## MPA-258-L1-L5

**L1 L5 GPS Embedded Antenna – 25mm**

Part #: 189-00057-01

GPS L1 L5 frequency Dual stacked patch Thru-Hole Mount Compact size Ceramic Material Advanced Ceramic Materials High Performance

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | (L1) 1575.42 ± 1.023 MHz<br>(L5) 1176.45 ± 12 MHz |
| Gain at Zenith | 1.8 dB i typ.<br>0.5 dB i typ. |
| Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Thru-Hole Mount |
| Dimensions | 25 mm x 25 mm x 8 mm |

# GNSS Passive Patch

## MPA-356-1516

**Passive GPS GLONASS Beidou Antenna – 35mm x 6mm**

Part #: 189-00049-01

GPS, GLONASS, Beidou frequency · Adhesive mounting · Pin connector · Compact size · Custom tuning

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | GPS: 1575.42 MHz ± 1.023 MHz<br>GLONASS: 1602 MHz ± 5 MHz<br>Beidou: 1561.098 MHz ± 2.046 MHz |
| Realized gain | GPS: +3.7 dBi typ.<br>GLONASS: +4.9 dBi typ.<br>Beidou: +5.2 dBi typ. |
| Polarization | RHCP |

### Key mechanical specifications:

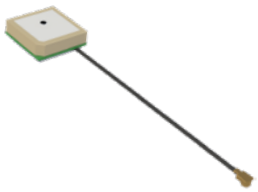
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| 18 mm x 18 mm x 4 mm | 35 mm x 35 mm x 6 mm |

## MPA-406-1227

**Passive GPS L2 Antenna – 40.5mm x 6.5mm**

Part #: 189-00047-01

GPS L2 frequency · Adhesive mounting · Pin connector · Compact size · Custom tuning



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1227.6 ± 10 MHz |
| Gain at Zenith | -3.8 dBi typ |
| Axial Ratio | 3 typ. |

### Key mechanical specifications:

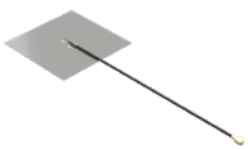
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 40.5mm x 40.5mm x 6.5mm |

## MEA-1176-AM

**GNSS – L1/L2/L5/L6 Adhesive mount antenna**

Part #: 100-00199-01

Low profile: 45.4 × 45.4 × 0.2 mm · Easy mounting: Self-Adhesive · Multi-Band-Constellation · Flexible Material · High Performance · Customizable Cable and Connector



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561.09, 1575.42, 1602 MHz (L1)<br>1227.6, 1246 MHz (L2)<br>1176.45, 1207.14 MHz (L5)<br>1268.52, 1278.75 MHz (L6) |
| Antenna element peak gain | 4.9 dBic (L1)<br>3.1 dBic (L2)<br>3.2 dBic (L5)<br>2.9 dBic (L6) |
| Radiation pattern | Hemispherical |

### Key mechanical specifications:

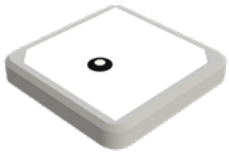
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Adhesive /U.FL Standard<br>(Other Connectors Available) |
| Dimensions | 45.4 × 45.4 × 0.2 mm |

# MPA-356-1575

**GPS MICROSTRIP ANTENNA**

Part #: 189-00049-02

Adhesive mounting Pin connector Compact size Custom tuning



## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz ± 1.023 MHz |
| Gain at Zenith | +3.7 dBi typ. |
| Polarization | RHCP |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector/ Adhesive mount |
| Dimensions | 35 x 35 x 6mm |

## MIA-GPS-10-C

**GPS Active Antenna – 10mm**

Part #: 189-00072-01

GPS L1 frequency · Active LNA circuitry · Compact size · Custom tuning · Custom connector / cable size

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1.575GHz 1575.42 MHz |
| Gain at Zenith | -3 dBic (typ.) |
| Axial Ratio | ≤ 4.0dB |

### Key mechanical specifications:

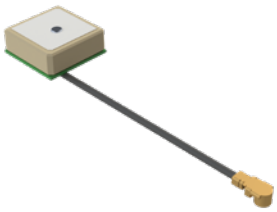
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX |
| Dimensions | 10 mm x 10 mm x 5.9 mm |

## MIA-GPS-12-C

**GPS Active Antenna – 12mm**

Part #: 189-00073-01

GPS L1 frequency · Active LNA circuitry · Compact size · Custom tuning · Custom connector / cable size



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | -4.5 dBic typ. |
| Axial Ratio | ≤4.0dB |

### Key mechanical specifications:

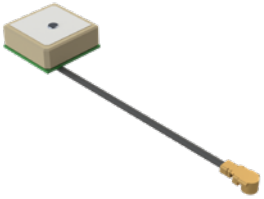
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX |
| Dimensions | 12 mm x 12 mm x 6 mm |

## MIA-GPS-12-HC

**High Current GPS Active Antenna – 12mm**

Part #: 189-00039-01

GPS L1 frequency · Active LNA circuitry · Compact size · Custom tuning · Custom connector / cable size



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | -4.5 dBic typ. |
| Axial Ratio | ≤4.0dB |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX |
| Dimensions | 12 mm x 12 mm x 4 mm |

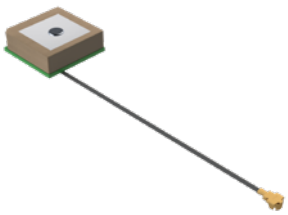
# GNSS Active Patch

## MIA-GPS-15-C

**GPS Active Antenna – 15mm**

Part #: 189-00070-01

✓ GPS L1 frequency ✓ Active LNA circuitry ✓ Compact size ✓ Custom tuning ✓ Custom connector/Cable size ✓ Excellent out-of-band signal rejection ✓ Ideal antenna solution for RTK systems



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain at Zenith | 5dBic |
| Axial Ratio | ≤ 5dB |

### Key mechanical specifications:

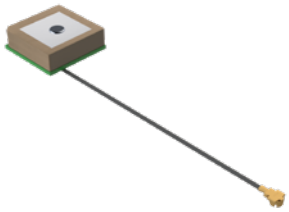
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX |
| Dimensions | 15x15x4 mm |

## MIA-GPS-15-HC

**GPS Active Antenna – 15mm**

Part #: 189-00040-01

✓ GPS L1 frequency ✓ Active LNA circuitry ✓ Compact size ✓ Custom tuning ✓ Custom connector/Cable size



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz ± 10 MHz (L1) |
| Gain (LNA) | 26 dB |
| Axial Ratio | 1.5 dB (typical) / 2.5 dB (max) |

### Key mechanical specifications:

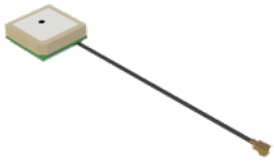
| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA female straight connector or other |
| Dimensions | 16.38 mm x 16.38 mm x 4.89 mm |

## MIA-GPS-18-C

**GPS Active Antenna – 18mm**

Part #: 189-00074-01

✓ GPS L1 frequency ✓ Active LNA circuitry ✓ Compact size ✓ Custom tuning ✓ Custom connector/Cable size



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Gain | 0 dBic typ. @ zenith<br>≥23dB, 25dB (typ.) |
| Axial Ratio | ≤4 dB |

### Key mechanical specifications:

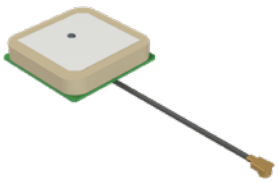
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I- PEX ( F ) |
| Dimensions | 18mm x 18mm x 6.5 mm |

# MIA-GPS-25-C

**GPS Active Antenna – 25mm**

Part #: 189-00075-01

GPS L1 frequency · Active LNA circuitry · Compact size · Custom tuning · Custom connector/Cable size



## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Antenna element peak gain | + 5.0 dBic @ Zenith 30±3dB |
| Axial Ratio | ≤ 3.0dB |

## Key mechanical specifications:

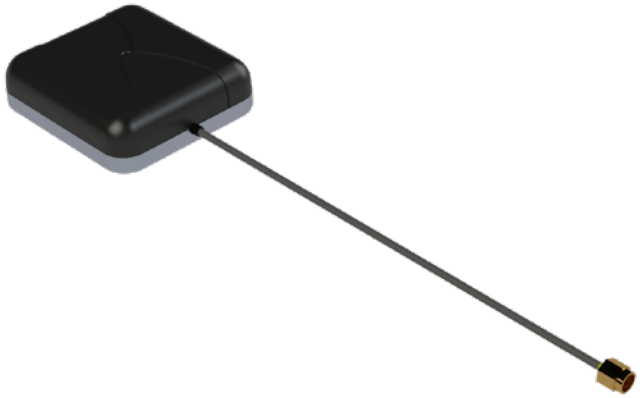
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX |
| Dimensions | 25.1 mm x 25.1 mm x 7.4 mm |

# Discover

## M9708CWT, our new

## L1 L2 L5 Multi-Frequency Active Antenna

# M9708CWT



Maxtena Releases the M9708CWT a Rugged Low Prole Multi-Frequency GNSS Antenna for SATCOM Applications.

The new active conformal wave antenna is unrivaled in performance and capabilities, able to operate across the L1/L2 GPS, GLONASS, Galileo and Beidou bands with superior precision.

The M9708CWT antenna is designed using Maxtena's proprietary Optimized Microstrip Technology, a technology that uses an electromagnetically co-optimized antenna and ground plane combination to enhance the performance of an antenna system.

The M9708CWT antenna is a high accuracy, multi-frequency active conformal wave GNSS antenna. The revolutionary design features concurrent GNSS reception on L1: GPS, GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, GLONASS L3OC, and L2 OF in a rugged, compact, and ultra-lightweight form factor. The antenna is a perfect match for GNSS applications where size, performance, and cost drive antenna selection.The M9706CWT is built on Maxtena' s proprietary Optimized Microstrip Technology, which features 40% better eciency and 3 dB improved axial ratio purity compared to competitor patch technology. Maxtena's M9708CWT has unique features that make it the best option for high-accuracy GNSS applications. It oers a low axial ratio not only at the zenith, but also in other elevation angles ensuring multipath error is mitigated. With the M9708 CWT full hemispherical coverage is achieved by an exceptionally large 3 dB beamwidth, ensuring the full view of sky and satellites at lower elevation angles.

Maxtena's CEO Stani Licul said, *"Maxtena has developed a very exible platform that can address many existing challenges in the GNSS market segment. Our M9708CWT uses advanced materials to achieve maximum bandwidth and RF with super low group delay characteristics. The advanced materials used can be conformal to dierent surfaces thus providing a very attractive solution for the automotive, IOT and autonomous markets. The M9708CWT provides the most optimal balance in terms of eciency, size, and power."*

The M9708CWT will be available either as an o-the-shelf antenna housed in rugged automotive grade PCB plastic with automatic grade electronics or as an embedded antenna option which is mounted on the inside of a customer's designed enclosure.

### Features

- Low profile design
- Rugged IP67 rating
- Small form factor
- GIS, RTK and other high accuracy GNSS applications
- Minimal phase center variation over azimuth and elevation
- Negligible group delay variation
- Automotive grade housing

### Suggested Applications include

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Oil & gas industries
- Mining equipment
- LBS & M2M applications

# Multi-Frequency Active Microstrip Antenna

## External

## MEA-1227-SM

**GNSS/L1L2 Screw Mount**

Part #: 189-00062-01

Pre-Filter Low Noise Figure Low Power Consumption Customizable Cable and Connector Dimension 80 x 74 x 25.6 mm Anti-Rotation Mechanism IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1227.6 MHz (L2)<br>1561-1606 MHz (L1) |
| Antenna element peak gain | 3.4 dBi (L2) 5.3 dBi (L1) |
| Axial Ratio | ≤ 3dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount /SMA Male |
| Dimensions | 80 x 74 x 25.6 mm |

## MEA-1227-MM

**GNSS/L1L2 Magnet Mount**

Part #: 100-00202-01

Superb out of band rejection Outstanding filtering High Precision Easy mounting: Magnetic Mount Low Profile - Ø 54 × 21.5 mm Ground Plane Independent Customizable Cable and Connector IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1227.6 MHz (L2)<br>1561-1606 MHz (L1) |
| Antenna element peak gain | 4.9 dBi (L2) 4.4 dBi (L1) |
| Axial Ratio | ≤ 3dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount /SMA Male |
| Dimensions | Ø 54 × 21.5 mm |

## M1559CWT

**L1 GPS GLONASS Active Multi-Frequency Antenna – External**

Part #: 100-00118-01

Concurrent GNSS reception on L1: GPS, GLONASS, Galileo, Beidou Low profile design Rugged IP67 rating Small form factor Low power consumption Minimal phase center variation over azimuth and elevation Negligible group delay variation Automotive grade

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1559-1610 MHz<br>(L1, E1, B1, B1-2, G1) |
| Realized gain | 3.3 dB |
| Axial Ratio | Max 2.7 dB at the Zenith |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, SMB, MCX (customer choice) |
| Dimensions | 75mm x 70mm x 23 mm |

# Multi-Frequency Active Microstrip Antenna

## External

## M9706CWT

**L1/L2 GPS GLONASS Active Multi-Frequency Antenna – External**

Part #: 100-00090-01

✓Low profile design✓ Concurrent GNSS reception on L1: GPS , GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, and GLONASS L3OC ✓ Rugged IP67 rating ✓Small form factor ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation ✓Automotive grade housing

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1) |
| Realized gain | 2.6 dB 3.3 dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, SMB or MCX (customer's choice) |
| Dimensions | 75mm x 70mm x 23 mm |

## M9708CWT

**L1/L2/L5 GPS GLONASS Active Multi-Frequency Antenna – External**

Part #: 108-00060-02

✓Low profile design✓ Concurrent GNSS reception on L1: GPS , GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, and GLONASS L3OC ✓ Rugged IP67 rating ✓Small form factor ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation ✓Automotive grade housing

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1)<br>1164-1189 MHz (L5, E5A) |
| Realized gain | 2.6 dB<br>3.3 dB<br>-2dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith<br>Max 3 dB at the Zenith |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, SMB or MCX connector |
| Dimensions | 75mm x 70mm x 23 mm |

## M1593CWT

**L1/L2/L5 GPS GLONASS + L-Band- Active Multi-Frequency Antenna – External**

Part #: 100-00191-01

✓ Small form factor✓GIS, RTK and other high accuracy GNSS applications ✓ Low Power Consumption✓ Minimal phase center variation over azimuth and elevation ✓Negligible group delay variation ✓ Automotive grade housing

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 197-1249 MHz<br>1559-1606 MHz<br>1539 - 1559 MHz |
| Realized gain | 2.6 dB @1197-1249 MHz<br>3.3 dB @1559-1606 MHz<br>1.5 dB @1539 - 1559 MHz |
| Polarization | RHCP |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic base, fixed installation option/<br>SMA, SMB, MCX |
| Dimensions | 75mm x 70mm x 23 mm |

# Multi-Frequency Active Microstrip Antenna

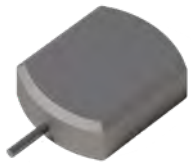
## External

## MEA-GPS-GG

**GPS GLONASS Active External Antenna**

Part #: 189-00015-01

GPS/GLONASS coverage Active LNA circuitry Waterproof housing Compact size Custom tuning



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1590 MHz |
| Total system peak gain | 30 dB @ 2.5 V / 32 dB @ 5 V |
| Axial Ratio | 1 dB (min) |

Key mechanical specifications:

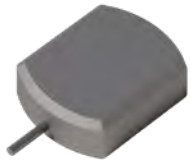
| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, TNC or other |
| Dimensions | 48 mm x 39 mm x 14 mm |

## MEA-GPS-S

**GPS Active External Antenna**

Part #: 189-00016-01

GPS L1 frequency Active LNA circuitry Waterproof housing Compact size Custom tuning



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Total system peak gain | 28 dB @ 2.5 V / 30 dB @ 5 V |
| Axial Ratio | 2.5 dB (min) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, TNC or other |
| Dimensions | 48 mm x 39 mm x 14 mm |

## MEA-GPS-SM

**GPS Active External Antenna**

Part #: 189-00017-01

GPS L1 frequency Active LNA circuitry Waterproof housing Compact size Custom tuning

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz |
| Total system peak gain | 26 dB @ 2.5 V / 28 dB @ 5 V |
| Axial Ratio | 2 dB (min) |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, TNC or other |
| Dimensions | Ø 46.5 x 29.93 mm |

# Multi-Frequency Active Microstrip Antenna

## External

## MEA-5IG-MA

**5GNR, Iridium and GNSS Magnetic/Adhesive Mount**

Part #: 100-00206-01

Easy mounting: Magnetic/Adhesive Mount Iridium Certified Low Profile High Performance Pre-Filtered GNSS Ground Plane Independent Customizable Cable and Connector Dimensions 89 × 76 × 27/30 mm IP67, IP69

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 617-960 MHz/1427-2690 MHz 3300-5000 MHz/5150-5925 MHz |
| | Antenna element peak | 2.3 dBi / 5.1 dBi / 2.6 dBi / 2.7 dBi |
| Cable2 | Frequency | 1616-1627 MHz |
| | Antenna element peak | 5.2 dBi |
| Cable3 | Frequency | 1575.42 MHz /1602 MHz |
| | Antenna element peak | 28 dB @ 2.7 / 28 dB @ 2.7 |
| | Bandwidth | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic/Adhesive Mount/ SMA Male |
| Dimensions | 89 × 76 × 27/30 mm |

## MEA-LWIG-SM

**5GNR, 2.4/5.0/6.0 GHz ISM, Iridium & GNSS Antenna – Screw Mount**

Part #:100-00164-01

4in1 antenna (5GNR, 2.4/5.0/6.0 GHz ISM, Iridium and GPS/GLONASS/QZSS/Galileo) Screw Mount Anti-Rotation Mechanism Customizable Cable and Connector Dimensions Ø 146 x 31.5 mm IK09, IP67, IP69K

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable 1. | Frequency | 617-960 MHz / 1427-2690 MHz 3300-5000 MHz / 5150-5925 MHz |
| | Peak gain | -1.7 dBi/-1.7 dBi /-1.3 dBi/ 0.6 dBi |
| | Efficiency | 19.7% / 17.5% / 13.3% / 15.9 % |
| | VSWR | 3.3:1/ 2.3:1 / 2.1:1 / 1.7:1 |
| Cable 2. | Frequency | 2410-2490 MHz / 4920-5925 MHz / 5925-7125 MHz |
| | Peak gain | 1.2 dBi / 0.0 dBi / 5.2 dBi |
| | Efficiency | 30.5% / 13.8% / 52.1% |
| | VSWR | 1.4:1 / 1.6:1 / 2.5:1 |
| Cable 3. | Frequency | 1616-1627 MHz |
| | Peak gain | 4.5 dBic |
| | Efficiency | 76% |
| | VSWR | 1.2:1 |
| Cable 4. | Frequency | 1575.42 MHz /1598-1606 MHz |
| | Active gain | 28 dB @ 2.7 V |
| | Noise figure | 1.8 dB @ 2.7 V |
| | Power consumption | 24.3 mW@2.7 V |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 146 x 31.5 mm |

# Multi-Frequency Active Microstrip Antenna

## External

## MEA-5GGG-SM

**5GNR and GPS/GLONASS Screw Mount**

Part #: 100-00204-01

5GNR & GPS/GLONASS/QZSS/Galileofrequency coverage Easy Mounting: Screw Mount Anti-Rotation Mechanism Low Profile Ground Plane Independent Customizable Cable and Connector Dimensions 80 × 74 × 25.6 mm IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1427-2690 MHz<br>3300-5000 MHz 5150-5925 MHz<br>1575.42 MHz 1602 MHz |
| Antenna element peak gain | 2.3 dBi@698-960 MHz<br>2.6 dBi @3300-5000 MHz<br>28dB @ 2.7 V @1575.42 MHz<br>5.1 dBi@1427-2690 MHz<br>2.7 dBi @5150-5925 MHz<br>28dB @ 2.7 V @1602 MHz |
| Radiation pattern | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount /SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

# Multi-Frequency Active Microstrip Antenna

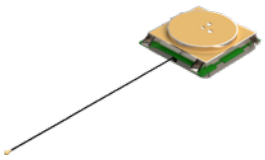
# Embedded

## M9706CWT-UFL

**L1/L2 GPS GLONASS Active Multi-Frequency Antenna – Embedded**

Part #: 108-00060-02

✓ Concurrent GNSS reception on L1: GPS, GLONASS, Galileo, Beidou and ✓ L2: GPS L2C, Galileo E5B, GLONASS L30C, and L2 OF ✓ Low profile design ✓ Conformal materials ✓ Full active design with superb filtering ✓ Small form factor ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1) |
| Realized gain | 2.6 dB 3.3 dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith |

Key mechanical specifications:

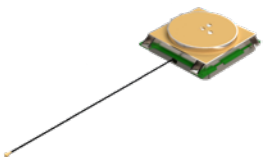
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 65mm x 65mm x 17 mm |

## M9708CWT-UFL

**L1/L2/L5 GPS GLONASS Active Multi-Frequency Antenna – Embedded**

Part #: 108-00060-02

✓ Low profile design ✓ Concurrent GNSS reception on L1: GPS GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, and GLONASS L3OC ✓ Small form factor ✓ GIS, RTK and other high accuracy GNSS Applications ✓ Low power consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation ✓ Custom tuned to applications enclosure



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1)<br>1164-1189 MHz (L5, E5A) |
| Realized gain | 2.6 dB<br>3.3 dB<br>-2dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith<br>Max 3 dB at the Zenith |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 65mm x 65mm x 17 mm |

# Multi-Frequency Active Microstrip Antenna

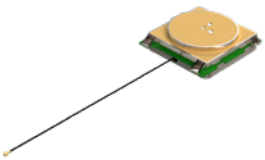
## Embedded

## M1593CWT-UFL

**L1/L2/L5 GPS GLONASS + L-Band- Active Multi-Frequency Antenna – Embedded**

Part #: 108-00083-01

✓ Small form factor ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low Power Consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation ✓ Automotive grade housing



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz<br>1559-1606 MHz<br>1539 - 1559 MHz |
| Realized gain | 2.6 dB<br>3.3 dB<br>1.5 dB |
| Noise figure | ≤ 2 dB |

### Key mechanical specifications:

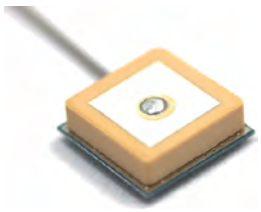
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded/ U.FL |
| Dimensions | 65mm x 65mm x 17 mm |

## MIA-GNSS-1500-C

**Active Multi-Frequency Antenna – Embedded**

Part #: 189-00076-01

✓ GPS, GLONASS, Beidou frequencies ✓ Active LNA circuitry ✓ Compact size ✓ Custom tuning ✓ Custom connector / cable size



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561.098± 2.046 MHz<br>1575.42 MHz<br>1602MHz |
| Gain @zenith | -5.5dBi typ.<br>-4.5dBi typ<br>-2.5dBi typ. |
| Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | custom connector |
| Dimensions | 15 x 15 x 6.6 mm |

# Iridium Passive Microstrip Antenna

## MEA-1600-SM

**External Iridium/GNSS Passive Antenna – Screw Mount**

Part #: 189-00059-01

✓2in1 antenna: GPS/GLONASS ✓Galileo and Iridium ✓High performance ✓Low Profile ✓Cable1: GPS/GLONASS /Galileo -1575-1606 MHz ✓Cable 2: Iridium - 1616-1627 MHz ✓Easy mounting: Screw Mount ✓Iridium certied antenna ✓Anti-Rotation Mounting ✓Customizable Cable and Connector ✓Low prole 80 × 74 × 25.6 mm l ✓P69

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 1575.42 MHz / 1598-1606 MHz |
| | Active gain | 28 dB@ 2.7 V |
| | Polarization | RHCP |
| Cable2 | Frequency Range | 1616 – 1627 MHz |
| | Peak gain | 5.2 dBic |
| | Average Gain | -1.8 dB |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA male |
| Dimensions | 80mm x 74mm x 25.6 mm |

## MEA-1621

**External Iridium Certied Passive Antenna – Magnet Mount**

Part #: 189-00024-01

✓Optimized for Iridium Network ✓Very low axial ratio ✓Excellent performance at low orbit ✓Easy mounting ✓150cm cable length ✓LM4100 cable ✓Rugged housing

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | Iridium 1616-1626 MHz |
| Peak Gain | 4.5 dBic |
| Average Gain | -1.1 dB |
| Axial Ratio | 3 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA–Male (other connectors available) |
| Dimensions | 80 x 76 x 16 mm |

