



Part No. X1005245-LSA3SA10A2

GNSS (active) / LTE MIMO 3-in-1 External Antenna

(1561 / 1575 / 1602) MHz + (698-960; 1710-2170; 2300-2690) MHz

Supports: Tracking, Smart Home, Agriculture, Automotive Aftermarket, Healthcare, Digital Signage, Logistics, Industrial Devices



Ethertronics' 3-in-1 GNSS (active) and LTE MIMO external antenna delivers on the key needs of device designers for higher functionality and performance.

Electrical Specifications

Typical characteristics in free-space

GNSS (active) & LTE MIMO External Antenna

(1561 / 1575 / 1602) MHz
(698-960; 1710-2170; 2300-2690) MHz

KEY BENEFITS

Reduced Costs and Time-to Market

Standard antennas eliminate design fees and cycle time associated with a custom solution, getting products to market faster.

High Performance

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

Reliability

Products are the latest RoHS & REACH version compliant.

APPLICATIONS

- Remote Monitoring
- Point of Sale
- IoT
- Gateway
- Telematics
- Tracking
- Healthcare
- M2M,
- Industrial devices
- Smart Grid
- Logistics
- Energy
- Retail

Frequency (GNSS)	1561 MHz	1575 MHz	1602 MHz
Gain at Zenith	1.1 dBi	2.1 dBi	2.3 dBi
VSWR	2.0:1 max		
LNA Electrical Properties			
Frequency (GPS-GLONASS)	1561 MHz	1575 MHz	1602 MHz
VSWR	3.0:1 max		
Impedance	50 Ω		
Antenna Gain (@3.3 V)	28 dB / 25 dB min.		
DC Power Input	3~5 V		
Noise Figure	3.0 dB Typ.		
Power Consumption (@ 3.3 v)	9 mA Typ.		
Frequency (LTE 1 & 2)	698~960 MHz	1710~2170 MHz	2300~2690 MHz
Peak Gain	3.9 / 4.5 dBi	4.2 / 3.6 dBi	3.7 / 2.2 dBi
Average Efficiency	47 / 50 %	64 / 60 %	57 / 57 %
VSWR	2.0:1 max		
Impedance	50 Ω		



GNSS (active) / LTE MIMO 3-in-1 External Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

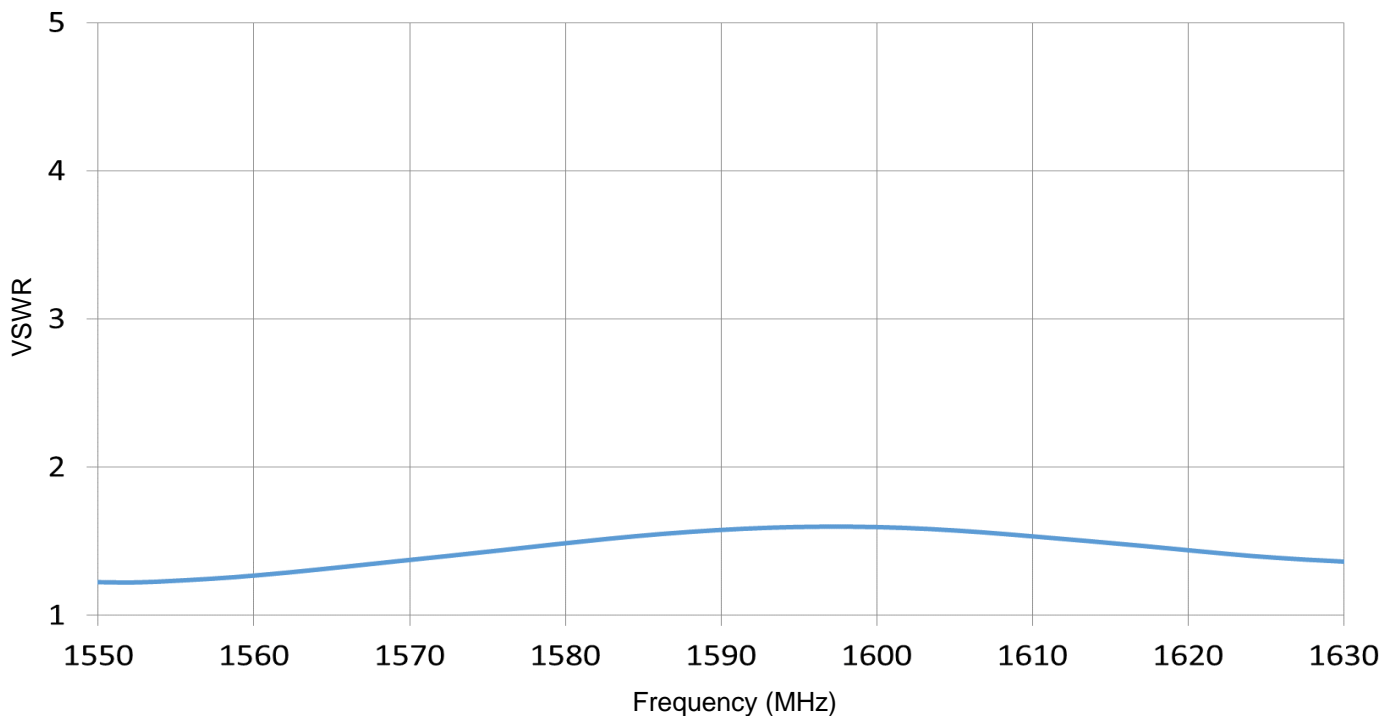
Mechanical Specifications

Ordering Part #	X1005245-LSA3SA10A2
Dimensions (mm)	136.2 x 72.4 x 12.7
Mounting Type	Foam Adhesive
Operating Temperature (°C)	-40 ~ +85
Weight (grams)	189
Housing Material & Color	PC+ABS (Black)
Cable	Length: 1M Type: RG-174 GNSS CFD-200 LTE 1 & 2
Connector	SMA(M) GNSS SMA(M) LTE 1 & 2
Waterproof	IPX7

