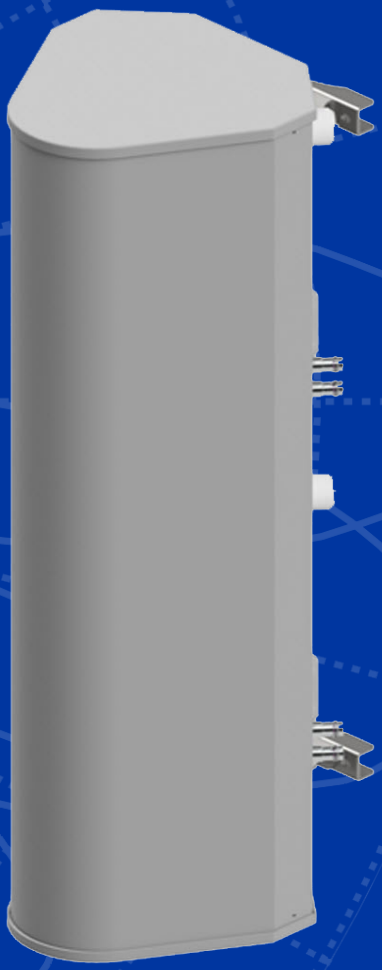


MATSING®

LENS TECHNOLOGY ENABLED

MS-MBA-3-C4A3

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

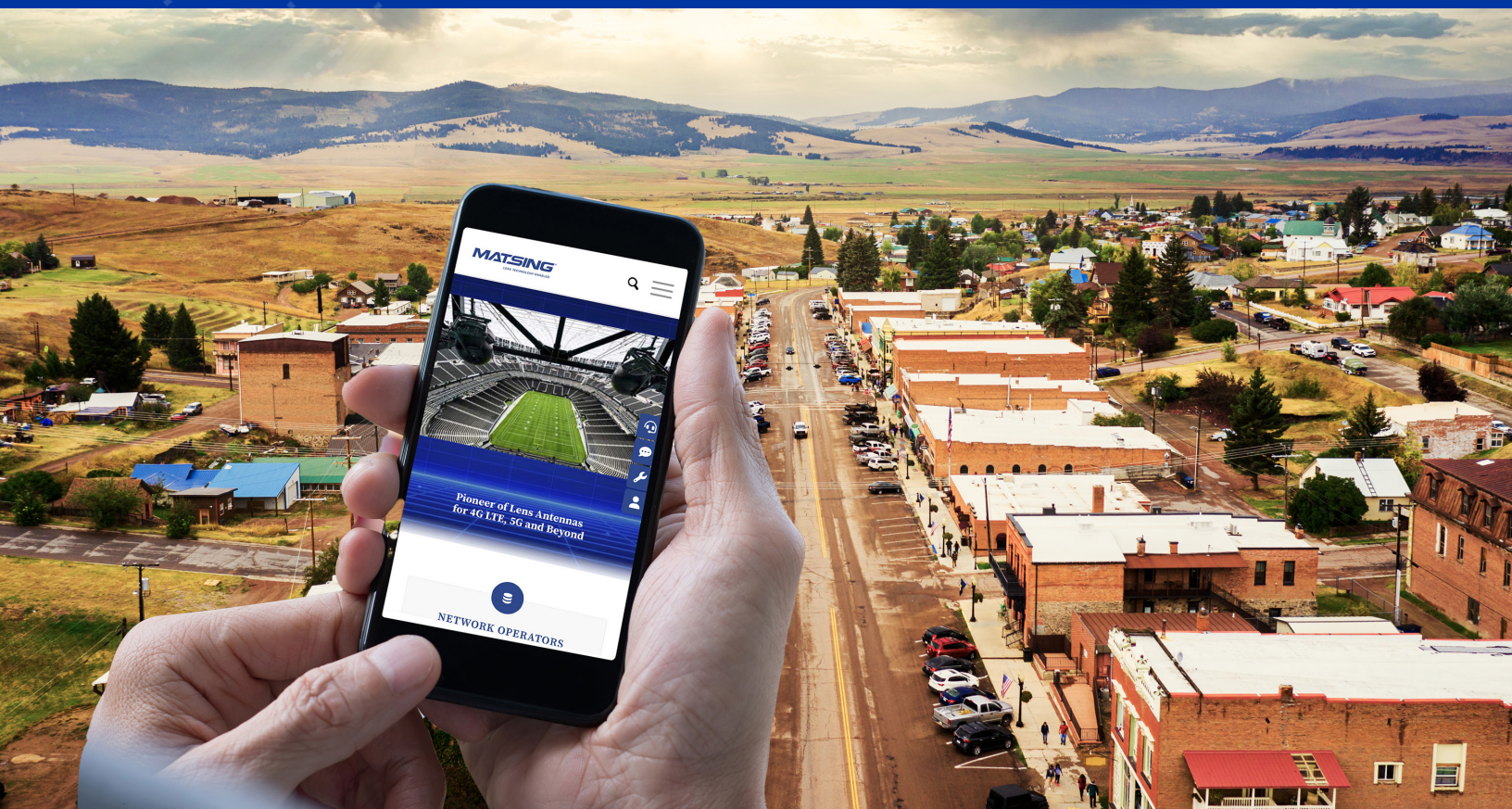


Table of Contents

MS-MBA-3-C4A3

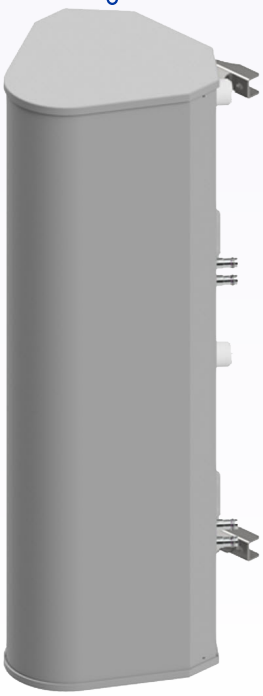
Ideal Coverage and Capacity Solution for Suburban, Rural & Fixed Wireless Access (FWA) Networks

Better Signal Quality

High Gain, Narrow Vertical Beamwidth

Improved Capacity & Data Throughput

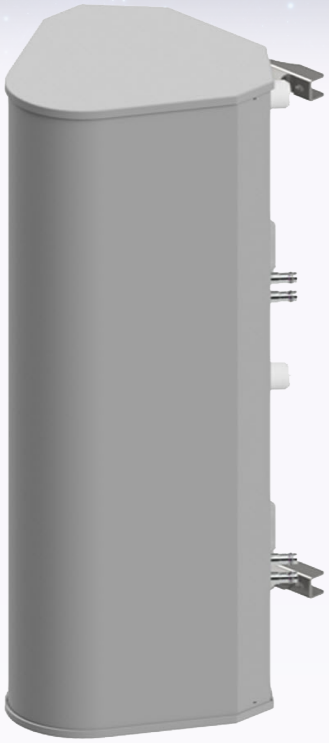
High SINR, Reduced Sidelobes & Backlobes



Rapid & Cost Effective Scalabillity

Quick Deployment, Minimal Infrastructure

MS-MBA-3-C4A3



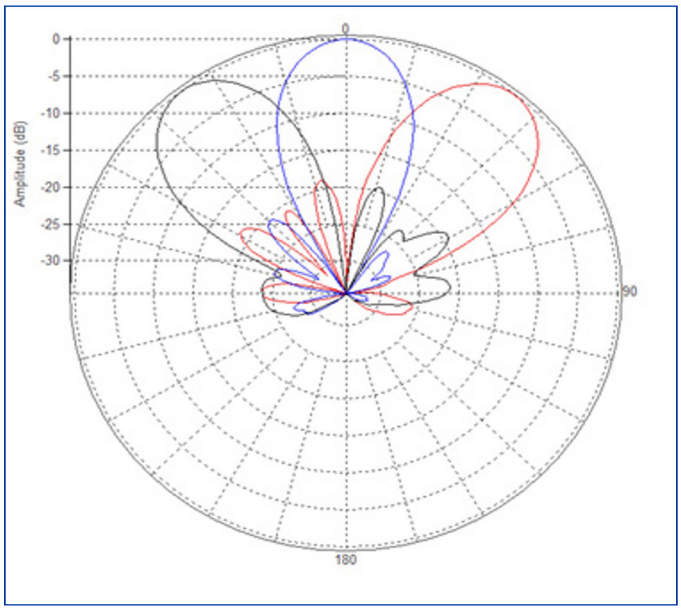
Lens Technology EnabledTM Multi-Beam Base-Station Antenna perfect for six to nine sector LTE cell site deployments, utilizes a patented spherical lens design with 3 isolated C-Band (3700 - 4200MHz) cross-polarized beams. Each beam has 4 ports, or 4X4 MIMO. MS-MBA-3-C4A3

EMAIL: info@matsing.com
WEBSITE: www.matsing.com PHONE: (949)585-5144

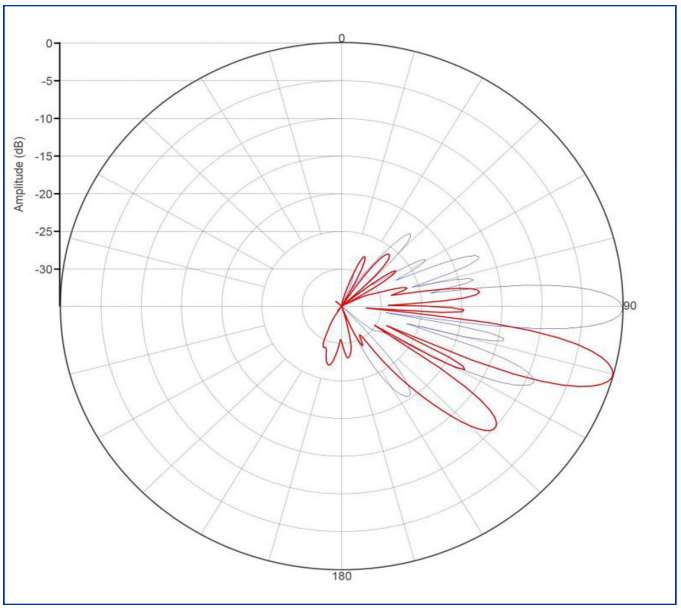
RET available from 0 to 15 for each beam.

