



RP20 pro

High Gain 5G, 4G/LTE 2x2 MIMO Fixed Wireless Access Directional Antenna

The RP20 pro (L000379-XX) antenna family from TE Connectivity (TE) provides high-performance connectivity for current and emerging 4G and 5G frequencies.

The incorporated 2x2 MIMO technology, and consistent radiation patterns means that the RP20 pro can provide enhanced data rates and bandwidth with extremely consistent performance.

There are 2 and 3 antenna port variants available with the 3-port models including GNSS coverage. Each model covers 617 - 6000 MHz and supports all major global 5G/LTE bands.

RP20 pro antennas are suitable for use globally on cellular networks and with any network operator. Connector options are available to fit most common industrial routers/gateways currently on the market.

Designed with a stylish housing and supplied with all necessary mounting hardware, this antenna is intended for professional installations for Fixed Wireless Access applications. They can be mounted to a pole/mast or directly to a wall using the mounting hardware provided.

FEATURES AND BENEFITS

- Global LTE and 5G coverage (617-6000MHz)
- Operates in both CBRS as well as unlicensed 5-6 GHz
- Covers B11 and B32 (1427 – 1522 MHz) to support Japanese customers and various EU countries
- Consistent directional patterns across all bands, providing stable reception
- Integrated pigtail cables - Easier attachment of long-run cables such as LMR240 or LMR400 type low-loss (large dia. cables)
- Supplied with brackets and mounting hardware for pole or wall mounting

APPLICATIONS

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

MOUNTING OPTIONS

Pole/Mast Mount



Wall Mount



SPECIFICATIONS

ELECTRICAL SPECIFICATION						
Operating Frequency (MHz)	617-698	698-960	1427-1522	1690-2700	3300-4200	4200-6000
VSWR - Max**	<2.5:1	<1.8:1	<1.4:1	<1.7:1	<1.6:1	<1.5:1
Peak Gain Max (dBi)*	8.4	9.1	7.4	9.1	10.6	10
Total Efficiency Average (%)*	66	74	80	74	68	62
Isolation Max (dB)*	30	20	30	25	22	24
3dB beamwidth Ave. @ Azimuth (°)*	70	63	74	70	47	62
3dB beamwidth Ave. @ Elevation (°)*	66	60	75	70	47	64
Gain Variation/Ripple (dB)*	1.7	1.2	0.6	3.1	3.5	4.6
Nominal Impedance (Ohms)	50					
Max Power - Ambient 25°C (W)	5					
Polarization	Linear Slant ($\pm 45^\circ$)					

* Measured with 0.4m length (0.195in. diameter) cable (N-Type Female connector)

** Measured with 5.0m length (0.195in. diameter) cable (SMA-Male connector)

ELECTRICAL SPECIFICATION - GNSS*		
Part Numbers Supporting GNSS	L000379-02 / L000379-04	
Frequency	1559-1610	
LNA Gain (dB)	28 \pm 3	
Noise Figure @ room temp. (dB)	< 2.5 @ 1575 MHz	
VSWR Max	<2.0:1	
Polarization	RHCP	
Nominal Impedance (ohm)	50	
Operating Supply Voltage (Vdc)	2.5-7.0	
Current Consumption, Max @ room temp. (mA)	8.5 \pm 3 @ 3.0V	
Input Max Power @ DC 3V (dBm)	+10	
Out-of-band Signal Rejection, Min @ room temp. (dBc)	617-698	>70
	698-960	>80
	1428-1511	>80
	1710-2700	>80
	3300-4200	>70
	4200-4400	>80
	4900-5800	>70
Cable Type	RG174	

* Measured with 0.385m length (RG174) + 0.4 m length (0.195in diameter) cable

MECHANICAL SPECIFICATION

Dimensions - Height x Width x Depth - mm (in.)	295 x 295 x 90 (11.61 x 11.61 x 3.54)
Cable	0.195in dia
Radome Color / Material	White / Polycarbonate
Mounting	Fixed Bracket (Supplied)