## MEA-1621-AM

**Iridium Certied Antenna – Adhesive Mount**

Part #: 189-00067-01

✓Optimized for Iridium Network ✓Very low axial ratio ✓Excellent performance at low orbit ✓Easy mounting ✓Rugged housing

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1627 MHz |
| Peak Gain | 4.5 dBic |
| Average Gain | -1.1 dB |
| Axial Ratio | 3 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA–Male |
| Dimensions | 80 x 76 x 16 mm |

# Iridium Passive Microstrip Antenna

## MEA-1621-GGG

**External Iridium Passive Antenna – Screw Mount**

Part #: 189-00060-01

✓ Optimized for GPS/GLONASS/IRIDIUM/ Cellular networks ✓ Easy mounting ✓ 1m cable length RG-174, CFD-200 cables ✓ Rugged housing ✓ Customer specification connectors ✓ IPX7 waterproof housing

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| GPS/GLONASS | Frequency Range | 1575.42 / 1602 MHz |
| | Active gain | 3 dBi Typ.@1575 MHz / 2.5 dBi Typ. @1602 MHz |
| | Polarization | Linear |
| LNA | Frequency Range | 1575.42 / 1602 MHz |
| | Peak gain | 28 dB Typ. / 25 dB Min |
| | VSWR | 2.0 : 1 Max |
| Cellular | Frequency Range | 824-960 / 1710-2170 MHz |
| | Active gain | 0.56-2.69 dBi @ 824-960 MHz 1.69-5.2 dBi @1710-2170 MHz |
| | Impedance | 50 Ω |
| Iridium | Frequency Range | 1621 MHz |
| | Peak gain | 3.5 dBic Min. @ 1621 MHz |
| | Polarization | RHCP |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA–Male (other connectors available) |
| Dimensions | 80mm x 74mm x 43 mm |

## MEA-1621-SM

**External Iridium Passive Antenna – Screw Mount**

Part #: 189-00060-01

✓ Frequency coverage: 1616-1627 MHz ✓ Easy mounting: Screw Mount ✓ Optimized for Iridium network ✓ High Performance ✓ Ground Plane Independent ✓ Anti-Rotation Mechanism ✓ Customizable Cable and Connector ✓ ROHS Certified ✓ Small size: Dimensions 80 × 74 × 25.6 mm ✓ Rugged housing ✓ IP69, IP67

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1627 MHz |
| Peak Gain | 4.5 dBic |
| Average Gain | 1.2 dB |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA–Male (other connectors available) |
| Dimensions | 80mm x 74mm x 43 mm |

# Iridium Passive Microstrip Antenna

## MPA-406-1612

**Passive GPS Iridium Antenna – 40mm x 6.5mm**

Part #: 189-00050-01

✓ Ultra High Performance ✓ Iridium & GPS Band Coverage ✓ Embedded Applications ✓ Pin Connector ✓ Custom Tuning and Matching

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1565 MHz - 1640 MHz |
| Antenna element peak gain | +2.0 dBi (typical) |
| Axial Ratio | 3 dB max |

### Key mechanical specifications:

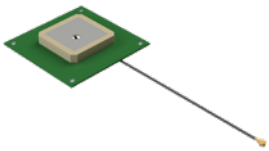
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| Dimensions | 40mm x 40 mm x 6.5mm |

## MPA-D254-1621

**Iridium Passive Antenna – 25mm**

Part #: 100-00024-02

✓ Iridium frequency band ✓ U. FL connector or other ✓ Compact size ✓ Custom tuning



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1616-1626 MHz |
| Antenna element peak gain | 2.5 dBic |
| Axial Ratio | 4 dB (typical) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | U. FL connector |
| Dimensions | 25 mm x 25 mm x 4 mm |

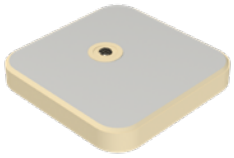
# Globalstar Passive Microstrip Antenna

## MPA-1618-C

**Globalstar Passive Antenna – 25mm**

Part #: 189-00078-01

✓ Globalstar Simplex ✓ Adhesive mounting ✓ Pin connector ✓ Compact size ✓ Custom tuning



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1615-1645 MHz |
| Realized Gain | 5 dBic |
| Axial Ratio | 2.5 dB (typical) / 5 dB (max) |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded / Pin connector |
| Dimensions | 25.1 x 25.1 x 4.2 mm |

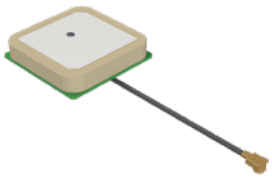
# GPS/GLONASS Microstrip Antennas

## MIA-1516-C

**GPS/GLONASS Active Antenna – 25mm**

Part #: 189-00077-01

✓GPS & GLONASS coverage ✓Active LNA circuitry ✓Custom cable-connector options ✓Compact size ✓Custom tuning



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 ± 1.023 MHz<br>1602 ± 8 MHz |
| Gain | -1 dBi typ. +2 dBi typ. |
| Polarization | RHCP |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 25.1 x 25.1 x 7.4 |

## MPA-134-GPS

**Passive GPS GLONASS Antenna – 13mm x 4mm**

Part #: 189-00056-01

✓GLONASS frequency ✓Easy mounting ✓Pin-Connector ✓Compact size ✓Advanced Ceramic Material ✓Ground Plane Dependent ✓Dimensions 13 x 13 x 4 mm

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1595 - 1610 MHz |
| Gain at Zenith | -1.5 dBic typ |
| Axial Ratio | 5 dBi |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin - Connector |
| Dimensions | 13 x 13 x 4mm |

## MPA-1516

**GPS GLONASS Passive Antenna – 25mm**

Part #: 189-00044-01

✓GPS & GLONASS coverage ✓Custom cable-connector options ✓Compact size ✓Custom tuning

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575 MHz (GPS)<br>1602 MHz (GLONASS) |
| Total system peak gain | 5 dBic |
| Axial Ratio | 3 dB |

Key mechanical specifications:

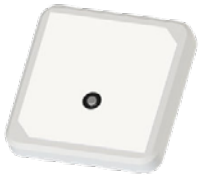
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin solution |
| Dimensions | 25 mm x 25 mm x 4 mm |

# MPA-356-1516

**Passive GPS GLONASS Beidou Antenna – 35mm x 6mm**

Part #: 189-00049-01

GPS, GLONASS, Beidou frequency ✓ Adhesive mounting ✓ Pin connector ✓ Compact size ✓ Custom tuning



## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | GPS: 1575.42 MHz ± 1.023 MHz<br>GLONASS: 1602 MHz ± 5 MHz<br>Beidou: 1561.098 MHz ± 2.046 MHz |
| Realized gain | GPS: +3.7 dBi typ.<br>GLONASS: +4.9 dBi typ.<br>Beidou: +5.2 dBi typ. |
| Polarization | RHCP |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pin connector |
| 18 mm x 18 mm x 4 mm | 35 mm x 35 mm x 6 mm |

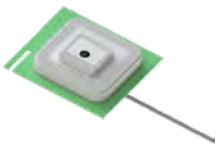
# WIFI Embedded Microstrip Antennas

## MPA-254-WIFI

**WIFI Embedded Antenna – 25mm x 4 mm**

Part #: 189-00055-01

2.4GHz & 5.8 GHz Wi-Fi frequency Integrated Ground plane with cable Easy mounting Surface Mount Compact size Advanced Ceramic Material Terminator using IPEX connector



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2500 MHz<br>5700-5870MH |
| Gain at Zenith | 1.0 dBi typ. |
| Polarization | Linear |

### Key mechanical specifications:

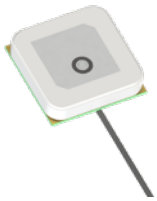
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (U.FL) |
| Dimensions | 25 mm x 25 mm x 4 mm |

## MPA-258-WIFI

**WIFI Embedded Antenna – 25mm x 4.5mm**

Part #: 189-00051-01

2.4GHz Wi-Fi frequency Integrated Ground plane with cable Easy mounting Surface Mount Compact size Advanced Ceramic Material Ground Plane Dependent Terminator using IPEX connector Dimensions 25 x 25 x 4.5 mm



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2450 ± 50 MHz |
| Gain at Zenith | > 0.5 dBi |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (MHF) |
| Dimensions | 25 x 25 x 4.5 mm |

# 5G Antennas

# 5G Antennas

We offer high performing 5G antennas that provide coverage for all lower and mid 5G bands along with custom solutions for mm wave frequencies. By offering the most comprehensive portfolio of external antennas with different mounting options, omnidirectional radiation patterns for easy integration in wireless communication devices, we are the leaders of 5G antenna solutions. Our 5G antennas are great for telematics systems, remote surveillance, asset tracking and any IOT system applications. All of our 5G antenna solutions are fully customizable and optimized for the customers system.

## Applications

- IOT Applications
- Automotive
- Industrial Applications
- Asset tracking
- Telematics
- Container & Logistics

# Explore

## Our New Release **MEA-1400-SM**

## our GNSS L1 L5 Antenna Screw Mount

# MEA-1400-SM

The MEA-1400-SM Screw Mount Antenna is a 2-in-1 antenna solution, with high gain and efficiency ideal for maintaining constant global connectivity. The MEA-1400-SM covers all GPS/GLONASS/Galileo and L1 L5 frequencies with low-profile antenna design and high-quality screw mount.

This is an ideal antenna for telematics systems, remote surveillance, asset tracking and any IOT system applications. The high performance and low profile make this antenna ideal for the most challenging installations.

This screw mount antenna is easy to install with maximum durability. The MEA-1400-SM has one cable with a SMA-Male standard connector, 3m standard cable length and is fully customizable by offering additional connector types, cable lengths and cable types. This antenna is low profile, rugged and IP67 rated.

### Features

- GNSS L1/L5
- High Precision Navigation
- Screw Mount
- Low Profile
- Low Noise Figure
- Low Power Consumption
- Anti-Rotation Mechanism
- Customizable Cable and Connector
- Dimensions 80 × 74 × 25.6 mm
- IP67, IP69

### Suggested Applications include

- Asset Tracking
- Telematics
- Container & Logistics
- Automotive
- Industrial Applications
- IOT Applications

## MEA-698-3800-SM

**Low Prole 5G LTE Antenna**

Part #: 100-00132-01

Low profile antenna Covers large frequencies 698-3800 MHz ROHS Compliant High gain for the antenna size PC + ABC housing Exceptional performance over the main 4G/5G bands

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Antenna element peak gain | 5.5 dBi |
| Return Loss | -10 dBi |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 59 x 71mm |

## MEA-LGI-SMA

**5GNR & Iridium GNSS Antenna – Screw Mount**

Part #: 189-00059-01

3in1 antenna: 5GNR, Iridium and GNSS Ultra-Wide band antenna High performance Easy mounting: Screw Mount Anti-Rotation Mounting Optimized for Iridium network Ground Plane Independent Customizable Cable and Connector Low profile 80 × 74 × 25.6 mm IP69

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 617-960 MHz<br>3300-5000 MHz<br>1616 - 1627 MHz | 1427-2690 MHz<br>5150-5925 MHz<br>1559 - 1608 MHz |
| Antenna element peak gain | 2.3 dBi<br>2.6 dBi<br>5.2 dBic | 5.1 dBi<br>2.7dBi<br>28 dB @ 2.7 V |
| Polarization | Linear | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-LWIG-SM

**5GNR, 2.4/5.0/6.0 GHz ISM, Iridium & GNSS Antenna – Screw Mount**

Part #:100-00164-01

✓ 4in1 antenna (5GNR, 2.4/5.0/6.0 GHz ISM, Iridium and GPS/GLONASS/QZSS/Galileo) ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Customizable Cable and Connector ✓ Dimensions Ø 146 x 31.5 mm ✓ IK09, IP67, IP69K

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable 1. | Frequency | 617-960 MHz / 1427-2690 MHz 3300-5000 MHz / 5150-5925 MHz |
| | Peak gain | -1.7 dBi/-1.7 dBi /-1.3 dBi/ 0.6 dBi |
| | Efficiency | 19.7% / 17.5% / 13.3% / 15.9 % |
| | VSWR | 3.3:1/ 2.3:1 / 2.1:1 / 1.7:1 |
| Cable 2. | Frequency | 2410-2490 MHz / 4920-5925 MHz / 5925-7125 MHz |
| | Peak gain | 1.2 dBi / 0.0 dBi / 5.2 dBi |
| | Efficiency | 30.5% / 13.8% / 52.1% |
| | VSWR | 1.4:1 / 1.6:1 / 2.5:1 |
| Cable 3. | Frequency | 1616-1627 MHz |
| | Peak gain | 4.5 dBic |
| | Efficiency | 76% |
| | VSWR | 1.2:1 |
| Cable 4. | Frequency | 1575.42 MHz /1598-1606 MHz |
| | Active gain | 28 dB @ 2.7 V |
| | Noise figure | 1.8 dB @ 2.7 V |
| | Power consumption | 24.3 mW@2.7 V |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 146 x 31.5 mm |

## MEA-LWIG-SM

**5GNR, 2.4/5.0/6.0 GHz ISM, Iridium & GNSS Antenna – Screw Mount**

Part #:100-00164-01

✓ GNSS L1/L55 ✓ High Precision Navigation ✓ Screw Mount ✓ Low Profile ✓ Low Noise Figure ✓ Low Power Consumption ✓ Anti-Rotation Mechanism ✓ Customizable Cable and Connector ✓ IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1176.45 MHz / 1561,1575, 1602 MHz |
| Axial Ratio | ≤ 3dB |
| Polarization | RHCP |
| Bandwidth | ≤ 1176 MHz / 1561-1606 MHz |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | 80 x 74 x 25.6 mm |

## MEA-5GGG-SM

**5GNR and GPS/GLONASS Screw Mount**

Part #: 100-00204-01

5GNR & GPS/GLONASS/QZSS/Galileo frequency coverage Easy Mounting: Screw Mount Anti-Rotation Mechanism Low Profile Ground Plane Independent Customizable Cable and Connector Dimensions 80 × 74 × 25.6 mm IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1427-2690 MHz<br>3300-5000 MHz 5150-5925 MHz<br>1575.42 MHz 1602 MHz |
| Antenna element peak gain | 2.3 dBi@698-960 MHz<br>5.1 dBi@1427-2690 MHz<br>2.6 dBi @3300-5000 MHz<br>2.7 dBi @5150-5925 MHz<br>28dB @ 2.7 V @1575.42 MHz<br>28dB @ 2.7 V @1602 MHz |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-5GNR-SM

**5GNR Screw Mount**

Part #: 100-00217-01

Easy mounting: Screw Mount High Performance Ground Plane Independent Customizable Cable and Connector Dimensions Ø 60 x 81 mm IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz<br>3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 3.3dBi@617-960MHz<br>2.0dBi@1427-2690MHz<br>0.5dBi@3300-5000MHz<br>0.6dBi@5150-5925MHz |
| Radiation pattern | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 60 × 81 mm |

## MEA-5GNR-LP-SM

**5GNR Screw Mount**

Part #: 100-00222-01

Easy mounting: Screw Mount Ground Plane Independent Customizable Cable and Connector Low profile: Ø 50 x 50.8 mm IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz<br>3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 2.9dBi@617-960MHz<br>2.1dBi@1427-2690MHz<br>0.5dBi@3300-5000MHz<br>-1.0dBi@5150-5925MHz |
| Radiation pattern | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 50 x 50.8 |

## MEA-5800-MM

**5GNR Magnetic Mount Antenna**

Part #: 100-00200-01

✓ 5GNR Frequency range (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz, 5150-5925 MHz) ✓ Easy mounting: Magnetic Mount ✓ High Performance ✓ Customizable Cable and Connector ✓ Low profile: Ø 31 x 109 mm

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz<br>3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 1.0 dBi @ 617-960 MHz<br>2.9 dBi @1427-2690 MHz<br>2.5 dBi @3300-5000 MHz<br>0.4 dBi @5150-5925 MHz |
| Radiation pattern | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 105.1 x 30.1 x 6.7 mm |

## MEA-5IG-MA

**5GNR, Iridium and GNSS Magnetic/Adhesive Mount**

Part #: 100-00206-01

✓Easy mounting: Magnetic/Adhesive Mount ✓Iridium Certified ✓Low Profile ✓High Performance ✓Pre-Filtered GNSS ✓Ground Plane Independent ✓Customizable Cable and Connector ✓Dimensions 89 × 76 × 27/30 mm ✓IP67, IP69

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 617-960 MHz/1427-2690 MHz<br>3300-5000 MHz/5150-5925 MHz |
| Cable1 | Antenna element peak | 2.3 dBi / 5.1 dBi / 2.6 dBi / 2.7 dBi |
| Cable2 | Frequency | 1616-1627 MHz |
| Cable2 | Antenna element peak | 5.2 dBi |
| Cable3 | Frequency | 1575.42 MHz /1602 MHz |
| Cable3 | Antenna element peak | 28 dB @ 2.7 / 28 dB @ 2.7 |
| Bandwidth | | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic/Adhesive Mount/ SMA Male |
| Dimensions | 89 × 76 × 27/30 mm |

## MEA-5IG-MA

**5GNR, Iridium and GNSS Magnetic/Adhesive Mount**

Part #: 100-00206-01

Easy mounting: Magnetic/Adhesive Mount Iridium Certified Low Profile High Performance Pre-Filtered GNSS Ground Plane Independent Customizable Cable and Connector Dimensions 89 × 76 × 27/30 mm IP67, IP69

*Key electrical specifications:*

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 617-960 MHz/1427-2690 MHz<br>3300-5000 MHz/5150-5925 MHz |
| | Antenna element peak | 2.3 dBi / 5.1 dBi / 2.6 dBi / 2.7 dBi |
| Cable2 | Frequency | 1616-1627 MHz |
| | Antenna element peak | 5.2 dBi |
| Cable3 | Frequency | 1575.42 MHz /1602 MHz |
| | Antenna element peak | 28 dB @ 2.7 / 28 dB @ 2.7 |
| Bandwidth | | Omni-directional / Hemispherical |

*Key mechanical specifications:*

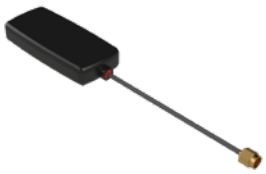
| Parameter | *Specification* |
|---|---|
| *Mounting option / Connector* | *Magnetic/Adhesive Mount/ SMA Male* |
| *Dimensions* | *89 × 76 × 27/30 mm* |

## MEA-5GNR-AM

**5GNR Adhesive Mount**

Part #: 100-00221-01

Easy mounting: Adhesive Mount High Performance Ground Plane Independent Customizable Cable and Connector Dimensions 83 × 35 × 13.3 mm IP67, IP69



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz<br>3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 1.1dBi@617-960MHz<br>3.6dBi@1427-2690MHz<br>1.9dBi@3300-5000MHz<br>1.2dBi@5150-5925MHz |
| Radiation pattern | Omni-Directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Adhesive Mount/ SMA-Male |
| Dimensions | 83 × 35 × 13.3 mm |

# 5G Antennas
# Connector Mount

## MEA-2690-CM

**5GNR Connector Mount Antenna**

Part #: 100-00205-01

✓ 5GNR frequency range (617-960 MHz -1525-2690 MHz) ✓ Easy mounting: Connector Mount ✓ N-Male StandardGround Plane Independent ✓ Dimensions 232 × Ø 20 (Ø 16) mm

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960 MHz<br>1525-2690 MHz |
| Antenna element peak gain | 0.5 dBi @ 617-960 MHz<br>2.0 dBi @1525-2690 MHz |
| Radiation pattern | Omni-Directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / N-male connector |
| Dimensions | Ø 20 (Ø 16) × 232 mm |

## MEA-2400-N

**Ultra-Rugged Dipole Antenna**

Part #: 100-00190-01/02

✓ High Performance ✓ Dual Band 2.4/5 GHz ✓ UV Protected ✓ IP 67 ✓ Low profile antenna ✓ N-Jack or N-Plug ✓ Easy installation: Pole / Wall Mount

Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 2.4 - 2.5 GHz | 4.8 - 6.0GH |
| Antenna element peak gain | 6 dBi | 6 dBi |
| Radiation pattern | Omni-Directional | |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount / N-Jack or N-Plug |
| Dimensions | Ø 30 x 280 mm (N-Jack)<br>Ø 23 x 255 mm (N-Plug) |

## MEA-5000-CM

**5GNR Connector Mount**

Part #: 100-00215-01

✓ Easy mounting: Connector Mount ✓ Ultra-Wide band Antenna ✓ High Performance ✓ Ground Plane Independent ✓ Waterproof Dimensions 192 × 20 × 18 mm ✓ IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960 MHz<br>1427-2690 MHz<br>3300-3800 MHz |
| Antenna element peak gain | 2.3 dBi / 5.1 dBi / 2.6 dBi / 2.7 dBi |
| Radiation pattern | Omni-Directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount/ SMA Male |
| Dimensions | 192 × 20 × 18 mm |

## MEA-5GNR-UWB-CM

**5GNR Connector Mount**

Part #: 100-00218-01

Easy mounting: Connector Mount Ground Plane Independent Ultra-Wide band Antenna High Performance Ground Plane Independent Hinged Connector Low profile 171 × 38 × 13.8 mm

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz 3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 0.0dBi@617-960MHz<br>1.7dBi@1427-2690MHz<br>1.1dBi@3300-5000MHz<br>1.6dBi@5150-5925MHz |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount/ SMA Male |
| Dimensions | 171 × 38 × 13.8 mm |

## MEA-5GNR-UWB-SMA

**5GNR/UHF Connector Mount**

Part #: 100-00216-01

Easy mounting: Connector Mount Ultra-Wide band Antenna High Performance Ground Plane Independent Hinged Connector Low profile 171 × 38 × 13.8 mm

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 410-496 MHz 617-960 MHz 1427-2690 MHz 3300-5000 MHz 5150-5925 MHz |
| Antenna element peak gain | -4.5dBi@410-496MHz<br>0.5dBi@617-960MHz<br>2.1dBi@1427-2690MHz<br>1.5dBi@3300-5000MHz<br>2.5dBi@5150-5925MHz |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

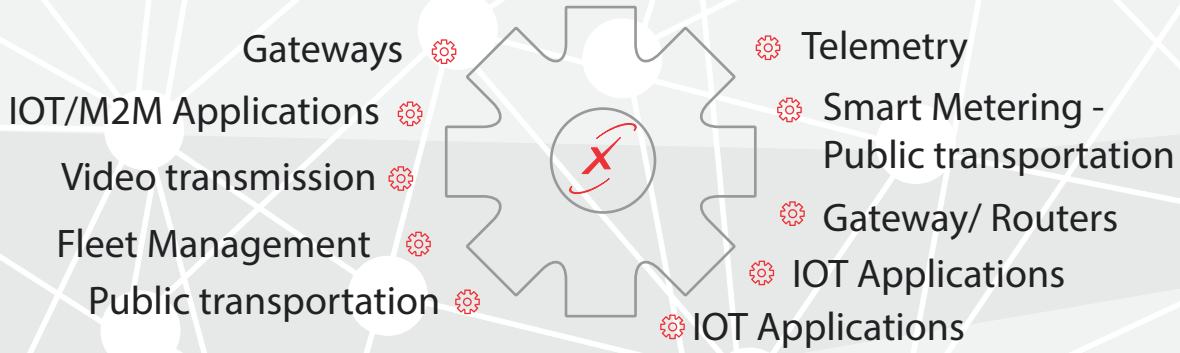
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount/ SMA Male |
| Dimensions | 171 × 38 × 13.8 mm |

# 3G/4G/LTE Antennas

# 3G/4G/LTE Antennas

Maxtena offers a wide selection of antennas across a broad range of frequencies between 700- 960 MHz, 1710-2170 MHz and 2500-2700 MHz, dual-band 2.4GHz/5GHz, cellular, and Bluetooth antennas. It enhances connectivity for multiple devices in nearly any location. Our antennas are purpose-built to provide compact, high gain, and a constant worldwide connectivity for Wi-Fi, Bluetooth, and ZigBee. The antennas are available in several different sizes depending on customer requirements. We produce both external antennas that come in a range of rugged housings, as well as embedded antennas. These antennas can be customized with different cable lengths and connectors upon request.
We have developed countless high-performance antennas, and they are currently being used in multiple Iot devices (Wearables, Routers, Smart Home, UAV/Drone, and Connected Vehicles).