PATTERN RESULTS:

C-Band Horizontal Pattern (3.7GHz)



C-Band Vertical Pattern at 0° and 15° Tilt



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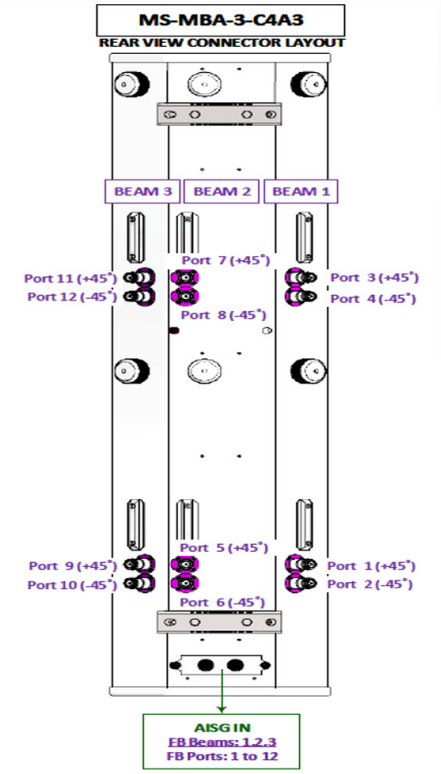
TECHNICAL SPECIFICATIONS	
Frequency	3700 – 4200 MHz
Gain	20dBi
VSWR	<1.5:1
Polarization	Dual Slant ± 45°
Horizontal Coverage	120°
Horizontal Beamwidth (3 dbB) level Horizontal Beamwidth (10 dB) level	25° 45°
Vertical Beamwidth (3 dB) level	8°
Beam Cross-over	8dB typical
Total Number of Beams	3
Number of Ports per Beam	4
Number of Ports Total	12
RET Per Cross-Pol	0° to 15°
Upper Sidelobe level Azimuth Sidelobe level	<-16dB <-18dB
Front to Back Ratio	>28dB
Isolation Port to Port - Polarization Isolation Port to Port - Beam	>28dB >25dB
Power Rating	150W per port
Intermodulation	<-153dBc
Impedance	50 Ohm
Connector Quantity and Type	12 x 4.3-10 female

MECHANICAL DATA	
Dimensions (H x W x D)	118.8 x 29.4 x 37 cm 46.8 x 11.6 x 14.6 inch
Antenna Weight	19.46kg 42.9 lbs
Radome Material	Polycarbonate
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 @ 150 km/hr	N/lbf Frontal: 262/58.9 Lateral: 374/84.1 Rear: 298/67

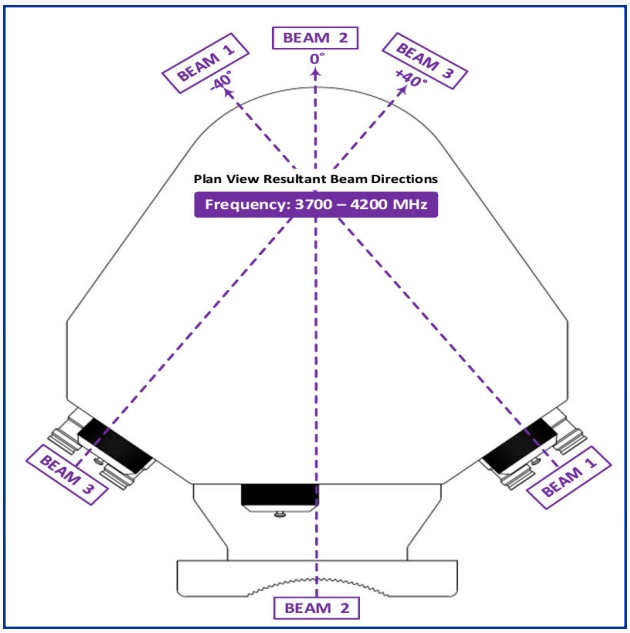
CONNECTOR LAYOUT:



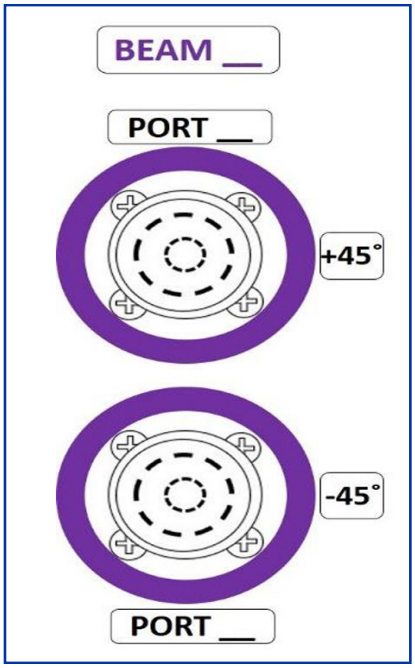
Instruction Manual

1.0 BEAMS AND CONNECTORS

1.10 Plan View Resultant Beam Layout



1.30 Connector Detail

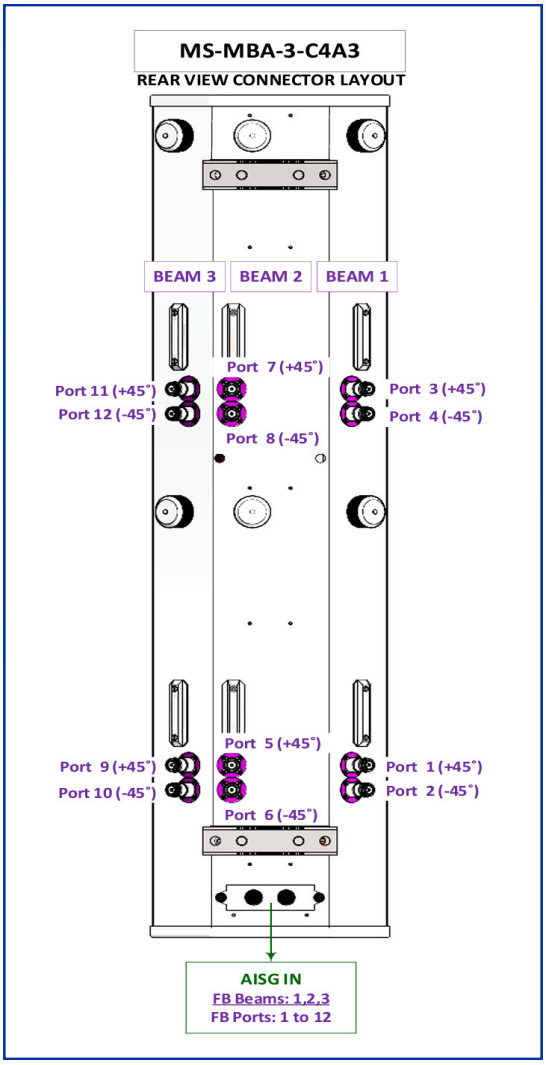


1.20 Connector Port Table

1.20 Connector Ports Table

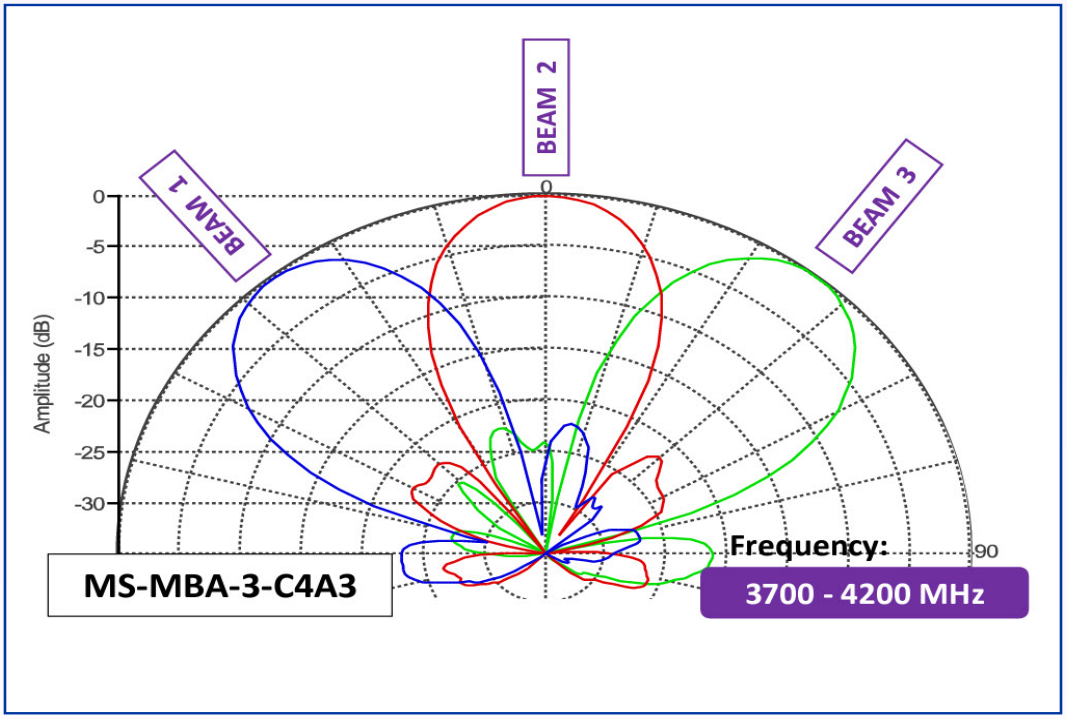
BEAM 3	BEAM 2	BEAM 1
Port 11 (+45°)	Port 7 (+45°)	Port 3 (+45°)
Port 12 (-45°)	Port 8 (-45°)	Port 4 (-45°)
Port 9 (+45°)	Port 5 (+45°)	Port 1 (+45°)
Port 10 (-45°)	Port 6 (-45°)	Port 2 (-45°)

1.40 Connector Layout

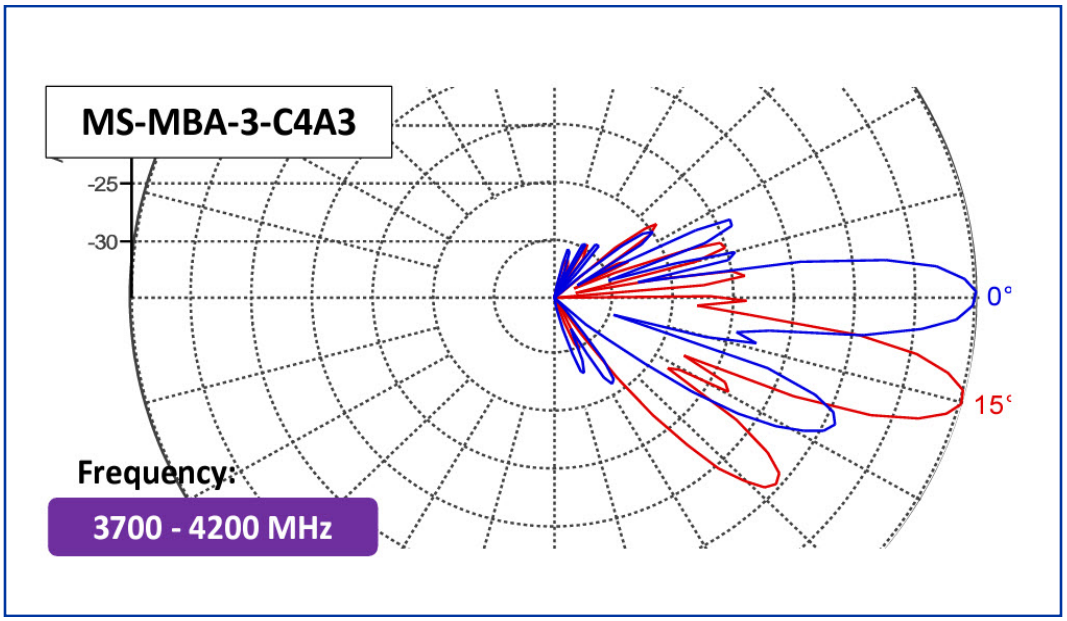


2.0 PATTERN DIAGRAM

2.10 H-Band Horizontal Pattern



2.20 H-Band Vertical Pattern



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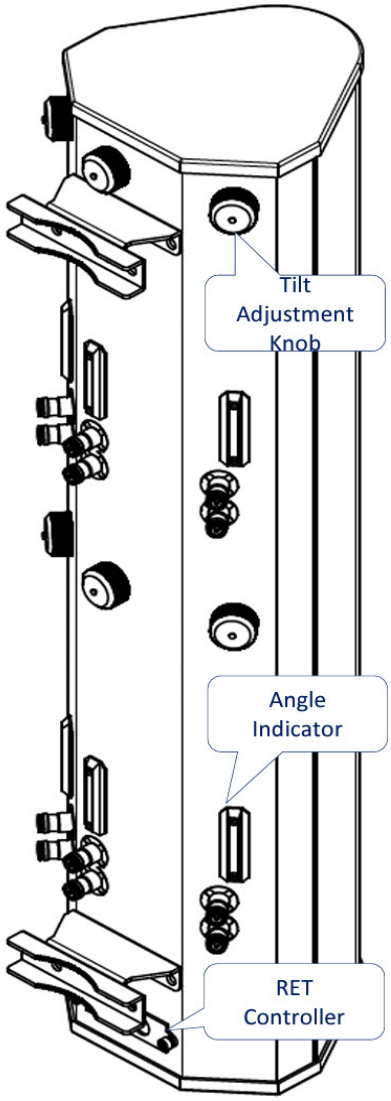
3.0 MANUAL TILT ADJUSTMENT

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.



1. Engaged with internal RET motor position

2. Unscrew/ Screw the cap for tilt adjustment process

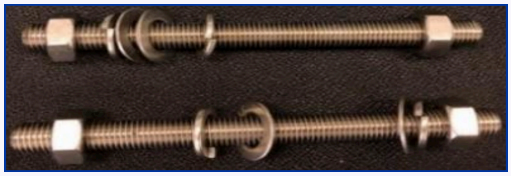
3. Pull knob out to disengaged RET for tilt adjustment