ENVIRONMENTAL SPECIFICATION

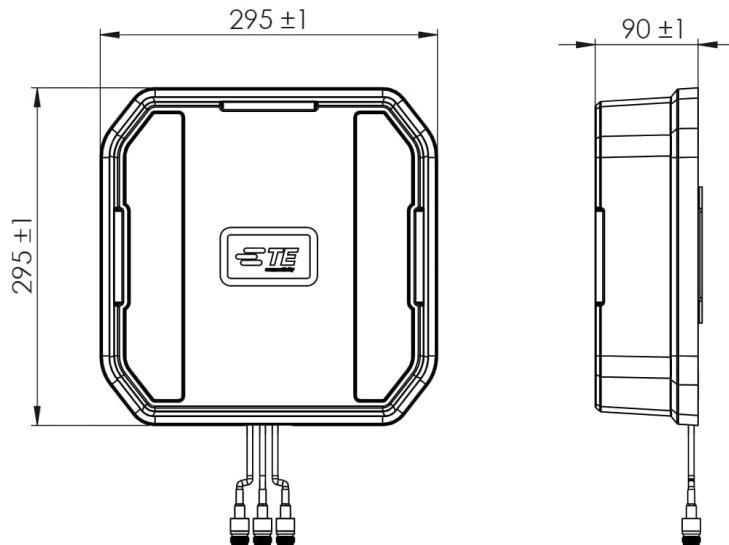
Operating Temp. (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Temperature Cycling / Thermal Shock	IEC 68-2-14
Ingress Protection	IP67
Wind Velocity - Operation mph (kmh)	100 (161)
Wind Velocity - Survival mph (kmh) - Without Bracket	155 (250)
UV Rating	ASTM-G-155
Flammability Rating	UL 94-HB / UL746C-F2
Mechanical Shock Rating	IEC 60068-2-27, Structural Integrity of Mountings
Vibration Test Rating	IEC 60068-2-64, Stationary Installation, Category 3
Operating Relative Humidity Rating	MIL-STD 810G/Method 507.5 Aggravated Humidity @ 98%
Salt Fog Spray Resistance	MIL-STD-810G, Method 509.5
Impact Resistance	IK-8
Pull Test - Cable	20lbs - 30 Second Duration
Drop Test - Radome	Passed - 1m Drop on Hard Surface (5 Drops Total)
Material Substance Compliance	RoHS Compliant CE & UKCA Compliant California Prop 65 Compliant European RED Compliant

PART NUMBER CONFIGURATIONS

ORDERABLE PART NUMBER	ALIAS PART NUMBER	PIGTAIL/CABLE	CONNECTOR	NUMBER PORTS	FREQUENCY
L000379-01	PAS61609-30NF	Integrated Pigtail 30cm (11.81 in.)	Type N (Female)	2 x Cellular	617-6000 MHz
L000379-02	PAS61609J-30NF	Integrated Pigtail 30cm (11.81 in.)	Type N (Female)	2 x Cellular 1 x GNSS	617-6000 MHz
L000379-03	PAS61609-500SMM	Integrated Cable 500cm (196.85 in.)	SMA Male	2 x Cellular	617-6000 MHz
L000379-04	PAS61609J-500SMM	Integrated Cable 500cm (196.85 in.)	SMA Male	2 x Cellular 1 x GNSS	617-6000 MHz

