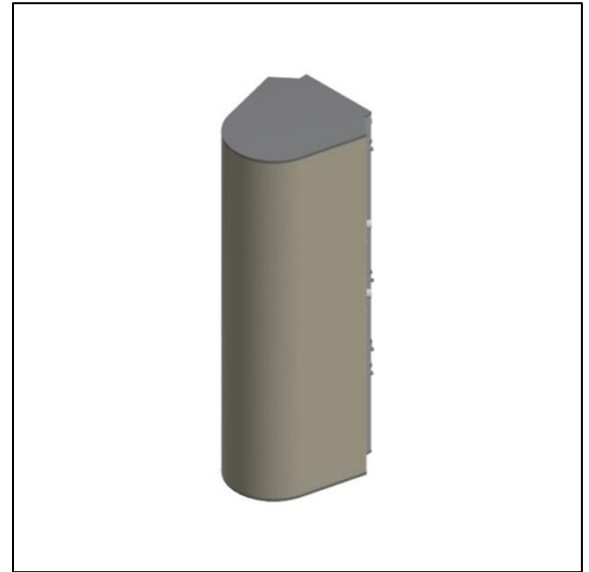


4 BEAMS | 3300-4200MHz | 4T4R
4 BEAMS | 1695-2690MHz | 4T4R

Lens Technology Enabled™ Multi-Beam Antenna:

- Utilizes a patented cylindrical lens design
- 4 Isolated cross-polarized beams for F-band
- 4 isolated cross-polarized beams for Mid-Band
- 120° coverage with highest beam stability
- 4x4 MIMO capability per beam
- Broadband element to cover all frequencies between (1695 – 2690MHz) & (3300 – 4200MHz)
- Beams can be combined to form 1 sector (square), 2 sectors (horizontal & vertical), 3 sectors or 4 sectors
- Splitter boxes are provided with the antenna for all 4 configurations
- No beam squinting as compared to Butler matrix antennas
- High-capacity solution for venues, stadiums, arenas & special events
- Rugged fiberglass radom material for the best protection during transportation



4 Beams Cluster



2 Beams Cluster



Square Beam

Schematic view of possible configurations

ELECTRICAL SPECIFICATIONS, BASTA (4-BEAM CLUSTER)

Frequency, MHz	1695-1880	1850-1990	1920-2170	2300-2400	2490-2690	3300-3700	3700-4000
Gain, by all ports, dBi	18.5+/-0.7	19+/-0.5	19.5+/-0.5	20.5+/-0.5	20.5+/-0.5	18+/-1	18.5+/-1
VSWR	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	
Number of beams	4					4	
Horizontal and Vertical Coverage, deg	54	54	54	54	54	54	
Horizontal Beam Centers, deg	-12+/-1; 12+/-1					-12+/-1; 12+/-1	
Horizontal Beamwidth, deg	20±1	19±1	18.5±1	16.3±0.5	16±0.5	19±1	18±1
Beam Crossover, dB	5	6	7	8	8	6	7
Horizontal sidelobe, dB	-17.5	-17	-16.5	-17	-17	-15.5	-17
Front-to-Back Ratio Total Power at 180±30°, dB	30	30	30	30	30	30	30
CPR at Boresight, dB	20	22	20	22	22	20	21
CPR at 7dB beamwidth, dB	14	13	12	12	12	10	10
Beam Tilt, deg	-12+/-1; 12+/-1 fixed					-12+/-1; 12+/-1 fixed	
Vertical Beamwidth, deg	20±1	19±0.7	18.5±0.7	16.5±0.5	16±0.5	23	21
USLS, beampeak to 20° above beampeak, dB	18	18	17	18	18	16	17
Isolation Port to Port, Polarization, dB	26	26	26	26	26	28	28
Isolation Port to Port, Beam, dB	24	24	24	24	24	24	24
PIM, 3 rd Order, 2x20W, dBc	-153					-153	
Max. Power per Port, W (at 40°C)	150					150	
Total power, max, W (at 40°C)	1000					1000	
Connector quantity and type	16 x 4.3-10 female					16 x 4.3-10 female	

ELECTRICAL SPECIFICATIONS, BASTA (2-BEAM CLUSTER)

Frequency, MHz	1695-1880	18500-1990	1920-2170	2300-2400	2490-2690	3300-3700	3700-4000
Gain, by all ports, dBi	16+/-0.5	16+/-0.5	16+/-0.5	16.5+/-0.5	16+/-0.5	15+/-1	15+/-1
VSWR	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	
Number of beams	2					2	
Vertical Coverage, deg	54	54	54	54	54	54	
Horizontal Coverage, deg	27	27	27	27	27	27	
Horizontal Beam Centers, deg	-12+/-1; 12+/-1					-12+/-1; 12+/-1	
Horizontal Beamwidth, deg	20±1	19±1	18.5±1	16.3±0.5	16.5±0.5	19±1	17±1
Beam Crossover, dB	5	6	7	8	8	6	7
Horizontal sidelobe, dB	-17.5	-17	-15.5	-17	-17	-17.5	-16
Front-to-Back Ratio Total Power at 180±30°, dB	30	30	30	30	30	30	30
CPR at Boresight, dB	20	22	20	22	22	20	21
CPR at 7dB beamwidth, dB	14	13	12	12	12	12	10
Beam Tilt, deg	0, fixed					0, fixed	
Vertical Beamwidth, deg	37±1	38±1	38±1	39±1	39±1	23	21
USLS, beampeak to 20° above beampeak, dB	18	18	17	18	18	16	17
Isolation Port to Port, Polarization, dB	30	30	30	30	30	30	30
Isolation Port to Port, Beam, dB	25	25	25	25	25	28	28
PIM, 3 rd Order, 2x20W, dBc	-153					-153	
Max. Power per Port, W (at 40°C)	100					100	
Total power, max, W (at 40°C)	1000					800	
Connector quantity and type	8 x 4.3-10 female					8 x 4.3-10 female	

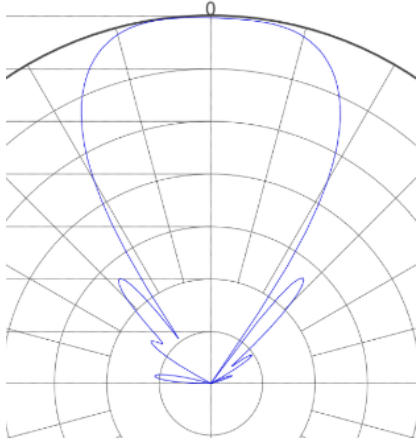
ELECTRICAL SPECIFICATIONS, BASTA (SQUARE BEAM)