## Applications



# Discover

Our best seller **Netz 4in1**

## our LTE/Cellular/WIFI and MIMO 4in1 Antenna

# Netz 4in1

The NETZ 4 in 1 is a Cellular/LTE/MIMO/WIFI technology solution by Maxtena. The antenna features Cellular/LTE (698-960, 1710-2170, 2500-2700 MHz) and 2.4/5.0 GHz WIFI (2410-2490, 4920-5925 MHz) reception.
The NETZ 4 in 1 antenna is an omnidirectional, heavy-duty, and waterproof external multi-antenna for use in fleet management, smart cities, and buses, train, and commercial transport.
This cutting-edge antenna provides powerful MIMO antenna technology for global coverage LTE and Wi-Fi for constant wireless communication.
The 4 in 1 solution is ideal for high data throughput and streaming, video, industrial and IOT applications. The antennas advanced technology ensures constant reception and transmission. The underside of the antenna contains a foam adhesive for easy, reliable mounting.

### Features

- Screw Mount
- High Performance
- Rated IP67, IP69K and IK09 Compact
- Size: 96 x 96 x 94 mm
- Custom Cable and Connector

### Suggested Applications include

- Fleet Management
- Commercial Transport
- HD Video Monitoring
- Buses, Train & Commerical Applications
- Smart Cities

The standard NETZ 4 in 1 comes with 3 meters LL195, and SMA-Male connectors. It is available with an SMA, FAKRA or customer specified connector and cable length.

## NETZ 4IN1

**4G LTE/Cellular/WIFI and MIMO 4in1 Antenna**

Part #: 100-00142-01

✓ Screw Mount ✓ High Performance ✓ Rated IP67, IP69K and IK09 ✓ Compact Size: 96 x 96 x 94 mm ✓ Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170MHz<br>2500-2700 MHz |
| Antenna element peak gain | 0.9 dBi<br>3.3 dBi<br>4.4 dBi |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 96 x 96 x 94 mm |

## MEA-SW-700-3800

**2G/3G/4G/ISM/WIFI GNSS Antenna**

Part #: 189-00046-01

✓ 2G/3G/4G/ISM/Wi-Fi & GNSS frequency bands ✓ N Type connector & seal ring ✓ IP68 rated / UV protected ✓ Rugged industrial design ✓ Ground plane Independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Antenna element peak gain | 4.0 dB |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ N Type connector |
| Dimensions | Ø 41 x 84 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

✓ 2 in 1 antenna: Cellular/LTE & ISM bands ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Low Profile: 80 x 76 x 13 mm ✓ Ground Plane Independent ✓ IP67 ✓ Customizable Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz 868 MHz<br>915 MHz |
| Antenna element peak gain | 0.7 dBi@698-960 MHz 2.7 dBi@1710-2170 MHz<br>4.3 dBi@2500-2700 MHz 1.2 dBi@ 868 MHz<br>1.7 dBi@915 MHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount /SMA Male |
| Dimensions | 80 × 74 × 25.6 mm |

## NETZ 5IN1

**LTE-MIMO/WIFI-MIMO/GNSS 5in1 Antenna**

Part #: 100-00095-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ An integrated SMA connectors

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561 MHz 1575.42 MHz<br>1602 MHz 698-960 MHz<br>1710-2170 MHz 2300-2690 MHz |
| Antenna element peak gain | 3 dBi Typ. @1561 MHz<br>3 dBi Typ. @1575 MHz<br>3.5 dBi Typ. @1602 MHz<br>4.0 dBi Typ. @698~960 MHz<br>6.0 dBi Typ. @1710~2170 MHz<br>5.0 dBi Typ. @2300~2690 MHz |
| Radiation pattern | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Permanent Mount/ SMA connectors |
| Dimensions | Ø 141.98 x 66.5 mm |

## Netz 5in1-SM

**CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount**

Part #: 100-00177-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.3 dBi 4.3 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 3.0 dB 3.0 dBi |
| Cable3 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.8 dBi 3.0 dBi |
| Cable4 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.6 dBi 3.1 dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23 dB @ 3 V; 24dB @ 5 V |
| Radiation pattern | | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male / SMA-Male RP |
| Dimensions | Ø 96 x 90 mm |

## MEA-LW2-SM

**External Cellular/LTE, ISM and GNSS Antenna – Screw Mount**

Part #: 189-00061-01

✓2in1 antenna: Cellular/LTE and 2.4/5.0GHz ISM ✓Wide band antenna ✓Ground Plane Independent ✓Rugged housing ✓IP67 rated ✓IP69 rated ✓Low profile: 80 x 74 x 43 mm ✓Anti-Rotation mounting ✓Customized Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Peak gain | 2.7 dBi<br>5.1 dBi<br>5.3 dBi |
| Radiation pattern | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 43 mm |

## MEA-2700-UWB-SM

**High Performance 4G LTE Antenna**

Part #: 100-00141-01

✓High Performance ✓4G LTE Ultra-Wideband Automotive Antenna ✓ROHS Compliant ✓Custom Cable and Connector ✓Rated IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960/1710-2700 MHz |
| Peak gain | 3 dBi |
| Radiation pattern | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ N-connector |
| Dimensions | Ø 48 x 82 mm |

## MEA-698-3800-SM

**Low Prole 5G LTE Antenna**

Part #: 100-00132-01

✓ Low profile antenna ✓ Covers large frequencies 698-3800 MHz ✓ ROHS Compliant ✓ High gain for the antenna size ✓ PC + ABC housing ✓ Exceptional performance over the main 4G/5G bands

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Peak gain | 5.5 dBi |
| Radiation pattern | -10 dBi |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 59 x 71mm |

## MEA-1400-SM

**GNSS L1 L5 Antenna – Screw Mount**

Part #: 100-00165-01

✓ GNSS L1/L55 ✓ High Precision Navigation ✓ Screw Mount ✓ Low Profile ✓ Low Noise Figure ✓ Low Power Consumption ✓ Anti-Rotation Mechanism ✓ Customizable Cable and Connector ✓ IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1176.45 MHz / 1 561,1575, 1602 MHz |
| Axial Ratio | ≤ 3dB |
| Polarization | RHCP |
| Bandwidth | 1176 MHz / 1561-1606 MHz |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 x 74 x 25.6 mm |

## MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

✓ High Performance ✓ Easy mounting: Screw Mount ✓ Ground Plane Independent ✓ Low profile: 96 x 96 x 90 mm ✓ Customized Cable and Connector

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

## Netz 5in1-MIMO

**CELLULAR/LTE MIMO and GNSS - Screw mount antenna**

Part #: 100-00177-01

✓ CELLULAR / LTE & GPS/GLONASS/QZSS/frequencies ✓ Galileo frequency range ✓ Easy mounting: Screw Mount ✓ Heavy Duty antenna ✓ High Performance ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 0.2dBi 3.8dBi 6.0dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.1dBi 3.2dBi -5.6dBi |
| Cable3 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.5dBi 3.1dBi 5.0dBi |
| Cable4 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.7dBi 3.0dBi 4.8dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23dB@3V; 24dB@5V |
| Radiation pattern | | Omni-Directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 96 x 90 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

✓ 2 in 1 antenna: Cellular/LTE & ISM bands ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Low Profile: 80 x 76 x 13 mm ✓ Ground Plane Independent ✓ IP67 ✓ Customizable Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz 2500-2700MHz 868MHz 915MHz |
| Peak Gain | 0.7 dBi@698-960MHz 2.7dBi@1710-2170MHz 4.3 dBi@2500-270MHz 1.2 dBi@ 868MHz 1.7 dBi@91MHz |
| Radiation pattern | Radiation pattern |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

# 3G/4G/LTE Antennas
## Screw mount

## MEA-2500-SM

**CELLULAR/LTE MIMO Screw Mount**

Part #: 100-00212-01

✓ CELLULAR / LTE (698-960 MHz, 1710-2170 MHz, and 2500-2700 MHz) ✓ Easy mounting: Screw Mount ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low profile : 80 x 74 x 14.7 mm ✓ IP67

Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -2.7 dB -3.0 dB -5.9 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 2.2 dBi 4.4 dBi |
| Radiation pattern | | Omni-Directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | 80 x 74 x 14.7 mm |

## COBRA-LTE700

**LTE MIMO & Active GPS High-Performance Transportation Antenna**

Part #: 100-00036-01

✓ Robust arrow shape housing for easy roof-top alignment ✓ MIMO technology ✓ One connector for each application; LTE 1, LTE 2 and GPS ✓ No ground plane requirements ✓ Single-hole mounting with screws on top for easy installation ✓ Use of only one multifunction solution

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 690 - 960 MHz<br>1700 - 2200 MHz<br>1575.42 MHz |
| Antenna element peak gain | 4 dBi (typical) |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## MAXWAVE

**MAXWAVE™ 4×4 MIMO TRAIN ANTENNA**

Part #: 100-00074-01

✓ 4 antenna elements operating simultaneously from 698 MHz to 6000 MHz ✓ Optional active GPS/GLONASS antenna with integrated surge arrestor ✓ DC grounded antenna elements for protection against lightning and high voltage power supply lines ✓ Versatile Design: Maintains performance when mounted on non-metallic surfaces ✓ Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

# 3G/4G/LTE Antennas
## Magnet Mount

## MEA-GNSS-LTE-MM

**Active Multi-Frequency Antenna – External**

Part #: 189-00103-03

GNSS & LTE Bands 2 in 1 Low Profile Antenna Rugged IP67 Customizable Cables and Connectors Small Size Easy Mounting Quality Textured Covert Design Tape for Quick and Easy Mounting

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz/ 1602 MHz<br>698~960 MHz / 1710~2170 MHz /<br>2300~2690 MHz |
| Antenna element peak gain | 1 dBi Typ. @ 1575 MHz<br>1 dBi Typ. @ 1602 MHz<br>1.0 dBi Typ. @ 698-960 MHz<br>2.0 dBi Typ. @ 1710-2170 MHz<br>2.0 dBi Typ. @ 2300-2690 MHz |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount/ SMA connector |
| Dimensions | 51.4 x (h) 11.7 mm |

## MEA-4-GGC

**GPS/GLONASS & 2G 3G**

Part #: 100-00119-01

GSM/GPRS/CDMA/PCS/DCS/WCDMA/UMTS/HSPA/GPS/GLONASS Low profile antenna for easy installation High LNA Gain Low noise figure Ultra-low power consumption IP65 water resistant Customizable connector & cable length Foam Adhesive or Magnet ROHS Compliant

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz/ 1602 MHz<br>824-894 MHz / 1850-1990 MHz |
| Antenna element peak gain | 1 dBi Typ. @ 1575 MHz<br>1 dBi Typ. @ 1602 MHz<br>1.0 dBi Typ. @824~894 MHz<br>5.0 dBi Typ. @1850~1990 MHz |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet or Adhesive Mount/<br>SMA connector |
| Dimensions | 58.15 x 56.2 x 16.8 mm |

## MEA-LTE3MM-SMA

**CELLULAR / LTE Magnetic Mount**

Part #: 100-00185-01

CELLULAR / LTE - 698-960 MHz 1710-2170 MHz, 2500-2700 MHz Magnetic Mount Rugged design High Performance Customizable Cable and Connector Dimensions Ø 54 x 80 mm IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Antenna element peak gain | -2.6 dB -2.9 dB -3.6 dB |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic Mount / SMA-Male |
| Dimensions | Ø 54 x 80 |

# MEA-1400-MM

**GNSS L1 L5 Antenna – Magnet Mount**

Part #: 100-00186-01

✓Magnetic Mount ✓28 dB Gain ✓Pre-Filter ✓Low Noise Figure ✓Low Power Consumption ✓ Customizable Cable and Connector
✓GPS/ GLO/ BEI/ QZSS/ Galileo/ IRNSS/ SBAS/ L1L5 (1176 and 1561-1606 MHz)

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1164-1189 MHz / 1561-1606 MHz |
| Axial Ratio | ≤ 3dB |
| Radiation | RHCP |
| Bandwidth | 25 MHz / 45MHz |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic Mount / SMA-Male |
| Dimensions | Ø 54 x 21.5 mm |

## MEA-UWB-01-AM

**Low Prole LTE Antenna**

Part #: 100-00106-01

2G/3G/4G Ultra-Wideband Automotive Antenna Fully customizable cable length and connector ROHS Compliant Low Profile IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170 MHz 2300-2700 MHz |
| Antenna element peak gain | 3.8 dBi 2.9 dBi 4.4 dBi |
| Impedance | 50 Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 105.1 mm x 30.1 mm x 6.7 mm |

## MEA-GNSS-LTE

**Active Multi-Frequency Antenna – External Adhesive Mount**

Part #: 189-00103-01

GNSS & LTE Bands 2 in 1 Low Profile Antenna Rugged IP67 Customizable Cables and Connectors Small Size Easy Mounting Quality Textured Covert Design Tape for Quick and Easy Mounting

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1575.42 MHz/ 1602 MHz<br>698-960 MHz / 1710-2170 MHz / 2300-2690 MHz |
| Antenna element peak gain | 1 dBi Typ. @ 1575 MHz<br>1 dBi Typ. @ 1602 MHz<br>1.0 dBi Typ. @ 698-960 MHz<br>2.0 dBi Typ. @ 1710-2170 MHz<br>2.0 dBi Typ. @ 2300-2690 MHz |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Adhesive Mount/ SMA-Male |
| Dimensions | 51.4 x (h) 11.7 mm |

## MEA-698-2700-AM

**Omni-Directional 4G LTE Antenna**

Part #: 100-00143-01

Dual-Port Multiband Omni-Directional LTE Antenna Covers Frequencies: 698 - 2700 MHz Low Profile Rugged Design

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-2700 MHz |
| Antenna element peak gain | 4.5 dBi |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 101.5 x 77.6 x 15.8 mm |

## MEA-LG-AM

**CELLULAR/LTE and GPS/GLONASS Adhesive Mount**

Part #: 100-00193-01

✓Cable 1: CELLULAR/LTE - 698-960 MHz; 1710-2170 MHz; 2500-2700 MHz / Cable 2: GPS/GLONASS/QZSS/Galileo - 1575-1606 MHz ✓Adhesive Mount ✓Ground Plane Independent ✓Customizable Cable and Connector Dimensions ✓Low profile: 83 x 35 x 13.3 mm ✓IP67, IP69

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| Cable1 | Antenna element peak | -2.7 dB | -3.0 dB | -5.9 dB |
| Cable1 | Polarization | Linear | | |
| Cable1 | VSWR | 1.8:1 | 1.3:1 | 2.0:1 |
| Cable2 | Frequency | 1575.42 MHz | 1598-1606 MHz | |
| Cable2 | Active gain | 28 dB @ 2.7 V | | |
| Cable2 | Polarization | RHCP | | |
| Cable2 | VSWR | ≤ 1.4:1 | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MEA-LGG-AM

**Cellular/LTE and GPS/GLONASS Antenna – Adhesive Mount**

Part #: 100-00163-01

✓ 2in 1 antenna (CELLULAR/LTE,GPS/GLONASS/QZSS/Galileo) ✓Adhesive Mount ✓High Performance ✓Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions 150.5 x 42 x 15.3 mm ✓ IP67, IP69

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| Cable1 | Antenna element peak | 3.4 dBi | 3.5 dBi | 3.9 dBi |
| Cable1 | Efficiency | 76% | 69% | 76% |
| Cable1 | VSWR | 1.7:1 | 1.4:1 | 1.5:1 |
| Cable2 | Frequency | 1575.42 MHz | 1598-1606 MHz | |
| Cable2 | Active gain | 28 dB @ 2.7 V | | |
| Cable2 | Polarization | RHCP | | |
| Cable2 | VSWR | ≤ 1.4:1 | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA-Male |
| Dimensions | 150.5 x 42 x 15.3 mm |

# MEA-3-GGL

**GPS/GLONASS/LTE Antenna & 2G/3G LTE SOLUTION**

Part #: 189-00053-01

✓Covers GNSS & LTE Bands ✓ 2 in 1 Low Profile Antenna ✓Rugged IP67 ✓Customizable Cables and Connectors ✓Small Size ✓Easy Magnet Mounting ✓ Quality Textured Covert Design

## Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| GNSS | Frequency | 1575.42 MHz | | 1602 MHz |
| | Polarization | Linear | | |
| | Polarization | 3.0 dBi Typ. | | 3.5 dBi Typ |
| | VSWR | ≤ 2.0:1 | | |
| LNA | Frequency | 1575.42 MHz | | 1602 MHz |
| | Power Consumption | 9 Typ. mA @3.3V | | |
| | Antenna Gain | 28 dB Typ. / 25 dB Min | | |
| | VSWR | ≤ 2.0:1 | | |
| LTE | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| | Antenna element peak | 1.5 dBi | 0.5 dBi | 0.5 dBi |
| | Efficiency | 25% | 30% | 30% |
| | VSWR | ≤ 5.5 | ≤ 4.0 | ≤ 4.0 |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Foam adhesive / SMA, FAKRA or custom |
| Dimensions | (L) 55 x (W) 55 x (H) 20 mm |

## MEA-1700-LTE

**High Performance LTE Antenna**

Part #: 100-00109-01

✓ 3G/4G/LTE modems ✓ Ultra-Wideband Automotive Antenna ✓ Low profile for easy installation ✓ Small size: 20 x 215 mm3 ROHS Compliant ✓ IPX67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170MHz |
| Antenna element peak gain | 0~1 dBi |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N-Type |
| Dimensions | Ø 20 x 215 mm |

## MEA-960-LTE

**4G LTE Omni-Directional Antenna**

Part #: 100-00140-01

✓ Robust arrow shape housing for easy roof-top alignment ✓ MIMO technology ✓ One connector for each application; LTE 1, LTE 2 and GPS ✓ No ground plane requirements ✓ Single-hole mounting with screws on top for easy installation ✓ Use of only one multifunction solution

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170MHz |
| Antenna element peak gain | 3 dBi ± 1 |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male |
| Dimensions | 82 x 12 x 6 mm |

## MEA-UWB-LTE-90

**Ultra-Wideband 4G LTE Antenna**

Part #: 100-00139-01

✓ LTE / GSM / CDMA /DCS /PCS / WCDMA / UMTS / HSDPA / GPRS / EDGE /GPS /Wi-Fi ✓ Ultra-Wide Band Antenna ✓ Ground Plane Independent ✓ Hinged 90° termination with SMA(M) Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170MHz |
| Antenna element peak gain | 2.5 / 3.5 dBi |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male |
| Dimensions | 163 x 22 x 7 mm |

## MEA-2700-LTE

**Low Prole LTE Antenna**

Part #: 100-00126-01

Low profile design for easy installation Heavy duty applications Can be used for mobile and fixed base applications Compact housing that makes the antenna ideal for indoor or outdoor applications 698-960/1710-2170/2500-2700 MHz Small size: 22 x 66mm ROHS compliant

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170 MHz 2300-2700 MHz |
| Antenna element peak gain | 3 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N-Female connector |
| Dimensions | 22 x 66mm |

## MEA-3L-SMA

**Cellular/LTE Antenna – Connector Mount**

Part #: 100-00166-01

CELLULAR / LTE frequency Connector Mount Low Profile Wide band Antenna Dimensions 48 x Ø 9 mm Easy integration High performance

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 698-960 MHz | 1710-2170 MHz |
| Efficiency | 62.4% | 62.4% |
| Polarization | Linear | |
| Average gain | -2.1 dB | 2.1 dB |
| Bandwidth | 700/850/900 MHz \| 1700/1800/1900/2100 MHz | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 38 mm |

# MEA-2700-WIFI

**Omni Fiberglass WIFI Antenna**

Part #: 100-00188-01

✓ High Performance ✓ 698-960 MHz &1710-2690 MHz frequency coverage ✓ Wi-Fi band ✓ Omni-directional antenna ✓ IP67 rating ✓ N-jack connector (N-Plug available) ✓ Easy mounting: Pole/ Wall mount

## Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 698-960 MHz | 1710-2170 MHz |
| Antenna element peak gain | 2 dBi | 2 dBi |
| Radiation | Omni-directional | |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount/ N-Jack or N-Plug |
| Dimensions | Ø 49 x 284 mm |

# MEA-698-3800-CM

**Indoor Omnidirectional Antenna**

Part #: 100-00187-01

✓ Wideband Omni antenna ✓ Compact and light weight ✓ Excellent performance ✓ Celling mounting ✓ N-female connector ✓ IP65

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1427-2700MHz<br>3400-3800 MHz |
| Antenna element peak gain | 2.0 ± 0.5 dBi<br>5 ± 1 dBi<br>5 ± 1 dBi |
| Radiation pattern | Omni-directional |

## Key mechanical specifications:

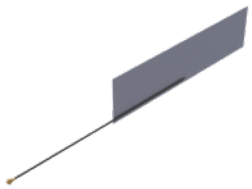
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Celling Mount /SMA Male |
| Dimensions | 80 × 76 × 13 mm |

# MIA-HB-698-2700

**Ultra-Wideband 4G LTE Antenna**

Part #: 100-00160-01

✓ 4G LTE 690MHz – 960MHz | 1710MHz – 2700MHz ✓ Ground plane Independent ✓ High Efficiency across all bands ✓ Flexible embedded antenna



## Key electrical specifications:

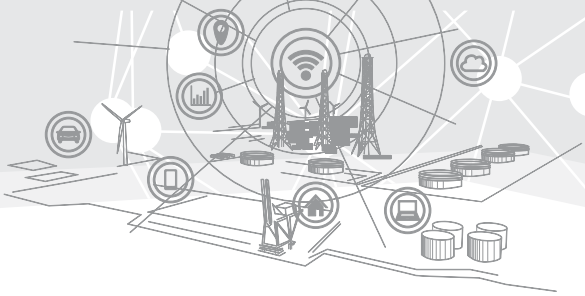
| Parameter | Specification |
|---|---|
| Frequency | 698 MHz ~ 960 MHz<br>1710 MHz ~ 2170 MHz<br>2500 MHz ~ 2700 MHz |
| VSWR | < 3.5 |
| Polarization | Linear |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | U.FL connector |
| Dimensions | 120mm x 30mm |

# WIFI/ Bluetooth/ ZigBee Antennas

# WIFI/ Bluetooth/ ZigBee Antennas



We offer a wide selection of WiFi/ Bluetooth/ISM antennas that operate within the 902-928 MHz, 2.4 GHz and 5.7-5.8 bands and include a wide variety of indoor and outdoor antennas.

ISM antennas are ideal for various installations for IOT, smart metering, digital signage, and industrial monitoring. The antennas are available in several different sizes depending on customer requirements. These antennas can be customized with various cable lengths and connectors upon request. All of our external antennas are IP67 rate which allow for the most environmentally challenging installations.

