

## 698 to 960 MHz/1710 to 2700 MHz Low PIM 4-port MIMO Ceiling Mount Antenna



Patent Pending  
CMQ69273P



(TILE FLUSH MOUNT)  
Standard



(HARD CEILING FLUSH MOUNT)  
Part # HKIT-CMX-003



(ABOVE CEILING MOUNT)  
Part # HKIT-CMX-004



(ABOVE CEILING TITLE MOUNT)  
Part # HKIT-CMX-001



(HARD CEILING EXTENSION MOUNT)  
Part # HKIT-CMX-002

### LOW PIM 4-PORT MIMO MULTI-BAND CEILING MOUNTED OMNIDIRECTIONAL ANTENNA

The Patent Pending CMQ69273P is an indoor broadband Low PIM 4-port MIMO omnidirectional ceiling mount antenna. It is designed to provide pattern coverage that is optimized for indoor requirements at 698-960 MHz and 1710-2700 MHz frequency bands. The individual antennas elements are designed to radiate a pattern that has been specifically shaped to provide optimal radiation within a coverage zone.

#### FEATURES

- Low Profile aesthetically neutral housing
- Mounts directly and easily to ceiling tile
- Performance optimized using Laird proprietary RF optimization tools
- Excellent flame retardancy rating
- Four radiating elements optimized for indoor applications
- RoHS compliant

#### MARKETS

- Wireless Service Providers
- Small cells
- Building Operators – offices & meeting rooms
- Hospitality – hotels & casinos
- Transportation – airport, bus, & train terminals
- Retail – stores & indoor pedestrian malls
- Education – libraries & museums

#### BENEFITS

- Complete cellular 3G/4G LTE data communication at every antenna port
- Low PIM performance minimizes interference and improves in building wireless network coverage and capacity.
- Attractive, compact design and form factor ideal for indoor solution applications.

PARAMETER	SPECIFICATION							
Frequency Bands, MHz	698-806	824-894	880-960	1710-1880	1850-1990	1910-2170	2300-2500	2500-2700
Peak Gain, dBi (Typ)	3.6	3.8	3.7	5.4	5.0	4.7	4.5	4.5
Peak Gain, dBi (Max)	5.4	4.7	4.2	6.0	5.4	5.4	6.0	5.1
VSWR (Typ)	<1.8:1	<1.6:1	<1.7:1	<1.6:1	<1.6:1	<1.8:1	<1.4:1	<1.7:1
VSWR (Max)	<2.0:1	<2.0:1	<2.0:1	<2.0:1	<2.0:1	<2.0:1	<2.0:1	<2.0:1
Isolation, dB (Max)	< -15	< -15	< -15	< -17	< -17	< -17	< -17	< -17
Port 1->Port 2, dB (Typ)	< -15	< -19	< -20	< -24	< -27	< -23	< -22	< -23
Port 1->Port 3, dB (Typ)	< -17	< -17	< -19	< -18	< -22	< -24	< -24	< -26
Port 1->Port 4, dB (Typ)	< -15	< -17	< -18	< -24	< -28	< -22	< -22	< -23
Port 2->Port 3, dB (Typ)	< -15	< -18	< -18	< -24	< -29	< -22	< -22	< -23
Port 2->Port 4, dB (Typ)	< -17	< -18	< -19	< -19	< -22	< -23	< -25	< -27
Port 3->Port 4, dB (Typ)	< -15	< -17	< -18	< -24	< -27	< -23	< -23	< -24
PIM, 3rd Order, 2 x 20W (Typ)	<-154 dBc			<-164 dBc				
PIM, 3rd Order, 2 x 20W (Max)	<-153 dBc							
Nominal Impedance	-50 Ω							
Max Power (ambient temp of 25°C)	50 Watts							
Polarization	Linear, Omni-directional							
Radome	PC / ABS, UV stable							
Mounting	Ceiling mount (drywall or tile flush mount )							
Dimensions (diameter x height)	330 mm x 55.5 mm (12.9" x 2.2")							
Weight	Approximately 1.18 kg (2.6 lbs.)							
Storage Temperature (°C)	- 40° C to +85° C ( -40° F to 185° F)							
Operational Temperature (°C)	-30° C to +70° C ( -22° F to 158° F)							
Flammability Rating (Radome)	UL 94V0 Materials							
Material Substance Compliance	RoHS Compliant							
Standard for Safety: Information Technology Equipment	UL/CSA/EN/IEC/CB-Scheme 60950-1 Listed							

