



MEA-LTE-ISM-GNSS-TETRA

CELLULAR/LTE, 2.4/5.0 GHZ ISM, TETRA AND GNSS

Part #: 100-00249-01

Description

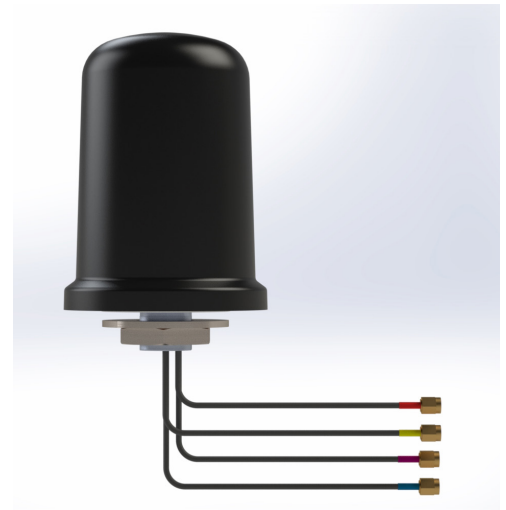
The MEA-LTE-ISM-GNSS-TETRA is a 4-in-1 antenna that combines high performance 4G LTE, 3G, 2G, Tetra/UHF, ISM, GPS, GLONASS and Galileo standard. The antenna's excellent radiation pattern, exceptional out-of-band rejection, and low noise figure ensures optimal performance of GNSS systems. It features 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 ASA black housing and is ideal for the most demanding environmental challenges. The MEA-LTE-ISM-GNSS-TETRA is IP67 rated.

Electrical Specifications

Cable 1 - Cellular/LTE Antenna

Parameter	Specification		
Standards	4G, 3G and 2G		
Frequency (MHz)	698-960	1710-2170	2500-2700
Return Loss (dB)	~ -6.1	~ -10.3	~ -10.6
VSWR	~ 3.0:1	~ 2.0:1	~ 1.9:1
Efficiency (%)	~ 41.3	~ 42.4	~ 43.0
Peak Gain (dB)	~ 1.9	~ 3.0	~ 2.9
Average Gain (dB)	~ -3.9	~ -3.8	~ -3.7
Impedance (Ω)	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	LL195 (other cable type available)		



Features

- 4 in1 antenna : CELLULAR / LTE, TETRA/UHF, ISM, and GPS/ GLONASS/QZSS/Galileo
- Easy mounting: screw mount
- Heavy duty antenna
- High performance
- Anti-rotation mounting
- Customizable cable and connector
- IP67
- IP69
- IK09

Applications

- Public safety
- IoT applications
- Critical Communication
- Public safety
- Transportation
- Tracking/ Mapping devices

Cable 2 - 2.4/5.0 GHz ISM Antenna

Parameter	Specification	
Standards	WiFi, BT, ZigBee, ISM	
Band (MHz)	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	4920-5925
Return Loss (dB)	~ -10.4	~ -13.6
VSWR	~ 1.9:1	~ 1.6:1
Efficiency (%)	~ 58	~ 64
Peak Gain (dB)	~ 5.6	~ 5.5
Average Gain (dB)	~ -2.3	~ -1.9
Impedance (Ω)	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	LL195 (other cable type available)	

Cable 3 - TETRA Antenna

Parameter	Specification
Standards	TETRA
Band (MHz)	390, 420, 460
Frequency (MHz)	380-470
Return Loss (dB)	~ -16.6
VSWR	~ 1.5:1
Efficiency (%)	~ 64.4
Peak Gain (dB)	~ 2.1
Average Gain (dB)	~ -1.9
Impedance (Ω)	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	LL195 (other cable type available)