## Applications

- LBS & M2M applications
- Handheld devices
- Law enforcement
- Vehicle and fleet tracking
- Mining equipment
- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- Embedded applications

## MEA-2700-WIFI

**Omni Fiberglass WIFI Antenna**

Part #: 100-00188-01

✓ High Performance ✓ 698-960 MHz &1710-2690 MHz frequency coverage ✓ Wi-Fi band ✓ Omni-directional antenna ✓ IP67 rating ✓ N-jack connector (N-Plug available) ✓ Easy mounting: Pole/ Wall mount

Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 698-960 MHz | 1710-2170 MHz |
| Antenna element peak gain | 2 dBi | 2 dBi |
| Radiation | Omni-directional | |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount/ N-Jack or N-Plug |
| Dimensions | Ø 49 x 284 mm |

## MEA-2400-UWB-SM

**High Performance 2.4 GHz WIFI Antenna**

Part #: 100-00155-01

✓ Wi-Fi/ISM/ZigBee/WLAN/Bluetooth 2.4GHz frequencies ✓ IP67 rated ✓ High gain & efficiency ✓ Custom cable & connector options

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2483MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

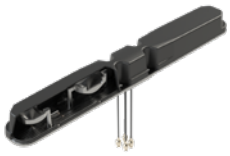
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MAXWAVE

**MAXWAVE™ 4×4 MIMO TRAIN ANTENNA**

Part #: 100-00074-01

✓ 4 antenna elements operating simultaneously from 698 MHz to 6000 MHz ✓ Optional active GPS/GLONASS antenna with integrated surge arrestor ✓ DC grounded antenna elements for protection against lightning and high voltage power supply lines ✓ Versatile Design: Maintains performance when mounted on non-metallic surfaces ✓ Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## NETZ 5IN1

**LTE-MIMO/WIFI-MIMO/GNSS 5in1 Antenna**

Part #: 100-00095-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ An integrated SMA connectors

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561 MHz 1575.42 MHz<br>1602 MHz 698-960 MHz<br>1710-2170 MHz 2300-2690 MHz |
| Antenna element peak gain | 3 dBi Typ. @1561 MHz<br>3 dBi Typ. @1575 MHz<br>3.5 dBi Typ. @1602 MHz<br>4.0 dBi Typ. @698~960 MHz<br>6.0 dBi Typ. @1710~2170 MHz<br>5.0 dBi Typ. @2300~2690 MHz |
| Radiation pattern | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Permanent Mount/ SMA connectors |
| Dimensions | Ø 141.98 x 66.5 mm |

## Netz 5in1-SM

**CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount**

Part #: 100-00177-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.3 dBi 4.3 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 3.0 dB 3.0 dBi |
| Cable3 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.8 dBi 3.0 dBi |
| Cable4 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.6 dBi 3.1 dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23 dB @ 3 V; 24dB @ 5 V |
| Radiation pattern | | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male / SMA-Male RP |
| Dimensions | Ø 96 x 90 mm |

## Netz 5in1-MIMO

**CELLULAR/LTE MIMO and GNSS - Screw mount antenna**

Part #: 100-00177-01

✓ CELLULAR / LTE & GPS/GLONASS/QZSS/frequencies ✓ Galileo frequency range ✓ Easy mounting: Screw Mount ✓ Heavy Duty antenna ✓ High Performance ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 0.2dBi 3.8dBi 6.0dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.1dBi 3.2dBi -5.6dBi |
| Cable3 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.5dBi 3.1dBi 5.0dBi |
| Cable4 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.7dBi 3.0dBi 4.8dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23dB@3V; 24dB@5V |
| Radiation pattern | | Omni-Directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 96 x 90 mm |

## NETZ 4IN1

**4G LTE/Cellular/WIFI and MIMO 4in1 Antenna**

Part #: 100-00142-01

✓ Screw Mount ✓ High Performance ✓ Rated IP67, IP69K and IK09 ✓ Compact Size: 96 x 96 x 94 mm ✓ Custom Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170MHz 2500-2700 MHz |
| Antenna element peak gain | 0.9 dBi 3.3 dBi 4.4 dBi |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 96 x 96 x 94 mm |

## MEA-698-3800-SM

**Low Prole 5G LTE Antenna**

Part #: 100-00132-01

✓ Low profile antenna ✓ Covers large frequencies 698-3800 MHz ✓ ROHS Compliant ✓ High gain for the antenna size ✓ PC + ABC housing ✓ Exceptional performance over the main 4G/5G bands

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Peak gain | 5.5 dBi |
| Radiation pattern | -10 dBi |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 59 x 71mm |

## MEA-UWB-LTE-90

**Ultra-Wideband 4G LTE Antenna**

Part #: 100-00139-01

✓ LTE / GSM / CDMA /DCS /PCS / WCDMA / UMTS / HSDPA / GPRS / EDGE /GPS /Wi-Fi ✓Ultra-Wide Band Antenna ✓ Ground Plane Independent ✓ Hinged 90° termination with SMA(M) Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170MHz |
| Antenna element peak gain | 2.5 / 3.5 dBi |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male |
| Dimensions | 163 x 22 x 7 mm |

## MEA-2400-N

**2.4 GHz WIFI/Bluetooth/ISM Antenna**

Part #: 100-00152-01

✓ 2400-2500 GHz frequency coverage ✓ 2.4GHz Wi-Fi/Bluetooth/ISM band ✓ Omni-directional whip antenna ✓ IP66 rating ✓ SMA connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2.4 ~ 2.5 GHz |
| Antenna element peak gain | 2 ± 1 dBi |
| Radiation pattern | Omni-Directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male connector |
| Dimensions | 9.7 x 80 x 11.7 mm |

## MEA-2400-N

**Ultra-Rugged Dipole Antenna**

Part #: 100-00190-01/02

✓ High Performance ✓ Dual Band 2.4/5 GHz ✓ UV Protected ✓ IP 67 ✓ Low profile antenna ✓ N-Jack or N-Plug ✓ Easy installation: Pole / Wall Mount

Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 2.4 - 2.5 GHz | 4.8 - 6.0GH |
| Antenna element peak gain | 6 dBi | 6 dBi |
| Radiation pattern | Omni-Directional | |

Key mechanical specifications:

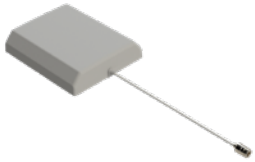
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount / N-Jack or N-Plug |
| Dimensions | Ø 30 x 280 mm (N-Jack)<br>Ø 23 x 255 mm (N-Plug) |

## MEA-1710-WM

**Indoor Omnidirectional Wall mount Antenna**

Part #: 100-00189-01

✓Wideband Omni antenna ✓Compact and light weight ✓ Excellent performance ✓Wall mounting ✓N-female connector ✓IP65



### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 2.4 - 2.5 GHz | 4.8 - 6.0GH |
| Antenna element peak gain | 6 dBi | 6 dBi |
| Radiation pattern | Omni-Directional | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount / N-Jack or N-Plug |
| Dimensions | Ø 30 x 280 mm (N-Jack)<br>Ø 23 x 255 mm (N-Plug) |

## MEA-2500-LTE-MIMO

**CELLULAR/LTE MIMO Screw Mount**

Part #: 100-00211-01

✓ Wide-band antenna ✓Easy mounting: Screw Mount ✓ Anti-rotation mounting ✓ High Performance ✓ Customizable Cable and Connector ✓Dimensions: Ø 60 x 69 mm ✓ IP67, IP69, IK09 ✓Heavy duty antenna.

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| Cable1 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| Cable1 | Antenna element peak | -0.8 dBi | 3.6 dBi | 4.1 dB |
| Cable2 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| Cable2 | Antenna element peak | -0.6 dBi | 2.8 dBi | 3.0 dBi |
| | Radiation pattern | Omni-Directional | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 60 x 69 mm |

## MEA-2500-SM

**CELLULAR/LTE MIMO Screw Mount**

Part #: 100-00212-01

✓CELLULAR / LTE (698-960 MHz, 1710-2170 MHz, and 2500-2700 MHz) ✓ Easy mounting: Screw Mount ✓Ground Plane Independent ✓ Customizable Cable and Connector ✓Low profile : 80 x 74 x 14.7 mm ✓IP67

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| Cable1 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| Cable1 | Antenna element peak | -2.7 dB | -3.0 dB | -5.9 dB |
| Cable2 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| Cable2 | Antenna element peak | 1.4 dBi | 2.2 dBi | 4.4 dBi |
| | Radiation pattern | Omni-Directional | | |

### Key mechanical specifications:

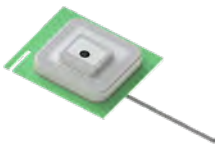
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | 80 x 74 x 14.7 mm |

## MPA-254-WIFI

**WIFI Embedded Antenna – 25mm x 4 mm**

Part #: 189-00055-01

✓2.4GHz & 5.8 GHz Wi-Fi frequency ✓Integrated Ground plane with cable ✓ Easy mounting ✓ Surface Mount ✓ Compact size ✓Advanced Ceramic Material ✓ Terminator using IPEX connector



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2500 MHz<br>5700-5870MH |
| Gain at Zenith | 1.0 dBi typ. |
| Polarization | Linear |

Key mechanical specifications:

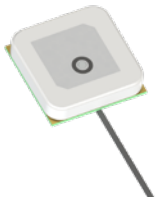
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (U.FL) |
| Dimensions | 25 mm x 25 mm x 4 mm |

## MPA-258-WIFI

**WIFI Embedded Antenna – 25mm x 4.5mm**

Part #: 189-00051-01

✓ 2.4GHz Wi-Fi frequency ✓ Integrated Ground plane with cable ✓Easy mounting ✓ Surface Mount ✓ Compact size ✓ Advanced Ceramic Material ✓Ground Plane Dependent ✓Terminator using IPEX connector ✓Dimensions 25 x 25 x 4.5 mm



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2450 ± 50 MHz |
| Gain at Zenith | > 0.5 dBi |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (MHF) |
| Dimensions | 25 x 25 x 4.5 mm |

## MEA-2400-UWB-SM

**High Performance 2.4 GHz WIFI Antenna**

Part #: 100-00155-01

Wi-Fi/ISM/ZigBee/WLAN/Bluetooth 2.4GHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2483MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-2700-WIFI

**Omni Fiberglass WIFI Antenna**

Part #: 100-00188-01

High Performance 698-960 MHz &1710-2690 MHz frequency coverage Wi-Fi band Omni-directional antenna IP67 rating N-jack connector (N-Plug available) Easy mounting: Pole/ Wall mount

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 698-960 MHz | 1710-2170 MHz |
| Antenna element peak gain | 2 dBi | 2 dBi |
| Radiation | Omni-directional | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount/ N-Jack or N-Plug |
| Dimensions | Ø 49 x 284 mm |

## NETZ 5IN1

**LTE-MIMO/WIFI-MIMO/GNSS 5in1 Antenna**

Part #: 100-00095-01

LTE/Wifi/GNSS frequencies High performance MIMO technology solution A low profile design with easy mounting An integrated SMA connectors

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561 MHz 1575.42 MHz<br>1602 MHz 698-960 MHz<br>1710-2170 MHz 2300-2690 MHz |
| Antenna element peak gain | 3 dBi Typ. @1561 MHz<br>3 dBi Typ. @1575 MHz<br>3.5 dBi Typ. @1602 MHz<br>4.0 dBi Typ. @698~960 MHz<br>6.0 dBi Typ. @1710~2170 MHz<br>5.0 dBi Typ. @2300~2690 MHz |
| Radiation pattern | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Permanent Mount/ SMA connectors |
| Dimensions | Ø 141.98 x 66.5 mm |

## Netz 5in1-SM

**CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount**

Part #: 100-00177-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| Parameter | | Specification | | |
|---|---|---|---|---|
| Cable1 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| | Antenna element peak | -0.9 dBi | 3.3 dBi | 4.3 dB |
| Cable2 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| | Antenna element peak | 1.4 dBi | 3.0 dB | 3.0 dBi |
| Cable3 | Frequency | 2410-2490 MHz | 4920-5925 MHz | |
| | Antenna element peak | 4.8 dBi | 3.0 dBi | |
| Cable4 | Frequency | 2410-2490 MHz | 4920-5925 MHz | |
| | Antenna element peak | 4.6 dBi | 3.1 dBi | |
| Cable5 | Frequency | 1575.42 MHz | 1602 MHz | |
| | Antenna element peak | 23 dB @ 3 V; 24dB @ 5 V | | |
| Radiation pattern | | Omni-directional / Hemispherical | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male / SMA-Male RP |
| Dimensions | Ø 96 x 90 mm |

## MEA-2400-N

**Ultra-Rugged Dipole Antenna**

Part #: 100-00190-01/02

✓ High Performance ✓ Dual Band 2.4/5 GHz ✓ UV Protected ✓ IP 67 ✓ Low profile antenna ✓ N-Jack or N-Plug ✓ Easy installation: Pole / Wall Mount

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 2.4 - 2.5 GHz | 4.8 - 6.0GH |
| Antenna element peak gain | 6 dBi | 6 dBi |
| Radiation pattern | Omni-Directional | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount / N-Jack or N-Plug |
| Dimensions | Ø 30 x 280 mm (N-Jack)<br>Ø 23 x 255 mm (N-Plug) |

## MEA-2400-SMA

**2.4 GHz WIFI/Bluetooth/ISM Antenna**

Part #: 100-00152-01

✓ 2400-2500 GHz frequency coverage ✓ 2.4GHz Wi-Fi/Bluetooth/ISM band ✓ Omni-directional whip antenna ✓ IP66 rating ✓ SMA connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2.4 ~ 2.5 GHz |
| Antenna element peak gain | 2 ± 1 dBi |
| Radiation pattern | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male connector |
| Dimensions | 9.7 x 80 x 11.7 mm |

## MEA-2400-MM

**2.4 GHz ISM Antenna – Magnetic Mount**

Part #: 100-00173-01

✓ 2.4 GHz ISM Band ✓ Magnetic Mount ✓ 3.8 dBi WIFI Peak Gain ✓ Customizable Cable and Connector ✓ Ultra rugged housin ✓ Dimensions Ø 54 × 14.7 mm ✓ IP67, IP69K

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2410-2490 MHz |
| Peak gain | 3.8 dBi |
| Polarization | Linear |
| VSWR | 1.4:1 |

### Key mechanical specifications:

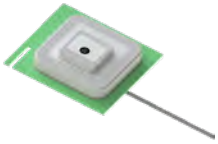
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount / SMA-Male |
| Dimensions | Ø 54 × 14.7 mm |

## MPA-254-WIFI

**WIFI Embedded Antenna – 25mm x 4 mm**

Part #: 189-00055-01

2.4GHz & 5.8 GHz Wi-Fi frequency Integrated Ground plane with cable Easy mounting Surface Mount Compact size Advanced Ceramic Material Terminator using IPEX connector



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2500 MHz<br>5700-5870MH |
| Gain at Zenith | 1.0 dBi typ. |
| Polarization | Linear |

Key mechanical specifications:

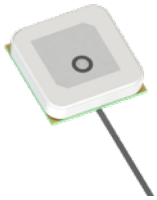
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (U.FL) |
| Dimensions | 25 mm x 25 mm x 4 mm |

## MPA-258-WIFI

**WIFI Embedded Antenna – 25mm x 4.5mm**

Part #: 189-00051-01

2.4GHz Wi-Fi frequency Integrated Ground plane with cable Easy mounting Surface Mount Compact size Advanced Ceramic Material Ground Plane Dependent Terminator using IPEX connector Dimensions 25 x 25 x 4.5 mm



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2450 ± 50 MHz |
| Gain at Zenith | > 0.5 dBi |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (MHF) |
| Dimensions | 25 x 25 x 4.5 mm |

# WIFI Terminal Mount Antennas
## Screw Mount

## MAXWAVE

**MAXWAVE™ 4×4 MIMO TRAIN ANTENNA**

Part #: 100-00074-01

✓ 4 antenna elements operating simultaneously from 698 MHz to 6000 MHz ✓ Optional active GPS/GLONASS antenna with integrated surge arrestor ✓ DC grounded antenna elements for protection against lightning and high voltage power supply lines ✓ Versatile Design: Maintains performance when mounted on non-metallic surfaces ✓ Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## NETZ 4IN1

**4G LTE/Cellular/WIFI and MIMO 4in1 Antenna**

Part #: 100-00142-01

✓ Screw Mount ✓ High Performance ✓ Rated IP67, IP69K and IK09 ✓ Compact Size: 96 x 96 x 94 mm ✓ Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170MHz 2500-2700 MHz |
| Antenna element peak gain | 0.9 dBi 3.3 dBi 4.4 dBi |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 96 x 96 x 94 mm |

## MEA-SW-700-3800

**2G/3G/4G/ISM/WIFI GNSS Antenna**

Part #: 189-00046-01

✓ 2G/3G/4G/ISM/Wi-Fi & GNSS frequency bands ✓ N Type connector & seal ring ✓ IP68 rated / UV protected ✓ Rugged industrial design ✓ Ground plane Independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Antenna element peak gain | 4.0 dB |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ N Type connector |
| Dimensions | Ø 41 x 84 mm |

# MEA-2400-SMA

**2.4 GHz WIFI/Bluetooth/ISM Antenna**

Part #: 100-00152-01

✓ 2400-2500 GHz frequency coverage ✓ 2.4GHz Wi-Fi/Bluetooth/ISM band ✓ Omni-directional whip antenna ✓ IP66 rating ✓ SMA connector

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2.4 ~ 2.5 GHz |
| Antenna element peak gain | 2 ± 1 dBi |
| Radiation pattern | Omni-Directional |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male connector |
| Dimensions | 9.7 x 80 x 11.7 mm |

# MEA-2700-WIFI

**Omni Fiberglass WIFI Antenna**

Part #: 100-00188-01

✓ High Performance ✓ 698-960 MHz &1710-2690 MHz frequency coverage ✓ Wi-Fi band ✓ Omni-directional antenna ✓ IP67 rating ✓ N-jack connector (N-Plug available) ✓ Easy mounting: Pole/ Wall mount

## Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 698-960 MHz | 1710-2170 MHz |
| Antenna element peak gain | 2 dBi | 2 dBi |
| Radiation | Omni-directional | |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Pole / Wall Mount/ N-Jack or N-Plug |
| Dimensions | Ø 49 x 284 mm |

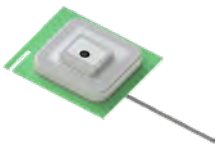
# WIFI Terminal Mount Antennas
## Surface Mount

## MPA-254-WIFI

**WIFI Embedded Antenna – 25mm x 4 mm**

Part #: 189-00055-01

✓2.4GHz & 5.8 GHz Wi-Fi frequency ✓Integrated Ground plane with cable ✓ Easy mounting ✓ Surface Mount ✓ Compact size ✓Advanced Ceramic Material ✓ Terminator using IPEX connector



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2500 MHz<br>5700-5870MH |
| Gain at Zenith | 1.0 dBi typ. |
| Polarization | Linear |

Key mechanical specifications:

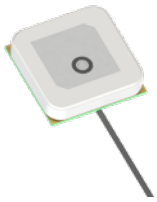
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (U.FL) |
| Dimensions | 25 mm x 25 mm x 4 mm |

## MPA-258-WIFI

**WIFI Embedded Antenna – 25mm x 4.5mm**

Part #: 189-00051-01

✓ 2.4GHz Wi-Fi frequency ✓ Integrated Ground plane with cable ✓Easy mounting ✓ Surface Mount ✓ Compact size ✓ Advanced Ceramic Material ✓Ground Plane Dependent ✓Terminator using IPEX connector ✓Dimensions 25 x 25 x 4.5 mm



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2450 ± 50 MHz |
| Gain at Zenith | > 0.5 dBi |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (MHF) |
| Dimensions | 25 x 25 x 4.5 mm |

# MEA-2400-MM

**2.4 GHz ISM Antenna – Magnetic Mount**

Part #: 100-00173-01

✓ 2.4 GHz ISM Band ✓ Magnetic Mount ✓ 3.8 dBi WIFI Peak Gain ✓ Customizable Cable and Connector ✓ Ultra rugged housin
✓ Dimensions Ø 54 × 14.7 mm ✓ IP67, IP69K

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2410-2490 MHz |
| Peak gain | 3.8 dBi |
| Polarization | Linear |
| VSWR | 1.4:1 |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount / SMA-Male |
| Dimensions | Ø 54 × 14.7 mm |

# MEA-2400-MM

**2.4 GHz ISM Antenna – Magnetic Mount**

Part #: 100-00173-01

✓ 2.4 GHz ISM Band ✓ Magnetic Mount ✓ 3.8 dBi WIFI Peak Gain ✓ Customizable Cable and Connector ✓ Ultra rugged housin
✓ Dimensions Ø 54 × 14.7 mm ✓ IP67, IP69K

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2410-2490 MHz |
| Peak gain | 3.8 dBi |
| Polarization | Linear |
| VSWR | 1.4:1 |

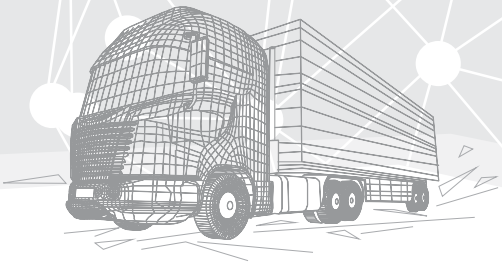
## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnet Mount / SMA-Male |
| Dimensions | Ø 54 × 14.7 mm |

# MIMO Antennas

MAXTENA
WIRELESS INNOVATIONS COMPANY

# LTE MIMO Antennas



Our patented & fully EN 50155 Certified Rail 4x4 MIMO LTE antennas are the most advanced solutions available. They ensure the most optimal data aggregation connectivity by providing outstanding RF performances.

As technology capabilities increase, the world is becoming more connected and so does the demand for a smart, and fastest growing transportation market. Maxtena is the industry leader in developing new antenna technologies for vehicle – to – vehicle (V2V) and vehicle – to – anything (V2X) applications. We have developed cutting edge dedicated short-range communications (DSRC) antennas which are vehicle and DSRC transponder agnostic. All DSRC antennas are available for external and internal automotive applications.

At Maxtena, we offers the most advanced train and rail antennas in rugged, low profile form factors.

## Applications

- Fleet management
- Smart city
- HD video monitoring
- Commercial transport
- Buses, train, and commercial applications
- Wireless LAN

# Discover

## Our best seller

## Netz 5in1, our LTE-MIMO/WIFI MIMO/GNSS 5in1 Antenna

# Netz 5in1

The NETZ 5 in 1 is a MIMO technology solution by Maxtena that combines two LTE antennas, and two WiFi antennas with GNSS. Our 5 in 1 solution is ideal for high data throughput and streaming, video, industrial and IOT applications.

The NETZ 5 in 1 antenna is an omnidirectional, heavy-duty, and waterproof external multi-antenna for use in fleet management, smart cities, and buses, train and commercial transport.

This cutting-edge antenna provides powerful MIMO antenna technology for global coverage LTE and Wi-Fi, plus GPS/GLONASS for constant wireless communication.

It offers a low-profile design with easy mounting and integrated SMA connectors. The antenna is designed with rugged PC+ABS black plastic housing and is ideal for the most demanding environmental challenges.

The standard NETZ 5 in 1 comes with 3 meters RG-174 (GNSS) / CFD-200 (LTE) / CFD-200 (WIFI) and SMA-Male connectors. Cable and connectors are customizable upon request.

### Features

- LTE/Wifi/GNSS frequencies
- High performance
- MIMO technology solution
- A low-profile design with easy mounting
- An integrated SMA connectors

### Suggested Applications include

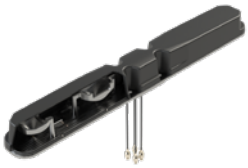
- Fleet management
- Commercial transport
- HD video monitoring
- Buses, train, and commercial application
- Smart city

## MAXWAVE

**MAXWAVE™ 4×4 MIMO TRAIN ANTENNA**

Part #: 100-00074-01

4 antenna elements operating simultaneously from 698 MHz to 6000 MHz Optional active GPS/GLONASS antenna with integrated surge arrestor DC grounded antenna elements for protection against lightning and high voltage power supply lines Versatile Design: Maintains performance when mounted on non-metallic surfaces Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## NETZ 5IN1

**LTE-MIMO/WIFI-MIMO/GNSS 5in1 Antenna**

Part #: 100-00095-01

LTE/Wifi/GNSS frequencies High performance MIMO technology solution A low profile design with easy mounting An integrated SMA connectors

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561 MHz 1575.42 MHz<br>1602 MHz 698-960 MHz<br>1710-2170 MHz 2300-2690 MHz |
| Antenna element peak gain | 3 dBi Typ. @1561 MHz<br>3 dBi Typ. @1575 MHz<br>3.5 dBi Typ. @1602 MHz<br>4.0 dBi Typ. @698~960 MHz<br>6.0 dBi Typ. @1710~2170 MHz<br>5.0 dBi Typ. @2300~2690 MHz |
| Radiation pattern | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Permanent Mount/ SMA connectors |
| Dimensions | Ø 141.98 x 66.5 mm |

## NETZ 4IN1

**4G LTE/Cellular/WIFI and MIMO 4in1 Antenna**

Part #: 100-00142-01

Screw Mount High Performance Rated IP67, IP69K and IK09 Compact Size: 96 x 96 x 94 mm Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170MHz<br>2500-2700 MHz |
| Antenna element peak gain | 0.9 dBi 3.3 dBi 4.4 dBi |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 96 x 96 x 94 mm |

## Netz 5in1-SM

**CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount**

Part #: 100-00177-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.3 dBi 4.3 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 3.0 dB 3.0 dBi |
| Cable3 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.8 dBi 3.0 dBi |
| Cable4 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.6 dBi 3.1 dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23 dB @ 3 V; 24dB @ 5 V |
| Radiation pattern | | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male / SMA-Male RP |
| Dimensions | Ø 96 x 90 mm |

## Netz 5in1-MIMO

**CELLULAR/LTE MIMO and GNSS - Screw mount antenna**

Part #: 100-00177-01

✓ CELLULAR / LTE & GPS/GLONASS/QZSS/frequencies ✓ Galileo frequency range ✓ Easy mounting: Screw Mount ✓ Heavy Duty antenna ✓ High Performance ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 0.2dBi 3.8dBi 6.0dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.1dBi 3.2dBi -5.6dBi |
| Cable3 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.5dBi 3.1dBi 5.0dBi |
| Cable4 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.7dBi 3.0dBi 4.8dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23dB@3V; 24dB@5V |
| Radiation pattern | | Omni-Directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 96 x 90 mm |

# COBRA-LTE700

**LTE MIMO & Active GPS High-Performance Transportation Antenna**

Part #: 100-00036-01

Robust arrow shape housing for easy roof-top alignment MIMO technology One connector for each application; LTE 1, LTE 2 and GPS No ground plane requirements Single-hole mounting with screws on top for easy installation Use of only one multifunction solution

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 690 - 960 MHz<br>1700 - 2200 MHz<br>1575.42 MHz |
| Antenna element peak gain | 4 dBi (typical) |
| Polarization | Linear |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

# MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

High Performance Easy mounting: Screw Mount Ground Plane Independent Low profile: 96 x 96 x 90 mm Customized Cable and Connector

## Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz<br>2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

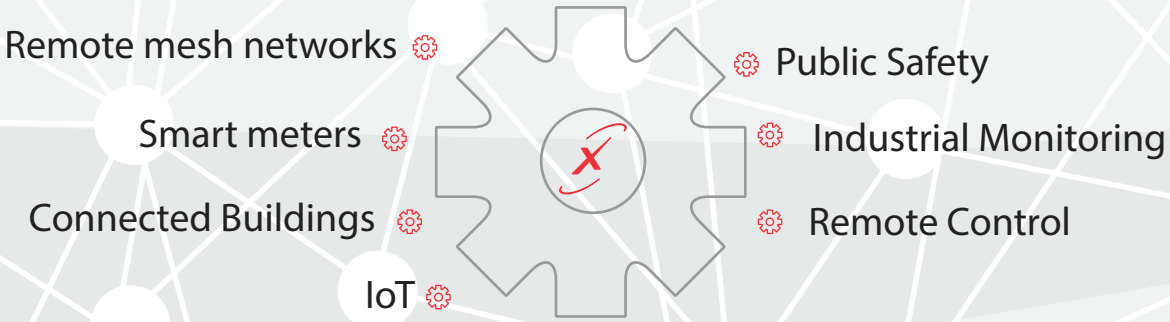
# Sigfox/LoRa/ISM Antennas

# Sigfox/LoRa/ISM Antennas

We offer a wide selection of SigFox/LoRA/ISM antennas that operate within the 902-928 MHz, 2.4 GHz and 5.7-5.8 bands and include a wide variety of indoor and outdoor antennas.

