

## 698 to 960 MHz/1710 to 2700 MHz Low PIM 2-port MIMO Ceiling Mount Antenna



Patent Pending CMX69273P

### CEILING MOUNTS



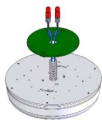
(TILE FLUSH MOUNT)  
Standard



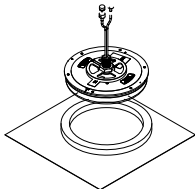
Part # HKIT-CMX-001  
(ABOVE CEILING TILE MOUNT)



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



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



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

### LOW PIM 2-PORT MIMO MULTI-BAND CEILING MOUNTED OMNIDIRECTIONAL ANTENNA

The Patent Pending CMX69273P is an indoor broadband Low PIM 2-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 antenna 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
- Two radiating elements optimized for indoor applications
- Multiple mounting options for a variety of ceiling configurations
- QR Code (Quick Response) label for easy access to antenna performance data
- RoHS compliant

#### MARKETS

- Indoor Distributed Antenna Systems
- 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 each 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)                   | 4.3  | 4.1     | 4.1     | 3.3       | 2.9       | 2.6       | 2.8       | 3.1       |
| Peak Gain, dBi (Max)                   | 4.5  | 4.2     | 4.2     | 3.5       | 3.3       | 2.9       | 3.3       | 3.3       |
| VSWR (Typ)                             | <1.5:1                                       | <1.3:1  | <1.3:1  | <1.3:1    | <1.3:1    | <1.3:1    | <1.2:1    | <1.5:1    |
| VSWR (Max)                             | 1.7:1  | 1.7:1   | 1.7:1   | 1.7:1     | 1.7:1     | 1.7:1     | 1.7:1     | 1.7:1     |
| Isolation, dB (Typ)                    | < -21  | < -19   | < -17   | < -22     | < -23     | < -25     | < -29     | < -30     |
| Isolation, dB (Max)                    | < -16  | < -16   | < -16   | < -16     | < -16     | < -16     | < -16     | < -16     |
| PIM, 3rd Order, 2 x 20W (Typ)          | <-154 dBc                                    |         |         | <-153 dBc |           |           |           |           |
| PIM, 3rd Order, 2 x 20W (Max)          | <-150 dBc                                    |         |         | <-150 dBc |           |           |           |           |
| Nominal Impedance                      | -50 Ω  |         |         |           |           |           |           |           |
| Max Power (ambient temp of 25°C, 77°F) | 50 Watts                                     |         |         |           |           |           |           |           |
| Polarization                           | Linear H/V for each radiator                 |         |         |           |           |           |           |           |
| Radome                                 | PC / ABS, UL94 V-O (White)                   |         |         |           |           |           |           |           |
| Mounting                               | Ceiling mount (drywall or tile flush mount ) |         |         |           |           |           |           |           |
| Dimensions (diameter x height)         | 250 mm x 49 mm ( 9.84" x 1.9" )              |         |         |           |           |           |           |           |
| Weight                                 | Approximately 0.60 kg ( 1.32 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                               |         |         |           |           |           |           |           |

| MODEL NUMBER     | CABLE LENGTH        | CONNECTOR                |
|------------------|---------------------|--------------------------|
| CMX69273P-30NF   | 30 cm, (12"), cable | Dual Type N Female       |
| CMX69273P-30D41F | 30 cm, (12"), cable | Dual Type 4.1-9.5 Female |
| CMC69273P-30D43F | 30 cm, (12"), cable | Dual Type 4.3-10 Female  |

