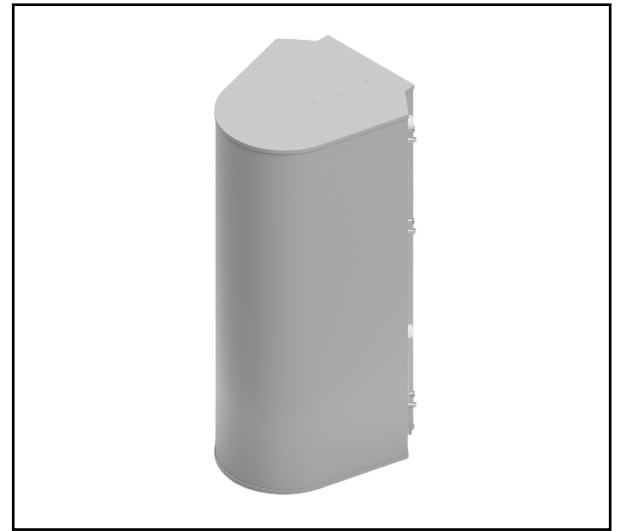


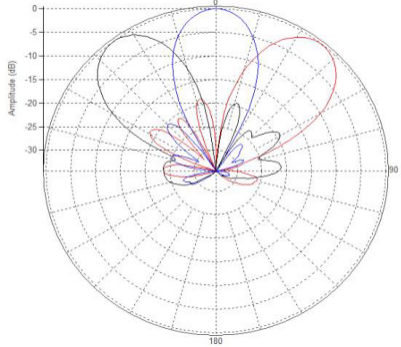
## MS-MBA-3.3.2-F2-H2-L2

**Lens Technology Enabled™ Multi-Beam Tri-Band Base-Station Antenna** utilizes a patented spherical lens design with 3 isolated F-Band frequency (3300-4200 MHz) cross-polarized beams, 3 isolated H-Band frequency (1695-2690 MHz) cross-polarized beams & 2 isolated Low-Band frequency (698-960 MHz) cross-polarized beams. Each F, H & L Band beams have 2 ports to support 2x2 MIMO. There are three independent tilt settings per beam (0-30° for F-Band, 0-30° for H-Band and 0-40° for Low-Band) for each pair of cross-polarized elements.

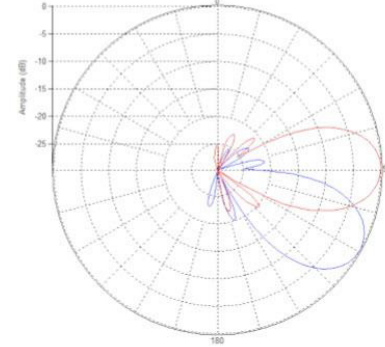


### PATTERN RESULTS:

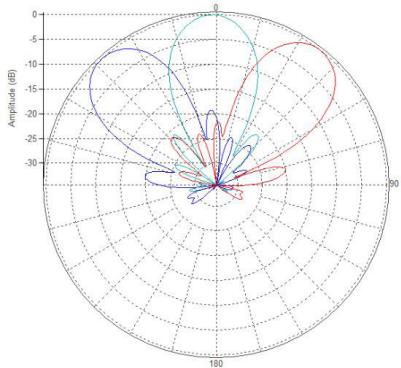
**F-Band Horizontal Pattern (3.6GHz)**



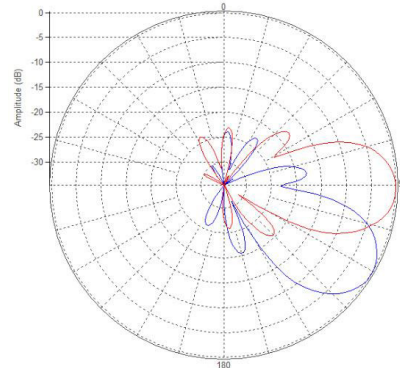
**F-Band Vertical Pattern at 0° and 30° Tilt (3.6GHz)**



