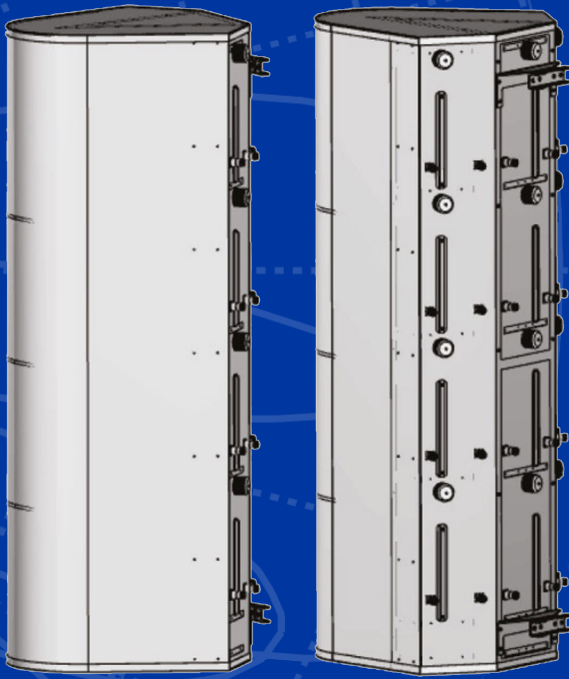


MATSING[®]

LENS TECHNOLOGY ENABLED



MS-MBA-3-H8

Low-Band Lens Panel Antenna Delivering
High-Capacity Mobile Connectivity and
Fixed Wireless Access (FWA)

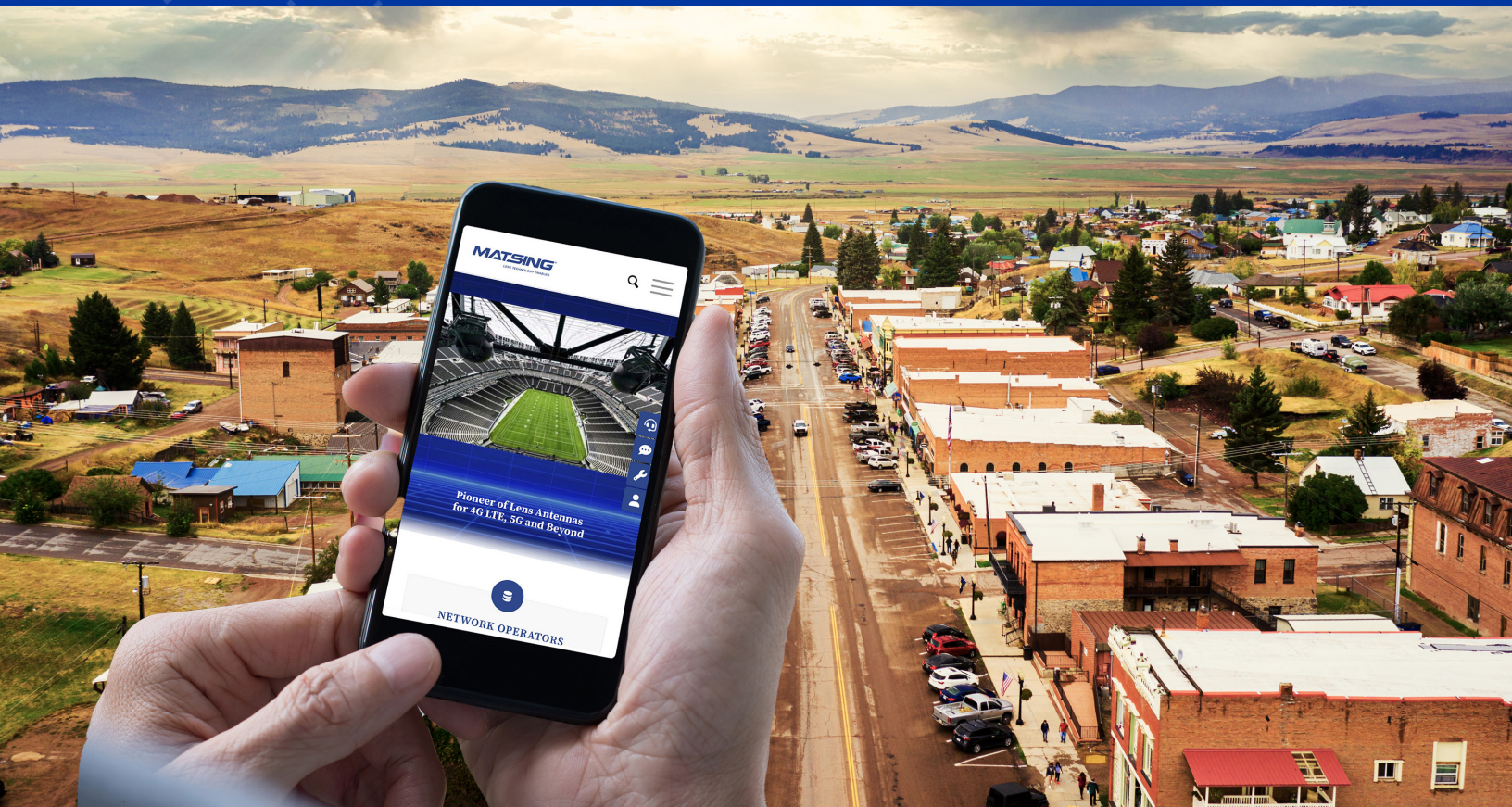


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MS-MBA-3-H8

Ideal Coverage and Capacity Solution for Suburban, Rural & Fixed Wireless Access (FWA) Networks

Better Signal Quality

High Gain, Narrow Vertical Beamwidth

Improved Capacity & Data Throughput

High SINR, Reduced Sidelobes & Backlobes



Rapid & Cost Effective Scalability

Quick Deployment, Minimal Infrastructure



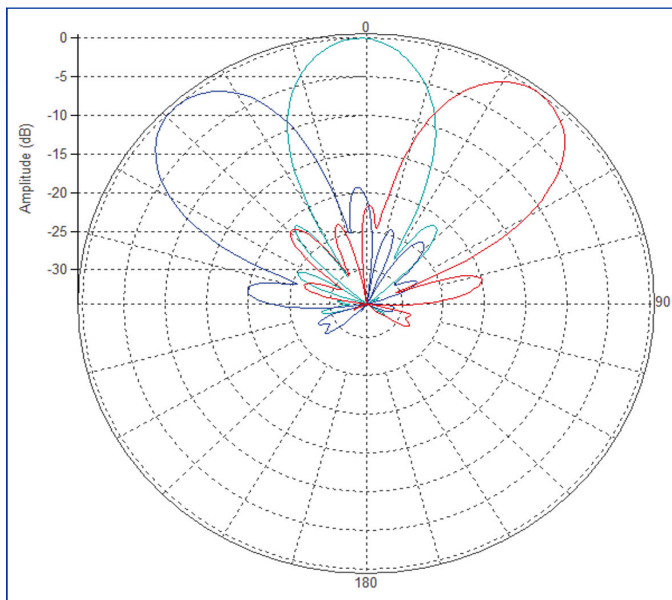
MS-MBA-3-H8

Lens Technology Enabled™ Multi-Beam Base-Station Antenna perfect for 3 to 9 sector LTE cell site deployments for best CINR results. Utilizes a patented spherical lens design with 3 isolated high-frequency (1710 – 2690 MHz) cross-polarized beams. Each beam is made of four independent antennas and has 8 ports. There are four independent tilt settings per beam (0-30° tilt for each pair of cross-polarized elements).

