



RP40 lite

5G, 4G/LTE 4x4 MIMO Fixed Wireless Access Omnidirectional Antenna

The RP40 lite (L000306-XX) antenna family from TE Connectivity (TE) provides high-performance connectivity for current and emerging 4G and 5G frequencies in a flexible and modular package.

The incorporated 4x4 MIMO technology and consistent radiation patterns means that the RP40 lite can provide enhanced data rates and bandwidth with extremely consistent performance.

RP40 lite is suitable for use globally on cellular networks and with any network operator. It fits most common industrial routers/gateways currently on the market. There are 4 or 5-port variants available with the optional fifth port for GNSS coverage. Each model covers 617 - 6000 MHz and supports all major global 5G and 4G/LTE bands.

Designed with a stylish housing and includes all the necessary mounting hardware for desk, wall, offset wall and pole mounting options.

FEATURES AND BENEFITS

- Global LTE and 5G coverage (617-6000MHz)
- Consistent omnidirectional patterns across all bands, providing stable reception
- Extensive mechanical and environmental testing including UV, flammability, humidity, impact, vibration, shock (see page 3 for full details)
- Integrated 5m (16ft) cables for easier installation
- Supplied with all brackets and mounting hardware

APPLICATIONS

- Primary connectivity
- Fixed Wireless Access (FWA)
- Failover support
- IoT device connections
- Private networks

APPLICATIONS

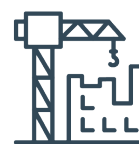
Remote Offices



Hotel Rooms



Construction Sites



Remote Schools



Rural Communities



Temporary Usage



SPECIFICATIONS

ELECTRICAL SPECIFICATION						
Operating Frequency (MHz)	617-698	698-960	1427-1496	1559-1606	1690-4200	4200-6000
VSWR - Max	<2.20		<2.20			
Isolation - Min (dB)*	10					
Peak Gain - Max (dBi)*	5.2		6.5			
Total Efficiency Average (%)	77					
Nominal Impedance (Ohms)	50					
Max Power - Ambient 25°C (W)	10					
Polarization	Linear Dual Polarized (2V x 2H)					
Azimuth Beamwidth	360°, Omnidirectional					

*Measured with 1.5ft LMR195 equivalent coaxial cable

ELECTRICAL SPECIFICATION - GNSS			
Operating Frequency (MHz)	1561.098 ± 2.046	1575.42 ± 1.023	1602 ± 5
VSWR - Max	<2.0		
LNA Gain, dB	28 ± 3		
LNA Noise Figure, dB	3.17	2.87	3.06
LNA Input Max. Power, dBm	-10		
Out of band Rejection (dBc)	698-960MHz	>80	
	1428-1511MHz	>80	
	1710-2700MHz	>80	
	4900-5800MHz	>70	
DC Voltage, V	2.5-7.0		
Current, mA	8.5 ± 3 (at 3.0V)		
Nominal Impedance	50		
Polarization	RHCP		

MECHANICAL SPECIFICATION	
Dimensions - Length x Width x Height - mm (in.)	380 x 230 x 30 mm (14.96 x 9.05 x 1.18)
Weight kg (lbs.)	L000306-01 - 1.3 (2.87) L000306-02 - 1.5 (3.31)
Cable	Cellular: LMR 195-equivalent GNSS: RG174
Radome Color / Material	White FRPC2100 UV
Base Material	PC-ABS FR-V0, UV
Mounting	Multiple Options Supplied

ENVIRONMENTAL SPECIFICATION

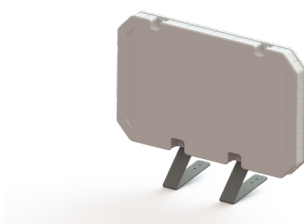
Operating Temp. (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Temperature Cycling	IEC 68-2-14
Ingress Protection (IP Rating)	IP66
Humidity	MIL-STD-810G, 507.5, Procedure II, Aggravated Humidity
Thermal Shock	IEC 68-2-14: -25°C to +70°C
Corrosive Atmosphere (Salt Fog/Mist)	MIL-STD-810G, Method 509.5
Vibration	IEC 60068-2-64
Mechanical Shock	IEC 60068-2-27
Wind Operational	Simulated 100MPH
Wind Survival	Simulated 136MPH
Pull Test	20lb Pull on Connector/Cables: Duration of 30 Seconds
UV Resistance	ASTM-G-155
Flammability Rating	UL94-V0
Material Substance Compliance	RoHS Compliant, CE & UKCA Compliant California Prop 65 Compliant, European RED Compliant

PART NUMBER CONFIGURATIONS

PART NUMBER	PIGTAIL/CABLE	CONNECTOR	NUMBER PORTS	FREQUENCY
L000306-01	Integrated Cable - 5m (16ft.)	4 x SMA Male	4	Cellular: 617-6000 MHz
L000306-02	Integrated Cable - 5m (16ft.)	5 x SMA Male	5	Cellular: 617-6000 MHz GNSS: 1561 - 1602 MHz

MOUNTING OPTIONS (MOUNTING KITS INCLUDED)