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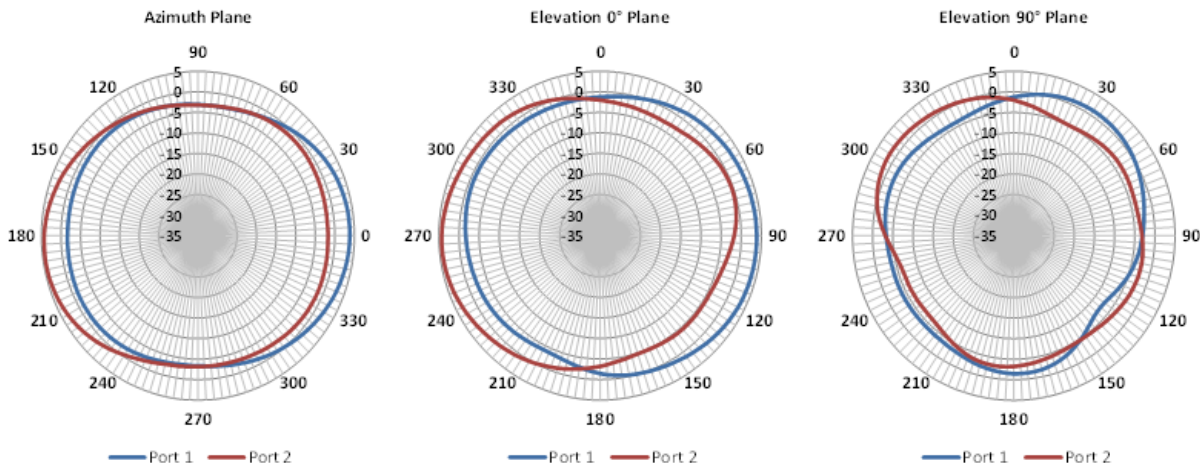
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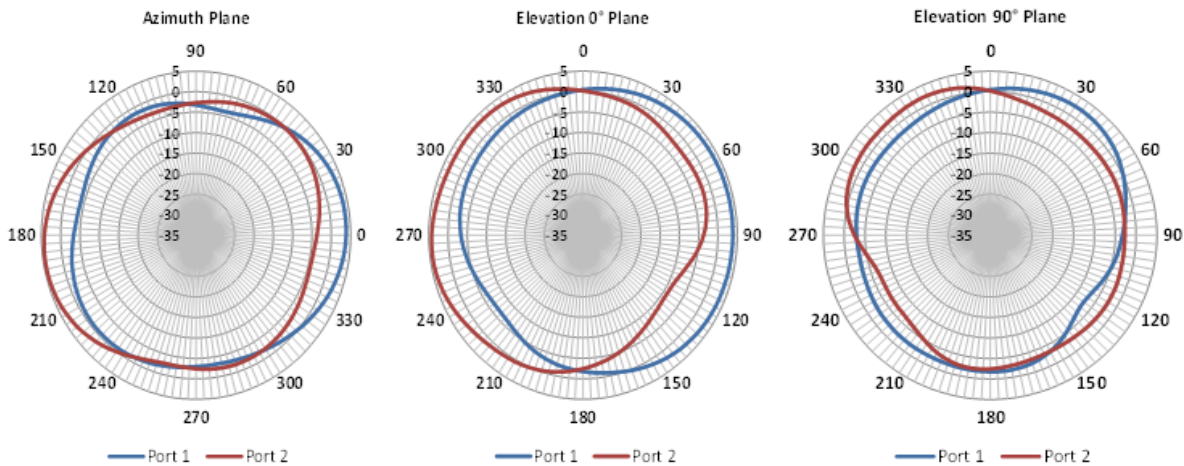
## 698 to 960 MHz/1710 to 2700 MHz Low PIM 2-port MIMO Ceiling Mount Antenna