Frequency, MHz	1695-1880	1850 - 1990	1920-2170	2300-2400	2490-2690	3300-3700	3700-4000
Gain, by all ports, dBi	12.5+/-0.7	12+/-0.5	12+/-0.5	12+/-0.5	12+/-0.5	11.5+/-1	11+/-1
VSWR	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	
Number of beams	1					1	
Vertical Coverage, deg	54	54	54	54	54	54	
Horizontal Coverage, deg	54	54	54	54	54	54	
Horizontal Beam Centers, deg	0					0	
Horizontal Beamwidth (3dB level), deg	38±2	41±1	41±1	38±1	39±2	42±2	43±3
Horizontal Beamwidth (10dB level), deg	56±1.5	56±2	55±2	54±2	55±1	60±2	57±2
Horizontal sidelobe, dB	-19.5	-19	-19.5	-19	-20	-16	-17
Front-to-Back Ratio Total Power at 180±30°, dB	30	30	30	30	30	30	30
CPR at Boresight, dB	20	22	20	22	22	20	21
CPR at 10dB beamwidth, dB	14	13	12	12	12	12	12
Beam Tilt, deg	0					0	
Vertical Beamwidth (3dB level, deg	38±2	41±1	41±1	38±1	39±2	42±2	43±3
USLS, beampeak to 20° above beampeak, dB	18	18	17	18	18	16	17
Isolation Port to Port, Polarization, dB	30	30	30	30	30	32	32
Isolation Port to Port, interband, dB	35	35	35	35	35	35	35
PIM, 3 rd Order, 2x20W, dBc	-153					-153	
Max. Power per Port, W (at 40°C)	300					300	
Total power, max, W (at 40°C)	1000					1000	
Connector quantity and type	4 x 4.3-10 female					4 x 4.3-10 female	

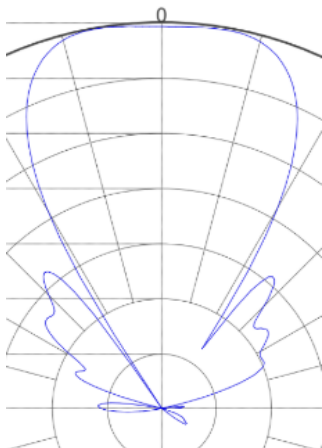
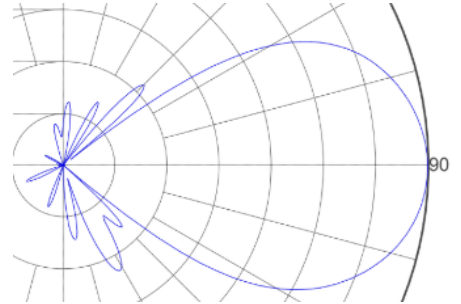
PATTERN RESULTS (H-BAND) SQUARE BEAM

Horizontal Patterns

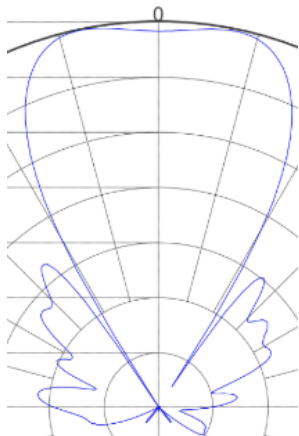
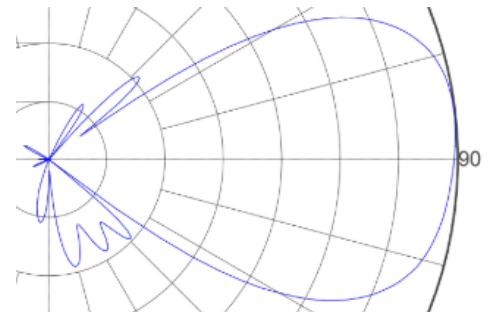
Vertical Patterns



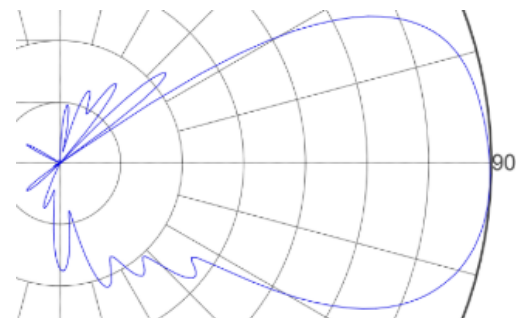
1.80 GHz



1.95 GHz



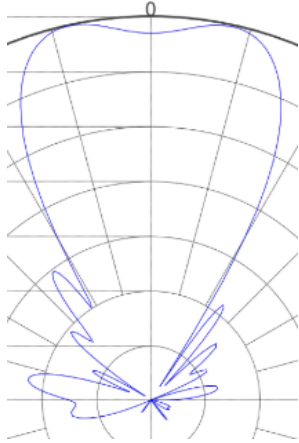
2.1 GHz



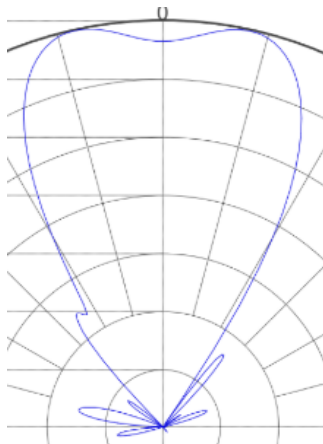
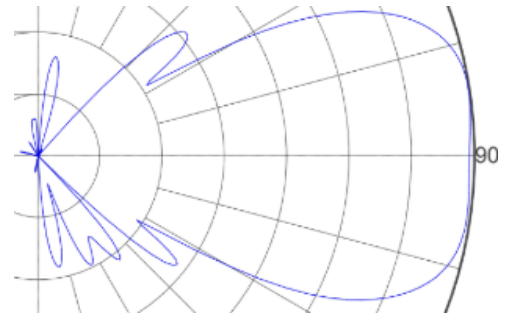
PATTERN RESULTS (H-BAND) SQUARE BEAM