Cable 4 - GPS/GLONASS Antenna

Parameter	Specification	
Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency (MHz)	1575.42	1598-1606
Passive Gain (dBi)	~ 3.6	
Impedance (Ω)	50	
Radiation Pattern	Hemispherical	
Voltage Range (V)	1.5 - 3.6	
Active Gain (dB)	28 @ 2.7 V	
Noise Figure (dB)	1.8 @ 2.7 V	
Current Consumption (mA)	9 @ 2.7 V	
Power Consumption (mW)	24.3 @ 2.7 V	
Saw Filter Type	Pre-Filter	
Out of Band Rejection (dB)	~ 43	
ESD Protection (kV)	6	
Connector Type	SMA-Male (other connectors available)	
Cable Length	200 cm (custom length available)	
Cable Type	LL100 (other cable type available)	

Antenna Measurement Conditions:

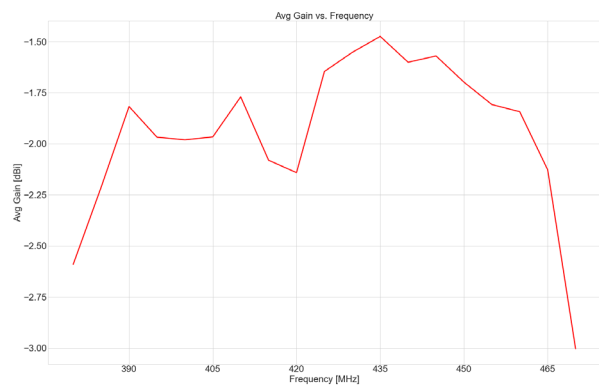
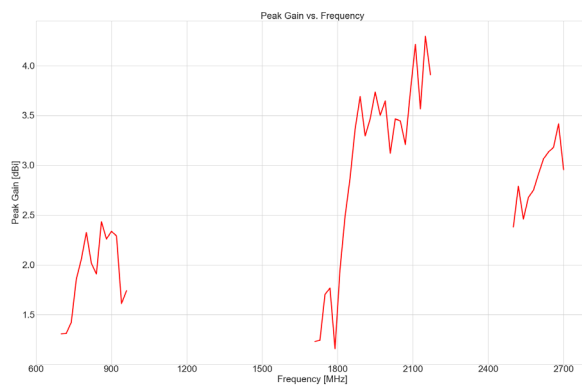
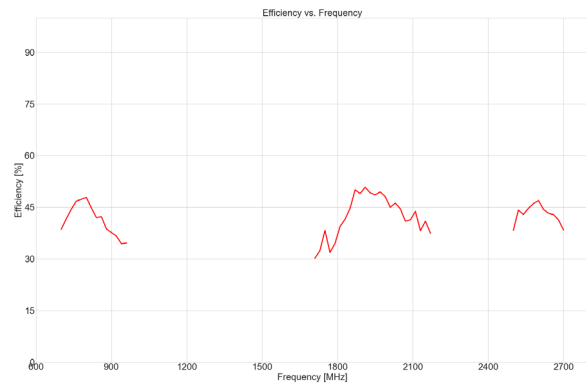
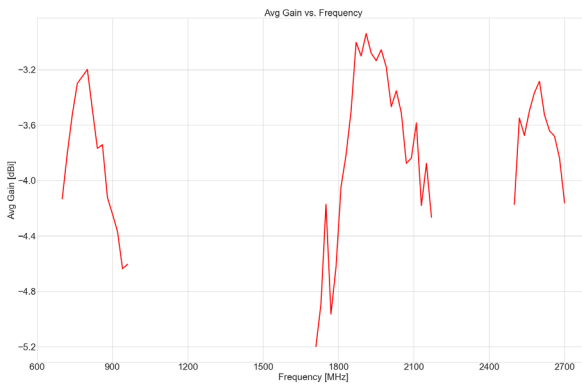
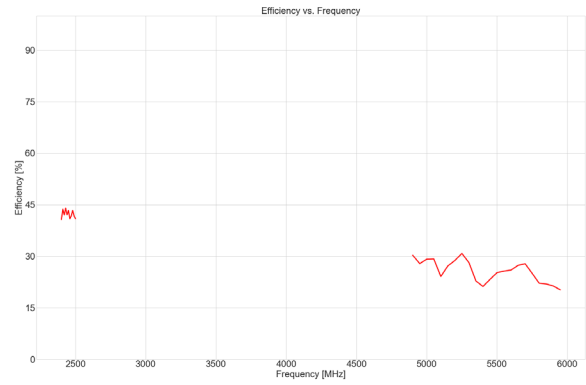
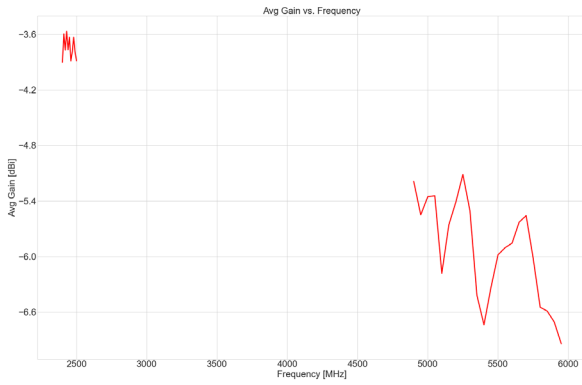
Mounted on metal plate of 60 x 60 cm
 200 cm of cable LL195
 Measured in certified CTIA 3D anaechoic chamber

