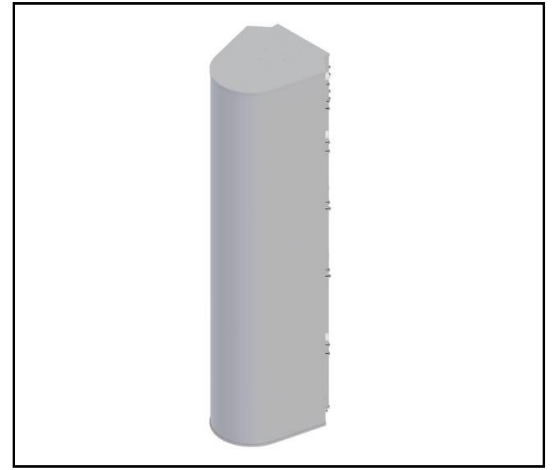


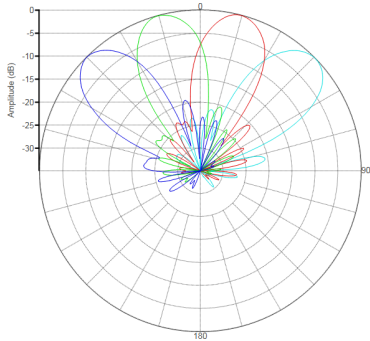
MS-MBC-4.4.2-C4-6-H4-12-L4-20

Lens Technology Enabled™ Multi-Beam Tri Band Base-Station Antenna utilizes a patented Cylindrical lens design with 4 isolated C-Band (3700MHz – 4200MHz) cross-polarized beams, 4 isolated High Band (1695 MHz – 2690MHz) cross-polarized beams and 2 isolated Low Band (698 MHz – 960MHz) beams, each beam has 4 ports to support 4X4 MIMO. RET for C Band Beams 2°-10°. RET for High Band Beams 2°-15°. RET for Low Band Beams 2°-20°.

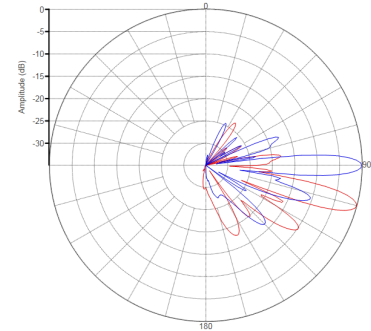


PATTERN RESULTS:

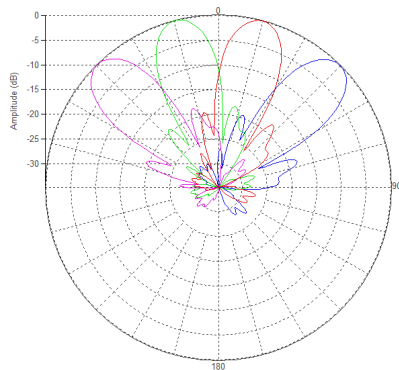
C-Band Horizontal Pattern (3.7GHz)



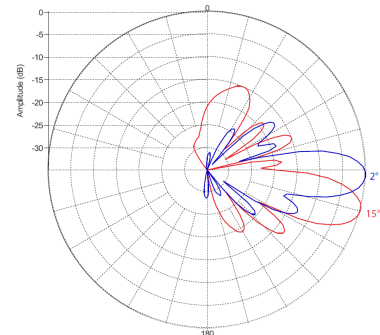
C-Band Vertical pattern (3.7GHz) at tilt 2° and 10°



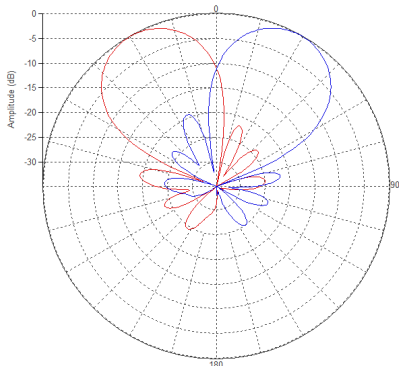
High-band Horizontal Pattern (1.92GHz)



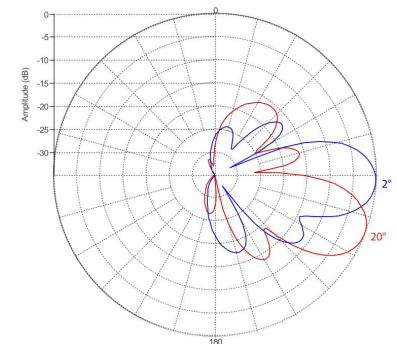
High-band Vertical Pattern (1.92GHz) at tilt 2° and 15°



Low-band Horizontal Pattern (0.8GHz)



Low-band Vertical Pattern (0.8GHz) at tilt 2° and 20°



PRELIMINARY

TECHNICAL SPECIFICATIONS PER BEAM

Frequency	3700-4200 MHz	1695-2690 MHz	698-960 MHz
Gain	22dBi	20.5dBi	15dBi
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)	30°	31°	60°
Horizontal Beamwidth (3dB)	18°	18°	34°
Vertical Beamwidth (3dB)	6.5°	12°	20°
Beam Cross-over	8dB typical	10dB typical	10dB typical
Total Number of Beams	4	4	2
Number of Ports per Beam	4	4	4
Number of Ports Total	16	16	8
RET	2° - 10°	2° - 15°	2° - 20°
First Sidelobe Level	<-15dB	<-15dB	<-15dB
Front to Back Ratio	>28dB	>28dB	>28dB
Isolation Port to Port - Polarization	>26dB	>26dB	>26dB
Isolation Port to Port - Beam	>26dB	>26dB	>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	16 x 4.3-10 female	16 x 4.3-10 female	8 x 4.3-10 female

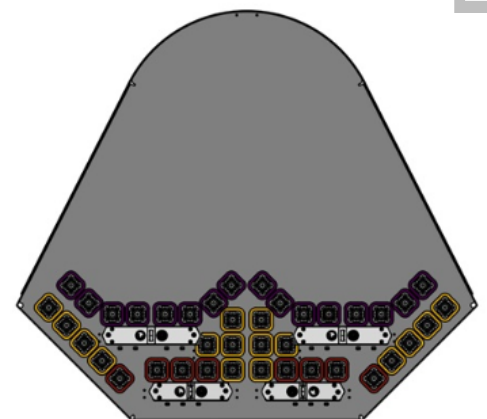
MECHANICAL DATA

Dimensions (H x W x D)	243 x 77.2 x 68.7 cm 95.7 x 30.4 x 27 inch
Antenna Weight	100 kg 220 lbs
Radome Material	Fiber Glass
Mounting	Adjustable Clamps Compatible pipe diameter 10.1 – 15.2 cm 4 – 6 inch

ENVIRONMENTAL RATINGS

Humidity	95% RH @ +30°C
Temperature	-40°C to +70°C
Wind load @150km/hr	TBD

CONNECTOR LAYOUT



PRELIMINARY