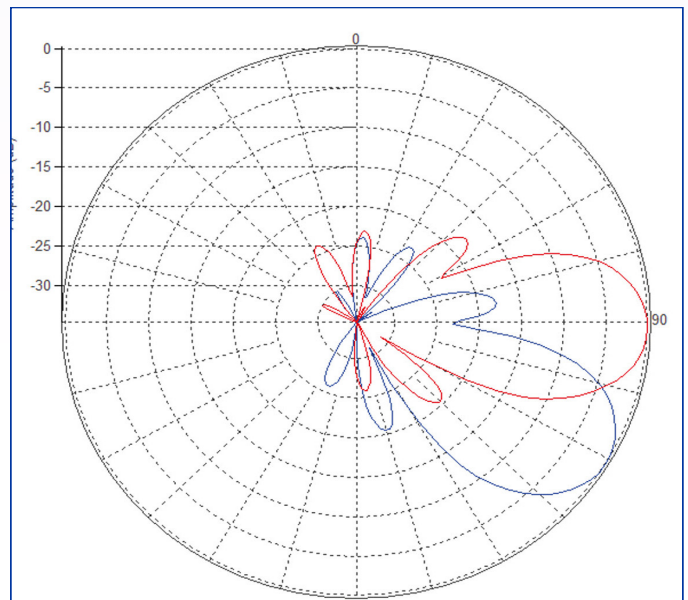


PATTERN RESULTS:

High-Band Horizontal Pattern (1.80GHz)



Vertical pattern at 0° tilt and 30° tilt (1.80GHz)

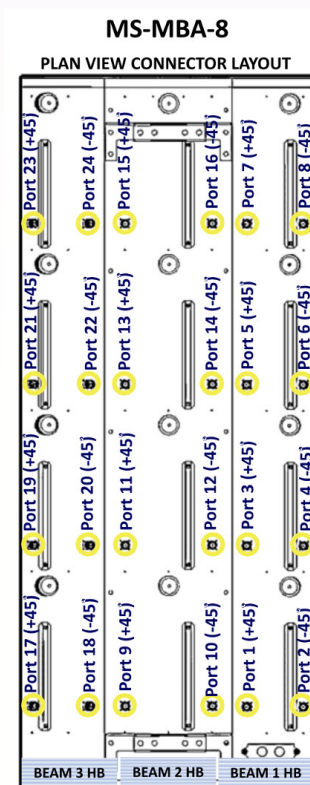


TECHNICAL SPECIFICATIONS	
Frequency	1710 – 2690 MHz
Gain	17.8dBi
VSWR	<1.5:1
Polarization	Dual Slant $\pm 45^\circ$
Horizontal Coverage	120°
Horizontal Beamwidth (10 dB) level	40°
Horizontal Beamwidth (3 dB) level	23°
Vertical Beamwidth (10 dB) level	40°
Vertical Beamwidth (3 dB) level	23°
Beam Cross-over	10dB typical
Total Number of Beams	3
Number of Ports per Beam	8
Number of Ports Total	24
Tilt Per Cross-Pol (Four adjustments per beam) Remote Electrical Tilt (AISG 2.0)	0° to 30°
First Sidelobe level	<-16dB
Front to Back Ratio	>28dB
Isolation Port to Port - Polarization	>28dB
Isolation Port to Port - Beam	>28dB
Power Rating	200W per port
Intermodulation	<-153dBc
Impedance	50 Ohm
Connector Quantity and Type	24 x 4.3-10 DIN female

MECHANICAL DATA	
Dimensions (H x W x D)	163.8 X 61.7 X 68.3 cm 64.5 X 24.3 X 26.9 inch
Antenna Weight	48.4 kg 106.7 lbs
Radome Material	Fiber Glass
Mounting	2 position 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 @ 150 km/hr	Frontal: 701 N/157.6 lbf Lateral: 1007 N/226.4 lbf Rear: 822 N/ 184.8 lbf

CONNECTOR LAYOUT:



Instruction Manual

1.0 BEAMS & CONNECTORS:

- 1.10** Plan View Resultant Beam Layout
- 1.20** Connector Port Table
- 1.30** Connector Detail
- 1.40** Connector Layout

2.0 PATTERN DIAGRAM

- 2.10** H-Band Horizontal Pattern
- 2.20** H-Band Vertical Pattern

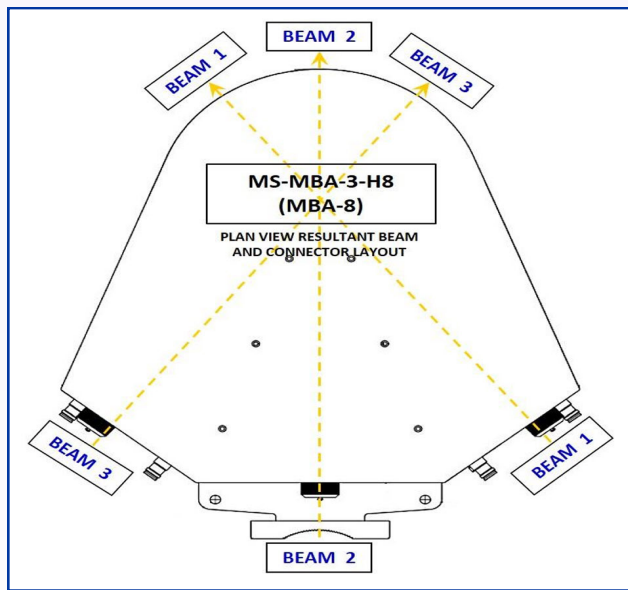
3.0 MANUAL TILT ADJUSTMENT

4.0 BRACKET INSTALLATION

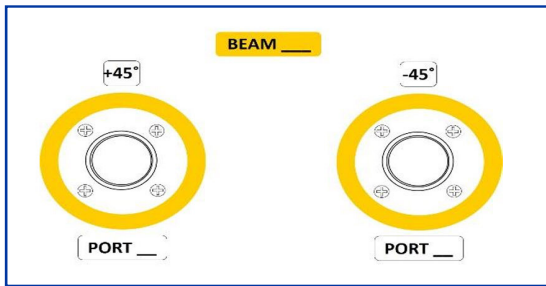
- 4.10** Bolts & Nuts Requirements
 - 4.11** Bolts & Nuts
 - 4.12** Bracket
- 4.20** Tools Requirement
 - 4.21** Adjustable Spanner
 - 4.22** M12 Spanner
- 4.30** Bracket Spacing & Installation Sample