### RADIATION PATTERNS

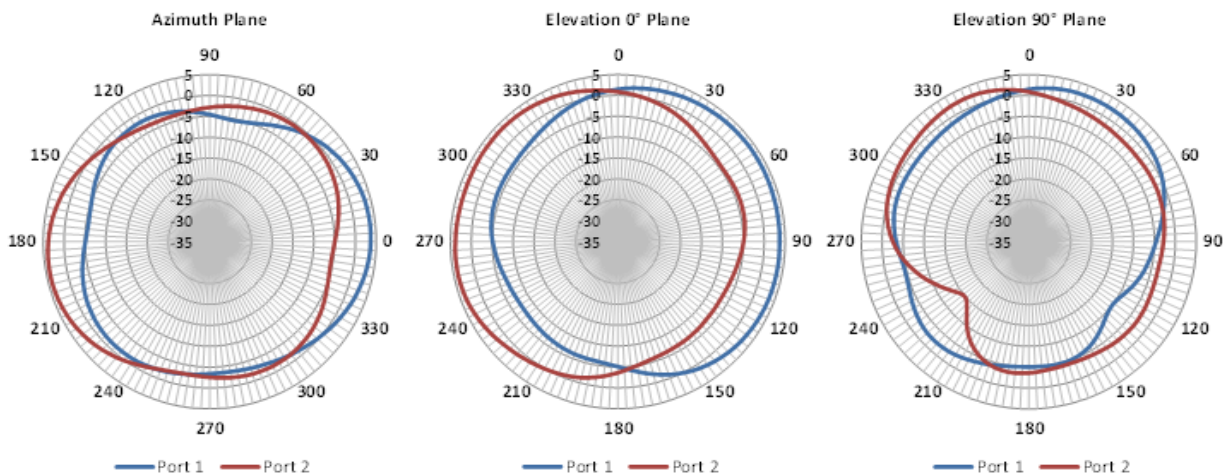
Radiation Pattern at 698 MHz



Radiation Pattern at 746 MHz



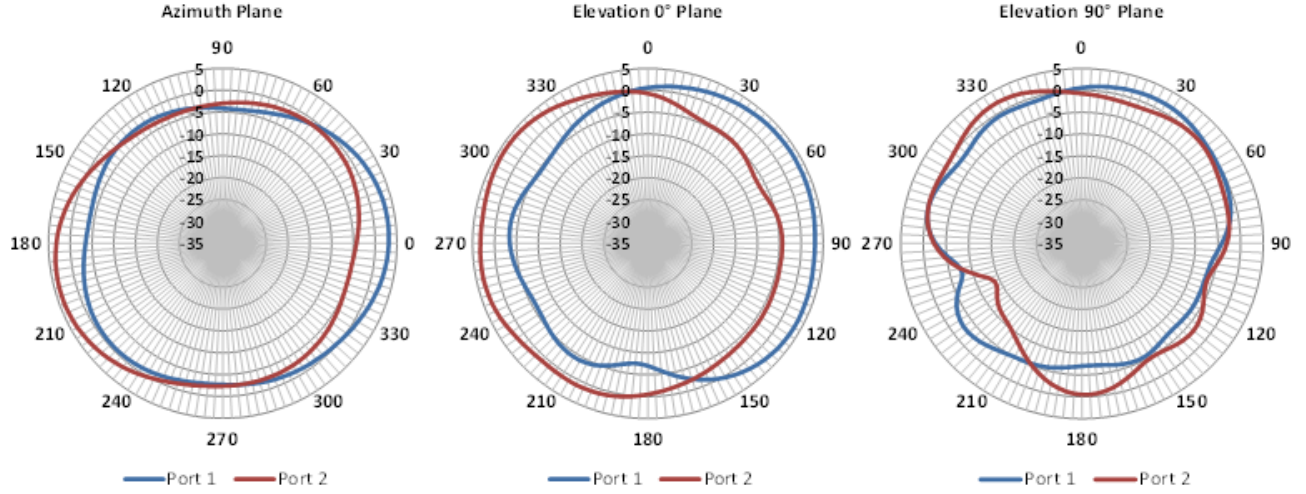
Radiation Pattern at 824 MHz



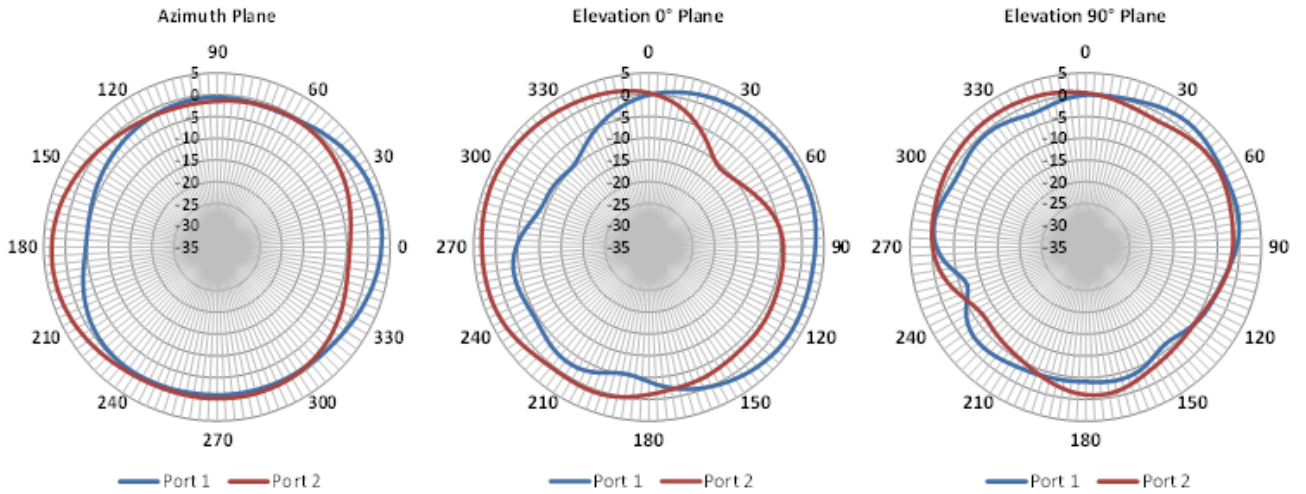
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### RADIATION PATTERNS