MODEL NUMBER	CABLE LENGTH	CONNECTOR
CMQ69273P-30NF	30 cm, (12"), cable	Four Type N-Female
CMQ69273P-30D41F	30 cm, (12"), cable	Four Type 4.1-9.5 Female
CMQ69273P-30D43F	30 cm, (12"), cable	Four Type 4.3-10 Female

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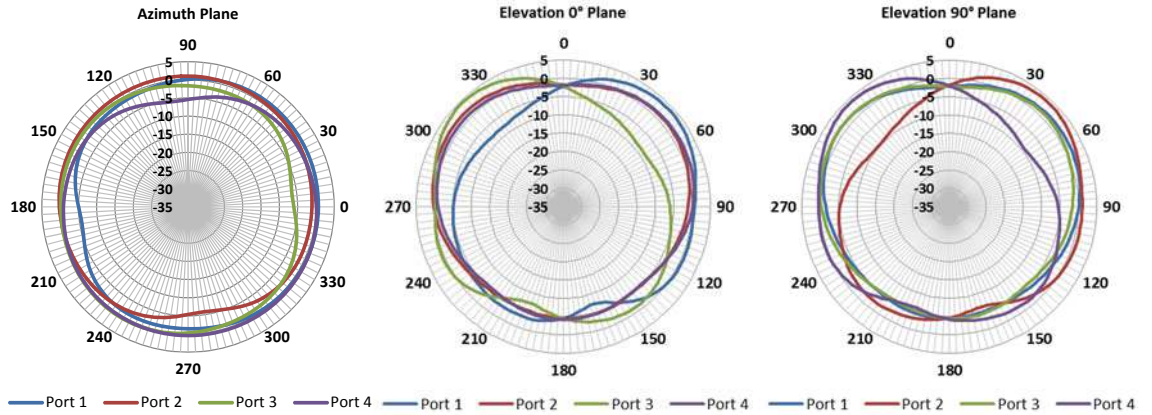
Asia: +86.21.5855.0827.127  
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[www.lairdtech.com](http://www.lairdtech.com)

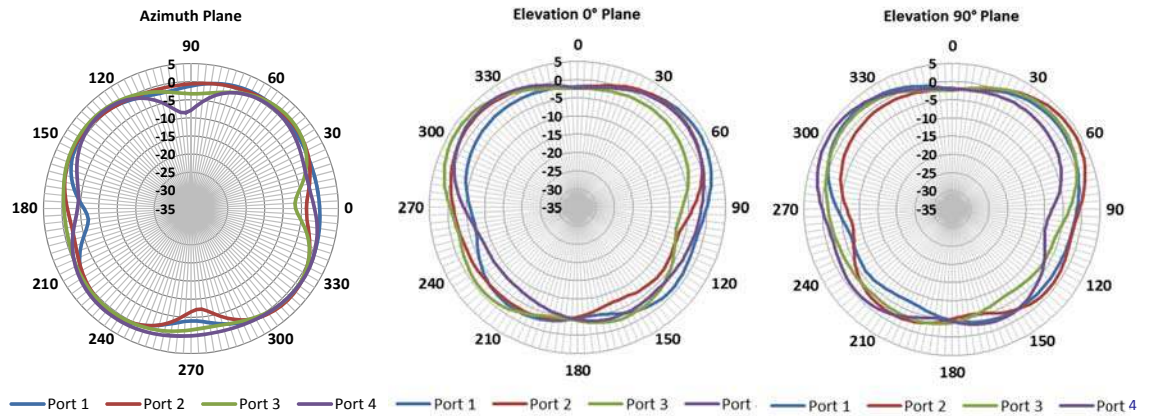
**698 to 960 MHz/1710 to 2700 MHz  
Low PIM 4-port MIMO Ceiling Mount Antenna**