ISM antennas are ideal for various installations for IOT, smart metering, digital signage, and industrial monitoring. The antennas are available in several different sizes depending on customer requirements. These antennas can be customized with various cable lengths and connectors upon request. All of our external antennas are IP67 rate which allow for the most environmentally challenging installations.

## Applications



# Discover

Our best seller

## MEA-868-915-N
## Ultra Rugged Dipole Antenna for SIGFOX/LORA/ISM

# MEA-868-915-N

Maxtena releases the MEA-868-915-N an Ultra Rugged Dipole Antenna for SIGFOX/LORA/ISM applications.

MEA-868-915-N is a heavy duty, omni-directional fiberglass base station antenna for outdoor applications operating at 868MHz – 915MHz ISM band. It is ideal for long-distance coverage. This antenna is fully compatible with Sigfox/ LoRA/ISM standards. The MEA-868-915-N is a dipole antenna which is ideal for various installations for IOT, smart metering, digital signage, and industrial monitoring.

The antenna is supplied with a N-Type connector and is light weight. The UV resistant coated fiberglass housing makes this antenna suitable to be mounted in very challenging robust outdoor environments. It can be connected directly to the access point or can be mounted on the wall or customer device via the N-type connector and a pole-mount and wall-mount bracket is included.

The antenna is IP 65 rated.

### Features

- Suitable to use in Robust Outdoor Environment
- High performance for increased coverage
- UV protected
- Wall & pole mount
- N-Type Connector
- IP 65 rated

### Suggested Applications include

- Smart Metering
- Industrial Monitoring
- Remote Control
- IOT & M2M
- Connected Buildings

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

✓ 2 in 1 antenna: Cellular/LTE & ISM bands ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Low Profile: 80 x 76 x 13 mm ✓ Ground Plane Independent ✓ IP67 ✓ Customizable Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz<br>2500-2700MHz 868MHz<br>915MHz |
| Peak Gain | 0.7 dBi@698-960MHz<br>2.7dBi@1710-2170MHz<br>4.3 dBi@2500-270MHz<br>1.2 dBi@ 868MHz<br>1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-900-W2-SM

**2.4/5.0 GHz & 868/915 MHz ISM - Screw Mount**

Part #: 100-00194-01

✓ 2.4/5.0 GHz ISM ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ IP67, IK09, IP69K ✓ Dimensions Ø 80 × 76 × 13 m

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868 MHz 915 MHz<br>2.4 GHz 5.0 GHz |
| Peak Gain | -0.6 dBi@ 868 MHz<br>-0.2 dBi@915 MHz<br>4.5 dBi@ 2.4 GHz<br>3.9 dBi@5.0 GHz |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 76 × 13 mm |

## MEA-868-01-SMA

**868 MHz ISM- Connector Mount**

Part #: 100-00201-01

✓ Small Form Factor ✓ High Performance ✓ Frequency range 863-870 MHz ✓ Low profile: 9 x 48.0mm ✓ RoHS Compliant ✓ Connector Type: SMA Male

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Antenna element peak gain | -1.2 dB |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | 9 x 48.0mm |

## MEA-868-915-SMA

**High Performance 868-915 MHz ISM Antenna**

Part #: 100-00153-01

✓ Ultra High Performance ✓ LoRa/Sigfox/ ISM Band coverage ✓ ROHS Compliant ✓ Robust Housing IP67 Rated ✓ Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

✓ 868 MHz ISM LoRa band antenna ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low Profile ✓ IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Axial Ratio | -1.4 dB |
| Polarization | Linear |
| VSWR | 1.1:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | SMA Male |
| Cable Type | D302 Standard |
| Dimensions | 80 x 76 x 13 mm |

## MEA-868-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00172-01

✓ 868 MHz ISM - 863-870 MHz ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 50 x 50.8 mm ✓ IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Peak gain | -0.8 dBi |
| Polarization | Linear |
| VSWR | ≤ 1.9:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 50 x 50.8 mm |

## MEA-915-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00171-01

915 MHz ISM Screw Mount Ground Plane Dependent High Performance Low Profile Customizable Cable and Connector Dimensions 80 x 74 x 14.7 mm IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Average gain | -3 dB |
| Polarization | Linear |
| VSWR | 1.5:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male (other available) |
| Dimensions | 80 x 74 x 14.7 mm |

## MEA-698-3800-SM

**Low Prole 5G LTE Antenna**

Part #: 100-00132-01

Low profile antenna Covers large frequencies 698-3800 MHz ROHS Compliant High gain for the antenna size PC + ABC housing Exceptional performance over the main 4G/5G bands

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Peak gain | 5.5 dBi |
| Radiation pattern | -10 dBi |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 59 x 71mm |

## MEA-UWB-LTE-90

**Ultra-Wideband 4G LTE Antenna**

Part #: 100-00139-01

LTE / GSM / CDMA /DCS /PCS / WCDMA / UMTS / HSDPA / GPRS / EDGE /GPS /Wi-Fi Ultra-Wide Band Antenna Ground Plane Independent Hinged 90° termination with SMA(M) Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170MHz |
| Antenna element peak gain | 2.5 / 3.5 dBi |
| Radiation | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male |
| Dimensions | 163 x 22 x 7 mm |

## Netz 5in1-SM

**CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount**

Part #: 100-00177-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.3 dBi 4.3 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 3.0 dB 3.0 dBi |
| Cable3 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.8 dBi 3.0 dBi |
| Cable4 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.6 dBi 3.1 dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23 dB @ 3 V; 24dB @ 5 V |
| Radiation pattern | | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male / SMA-Male RP |
| Dimensions | Ø 96 x 90 mm |

## Netz 5in1-MIMO

**CELLULAR/LTE MIMO and GNSS - Screw mount antenna**

Part #: 100-00177-01

✓ CELLULAR / LTE & GPS/GLONASS/QZSS/frequencies ✓ Galileo frequency range ✓ Easy mounting: Screw Mount ✓ Heavy Duty antenna ✓ High Performance ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 0.2dBi 3.8dBi 6.0dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.1dBi 3.2dBi -5.6dBi |
| Cable3 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.5dBi 3.1dBi 5.0dBi |
| Cable4 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.7dBi 3.0dBi 4.8dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23dB@3V; 24dB@5V |
| Radiation pattern | | Omni-Directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 96 x 90 mm |

## MEA-2700-LTE

**Low Prole LTE Antenna**

Part #: 100-00126-01

Low profile design for easy installation Heavy duty applications Can be used for mobile and fixed base applications Compact housing that makes the antenna ideal for indoor or outdoor applications 698-960/1710-2170/2500-2700 MHz Small size: 22 x 66mm ROHS compliant

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170 MHz 2300-2700 MHz |
| Antenna element peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N-Female connector |
| Dimensions | 22 x 66mm |

## MAXWAVE

**MAXWAVE™ 4×4 MIMO TRAIN ANTENNA**

Part #: 100-00074-01

4 antenna elements operating simultaneously from 698 MHz to 6000 MHz Optional active GPS/GLONASS antenna with integrated surge arrestor DC grounded antenna elements for protection against lightning and high voltage power supply lines Versatile Design: Maintains performance when mounted on non-metallic surfaces Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

Key mechanical specifications:

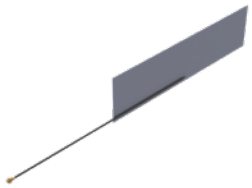
| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## MIA-HB-698-2700

**Ultra-Wideband 4G LTE Antenna**

Part #: 100-00160-01

✓ 4G LTE 690MHz – 960MHz | 1710MHz – 2700MHz ✓ Ground plane Independent ✓ High Efficiency across all bands ✓ Flexible embedded antenna



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698 MHz ~ 960 MHz<br>1710 MHz ~ 2170 MHz<br>2500 MHz ~ 2700 MHz |
| VSWR | < 3.5 |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | U.FL connector |
| Dimensions | 120mm x 30mm |

## MEA-LW2-SM

**External Cellular/LTE, ISM and GNSS Antenna – Screw Mount**

Part #: 189-00061-01

✓ 2in1 antenna: Cellular/LTE and 2.4/5.0GHz ISM ✓ Wide band antenna ✓ Ground Plane Independent ✓ Rugged housing ✓ IP67 rated ✓ IP69 rated ✓ Low profile: 80 x 74 x 43 mm ✓ Anti-Rotation mounting ✓ Customized Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Peak gain | 2.7 dBi<br>5.1 dBi<br>5.3 dBi |
| Radiation pattern | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 43 mm |

## MEA-2700-UWB-SM

**High Performance 4G LTE Antenna**

Part #: 100-00141-01

✓ High Performance ✓ 4G LTE Ultra-Wideband Automotive Antenna ✓ ROHS Compliant ✓ Custom Cable and Connector ✓ Rated IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960/1710-2700 MHz |
| Peak gain | 3 dBi |
| Radiation pattern | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ N-connector |
| Dimensions | Ø 48 x 82 mm |

## MEA-LG-AM

**CELLULAR/LTE and GPS/GLONASS Adhesive Mount**

Part #: 100-00193-01

✓Cable 1: CELLULAR/LTE - 698-960 MHz; 1710-2170 MHz; 2500-2700 MHz / Cable 2: GPS/GLONASS/QZSS/Galileo - 1575-1606 MHz ✓Adhesive Mount ✓Ground Plane Independent ✓Customizable Cable and Connector Dimensions ✓Low profile: 83 x 35 x 13.3 mm ✓IP67, IP69

Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| Cable1 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| | Antenna element peak | -2.7 dB | -3.0 dB | -5.9 dB |
| | Polarization | Linear | | |
| | VSWR | 1.8:1 | 1.3:1 | 2.0:1 |
| Cable2 | Frequency | 1575.42 MHz | 1598-1606 MHz | |
| | Active gain | 28 dB @ 2.7 V | | |
| | Polarization | RHCP | | |
| | VSWR | ≤ 1.4:1 | | |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MEA-LTE3MM-SMA

**CELLULAR / LTE Magnetic Mount**

Part #: 100-00185-01

✓ CELLULAR / LTE - 698-960 MHz 1710-2170 MHz, 2500-2700 MHz ✓Magnetic Mount ✓Rugged design ✓High Performance ✓Customizable Cable and Connector ✓Dimensions Ø 54 x 80 mm ✓IP67, IP69K

Key electrical specifications:

| Parameter | Specification | | |
|---|---|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz | | |
| Antenna element peak gain | -2.6 dB | -2.9 dB | -3.6 dB |
| Radiation | Omni-directional | | |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic Mount / SMA-Male |
| Dimensions | Ø 54 x 80 |

## MEA-3L-SMA

**Cellular/LTE Antenna – Connector Mount**

Part #: 100-00166-01

✓ CELLULAR / LTE frequency ✓Connector Mount ✓Low Profile ✓Wide band Antenna Dimensions 48 x Ø 9 mm ✓ Easy integration ✓High performance

Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 698-960 MHz | 1710-2170 MHz |
| Efficiency | 62.4% | 62.4% |
| Polarization | Linear | |
| Average gain | -2.1 dB | 2.1 dB |
| Bandwidth | 700/850/900 MHz \| 1700/1800/1900/2100 MHz | |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 38 mm |

## MEA-LGG-AM

**Cellular/LTE and GPS/GLONASS Antenna – Adhesive Mount**

Part #: 100-00163-01

✓ 2in 1 antenna (CELLULAR/LTE,GPS/GLONASS/QZSS/Galileo) ✓ Adhesive Mount ✓ High Performance ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions 150.5 x 42 x 15.3 mm ✓ IP67, IP69

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| Cable1 | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| | Antenna element peak | 3.4 dBi | 3.5 dBi | 3.9 dBi |
| | Efficiency | 76% | 69% | 76% |
| | VSWR | 1.7:1 | 1.4:1 | 1.5:1 |
| Cable2 | Frequency | 1575.42 MHz | 1598-1606 MHz | |
| | Active gain | 28 dB @ 2.7 V | | |
| | Polarization | RHCP | | |
| | VSWR | ≤ 1.4:1 | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA-Male |
| Dimensions | 150.5 x 42 x 15.3 mm |

## MEA-3-GGL

**GPS/GLONASS/LTE Antenna & 2G/3G LTE SOLUTION**

Part #: 189-00053-01

✓ Covers GNSS & LTE Bands ✓ 2 in 1 Low Profile Antenna ✓ Rugged IP67 ✓ Customizable Cables and Connectors ✓ Small Size ✓ Easy Magnet Mounting ✓ Quality Textured Covert Design

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| GNSS | Frequency | 1575.42 MHz | | 1602 MHz |
| | Polarization | Linear | | |
| | Polarization | 3.0 dBi Typ. | | 3.5 dBi Typ |
| | VSWR | ≤ 2.0:1 | | |
| LNA | Frequency | 1575.42 MHz | | 1602 MHz |
| | Power Consumption | 9 Typ. mA @3.3V | | |
| | Antenna Gain | 28 dB Typ. / 25 dB Min | | |
| | VSWR | ≤ 2.0:1 | | |
| LTE | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| | Antenna element peak | 1.5 dBi | 0.5 dBi | 0.5 dBi |
| | Efficiency | 25% | 30% | 30% |
| | VSWR | ≤ 5.5 | ≤ 4.0 | ≤ 4.0 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Foam adhesive / SMA, FAKRA or custom |
| Dimensions | (L) 55 x (W) 55 x (H) 20 mm |

## MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

✓ High Performance ✓ Easy mounting: Screw Mount ✓ Ground Plane Independent ✓ Low profile: 96 x 96 x 90 mm ✓ Customized Cable and Connector

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

## NETZ 4IN1

**4G LTE/Cellular/WIFI and MIMO 4in1 Antenna**

Part #: 100-00142-01

✓ Screw Mount ✓ High Performance ✓ Rated IP67, IP69K and IK09 ✓ Compact Size: 96 x 96 x 94 mm ✓ Custom Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170MHz 2500-2700 MHz |
| Antenna element peak gain | 0.9 dBi 3.3 dBi 4.4 dBi |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 96 x 96 x 94 mm |

## MEA-UWB-LTE-90

**Ultra-Wideband 4G LTE Antenna**

Part #: 100-00139-01

✓ LTE / GSM / CDMA /DCS /PCS / WCDMA / UMTS / HSDPA / GPRS / EDGE /GPS /Wi-Fi ✓ Ultra-Wide Band Antenna ✓ Ground Plane Independent ✓ Hinged 90° termination with SMA(M) Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170MHz |
| Antenna element peak gain | 2.5 / 3.5 dBi |
| Radiation | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA Male |
| Dimensions | 163 x 22 x 7 mm |

## MEA-2500-LTE-MIMO

**CELLULAR/LTE MIMO Screw Mount**

Part #: 100-00211-01

✓ Wide-band antenna ✓ Easy mounting: Screw Mount ✓ Anti-rotation mounting ✓ High Performance ✓ Customizable Cable and Connector ✓ Dimensions: Ø 60 x 69 mm ✓ IP67, IP69, IK09 ✓ Heavy duty antenna.

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.8 dBi 3.6 dBi 4.1 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.6 dBi 2.8 dBi 3.0 dBi |
| Radiation pattern | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 60 x 69 mm |

## MEA-2500-SM

**CELLULAR/LTE MIMO Screw Mount**

Part #: 100-00212-01

✓ CELLULAR / LTE (698-960 MHz, 1710-2170 MHz, and 2500-2700 MHz) ✓ Easy mounting: Screw Mount ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low profile : 80 x 74 x 14.7 mm ✓ IP67

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -2.7 dB -3.0 dB -5.9 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 2.2 dBi 4.4 dBi |
| Radiation pattern | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | 80 x 74 x 14.7 mm |

## COBRA-LTE700

**LTE MIMO & Active GPS High-Performance Transportation Antenna**

Part #: 100-00036-01

✓ Robust arrow shape housing for easy roof-top alignment ✓ MIMO technology ✓ One connector for each application; LTE 1, LTE 2 and GPS ✓ No ground plane requirements ✓ Single-hole mounting with screws on top for easy installation ✓ Use of only one multifunction solution

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 690 - 960 MHz<br>1700 - 2200 MHz<br>1575.42 MHz |
| Antenna element peak gain | 4 dBi (typical) |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## MEA-5800-MM

**5GNR Magnetic Mount Antenna**

Part #: 100-00200-01

5GNR Frequency range (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz, 5150-5925 MHz) Easy mounting: Magnetic Mount High Performance Customizable Cable and Connector Low profile: Ø 31 x 109 mm

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz<br>3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 1.0 dBi @ 617-960 MHz<br>2.9 dBi @1427-2690 MHz<br>2.5 dBi @3300-5000 MHz<br>0.4 dBi @5150-5925 MHz |
| Radiation pattern | Omni-Directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 105.1 x 30.1 x 6.7 mm |

## MEA-DSRC-02Z

**External Mount DSRC Antenna**

Part #: 100-00089-01

External mount DSRC antenna for 5850 - 5950MHz Different mounting options available IPX5 SMA & N-Type or customer specified connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 5850 - 5950 MHz |
| Antenna passive peak gain | 5.0 dBi Typ. @ 5850-5950 MHz |
| Impendence | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA / N-Type or customer specied |
| Dimensions | 120 x 120 x 45 mm |

## MEA-DSRC-01P

**External Mount DSRC Antenna**

Part #: Part #: 100-00087-01

External mount DSRC antenna for 5850 - 5950MHz IPX7 SMA &N-Type or customer specified connector Foam Adhesive 30 cm cable length RG-174

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 5850 - 5950 MHz |
| Antenna passive peak gain | 5.0 dBi Typ. @ 2300-2700 MHz |
| Impendence | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA / N-Type or customer specied |
| Dimensions | 105.1 x 30.1 x 6.7 mm |

## MEA-DSRC-03Z

**External Mount DSRC Antenna**

Part #: 100-00088-01

External mount DSRC antenna for 5850 - 5950MHz IPX7 N-Type connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 5850 - 5950 MHz |
| Antenna passive peak gain | 5.0 dBi Typ. @ 2300-2700 MHz |
| Impendence | 50Ω |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N-Type or customer specied |
| Dimensions | Ø 20 x 215 mm |

## MEA-2410-ISM

**2.4/5.0 GHz ISM Screw Mount Antenna**

Part #: 100-00196-01

Screw Mount Anti-Rotation Mechanism Ground Plane Independent Customizable Cable and Connector IP67 IK09 IP69K

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 2410-2490 MHz | 4920-5925 MHz |
| Peak Gain | 2.6 dBi | 4.4 dBi |
| Radiation Pattern | Omni-directional | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ SMA connector |
| Dimensions | Ø 77.3 × 65.5 mm |

## MEA-868-SM-50

**868 MHz ISM Screw Mount**

Part #: 189-00064-01

Screw Mount Low Profile Customized Cable and Connector Dimensions 77.3 × 15 mm IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Peak Gain | -0.8 dBi |
| Radiation Pattern | Omni-directional |

### Key mechanical specifications:

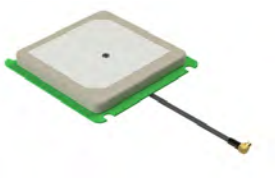
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ SMA connector |
| Dimensions | Ø 77.3 x 15 mm |

## MPA-716-868

**868 MHz ISM PASSIVE PATCH**

Part #: 189-00050-01

868 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865 MHz - 867MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MPA-716-915

**915 MHz ISM PASSIVE PATCH**

Part #: 189-00068-01

915 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz ± 1 MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

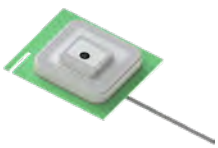
| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MPA-254-WIFI

**WIFI Embedded Antenna – 25mm x 4 mm**

Part #: 189-00055-01

2.4GHz & 5.8 GHz Wi-Fi frequency · Integrated Ground plane with cable · Easy mounting · Surface Mount · Compact size · Advanced Ceramic Material · Terminator using IPEX connector



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2400-2500 MHz<br>5700-5870MH |
| Gain at Zenith | 1.0 dBi typ. |
| Polarization | Linear |

Key mechanical specifications:

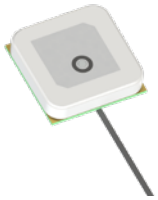
| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (U.FL) |
| Dimensions | 25 mm x 25 mm x 4 mm |

# MPA-258-WIFI

**WIFI Embedded Antenna – 25mm x 4.5mm**

Part #: 189-00051-01

✓ 2.4GHz Wi-Fi frequency ✓ Integrated Ground plane with cable ✓ Easy mounting ✓ Surface Mount ✓ Compact size ✓ Advanced Ceramic Material ✓ Ground Plane Dependent ✓ Terminator using IPEX connector ✓ Dimensions 25 x 25 x 4.5 mm



## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 2450 ± 50 MHz |
| Gain at Zenith | > 0.5 dBi |
| Polarization | Linear |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | I-PEX (MHF) |
| Dimensions | 25 x 25 x 4.5 mm |

## MEA-868-01-SMA

**868 MHz ISM- Connector Mount**

Part #: 100-00201-01

Small Form Factor High Performance Frequency range 863-870 MHz Low profile: 9 x 48.0mm RoHS Compliant Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Antenna element peak gain | -1.2 dB |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-915-01-SMA

**High Eciency 915 MHz ISM Antenna**

Part #: 100-00159-01

Small Form Factor High Performance Frequency range 900 - 1000 MHz Low profile: 9 x 48.0mm RoHS Compliant Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz |
| Antenna element peak gain | 3.3 dBi |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-868-915-SMA

**High Performance 868-915 MHz ISM Antenna**

Part #: 100-00153-01

Ultra High Performance LoRa/Sigfox/ ISM Band coverage ROHS Compliant Robust Housing IP67 Rated Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-868-SM

**High Performance 868 MHz ISM Antenna**

Part #: 100-00154-01

868MHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865-868MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-915-SM

**High Performance 915 MHz ISM Antenna**

Part #: 100-00156-01

915MHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-LGI-SMA

**5GNR & Iridium GNSS Antenna – Screw Mount**

Part #: 189-00059-01

3in1 antenna: 5GNR, Iridium and GNSS Ultra-Wide band antenna High performance Easy mounting: Screw Mount
Anti-Rotation Mounting Optimized for Iridium network Ground Plane Independent Customizable Cable and Connector
Low profile 80 × 74 × 25.6 mm IP69