Horizontal Patterns

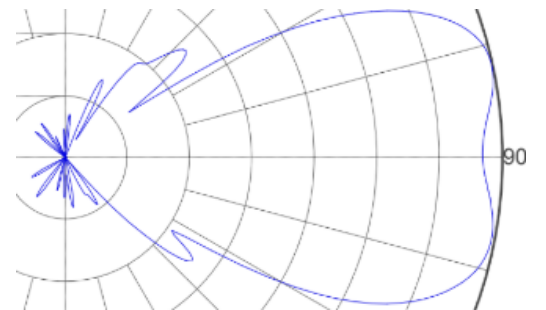
Vertical Patterns



2.36 GHz

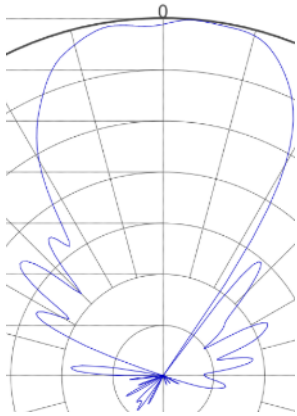


2.59 GHz



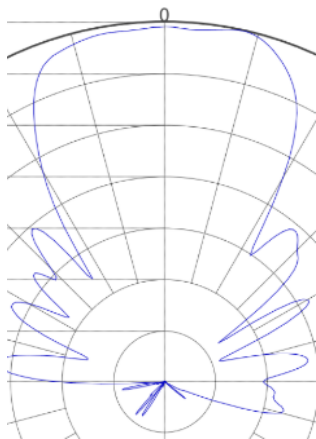
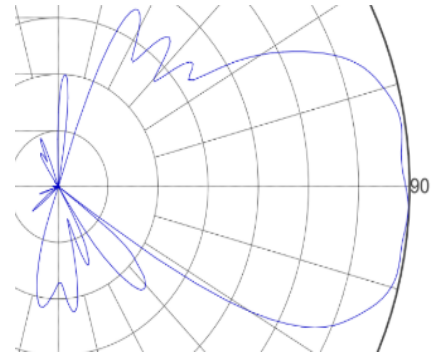
PATTERN RESULTS (F-BAND) SQUARE BEAM

Horizontal Patterns

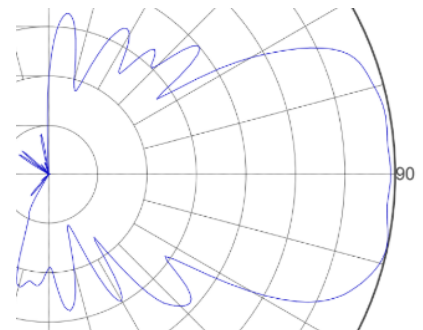


3.5 GHz

Vertical Patterns



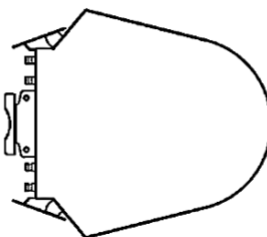
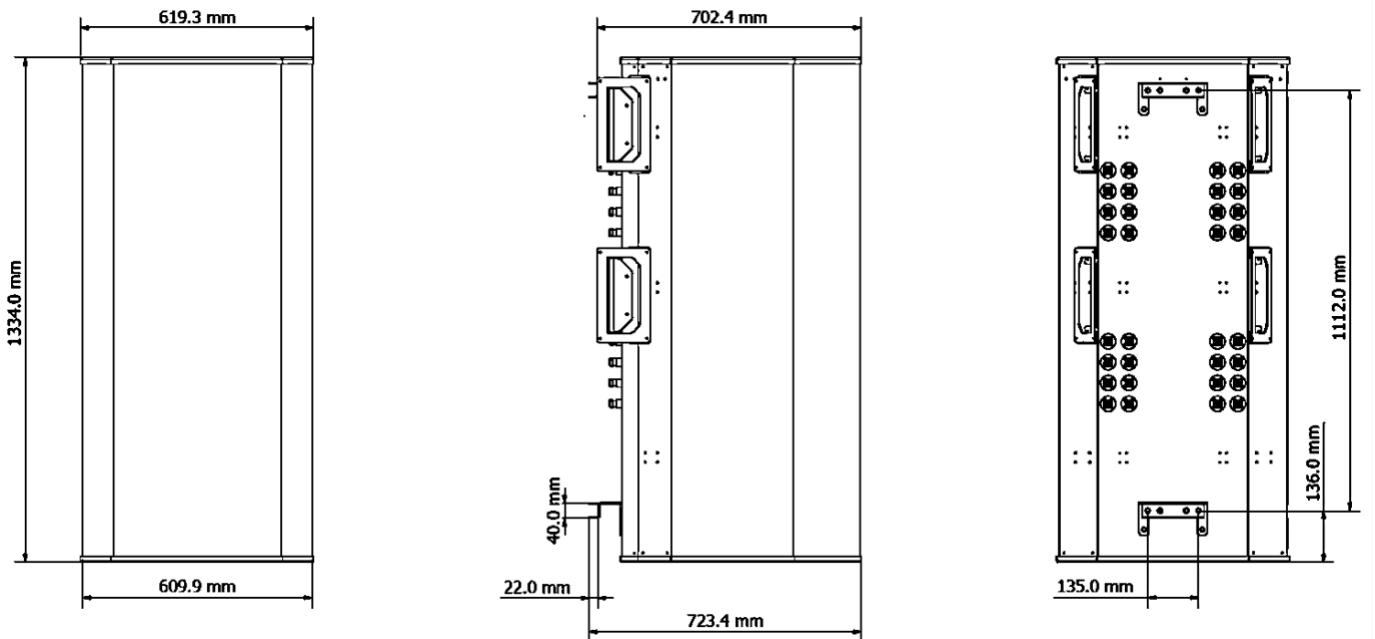
3.9 GHz



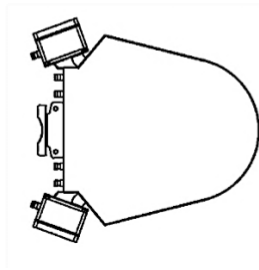
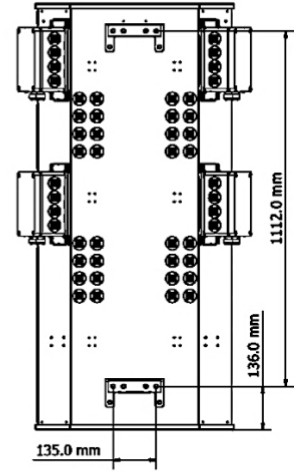
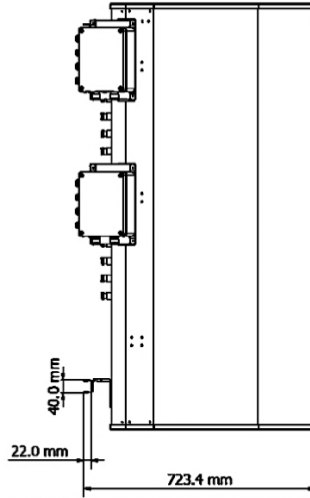
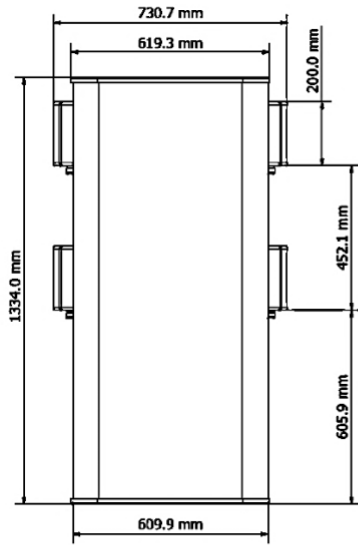
MECHANICAL SPECIFICATIONS