VSWR Plots (GNSS 1561 & 1575 & 1602 MHz)

Typical characteristics in free-space

VSWR:



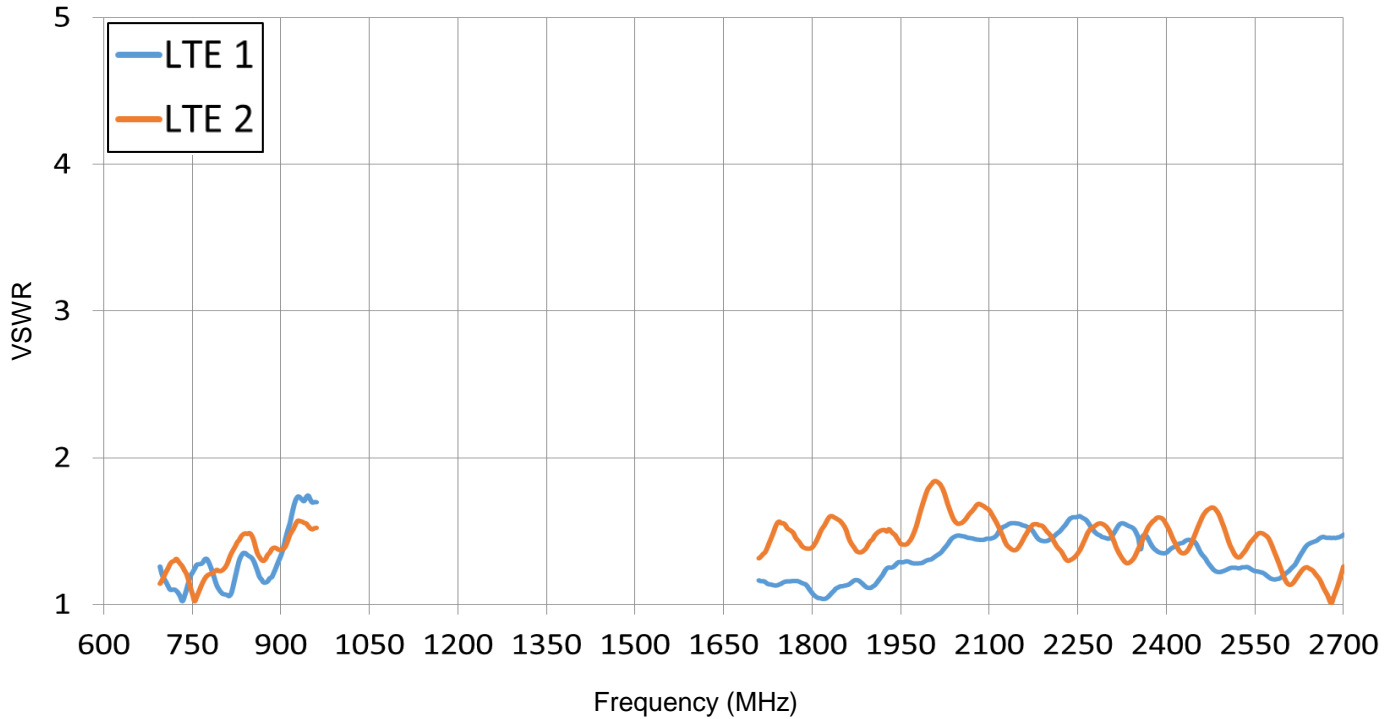


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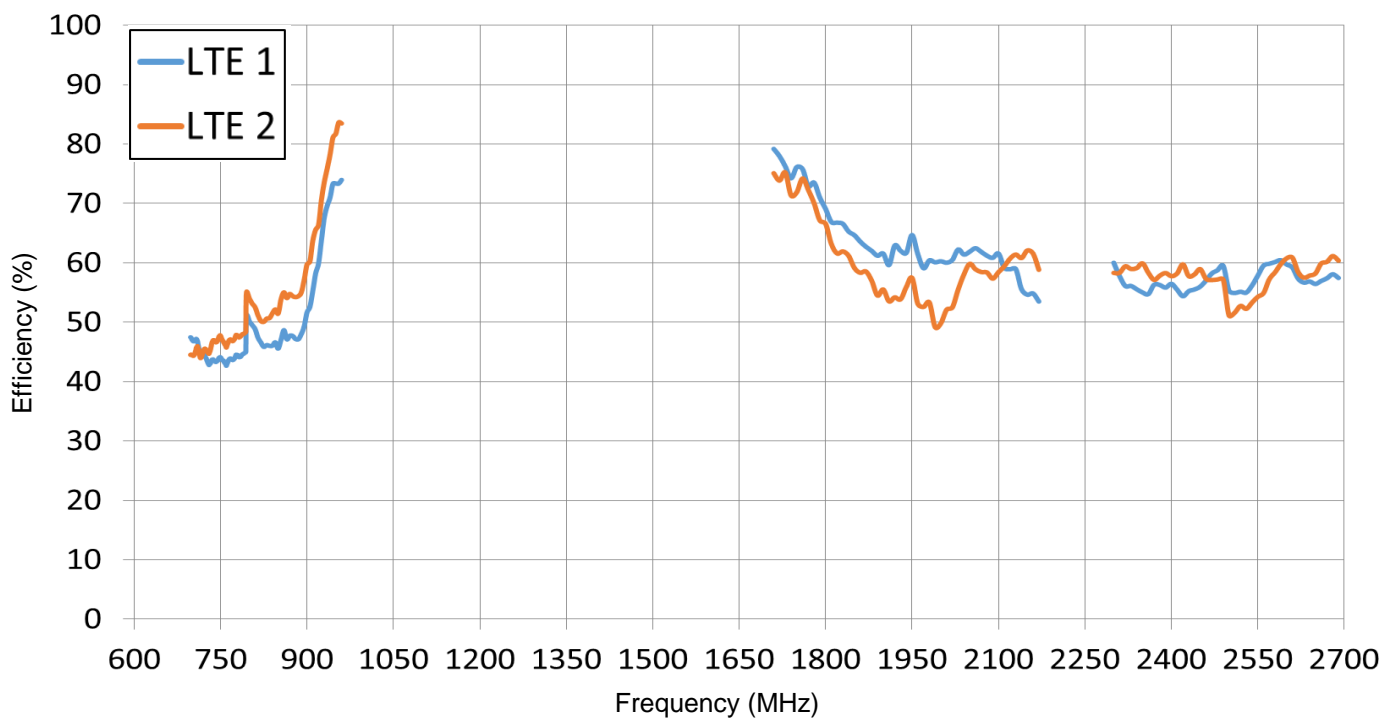
VSWR, Efficiency, Plots (LTE 1 & 2 698-2690 MHz)

Typical characteristics in free-space

VSWR:



Efficiency:



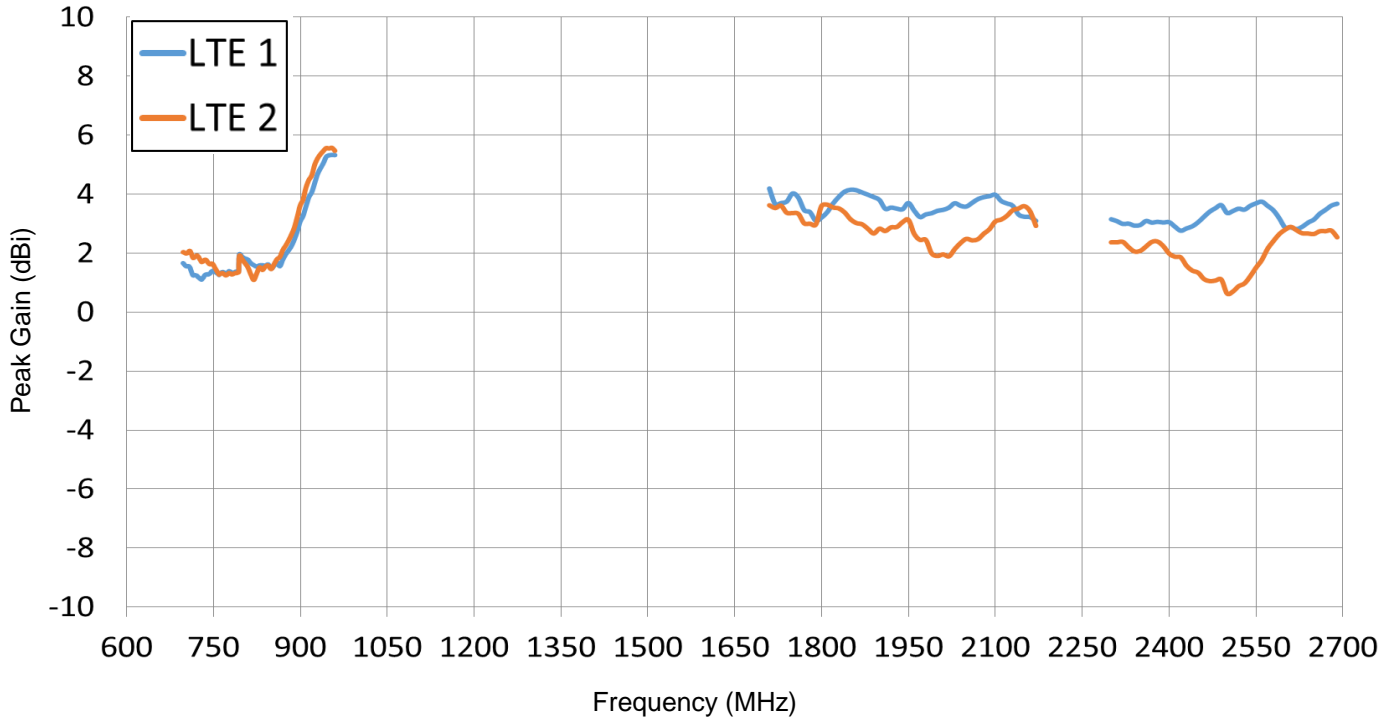


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Peak Gain Plot (LTE 1 & 2 698-2690 MHz)

Typical characteristics in free-space

Peak Gain:

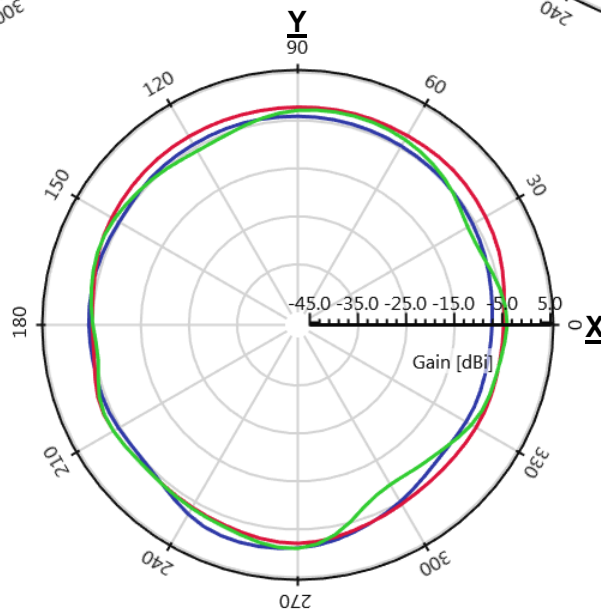
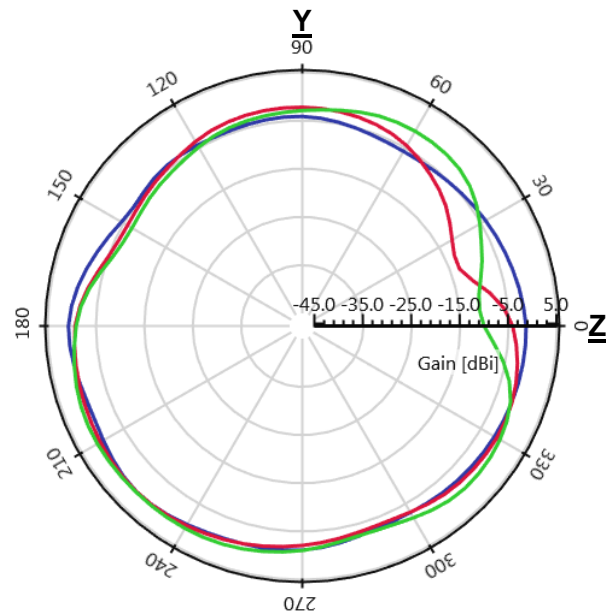
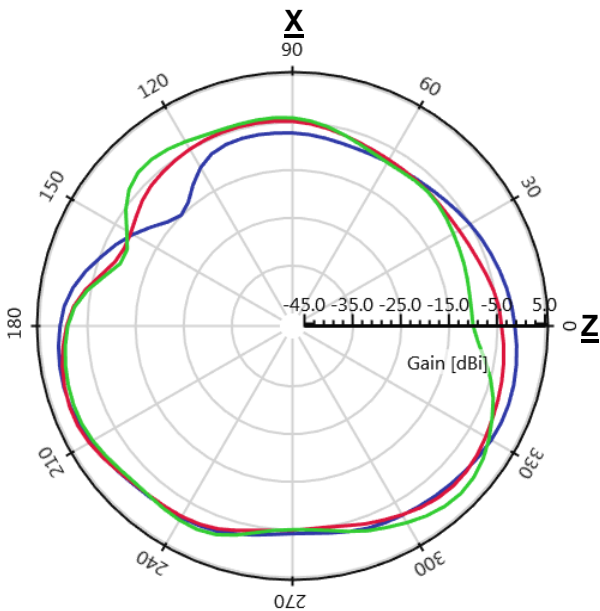
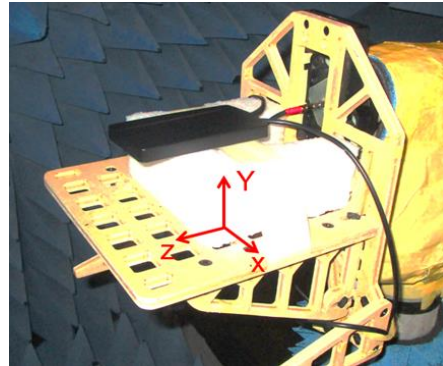




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2D Radiation Patterns (LTE-1 698-960 MHz)