Desk Mount



Direct Wall Mount



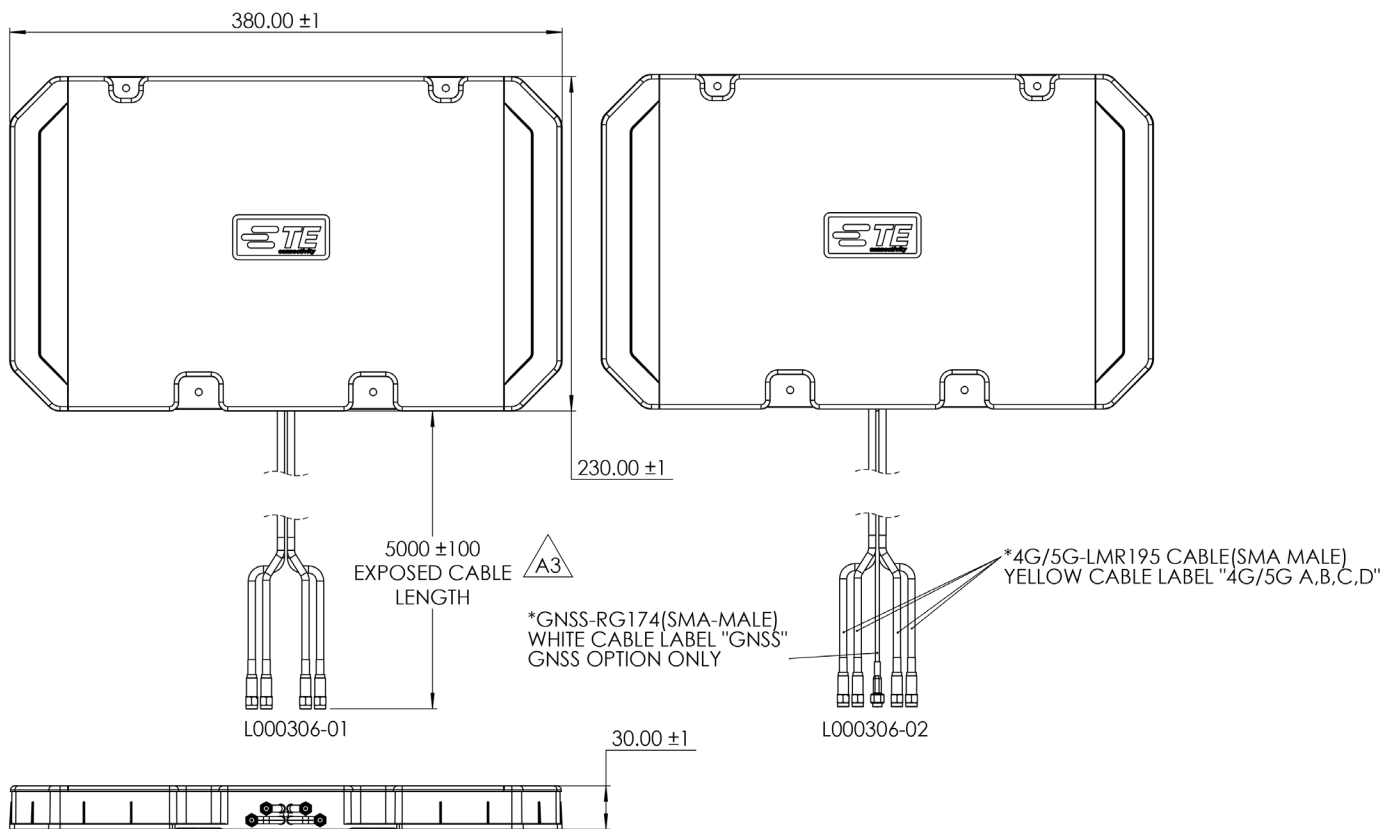
Pole Mount



Offset Wall Mount

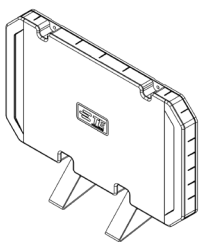


MECHANICAL DRAWINGS

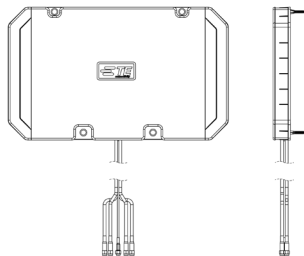


MOUNTING OPTION DRAWINGS

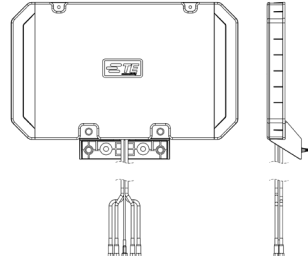
Desk Mount



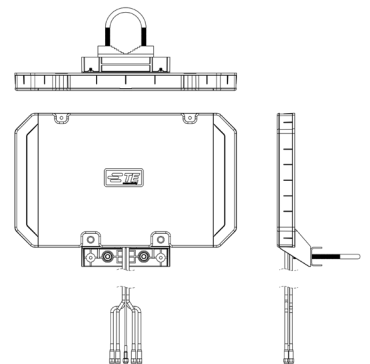
Direct Wall Mount



Offset Wall Mount



Pole Mount



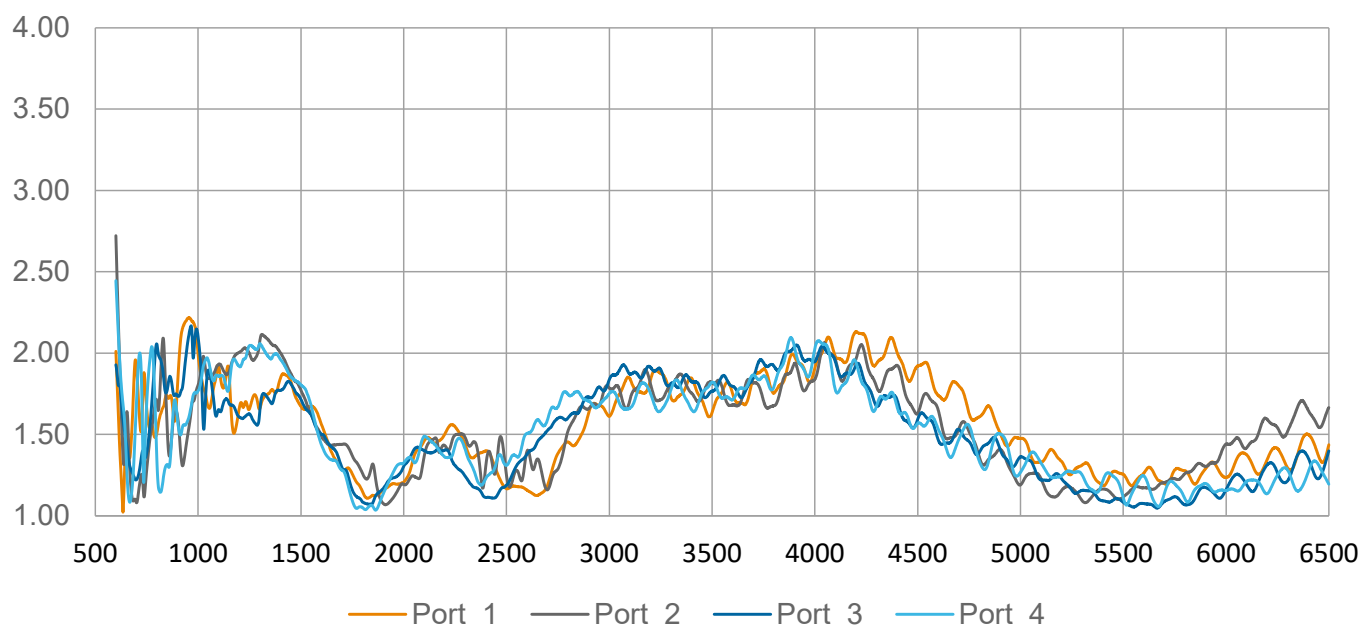
GLOBAL 4G/5G CELLULAR COVERAGE

The **RP40 lite** antenna provides global sub-6 GHz cellular coverage. The table below shows the frequencies and bands covered and the corresponding performance across those bands is shown in the charts below.

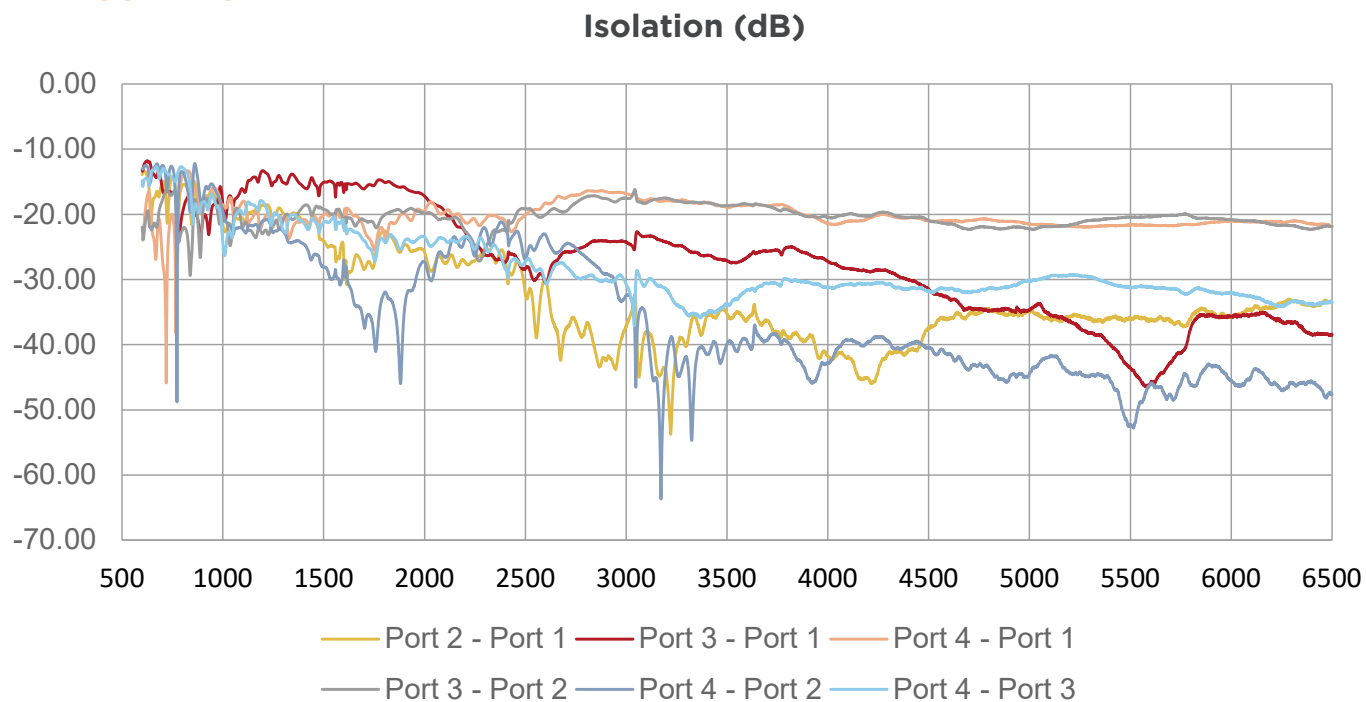
FREQUENCY	RF BANDS COVERED
617-960 MHz	5, 6, 8, 12, 13, 14, 17, 18, 19, 20, 26, 27, 28, 29, 44, 67, 68, 71, 85 N5, N8, N12, N14, N18, N20, N28, N29, N71, N81, N82, N83, N89, N91, N92, N93, N94, N100
1427-1690 MHz	11, 21, 24, 32, 45, 74, 75, 76 N50, N51, N74, N75, N76
1690-2700 MHz	1, 2, 3, 4, 7, 9, 10, 15, 16, 23, 25, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 65, 66, 69, 70 N30, N34, N38, N39, N40, N41, N65, N66, N70, N80, N84, N86, N90, N95, N101
3300-6000 MHz	22, 42, 43, 46, 47, 48 N48, N77, N78, N79