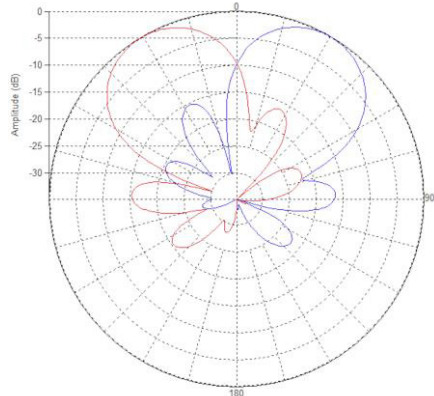
**High-Band Horizontal Pattern (1.92GHz)**



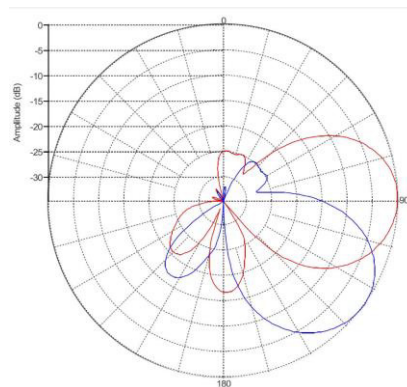
**High-Band Vertical Pattern 0° tilt and 30° tilt (1.92GHz)**



**Low-Band Horizontal Pattern (0.8GHz)**



**Low-Band Vertical Pattern 0° tilt and 40° tilt (0.8GHz)**



### TECHNICAL SPECIFICATIONS PER BEAM

| Frequency                             | 3300-4200MHz      | 1695-2690MHz      | 698-960MHz        |
|---------------------------------------|-------------------|-------------------|-------------------|
| Gain                                  | 16dBi             | 17.8dBi           | 13.5dBi           |
| VSWR                                  | <1.5:1            | <1.5:1            | <1.5:1            |
| Polarization                          | Dual Slant ±45°   | Dual Slant ±45°   | Dual Slant ±45°   |
| Horizontal Coverage                   | 120°              | 120°              | 120°              |
| Horizontal Beamwidth (10dB)           | 45°               | 40°               | 60°               |
| Horizontal Beamwidth (3dB)            | 25°               | 23°               | 34°               |
| Vertical Beamwidth (10dB)             | 45°               | 40°               | 60°               |
| Vertical Beamwidth (3dB)              | 25°               | 23°               | 34°               |
| Beam Cross-over                       | 8dB typical       | 10dB typical      | 10dB typical      |
| Total Number of Beams                 | 3                 | 3                 | 2                 |
| Number of Ports per Beam              | 2                 | 2                 | 2                 |
| Number of Ports Total                 | 6                 | 6                 | 4                 |
| RET Per Cross-Pol;                    | 0° - 30°          | 0° - 30°          | 0° - 40°          |
| First Sidelobe Level                  | < -18dB           | < -16dB           | < -15dB           |
| Front to Back Ratio                   | 28dB              | >28dB             | >28dB             |
| Isolation Port to Port - Polarization | 28dB              | >28dB             | >28dB             |
| Isolation Port to Port - Beam         | 28dB              | >28dB             | >26dB             |
| Power Rating                          | 150W per port     | 200W per port     | 250W per port     |
| Intermodulation                       | <-153dBc          | <-153dBc          | <-153dBc          |
| Impedance                             | 50 ohm            | 50 ohm            | 50 ohm            |
| Connector Quantity and Type           | 6 x 4.3-10 female | 6 x 4.3-10 female | 4 x 4.3-10 female |

### MECHANICAL DATA

|                        |                                                                                     |
|------------------------|-------------------------------------------------------------------------------------|
| Dimensions (H x W x D) | 139 x 61.7 x 72 cm<br>54.8 x 24.3 x 28.4 inch                                       |
| Antenna Weight         | 45 kg<br>99 lbs                                                                     |
| Radome Material        | Fiber Glass                                                                         |
| Mounting               | Standard pipe mount<br>Compatible pipe diameter:<br>6.1 – 11.4 cm<br>2.4 – 4.5 inch |

### ENVIRONMENTAL RATINGS

|                        |                                                                           |
|------------------------|---------------------------------------------------------------------------|
| Humidity               | 95% RH @ +30°C                                                            |
| Temperature            | -40°C to +70°C                                                            |
| Wind load @ 150km / hr | N/lbf<br>Frontal: 695 / 156.2<br>Lateral: 1081 / 243<br>Rear: 998 / 224.4 |

### CONNECTOR LAYOUT:

