

S-HU2L2PX10.10.12P-DH2-2C

X Pol Panel TD Antenna 2300–2690MHz 65° 15.5dBi 2° -12° Replaceable RET

XXXXXX Pol Panel Antenna 2×698–960/2×1710–2170/2×2490–2690MHz 65° /65° /65°
16/16/16.5dBi 2° -12° /2° -12° /2° -12° Replaceable RET

General Electrical Properties			
General Parameters	Frequency Range (MHz)	2300-2690(Y3)	
		2300-2500	2500-2690
	Polarization		±45°
	Electrical Downtilt (°)		2-12, continuously adjustable
Calibration and Electrical Parameters	Lightning Grounding		DC Grounded
	Coupling Factor between calibration port and each antenna port (dB)		-26±2
	Max Amp/Phase Deviation:		≤1.2/12°
	VSWR:		≤1.5
	Co- polarization Isolation between ports (dB):		≥20
	Cross-polarization Isolation Between Ports (dB)		≥20
	Avg. power per input(W)		≥150
Connector Type:		1xMQ5,1xMQ4	

Beamforming Electrical Properties				
Radiation parameters	Frequency Range (MHz)		2300-2690(Y3)	
			2300-2500	2500-2690
	Single Column	Horizontal 3dB Beamwidth (°):	72.3	69.2
		Gain(dBi):	15.5	15.5
		Vertical 3dB Beamwidth (°):	6.5	6.2
		Cross Polar Ratio 0° (dB):	≥15	≥15
		Front to Back Ratio (dB):	≥25	≥25
		First upper Side lobe suppression (dB)	≥13	≥14
	Broadcast Beam	Horizontal 3dB Beamwidth (°):	65±10	65±10
		Gain(dBi):	16.5±1.0	16.5±1.0
		Vertical 3dB Beamwidth (°):	6.5	6.2
		Cross Polar Ratio 0° (dB):	≥15	≥15
		Cross Polar Ratio ±60° (dB):	≥5	≥5
		Front to Back Ratio (dB):	≥27	≥25
		First upper Side lobe suppression (dB)	≥14	≥14
	Service Beam @ 0deg	Gain(dBi):	21±0.5	20.8±0.7
		Horizontal 3dB Beamwidth (°):	20.5	19.3
		Front to Back Ratio (dB):	≥30	≥28

BASTA Electrical Specifications

Frequency Range(MHz):	2300-2690(Y3)	
	2300-2500	2500-2690
Average Gain by all Beam Tilts (dBi):	15.2	15.1
Gain by all Beam Tilts Tolerance(dB):	±0.6	±0.9
Average Gain by Beam Tilt (dBi):	2° 15.0	2° 14.8
	7° 15.5	7° 15.5
	12° 15.1	12° 15.0
Horizontal Beamwidth Tolerance(°):	±7.0	±7.5
Vertical Beamwidth Tolerance(°):	±0.5	±0.5

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1st Upper Sidelobe Suppression (dB) :	13.0	14.0
Total Power at 180° ± 30°(dB):	27	27
CPR at Boresight(dB):	15	15

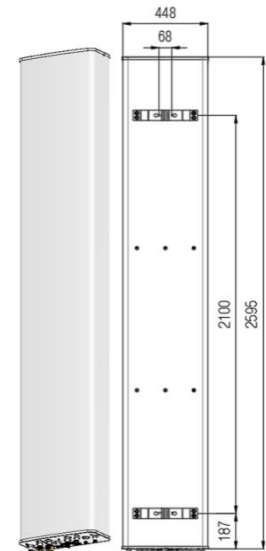
Frequency Range (MHz):	698-960(R1,R2)			1710-2170(B1,B2)			2490-2690
	698-790	790-880	880-960	1710-1880	1880-2025	2025-2170	(Y1,Y2)
Gain (dBi):	14.4±0.5	15.1±0.5	15.6±0.7	16.4±0.5	16.6±0.5	16.4±0.5	16.4±0.7
Return Loss (dB):	>14 (VSWR<1.5)						
Polarization:	±45°						
Horizontal 3dB Beamwidth (°):	69	65	59	58	58	57	58
Vertical 3dB Beamwidth (°):	9.5	8.4	7.7	6.6	6.1	5.8	4.6
Electrical Downtilt (°):	2-12 Independently Continuously Adjustable						
Intraband Isolation (dB):	>25						
Interband Isolation (dB):	>25						
Intermodulation IM3 (dBc):	250			200			
Impedance (ohm):	<-150						
Lightning Protection:	50						
Connector Type:	DC Grounded						
Intermodulation IM3 (dBc):	12×4.3-10 Female						

