

S-HU2L4PX10.10.12P-2C

X Pol Panel TD Antenna 2300–2690MHz 90° 16dBi 2° –12° Replaceable RET

XXXXXX Pol 2×698–960/4×1710–2690MHz 65° /65° 16/18dBi 2° –12° /2° –12° Replaceable RET

General Electrical Properties

General Parameters	Frequency Range (MHz) :	2300-2690(Y5)	
		2300-2500	2500-2690
	Polarization:	±45	
	Electrical Downtilt (°) :	2-12, continuously adjustable	
	Lightning Grounding:	DC Grounded	
Calibration and Electrical Parameters	Connector Type:	1xMQ5,1xMQ4	
	Coupling Factor between calibration port and each antenna port (dB) :	-26±2	
	Max Amp/Phase Deviation:	<1.2dB/12°	
	VSWR :	<1.5	
	Max. Power Per Port (W):	150	
	Intraband Isolation (dB):	>20	
	Interband Isolation (dB):	>20	

Beamforming Electrical Properties

Radiation parameters	Single Column	Frequency Range (MHz) :	2300-2690(Y5)	
			2300-2500	2500-2690
		Horizontal 3dB Beamwidth (°):	90±15	80±15
		Vertical 3dB Beamwidth (°):	6.5±0.5	6.0±0.5
		Front to Back Ratio (dB):	>25	>23
		Gain (dBi):	15.3±0.5	15.8±0.7
		Cross Polar Ratio 0° (dB):	>15 (0°)	>15 (0°)
		Cross Polar Ratio ±60° (dB):	>5 (±60°)	>4 (±60°)
	Broadcast Beam	Horizontal 3dB Beamwidth (°):	65±10	60±10
		Gain (dBi):	16.7±0.5	17±0.5
		Front to Back Ratio (dB):	25	25
		Vertical 3dB Beamwidth (°):	6.5±0.5	6.0±0.5
		Cross Polar Ratio 0° (dB):	>15 (0°)	>15 (0°)
		First upper Side lobe suppression	>14	>14
	Service Beam @ 0deg	Gain (dBi):	19.5±0.5	20±0.5
		Horizontal 3dB Beamwidth (°):	25	25
		Cross polar ratio (0°) (dB):	18	18
		Front to Back Ratio (dB):	25	25

Electrical Specifications (698-960/1710-2690 MHz)

Frequency Range (MHz) :	698-960(R1,R2)			1710-2690(Y2,Y3)			1710-2690(Y1,Y4)		
	698-806	806-880	880-960	1710-2170	2300-2490	2490-2690	1710-2170	2300-2490	2490-2690
Gain (dBi) :	15.3 ±0.6	15.7 ±0.5	15.4 ±0.7	16.3 ±0.8	17.0 ±0.8	17.6 ±0.8	16.6 ±0.7	17.0 ±0.8	17.6 ±0.8
Return Loss (dB) :	>14 (VSWR<1.5)								
Polarization:	±45°								
Horizontal 3dB Beamwidth (°):	58	56	57	69	65	61	68	68	60

S-HU2L4PX10.10.12P-2C

Vertical 3dB Beamwidth (°):	8.8	7.8	7.1	6.0	4.9	4.3	6.0	4.9	4.3
Electrical Downtilt (°):	2-12 Independently Continuously Adjustable								
RET Type:	Cascade SRET, AISG 2.0, Upgradeable								
1 st Upper Sidelobe Suppression (dB):	13	15	15	16	15	14	16	15	14
Intraband Isolation (dB):	>25								
Interband Isolation (dB):	>25								
Max. Power Per Port (W):	250			200					
Intermodulation IM3 (dBc):	<-150(2×43 dBm)								
Impedance (ohm):	50								
Lightning Protection:	DC Grounded								
Connector Type:	12×4.3-10 Female								

BASTA Electrical Specifications

Frequency Range(MHz):	2300-2690(Y5)		698-960(R1,R2)		
	2300-2500	2500-2690	698-806	806-880	880-960
Average Gain by Beam Tilts (dBi):	15.1	15.6	15.2	15.7	15.3
Gain by all Beam Tilts Tolerance(dB):	±0.6	±0.8	±0.5	±0.5	±0.7
Average Gain by Beam Tilts (dBi):	2° 15.1	2° 15.7	2° 15.2	2° 15.6	2° 15.3
	7° 15.3	7° 15.9	7° 15.3	7° 15.8	7° 15.5
	12° 15.2	12° 15.6	12° 15.2	12° 15.6	12° 15.3
Horizontal Beamwidth Tolerance(°):	±11	±17	±5.8	±4.8	±8.4
Vertical Beamwidth Tolerance(°):	±0.4	±0.4	±0.6	±0.5	±0.5
Upper Side Lobe Suppression, Peak to 20°(dB):	13.5	12.9	13.4	16.4	16.7
Front to back Total Power at 180° ± 30°(dB)	25.3	23.6	21.7	21.8	21.3
CPR at Boresight(dB):	16.0	15.1	17.2	19.7	17.4

