



# MEA-2170-GNSS-SM

## CELLULAR/LTE AND GNSS SCREW MOUNT

Part #: 100-00256-01

### Description

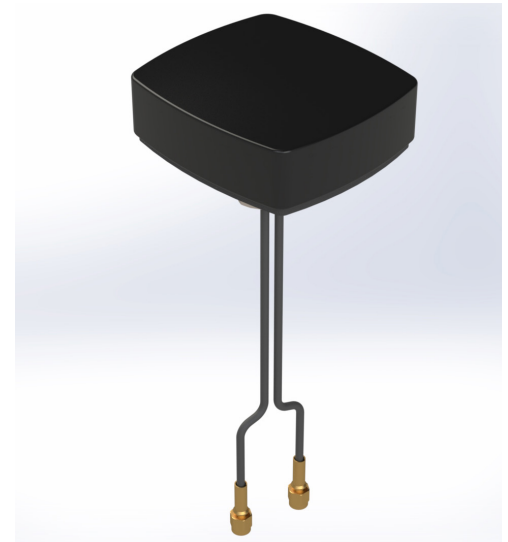
The MEA-2170-GNSS-SM is a 2-in-1 antenna that combines high performance Cellular/LTE, and GNSS standard frequency. The antenna's excellent radiation pattern, exceptional out-of-band rejection, and low noise figure ensures optimal performance of GNSS systems. It features a 2 m cable with an integrated SMA, SMB, or MCX connector (customer choice). This low profile screw mount is ideal for public safety, utilities tracking, and IOT applications. This antenna offers a ultra-low profile design with easy mounting and customizable cables and connector options.

The antenna is designed with rugged ABC UV black housing and is ideal for the most demanding environmental challenges. The MEA-2170-GNSS-SM is IP67 rated.

### Electrical Specifications

Cable 1 - Cellular/LTE Antenna

Parameter	Specification		
Standards	2G,3G and 4G		
Frequency (MHz)	698-960	1710-2170	2500-2700
Return Loss (dB)	~ -9.3	~ -6.8	~ -19.9
VSWR	~ 2.1:1	~ 2.7:1	~ 1.3:1
Efficiency (%)	~ 45.9	~ 50.3	~ 64.1
Peak Gain (dBi)	~ 2.7	~ 5.1	~ 5.3
Average Gain (dB)	~ -3.8	~ -3.2	~ -1.9
Impedance ( $\Omega$ )	50		
Polarization	Linear		
Radiation Pattern	Omni-Directional		
Max Input Power (W)	25		
Connector Type	SMA-Male (other connectors available)		
Cable Length	200 cm (custom length available)		
Cable Type	D302 (other cable type available)		



### Features

- 2 in 1 antenna: CELLULAR / LTE, and GPS/GLONASS/QZSS/Galileo
- Easy mounting: screw mount
- Anti-rotation mechanism
- Customizable cable and connector
- IP67
- IK09
- IP69K

### Applications

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- IoT & M2M applications
- Automotive
- Telematics

## Electrical Specifications

Cable 2 - GPS GLONASS Antenna

Parameter	Specification	
Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency (MHz)	1575.42	1598-1610
Patch Size (mm)	25 x 25 x4	
Return Loss (dB)	<= -15	
VSWR (dB)	<= 1.4:1	
Impedance ( $\Omega$ )	50	
Radiation Pattern	Hemispherical	
Polarization	RHCP	
Saw Filter	Pre-filter	
Active Gain (dB)	28 @ 2.7 V	
Noise Figure (dB)	1.5 typ	
Voltage (V)	1.5 - 3.6	
Current (mA)	9 typ	
Power Consumption (mW)	24.3 typ	
ESD Protection (kV)	2kV	
Connector Type	SMA-Male (other connectors available)	
Cable Length (m)	200 cm (custom length available)	
Cable Type	D100 (other cable type available)	