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 617-960 MHz<br>3300-5000 MHz<br>1616 - 1627 MHz | 1427-2690 MHz<br>5150-5925 MHz<br>1559 - 1608 MHz |
| Antenna element peak gain | 2.3 dBi<br>2.6 dBi<br>5.2 dBic | 5.1 dBi<br>2.7dBi<br>28 dB @ 2.7 V |
| Polarization | Linear | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-868-915-N

**Ultra-Rugged Dipole Antenna**

Part #: 189-00045-01

SigFox/LoRA/ISM (868MHz – 915MHz) High performance for increased coverage UV protected N-Type Connector Rated IP65

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 6 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N - Connector |
| Dimensions | ø 23 x 795mm |

## MEA-LW2-SM

**External Cellular/LTE, ISM and GNSS Antenna – Screw Mount**

Part #: 189-00061-01

2in1 antenna: Cellular/LTE and 2.4/5.0GHz ISM Wide band antenna Ground Plane Independent Rugged housing IP67 rated IP69 rated Low profile: 80 x 74 x 43 mm Anti-Rotation mounting Customized Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Peak gain | 2.7 dBi<br>5.1 dBi<br>5.3 dBi |
| Radiation pattern | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 43 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

868 MHz ISM LoRa band antenna Screw Mount Anti-Rotation Mechanism Ground Plane Independent Customizable Cable and Connector Low Profile IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Axial Ratio | -1.4 dB |
| Polarization | Linear |
| VSWR | 1.1:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | SMA Male |
| Cable Type | D302 Standard |
| Dimensions | 80 x 76 x 13 mm |

## MEA-915-ISM

**915 MHz ISM Screw Mount**

Part #: 100-00184-01

915 MHz ISM LoRa band antenna Screw Mount Anti-Rotation Mechanism Ground Plane Independent Customizable Cable and Connector Low Profile Dimensions Ø 54 x 80 mm IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Axial Ratio | RHCP |
| Polarization | Vertical |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 25.6 mm |

## MEA-868-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00172-01

868 MHz ISM - 863-870 MHz Screw Mount Anti-Rotation Mechanism Ground Plane Independent Customizable Cable and Connector Dimensions: Ø 50 x 50.8 mm IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Peak gain | -0.8 dBi |
| Polarization | Linear |
| VSWR | ≤ 1.9:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 50 x 50.8 mm |

## MEA-915-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00171-01

915 MHz ISM Screw Mount Ground Plane Dependent High Performance Low Profile Customizable Cable and Connector Dimensions 80 x 74 x 14.7 mm IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Average gain | -3 dB |
| Polarization | Linear |
| VSWR | 1.5:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male (other available) |
| Dimensions | 80 x 74 x 14.7 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

915 MHz ISM - 902-928 MHz · LoRa/ Sigfox/ NB-IOT · Screw Mount · Anti-Rotation Mechanism · Ground Plane Independent · Customizable Cable and Connector · Low Profile Dimensions Ø 9 x 48 mm · IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Peak gain | 4.0 dBi |
| Polarization | Linear |
| VSWR | 1.4:1 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

High Performance · Easy mounting: Screw Mount · Ground Plane Independent · Low profile: 96 x 96 x 90 mm · Customized Cable and Connector

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

✓ 2 in 1 antenna: Cellular/LTE & ISM bands ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Low Profile: 80 x 76 x 13 mm ✓ Ground Plane Independent ✓ IP67 ✓ Customizable Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz 2500-2700MHz 868MHz 915MHz |
| Peak Gain | 0.7 dBi@698-960MHz 2.7dBi@1710-2170MHz 4.3 dBi@2500-270MHz 1.2 dBi@ 868MHz 1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-900-W2-SM

**2.4/5.0 GHz & 868/915 MHz ISM - Screw Mount**

Part #: 100-00194-01

✓ 2.4/5.0 GHz ISM ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ IP67, IK09, IP69K ✓ Dimensions Ø 80 × 76 × 13 m

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868 MHz 915 MHz 2.4 GHz 5.0 GHz |
| Peak Gain | -0.6 dBi@ 868 MHz -0.2 dBi@915 MHz 4.5 dBi@ 2.4 GHz 3.9 dBi@5.0 GHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

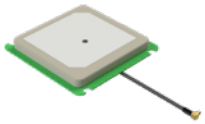
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 76 × 13 mm |

## MPA-716-868

**868 MHz ISM PASSIVE PATCH**

Part #: 189-00050-01

868 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865 MHz - 867MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

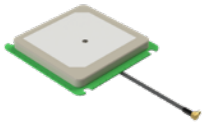
| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MPA-716-915

**915 MHz ISM PASSIVE PATCH**

Part #: 189-00068-01

915 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz ± 1 MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MEA-868-01-SMA

**868 MHz ISM- Connector Mount**

Part #: 100-00201-01

Small Form Factor High Performance Frequency range 863-870 MHz Low profile: 9 x 48.0mm RoHS Compliant Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Antenna element peak gain | -1.2 dB |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-915-01-SMA

**High Eciency 915 MHz ISM Antenna**

Part #: 100-00159-01

Small Form Factor High Performance Frequency range 900 - 1000 MHz Low profile: 9 x 48.0mm RoHS Compliant Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz |
| Antenna element peak gain | 3.3 dBi |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-868-915-SMA

**High Performance 868-915 MHz ISM Antenna**

Part #: 100-00153-01

Ultra High Performance LoRa/Sigfox/ ISM Band coverage ROHS Compliant Robust Housing IP67 Rated Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

# SigFox Antennas
## External

## MEA-868-SM

**High Performance 868 MHz ISM Antenna**

Part #: 100-00154-01

868MHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865-868MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-915-SM

**High Performance 915 MHz ISM Antenna**

Part #: 100-00156-01

915MHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-LGI-SMA

**5GNR & Iridium GNSS Antenna – Screw Mount**

Part #: 189-00059-01

3in1 antenna: 5GNR, Iridium and GNSS Ultra-Wide band antenna High performance Easy mounting: Screw Mount
Anti-Rotation Mounting Optimized for Iridium network Ground Plane Independent Customizable Cable and Connector
Low profile 80 × 74 × 25.6 mm IP69

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 617-960 MHz<br>3300-5000 MHz<br>1616 - 1627 MHz | 1427-2690 MHz<br>5150-5925 MHz<br>1559 - 1608 MHz |
| Antenna element peak gain | 2.3 dBi<br>2.6 dBi<br>5.2 dBic | 5.1 dBi<br>2.7dBi<br>28 dB @ 2.7 V |
| Polarization | Linear | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

# SigFox Antennas
# External

## MEA-868-915-N

**Ultra-Rugged Dipole Antenna**

Part #: 189-00045-01

✓ SigFox/LoRA/ISM (868MHz – 915MHz) ✓ High performance for increased coverage ✓ UV protected ✓ N-Type Connector Rated IP65

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 6 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N - Connector |
| Dimensions | ø 23 x 795mm |

## MEA-LW2-SM

**External Cellular/LTE, ISM and GNSS Antenna – Screw Mount**

Part #: 189-00061-01

✓ 2in1 antenna: Cellular/LTE and 2.4/5.0GHz ISM ✓ Wide band antenna ✓ Ground Plane Independent ✓ Rugged housing ✓ IP67 rated ✓ IP69 rated ✓ Low profile: 80 x 74 x 43 mm ✓ Anti-Rotation mounting ✓ Customized Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Peak gain | 2.7 dBi<br>5.1 dBi<br>5.3 dBi |
| Radiation pattern | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 43 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

✓ 868 MHz ISM LoRa band antenna ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low Profile ✓ IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Axial Ratio | -1.4 dB |
| Polarization | Linear |
| VSWR | 1.1:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | SMA Male |
| Cable Type | D302 Standard |
| Dimensions | 80 x 76 x 13 mm |

## MEA-915-ISM

**915 MHz ISM Screw Mount**

Part #: 100-00184-01

915 MHz ISM LoRa band antenna ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low Profile ✓ Dimensions Ø 54 x 80 mm ✓ IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Axial Ratio | RHCP |
| Polarization | Vertical |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 25.6 mm |

## MEA-868-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00172-01

868 MHz ISM - 863-870 MHz ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 50 x 50.8 mm ✓ IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Peak gain | -0.8 dBi |
| Polarization | Linear |
| VSWR | ≤ 1.9:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 50 x 50.8 mm |

## MEA-915-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00171-01

915 MHz ISM ✓ Screw Mount ✓ Ground Plane Dependent ✓ High Performance ✓ Low Profile ✓ Customizable Cable and Connector Dimensions 80 x 74 x 14.7 mm ✓ IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Average gain | -3 dB |
| Polarization | Linear |
| VSWR | 1.5:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male (other available) |
| Dimensions | 80 x 74 x 14.7 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

915 MHz ISM - 902-928 MHz · LoRa/ Sigfox/ NB-IOT · Screw Mount · Anti-Rotation Mechanism · Ground Plane Independent · Customizable Cable and Connector · Low Profile Dimensions Ø 9 x 48 mm · IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Peak gain | 4.0 dBi |
| Polarization | Linear |
| VSWR | 1.4:1 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

High Performance · Easy mounting: Screw Mount · Ground Plane Independent · Low profile: 96 x 96 x 90 mm · Customized Cable and Connector

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

✓ 2 in 1 antenna: Cellular/LTE & ISM bands ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Low Profile: 80 x 76 x 13 mm ✓ Ground Plane Independent ✓ IP67 ✓ Customizable Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz 2500-2700MHz 868MHz 915MHz |
| Peak Gain | 0.7 dBi@698-960MHz 2.7dBi@1710-2170MHz 4.3 dBi@2500-270MHz 1.2 dBi@ 868MHz 1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-900-W2-SM

**2.4/5.0 GHz & 868/915 MHz ISM - Screw Mount**

Part #: 100-00194-01

✓ 2.4/5.0 GHz ISM ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ IP67, IK09, IP69K ✓ Dimensions Ø 80 × 76 × 13 m

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868 MHz 915 MHz 2.4 GHz 5.0 GHz |
| Peak Gain | -0.6 dBi@ 868 MHz -0.2 dBi@915 MHz 4.5 dBi@ 2.4 GHz 3.9 dBi@5.0 GHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

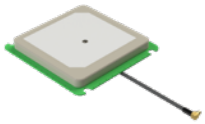
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 76 × 13 mm |

## MPA-716-868

**868 MHz ISM PASSIVE PATCH**

Part #: 189-00050-01

868 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865 MHz - 867MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

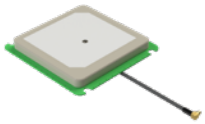
| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MPA-716-915

**915 MHz ISM PASSIVE PATCH**

Part #: 189-00068-01

915 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz ± 1 MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MEA-868-01-SMA

**868 MHz ISM- Connector Mount**

Part #: 100-00201-01

Small Form Factor High Performance Frequency range 863-870 MHz Low profile: 9 x 48.0mm RoHS Compliant Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Antenna element peak gain | -1.2 dB |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-915-01-SMA

**High Eciency 915 MHz ISM Antenna**

Part #: 100-00159-01

Small Form Factor High Performance Frequency range 900 - 1000 MHz Low profile: 9 x 48.0mm RoHS Compliant Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz |
| Antenna element peak gain | 3.3 dBi |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-868-915-SMA

**High Performance 868-915 MHz ISM Antenna**

Part #: 100-00153-01

Ultra High Performance LoRa/Sigfox/ ISM Band coverage ROHS Compliant Robust Housing IP67 Rated Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-868-SM

**High Performance 868 MHz ISM Antenna**

Part #: 100-00154-01

868MHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865-868MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-915-SM

**High Performance 915 MHz ISM Antenna**

Part #: 100-00156-01

915MHz frequencies IP67 rated High gain & efficiency Custom cable & connector options

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-LGI-SMA

**5GNR & Iridium GNSS Antenna – Screw Mount**

Part #: 189-00059-01

3in1 antenna: 5GNR, Iridium and GNSS Ultra-Wide band antenna High performance Easy mounting: Screw Mount
Anti-Rotation Mounting Optimized for Iridium network Ground Plane Independent Customizable Cable and Connector
Low profile 80 × 74 × 25.6 mm IP69

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 617-960 MHz<br>3300-5000 MHz<br>1616 - 1627 MHz | 1427-2690 MHz<br>5150-5925 MHz<br>1559 - 1608 MHz |
| Antenna element peak gain | 2.3 dBi<br>2.6 dBi<br>5.2 dBic | 5.1 dBi<br>2.7dBi<br>28 dB @ 2.7 V |
| Polarization | Linear | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-868-915-N

**Ultra-Rugged Dipole Antenna**

Part #: 189-00045-01

✓ SigFox/LoRA/ISM (868MHz – 915MHz) ✓ High performance for increased coverage ✓ UV protected ✓ N-Type Connector Rated IP65

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 6 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N - Connector |
| Dimensions | ø 23 x 795mm |

## MEA-LW2-SM

**External Cellular/LTE, ISM and GNSS Antenna – Screw Mount**

Part #: 189-00061-01

✓ 2in1 antenna: Cellular/LTE and 2.4/5.0GHz ISM ✓ Wide band antenna ✓ Ground Plane Independent ✓ Rugged housing ✓ IP67 rated ✓ IP69 rated ✓ Low profile: 80 x 74 x 43 mm ✓ Anti-Rotation mounting ✓ Customized Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Peak gain | 2.7 dBi<br>5.1 dBi<br>5.3 dBi |
| Radiation pattern | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 43 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

✓ 868 MHz ISM LoRa band antenna ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low Profile ✓ IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Axial Ratio | -1.4 dB |
| Polarization | Linear |
| VSWR | 1.1:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | SMA Male |
| Cable Type | D302 Standard |
| Dimensions | 80 x 76 x 13 mm |

## MEA-915-ISM

**915 MHz ISM Screw Mount**

Part #: 100-00184-01

915 MHz ISM LoRa band antenna ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low Profile ✓ Dimensions Ø 54 x 80 mm ✓ IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Axial Ratio | RHCP |
| Polarization | Vertical |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 25.6 mm |

## MEA-868-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00172-01

868 MHz ISM - 863-870 MHz ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 50 x 50.8 mm ✓ IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Peak gain | -0.8 dBi |
| Polarization | Linear |
| VSWR | ≤ 1.9:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 50 x 50.8 mm |

## MEA-915-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00171-01

915 MHz ISM ✓ Screw Mount ✓ Ground Plane Dependent ✓ High Performance ✓ Low Profile ✓ Customizable Cable and Connector Dimensions 80 x 74 x 14.7 mm ✓ IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Average gain | -3 dB |
| Polarization | Linear |
| VSWR | 1.5:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male (other available) |
| Dimensions | 80 x 74 x 14.7 mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

915 MHz ISM - 902-928 MHz · LoRa/ Sigfox/ NB-IOT · Screw Mount · Anti-Rotation Mechanism · Ground Plane Independent · Customizable Cable and Connector · Low Profile Dimensions Ø 9 x 48 mm · IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Peak gain | 4.0 dBi |
| Polarization | Linear |
| VSWR | 1.4:1 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

High Performance · Easy mounting: Screw Mount · Ground Plane Independent · Low profile: 96 x 96 x 90 mm · Customized Cable and Connector

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

2 in 1 antenna: Cellular/LTE & ISM bands Ultra-Wide band antenna High performance Easy mounting: Screw Mount Low Profile: 80 x 76 x 13 mm Ground Plane Independent IP67 Customizable Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz 2500-2700MHz 868MHz 915MHz |
| Peak Gain | 0.7 dBi@698-960MHz<br>2.7dBi@1710-2170MHz<br>4.3 dBi@2500-270MHz<br>1.2 dBi@ 868MHz<br>1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-900-W2-SM

**2.4/5.0 GHz & 868/915 MHz ISM - Screw Mount**

Part #: 100-00194-01

2.4/5.0 GHz ISM Screw Mount Anti-Rotation Mechanism Ground Plane Independent Customizable Cable and Connector IP67, IK09, IP69K Dimensions Ø 80 × 76 × 13 m

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868 MHz 915 MHz 2.4 GHz 5.0 GHz |
| Peak Gain | -0.6 dBi@ 868 MHz<br>-0.2 dBi@915 MHz<br>4.5 dBi@ 2.4 GHz<br>3.9 dBi@5.0 GHz |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

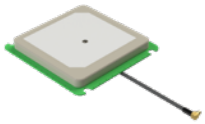
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 76 × 13 mm |

## MPA-716-868

**868 MHz ISM PASSIVE PATCH**

Part #: 189-00050-01

868 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865 MHz - 867MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

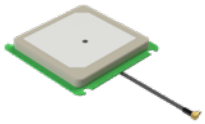
| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MPA-716-915

**915 MHz ISM PASSIVE PATCH**

Part #: 189-00068-01

915 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz ± 1 MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

✓ 2 in 1 antenna: Cellular/LTE & ISM bands ✓ Ultra-Wide band antenna ✓ High performance ✓ Easy mounting: Screw Mount ✓ Low Profile: 80 x 76 x 13 mm ✓ Ground Plane Independent ✓ IP67 ✓ Customizable Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz 2500-2700MHz 868MHz 915MHz |
| Peak Gain | 0.7 dBi@698-960MHz 2.7dBi@1710-2170MHz 4.3 dBi@2500-270MHz 1.2 dBi@ 868MHz 1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-900-W2-SM

**2.4/5.0 GHz & 868/915 MHz ISM - Screw Mount**

Part #: 100-00194-01

✓ 2.4/5.0 GHz ISM ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ IP67, IK09, IP69K ✓ Dimensions Ø 80 × 76 × 13 m

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868 MHz 915 MHz 2.4 GHz 5.0 GHz |
| Peak Gain | -0.6 dBi@ 868 MHz -0.2 dBi@915 MHz 4.5 dBi@ 2.4 GHz 3.9 dBi@5.0 GHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 76 × 13 mm |

## MEA-868-01-SMA

**868 MHz ISM- Connector Mount**

Part #: 100-00201-01

✓ Small Form Factor ✓ High Performance ✓ Frequency range 863-870 MHz ✓ Low profile: 9 x 48.0mm ✓ RoHS Compliant ✓ Connector Type: SMA Male

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Antenna element peak gain | -1.2 dB |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA Male |
| Dimensions | Ø 9 x 48.0mm |

## MEA-868-915-SMA

**High Performance 868-915 MHz ISM Antenna**

Part #: 100-00153-01

✓ Ultra High Performance ✓ LoRa/Sigfox/ ISM Band coverage ✓ ROHS Compliant ✓ Robust Housing IP67 Rated ✓ Custom Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 3 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-868-SM

**High Performance 868 MHz ISM Antenna**

Part #: 100-00154-01

✓868MHz frequencies ✓IP67 rated ✓High gain & efficiency ✓Custom cable & connector options

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865-868MHz |
| Peak gain | 3-5 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 48 x 82 mm |

## MEA-868-915-N

**Ultra-Rugged Dipole Antenna**

Part #: 189-00045-01

✓ SigFox/LoRA/ISM (868MHz – 915MHz) ✓High performance for increased coverage ✓UV protected ✓ N-Type Connector Rated IP65

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868-915 MHz |
| Peak gain | 6 dBi |
| Polarization | Vertical |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N - Connector |
| Dimensions | ø 23 x 795mm |

## MEA-868-ISM

**868 MHz ISM SCREW MOUNT**

Part #: 100-00198-01

868 MHz ISM LoRa band antenna ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Low Profile ✓ IP67, IP69K

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Axial Ratio | -1.4 dB |
| Polarization | Linear |
| VSWR | 1.1:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | SMA Male |
| Cable Type | D302 Standard |
| Dimensions | 80 x 76 x 13 mm |

## MEA-868-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00172-01

868 MHz ISM - 863-870 MHz ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 50 x 50.8 mm ✓ IP67, IP69

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 863-870 MHz |
| Peak gain | -0.8 dBi |
| Polarization | Linear |
| VSWR | ≤ 1.9:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male |
| Dimensions | Ø 50 x 50.8 mm |

## MEA-915-SM-LP

**868 MHz ISM Antenna – Screw Mount**

Part #: 100-00171-01

915 MHz ISM ✓ Screw Mount ✓ Ground Plane Dependent ✓ High Performance ✓ Low Profile ✓ Customizable Cable and Connector Dimensions 80 x 74 x 14.7 mm ✓ IP67

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 902-928 MHz |
| Average gain | -3 dB |
| Polarization | Linear |
| VSWR | 1.5:1 |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA Male (other available) |
| Dimensions | 80 x 74 x 14.7 mm |

# MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

2 in 1 antenna: Cellular/LTE & ISM bands Ultra-Wide band antenna High performance Easy mounting: Screw Mount Low Profile: 80 x 76 x 13 mm Ground Plane Independent IP67 Customizable Cable and Connector

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz 2500-2700MHz 868MHz 915MHz |
| Peak Gain | 0.7 dBi@698-960MHz<br>2.7dBi@1710-2170MHz<br>4.3 dBi@2500-270MHz<br>1.2 dBi@ 868MHz<br>1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

## Key mechanical specifications:

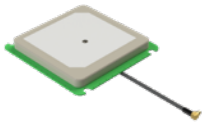
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

## MPA-716-868

**868 MHz ISM PASSIVE PATCH**

Part #: 189-00050-01

868 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 865 MHz - 867MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

Key mechanical specifications:

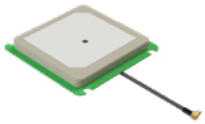
| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MPA-716-915

**915 MHz ISM PASSIVE PATCH**

Part #: 189-00068-01

915 MHz ISM Band · High antenna performance · Low profile · Adhesive mounting · Pin connector · Advanced Ceramic Material



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 915 MHz ± 1 MHz |
| Polarization | RHCP |
| Axial Ratio | ≤ 5 dB |
| VSWR | ≤ 1.5 |

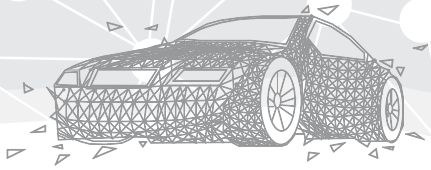
Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

# Transportation Antennas

MAXTENA
WIRELESS INNOVATIONS COMPANY

# Transportation Antennas



Our patented & fully EN 50155 Certified Rail 4x4 MIMO LTE antennas are the most advanced solutions available. They ensure the most optimal data aggregation connectivity by providing outstanding RF performances.

As technology capabilities increase, the world is becoming more connected and so does the demand for a smart, and fastest growing transportation market. Maxtena is the industry leader in developing new antenna technologies for vehicle – to – vehicle (V2V) and vehicle – to – anything (V2X) applications. We have developed cutting edge dedicated short-range communications (DSRC) antennas which are vehicle and DSRC transponder agnostic. All DSRC antennas are available for external and internal automotive applications.

At Maxtena, we offers the most advanced train and rail antennas in rugged, low profileform factors.

## Applications

- LBS & M2M applications
- Handheld devices
- Law enforcement
- Vehicle and eet tracking
- Mining equipment
- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- Embedded applications

# Discover

## **Maxwave**, our exclusive **LTE WIFI MIMO**

## Antenna for Transportation

# MAXWAVE

Maxtena Launches Maxwave™ a LTE/WiFi MIMO Antenna for Transportation
Maxtena designed this antenna to scale in performance and evolve as the train's wireless systems advance, providing reliable high-speed wireless internet to onboard systems. Installing two of the 4×4 Maxwave antennas in the 8×8 configuration will provide high-performance 4×4 technology immediately, and scaling to 8×8 is as simple as installing the new onboard system modems. The antenna is mounted externally on the train's roof and provides a patented omnidirectional coverage that is unmatched by comparable antennas. The antenna's superior isolation maximizes the performance between Maxwave elements as well as other antennas on the train roof while retaining remarkable efficiency.
Maxwave is easy to maintain, install, and upgrade on any train rooftop, and it is designed to be compliant with all US, European, and International Railway Certification Standards. It is also intended to be among the lowest profile, high-performance antennas on the market. Additionally, a single 8×8 model is planned for release which can configure to 16×16 MIMO performance using the same installation methods. Maxwave is perfect for high-speed trains, commuter trains, metro trains, trolleys, and even buses and other mass transit cars, and can be used for freight cars and rail CCTV systems as well.

Maxwave is easy to maintain, install, and upgrade on any train rooftop, and it is designed to be compliant with all US, European, and International Railway Certification Standards. It is also intended to be among the lowest profile, high-performance antennas on the market. Additionally, a single 8×8 model is planned for release which can configure to 16×16 MIMO performance using the same installation methods. Maxwave is perfect for high-speed trains, commuter trains, metro trains, trolleys, and even buses and other mass transit cars, and can be used for freight cars and rail CCTV systems as well.