1.0 BEAMS AND CONNECTORS

1.10 Plan View Resultant Beam Layout



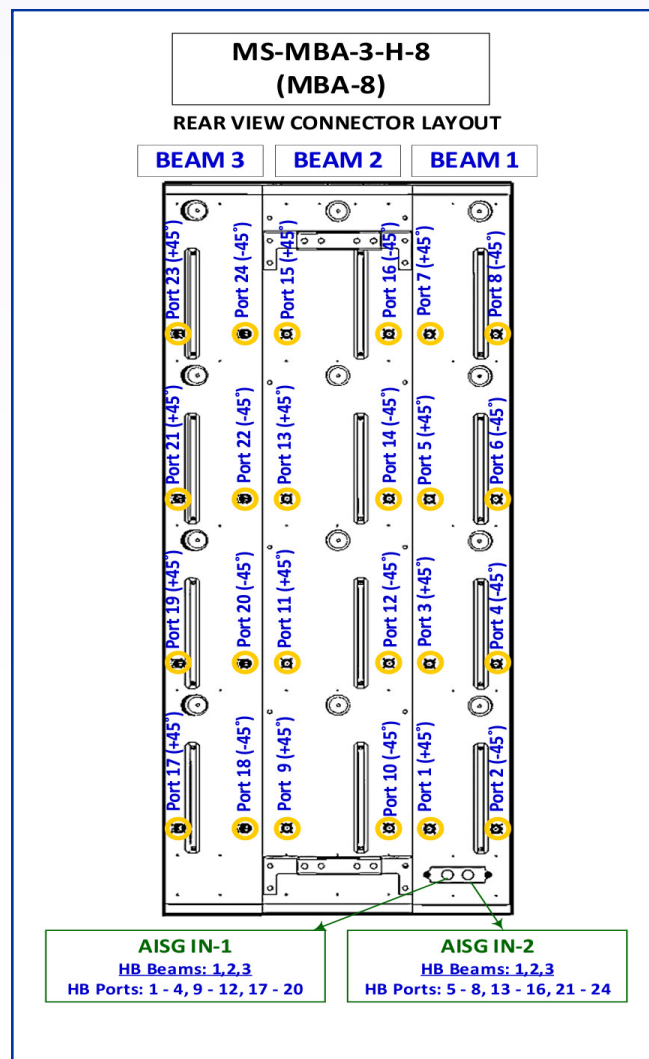
1.30 Connector Detail



1.20 Connector Port Table

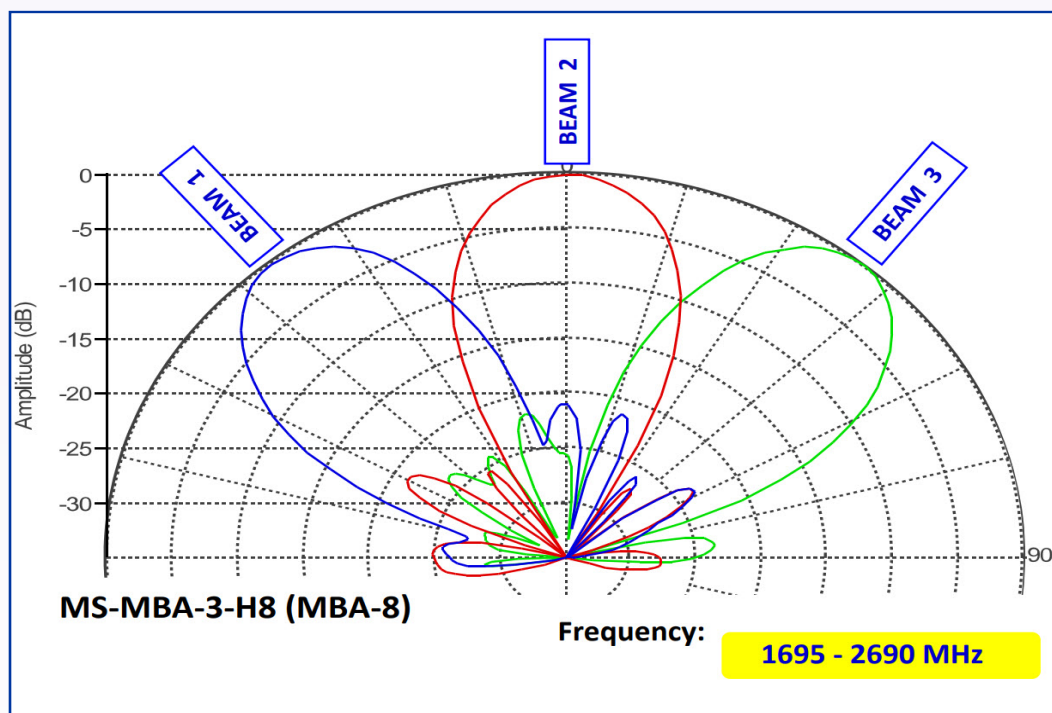
MS-MBA-3-H8 (MBA-8)					
Connector Table					
BEAM 3		BEAM 2		BEAM 1	
Port 23 (+45°)	Port 24 (-45°)	Port 15 (+45°)	Port 16 (-45°)	Port 7 (+45°)	Port 8 (-45°)
Port 21 (+45°)	Port 22 (-45°)	Port 13 (+45°)	Port 14 (-45°)	Port 5 (+45°)	Port 6 (-45°)
Port 19 (+45°)	Port 20 (-45°)	Port 11 (+45°)	Port 12 (-45°)	Port 3 (+45°)	Port 4 (-45°)
Port 17 (+45°)	Port 18 (-45°)	Port 9 (+45°)	Port 10 (-45°)	Port 1 (+45°)	Port 2 (-45°)