MECHANICAL DRAWINGS

Dimensions

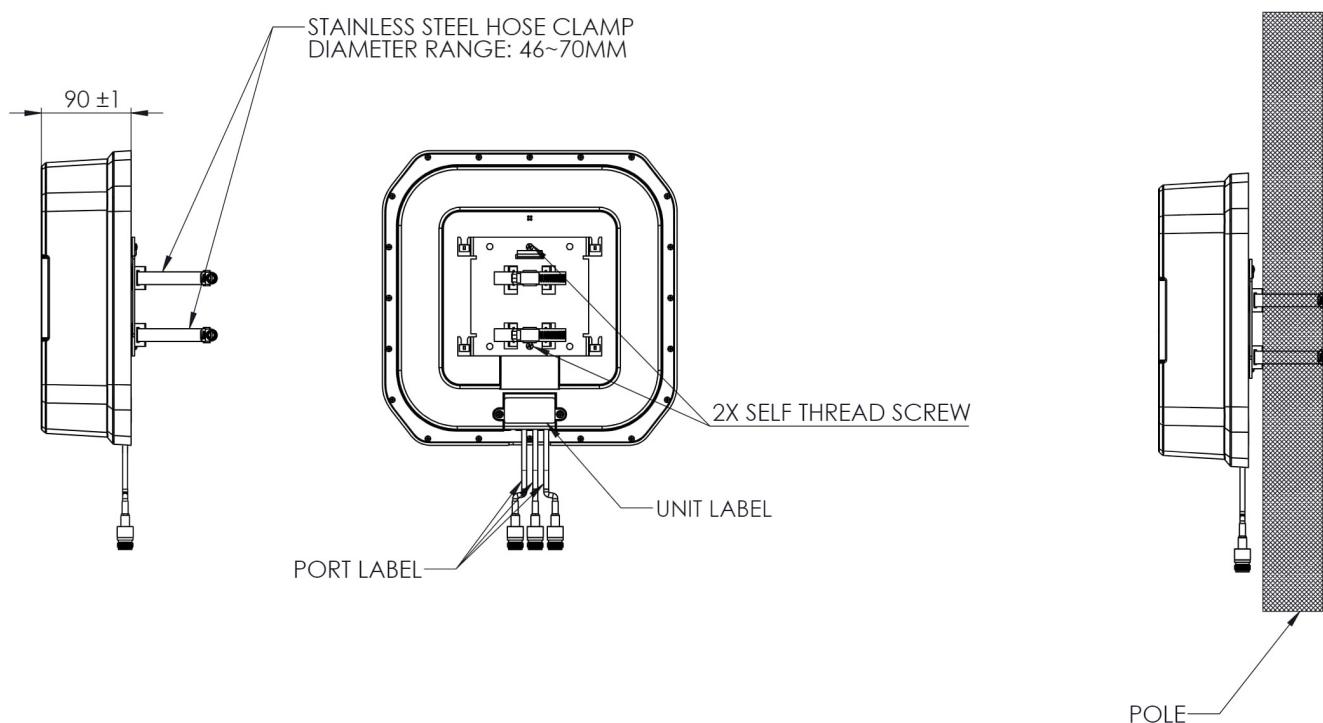


ORDERABLE PART NUMBER	CONNECTOR	NUMBER PORTS*
L000379-01	Type N (Female)	2 x Cellular
L000379-02	Type N (Female)	2 x Cellular 1 x GNSS
L000379-03	SMA Male	2 x Cellular
L000379-04	SMA Male	2 x Cellular 1 x GNSS

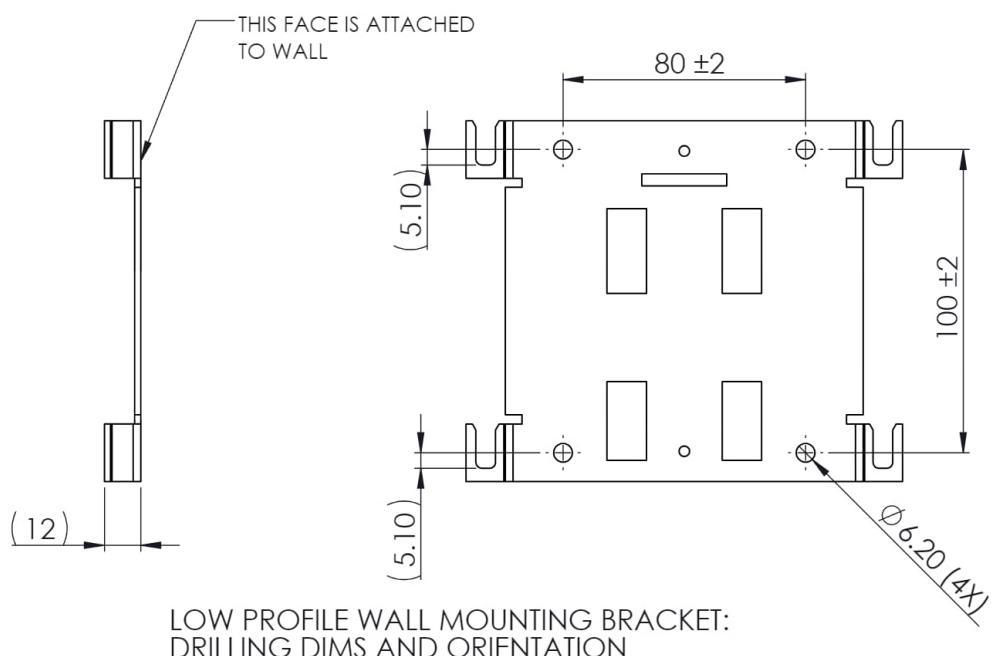
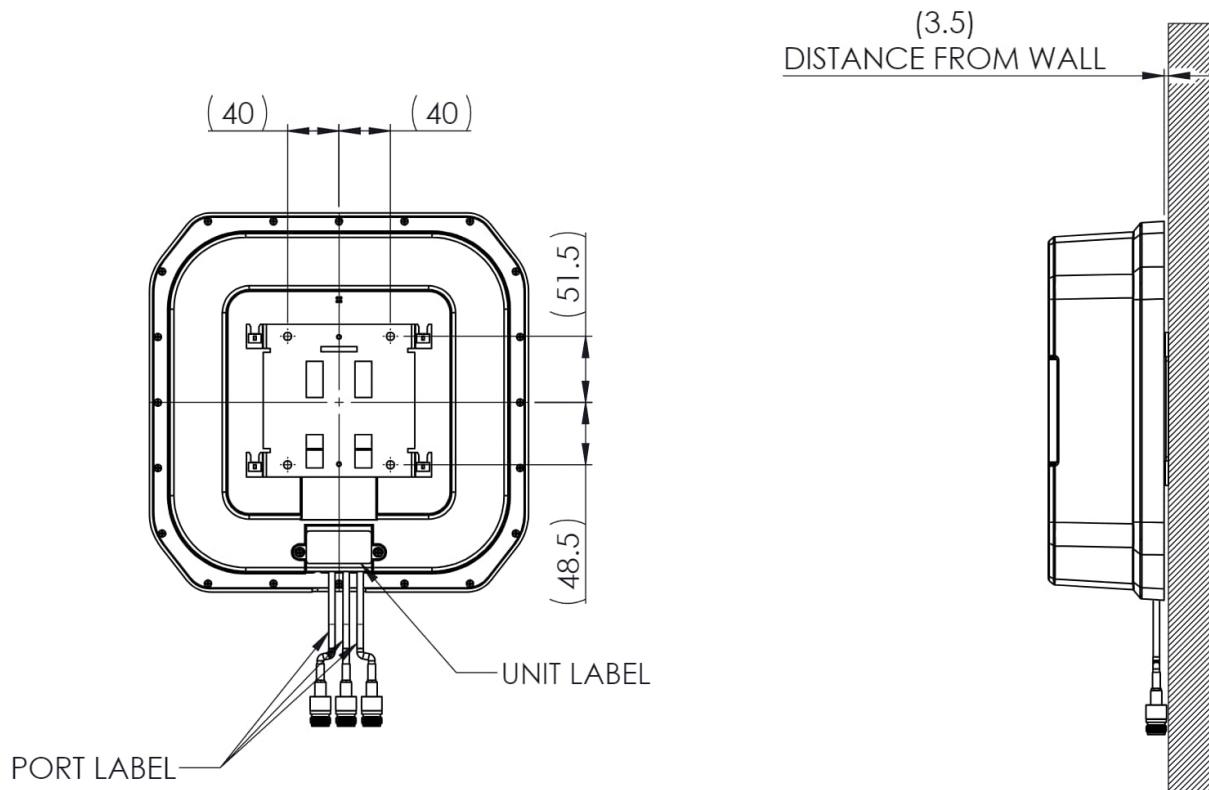
*Port Label Color Code:

4G/5G Ports - Yellow
GNSS - White

Pole Mount



Wall Mount

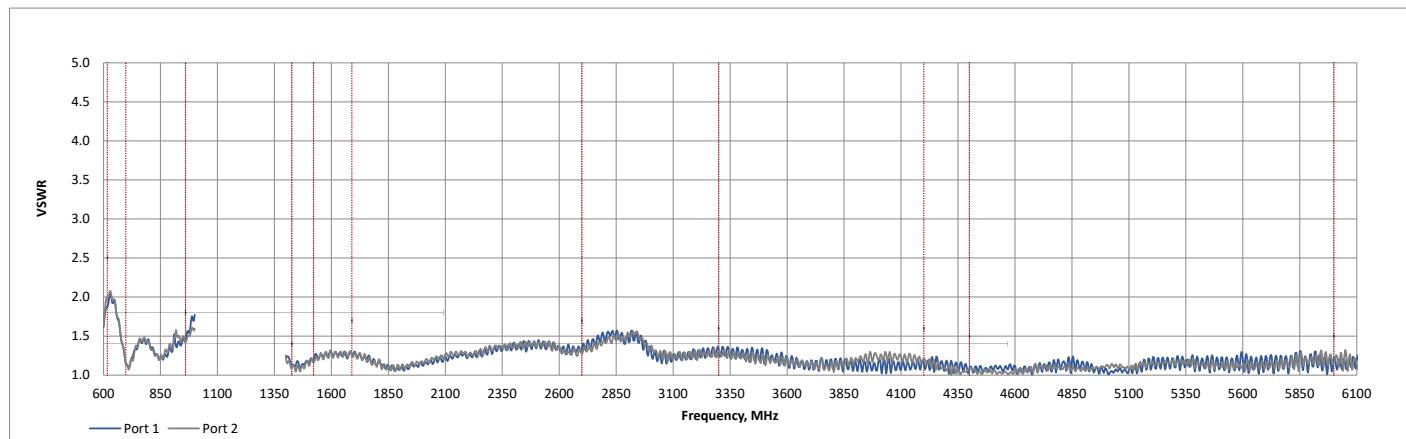


GLOBAL 4G/5G CELLULAR COVERAGE

The **RP20 pro** 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.