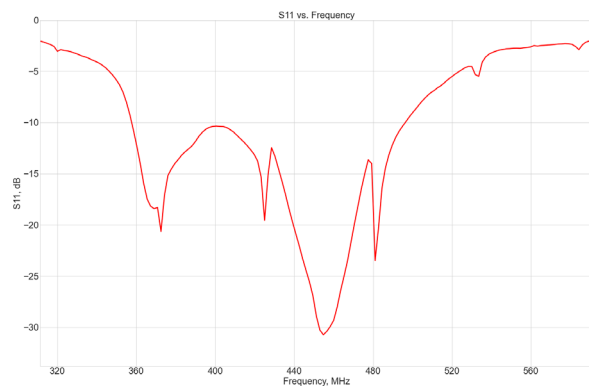
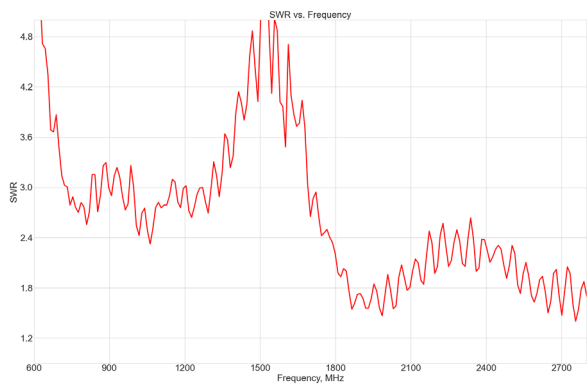
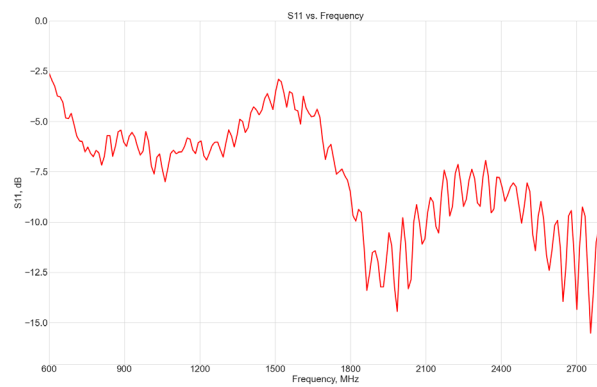
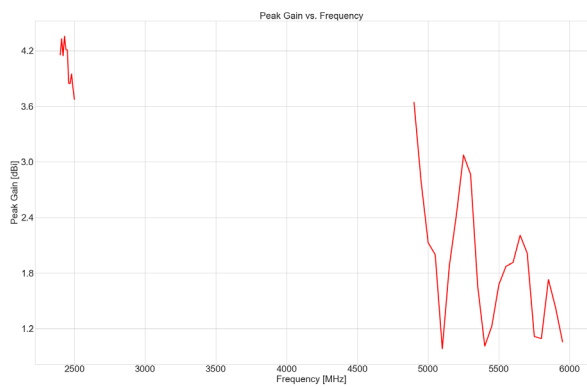
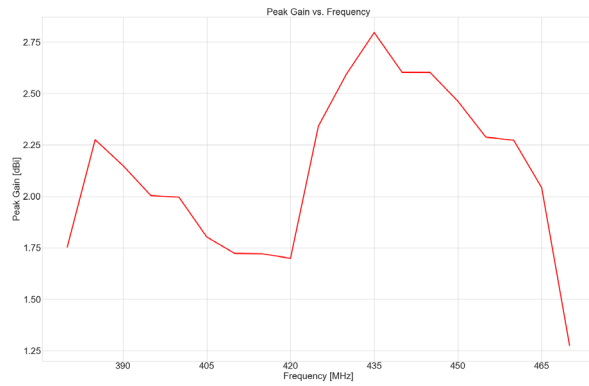
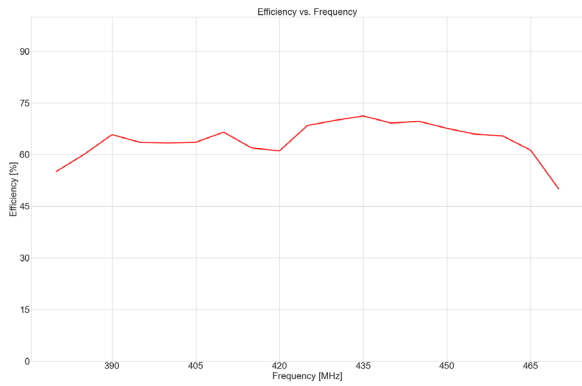
Mechanical and Environmental Specifications