1.40 Connector Layout

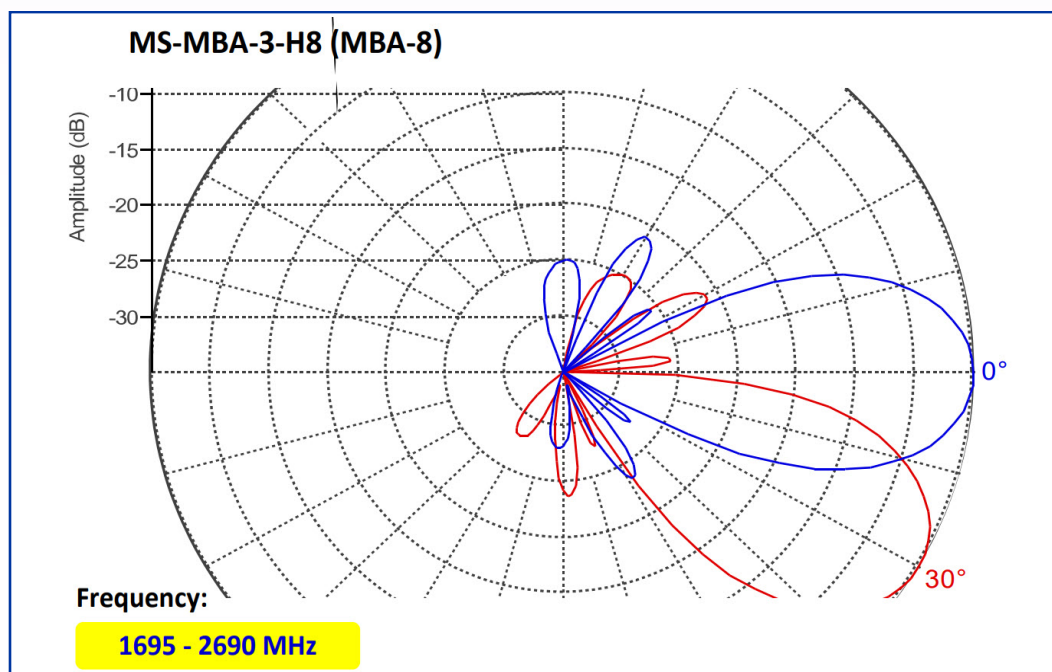


2.0 PATTERN DIAGRAM

2.10 H-Band Horizontal Pattern

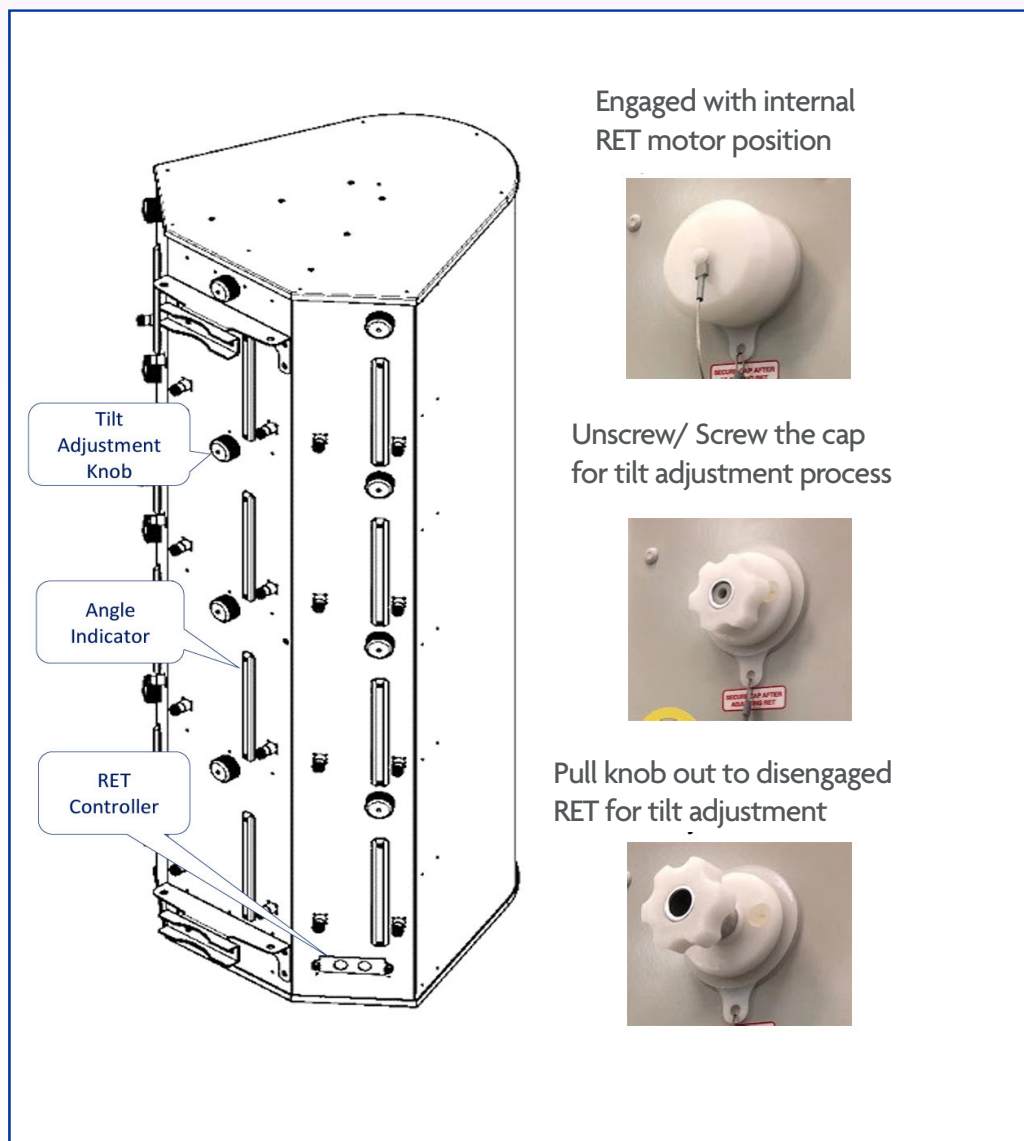


2.20 H-Band Vertical Pattern



3.0 MANUAL TILT ADJUSTMENT

1	The MBA antenna come in RET mode as default, but if needed can also be manually adjusted. To do so, please unscrew the waterproof cap behind the element whose tilt is to be adjusted.
2	By Default the knob is on engaged mode, pull out the handle for manual tilt adjustment, turn the handle to change the tilt.
3	When done, push the handle back in, screw the waterproof cap back to the position.



Technical drawing of the MS-MBA-8 medical cabinet, showing front, side, and top views with dimensions in inches.

Front View Dimensions:

- Width: 24.30 in
- Height: 64.56 in
- Bottom Width: 23.92 in

Side View Dimensions:

- Depth: 26.90 in
- Height: 64.56 in
- Bottom Depth: 23.68 in
- Bottom Width: 26.72 in

Top View Dimensions:

- Width: 24.31 in
- Height: 23.69 in

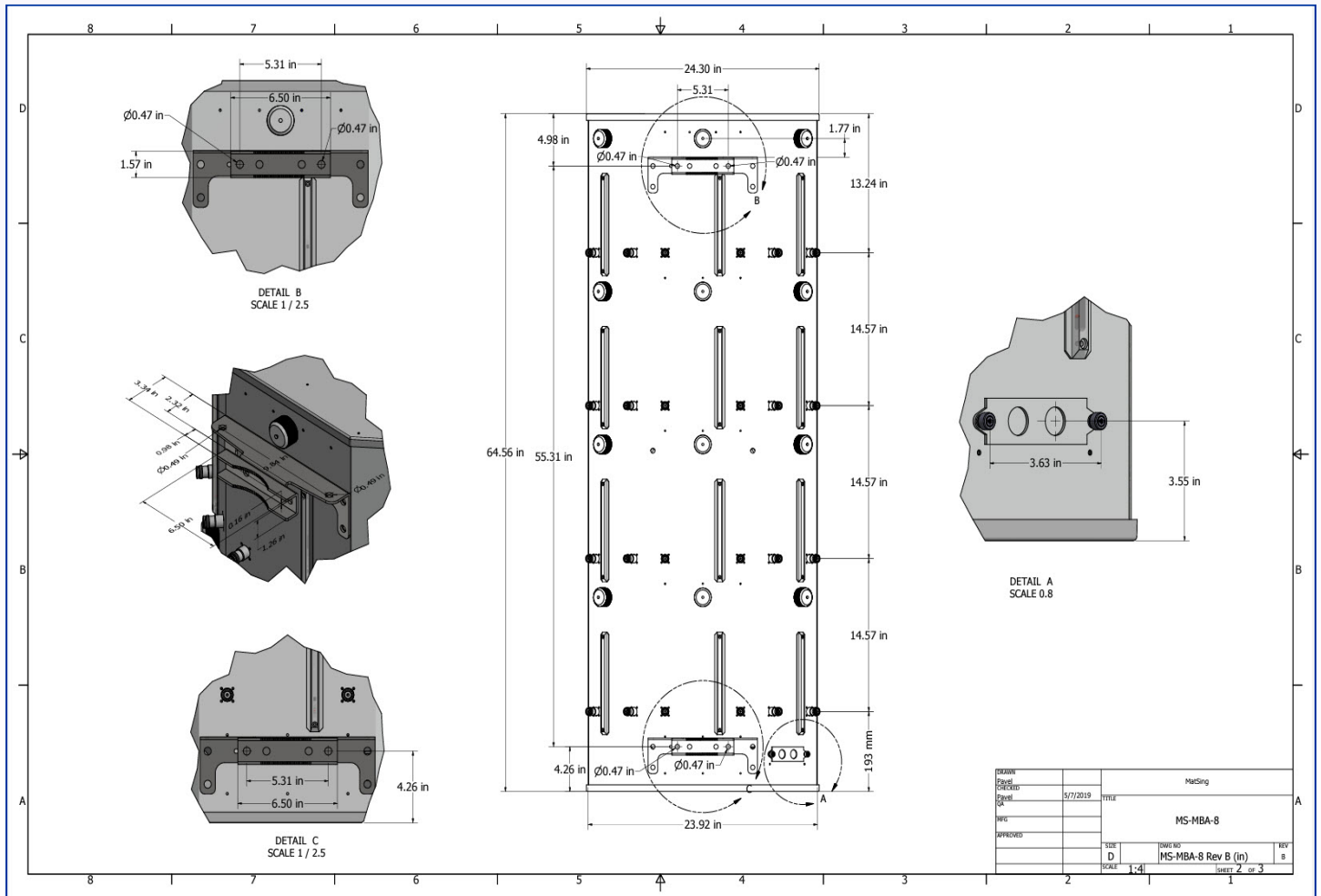
3D Perspective View:

The 3D view shows the cabinet's profile, including the top, front, and side panels, with various mounting points and handles visible.