LTE - VSWR

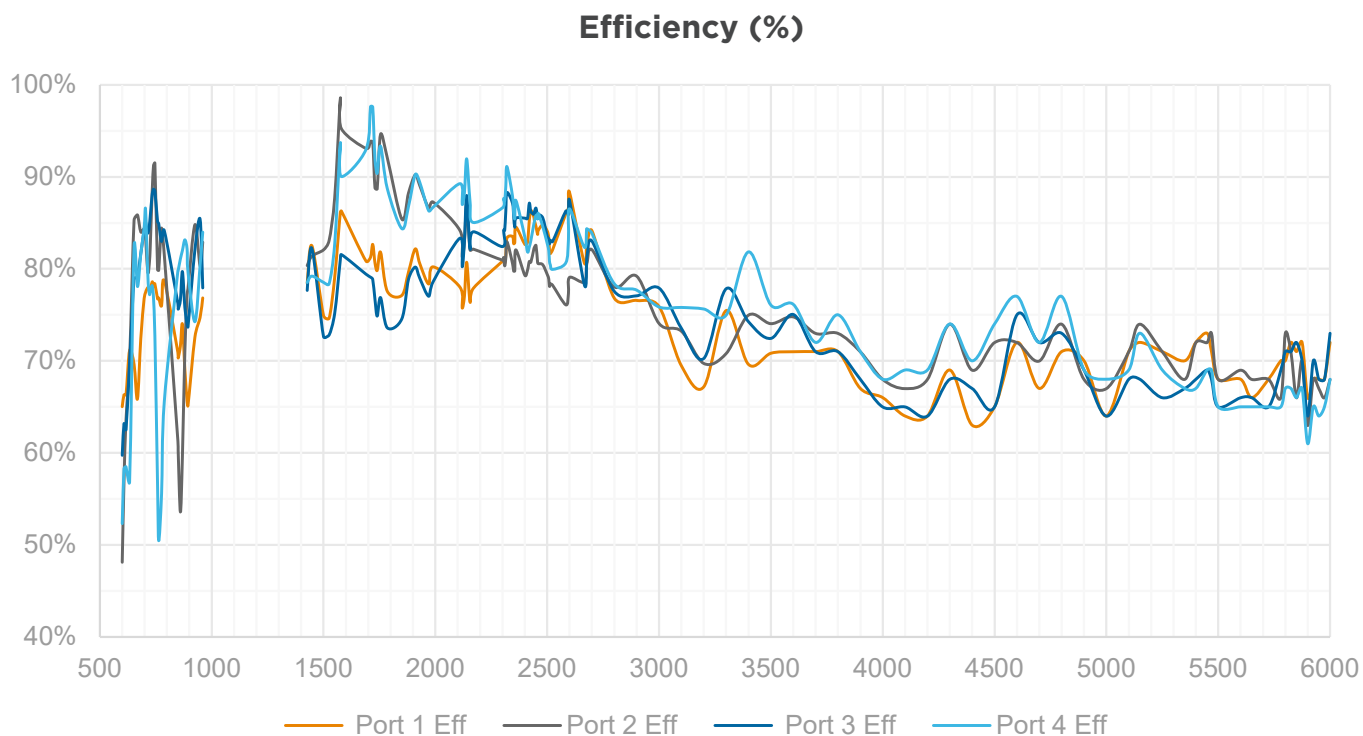
L000306-01 Without GNSS



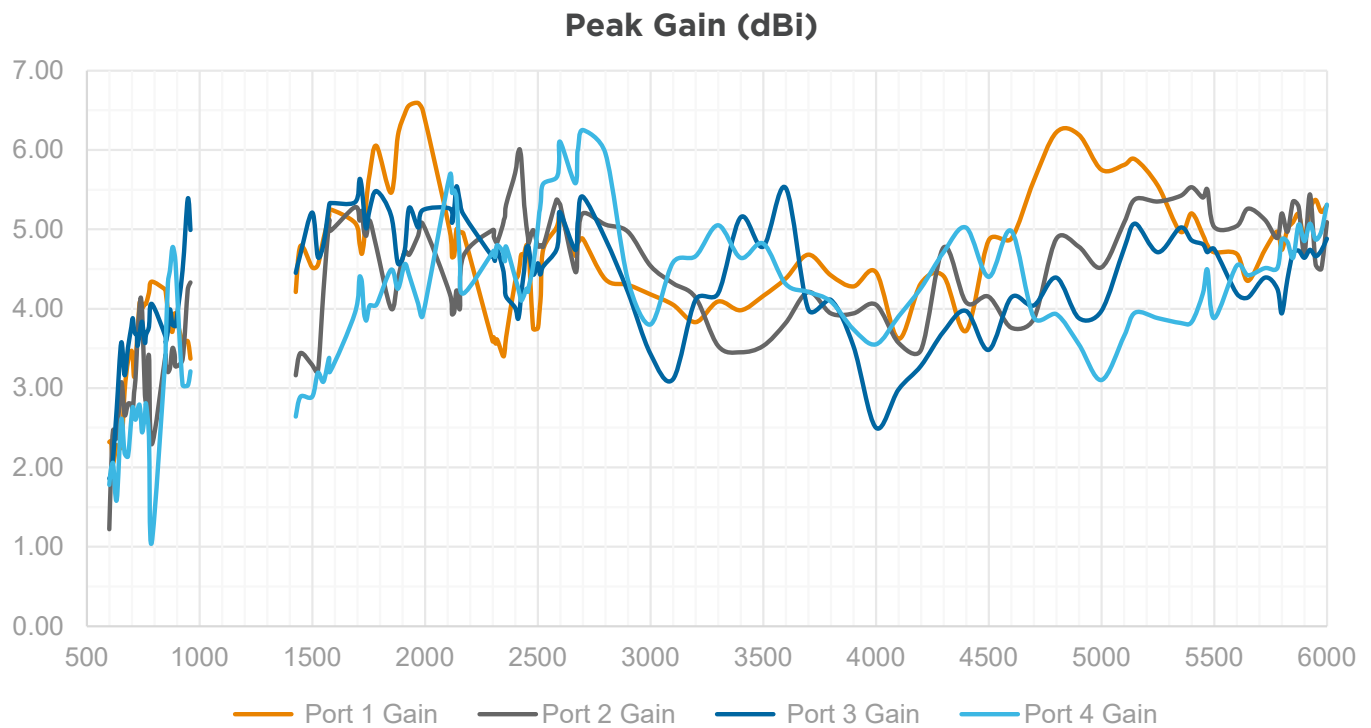
LTE - ISOLATION



LTE - EFFICIENCY

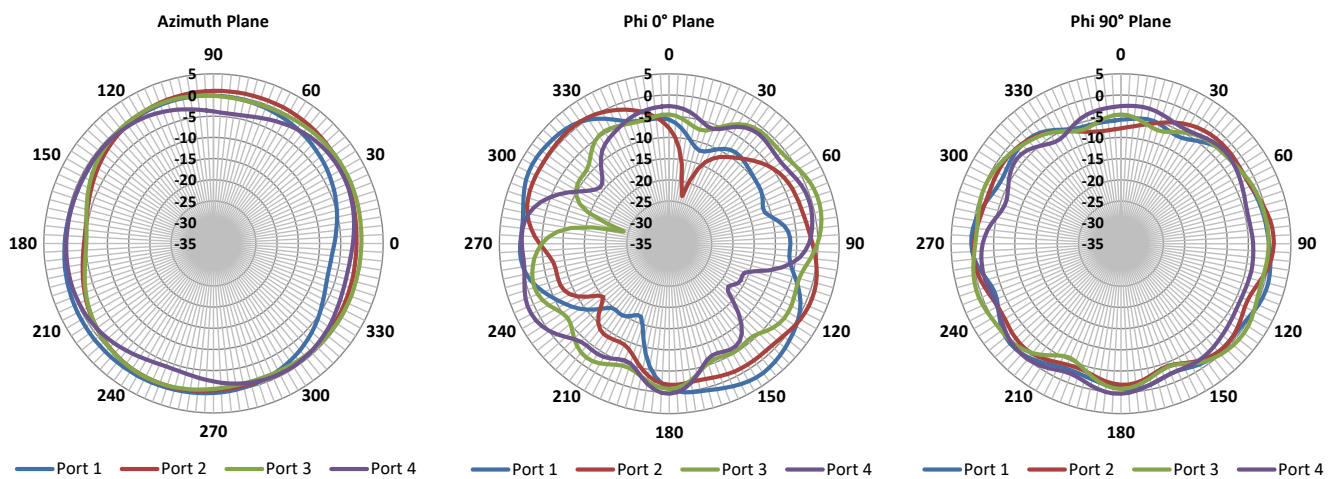


LTE - PEAK GAIN

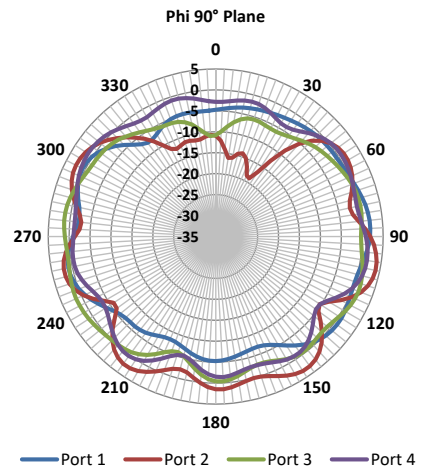
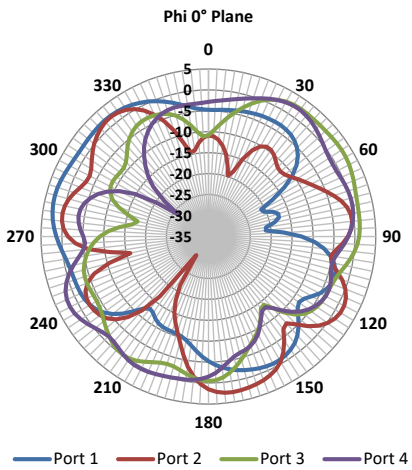