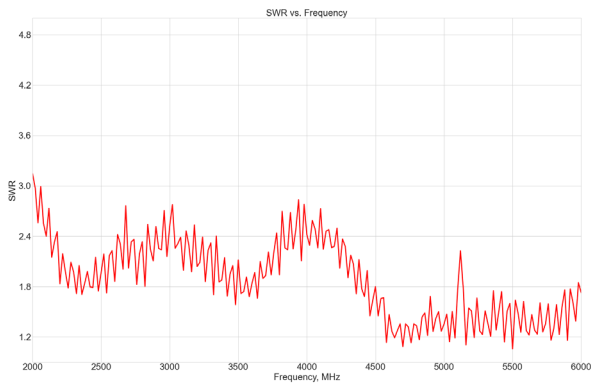
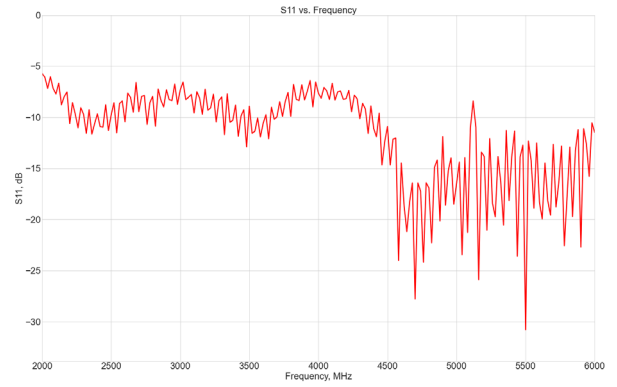
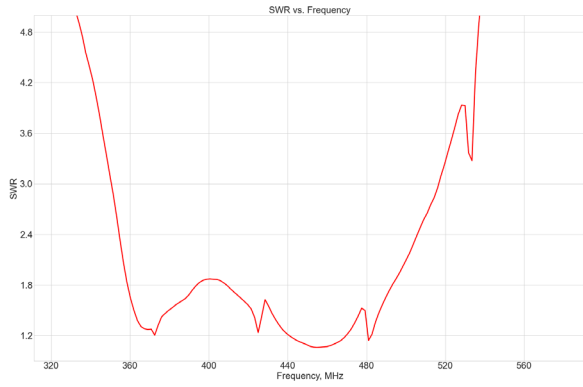
Parameter	Specification
Mounting Type	Screw Mount
Dimensions (mm)	Ø 96 X H 130
Weight (g)	550
Max. Tighten Torque (Nm)	15 Nm
Radome	ASA
Radome Color	White, Black
Antenna Base	Alluminium alloy
Operating Temperature (C)	-40 to +85°
Storage Temperature (C)	-40 to +85°
Protection	IP67, IP69K, IK09
Substance Compliance	RoHS

Radiation Performance

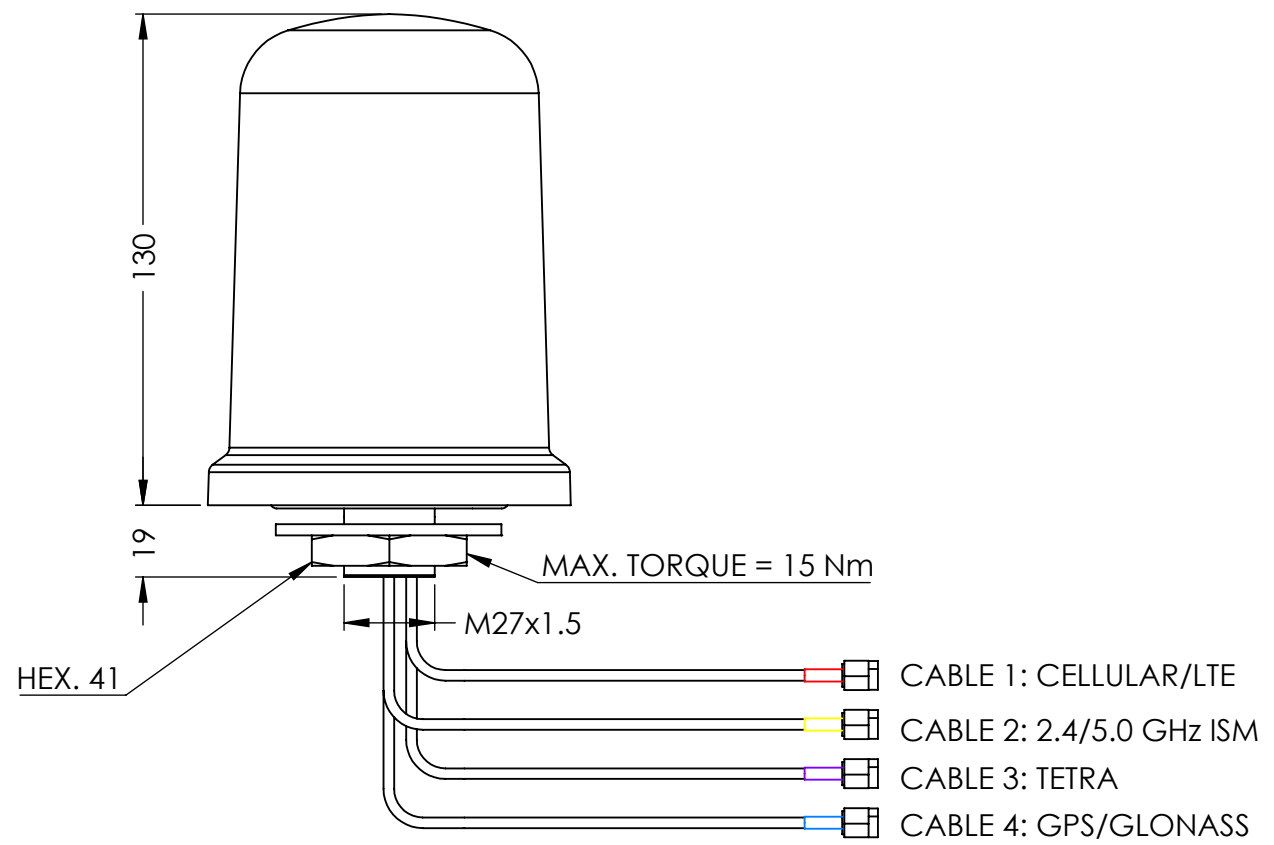
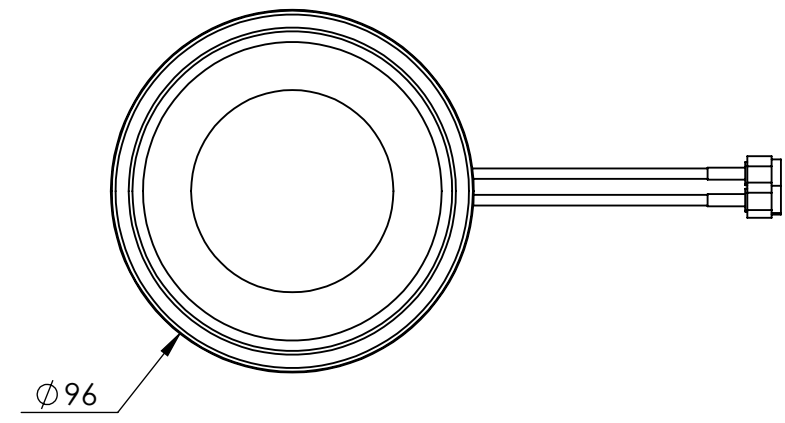
MEA-LTE-ISM-GNSS-TETRA