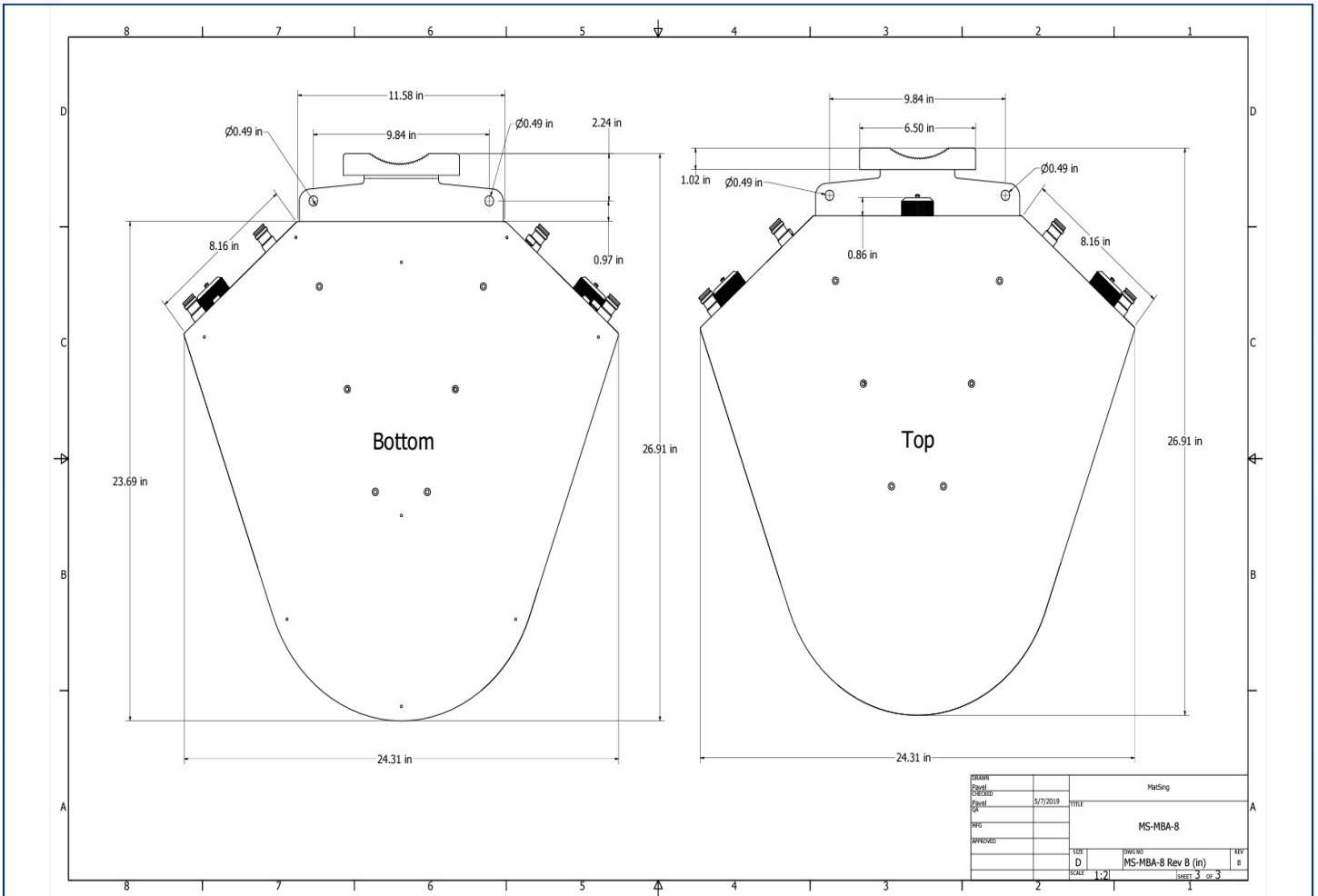
Title Block Information:

DRAWN		MS-MBA-8	
CHECKED	5/7/2019	TITLE	
DESIGNED		MS-MBA-8	
DESIGNED BY			
APPROVED			
SCALE	1:6	SHEET 1 of 3	

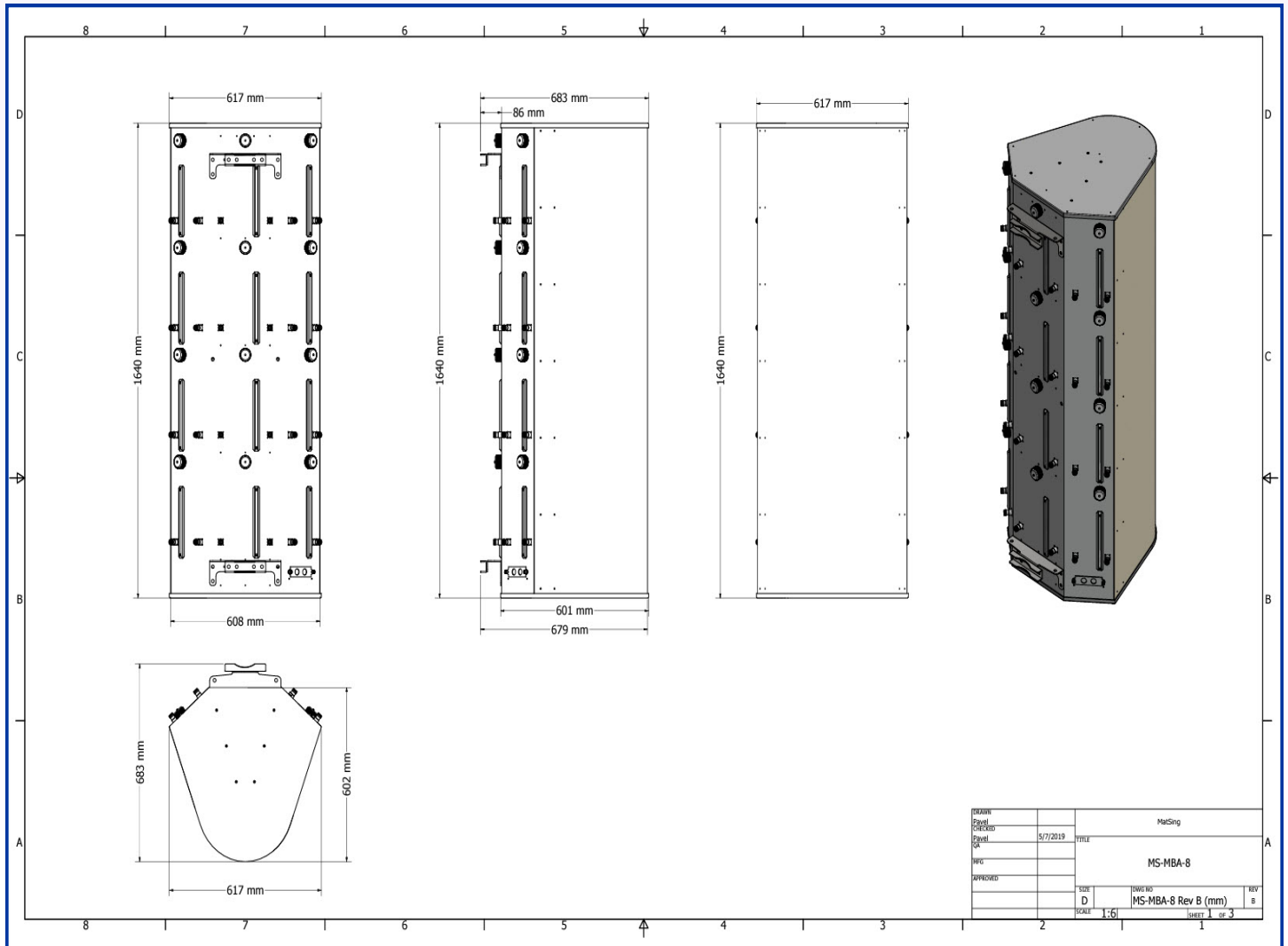
MECHANICAL DRAWINGS (INCHES)