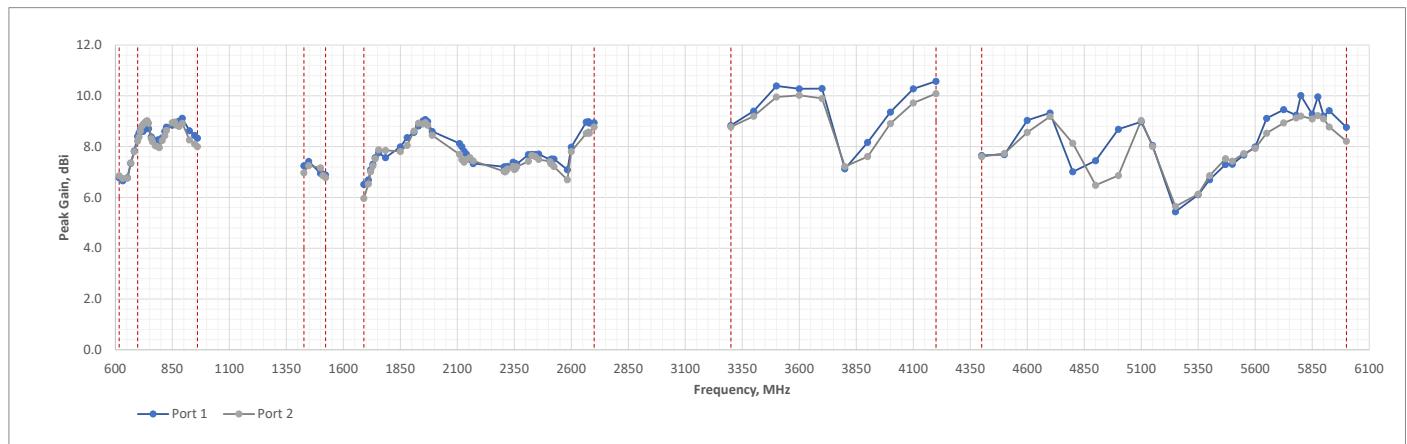
FREQUENCY	RF BANDS COVERED
617-698 MHz	71
698-960 MHz	5, 6, 8, 12, 13, 14, 17, 18, 19, 20, 26, 27, 28, 29, 44, 67, 68, 85 N5, N8, N12, N14, N18, N20, N28, N29, N81, N82, N83, N89, N91, N92, N93, N94
1427-1511 MHz	11, 21, 32, 45, 74 N50, N51, N74, N75, N76
1690-2700 MHz	1, 2, 3, 4, 7, 9, 10, 15, 16, 23, 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
3300-4200 MHz	22, 42, 43, 48 N48, N77, N78
4400-6000 MHz	N79

VSWR*



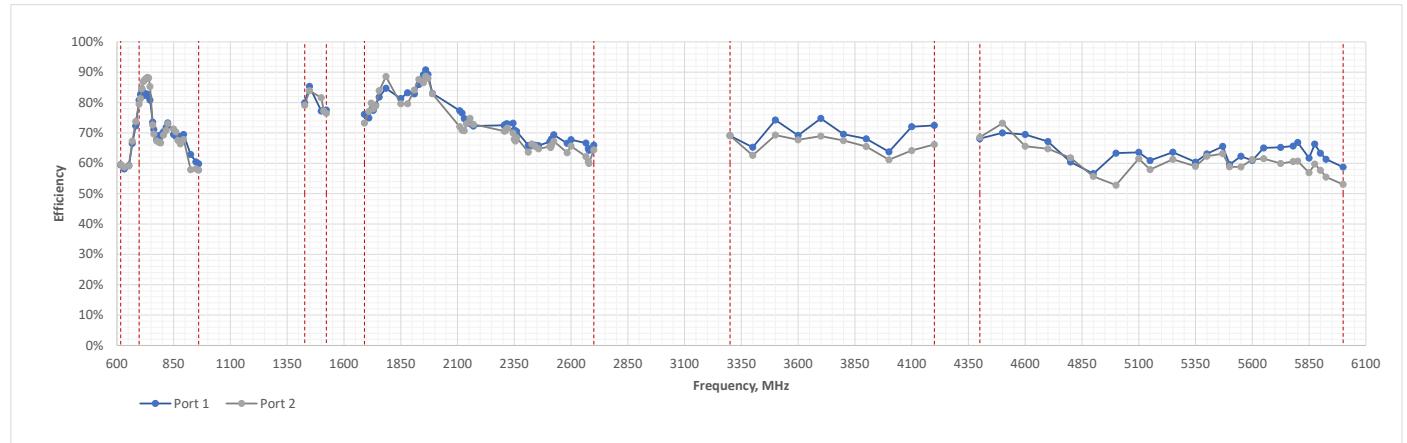
*Measured with 5.0m length (0.195in. diameter) cable

