Product Data Sheet

S-HU2L6PX10.10.11P2-DL2H2-2C

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

XXXXXXXXXXXX Pol 2×698-862/2×880-960/4×1710-2690/2×1710-2170/2×2490-2690MHz 65° /65° /65° /65° /65° 15/15.5/17.5/16.5/17dBi 2° -12° Replaceable RET

General Electrical Properties			
General Parameters	Frequency Range (MHz) :	2300-2690(Y7)	
		2300-2500	2500-2690
	Polarization:	±45	
	Electrical Downtilt (°) :	2-12, continuously adjustable	
	Lightning Grounding:	DC Grounded	
	Connecter Type:	1xMQ5,1xMQ4	
Calibration and Electrical Parameters	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(Y7)	
			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):	15.0±0.8	15.5±0.8
		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):	16.4±0.5	16.7±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 (dB):	>14	>14
	Service Beam @ 0deg	Gain (dBi):	19.2±0.5	19.7±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,R3,R4)		1710-2690(Y1,Y4,Y5,Y6)		
		698-862(R1,R2)	880-960(R3,R4)	1710-2170	2300-2490	2490-2690
Gain (dBi):	Bottom	14.3±0.6	14.8±0.7	16.0±0.8	16.7±0.8	17.5±0.8
	Top	/	/	16.0±0.8	16.3±0.8	17.0±0.8
Return Loss (dB):		>14 (VSWR<1.5)				
Polarization:		±45°				
Horizontal 3dB Beamwidth (°):	Bottom	65	60	68	67	60
	Top	/	/	68	67	64
Vertical 3dB Beamwidth	Bottom	8.3	7.2	7.0	5.9	5.2

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	Top	/	/	6.1	5.0	4.5
Electrical Downtilt (°):		2-12 Independently Continuously Adjustable				
1st Upper Sidelobe Suppression (dB):	Bottom	14	14	14	14	15
	Top	/	/	13	13	13
Intraband Isolation (dB):		>25				
Interband Isolation (dB):		>25				
Max. Power Per Port (W):		250		200		
Intermodulation IM3 (dBc):		<-150 (2×43dBm)				
Impedance (ohm):		50				
Lightning Protection:		DC Grounded				
Connector Type:		16x4.3-10 Female				

Electrical Specifications (1710-2170/2490-2690 MHz)				
Frequency Range (MHz):	1710-2170(B1,B2)			2490-2690(Y2,Y3)
	1710-1880	1880-2025	2025-2170	2490-2690
Gain (dBi):	16.0±0.8	16.3±0.8	16.1±0.8	16.8±0.8
Return Loss (dB):	>14 (VSWR<1.5)			
Polarization:	±45°			
Horizontal 3dB Beamwidth (°):	65	63	65	63
Vertical 3dB Beamwidth	6.0	5.8	5.2	4.5
Electrical Downtilt	2-12 Independently Continuously Adjustable			
1st Upper Sidelobe Suppression (dB):	13	13	13	13
Intraband Isolation (dB):	>25			
Interband Isolation (dB):	>25			
Max. Power Per Port (W):	200			
Intermodulation IM3 (dBc):	<-150 (2×43dBm)			
Impedance (ohm):	50			
Lightning Protection:	DC Grounded			
Connector Type:	8x4.3-10 Female			

BASTA Electrical Specifications

Frequency Range(MHz):	2300-2690(Y5)	
	2300-2500	2500-2690
Average Gain by all Beam Tilts (dBi):	15.0	15.5
Gain by all Beam Tilts Tolerance(dB):	±0.8	±0.8
Average Gain by Beam Tilt (dBi):	2°|15.1	2°|15.6
	7°|15.3	7°|15.7
	12°|14.6	12°|15.0
Horizontal BeamwidthTolerance(°):	±17	±15
Vertical BeamwidthTolerance(°):	±0.5	±0.5
1st Upper Sidelobe Suppression (dB) :	15	15
Front to back Total Power at 180° ± 30°(dB):	25.0	25.0
CPR at Boresight(dB):	15	15

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Frequency Range (MHz):		698-960(R1,R2,R3,R4)		1710-2690(Y1,Y4,Y5,Y6)		
		698-862(R1,R2	880-960(R3,R4	1710-2170	2300-2490	2490-2690
Average Gain by Beam Tilts (dBi):	Bottom	14.7	14.7	16.1	16.9	17.7
	Top	/	/	16.2	16.6	17.3
Gain by all Beam Tilts	Bottom	±0.5	±0.9	±0.7	±0.8	±0.6
	Top	/	/	±0.6	±0.6	±0.6
Average Gain by Beam Tilts (dBi):	Bottom	2°|14.7 7°|14.8 12°|14.5	2°|14.7 7°|14.8 12°|14.6	2°|16.2 7°|16.3 12°|15.9	2°|17.3 7°|17.2 12°|16.3	2°|17.8 7°|18.1 12°|17.3
	Top	/	/	2°|16.2 7°|16.4 12°|16.1	2°|16.7 7°|16.8 12°|16.1	2°|17.4 7°|17.5 12°|16.8
Horizontal BeamwidthTolerance(°):	Bottom	±6	±12	±10	±6	±5.5
	Top	/	/	±6	±5	±6.7
Vertical BeamwidthTolerance(°):	Bottom	±0.8	±0.6	±0.8	±0.4	±0.3
	Top	/	/	±0.6	±0.3	±0.4
1st Upper Sidelobe Suppression (dB):	Bottom	14	12	14	14	15
	Top	/	/	12	14	13
Front to back Total Power at 180° ± 30°(dB)	Bottom	21	22	25	24	23
	Top	/	/	27	28	28
CPR at Boresight(dB):	Bottom	20	20	20	23	23
	Top	/	/	19	21	20