ANTENNA WEIGHT (WITHOUT BRACKET) – 4 BEAM CLUSTER	88lbs	40kg
ANTENNA WEIGHT (WITHOUT BRACKET) – 2 BEAM CLUSTER	101.2lbs	46kg
ANTENNA WEIGHT (WITHOUT BRACKET) – 1 SQUARE BEAM	101.2lbs	46kg
ANTENNA WEIGHT (WITH BRACKET) – 4 BEAM CLUSTER	91.48lbs	41.58kg
HEIGHT	52.5 in	133.4 cm
WIDTH	24.3 in	61.9 cm
DEPTH	25.2 in	64.1 cm
RADOM MATERIAL	Fiberglass	
RADOM COLOR	RAL 7005	
WIND LOADING @150KM/HR FRONTAL	TBD	
WIND LOADING @150KM/HR LATERAL	TBD	
WIND LOADING @150KM/HR REAR	TBD	

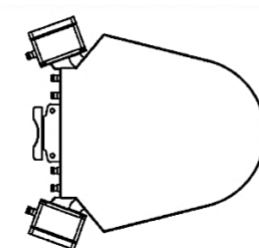
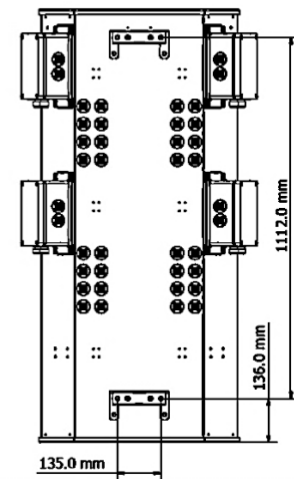
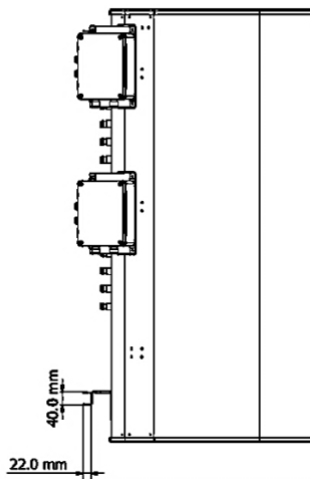
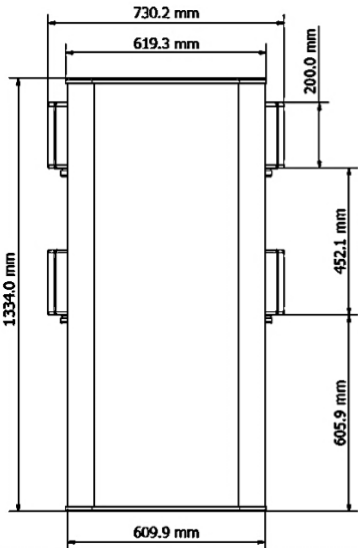
Standard Version



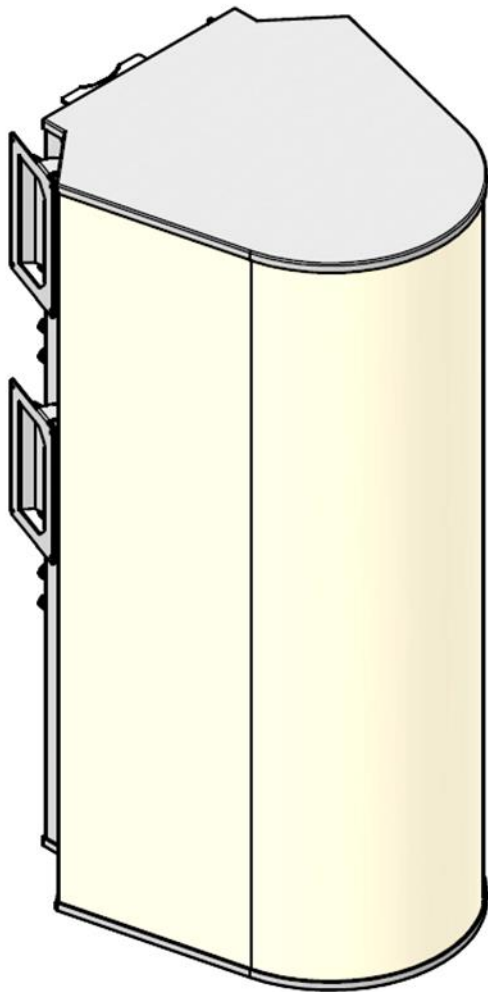
2C (2 Sector Beam Combination)



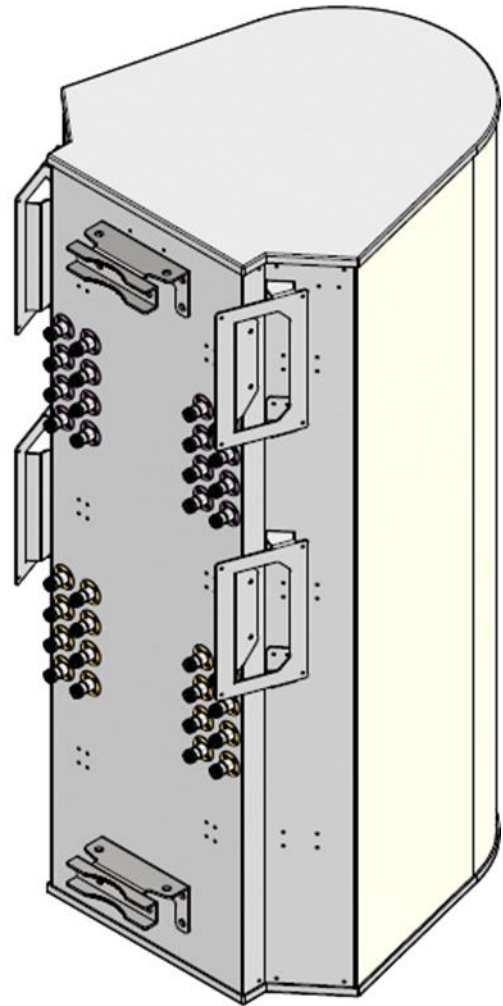
4C (4 Sector Beam Combination)