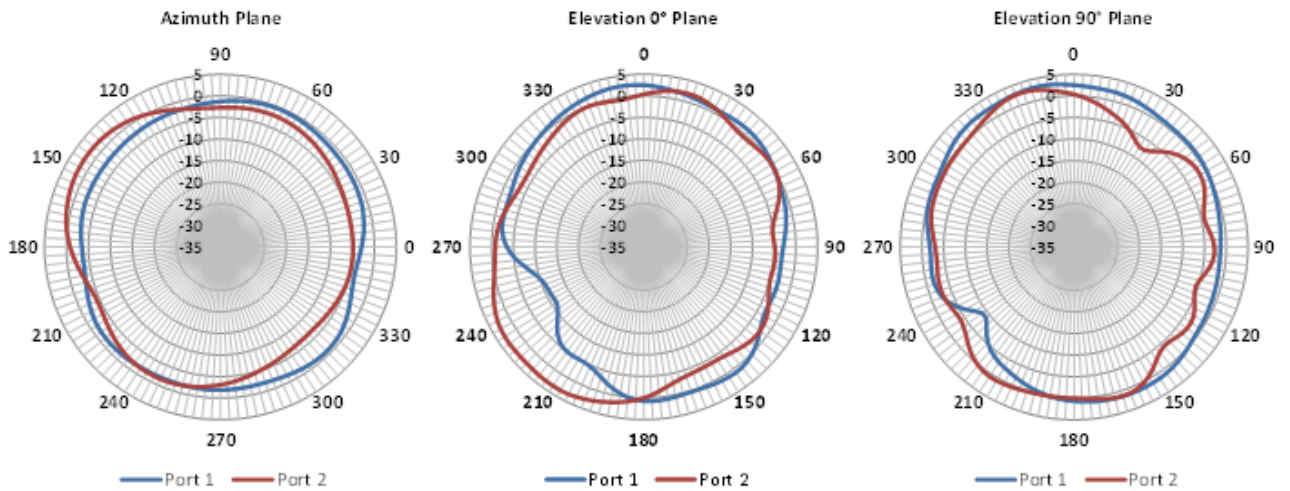
Radiation Pattern at 880 MHz



Radiation Pattern at 960 MHz



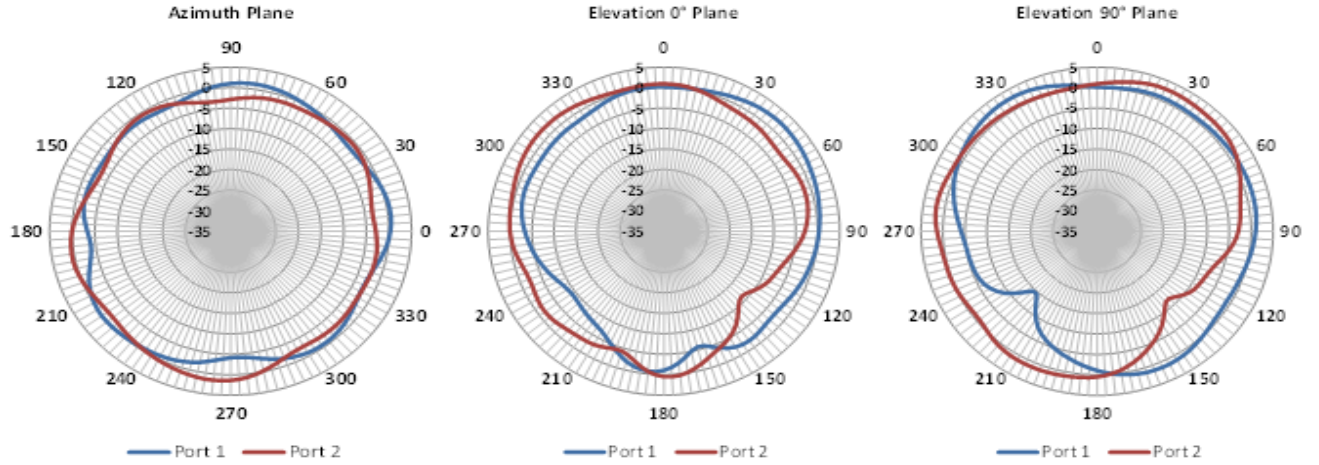