## Antenna Measurement Conditions:

Mounted on metal plate of 30 x 30 cm

200 cm of cable D302

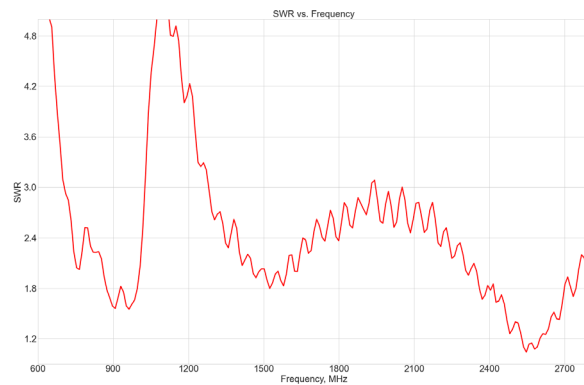
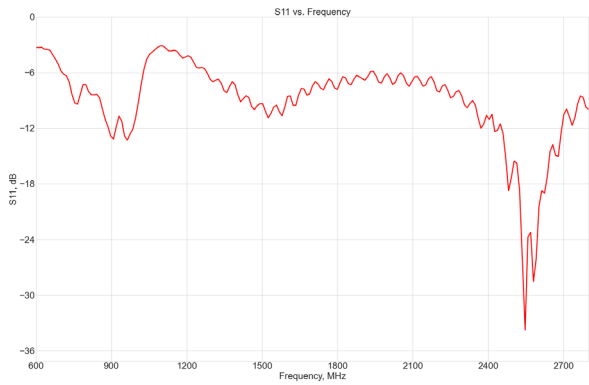
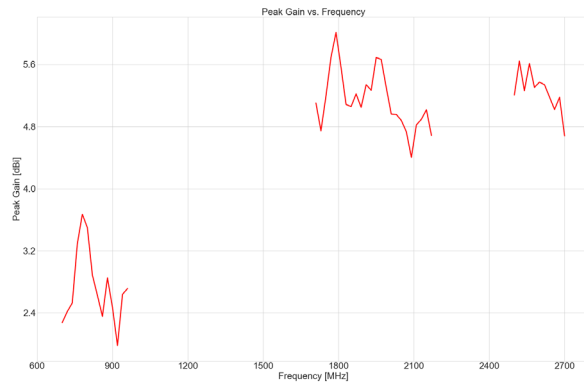
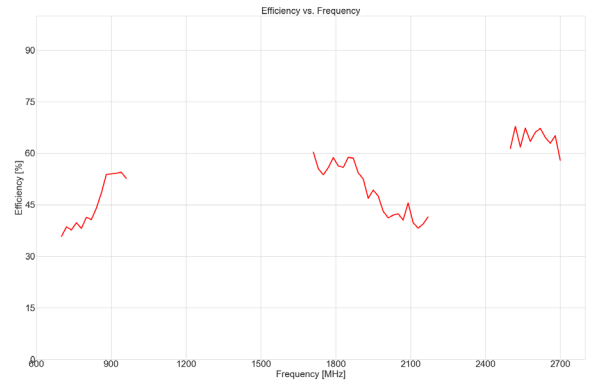
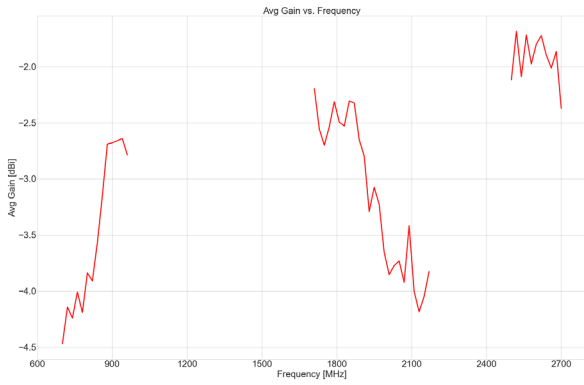
Measured in certified CTIA 3D anechoic chamber