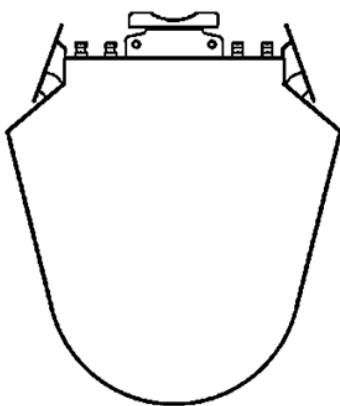
Standard Version



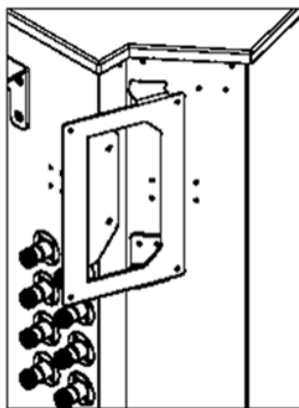
Antenna Front View



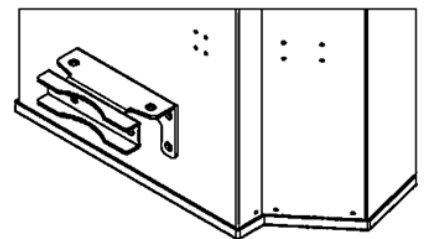
Antenna Rear View



Antenna Top View

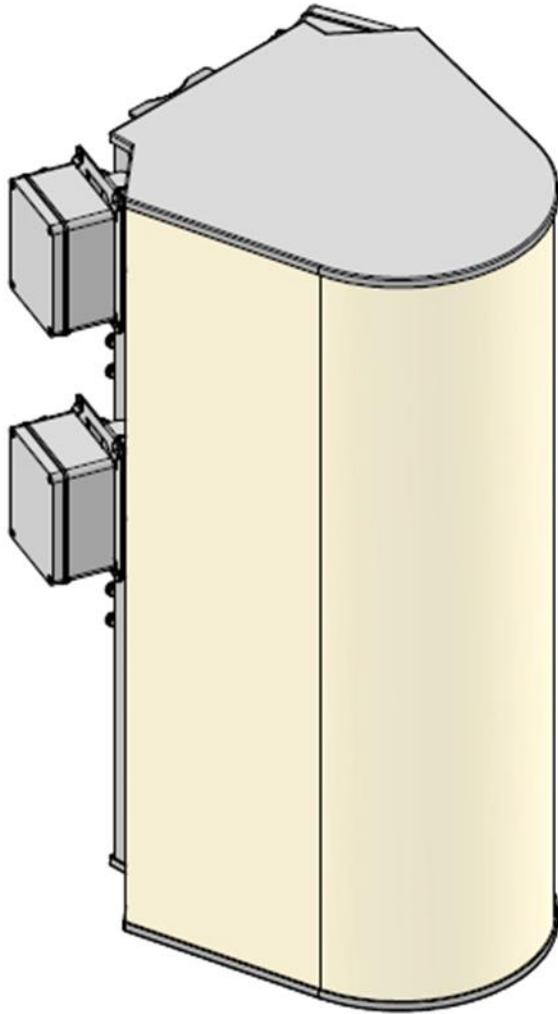


Splitter Box Position

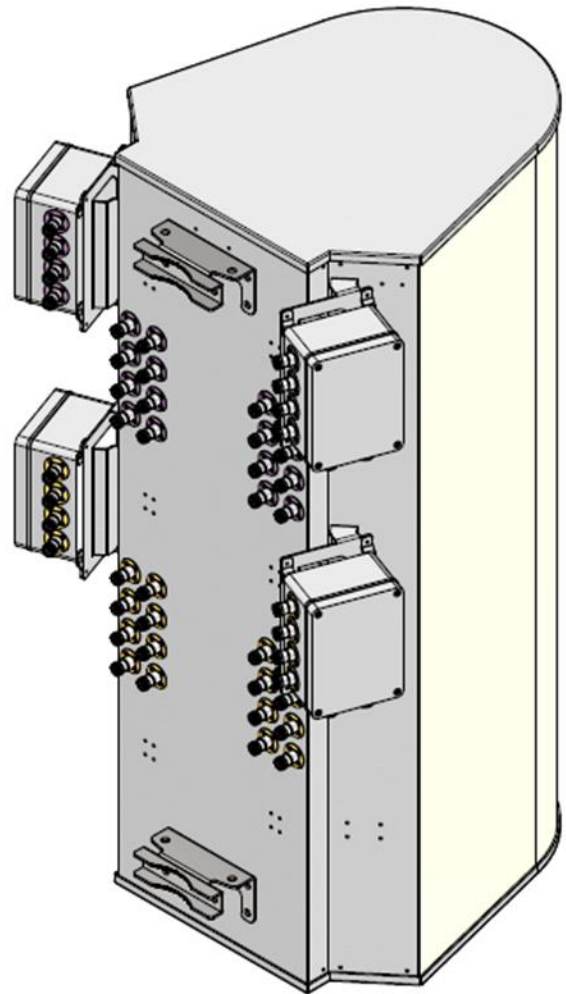


Mounting Detail

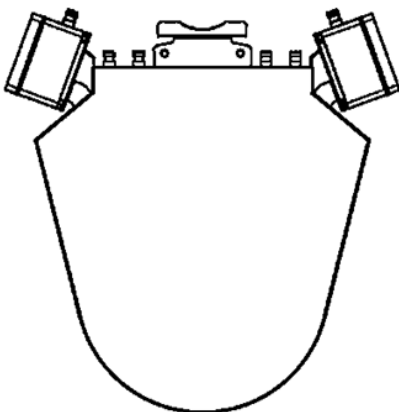
2C (2 Sector Beam Combination)