### Features

- 4 antenna elements operating simultaneously from 698 MHz to 6000 MHz
- Covers all cellular, LTE, WIFI and WiMAX frequency bands
- Optional active GPS/GLONASS antenna with integrated surge arrestor
- DC grounded antenna elements for protection against lightning and high voltage power supply lines and passenger safety
- Versatile Design: Maintains performance when mounted on non-metallic surfaces
- Railway standard compliant design to EN50155 and re retardant design according to EN 45545:2013

### Suggested applications include

- Fleet management
- Commercial transport
- HD video monitoring
- Buses, train, and commercial applications
- Smart city
- And also change products benets to features

## MEA-DSRC-02Z

**External Mount DSRC Antenna**

Part #: 100-00089-01

External mount DSRC antenna for 5850 - 5950MHz  Different mounting options available  IPX5  SMA & N-Type or customer specified connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 5850 - 5950 MHz |
| Antenna passive peak gain | 5.0 dBi Typ. @ 5850-5950 MHz |
| Impendence | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA / N-Type or customer specied |
| Dimensions | 120 x 120 x 45 mm |

## MEA-DSRC-01P

**External Mount DSRC Antenna**

Part #: Part #: 100-00087-01

External mount DSRC antenna for 5850 - 5950MHz  IPX7  SMA &N-Type or customer specified connector  Foam Adhesive  30  cm cable length RG-174

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 5850 - 5950 MHz |
| Antenna passive peak gain | 5.0 dBi Typ. @ 2300-2700 MHz |
| Impendence | 50Ω |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA / N-Type or customer specied |
| Dimensions | 105.1 x 30.1 x 6.7 mm |

## MEA-DSRC-03Z

**External Mount DSRC Antenna**

Part #: 100-00088-01

External mount DSRC antenna for 5850 - 5950MHz  IPX7  N-Type connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 5850 - 5950 MHz |
| Antenna passive peak gain | 5.0 dBi Typ. @ 2300-2700 MHz |
| Impendence | 50Ω |

Key mechanical specifications:

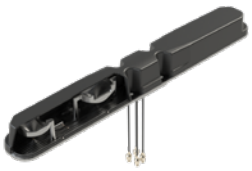
| Parameter | Specification |
|---|---|
| Mounting option / Connector | N-Type or customer specied |
| Dimensions | Ø 20 x 215 mm |

# MAXWAVE

## MAXWAVE™ 4×4 MIMO TRAIN ANTENNA

Part #: 100-00074-01

4 antenna elements operating simultaneously from 698 MHz to 6000 MHz Optional active GPS/GLONASS antenna with integrated surge arrestor DC grounded antenna elements for protection against lightning and high voltage power supply lines Versatile Design: Maintains performance when mounted on non-metallic surfaces Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013



### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

# GPS timing Antennas

# GPS timing Antennas

Our GNSS Timing antennas are state of the art designed and developed rugged solutions which are IP69K rated and vertisile for any installation necessary. The antennas are fully customizable and feature high gain LNA's along with superb filtering capabilities.

Precise time is crucial to a variety of economic activities around the world.
Communication systems, electrical power grids, and financial networks all rely on precision timing for synchronization and operational efficiency. GNSS enables users to determine the time to within 100 billionths of a second, without the cost of owning and operating atomic clocks.

Maxtena has the latest antenna technology and products for professional precisiontiming applications.

## Applications

- Fixed installations
- Military & security
- Timing applications
- Public safety communications
- Positive train control (PTC) networks
- Utility electric grid synchronization

# Explore

Our new release

## MEA-1575-TM-TNC

### For professional precision timing applications

# MEA-1575-TM-TNC

Precise time is crucial to a variety of economic activities around the world. Communication systems, electrical power grids, and financial networks all rely on precision timing for synchronization and operational efficiency. GPS enables users to determine the time to within 100 billionths of a second, without the cost of owning and operating atomic clocks. Maxtena has the latest antenna technology and products for professional precision timing applications. MEA-1575-TM-TNC is a very rugged GPS timing outdoor antenna solution by Maxtena covering GPS L1/GLONASS L1, Beidou B1, Galileo E1, AND QZSS L1 frequency bands. The antenna is ideal for professional precision timing applications. This antenna allows wideband coverage and achieves superior out of band rejection with a high gain of 40dB. The MEA-1575-TM-TNC provides exceptional circular polarized signal reception exceptional multipath rejection and a wide voltage input range of 2.5 to 10 VDC. It ideal for various outdoor GPS Timing installations.

The MEA-1575-TM-TNC is equipped with a TNC female connector and is ideal for any global GNSS time synchronization application that requires an externally mounted antenna. The antenna is designed with rugged waterproof housing (IP67 compliant) and is ideal for the most demanding environmental challenges. It can be mounted through a hole or L-Bracket.

### Features

- High bandwidth for GNSS coverage
- Low VSWR
- High Gain Performance
- High out of band rejection
- Outdoor use
- Designed for harsh environment 40dB LNA Gain
- Wide voltage input range: 2.5 to 10 VDC
- IP67 Compliant
- Filtering RF Jamming environment

### Suggested Applications include

- Timing applications
- Military and security
- Utility electric grid synchronization
- Positive train control (PTC) networks
- Public safety communications
- Fixed installations

# MEA-1575-TM-TNC

**External Mount DSRC Antenna**

External Mount DSRC Antenna

✓ High bandwidth for GNSS coverage: GPS L1/GLONASS L1, Beidou B1, Galileo E1, AND QZSS L1 frequency bands ✓ Low VSWR ✓ High Gain Performance ✓ High out of band rejection ✓ Outdoor use Designed for harsh environment 40dB LNA Gain ✓ Wide voltage input range: 2.5 to 10 VDC ✓ IP67 Compliant ✓ Filtering RF Jamming environment

## Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1559-1606 MHz |
| Antenna element peak gain | 40dBi |
| Impendence | 50Ω |

## Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | A screw mount/<br>TNC female connector<br>Through hole/L-Bracket (not included)<br>Pole mounting via clamp (included) |
| Dimensions | ø 66.5mmx76.4 mm |

# Combination antenna

MAXTENA
WIRELESS INNOVATIONS COMPANY

# Combination antenna

Maxtena's combination antenna include advanced RF technologies all in one configuration like GNSS, LTE, WiFi and ISM. This allows the customers to have increased efficiencies, performances and advantages. The consolidation of antennas leads to more innovative products and excessive cost savings.

Maxtena provides a wide range of multiband antennas starting from 2-in-1 and 3-in-1, to 5-in-1 antennas combination to increase efficiency and coverage while maintaining outstanding isolation specifications.

## Applications

# Explore

## Our new launch **MEA-LWIG-SM**

## 5GNR, 2.4/5.0/6.0 GHz ISM, Iridium & GNSS Antenna

# MEA-LWIG-SM

The MEA-LWIG-SM Screw Mount Antenna is a 4-in-1 low profile antenna solution, with a very high-performance ideal for maintaining constant network connectivity. The MEA-LWIG-SM covers all 5GNR, ISM, Iridium and GPS/GLONASS/QZSS/Galileo standard frequencies. This is an ideal antenna for telematics systems, remote surveillance, asset tracking and any IOT system applications.

The high performance and low profile make this antenna ideal for the most challenging installations.

The 5G NR Antenna (Cable 1) covers frequency range within 5G NR, 4G LTE, 2G, 3G standards. It operates within 617MHz-5925MHz frequency range. The antenna has an omni-directional radiation pattern, and it is ideal for maintaining constant network connectivity.

The 2.4/5.0/6.0 GHz ISM antenna (Cable 2) covers a complete ISM frequency coverage. It operates between 2410MHz-7125 MHz frequency range. The antenna has an omni-directional radiation pattern, and it is ideal for telematics systems, remote surveillance, and asset tracking.

The iridium antenna (Cable 3) covers the Iridium standards. It operates within 1616MHz-1627MHz frequency range. The antenna provides exceptional pattern control, polarization purity and high efficiency. The antenna provides outstanding performance for any Iridium SBD telematics and IOT applications.

The GNSS active antenna (Cable 4) covers the GPS, QZSS, Galileo and GLONASS frequency standards. It operates within 1575.42MHz and 1598MHz–1606MHz frequency range. The antenna has a hemispherical radiation pattern, and it ideal to provide accuracy, and constant connectivity.

This screw mount antenna is easy to install with maximum durability offering IP67 rated housing and anti-rotation mounting. The MEA-LWIG-SM has four cables with a SMA-Male standard connectors, 3m standard cable length and is fully customizable by offering additional connector types, cable lengths and cable types.

### Features

- 4in1 antenna
- Screw Mount
- Anti-Rotation Mechanism
- Customizable Cable and Connector
- Dimensions Ø 146 x 31.5 mm
- IK09
- IP67
- IP69K

### Suggested Applications include

- IoT applications
- Telematic
- Navigation
- Satellite Communications
- LTE applications

# Combination antenna
## Screw mount

## NETZ 4IN1

**4G LTE/Cellular/WIFI and MIMO 4in1 Antenna**

Part #: 100-00142-01

✓ Screw Mount ✓ High Performance ✓ Rated IP67, IP69K and IK09 ✓ Compact Size: 96 x 96 x 94 mm ✓ Custom Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1710-2170MHz 2500-2700 MHz |
| Antenna element peak gain | 0.9 dBi 3.3 dBi 4.4 dBi |
| Radiation pattern | Omni-directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 96 x 96 x 94 mm |

## NETZ 5IN1

**LTE-MIMO/WIFI-MIMO/GNSS 5in1 Antenna**

Part #: 100-00095-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ An integrated SMA connectors

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1561 MHz 1575.42 MHz 1602 MHz 698-960 MHz 1710-2170 MHz 2300-2690 MHz |
| Antenna element peak gain | 3 dBi Typ. @1561 MHz<br>3 dBi Typ. @1575 MHz<br>3.5 dBi Typ. @1602 MHz<br>4.0 dBi Typ. @698~960 MHz<br>6.0 dBi Typ. @1710~2170 MHz<br>5.0 dBi Typ. @2300~2690 MHz |
| Radiation pattern | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Permanent Mount/ SMA connectors |
| Dimensions | Ø 141.98 x 66.5 mm |

# Combination antenna
## Screw mount

## Netz 5in1-SM

**CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS - Screw Mount**

Part #: 100-00177-01

✓ LTE/Wifi/GNSS frequencies ✓ High performance ✓ MIMO technology solution ✓ A low profile design with easy mounting ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.3 dBi 4.3 dB |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 1.4 dBi 3.0 dB 3.0 dBi |
| Cable3 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.8 dBi 3.0 dBi |
| Cable4 | Frequency | 2410-2490 MHz 4920-5925 MHz |
| | Antenna element peak | 4.6 dBi 3.1 dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23 dB @ 3 V; 24dB @ 5 V |
| Radiation pattern | | Omni-directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male / SMA-Male RP |
| Dimensions | Ø 96 x 90 mm |

## Netz 5in1-MIMO

**CELLULAR/LTE MIMO and GNSS - Screw mount antenna**

Part #: 100-00177-01

✓ CELLULAR / LTE & GPS/GLONASS/QZSS/frequencies ✓ Galileo frequency range ✓ Easy mounting: Screw Mount ✓ Heavy Duty antenna ✓ High Performance ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions: Ø 96 x H 90 mm ✓ IP67, IP69, IK09

### Key electrical specifications:

| | Parameter | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | 0.2dBi 3.8dBi 6.0dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.1dBi 3.2dBi -5.6dBi |
| Cable3 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.5dBi 3.1dBi 5.0dBi |
| Cable4 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.7dBi 3.0dBi 4.8dBi |
| Cable5 | Frequency | 1575.42 MHz 1602 MHz |
| | Antenna element peak | 23dB@3V; 24dB@5V |
| Radiation pattern | | Omni-Directional / Hemispherical |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 96 x 90 mm |

# Combination antenna
## Screw mount

## MEA-LGI-SMA

**5GNR & Iridium GNSS Antenna – Screw Mount**

Part #: 189-00059-01

3in1 antenna: 5GNR, Iridium and GNSS Ultra-Wide band antenna High performance Easy mounting: Screw Mount
Anti-Rotation Mounting Optimized for Iridium network Ground Plane Independent Customizable Cable and Connector
Low profile 80 × 74 × 25.6 mm IP69

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 617-960 MHz<br>3300-5000 MHz<br>1616 - 1627 MHz | 1427-2690 MHz<br>5150-5925 MHz<br>1559 - 1608 MHz |
| Antenna element peak gain | 2.3 dBi<br>2.6 dBi<br>5.2 dBic | 5.1 dBi<br>2.7dBi<br>28 dB @ 2.7 V |
| Polarization | Linear | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw on design / SMA male |
| Dimensions | 80 × 74 × 25.6 mm |

## MEA-LW2-SM

**External Cellular/LTE, ISM and GNSS Antenna – Screw Mount**

Part #: 189-00061-01

2in1 antenna: Cellular/LTE and 2.4/5.0GHz ISM Wide band antenna Ground Plane Independent Rugged housing IP67 rated
IP69 rated Low profile: 80 x 74 x 43 mm Anti-Rotation mounting Customized Cable and Connector

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz<br>1710-2170 MHz<br>2500-2700 MHz |
| Peak gain | 2.7 dBi<br>5.1 dBi<br>5.3 dBi |
| Radiation pattern | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male connector |
| Dimensions | 80 x 74 x 43 mm |

# Combination antenna
## Screw mount

## MEA-LTE-MIMO-ISM-SM

**Cellular/LTE MIMO and 915 MHz ISM Screw Mount**

Part #: 100-00203-01

✓ High Performance ✓ Easy mounting: Screw Mount ✓ Ground Plane Independent ✓ Low profile: 96 x 96 x 90 mm ✓ Customized Cable and Connector

### Key electrical specifications:

| Parameter | | Specification |
|---|---|---|
| Cable1 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -1.5 dBi 3.2 dBi 6.5 dBi |
| Cable2 | Frequency | 698-960 MHz 1710-2170 MHz 2500-2700 MHz |
| | Antenna element peak | -0.9 dBi 3.0 dBi 5.0 dBi |
| Cable3 | Frequency | 902-928 MHz |
| | Antenna element peak | 0.2 dBi |
| Bandwidth | | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount/ SMA Male |
| Dimensions | Ø 96 x 90 mm |

## MEA-5GGG-SM

**5GNR and GPS/GLONASS Screw Mount**

Part #: 100-00204-01

✓ 5GNR & GPS/GLONASS/QZSS/Galileo frequency coverage ✓ Easy Mounting: Screw Mount ✓ Anti-Rotation Mechanism ✓ Low Profile ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ Dimensions 80 × 74 × 25.6 mm ✓ IP67, IP69

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960 MHz 1427-2690 MHz 3300-5000 MHz 5150-5925 MHz 1575.42 MHz 1602 MHz |
| Antenna element peak gain | 2.3 dBi@698-960 MHz<br>5.1 dBi@1427-2690 MHz<br>2.6 dBi @3300-5000 MHz<br>2.7 dBi @5150-5925 MHz<br>28dB @ 2.7 V @1575.42 MHz<br>28dB @ 2.7 V @1602 MHz |
| Polarization | Linear |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

# Combination antenna
## Screw mount

## MEA-698-3800-SM

**Low Prole 5G LTE Antenna**

Part #: 100-00132-01

Low profile antenna Covers large frequencies 698-3800 MHz ROHS Compliant High gain for the antenna size PC + ABC housing Exceptional performance over the main 4G/5G bands

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Peak gain | 5.5 dBi |
| Radiation pattern | -10 dBi |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 59 x 71mm |

## MEA-SW-700-3800

**2G/3G/4G/ISM/WIFI GNSS Antenna**

Part #: 189-00046-01

2G/3G/4G/ISM/Wi-Fi & GNSS frequency bands N Type connector & seal ring IP68 rated / UV protected Rugged industrial design Ground plane Independent

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-3800 MHz |
| Antenna element peak gain | 4.0 dB |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ N Type connector |
| Dimensions | Ø 41 x 84 mm |

## MEA-900-L-SM

**868/915 MHz ISM/LTE - Screw Mount**

Part #: 100-00197-01

2 in 1 antenna: Cellular/LTE & ISM bands Ultra-Wide band antenna High performance Easy mounting: Screw Mount Low Profile: 80 x 76 x 13 mm Ground Plane Independent IP67 Customizable Cable and Connector

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 698-960MHz 1710-2170MHz<br>2500-2700MHz 868MHz<br>915MHz |
| Peak Gain | 0.7 dBi@698-960MHz<br>2.7dBi@1710-2170MHz<br>4.3 dBi@2500-270MHz<br>1.2 dBi@ 868MHz<br>1.7 dBi@91MHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 74 × 25.6 mm |

# Combination antenna
## Screw mount

## MEA-900-W2-SM

**2.4/5.0 GHz & 868/915 MHz ISM - Screw Mount**

Part #: 100-00194-01

✓ 2.4/5.0 GHz ISM ✓ Screw Mount ✓ Anti-Rotation Mechanism ✓ Ground Plane Independent ✓ Customizable Cable and Connector ✓ IP67, IK09, IP69K ✓ Dimensions Ø 80 × 76 × 13 m

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 868 MHz 915 MHz<br>2.4 GHz 5.0 GHz |
| Peak Gain | -0.6 dBi@ 868 MHz<br>-0.2 dBi@915 MHz<br>4.5 dBi@ 2.4 GHz<br>3.9 dBi@5.0 GHz |
| Radiation pattern | Omni-directional |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount / SMA-Male |
| Dimensions | 80 × 76 × 13 mm |

## COBRA-LTE700

**LTE MIMO & Active GPS High-Performance Transportation Antenna**

Part #: 100-00036-01

✓ Robust arrow shape housing for easy roof-top alignment ✓ MIMO technology ✓ One connector for each application; LTE 1, LTE 2 and GPS ✓ No ground plane requirements ✓ Single-hole mounting with screws on top for easy installation ✓ Use of only one multifunction solution

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 690 - 960 MHz<br>1700 - 2200 MHz<br>1575.42 MHz |
| Antenna element peak gain | 4 dBi (typical) |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

## MAXWAVE

**MAXWAVE™ 4×4 MIMO TRAIN ANTENNA**

Part #: 100-00074-01

✓ 4 antenna elements operating simultaneously from 698 MHz to 6000 MHz ✓ Optional active GPS/GLONASS antenna with integrated surge arrestor ✓ DC grounded antenna elements for protection against lightning and high voltage power supply lines ✓ Versatile Design: Maintains performance when mounted on non-metallic surfaces ✓ Railway standard compliant to EN50155 and fire retardant according to EN 45545:2013

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 4 × 698 – 6000 MHz |
| Pattern | Omnidirectional |
| Polarization | Linear |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | N/A |
| Dimensions | 166 x 200 x 88 mm |

# Combination antenna
## Screw mount

## MEA-2500-LTE-MIMO

**CELLULAR/LTE MIMO Screw Mount**

Part #: 100-00211-01

Wide-band antenna Easy mounting: Screw Mount Anti-rotation mounting High Performance Customizable Cable and Connector Dimensions: Ø 60 x 69 mm IP67, IP69, IK09 Heavy duty antenna.

### Key electrical specifications:

| Parameter | | Specification | | |
|---|---|---|---|---|
| Cable1 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| | Antenna element peak | -0.8 dBi | 3.6 dBi | 4.1 dB |
| Cable2 | Frequency | 698-960 MHz<br>2500-2700 MHz | 1710-2170 MHz | |
| | Antenna element peak | -0.6 dBi | 2.8 dBi | 3.0 dBi |
| Radiation pattern | | Omni-Directional | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw mount / SMA-Male |
| Dimensions | Ø 60 x 69 mm |

## MEA-2410-ISM

**2.4/5.0 GHz ISM Screw Mount Antenna**

Part #: 100-00196-01

Screw Mount Anti-Rotation Mechanism Ground Plane Independent Customizable Cable and Connector IP67 IK09 IP69K

### Key electrical specifications:

| Parameter | Specification | |
|---|---|---|
| Frequency | 2410-2490 MHz | 4920-5925 MHz |
| Peak Gain | 2.6 dBi | 4.4 dBi |
| Radiation Pattern | Omni-directional | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Screw Mount/ SMA connector |
| Dimensions | Ø 77.3 x 65.5 mm |

# Combination antenna
# Magnetic Mount

## M9706CWT

**L1/L2 GPS GLONASS Active Multi-Frequency Antenna – External**

Part #: 100-00090-01

Low profile design Concurrent GNSS reception on L1: GPS , GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, and GLONASS L3OC Rugged IP67 rating Small form factor GIS, RTK and other high accuracy GNSS applications Low power consumption Minimal phase center variation over azimuth and elevation Negligible group delay variation Automotive grade housing

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1) |
| Realized gain | 2.6 dB 3.3 dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, SMB or MCX (customer's choice) |
| Dimensions | 75mm x 70mm x 23 mm |

## M9708CWT

**L1/L2/L5 GPS GLONASS Active Multi-Frequency Antenna – External**

Part #: 108-00060-02

Low profile design Concurrent GNSS reception on L1: GPS , GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, and GLONASS L3OC Rugged IP67 rating Small form factor GIS, RTK and other high accuracy GNSS applications Low power consumption Minimal phase center variation over azimuth and elevation Negligible group delay variation Automotive grade housing

Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1)<br>1164-1189 MHz (L5, E5A) |
| Realized gain | 2.6 dB<br>3.3 dB<br>-2dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith<br>Max 3 dB at the Zenith |

Key mechanical specifications:

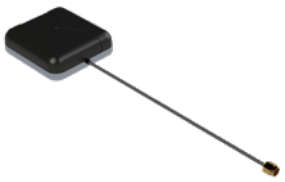
| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, SMB or MCX connector |
| Dimensions | 75mm x 70mm x 23 mm |

## M1593CWT

**L1/L2/L5 GPS GLONASS + L-Band- Active Multi-Frequency Antenna – External**

Part #: 100-00191-01

Small form factor GIS, RTK and other high accuracy GNSS applications Low Power Consumption Minimal phase center variation over azimuth and elevation Negligible group delay variation Automotive grade housing



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 197-1249 MHz<br>1559-1606 MHz<br>1539 - 1559 MHz |
| Realized gain | 2.6 dB @1197-1249 MHz<br>3.3 dB @1559-1606 MHz<br>1.5 dB @1539 - 1559 MHz |
| Polarization | RHCP |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Magnetic base, fixed installation option/<br>SMA, SMB, MCX |
| Dimensions | 75mm x 70mm x 23 mm |

# Combination antenna
## Magnetic Mount

## M1559CWT

**L1 GPS GLONASS Active Multi-Frequency Antenna – External**

Part #: 100-00118-01

Concurrent GNSS reception on L1: GPS, GLONASS, Galileo, Beidou Low profile design Rugged IP67 rating Small form factor Low power consumption Minimal phase center variation over azimuth and elevation Negligible group delay variation Automotive grade

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1559-1610 MHz (L1, E1, B1, B1-2, G1) |
| Realized gain | 3.3 dB |
| Axial Ratio | Max 2.7 dB at the Zenith |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA, SMB, MCX (customer choice) |
| Dimensions | 75mm x 70mm x 23 mm |

## MEA-5800-MM

**5GNR Magnetic Mount Antenna**

Part #: 100-00200-01

5GNR Frequency range (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz, 5150-5925 MHz) Easy mounting: Magnetic Mount High Performance Customizable Cable and Connector Low profile: Ø 31 x 109 mm

### Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 617-960MHz 1427-2690MHz 3300-5000MHz 5150-5925MHz |
| Antenna element peak gain | 1.0 dBi @ 617-960 MHz<br>2.9 dBi @1427-2690 MHz<br>2.5 dBi @3300-5000 MHz<br>0.4 dBi @5150-5925 MHz |
| Radiation pattern | Omni-Directional |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | SMA-Male |
| Dimensions | 105.1 x 30.1 x 6.7 mm |

# Combination antenna
# Adhesive Mount

## MEA-LG-AM

**CELLULAR/LTE and GPS/GLONASS Adhesive Mount**

Part #: 100-00193-01

✓Cable 1: CELLULAR/LTE - 698-960 MHz; 1710-2170 MHz; 2500-2700 MHz / Cable 2: GPS/GLONASS/QZSS/Galileo - 1575-1606 MHz
✓Adhesive Mount ✓Ground Plane Independent ✓Customizable Cable and Connector Dimensions ✓Low profile: 83 x 35 x 13.3 mm
✓IP67, IP69