**RADIATION PATTERNS**

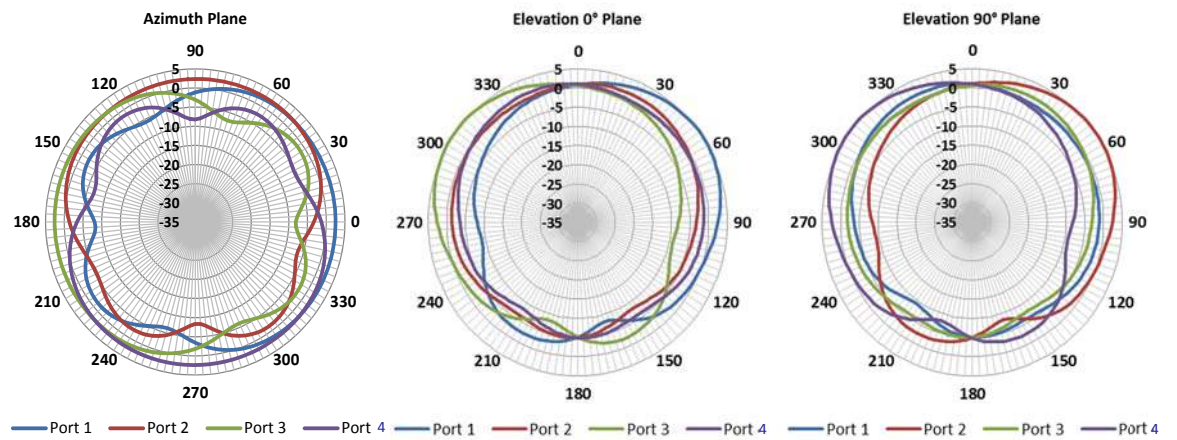
**Radiation Pattern at 698 MHz**



**Radiation Pattern at 746 MHz**



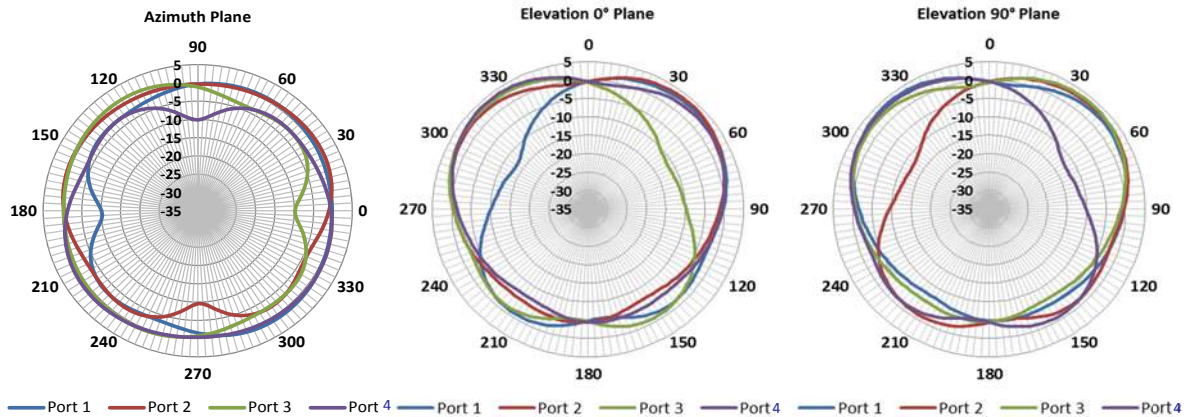
**Radiation Pattern at 824 MHz**



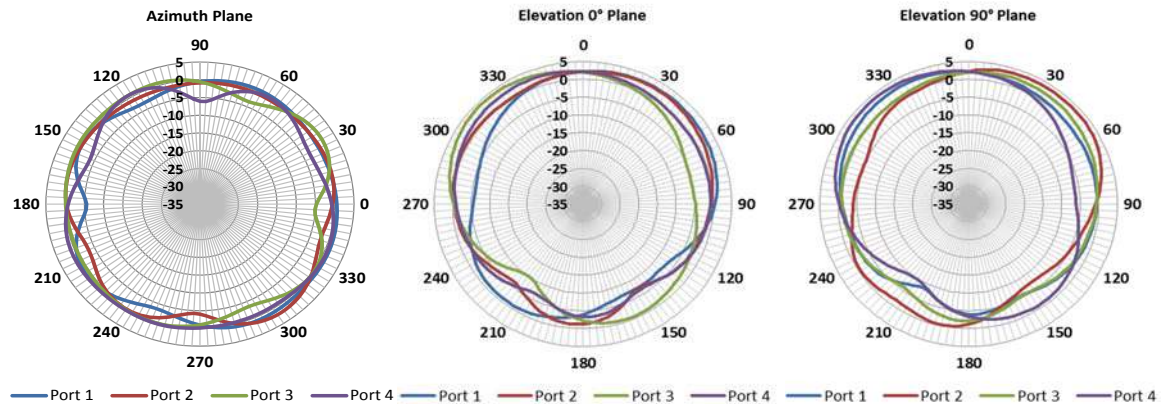
**698 to 960 MHz/1710 to 2700 MHz  
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**RADIATION PATTERNS**