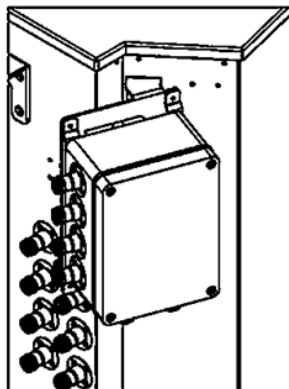
Antenna Front View



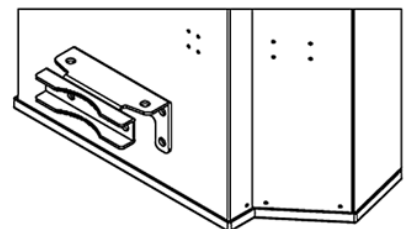
Antenna Rear View



Antenna Top View

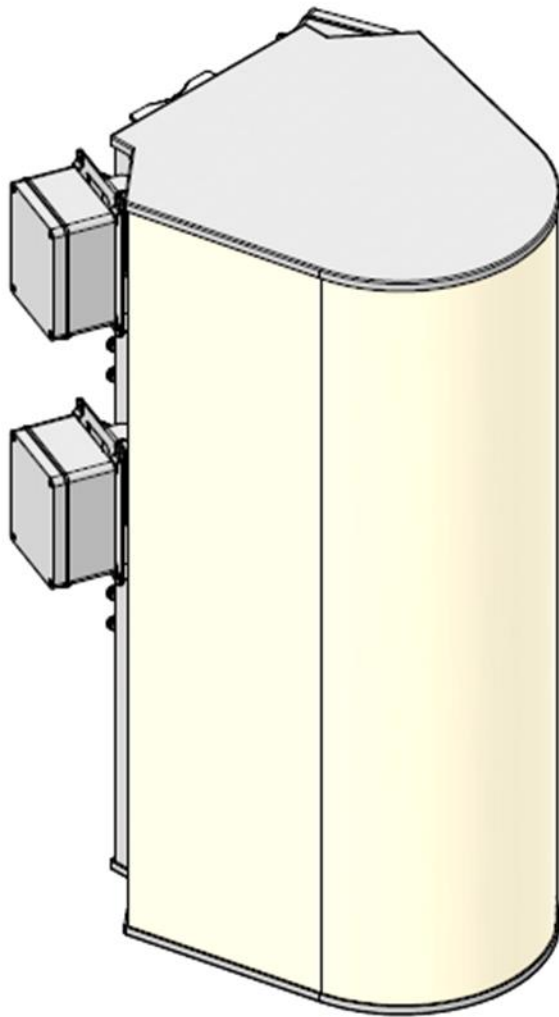


Splitter Box Position

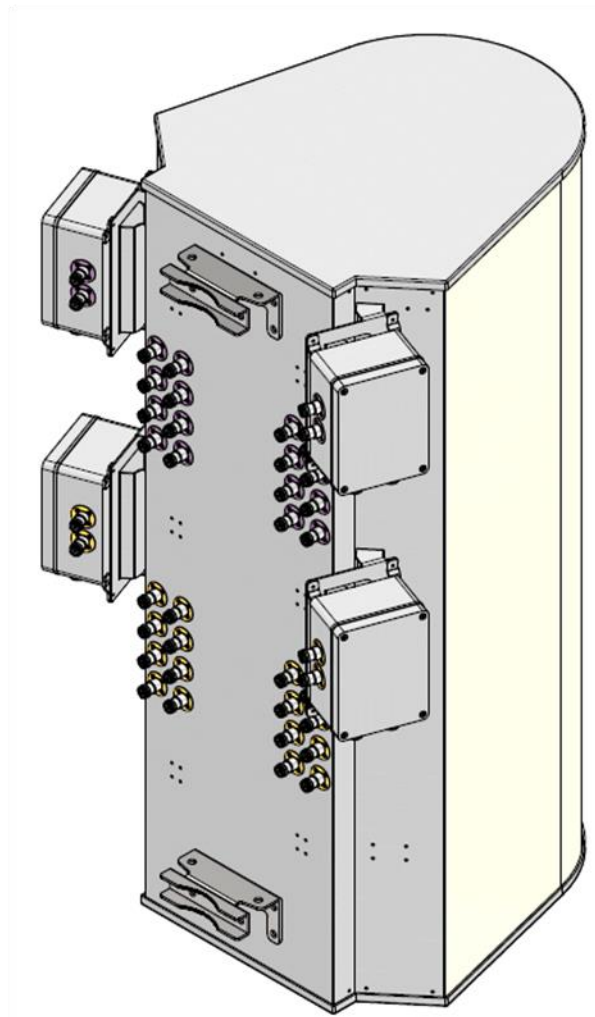


Mounting Detail

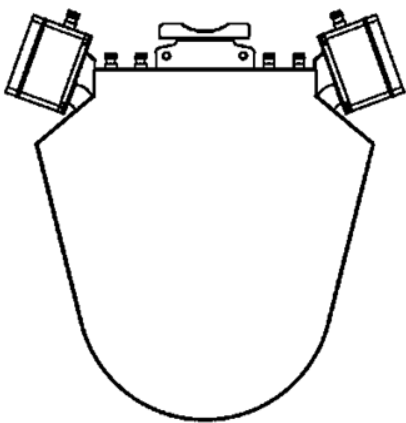
4C (4 Sector Beam Combination)