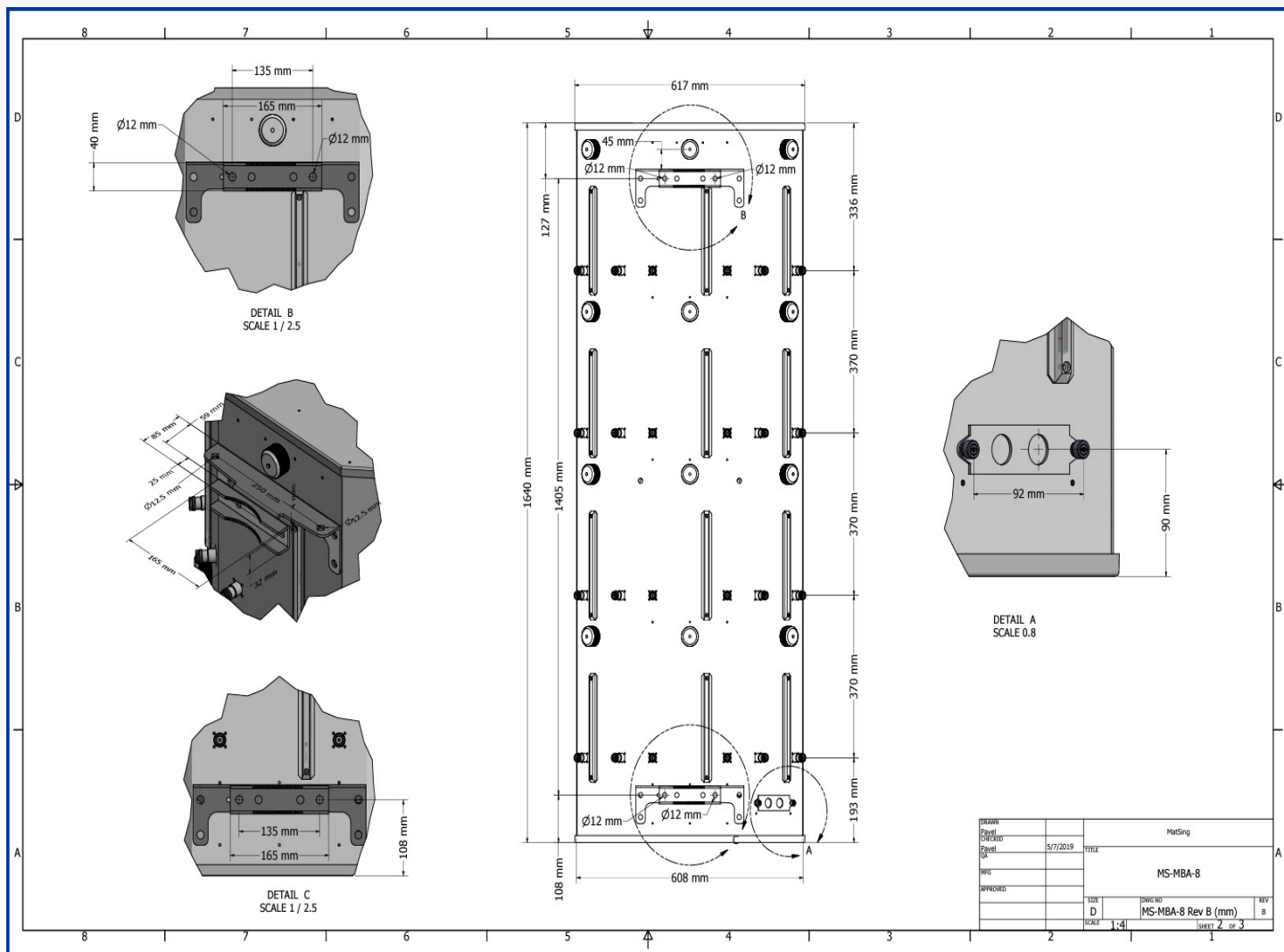
MECHANICAL DRAWINGS (INCHES)



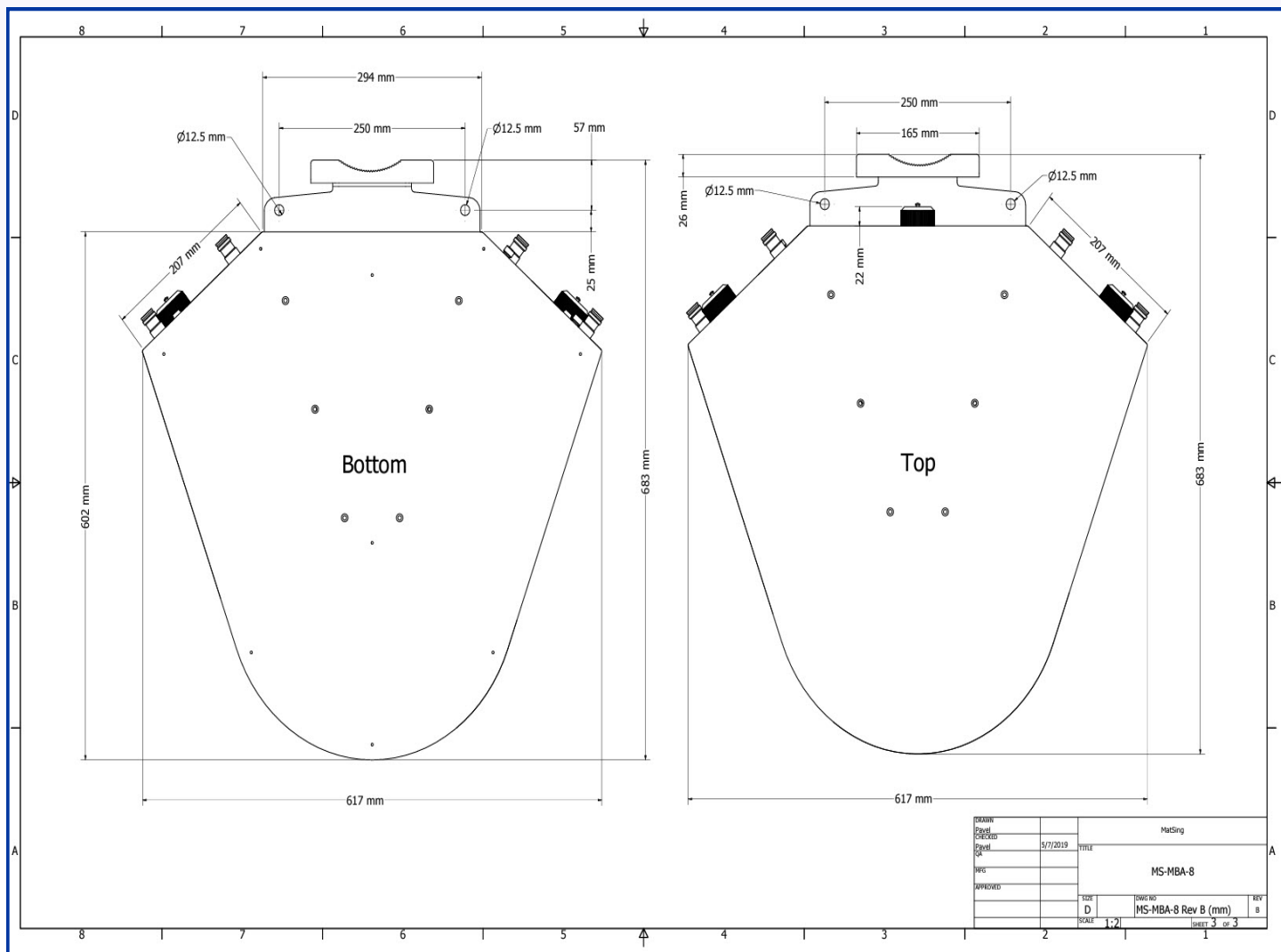
Mechanical Drawings (millimeters)



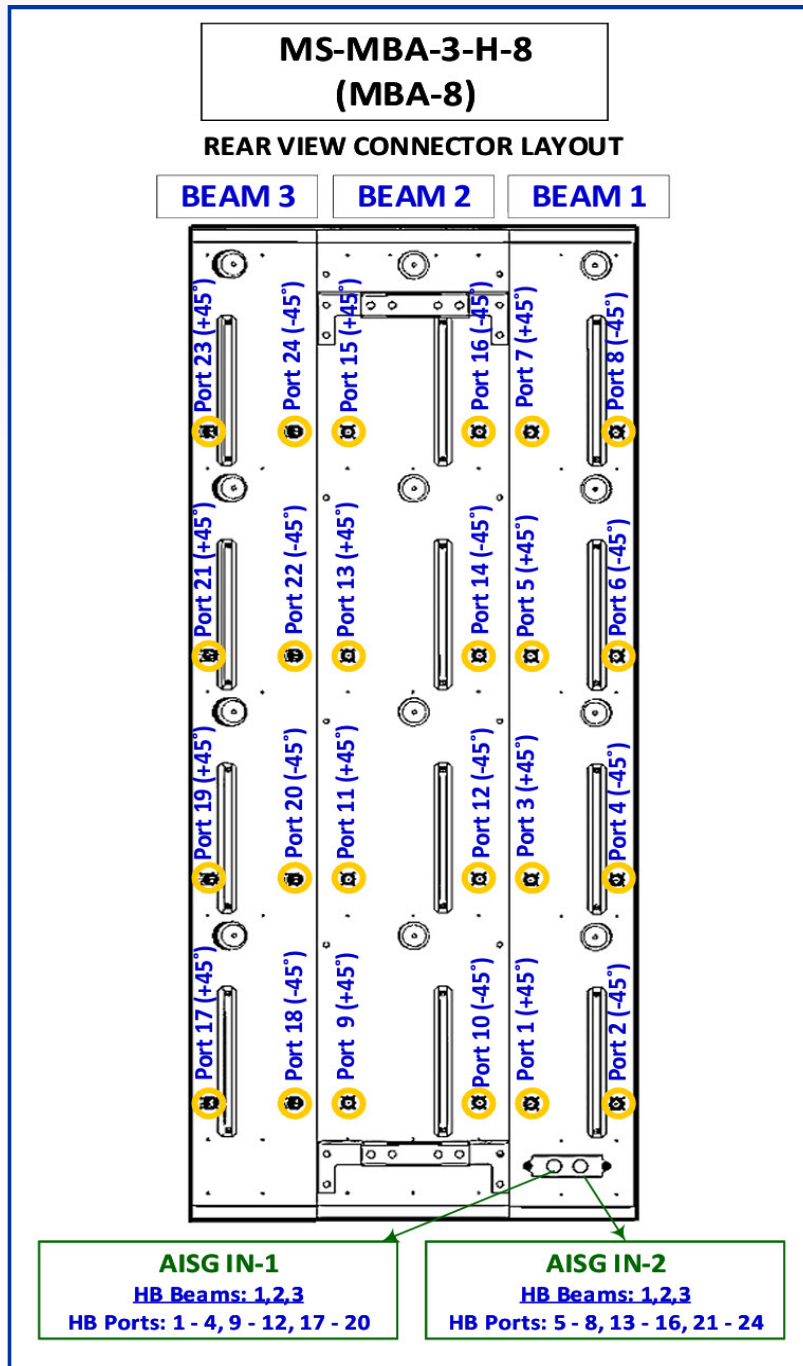
MECHANICAL DRAWINGS (MILIMETERS)