BASTA Electrical Specifications

Frequency Range(MHz):	698-960(R1,R2)			1710-2170(B1,B2)			2490-2690
	698-790	790-880	880-960	1710-1880	1880-2025	2025-2170	(Y1,Y2)
Average Gain by all Beam Tilts(dBi):	14.4	14.9	15.3	16.2	16.4	16.1	16.0
Gain by all Beam Tilts Tolerance(dB):	±0.6	±0.6	±0.7	±0.8	±0.5	±0.7	±0.8
Average Gain by Beam Tilts (dBi):	2° 14.4	2° 15.0	2° 15.4	2° 16.2	2° 16.5	2° 16.1	2° 16.1
	7° 14.4	7° 15.1	7° 15.5	7° 16.4	7° 16.6	7° 16.3	7° 16.4
	12° 14.3	12° 14.7	12° 14.9	12° 16.0	12° 16.0	12° 15.9	12° 15.5
Horizontal Beamwidth Tolerance(°):	±6.0	±6.5	±9.1	±5.6	±3.0	±3.5	±7
Vertical Beamwidth Tolerance(°):	±1.0	±0.8	±0.8	±0.6	±0.5	±0.7	±0.5
1 st Upper Sidelobe Suppression(dB):	15	13	13	14	16	16	12
Front to back Total Power at 180° ± 30°(dB)	20	22	21	26	27	26	25
CPR at Boresight(dB):	20	18	18	20	19	17	16
CPR at Sector(dB):	11	10	9	10	10	9	3

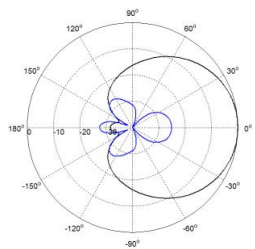
Mechanical Data

Antenna Dimensions (mm):	2595×448×200
Packing Dimensions (mm):	2855×535×295
Antenna Net Weight/Bracket (kg):	46.5 / 5.9
Antenna Gross Weight (kg):	59
Radome Material:	FRP
Pipe OD (mm):	50-115
Mounting Kits (Included):	BA.K.04.00069091, Adjustable Downtilt 0°-10°
Humidity:	95%RH@+30℃
Temperature (℃):	-40~+70
Wind Load @150 km/h (N):	Frontal/Lateral/Rearside: 1515 /373/ 1638
Max. Wind velocity(km/h):	200

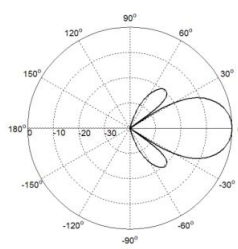


S-HU2L2PX10.10.12P-DH2-2C**Internal RET Specifications**

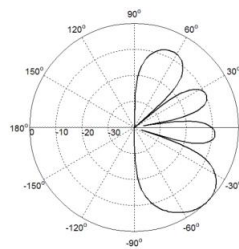
RET type:	Replaceable RET
RET protocol:	AISG2.0 /3GPP
Input voltage range(V):	10-30 DC
Power consumption(W):	< 5 (motor activated , single RET) < 1 (stand by, single RET), < 1.5 (stand by, 12V)
Adjustment time (full range) (s):	< 120 (typically, depending on antenna type)
RET connector:	1 pair of AISG 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 μ s Differential mode), 8 (8/20 μ s Common mode)

Typical Patterns

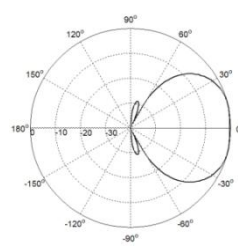
Single Column



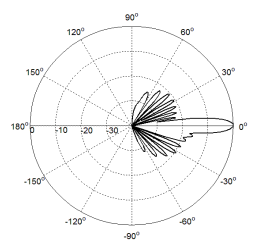
Service Beam @0deg



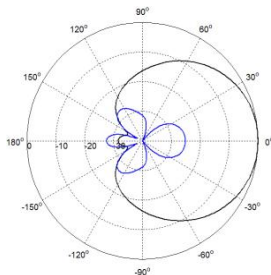
Service Beam @60deg



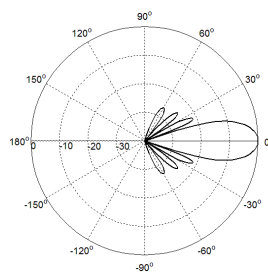
Broadcast Beam



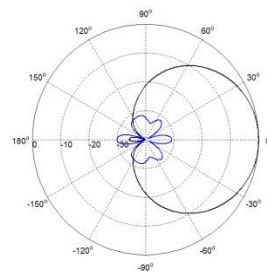
Elevation



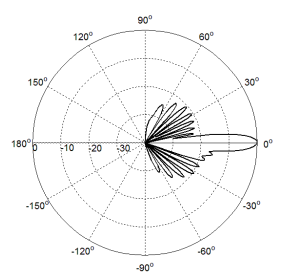
Azimuth(698-960MHz)