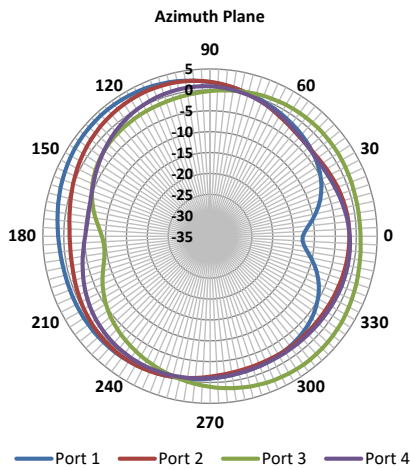


RADIATION PATTERNS

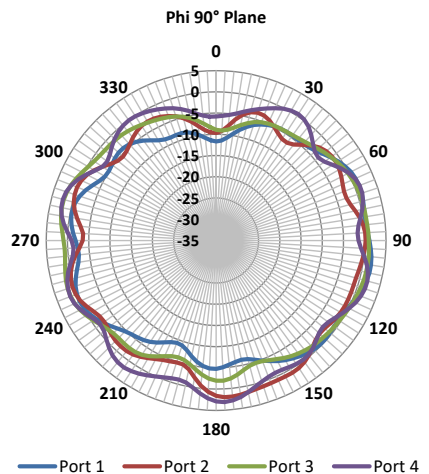
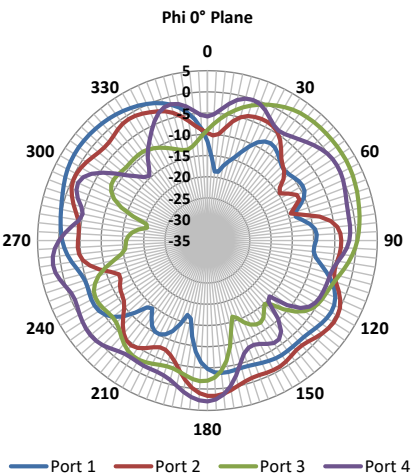
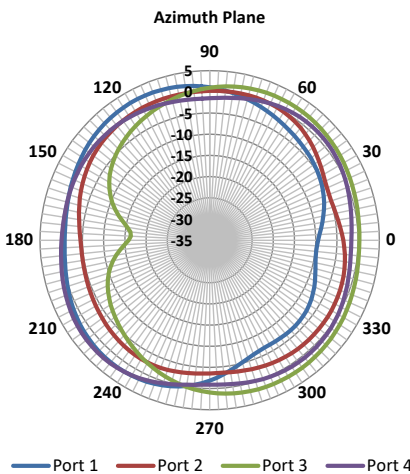
633 MHz



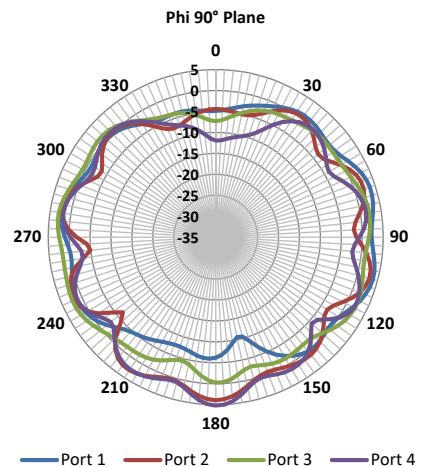
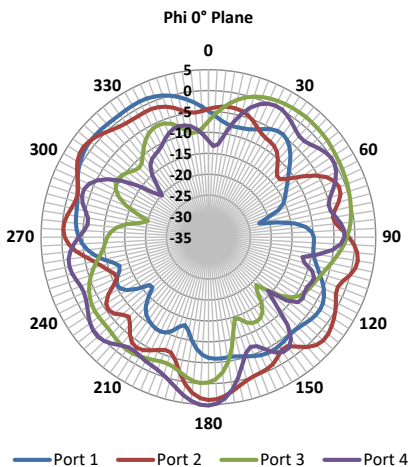
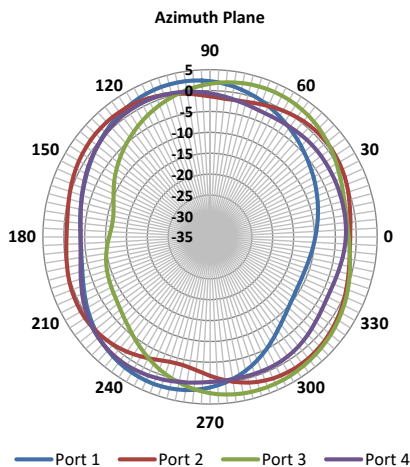
725 MHz