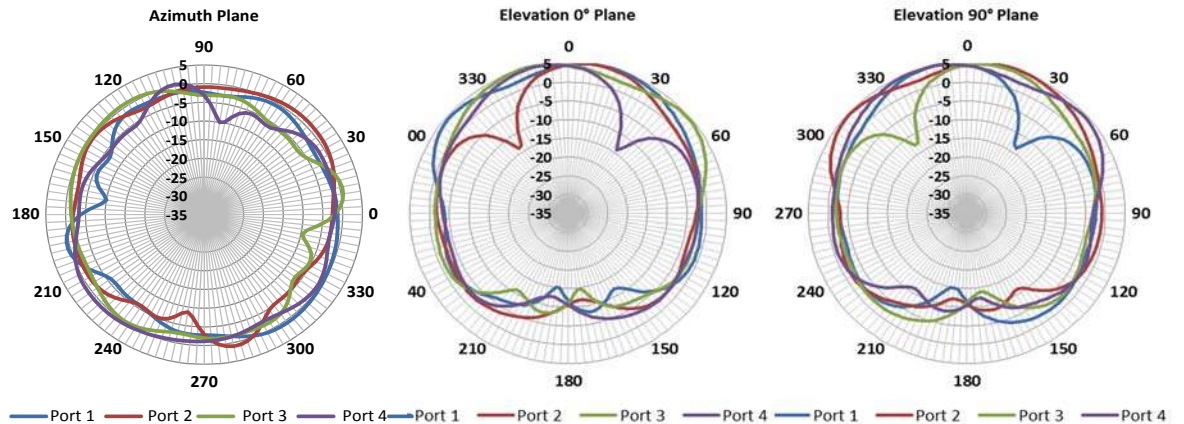
**Radiation Pattern at 880 MHz**



**Radiation Pattern at 960 MHz**



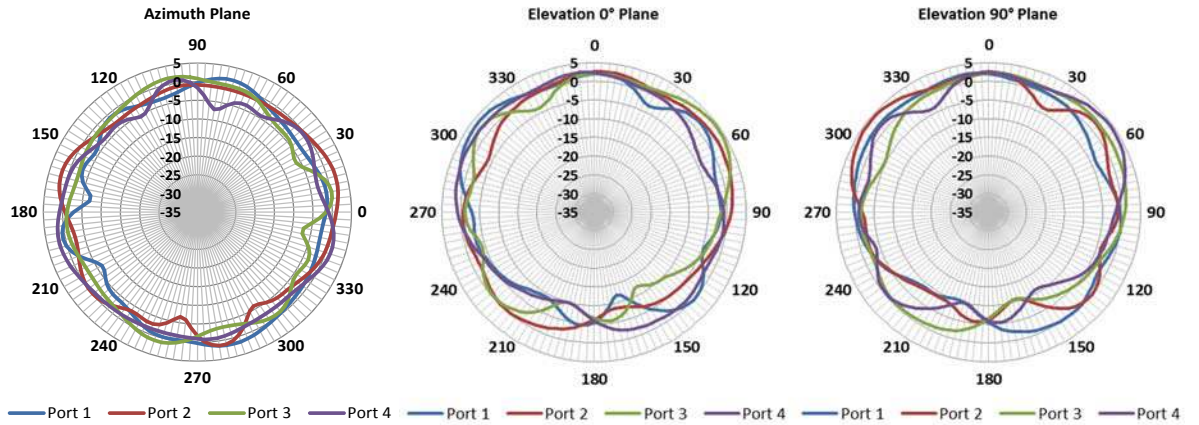
**Radiation Pattern at 1710 MHz**



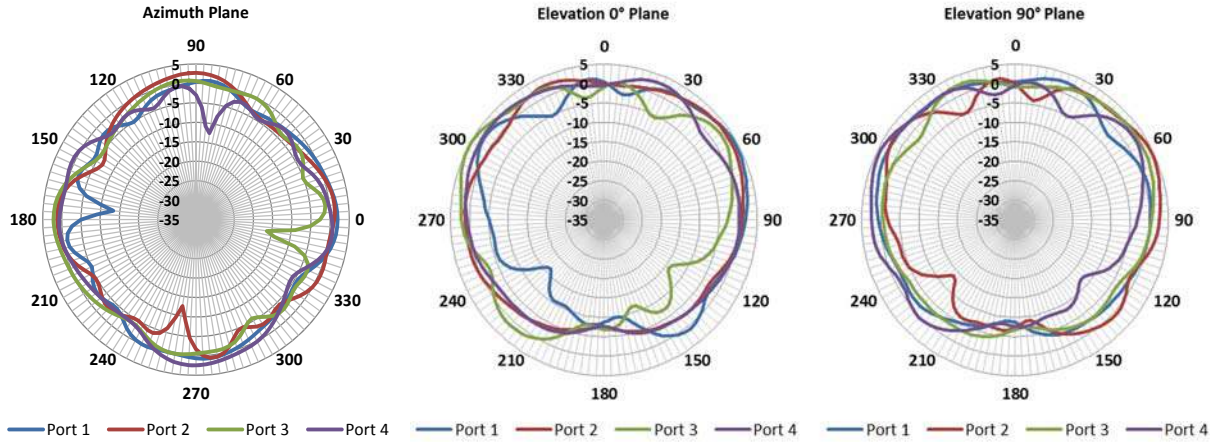
**698 to 960 MHz/1710 to 2700 MHz  
Low PIM 4-port MIMO Ceiling Mount Antenna**