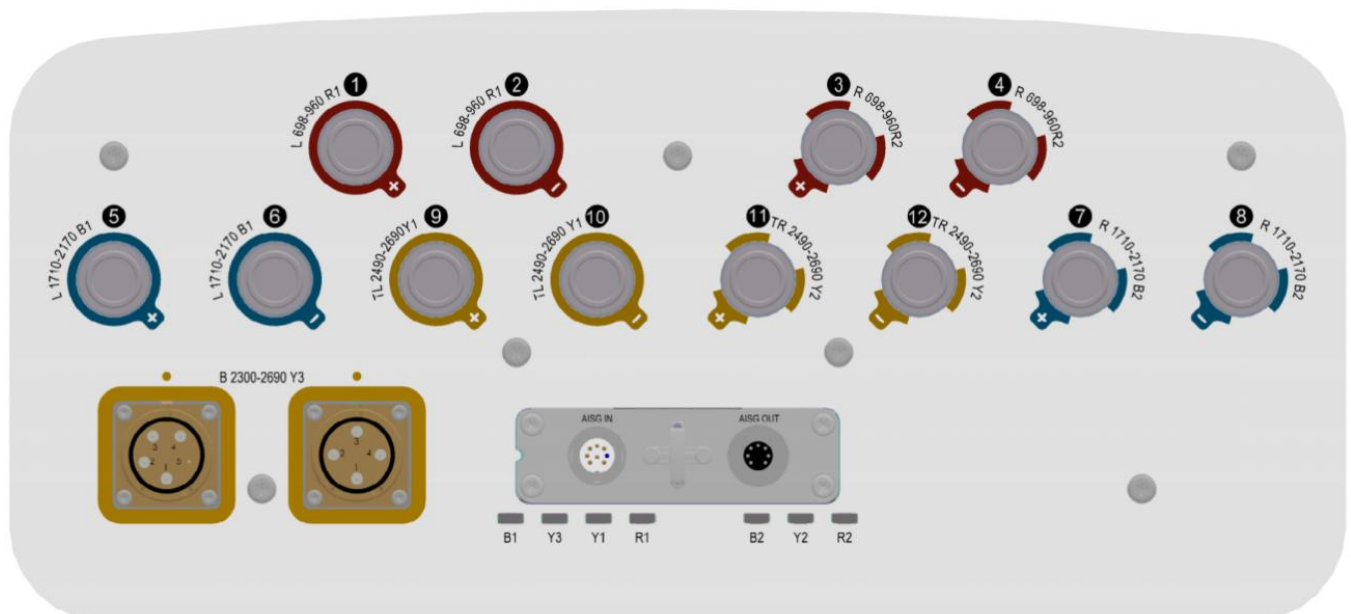
Elevation(698-960MHz)



Azimuth(1710-2690MHz)

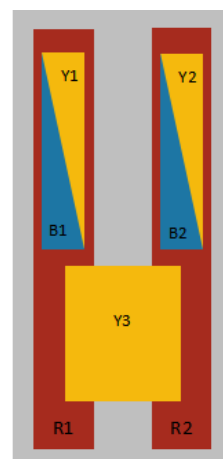


Elevation(1710-2690MHz)

Bottom View

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Frequency range	Array	Connector	RET S/N
698–960 MHz	R1	1-2	BRxxx.....1R1
698–960 MHz	R2	3-4	BRxxx.....2R2
1710–2170 MHz	B1	5-6	BRxxx.....3B1
1710–2170 MHz	B2	7-8	BRxxx.....4B2
2490–2690 MHz	Y1	9-10	BRxxx.....5Y1
2490–2690 MHz	Y2	11-12	BRxxx.....6Y2
2300–2690 MHz	Y3	1xMQ5,1xMQ4	BRxxx.....7Y3



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Broadcast Beam Weight Value for Reference

		MQ5-1/ MQ4-5	MQ5-2/ MQ4-6	MQ5-3/ MQ4-7	MQ5-4/ MQ4-8
2C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	171	0	-4
3C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	174	0	-1
4C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	177	0	2
5C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	180	0	5
6C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-177	0	8
7C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-174	0	11
8C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-171	0	14
9C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-168	0	17
10C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-165	0	20
11C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-162	0	23
12C(2300-2690MHz)	Amp[li]	0.26	0.55	1	1
	Phase	0	-159	0	26