## Mechanical and Environmental Specifications

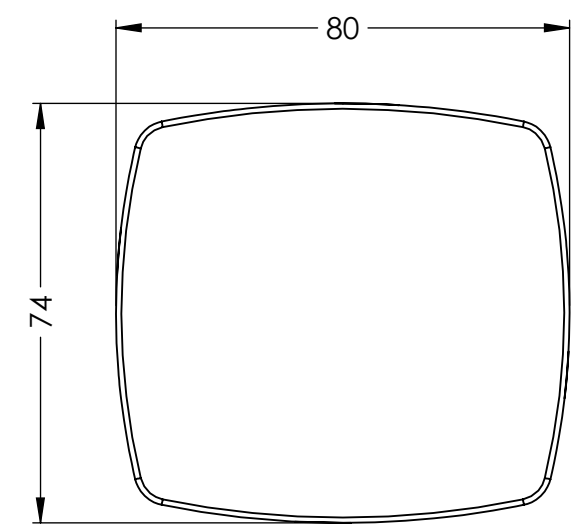
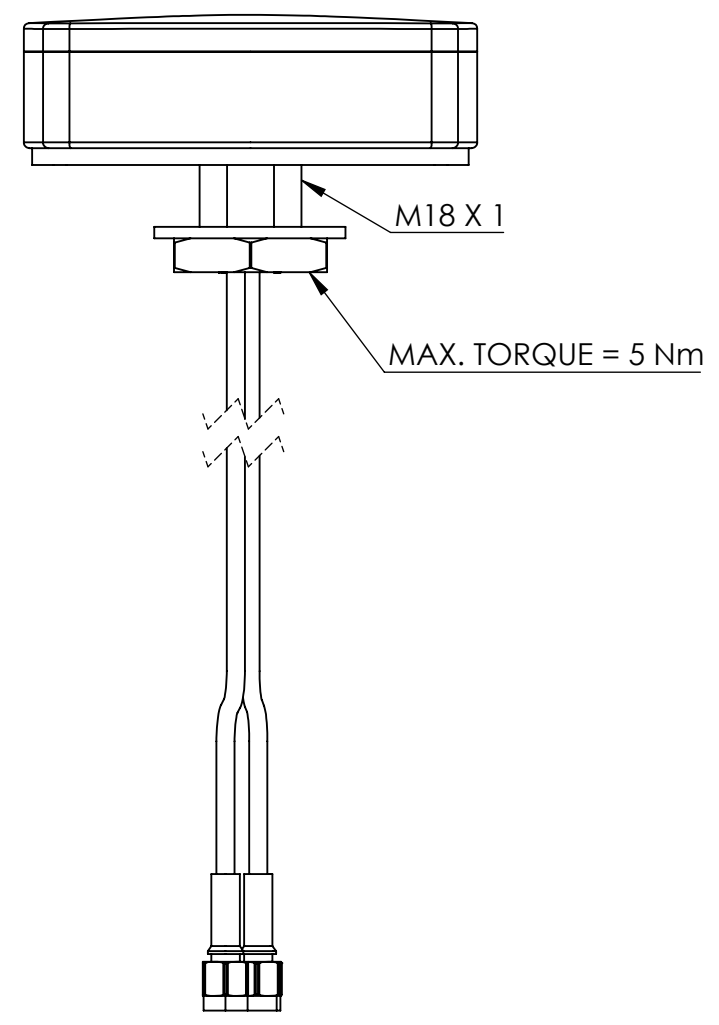
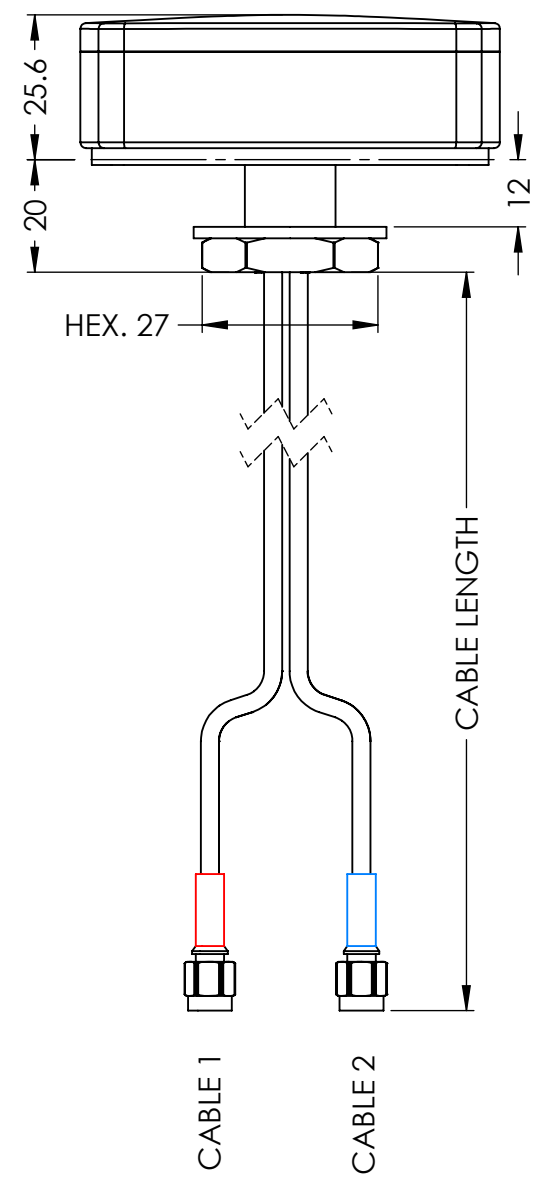
Parameter	Specification
Mounting Type	Screw Mount
Dimensions (mm)	80 x 74 x 25.6
Weight (g)	140
Max. Tighten Torque (Nm)	5 Nm
Radome Type	ASA UV Stable
Radome Color	Black, White
Operating Temperature (C)	-40 to +85°
Storage Temperature (C)	-40 to +85°
Protection	IP67, IP69
Substance Compliance	RoHS