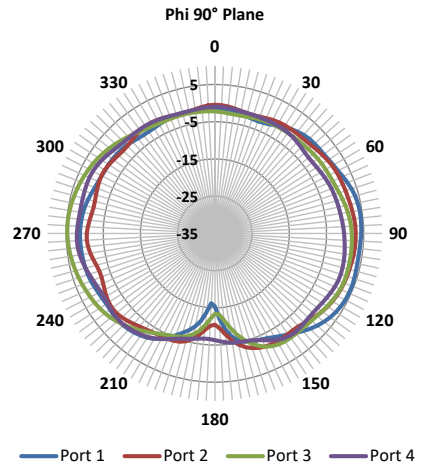
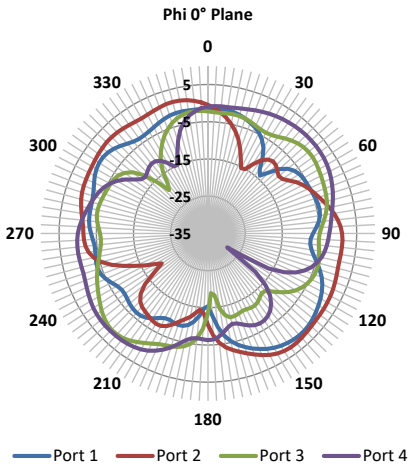
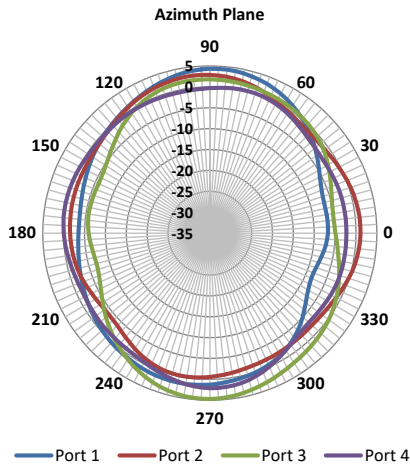
850 MHz



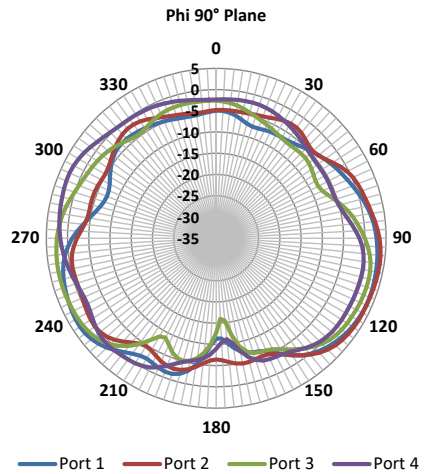
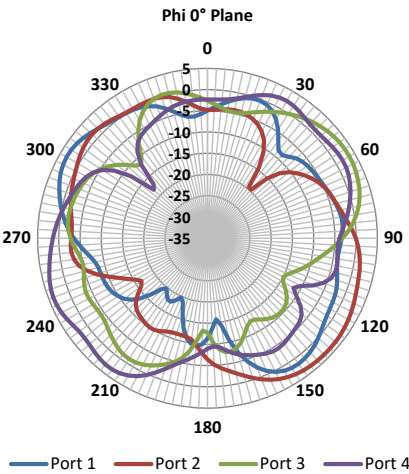
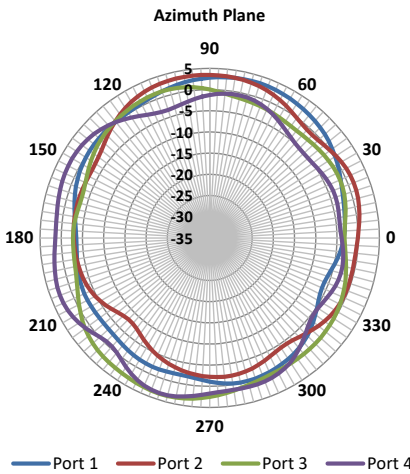
925 MHz



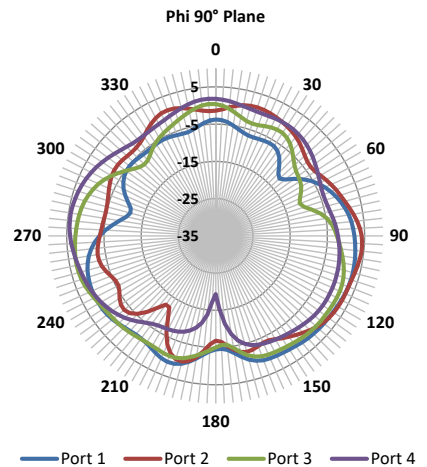
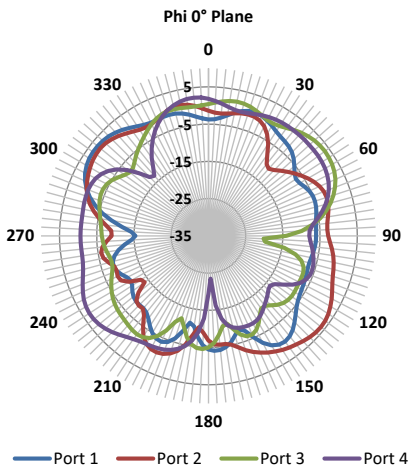
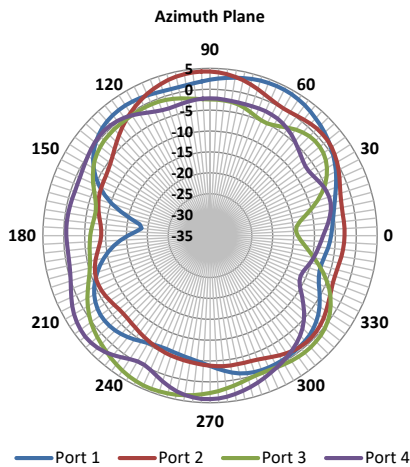
1448 MHz