Radiation Pattern at 1680 MHz



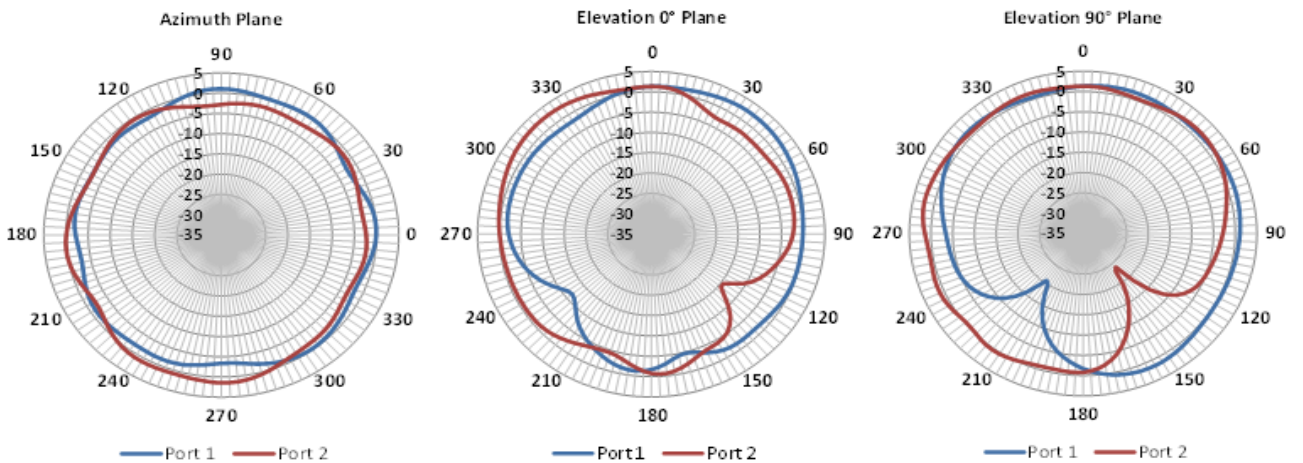
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### RADIATION PATTERNS