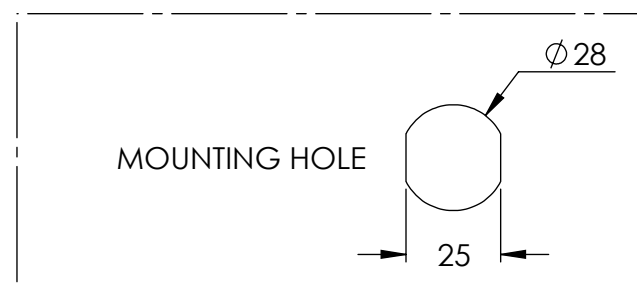




DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2022-02-18	JET



- NOTES:
- FREQUENCY:
 - CABLE 1 (CELLULAR / LTE): 698-960 MHz, 1710-2170 MHz, 2500-2700 MHz
 - CABLE 2 (2.4/5.0 GHz ISM): 2410-2490 MHz, 4920-5925 MHz,
 - CABLE 3 (TETRA): 380-470 MHz
 - CABLE 4 (GPS/QZSS/GALILEO, GLONASS): 1575.42 MHz, 1598-1610 MHz
 - DIMENSIONS ARE AFTER MOUNTING
 - CUSTOMIZABLE CABLE AND CONNECTOR TYPE
 - MOUNTING TYPE: SCREW MOUNT
 - MAX. MOUNTING THICKNESS: 7 mm
 - MATERIALS:
 - RADOME: ASA
 - RADOME COLOR: BLACK or WHITE
 - ANTENNA BASE: ALUMINIUM ALLOY
 - OPERATING TEMPERATURE: -40° C ~ +85° C
 - STORAGE TEMPERATURE: -40° C ~ +85° C
 - CERTIFICATION: IP67, IP69, IK09



100-00249 CONFIGURATION TABLE				
DASH NO	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE	RADOME COLOR
-01	CABLE 1: LL195 CABLE 2: LL195 CABLE 3: LL195 CABLE 4: LL100	200 CM 200 CM 200 CM 200 CM	SMA-MALE GOLD SMA-MALE-RP GOLD SMA-MALE GOLD SMA-MALE GOLD	BLACK

ITEM 100-00249 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2022-02-18	JET

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± .5° BEND ±
ONE PLACE DECIMAL ± 1.0
TWO PLACE DECIMAL ± .50

INTERPRET GEOMETRIC TOLERANCING PER:

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JET	2022-02-18
CHECKED	ZX	2022-02-18
ENG APPR.	NPC	2022-02-18
MFG APPR.		
	Q.A.	

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

MAXTENA, INC

TITLE: 100-00249 MEA-LTE-ISM-GNSS-TETRA

SIZE B DWG. NO. 117-00588-01 REV A

CAGE CODE: 5KQH7 SCALE: NONE SHEET 1 OF 1