**RADIATION PATTERNS**

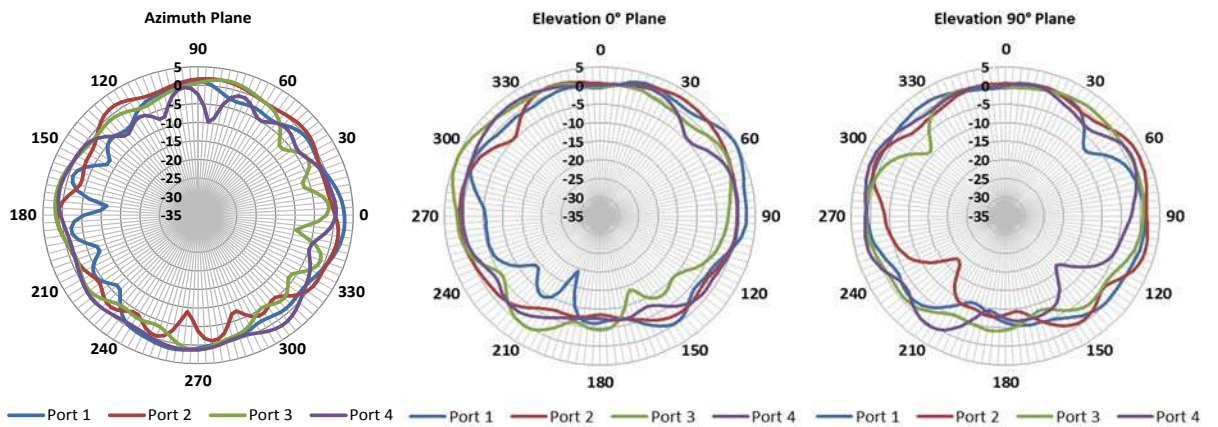
**Radiation Pattern at 1950 MHz**



**Radiation Pattern at 2170 MHz**



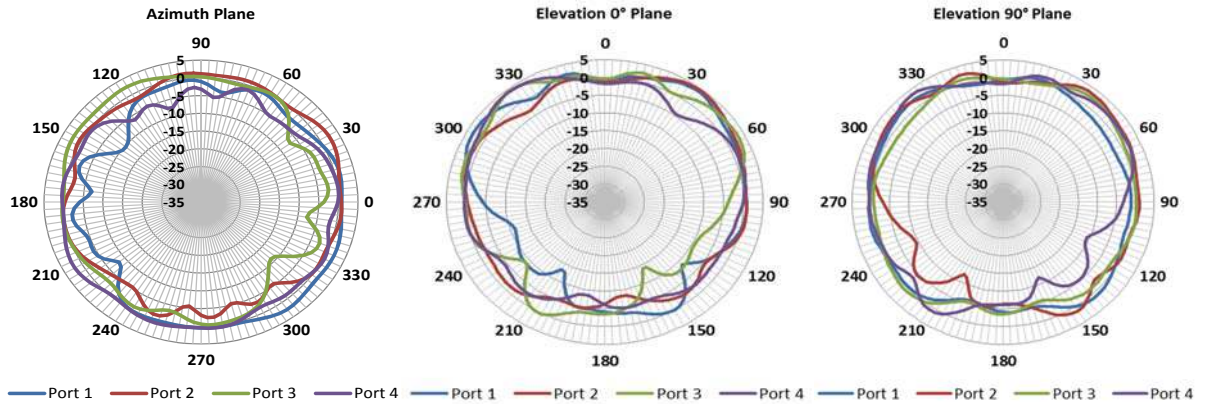
**Radiation Pattern at 2305 MHz**



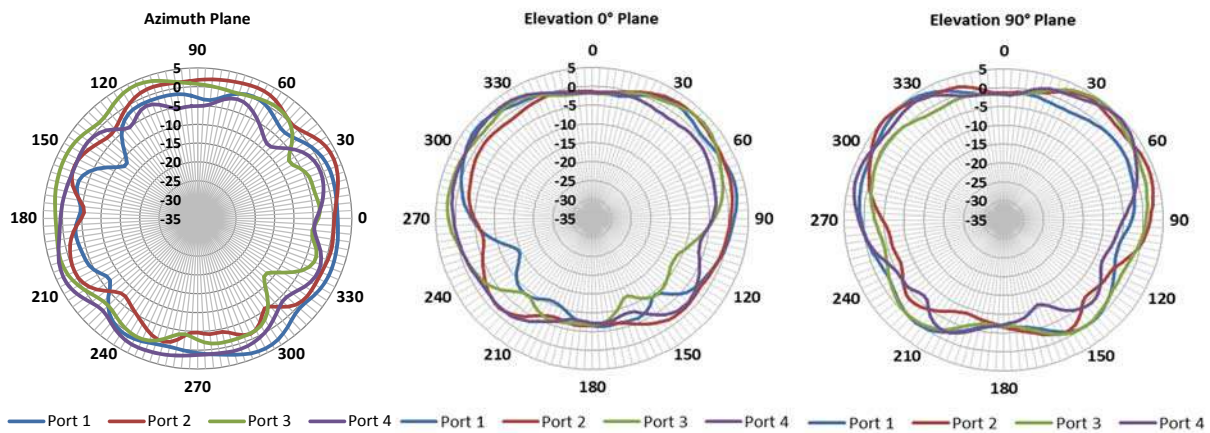