Typical characteristics in free-space

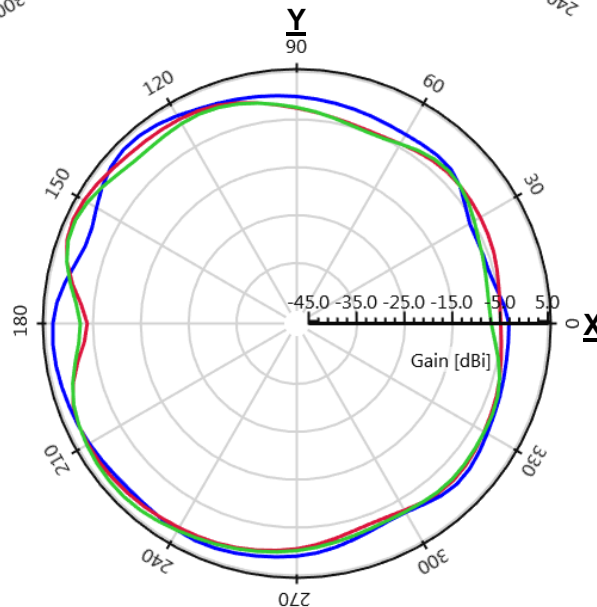
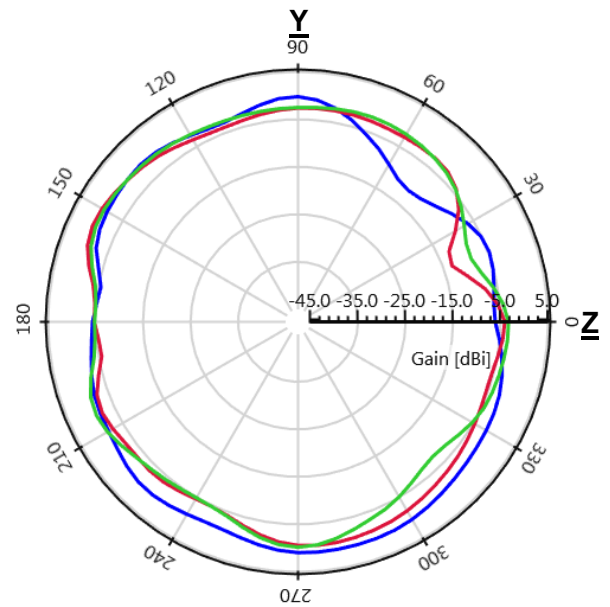
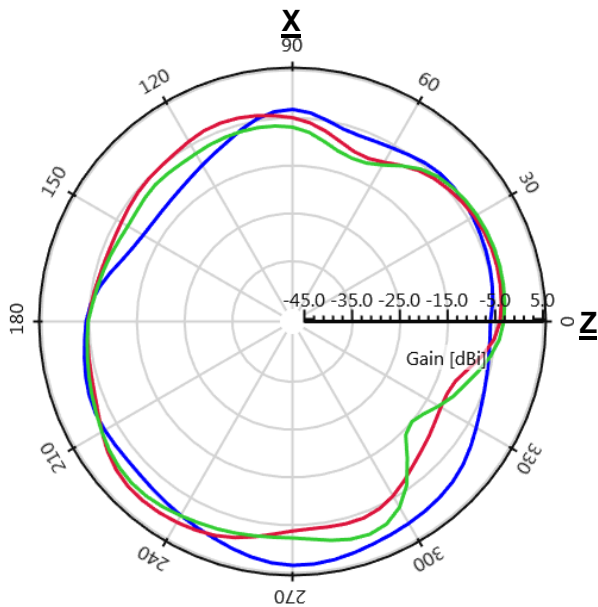
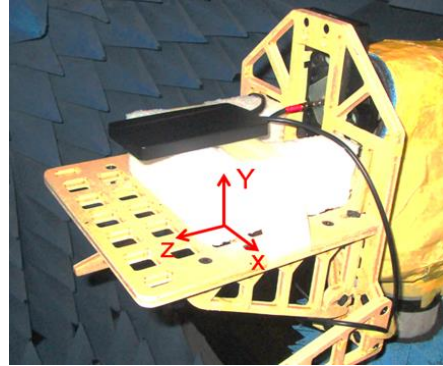
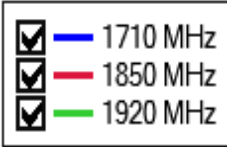




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2D Radiation Patterns (LTE-1 1710-2170 MHz)

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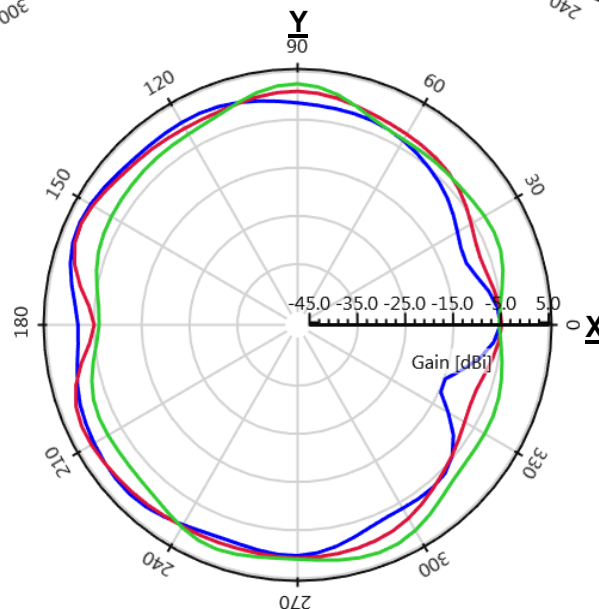
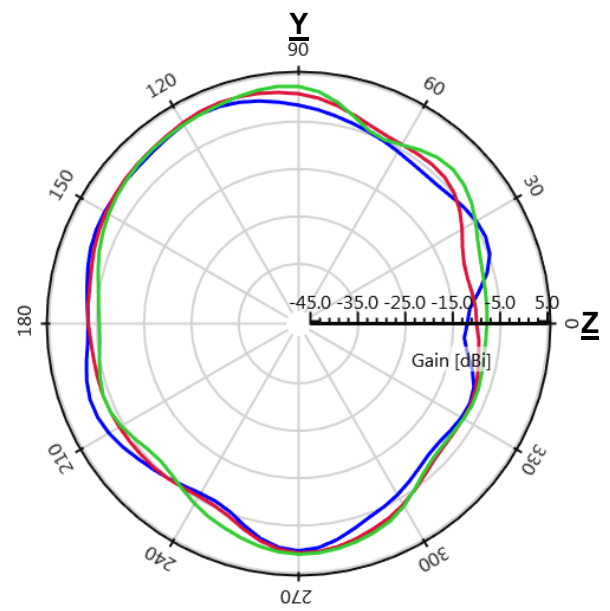
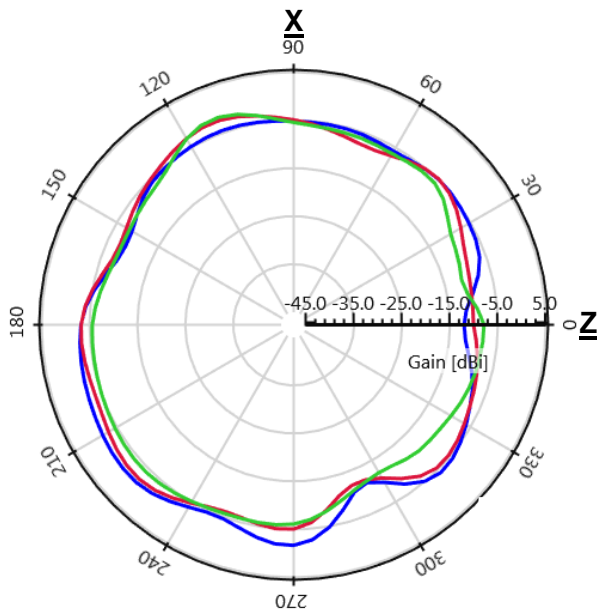
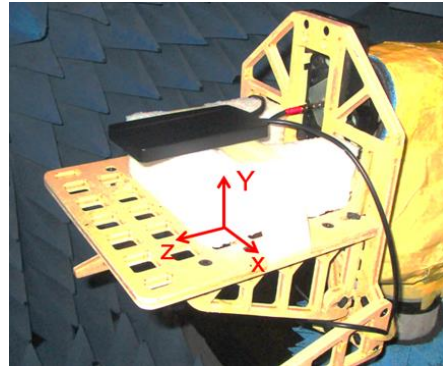
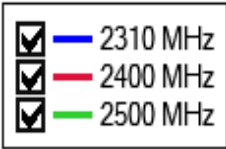