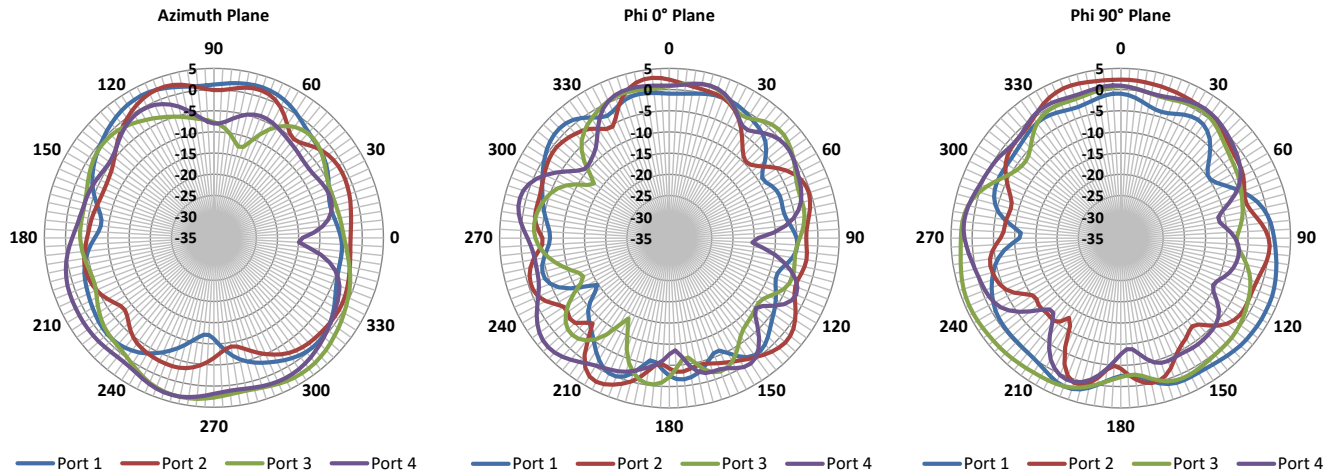
1730 MHz



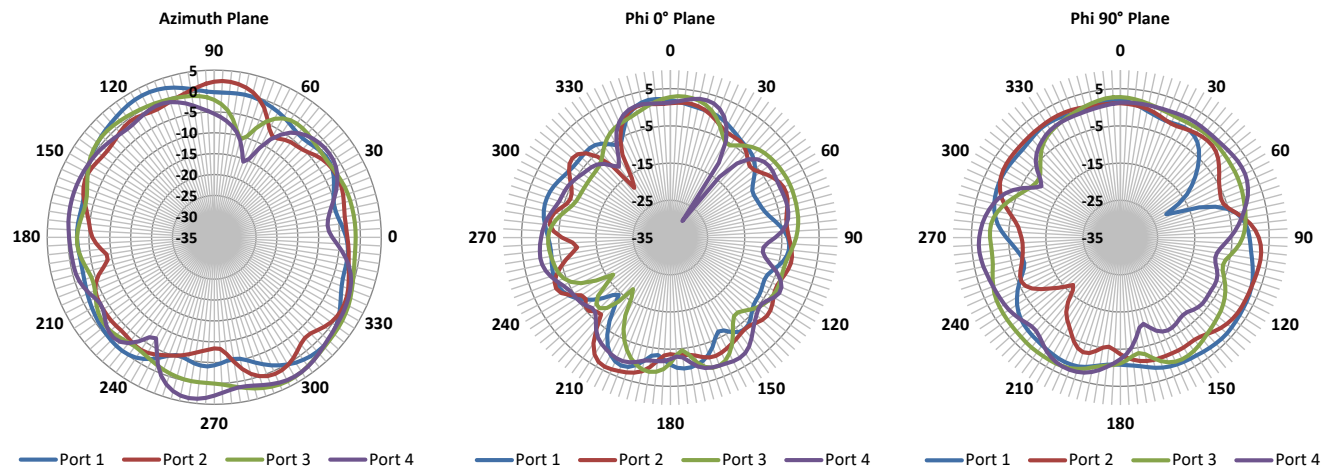
1930 MHz



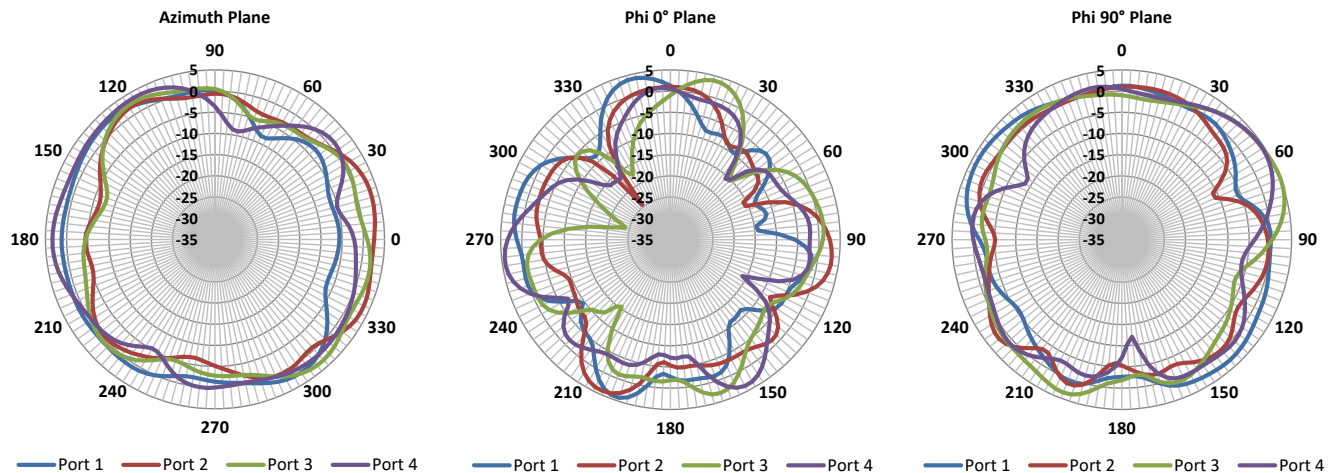
2130 MHz



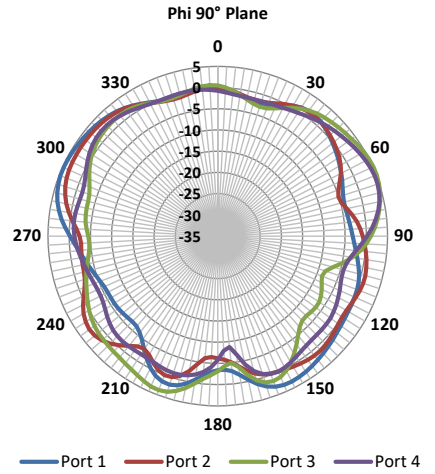
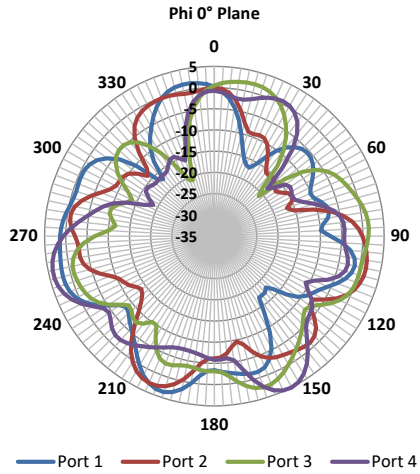
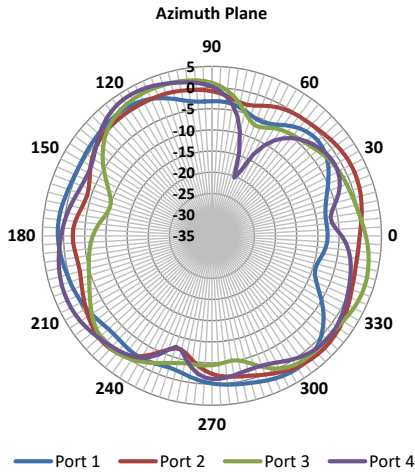
2310 MHz



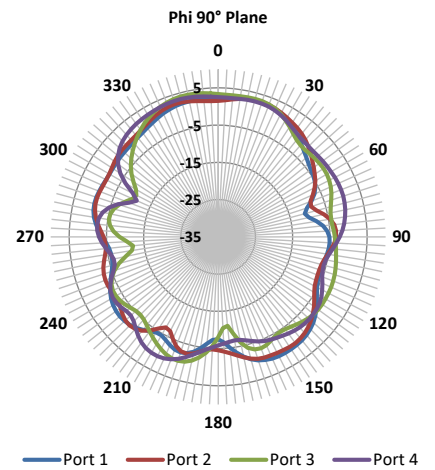
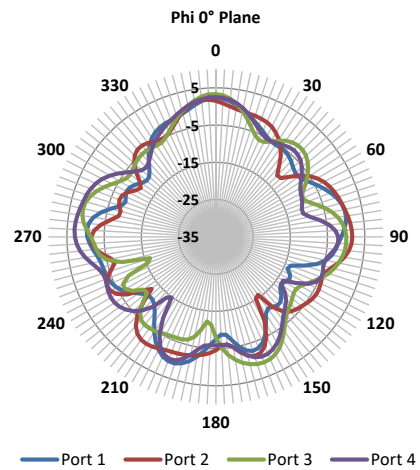
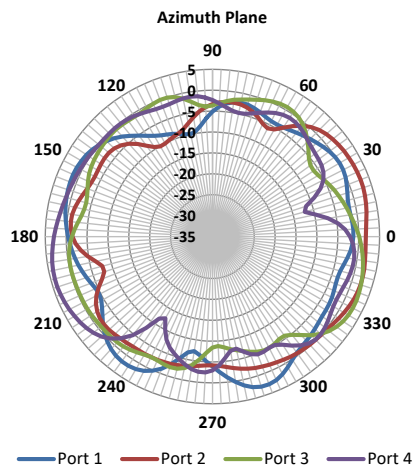
2600 MHz