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### RADIATION PATTERNS

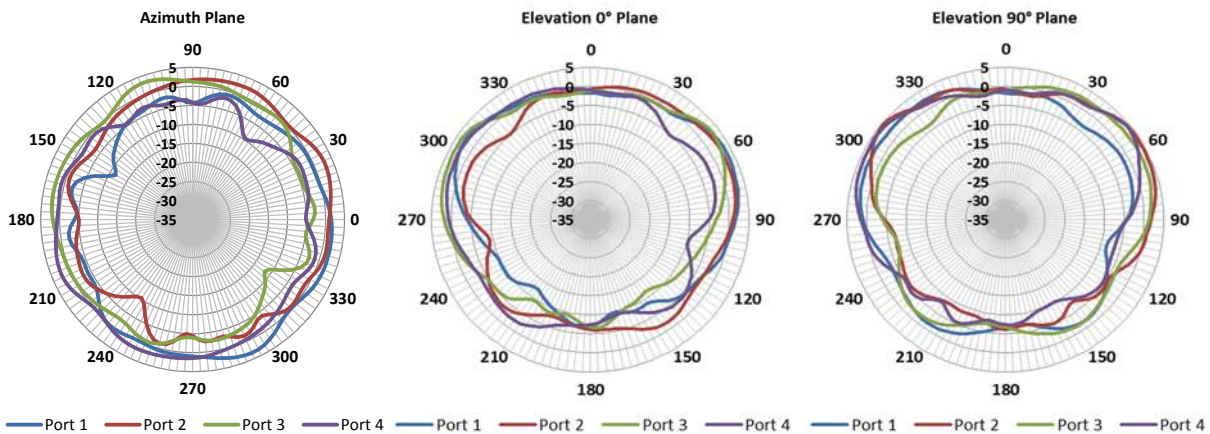
Radiation Pattern at 2412 MHz



Radiation Pattern at 2600 MHz



Radiation Pattern at 2700 MHz



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