MECHANICAL DRAWINGS (MILIMETERS)

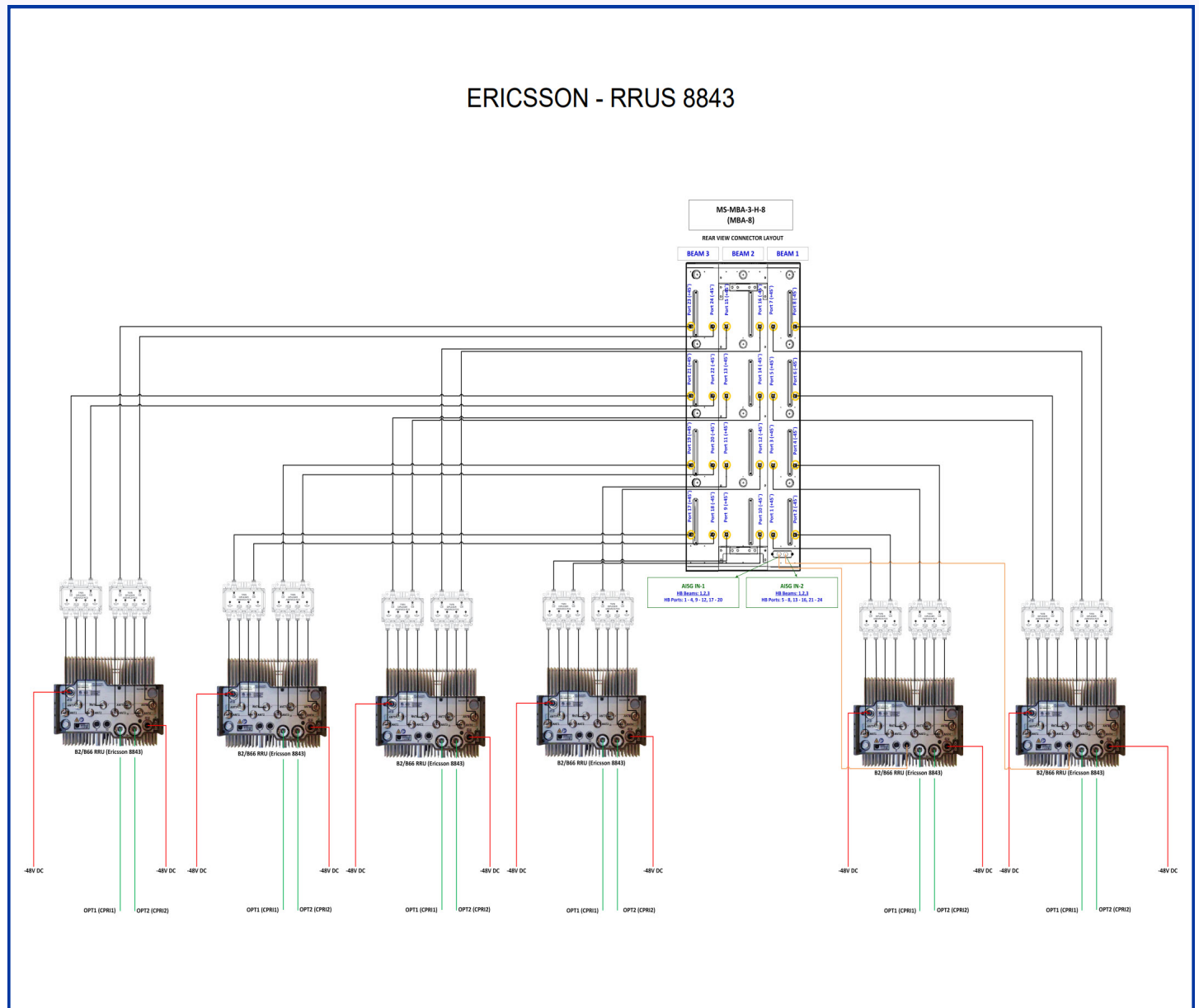


Connector Layout



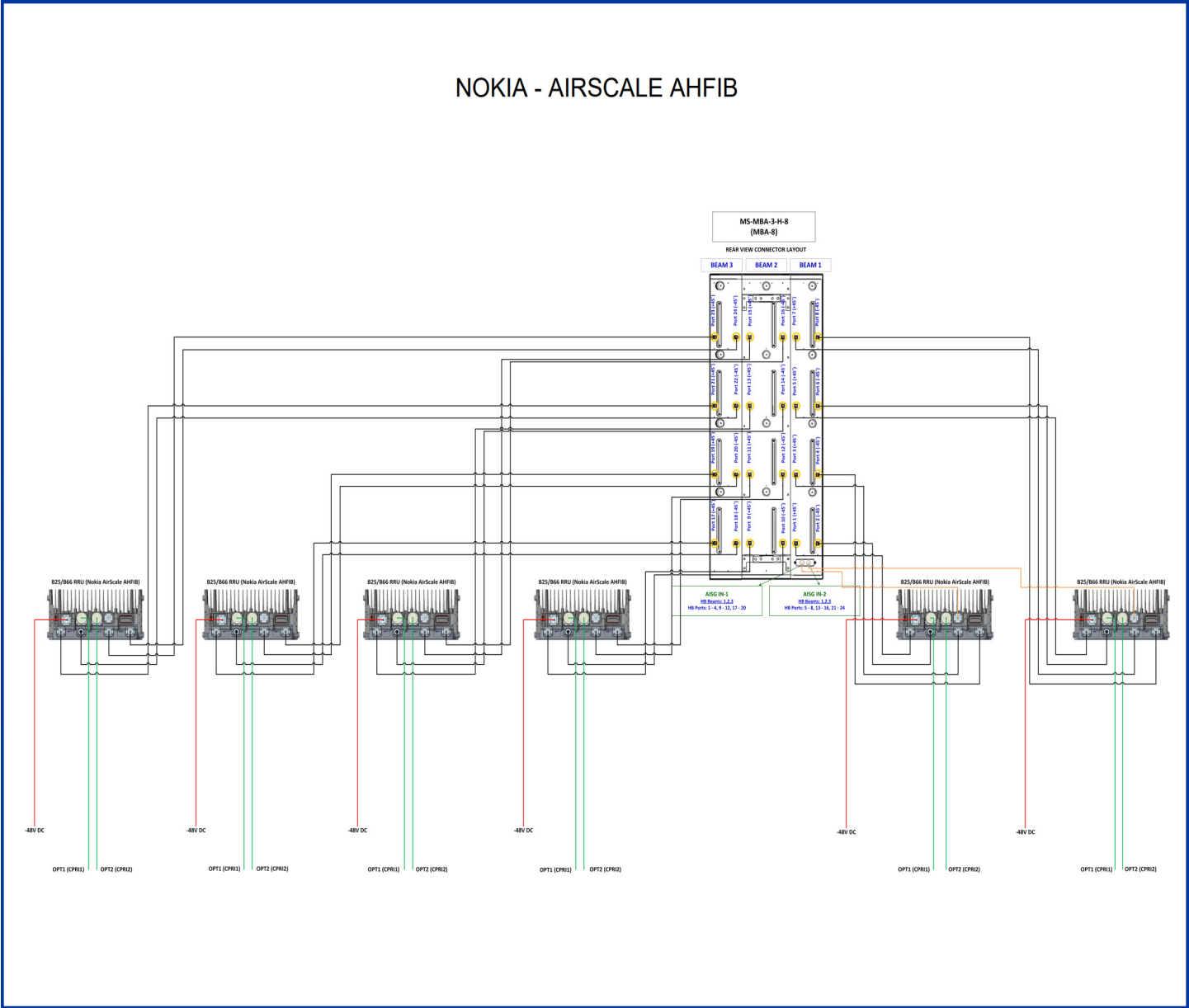
Plumbing Diagram

ERICSSON - RRUS 8843



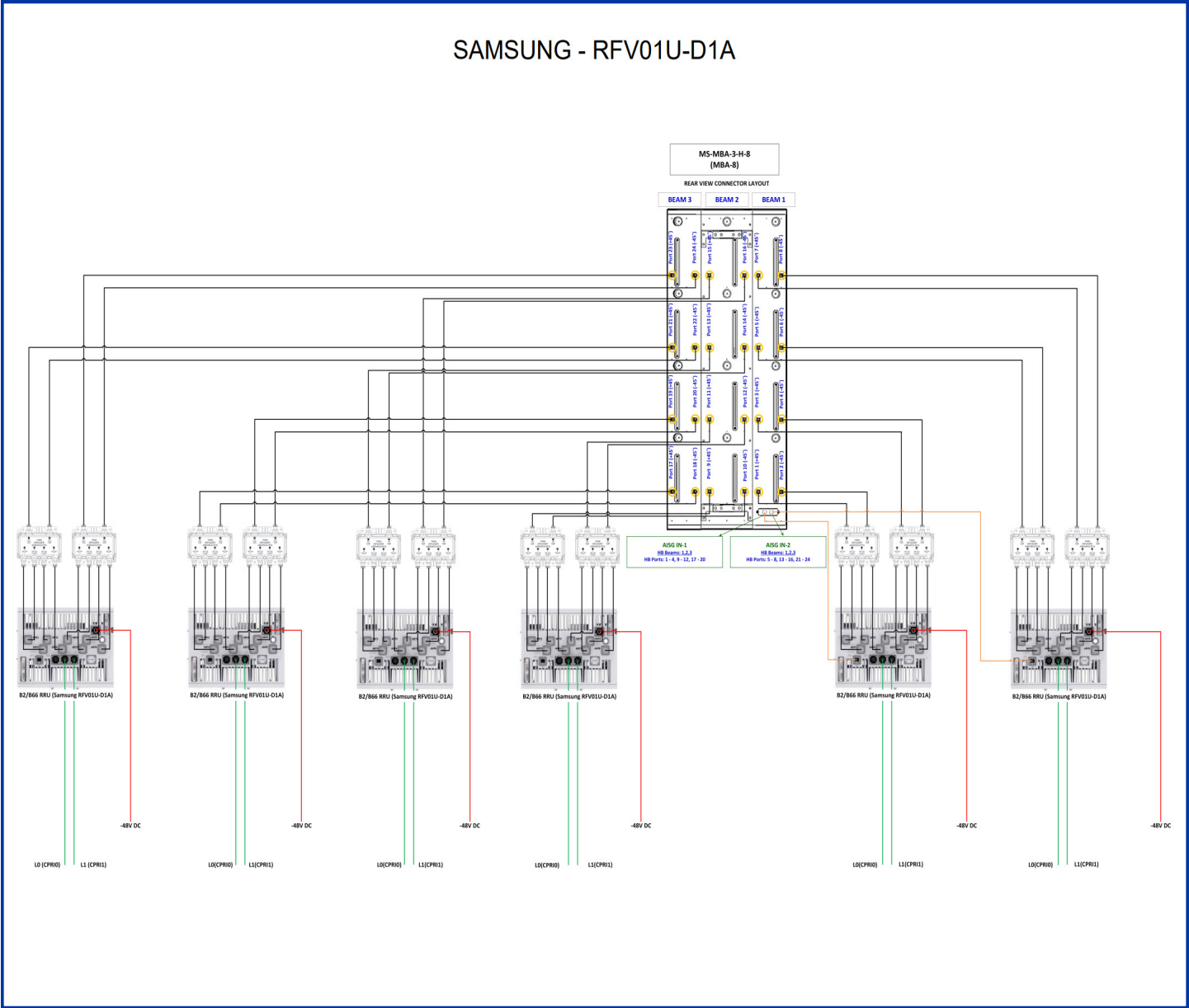
NOKIA - AIRSCALE AHFIB

NOKIA - AIRSCALE AHFIB



SAMSUNG - RFV01U-D1A

SAMSUNG - RFV01U-D1A



Wind Loading

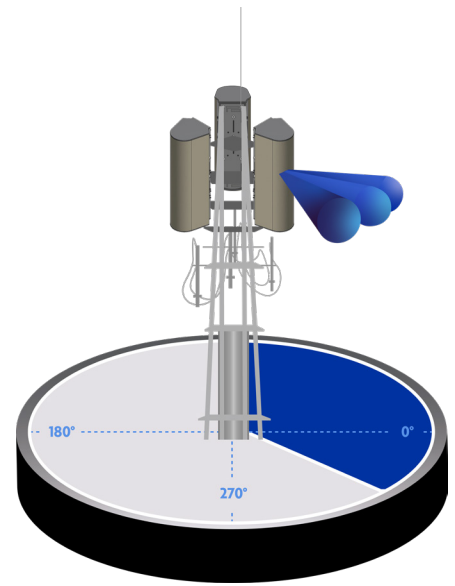
ANTENNA MS-MBA-3-H8

Antenna Model Number
MS-MBA-3-H8A2
Velocity [km/h]
150
Dimensions: [mm]