4.0 BRACKET INSTALLATION

4.10 Bolts and Nuts Requirments

Bracket	Bolts		Nuts	
Qty	Size	Qty	Size	Qty
2	M12 x 200mm	4	M12	10

4.11 Bolts and Nuts



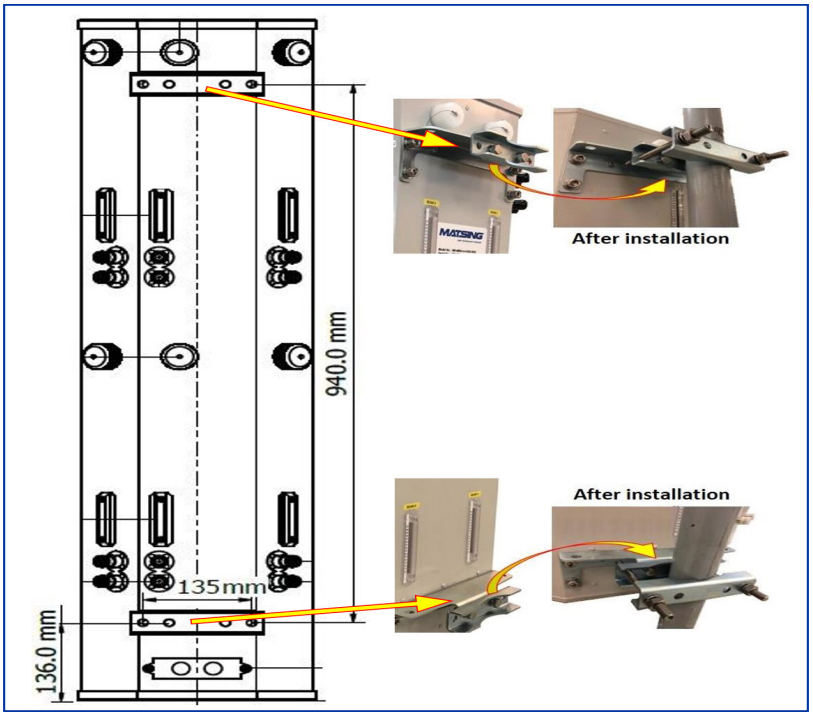
4.12 Bracket

4.20 Tool Requirments

4.21 Adjustable Spanner

4.22 M12 Spanner

4.30 Bracket Spacing and Installation Sample



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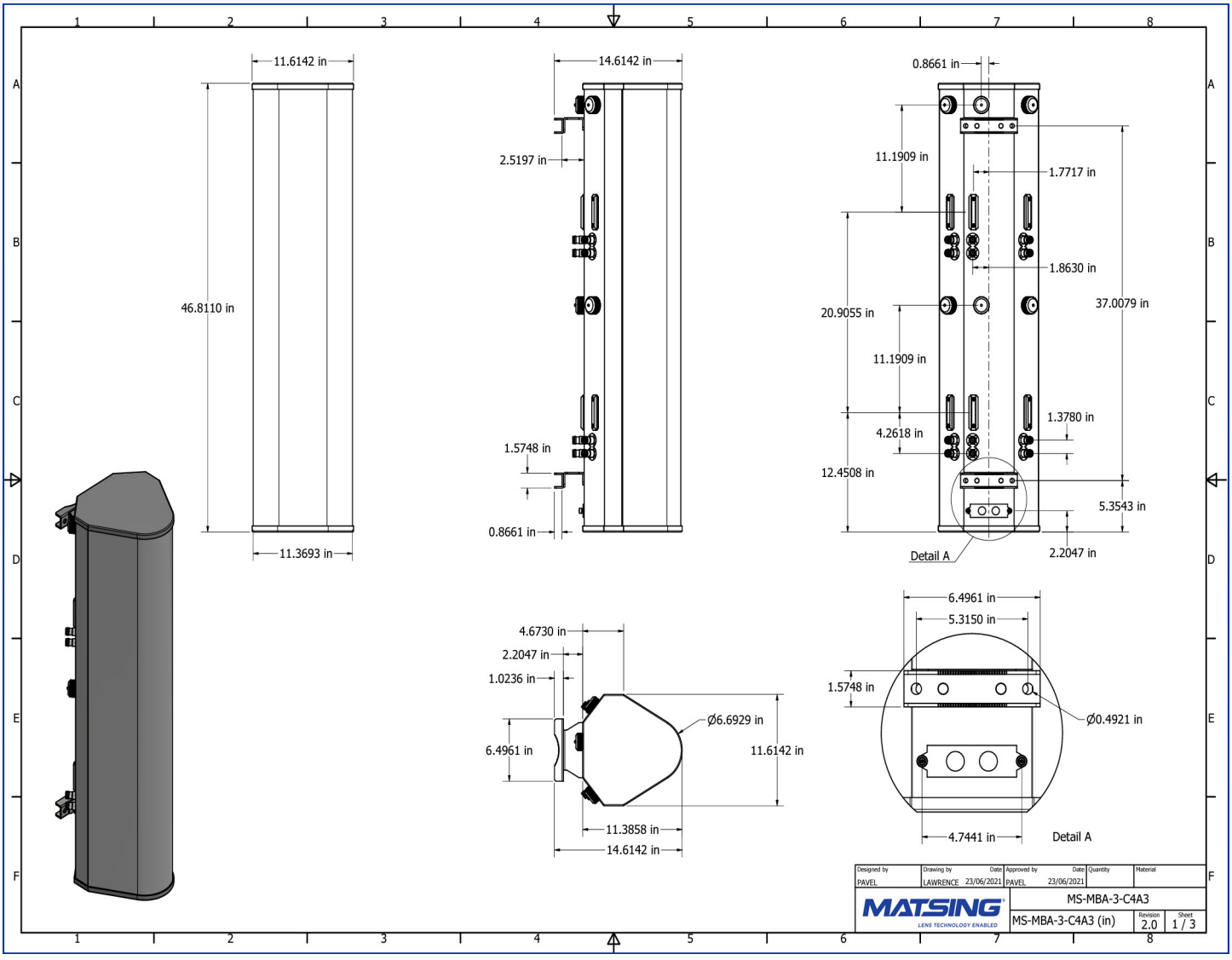
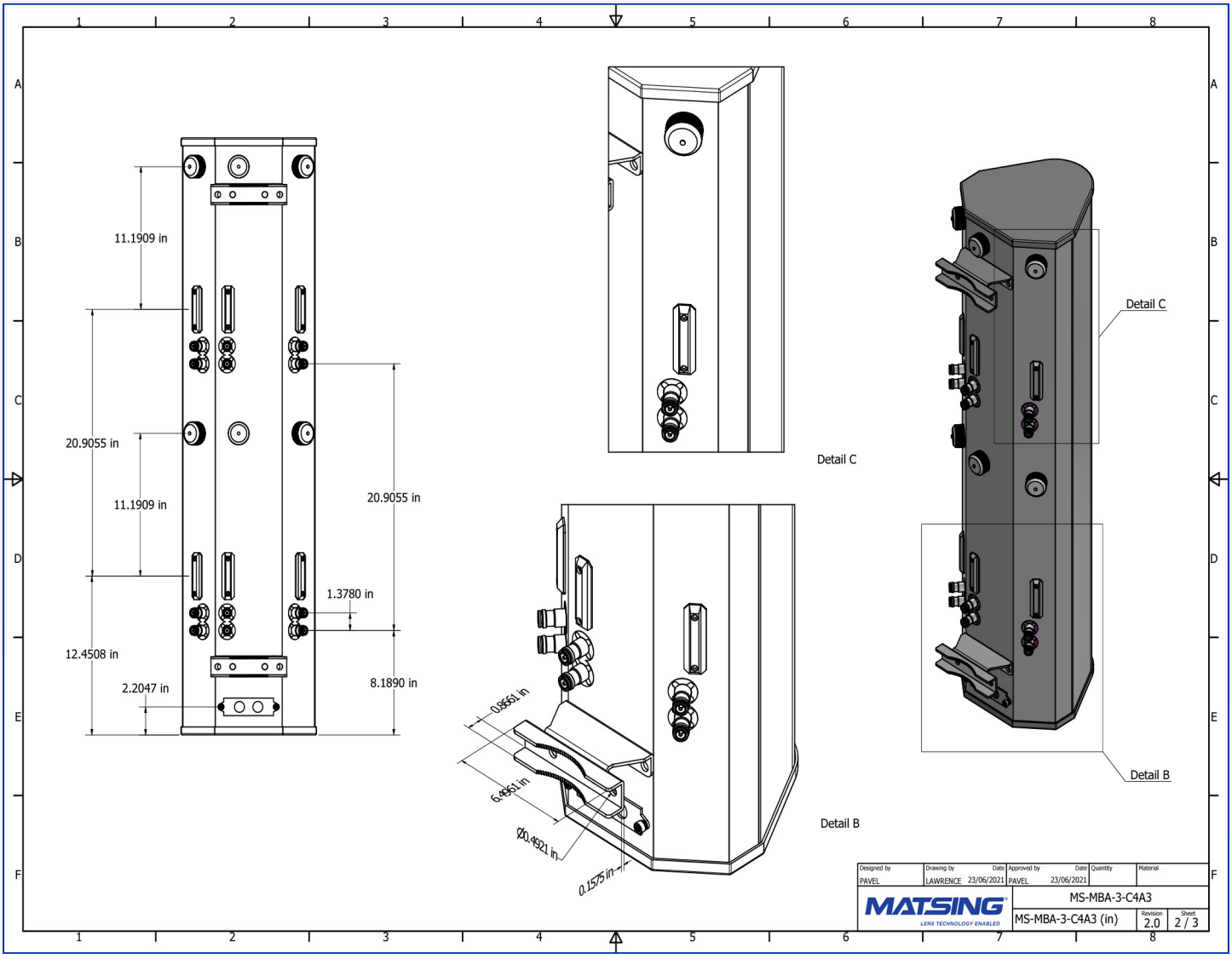
Mechanical Drawings (inches)



MECHANICAL DRAWINGS (INCHES)