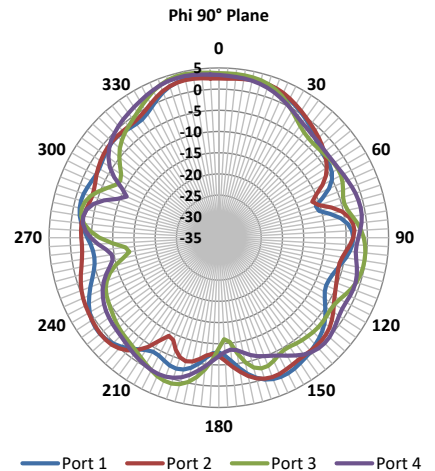
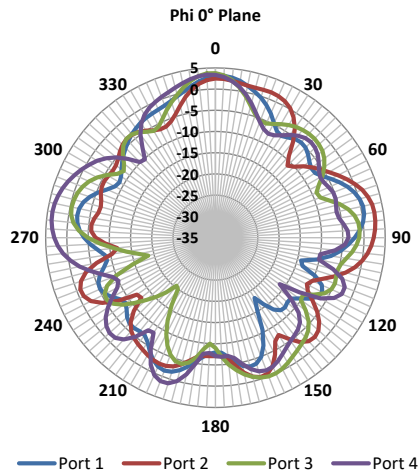
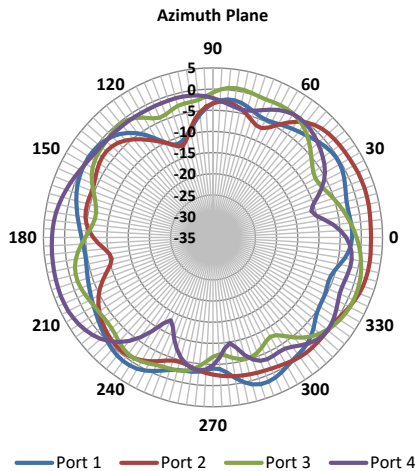
2700 MHz



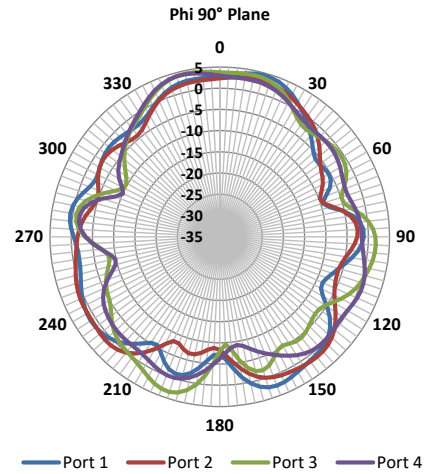
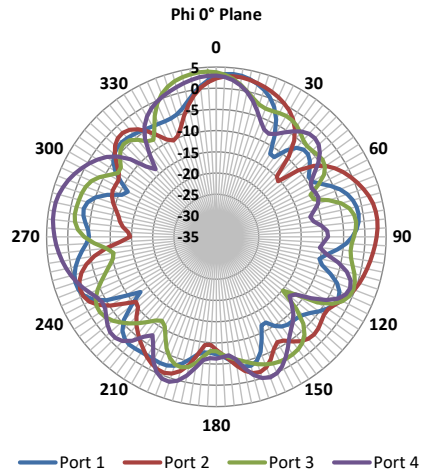
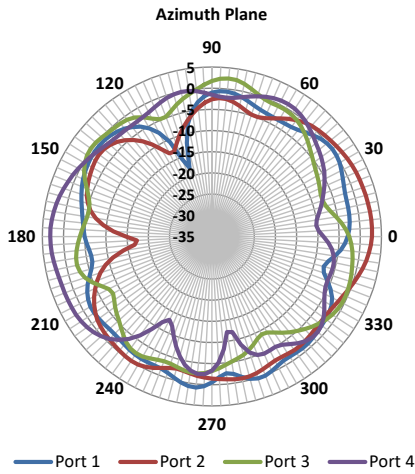
3300 MHz



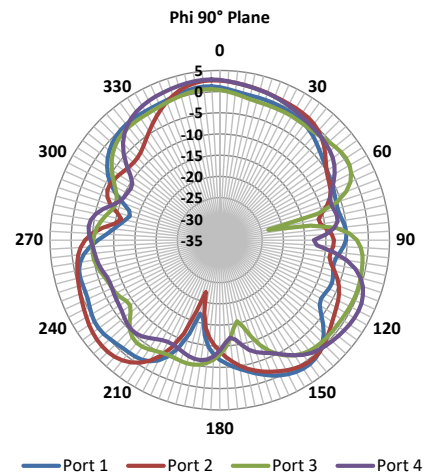
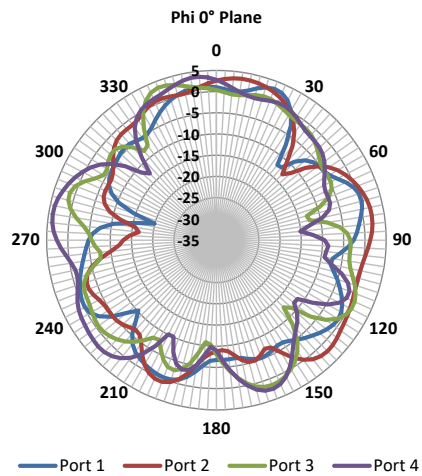
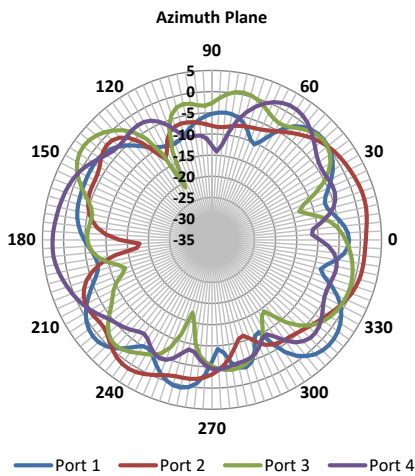
3500 MHz



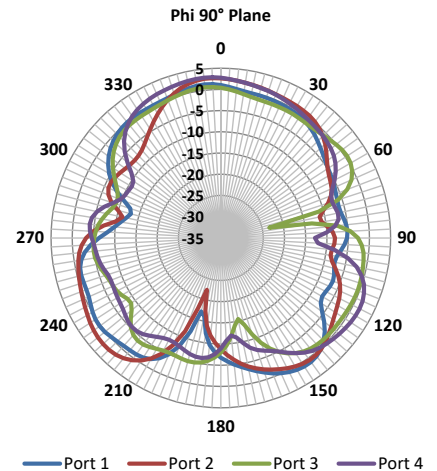
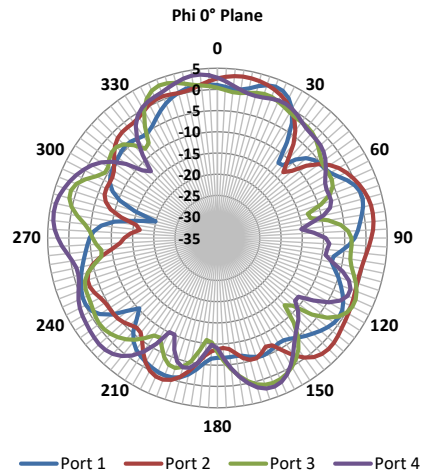
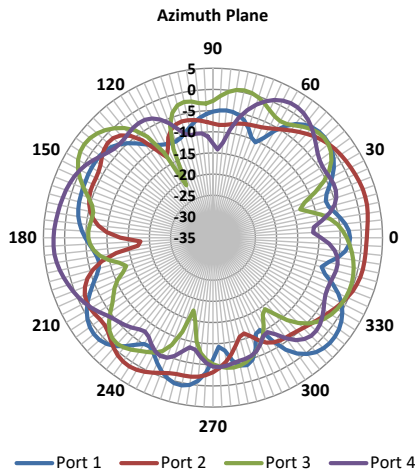
3700 MHz



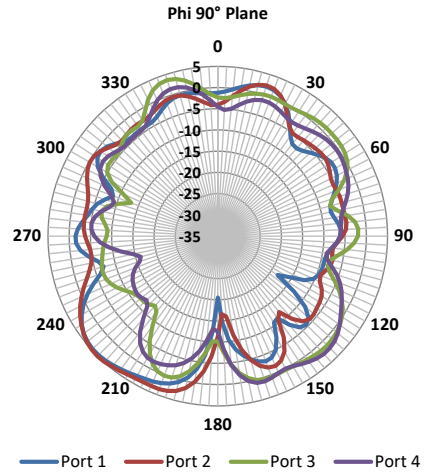
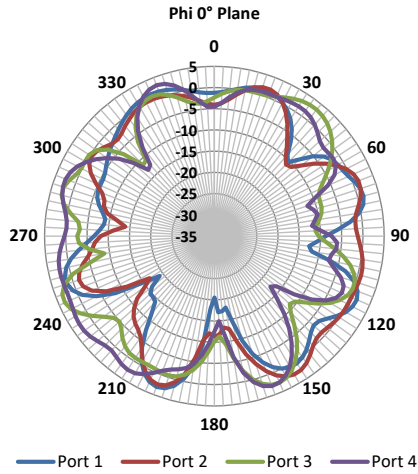
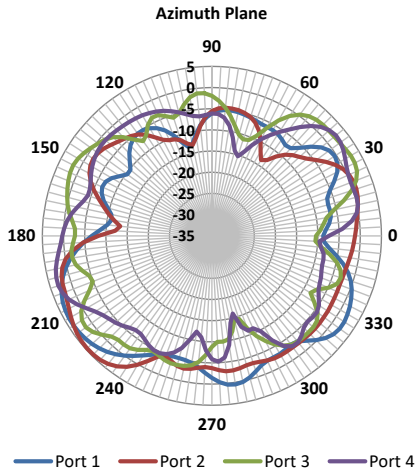
4200 MHz