GNSS (active) / LTE MIMO 3-in-1 External Antenna Specifications.
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2D Radiation Patterns (LTE-1 2300-2690 MHz)

Typical characteristics in free-space

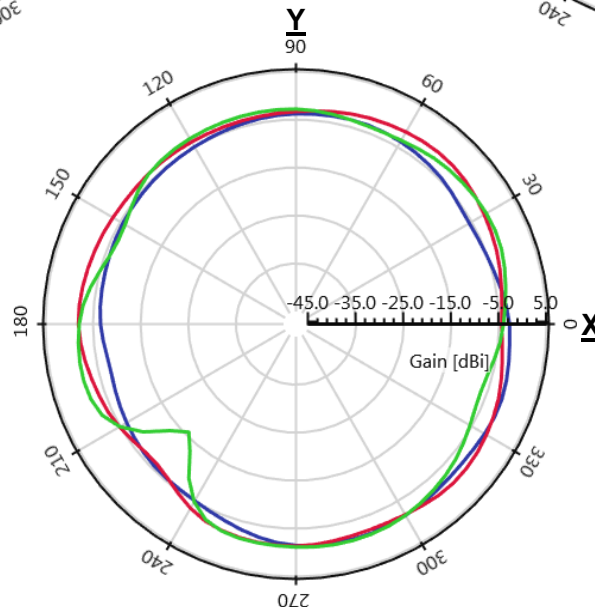
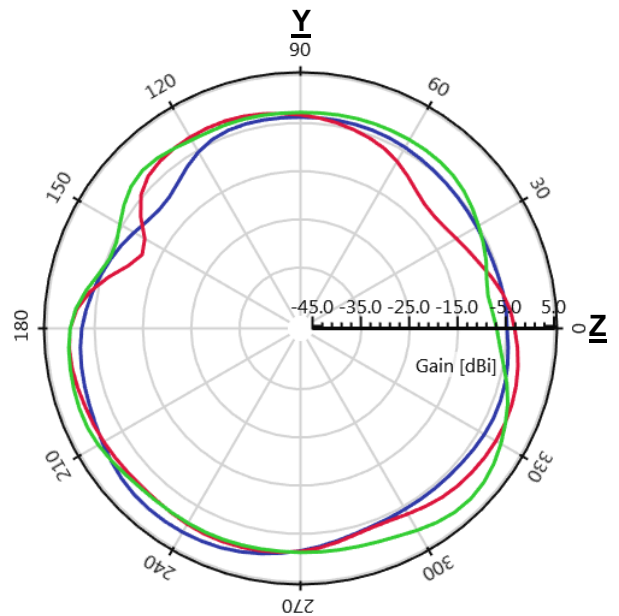
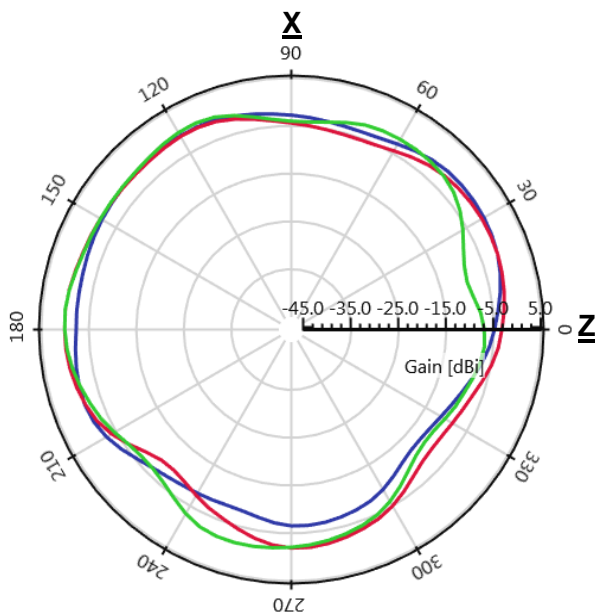
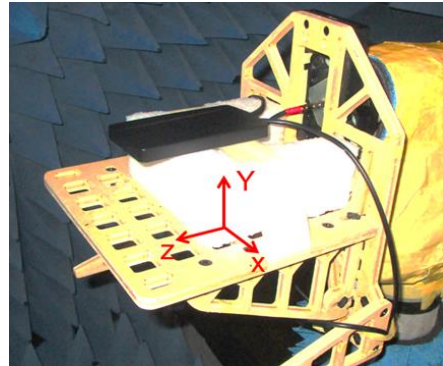