PEAK GAIN AVE**



**Measured with 0.4m length (0.195in. diameter) cable

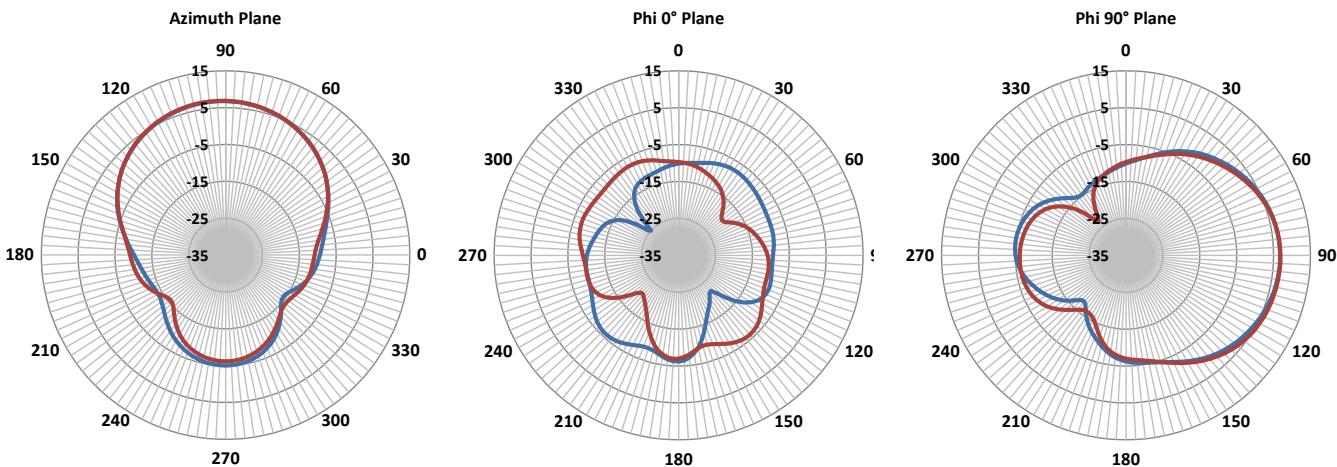
EFFICIENCY (%)**



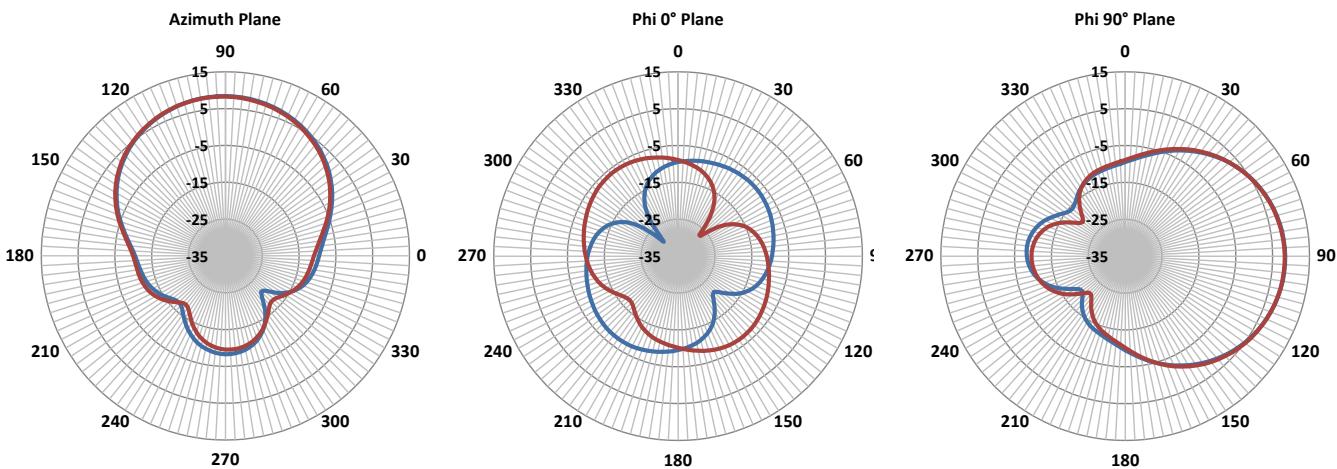
**Measured with 0.4m length (0.195in. diameter) cable