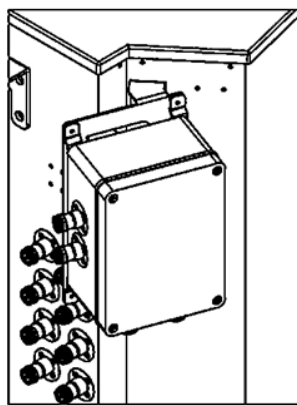
Antenna Front View



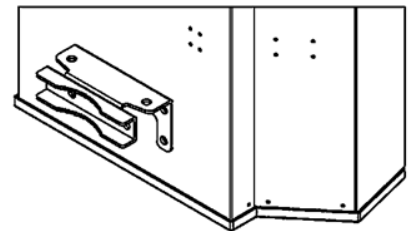
Antenna Rear View



Antenna Top View



Splitter Box Position

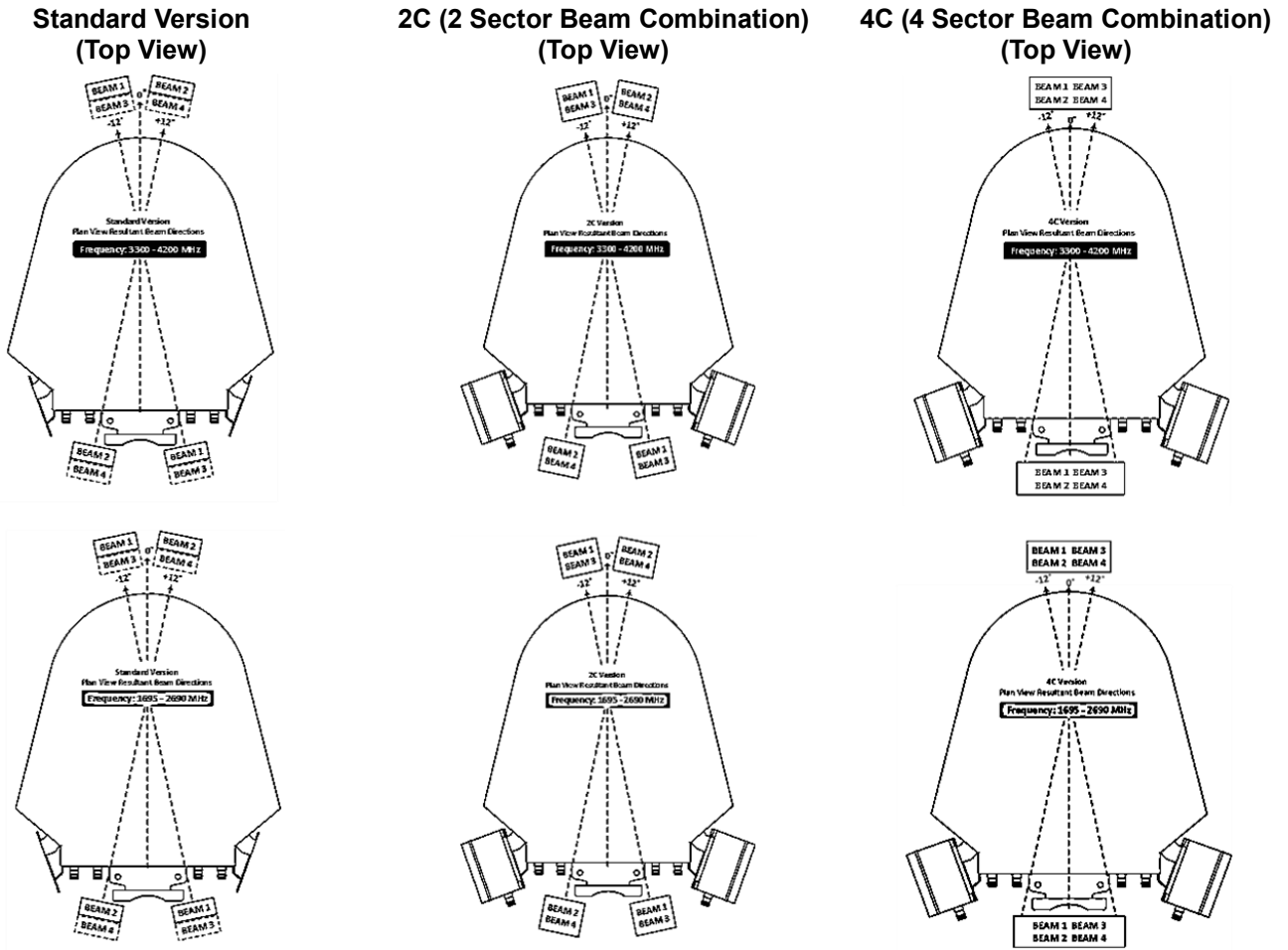


Mounting Detail

ENVIRONMENTAL RATINGS

HUMIDITY	95% RH @ +30°C
TEMPERATURE	-40°C to +70°C

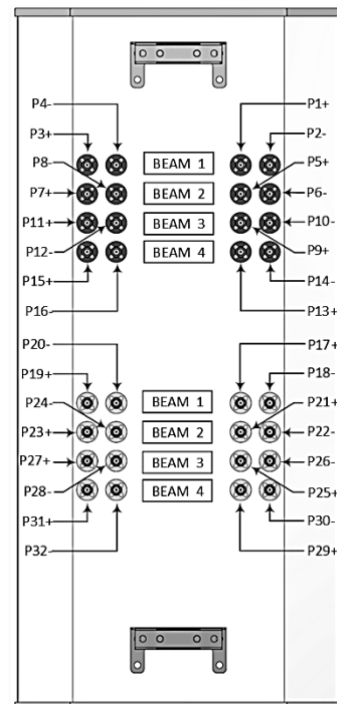
BEAM, PORT, RF CONNECTOR & RET LAYOUT



Standard Version (Connector Layout)

MS-SQ-4.4-F4-H4

REAR VIEW CONNECTOR LAYOUT



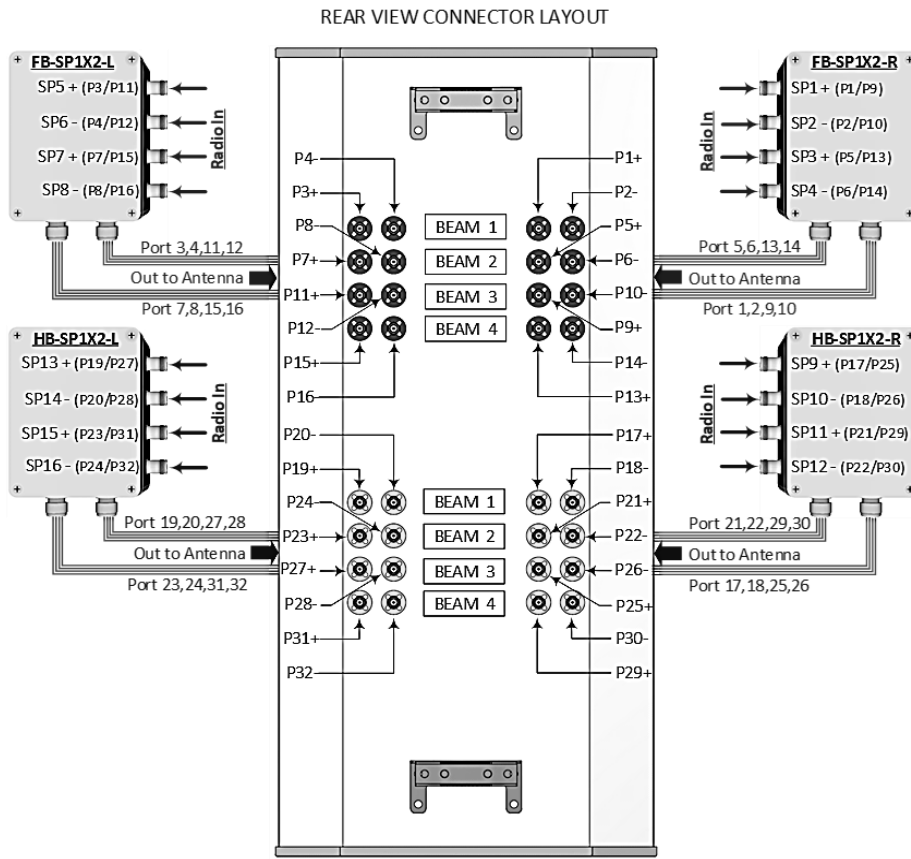
Connector Port Table

BEAM 1			
Port 3 (+45°)	Port 4 (-45°)	Port 2 (-45°)	Port 1 (+45°)
BEAM 2			
Port 7 (+45°)	Port 8 (-45°)	Port 5 (+45°)	Port 6 (-45°)
BEAM 3			
Port 11 (+45°)	Port 12 (-45°)	Port 9 (+45°)	Port 10 (-45°)
BEAM 4			
Port 15 (+45°)	Port 16 (-45°)	Port 13 (+45°)	Port 14 (-45°)

BEAM 1			
Port 19 (+45°)	Port 20 (-45°)	Port 17 (+45°)	Port 18 (-45°)
BEAM 2			
Port 23 (+45°)	Port 24 (-45°)	Port 21 (+45°)	Port 22 (-45°)
BEAM 3			
Port 27 (+45°)	Port 28 (-45°)	Port 25 (+45°)	Port 26 (-45°)
BEAM 4			
Port 31 (+45°)	Port 32 (-45°)	Port 29 (+45°)	Port 30 (-45°)