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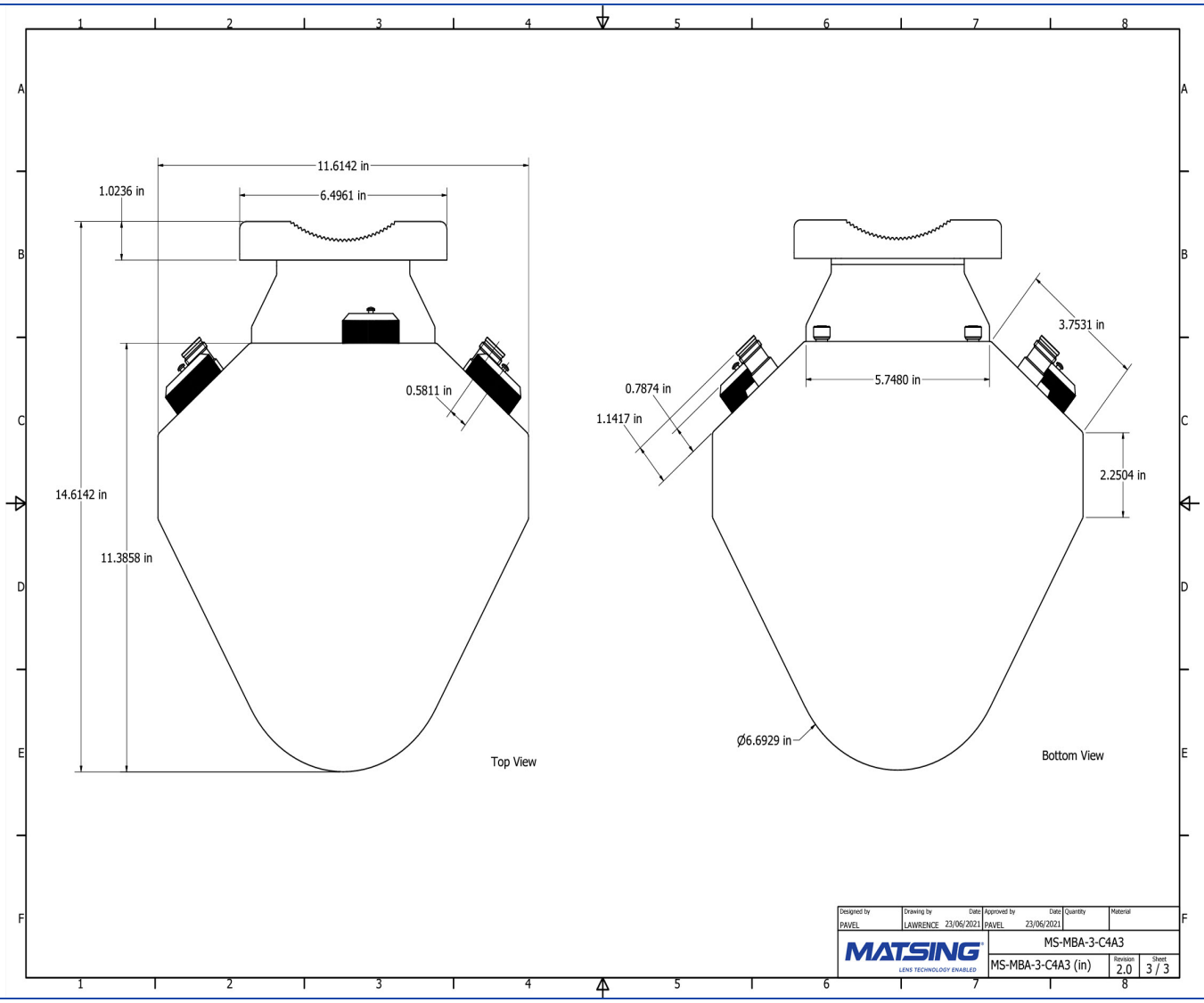
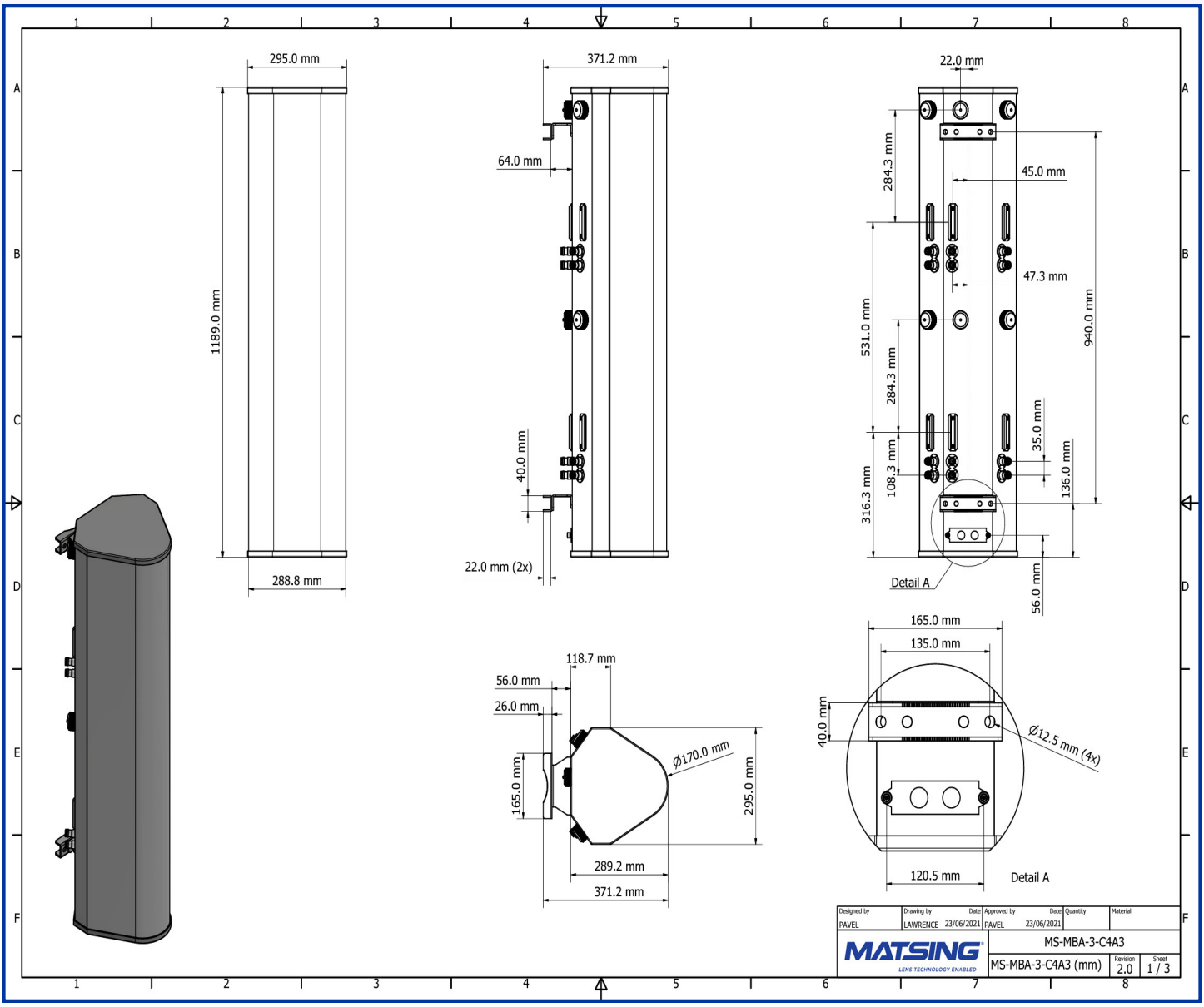
MECHANICAL DRAWINGS (INCHES)



Mechanical Drawings (milimeters)