# Radiation Performance

## MEA-2170-GNSS-SM

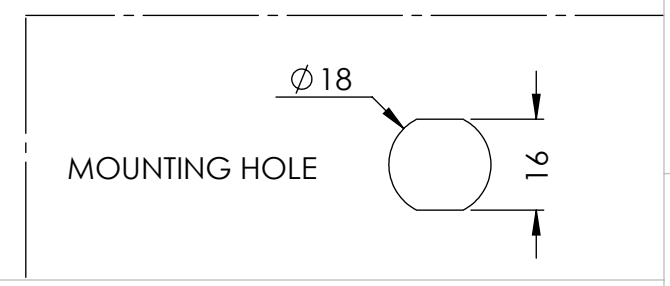


DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2022-02-25	JET



NOTES:

- FREQUENCY:  
 CABLE 1 ( 2G, 3G, 4G ): 698-960 MHz, 1710-2170 MHz, 2500-2700 MHz  
 CABLE 2 ( GPS/QZSS/GALILEO, GLONASS ): 1575.42 MHz, 1598-1606 MHz
- DIMENSIONS ARE AFTER MOUNTING
- CUSTOMIZABLE CABLE AND CONNECTOR TYPE
- MOUNTING TYPE: SCREW MOUNT
- MAX. MOUNTING THICKNESS: 12 mm
- MATERIALS:
  - RADOME: ASA UV STABLE
  - RADOME COLOR: BLACK or WHITE
- OPERATING TEMPERATURE: -40° C ~ +85° C
- STORAGE TEMPERATURE: -40° C ~ +85° C
- CERTIFICATION: IP67, IP69



ITEM 100-00256 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2022-02-25	JET

100-00256 CONFIGURATION TABLE				
DASH NO	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE	RADOME COLOR
-01	CABLE 1: D302 CABLE 2: D100	200 CM 200 CM	SMA-MALE GOLD SMA-MALE GOLD	BLACK

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DIMENSIONS ARE IN MM	DRAWN	JET 2022-02-25
TOLERANCES:	CHECKED	ZX 2022-02-25
FRACTIONAL ±	ENG APPR.	NPC 2022-02-25
ANGULAR: MACH ± .5° BEND ±	MFG APPR.	
ONE PLACE DECIMAL ± 1.0	Q.A.	
TWO PLACE DECIMAL ± .50		
INTERPRET GEOMETRIC TOLERANCING PER:		
	CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.	
THIRD ANGLE PROJECTION		
DO NOT SCALE DRAWING		

MAXTENA, INC		
TITLE: 100-00256 MEA-2170-GNSS-SM		
SIZE <b>B</b>	DWG. NO. <b>117-00595-01</b>	REV <b>A</b>
CAGE CODE: 5KQH7	SCALE: NONE	SHEET 1 OF 1