Frequency Range (MHz):	1710-2170(B1,B2)			2490-2690(Y2,Y3)
	1710-1880	1880-2025	2025-2170	2490-2690
Average Gain by Beam Tilts (dBi):	16.2	16.5	16.3	17.0
Gain by all Beam Tilts Tolerance(dB):	±0.5	±0.4	±0.5	±0.6
Average Gain by Beam Tilts (dBi):	2°|16.3 7°|16.3 12°|16.1	2°|16.4 7°|16.7 12°|16.5	2°|16.2 7°|16.5 12°|16.1	2°|17.2 7°|17.3 12°|16.6
Horizontal Beamwidth Tolerance(°):	±8.3	±5.2	±2.7	±5
Vertical Beamwidth Tolerance(°):	±0.5	±0.4	±0.5	±0.3
Upper Side Lobe Suppression, Peak to	10	11	11	12
Front to back Total Power at 180° ± 30°(dB)	28	27	27	27
CPR at Boresight(dB):	18	20	20	18

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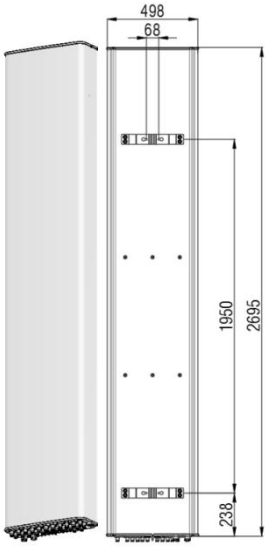
Mechanical Data

Antenna Dimensions (mm):	2695×498×197
Packing Dimensions (mm):	2915×580×290
Antenna Net Weight/Bracket (kg):	61.5/5.7
Antenna Gross Weight (kg):	75.5
Radome Material:	Fiberglass
Pipe OD (mm):	70-115
Mounting Kits (Included):	BA.K.04.00069491,Adjustable Downtilt0-8(0°-8°in 1°steps)



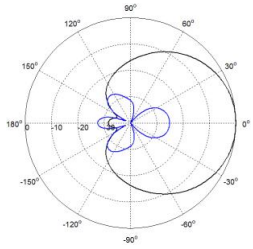
Environmental Ratings

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

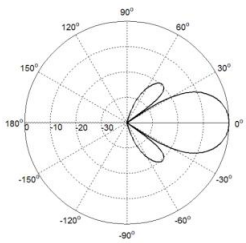
Internal RET Specifications

RET type:	Replaceable RET
RET protocol:	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:	8pin 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)

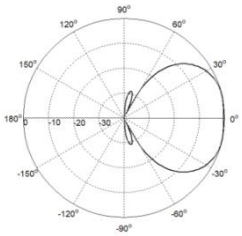
Typical Patterns



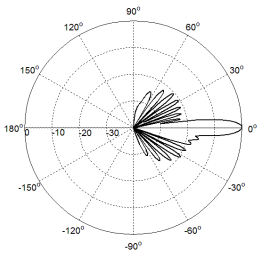
Single Column



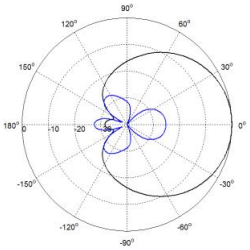
Service Beam @0deg



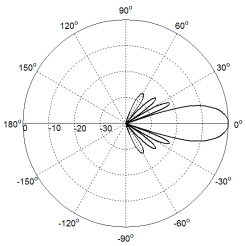
Broadcast Beam



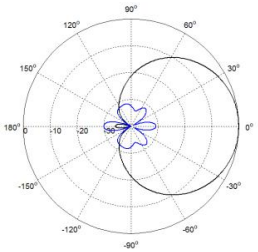
Elevation



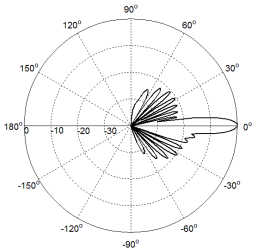
Azimuth(698–960MHz)



Elevation(698–960MHz)



Azimuth(1710–2690MHz)



Elevation(1710–2690MHz)

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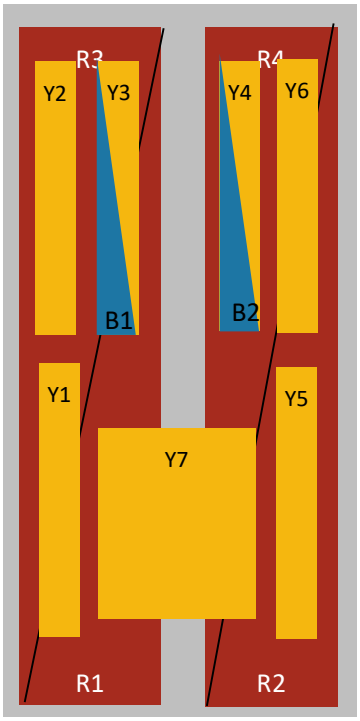
Bottom View

Correlation Table

Frequency Range	Array	Connector
698–862 MHz	R1	1-2
698–862 MHz	R2	3-4
880–960 MHz	R3	5-6
880–960 MHz	R4	7-8
1710-2170 MHz	B1	9-10
1710-2170 MHz	B2	11-12
1710–2690 MHz	Y1	13-14
1710–2690 MHz	Y2	15-16
2490–2690 MHz	Y3	17-18
2490–2690 MHz	Y4	19-20
1710–2690 MHz	Y5	21-22
1710–2690 MHz	Y6	23-24
2300-2690 MHz	Y7	1xMQ5,1xMQ4



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