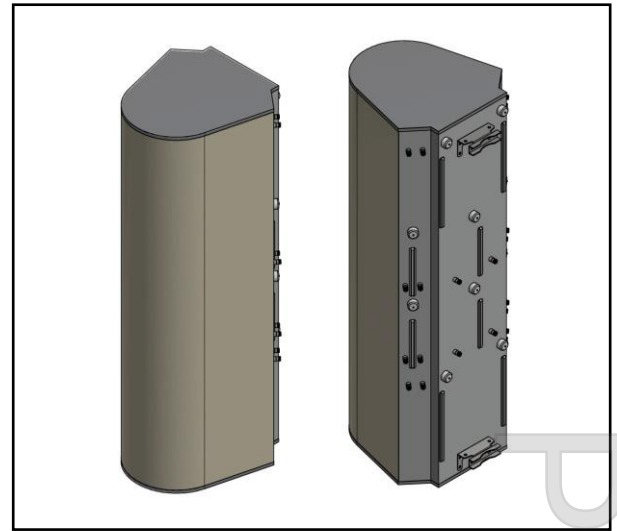


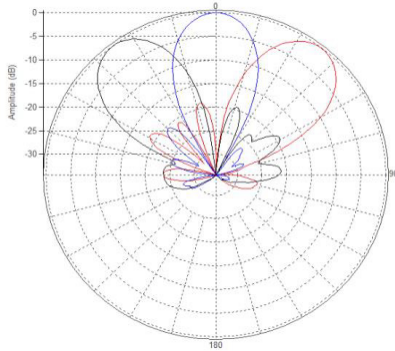
MS-MBA-3.3.2-F2-H2-L2

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.

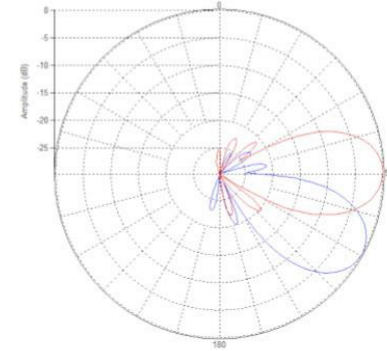


PATTERN RESULTS:

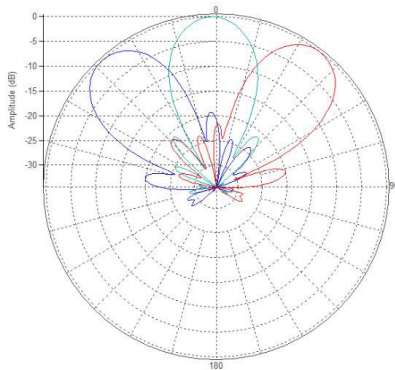
F-Band Horizontal Pattern (3.6GHz)



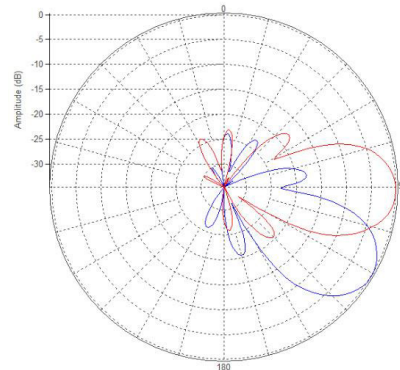
F-Band Vertical Pattern at 0° and 30° Tilt (3.6GHz)



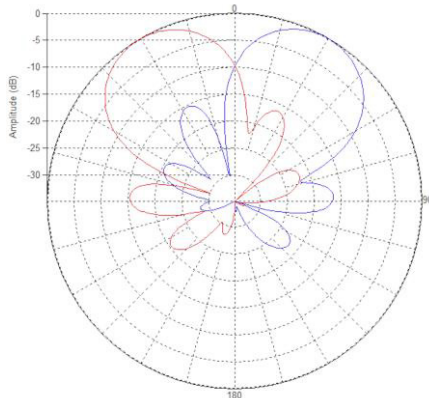
High-Band Horizontal Pattern (1.92GHz)



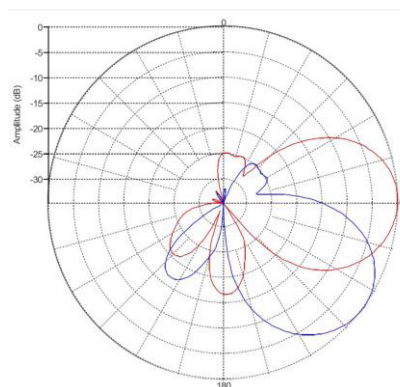
High-Band Vertical Pattern 0° tilt and 30° tilt (1.92GHz)



Low-Band Horizontal Pattern (0.8GHz)



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



PRELIMINARY

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)	160 x 61 x 66 cm 63 x 24 x 26 inch
Antenna Weight	45 kg 99 lbs
Radome Material	Fiber Glass
Mounting	Standard pipe mount Compatible pipe diameter: 6.1 – 11.4 cm 2.4 – 4.5 inch

ENVIRONMENTAL RATINGS

Humidity	95% RH @ +30°C
Temperature	-40°C to +70°C
Wind load @ 150km / hr	Frontal: 686N/154.2lbf Lateral: 930N/209.1lbf