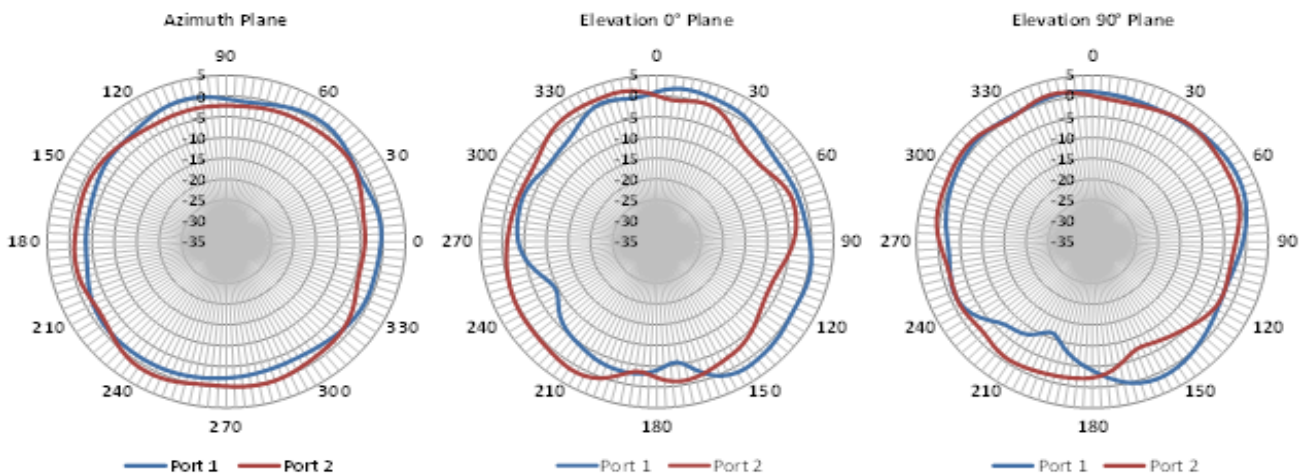
Radiation Pattern at 1880 MHz



Radiation Pattern at 1950 MHz



Radiation Pattern at 2170 MHz





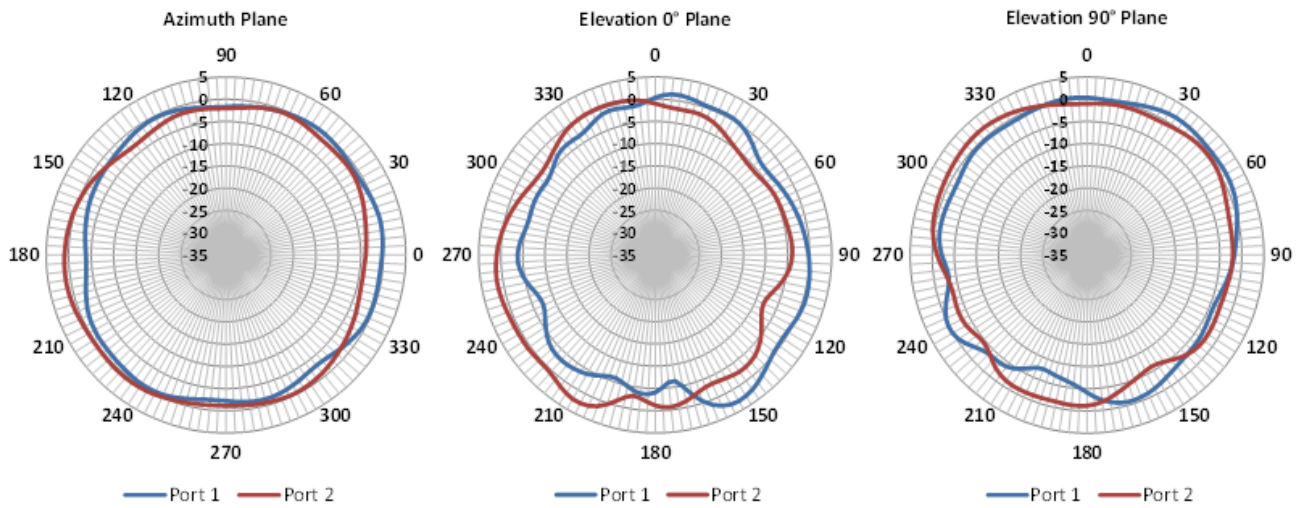
Smart Technology. Delivered.

# CMX69273P

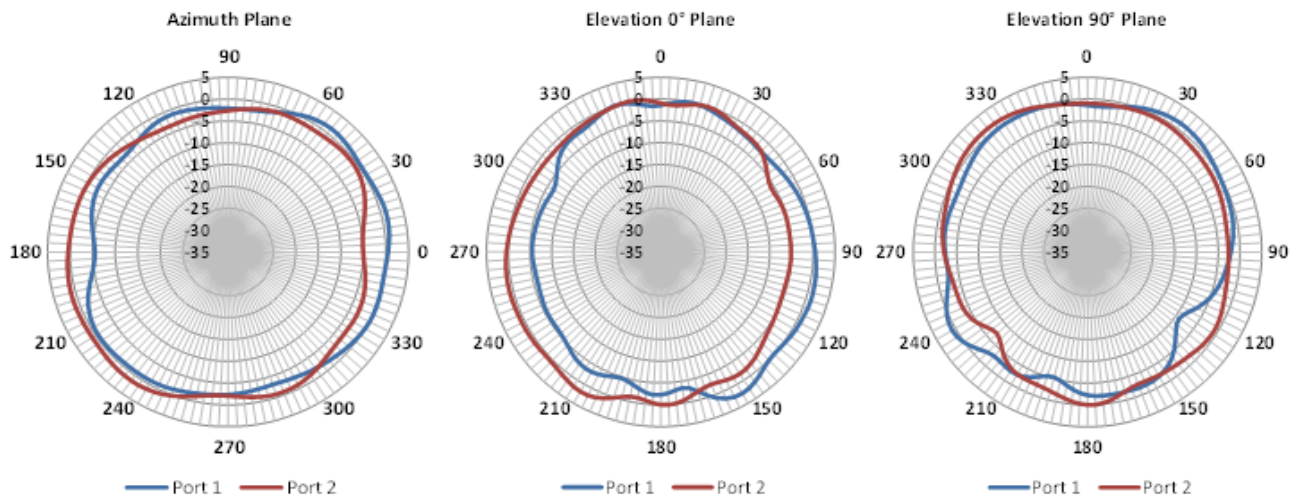
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### RADIATION PATTERNS

Radiation Pattern at 2305 MHz



Radiation Pattern at 2412 MHz



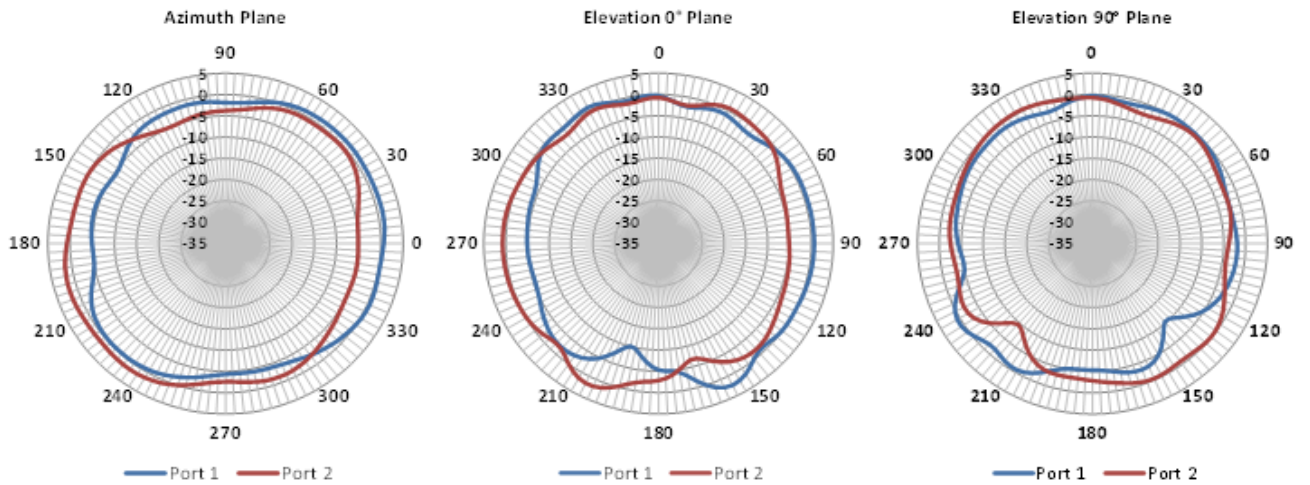
# CMX69273P

## 698 to 960 MHz/1710 to 2700 MHz

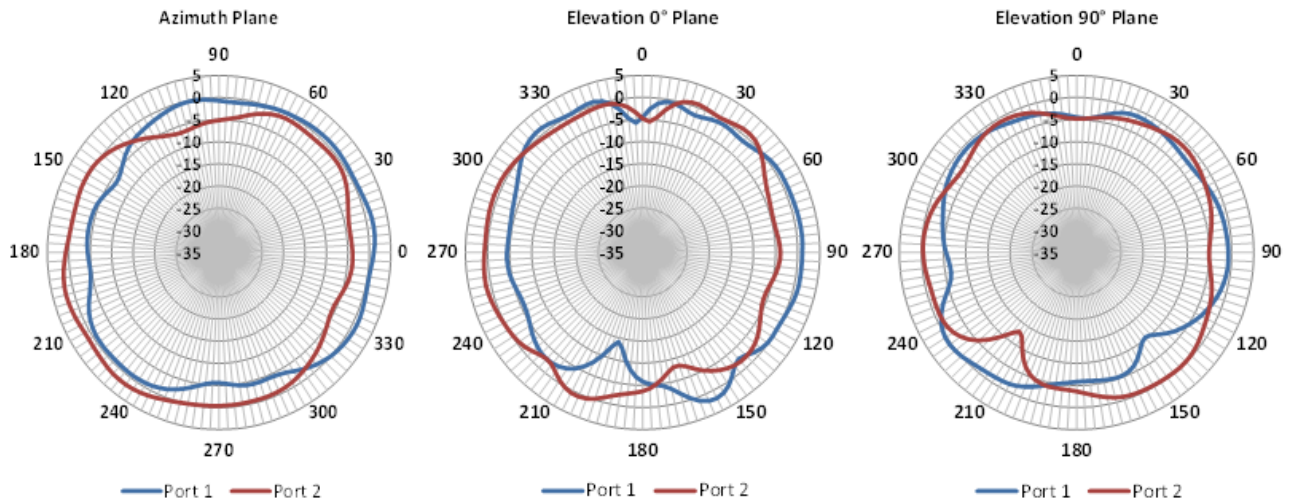
### Low PIM 2-port MIMO Ceiling Mount Antenna

#### RADIATION PATTERNS

Radiation Pattern at 2600 MHz



Radiation Pattern at 2700 MHz



IAS-ANT-DS-CMX69273P 013015

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