BASTA Electrical Specifications

Frequency Range(MHz):	1710-2690(Y2,Y3)			1710-2690(Y1,Y4)		
	1710-2170	2300-2490	2490-2690	1710-2170	2300-2490	2490-2690
Average Gain by Beam Tilts (dBi):	16.1	16.9	17.3	16.5	16.7	17.2
Gain by all Beam Tilts Tolerance(dB):	±0.7	±0.6	±0.8	±0.7	±0.7	±0.8
Average Gain by Beam Tilts (dBi):	2° 16.2	2° 16.7	2° 17.6	2° 16.6	2° 16.5	2° 17.5
	7° 16.3	7° 17.0	7° 17.6	7° 16.7	7° 17.0	7° 17.6
	12° 15.8	12° 16.8	12° 16.6	12° 16.5	12° 16.6	12° 17.2
Horizontal Beamwidth Tolerance(°):	±9	±6	±7.5	±8	±4.6	±8.4
Vertical Beamwidth Tolerance(°):	±0.6	±0.5	±0.4	±0.7	±0.5	±0.4
Upper Side Lobe Suppression, Peak to 20°(dB):	16.1	15.4	13.7	16.7	15.5	14.9
Front to back Total Power at 180° ± 30°(dB)	25.0	26.5	26.4	26.5	26.0	25.7
CPR at Boresight(dB):	16.5	17.7	18.1	21.7	18.7	20.8

S-HU2L4PX10.10.12P-2C**Mechanical Data**

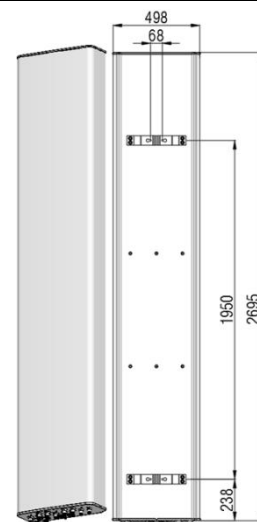
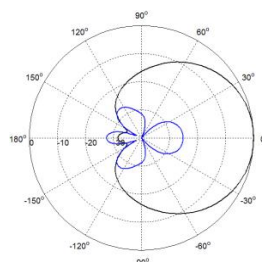
Antenna Dimensions (mm):	2695×498×197
Packing Dimensions (mm):	2915×585×290
Antenna Net Weight/Bracket (kg):	49/5.7
Antenna Gross Weight (kg):	63
Radome Material:	Fiberglass
Pipe OD (mm):	70-115
Mounting Kits (Included):	BA.K.04.00069471, Adjustable Downtilt0-8(0°-8°in 1°steps)

Environmental Ratings

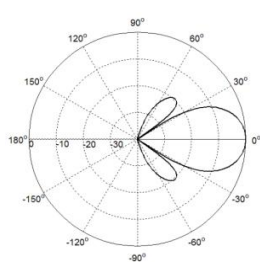
Humidity:	95%RH@+30℃
Temperature (℃):	-40~+70
Wind Load @150 km/h (N):	Frontal/Lateral/Rearside:1763/324/1788
Max.Wind velocity(km/h):	200

Internal RET Specifications

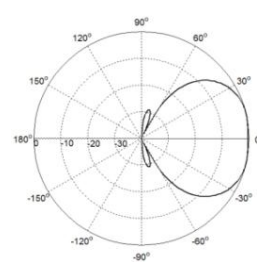
RET Type:	Replaceable RET
RET protocol:	AISG 2.0 /3 GPP
Input voltage range(V):	10-30 DC
Power consumption(W):	< 5 (motor activated ,single RET) < 1 (stand by, single RET), < 1.5 (stand by, 12V)
Adjustment time (full range) (s):	< 120 (typically, depending on antenna type)
RET connector:	1 pair of AISG 5 pin male & female
Pin assignment according AISG:	8 pin circular connector conforming to IEC 60130-9 - Ed. 3.0
Lightning protection (kA):	5 (8/20 μs Differential mode), 8 (8/20 μs Common mode)

**Typical Patterns**

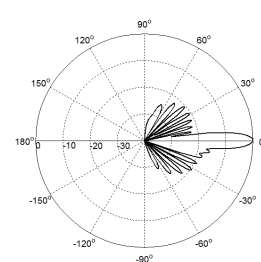
Single Column



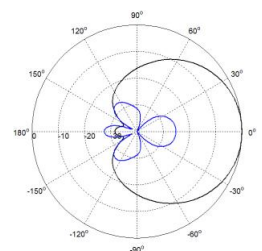
Service Beam @0deg



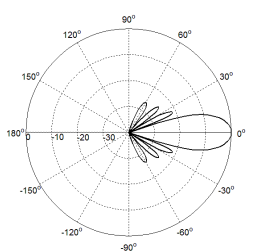
Broadcast Beam



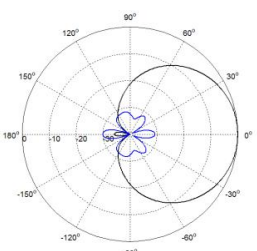
Elevation



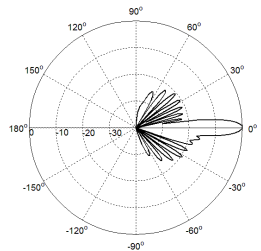
Azimuth(698-960MHz)



Elevation(698-960MHz)



Azimuth(1710-2690MHz)



Elevation(1710-2690MHz)

S-HU2L4PX10.10.12P-2C

Bottom View



Correlation Table

Frequency range	Array	Connector	RET S/N
698– 960 MHz	R1	1-2	BRxxx.....1R1
698– 960 MHz	R2	3-4	BRxxx.....2R2
1710–2690 MHz	Y1	5-6	BRxxx.....3Y1
1710–2690 MHz	Y2	7-8	BRxxx.....4Y2
1710–2690 MHz	Y3	9-10	BRxxx.....5Y3
1710–2690 MHz	Y4	11-12	BRxxx.....6Y4
2300-2690 MHz	Y5	1xMQ5,1xMQ4	BRxxx.....7Y5