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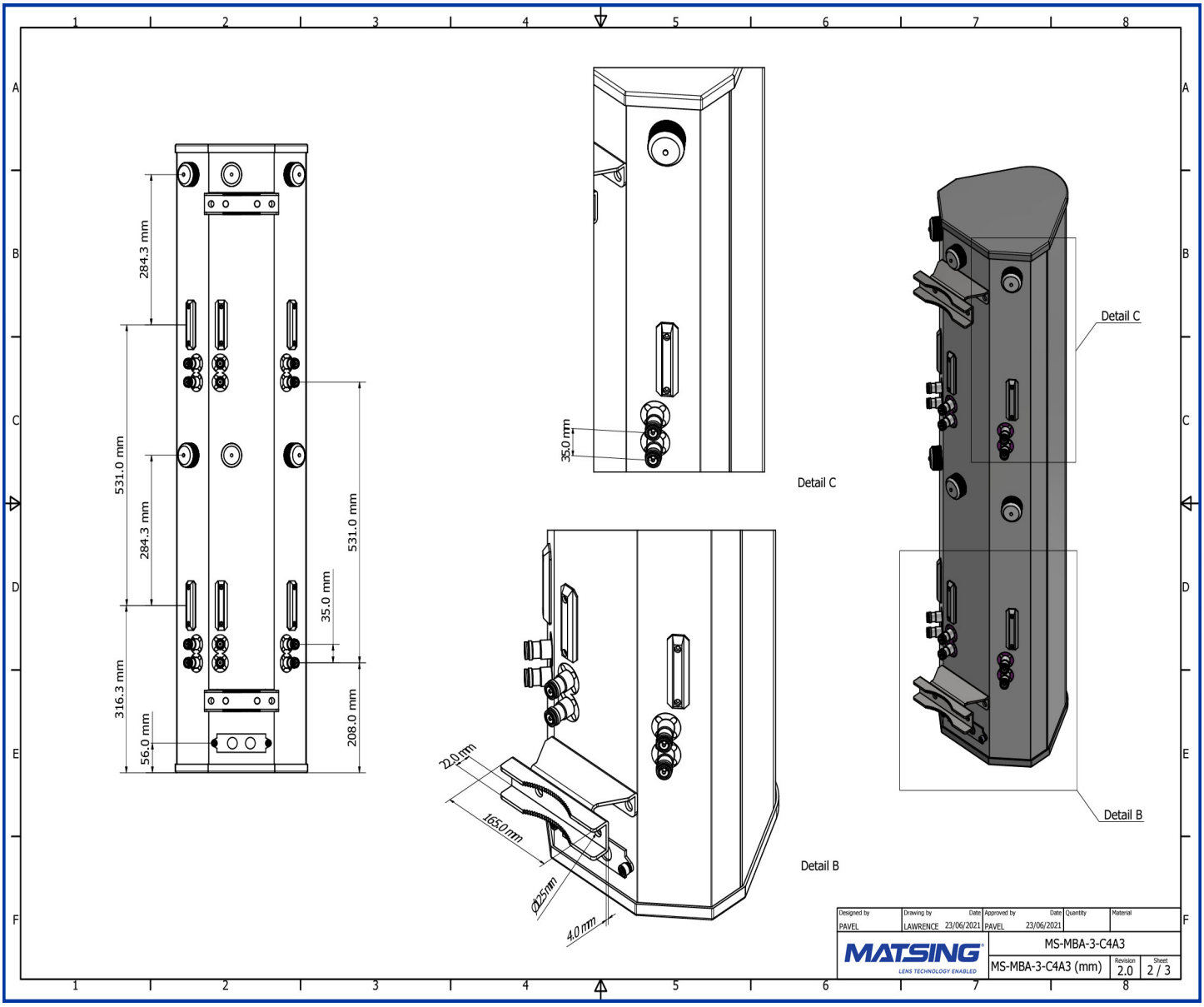
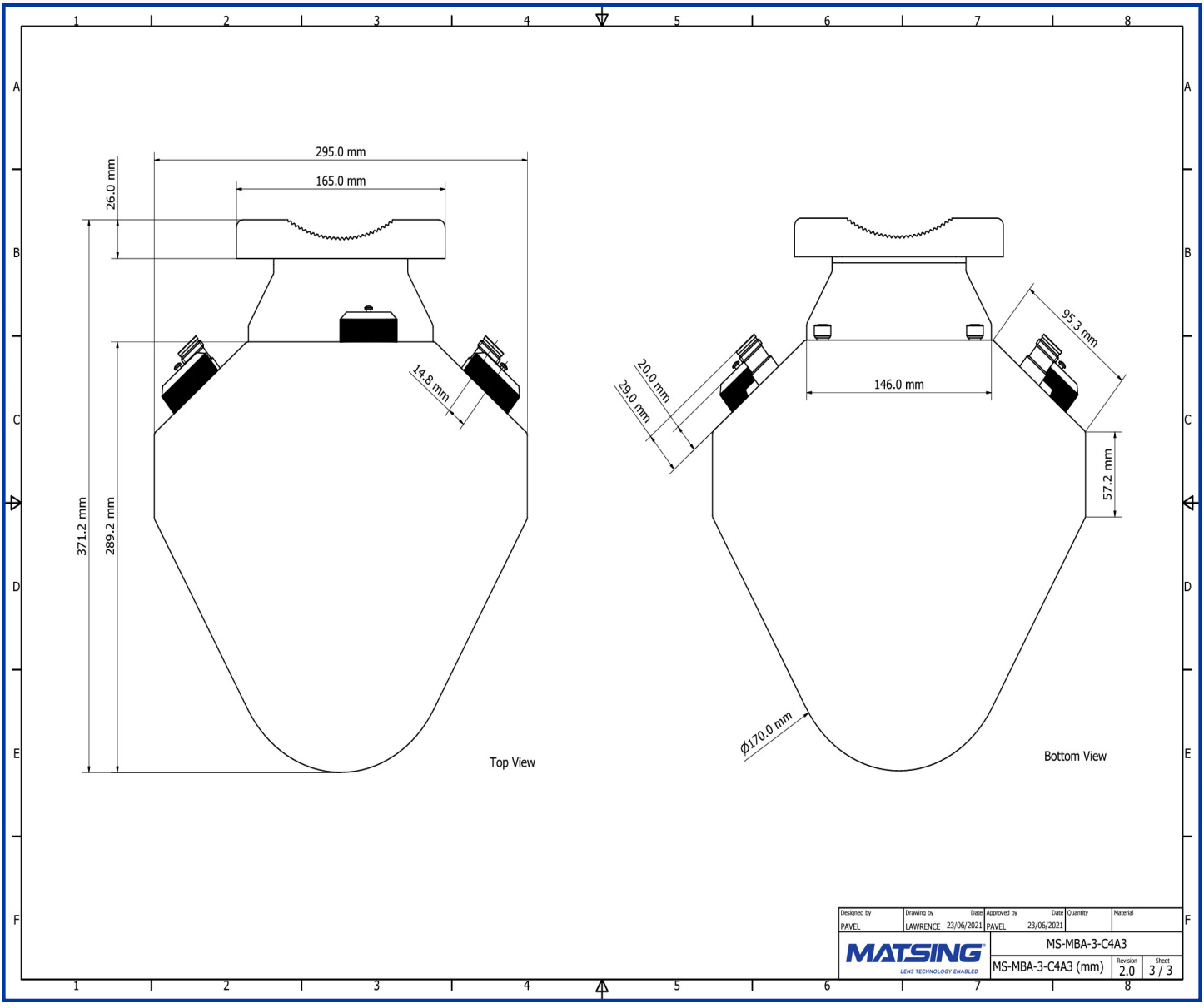
MECHANICAL DRAWINGS (MILIMETERS)



MECHANICAL DRAWINGS (MILIMETERS)