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| Cable1 | Antenna element peak | -2.7 dB | -3.0 dB | -5.9 dB |
| Cable1 | Polarization | Linear | | |
| Cable1 | VSWR | 1.8:1 | 1.3:1 | 2.0:1 |
| Cable2 | Frequency | 1575.42 MHz | 1598-1606 MHz | |
| Cable2 | Active gain | 28 dB @ 2.7 V | | |
| Cable2 | Polarization | RHCP | | |
| Cable2 | VSWR | ≤ 1.4:1 | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Connector | MMCX(MALE) |
| Cable Type | RG178 |
| Dimensions | 82 x 80 x 6.6 mm |

## MEA-LGG-AM

**Cellular/LTE and GPS/GLONASS Antenna – Adhesive Mount**

Part #: 100-00163-01

✓ 2in 1 antenna (CELLULAR/LTE,GPS/GLONASS/QZSS/Galileo) ✓Adhesive Mount ✓High Performance ✓Ground Plane Independent
✓ Customizable Cable and Connector ✓ Dimensions 150.5 x 42 x 15.3 mm ✓ IP67, IP69

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| Cable1 | Antenna element peak | 3.4 dBi | 3.5 dBi | 3.9 dBi |
| Cable1 | Efficiency | 76% | 69% | 76% |
| Cable1 | VSWR | 1.7:1 | 1.4:1 | 1.5:1 |
| Cable2 | Frequency | 1575.42 MHz | 1598-1606 MHz | |
| Cable2 | Active gain | 28 dB @ 2.7 V | | |
| Cable2 | Polarization | RHCP | | |
| Cable2 | VSWR | ≤ 1.4:1 | | |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Connector Mount / SMA-Male |
| Dimensions | 150.5 x 42 x 15.3 mm |

# Combination antenna
## Adhesive Mount

## MEA-3-GGL

**GPS/GLONASS/LTE Antenna & 2G/3G LTE SOLUTION**

Part #: 189-00053-01

✓Covers GNSS & LTE Bands ✓ 2 in 1 Low Profile Antenna ✓Rugged IP67 ✓Customizable Cables and Connectors ✓Small Size ✓Easy Magnet Mounting ✓ Quality Textured Covert Design

### Key electrical specifications:

| | Parameter | Specification | | |
|---|---|---|---|---|
| GNSS | Frequency | 1575.42 MHz | | 1602 MHz |
| | Polarization | Linear | | |
| | Polarization | 3.0 dBi Typ. | | 3.5 dBi Typ |
| | VSWR | ≤ 2.0:1 | | |
| LNA | Frequency | 1575.42 MHz | | 1602 MHz |
| | Power Consumption | 9 Typ. mA @3.3V | | |
| | Antenna Gain | 28 dB Typ. / 25 dB Min | | |
| | VSWR | ≤ 2.0:1 | | |
| LTE | Frequency | 698-960 MHz | 1710-2170 MHz | 2500-2700 MHz |
| | Antenna element peak | 1.5 dBi | 0.5 dBi | 0.5 dBi |
| | Efficiency | 25% | 30% | 30% |
| | VSWR | ≤ 5.5 | ≤ 4.0 | ≤ 4.0 |

### Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Foam adhesive / SMA, FAKRA or custom |
| Dimensions | (L) 55 x (W) 55 x (H) 20 mm |

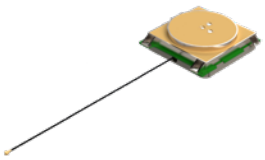
# Combination antenna
# Embedded

## M9706CWT-UFL

**L1/L2 GPS GLONASS Active Multi-Frequency Antenna – Embedded**

Part #: 108-00060-02

✓ Concurrent GNSS reception on L1: GPS, GLONASS, Galileo, Beidou and ✓ L2: GPS L2C, Galileo E5B, GLONASS L30C, and L2 OF ✓ Low profile design ✓ Conformal materials ✓ Full active design with superb filtering ✓ Small form factor ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low power consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1) |
| Realized gain | 2.6 dB 3.3 dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith |

Key mechanical specifications:

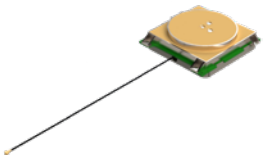
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 65mm x 65mm x 17 mm |

## M9708CWT-UFL

**L1/L2/L5 GPS GLONASS Active Multi-Frequency Antenna – Embedded**

Part #: 108-00060-02

✓ Low profile design ✓ Concurrent GNSS reception on L1: GPS GLONASS, Galileo, Beidou and L2: GPS L2C, Galileo E5B, and GLONASS L3OC ✓ Small form factor ✓ GIS, RTK and other high accuracy GNSS Applications ✓ Low power consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation ✓ Custom tuned to applications enclosure



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz (L2, B2, G2, G3, E5B)<br>1559-1606 MHz (L1, E1, B1, B1-2, G1)<br>1164-1189 MHz (L5, E5A) |
| Realized gain | 2.6 dB<br>3.3 dB<br>-2dB |
| Axial Ratio | Max 1.5 dB at the Zenith<br>Max 2.7 dB at the Zenith<br>Max 3 dB at the Zenith |

Key mechanical specifications:

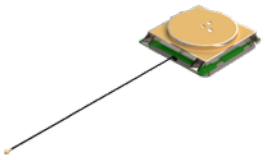
| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded |
| Dimensions | 65mm x 65mm x 17 mm |

## M1593CWT-UFL

**L1/L2/L5 GPS GLONASS + L-Band- Active Multi-Frequency Antenna – Embedded**

Part #: 108-00083-01

✓ Small form factor ✓ GIS, RTK and other high accuracy GNSS applications ✓ Low Power Consumption ✓ Minimal phase center variation over azimuth and elevation ✓ Negligible group delay variation ✓ Automotive grade housing



Key electrical specifications:

| Parameter | Specification |
|---|---|
| Frequency | 1197-1249 MHz<br>1559-1606 MHz<br>1539 - 1559 MHz |
| Realized gain | 2.6 dB<br>3.3 dB<br>1.5 dB |
| Noise figure | ≤ 2 dB |

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Mounting option / Connector | Embedded/ U.FL |
| Dimensions | 65mm x 65mm x 17 mm |

# Cable Options & Connectors

## Our standard connectors

SMA-Male
SMA-Female
SMA-Male Right Angle
SMA-Female Right Angle
SMA-Male Reverse Polarity
SMA-Female Reverse Polarity
SMA-Male Reverse Polarity Right angle
SMA-Female Bulkhead
MCX-Male
MCX-Female
MCX-Male Right Angle
MCX-Female Right Angle
MMCX

F-Male
F-Female
N-Male
N-Female
N-Female Bulkhead
SMB-Male
SMB-Female
TNC-Male
TNC-Female
TNC-Male RP
TNC-Female Bulkhead

SMC-Male
SMC-Female
SMC-Male Right Angle
SMC-Female Bulkhead
BNC-Male
BNC-Female
FAKRA all types
U.FL

## Cable list

RG174
RX174
RG174HF
RG174LL
RG174TWIN
RG178
RG223
RG316
RG58
RG6
LL100
LL195

Enviroflex 316
D
H155
D100
D302
Microcoax 0.81
Microcoax 1.13
Microcoax 1.32
Microcoax 1.37

## SMA Male

SMA Male with LMR 100

## U.FL connector

U.FL with Microcoax 1.13

## TNC connector

TNC straight with LMR 100

## MCX Right angle connector

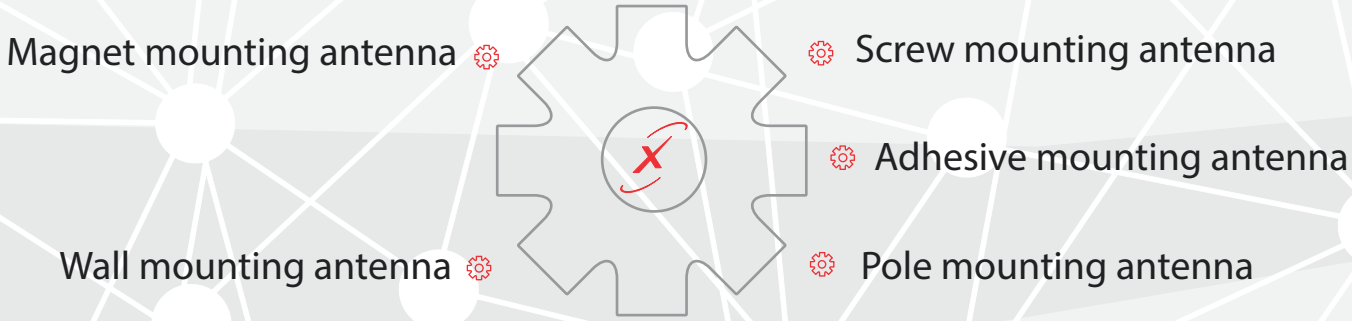
MCX Right angle with RG 174

# Accessories

# Accessories

Maxtena oers a high variety of antenna accessories including mounting brackets, RF cables and connectors. Custom solutions are available upon request.

## Applications

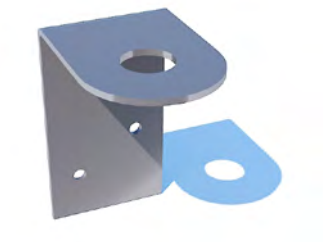


## MMB-01-11-P

**Wall Mount Bracket**

Part #: 311-00052-01

✓ Easy to mount ✓ Wall mount Antenna ✓ Very light: 30g ✓ ROHS Compliant ✓ Screws included ✓ Robust design



Key mechanical specifications:

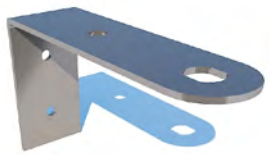
| Parameter | Specification |
|---|---|
| Material | Aluminum |
| M4 Screw Material | Zn - Fe |
| Weight | 30g |
| Operating environment | -40 °C to +85 °C |

## MMB-01-12-P

**Wall Mount Bracket**

Part #: 311-00052-01

✓ Easy to mount ✓ Wall mount Antenna ✓ Very light: 30g ✓ ROHS Compliant ✓ Screws included ✓ Robust design



Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Material | Aluminum |
| M4 Screw Material | Zn - Fe |
| Weight | 30g |
| Operating environment | -40 °C to +85 °C |

## MMB-04-17-SM

**Magnetic/Adhesive Mount Bracket With SMA (Female) Connector**

Part #: 105-00008-01

✓ Screw mount bracket with cable and SMA F connector ✓ Gasket suitable for all types of flat surface ✓ Suitable for various connector types ✓ Equipped with RG174 or LL100 cable ✓ Possible frequency transfer up to 6 GHz ✓ Robust construction ✓ Mounting hole 19 mm/square 15x15 mm

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Material | ASA - UV stable |
| Dimensions | Ø 60 x 25 mm |
| Weight | 103g |
| Cable type | RG174 or LL100 cable |
| Operating environment | -40 °C to +85 °C |

## MMB-04-18-SM

**Screw mount bracket with cable and SMA F connector**

Part #: 105-00012-01

Screw mount bracket with cable and SMA F connector Gasket suitable for all types of flat surface Suitable for various connector types Equipped with D302 cable High efficiency Possible frequency transfer up to 6 GHz Robust construction Mounting hole 19 mm/square 15x15 mm

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Material | ASA - UV stable |
| Dimensions | Ø 60 x 25 mm |
| Weight | 115g |
| Cable type | D302 cable |
| Operating environment | -40 °C to +85 °C |

## MMB-04-19-MM

**Magnetic/Adhesive Mount Bracket With SMA (Female) Connector**

Part #: 105-00009-01

Screw mount bracket with cable and SMA F connector Gasket suitable for all types of flat surface Suitable for various connector types Equipped with D302 cable High efficiency Possible frequency transfer up to 6 GHz Robust construction Mounting hole 19 mm/square 15x15 mm

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | Ø 59 x 24 mm |
| Cable type | RG174 or LL100 cable |

## MMB-04-20-AM

**Magnetic/Adhesive Mount Bracket with SMA (Female) Connector**

Part #: 105-00013-01

Gasket suitable for all types of flat surface Suitable for various connector mount antenna Equipped with D302 cable Possible frequency transfer up to 6 GHz Robust construction Strong magnet for metal surface Mounting hole 19 mm/square 15x15 mm

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | Ø 54 x 24 mm |
| Cable type | D302 cable |

## MMB-04-21-AM

**Magnetic/Adhesive Mount Bracket with SMA (Female) Connector**

Part #: 105-00010-01

✓ Suitable for connector mount antenna ✓ Equipped with RG174 or LL100 cable ✓ Possible frequency transfer up to 6 GHz ✓ Robust construction ✓ Strong magnet for metal surface ✓ Mounting hole 19 mm / square 15x15 mm ✓ Double side adhesive sticker included

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | Ø 54 x 24 mm |
| Cable type | RG174 or LL100 |

## MB-04-23-AM

**Magnetic/Adhesive Mount Bracket with SMA (Female) Connector**

Part #: 105-00014-01

✓ Suitable for magnetic/Adhesive surface ✓ Suitable for connector mount antenna ✓ Equipped with D302 cable ✓ Possible frequency transfer up to 6 GHz ✓ Robust construction ✓ Strong magnet for metal surface ✓ Double side adhesive sticker included ✓ Mounting hole 19 mm/square 15x15 mm

Key mechanical specifications:

| Parameter | Specification |
|---|---|
| Dimensions | Ø 54 x 24 mm |
| Cable type | RG174 or LL100 |

# Maxtena's Three-Phase Process for Embedded Antennas

Maxtena is the leader in the design and manufacturing of high performance, light weight antennas for use in a variety of portable wireless applications including satellite phones, military radios, handheld navigation, GPS tracking, recreational devices and laptop computers. Maxtena produces both external antennas that come in a range of plastic housings as well as embedded antennas. The embedded antennas are custom built to sit perfectly in the application's own housing.

## Phase 1

Upon agreement between Maxtena and the customer that an embedded antenna is the best solution a two-way Non-Disclosure Agreement is executed so both parties can share design information. After the NDA is executed, a Maxtena Program Manager will schedule a call between Maxtena's engineering team and the Customer.

Prior to the meeting the customer should provide CAD data in a suitable exchange format (such as STEP) for review by the Maxtena engineering team.

The purpose of the meeting is for Maxtena to understand the customer's requirements and to provide the customer with design guidance for their housing to ensure the final design will achieve the best overall antenna performance. A wide range of housing design elements can and will affect the performance of an embedded antenna and addressing these items early in the design phase can reduce the overall time required for development. Antenna placement, PCB spacing, material thickness, resin selection and resin additives are just some of the design elements where Maxtena will provide guidance.

At the conclusion of the meeting Maxtena will develop and submit a proposal detailing the breakdown of tasks, the schedule, Maxtena and customer deliverables, required engineering resources, and the total project cost. Upon review and acceptance of this proposal by the customer, and submission of a Non-Recurring Engineering (NRE) Purchase Order, Maxtena will assign resources to undertake the project.

## Phase 2

After the customer has incorporated Maxtena's design guidelines into the mechanical design, a new CAD database is sent to Maxtena. Maxtena's engineers will import this design into simulation software and conduct an analysis of the design to identify the expected antenna performance and provide feedback to the customer on changes they can make to the housing to ensure optimal antenna performance.

Once the customer incorporates any modifications into its design, Maxtena orders a small quantity (usually 2 to 4) of machined prototypes using the latest design. At the same time, Maxtena manufactures an equal number of antennas to be used with the new housing prototypes. The prototype assemblies are then tested by Maxtena's engineers using Maxtena's in-house near field anechoic chamber to verify the design achieves the expected results. Typically, the chamber testing confirms the results of the simulation and the customer can have tooling made for the fabrication of production parts. In rare cases, minor changes are required to the housing design before the tooling can be ordered.

Once initial chamber testing is completed Maxtena will provide a written report documenting the results. Maxtena will also schedule the manufacture of a small number of antennas, usually 20 to 30, to be used for testing when the final housings are available.

## Phase 3

When the first parts are made from the tooling, the customer sends a small number of parts to Maxtena (typically 20 to 30) for final testing in the anechoic chamber. Maxtena's engineering team will test all of the units to get a broader sample and to confirm the performance will be repeatedly achieved across a production lot. Once the testing is complete Maxtena will provide the customer a final written report documenting the test results.

Maxtena will then begin production of the antennas in accordance with the customer's orders and/or forecast.

## *The Business Result*

*As a result of Maxtena's embedded antenna design process, companies are rapidly deploying products with consistent and reliable performance. This process involves substantial communication and collaboration between Maxtena and the customer and serves to cement a strong working relationship on both a business and technical basis. This interchange also serves to educate the customer on key characteristics that affect antenna performance and avoid making future design changes. Maxtena's Program Manager continues to be the customers advocate within Maxtena to ensure a smooth transition to manufacturing and to respond to any issues that may arise.*

# Quality, shipping & lead time

## Quality

We work hard to provide customers with the very best products. We strive to provide best-in-class quality and reliability in each and every product we manufacture. We have developed a systematic approach to assure the quality of our products from development to prototyping to product qualification to manufacturing. We have selected strategic partners who meet the ISO management system standards to ensure we deliver the best quality products to our customers.
Every product manufactured is individually tested on the production line using proprietary software developed by Maxtena for quality assurance.

## Shipping

We sell our products globally and use strategically picked distribution partners to shorten lead times, as well as to provide excellent on-time customer support. Shipping of sample products Sample quantities for all of Maxtena's products are available for purchase and will ship from our headquarters in Rockville, Maryland, USA or from an authorized distributor. For a complete list of Maxtena authorized distributors please visit: http://www.maxtena.com/distributors.

## Lead time

The lead time for all Maxtena products is 8-10 weeks ARO, unless the product is in-stock and available o-the-shelf, in which case product(s) will ship immediately. Customers placing purchase orders (PO) will be quoted a lead time based on product availability before the PO is accepted and processed. Any custom tuned or custom-built antenna requires the sale of service ahead of the sale of antennas, such as feasibility studies, prototyping, and chamber measurement.

# Worldwide Distributors

To serve our customers internationally, Maxtena has established trusted distribution partners who are able to assist with product recommendations and purchases..

## Global Distributors

**Mouser Electronics**

Selling Territory: Global
Website: www.mouser.com

**Farnell – Electronic Component Distributor**

Selling Territory: Global
Website: www.farnell.com

**Richardson RFPD**

Selling Territory: Global
Address:
40W267 Keslinger Road LaFox, IL 60147 – USA

## North America

**Braemac USA**

Selling Territory: United States
Address:
43134 Osgood Road Fremont, CA 94539 – USA
Phone: 877-272-3622
Contact: Sid Batra
Email: sid@braemacca.com
Website: www.braemacca.com

**Mouser Electronics**

Selling Territory: Global
Website: www.mouser.com

## Europe

**Innovelec Solutions Limited**

Selling Territory: Northern Europe
Address:
8 Progression Centre, Mark Road Hemel Hempstead, Herts, HP2 7DW – United Kingdom Phone: +44 (0)1442 573035
Contact: Martin Newman
Email: maxtena@innovelec.co.uk
Website: www.innovelec.co.uk

**Microdis AG**

Selling Territory: Eastern Europe
Address:
Locations across Eastern and Western Europe
Phone: +48-22-8103666
Contact: Mariusz Ciesielski
Email: mariusz.ciesielski@micro-dis.net
Website: www.microdis.net

**PPM GmbH**

Selling Territory: Germany, Austria, Switzerland
Address:
ppM Precise Positioning Management GmbH, Grube 39a D-82377 Penzberg – Germany
Phone: 00 49/ 88 56 – 80 30 980
Contact: Stefan Geissler
Email: s.geissler@ppmgmbh.com
Website: http://www.ppmgmbh.com

**Diltronic SAS**

Selling Territory: France, Belgium
Address:
3 avenue du Val
78100 Saint Germain en Laye – France
Phone: +33 (0) 1 34 51 33 00
Contact: Stephane Gramfort
Email: info@diltronic.com Website: http://www.diltronic.com

**Matrix Electronica**

Selling Territory: Spain
Address:
Alejandro Sanchez, 109 28019 Madrid
Phone: +34 91 560 27 37
Contact: Cristobal Garcia
Email: cristobalgarcia@matrix.es
Website: http://www.matrix.es

**SE Spezial-Electronic GmbH**

Selling Territory: Germany
Address:
Friedrich-Bach-Straße 1,
31675 Bückeburg, Germany
Phone: +49 5722 2030
Contact: Johannes Lange
Email: johannes_lange@spezial.com
website: www.spezial.com

# Worldwide Distributors

## Australia

### M2M Connectivity Ltd

Selling Territory: Australia, New Zealand
Address:
1 Barret Street
Kensington VIC 3031 – Australia
Phone: +61 3 9696 3011
Contact: Daryl Chambers
Email: daryl.chambers@m2mconnectivity.com.au
Website: http://www.m2mconnectivity.com.au

### Step Global

Selling Territory: Australia, New Zealand
Address:
Unit 7, 444 Warrigal Road
Heatherton, VIC 3202 – Australia
Phone: +61 3 9551 7334
Contact: David Lloyd
Email: david.lloyd@stepglobal.com
Website: http://www.stepglobal.com
Website: http://www.m2mconnectivity.com.au

## Asia

### V-3 Novus

Selling Territory: India
Address:
No.38, 1st Main, S.N. layout, Opp
TATA Nagar, Kodegehalli Main Road
Bangalore 560092 – India
Phone: +9180 23624347
Contact: Hemnath HD
Email: hemnath.hd@v3novus.com
Website: http://www.v3novus.com

### AmTechs Corporation

Selling Territory: Japan
Address:
5-20-16, Kyodo, Setagayaku
Tokyo, 156-0052 – Japan
Phone: +81-3-5450-5311 Fax
+81-3-5450-5312
Email: info@amtechs.co.jp
Website: http://www.amtechs.co.jp

### Mouser Electronics

Selling Territory: Global
Website: www.mouser.com

### Richardson RFPD

Selling Territory: Global
Address:
40W267 Keslinger Road LaFox, IL 60147 – USA

### Farnell – Electronic Component Distributor

Selling Territory: Global
Website: www.farnell.com

## Israel

### A.N. Security & Technology Consultation Ltd.

Selling Territory: Israel
Address:
7 Habonim St. Area Poleg, P.O.B. 8232
Netanya, 42504 – Israel
Phone: +972-50-3339333
Email: alah@an-cons.com

# Notes

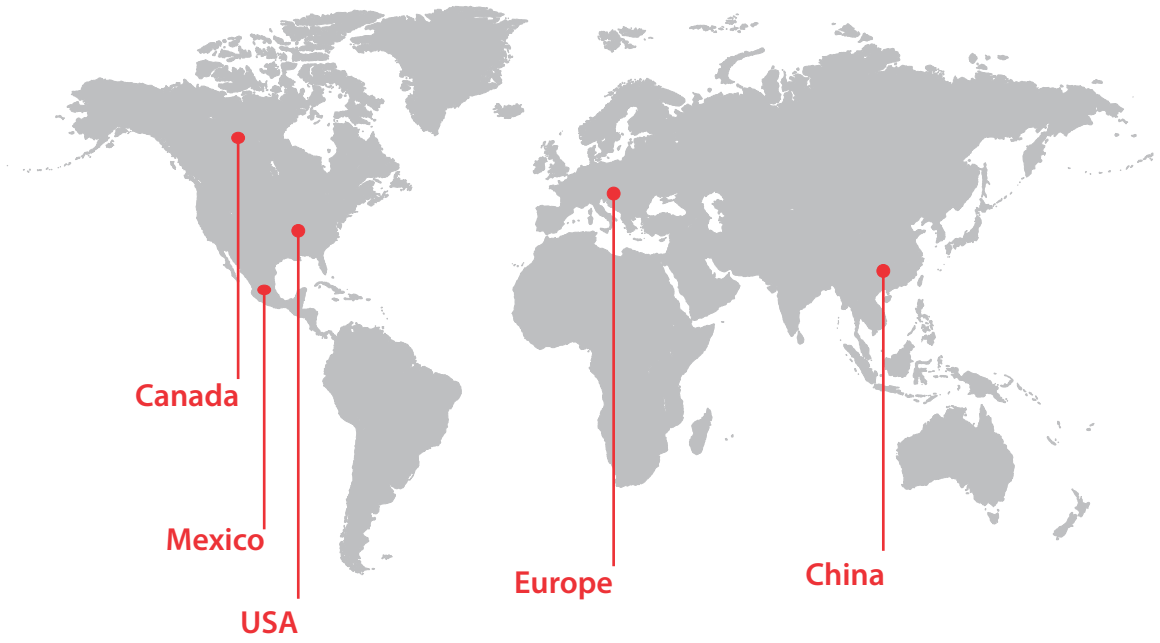
# Notes

# Offices & Contact

**7 offices worldwide**

**100+** Employees

**15** years in Business

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Facebook.com/Maxtena.inc
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