RADIATION PATTERNS

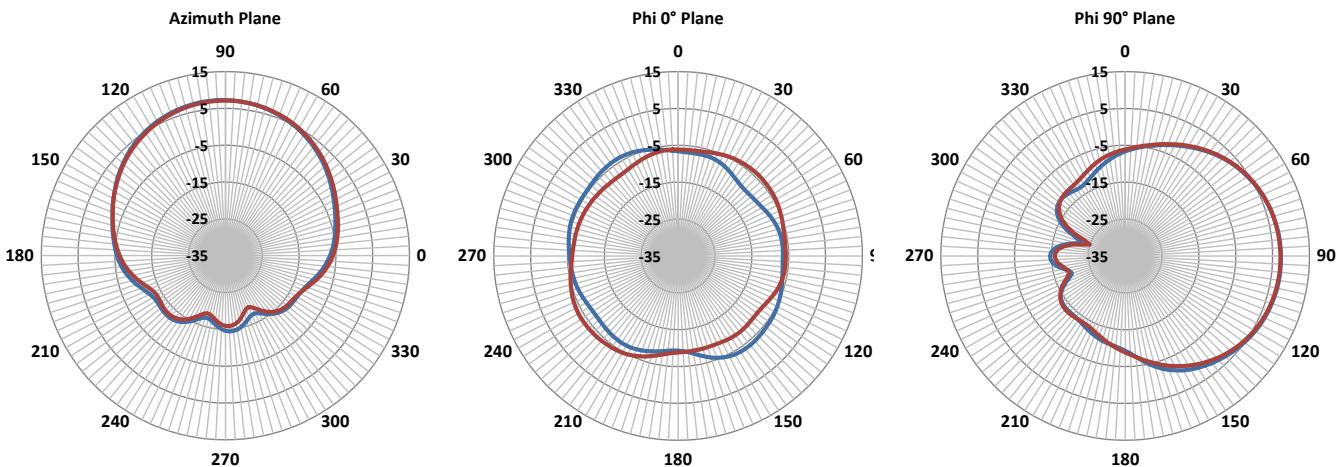
617-698 MHz



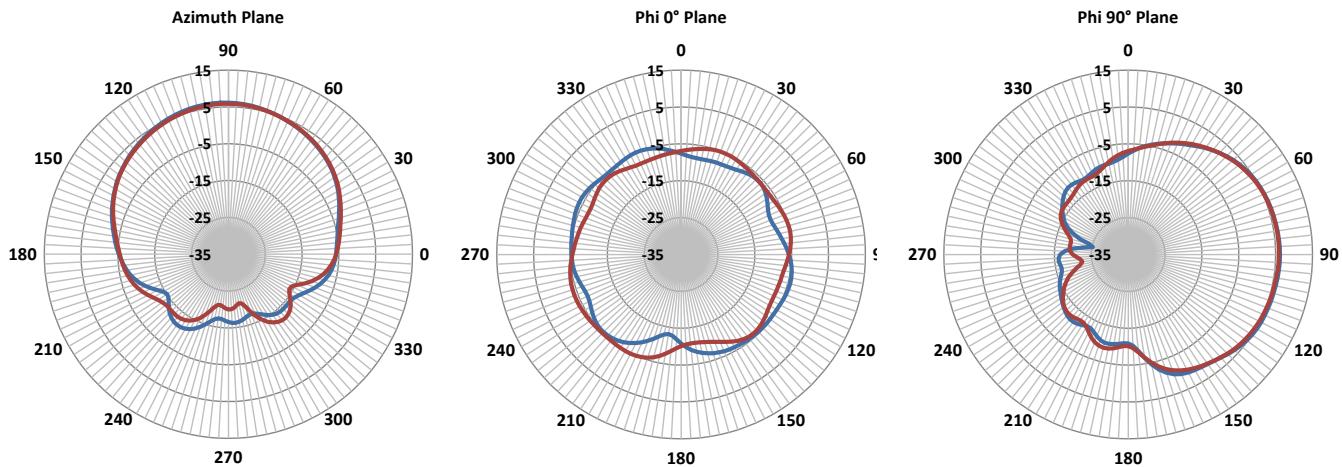
698-960- MHz



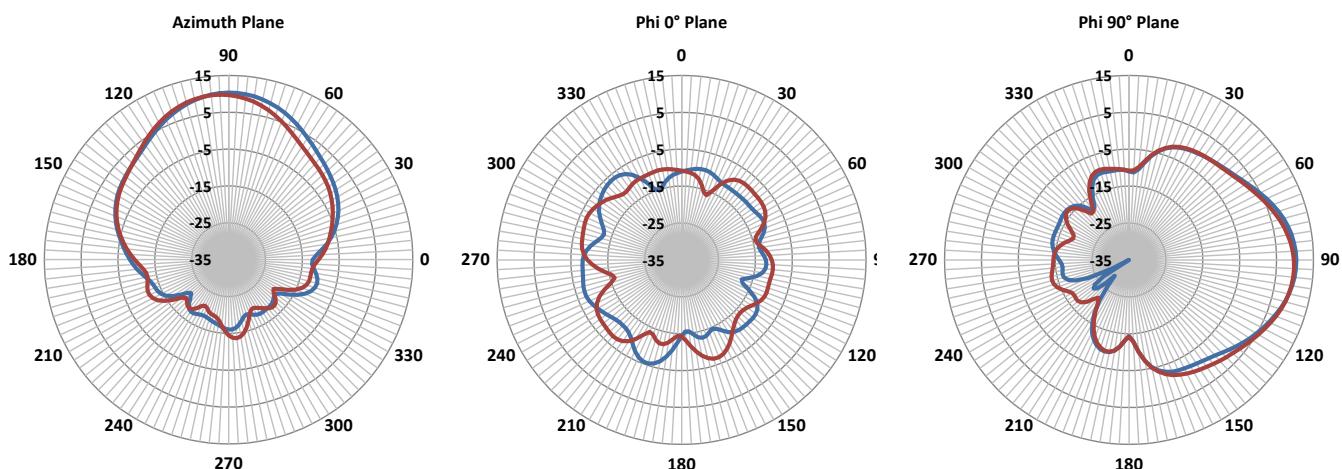
1452 MHz



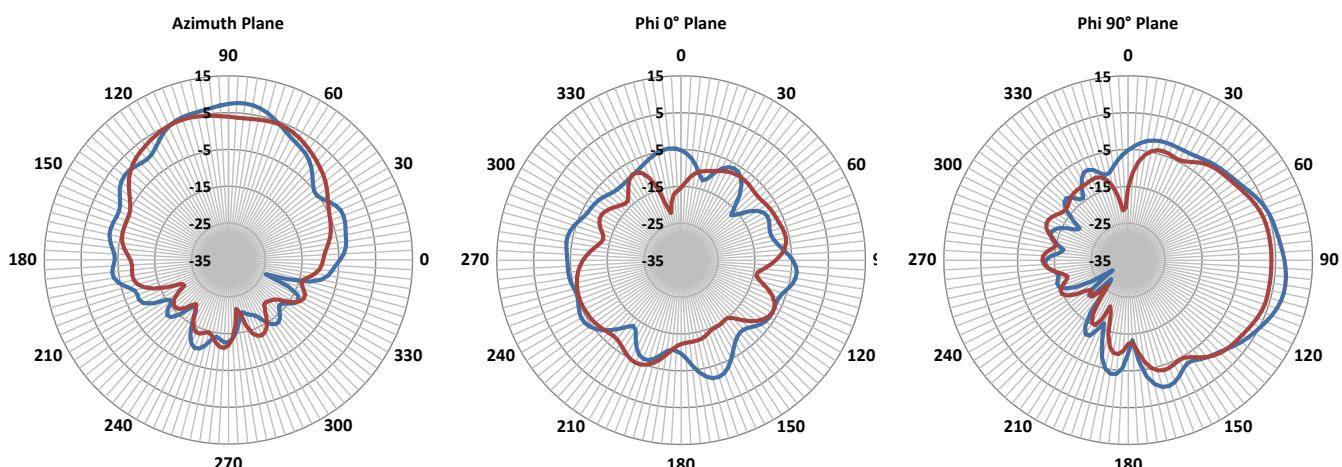
1690-2700 MHz



3300-4200 MHz

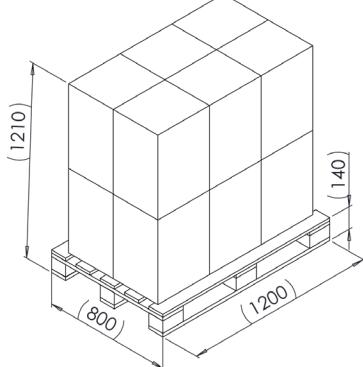


4200-6000 MHz

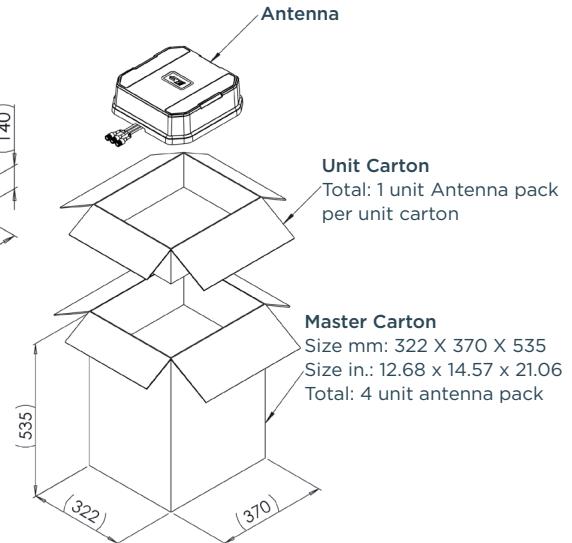
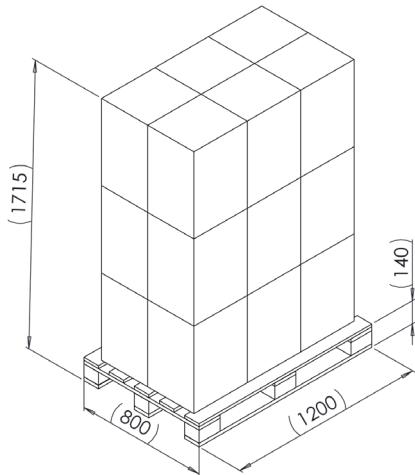


PACKAGING

Air Pallet



Ocean Pallet



PACKAGED DIMENSIONS	Unit Carton	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	4	48	72
Height mm (in)	125 (4.92)	535 (21.06)	1210 (47.64)	1715 (67.52)
Length mm (in)	370 (14.57)	370 (14.57)	1200 (47.24)	1200 (47.24)
Width mm (in)	322 (12.68)	322 (12.68)	800 (31.50)	800 (31.50)
Est. Shipping Weight Inc. Pallet kg (lbs.)	1.9 (4.19)	8.25 (18.19)	111 (244.71)	160 (352.74)

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