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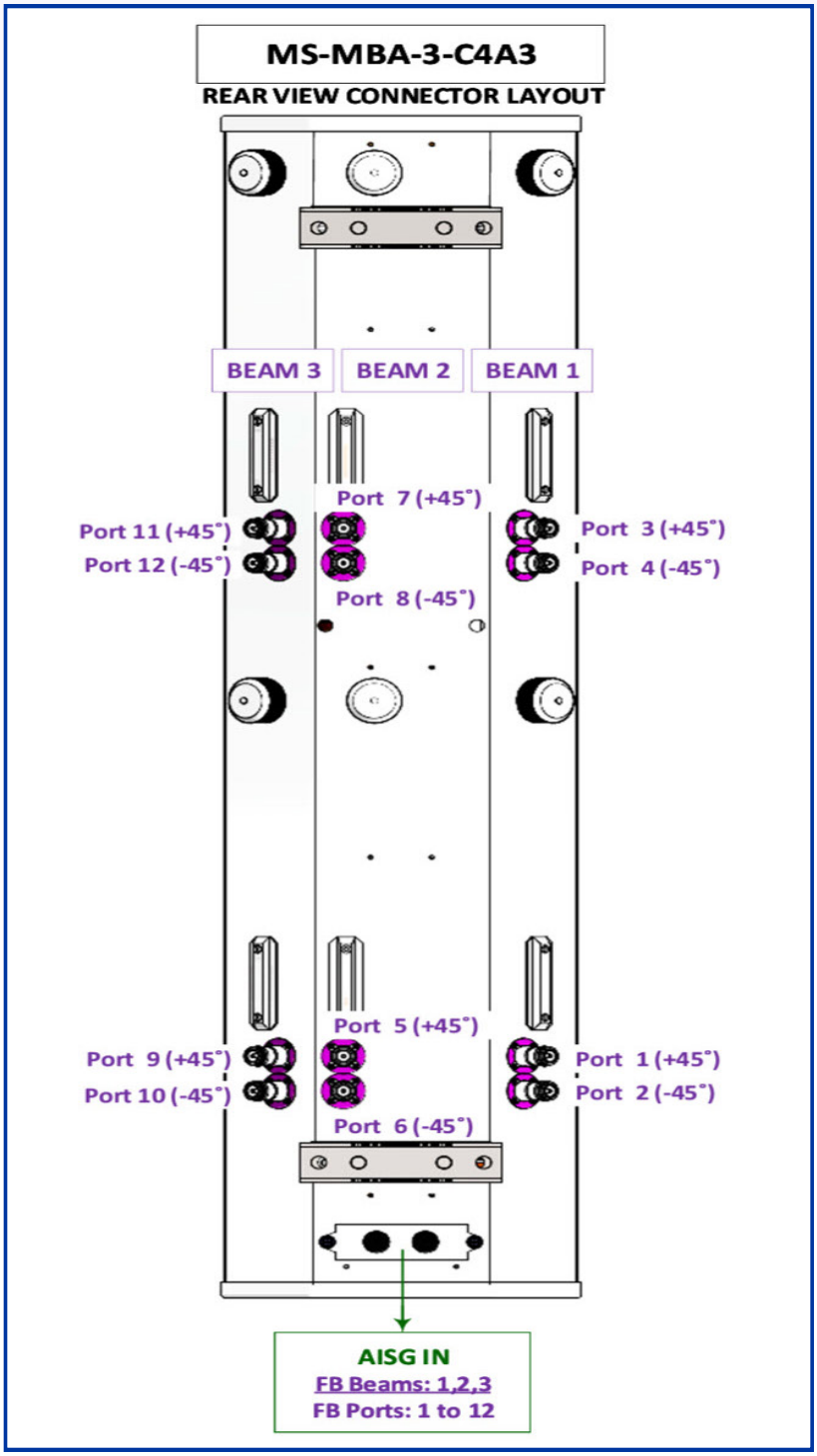
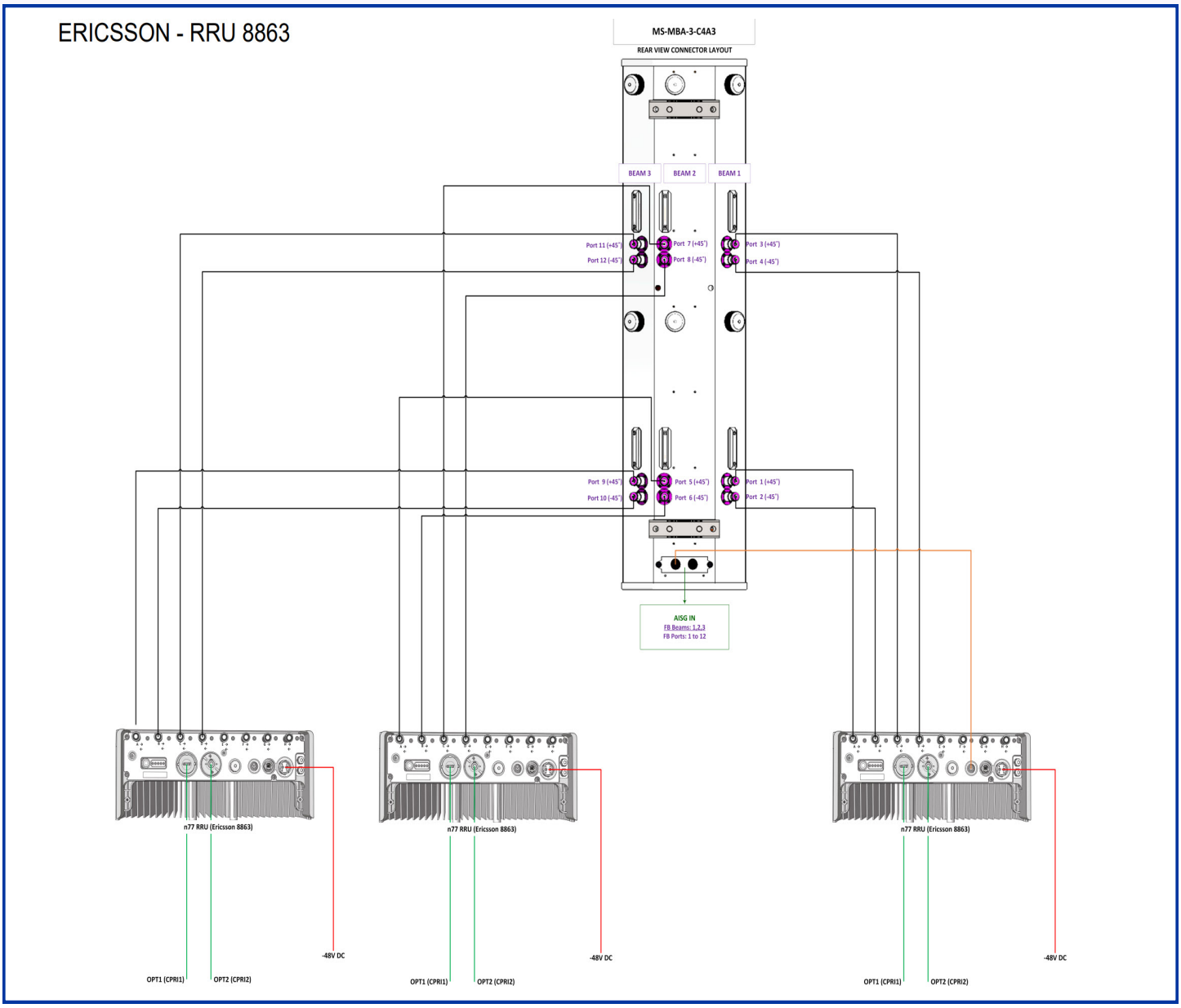
Connector Layout



Plumbing Diagram

ERICSSON - RRU 8863



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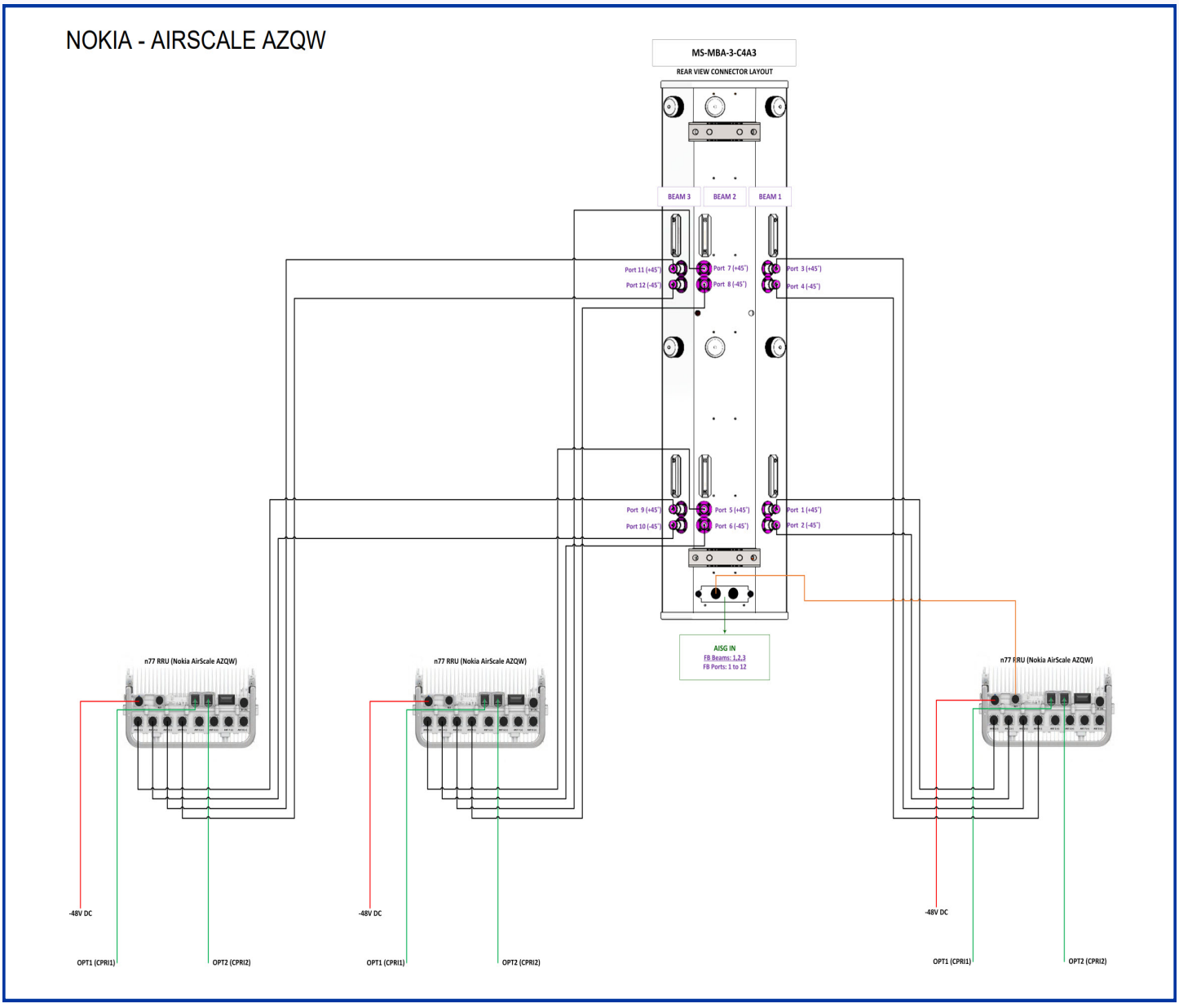
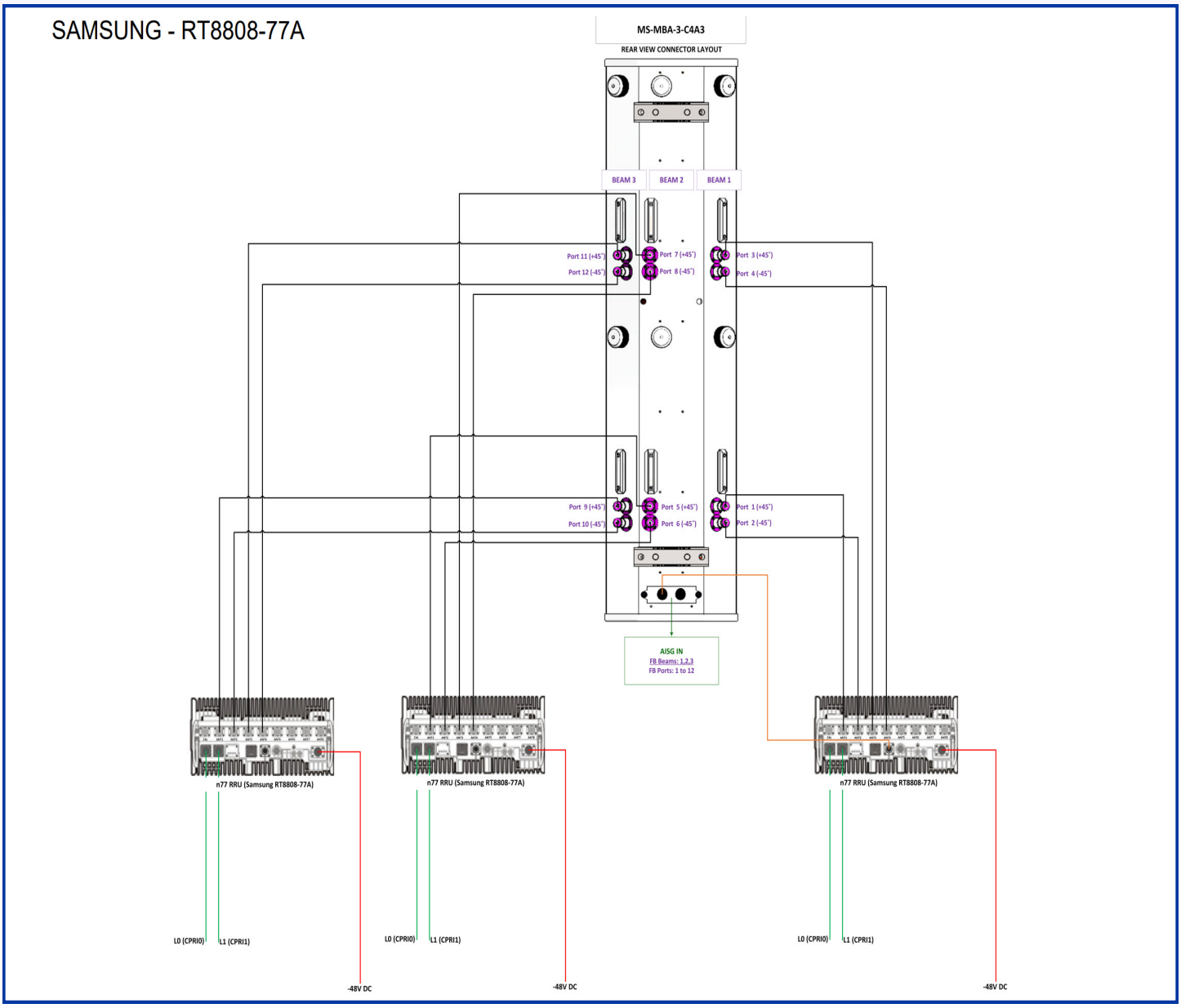
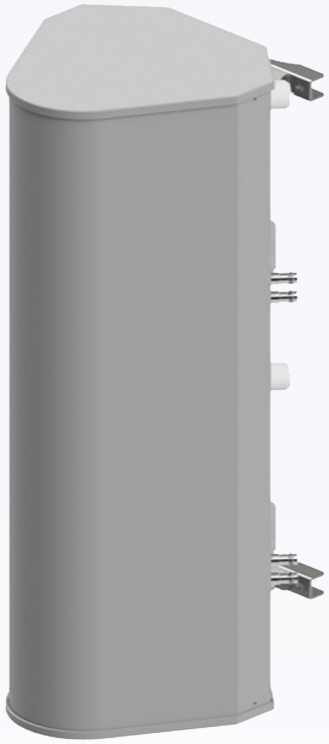
NOKIA - AIRSCALE AZQW



SAMSUNG - RT8808-77A



Wind Loading

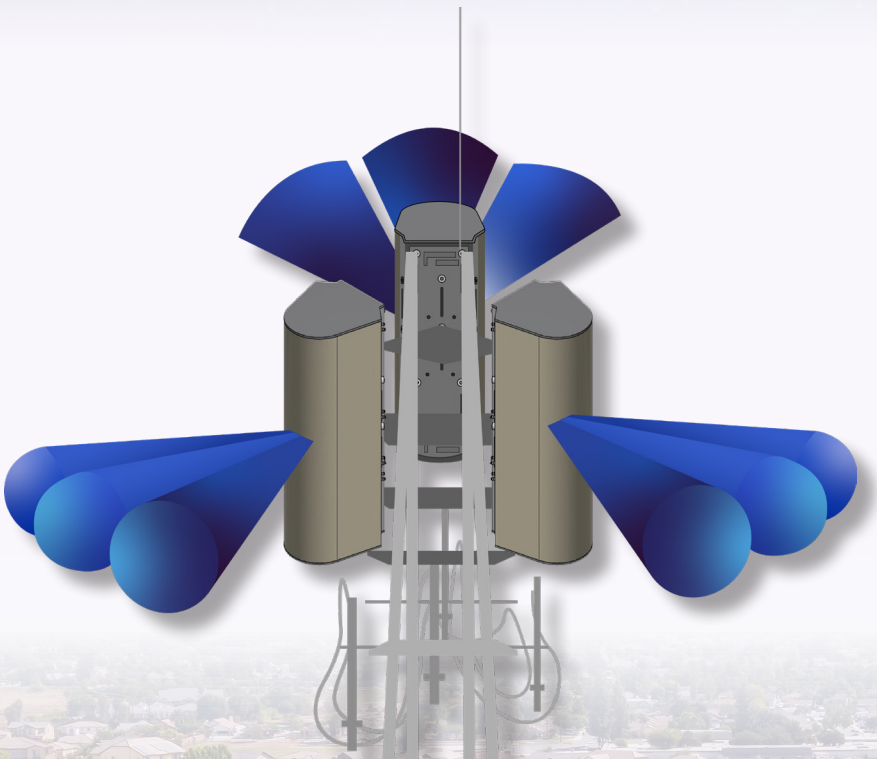


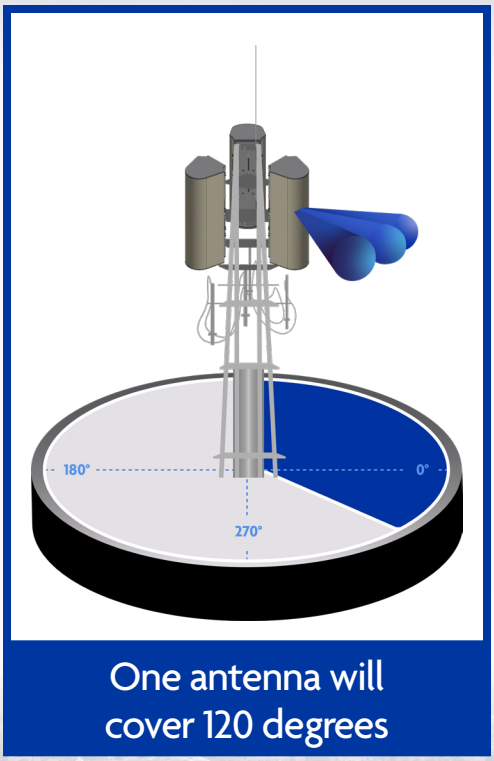
ANTENNA **MS-MBA-3-C4A3**

Antenna Model Number
MS-MBA-3-H8A2
Velocity [km/h]
150
Dimensions: [mm]
Length: 1189

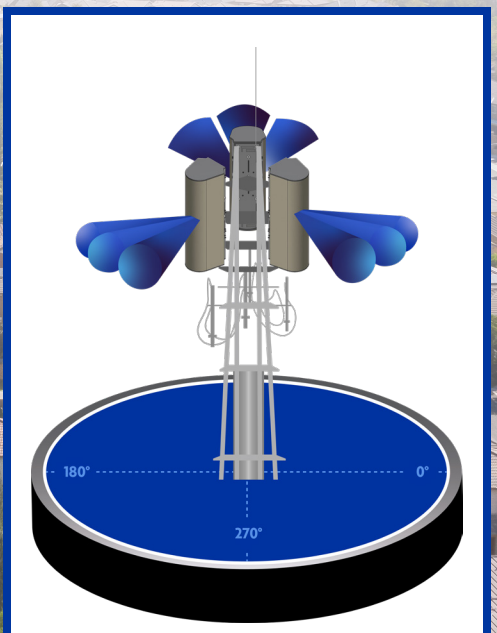
RESULTS

	Frontal	**Lateral**	**Rear**
Profile Drag Coefficient	1.17	1.7	1.33
Antenna Correction Coefficient	0.601	0.603	0.601
Antenna Drag Coefficient	0.7	1.02	0.8
Wind Load [N/lbf]	262 /58.9	1374 / 84.1	298 / 67
EPA [Wind Receiving area] (m^2/ft^2)	0.25 / 2.65	0.35 / 3.79	0.28 / 3.02





One antenna will cover 120 degrees



Three antennas will cover 360 degrees

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