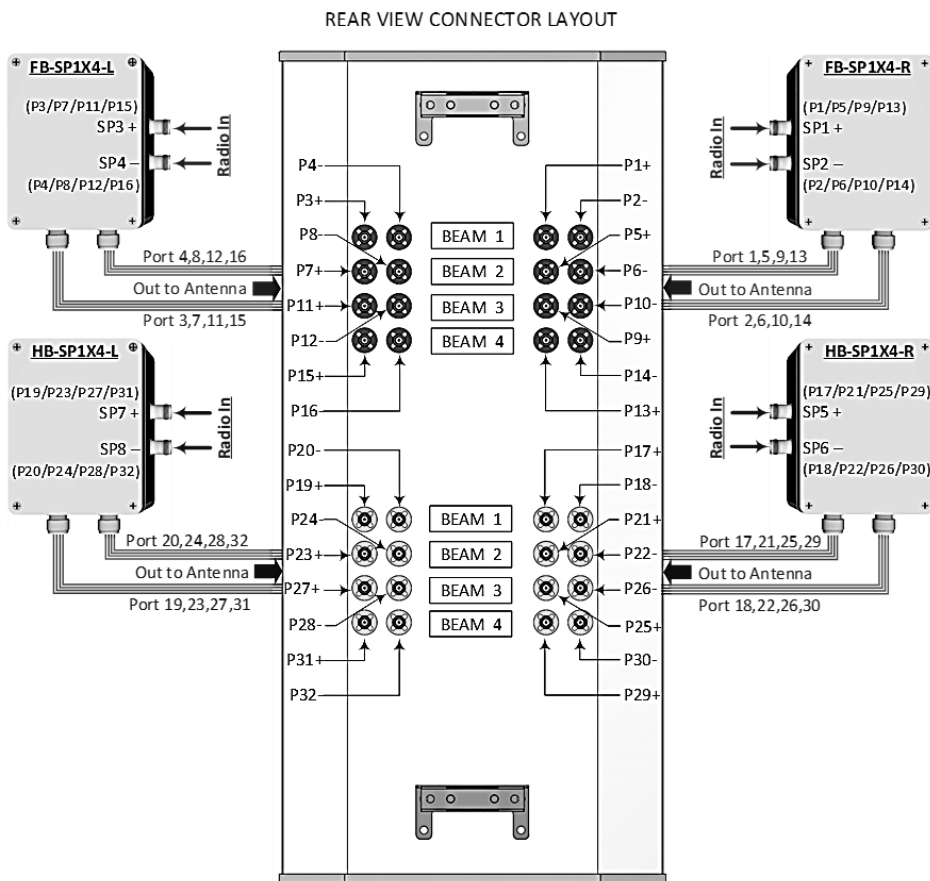
2C (2 Sector Beam Combination) - Connector Layout

MS-SQ-4.4-F4-H4 (2C)



4C (4 Sector Beam Combination) - Connector Layout

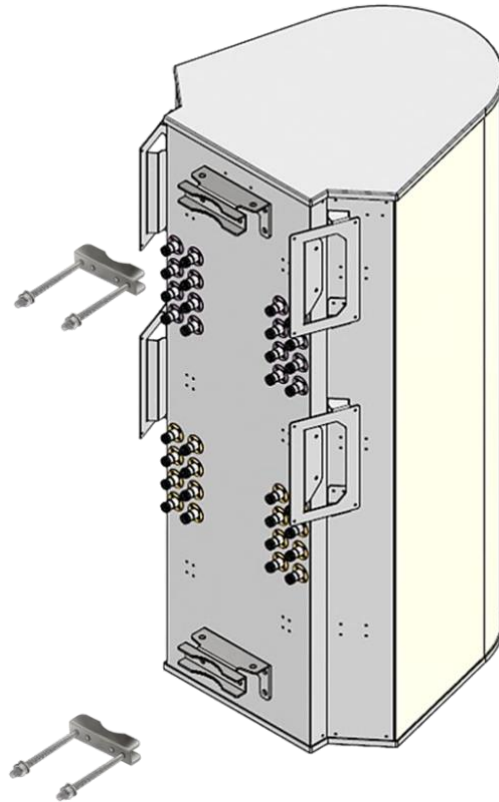
MS-SQ-4.4-F4-H4 (4C)



MOUNTING

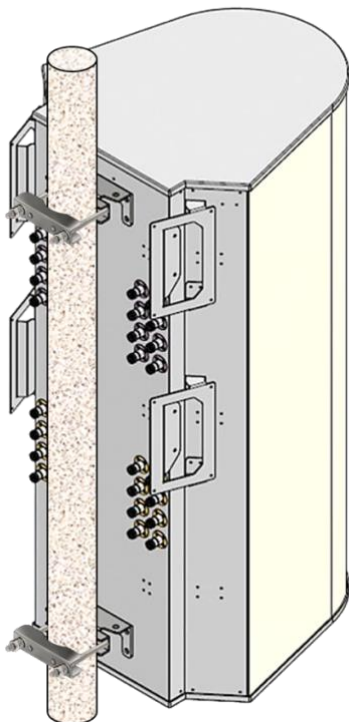
COMPATIBLE PIPE DIAMETER	2.4 – 4.5 in	6.1 – 11.4 cm
BRACKET WEIGHT	3.48 lb.	1.58 kg

Before Installation

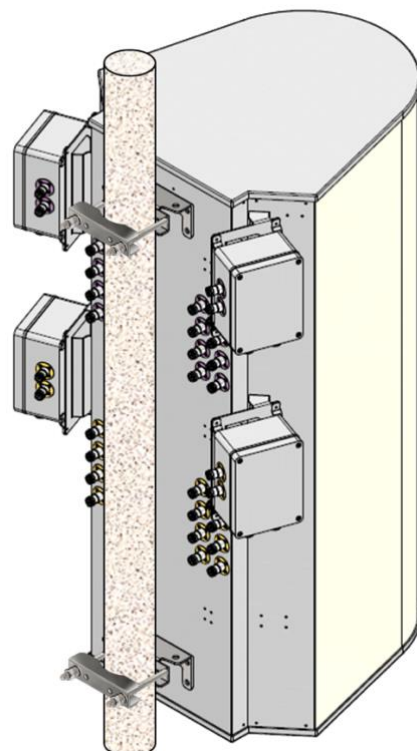


After Installation

Standard Version



**2C (2 Sector Beam Combination) or
4C (4 Sector Beam Combination)**



REVISION HISTORY

DATE	DOCUMENT	
08/30/2025	Initial BASTA Datasheet Released	