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2D Radiation Patterns (LTE-2 698-960 MHz)

Typical characteristics in free-space

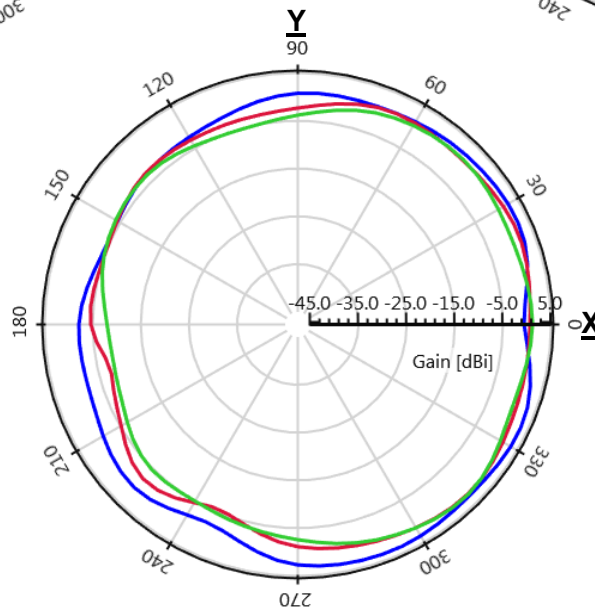
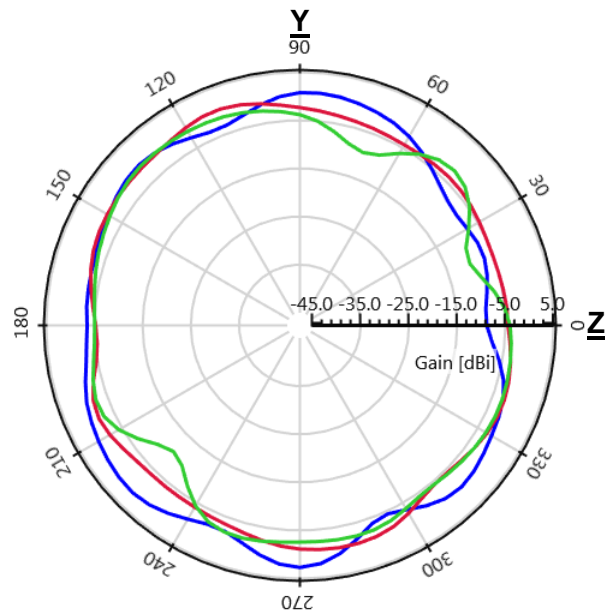
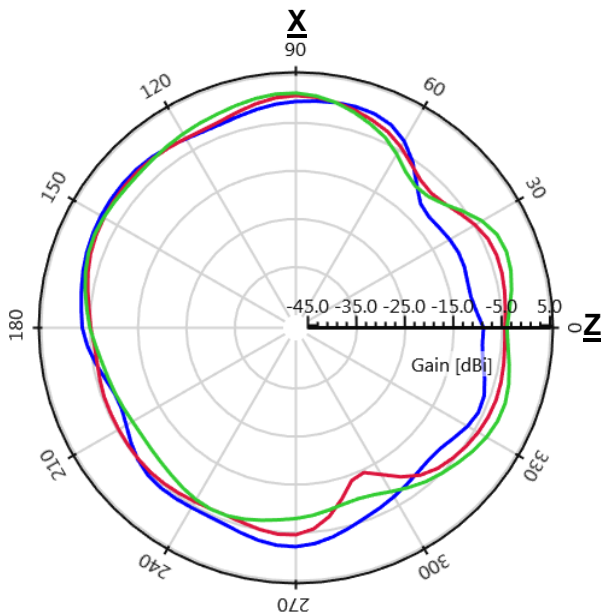
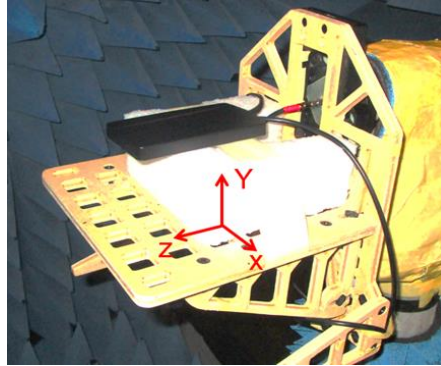
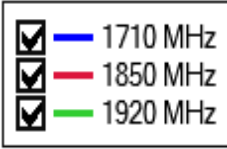




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2D Radiation Patterns (LTE-2 1710-2170 MHz)

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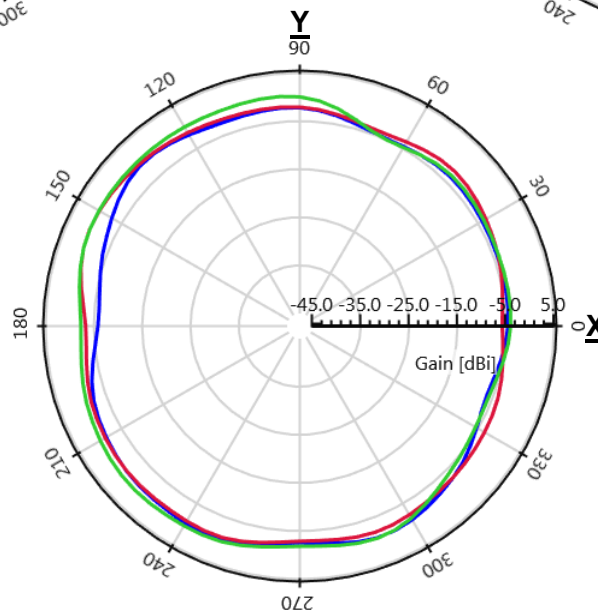
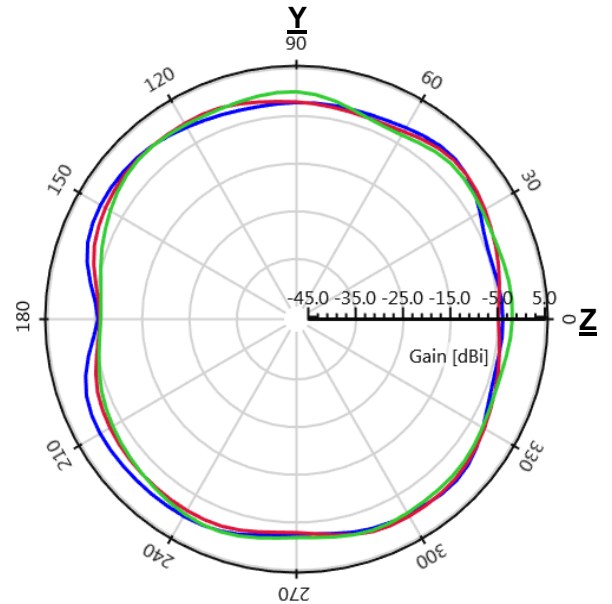
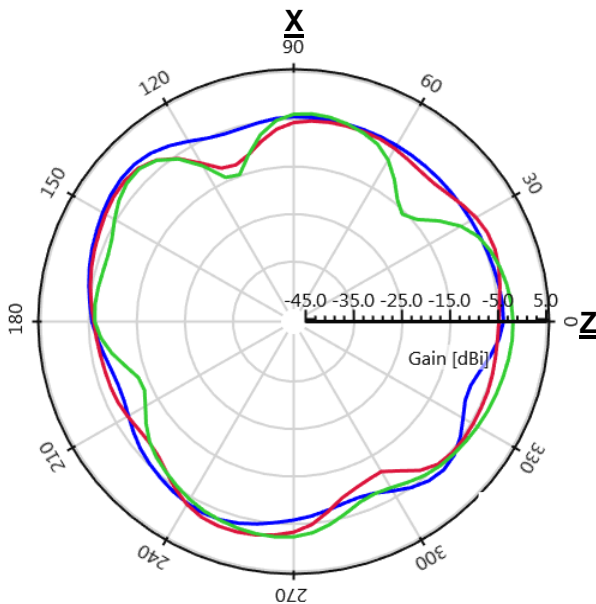
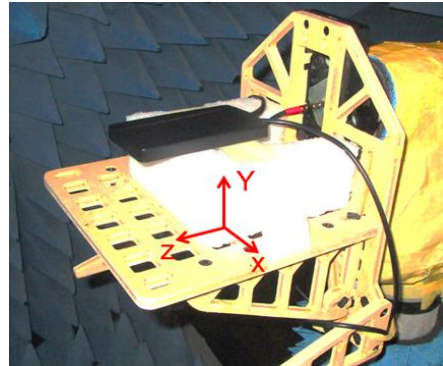
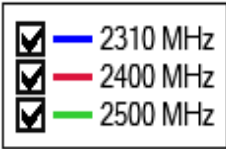




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2D Radiation Patterns (LTE-2 2300-2690 MHz)

Typical characteristics in free-space





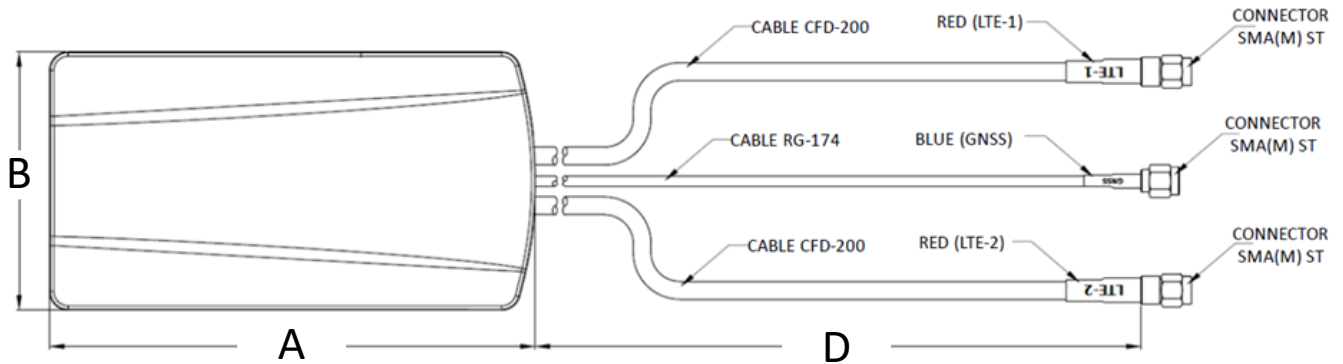
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Mechanical Dimensions

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)	D (mm)
X1005245-LSA3SA10A2	136.2 ± 3.0	72.4 ± 1.5	12.7 ± 1.0	1000 ± 40.0

Top View



Side View