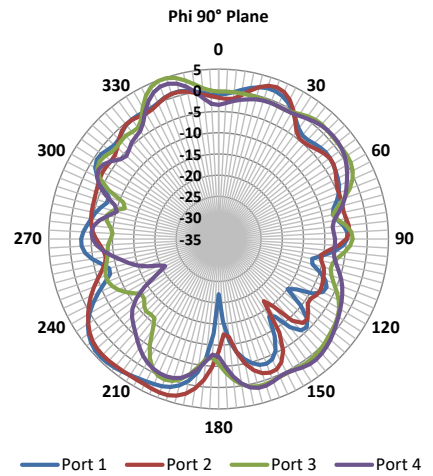
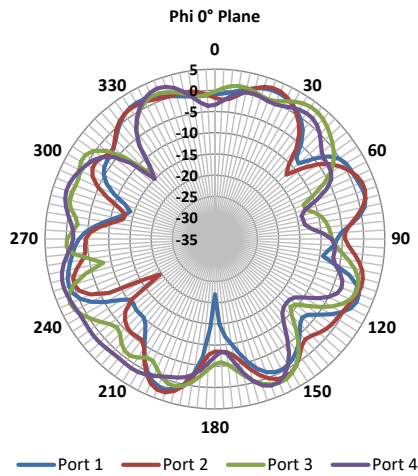
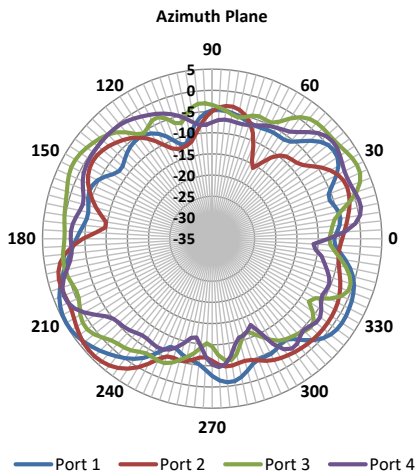
5150 MHz



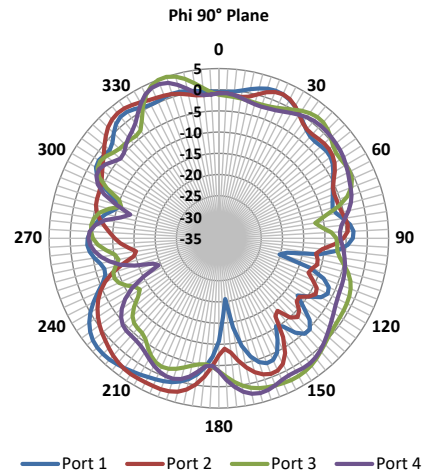
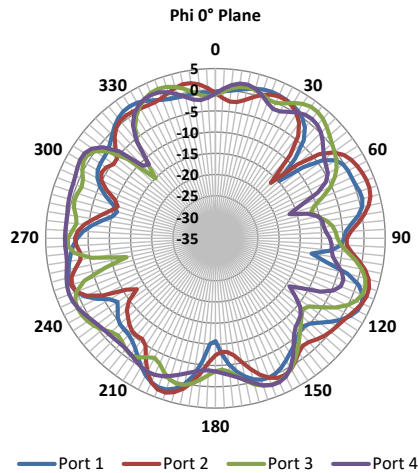
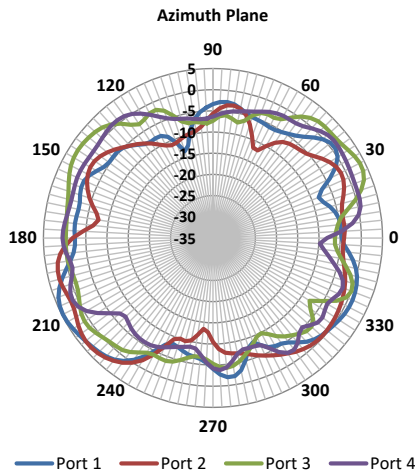
5500 MHz



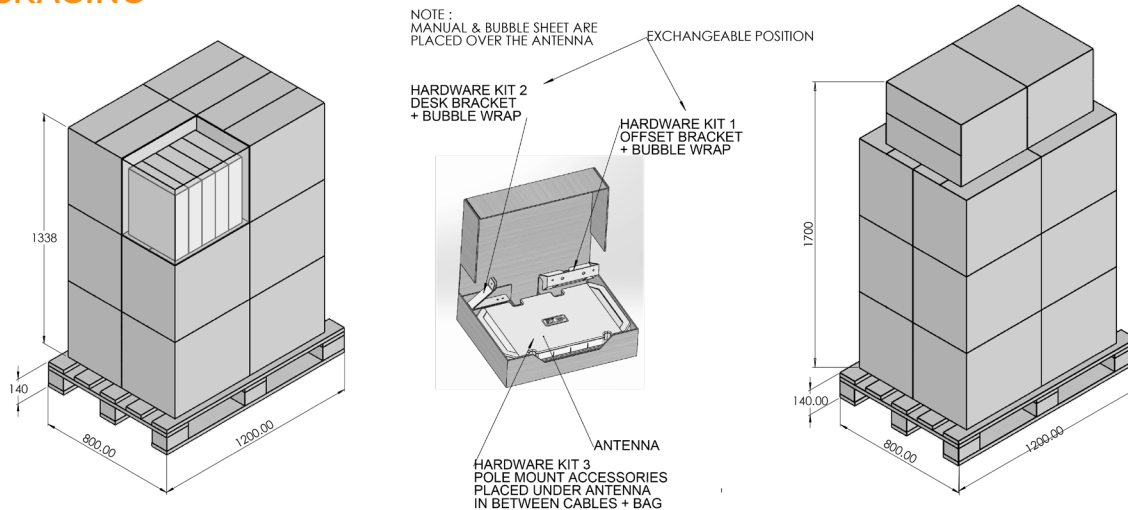
5800 MHz



6000 MHz



PACKAGING



Air Shipping Pallet Configuration Information

- Pallet 120cm x 80cm x 14cm, Weight 12 kg
- Single unit carton: Weight 2.8 kg
- Master carton @ 5 units: Weight 13.8 kg
- Pallet @ 12 master cartons per pallet: Weight 165 kg (120 x 80 x 134cm) 60 total units per pallet

Ocean Shipping Pallet Configuration Information

- Pallet 120cm x 80cm x 14cm, Weight 12kg
- Single unit carton: Weight 2.8 kg
- Master carton @ 5 units: Weight 13.8 kg
- Pallet @ 12 master cartons per pallet: Weight 193 kg (120 x 80 x 170cm) 70 total units per pallet

PACKAGED DIMENSIONS	UNIT CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	5	60	70
Height cm (in)	9.0 (3.54)	44.6 (17.56)	147.8 (58.19)	184.0 (72.44)
Length cm (in)	38.3 (15.08)	50.6 (19.9)	120 (47.24)	120 (47.24)
Width cm (in)	31.5 (12.4)	36.1 (14.2)	80.0 (31.5)	80 (31.5)
Est. Shipping Weight* kg (lbs.) *Including Mounting Kits	2.8 (6.1)	13.8 (30.4)	165 (363.8)	193 (425.5)

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08/23 Original

TE TECHNICAL SUPPORT CENTER

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