Length: 1636

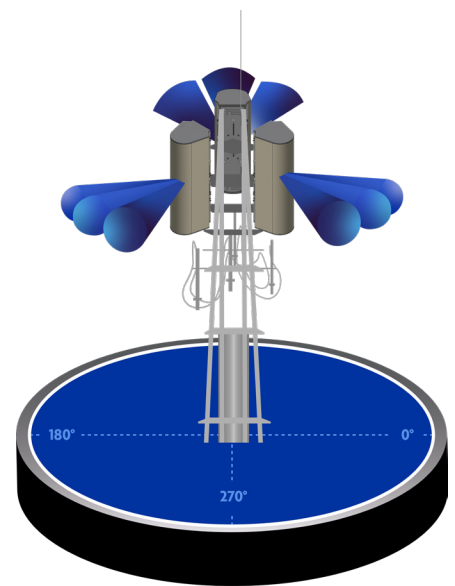


RESULTS

	Frontal	Lateral	Rear
Profile Drag Coefficient	1.1	1.42	1.29
Antenna Correction Coefficient	0.6	0.6	0.6
Antenna Drag Coefficient	0.66	0.85	0.77
Wind Load [N/lbf]	701 / 157.6	1007 / 226.4	822 / 184.8
Effective ragArea (m^2/ft^2)	0.66 / 7.1	0.95 / 10.2	0.77 / 8.33



One antenna will
cover 120 degrees



Three antennas will
cover 360 degrees

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