

Hybrid antenna FDD+TDD

Model : EHST401A



ELECTRICAL SPECIFICATIONS

General	Frequency Range (MHz)		P1(2300-3800)		
			2300-2400	2490-2690	3300-3800
Parameters	Polarization		$\pm 45^\circ$		
	Electrical Downtilt (°)		2-12		
	Electrical Downtilt accuracy (°)		± 1		
	Coupling factor between calibration port and each antenna port(dB)		-26 ± 2		
Calibrationand Electrical Parameters	Max.amplitude tolerance from calibration port to input ports(dB)		≤ 1.0		
	Max.phase tolerance from calibration port to input ports(°)		≤ 8		
	Ports VSWR		≤ 1.5		
	Impedance (Ω)		50		
	Max Input Power (W)		1500		
	Co-polarization isolation between ports(dB)		≥ 25		
	Cross-polarization isolation between ports(dB)		≥ 25		
Radiation Parameters	Single Column Beam	Horizontal 3dB beam width(°)	67 ± 10	65 ± 10	64 ± 10
		Gain (dBi)	≥ 16	≥ 16	≥ 16.5
		Vertical 3dB beam width(°)	6.6 ± 0.8	6 ± 0.8	5.5 ± 0.8
		Cross polar ratio(0°)(dB)	≥ 15	≥ 15	≥ 13
		Cross polar ratio($\pm 60^\circ$)(dB)	≥ 8	≥ 5	≥ 5
		Front to back ratio(dB)	≥ 24	≥ 25	≥ 25
		Upper side lobe suppression (dB)	≤ -15	≤ -16	≤ -15
	Broadcast beam	Gain (dBi)	≥ 16	≥ 16	≥ 16.5
		SPR($\pm 32.5^\circ$)(%)	70 ± 15	70 ± 15	70 ± 15
		SPR($\pm 60^\circ$)(%)	≥ 85	≥ 85	≥ 85
		Vertical 3dB beam width(°)	6.6 ± 0.8	6 ± 0.8	5.5 ± 0.8
		Front to back ratio(dB)	≥ 23	≥ 24	≥ 25
		Upper side lobe suppression (dB)	≤ -15	≤ -16	≤ -15
	Service beam	0° direct beam gain(dBi)	≥ 20	≥ 20	≥ 20.5
		0°direct beam horizontal 3dB beam width(°)	≤ 30	≤ 30	≤ 30
		0° direct beam sidelobe suppression (dB)	≤ -15	≤ -15	≤ -15
		0° direct beam cross polar ratio(axial)(dB)	≥ 17	≥ 17	≥ 17
		0° direct beam front to back ratio(dB)	≥ 24	≥ 24	≥ 24
		$\pm 30^\circ$ direct beam gain(dBi)	≥ 18	≥ 18	≥ 18

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Frequency Range (MHz)	R1/R2 (698-960)			Y1/Y2/Y3/Y4 (1695-2690)			
	698-824	791-894	880-960	1695-1990	1920-2180	2300-2400	2490-2690
Polarization	$\pm 45^\circ$						
Gain over all tilts (dBi)	14.5 $\pm$ 0.8	15.0 $\pm$ 0.8	15.5 $\pm$ 0.8	16.3 $\pm$ 0.9	16.8 $\pm$ 0.8	17.1 $\pm$ 0.8	17.3 $\pm$ 0.9
Horizontal 3dB beam width($^\circ$)	67 $\pm$ 6	64 $\pm$ 7	59 $\pm$ 7	68 $\pm$ 6	66 $\pm$ 6	61 $\pm$ 6	58 $\pm$ 6
Vertical 3dB beam width($^\circ$)	11.6 $\pm$ 1.0	10.6 $\pm$ 0.9	9.7 $\pm$ 1.0	8.6 $\pm$ 1.1	7.6 $\pm$ 1.0	6.8 $\pm$ 1.1	6 $\pm$ 1.1
Front to back ratio(dB)	≥ 23	≥ 24	≥ 24	≥ 24	≥ 24	≥ 25	≥ 25
Cross polar ratio(0 $^\circ$)(dB)	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15
Upper side lobe suppression (dB)	≥ 15	≥ 16	≥ 15	≥ 15	≥ 16	≥ 16	≥ 15
Electrical Downtilt ($^\circ$)	2-12						
Electrical Downtilt accuracy ($^\circ$)	± 1						
Ports VSWR	≤ 1.5						
Isolation: intra-system (dB)	≥ 25						
Isolation: inter-system (dB)	≥ 25						
Intermodulation IM3 (2 $\times$ 43dBm)	≤ -153 dBc						
Impedance (Ω)	50						
Max Input Power (W)	1500						

MECHANICAL SPECIFICATIONS

Connector(s)	2 $\times$ (MQ4+MQ5)Connector-Male +12 $\times$ 4.3-10 Female
Connector position	Bottom
Antenna Dimensions (mm)	2190 $\times$ 500 $\times$ 158
Packing Dimensions (mm)	2455 $\times$ 575 $\times$ 235
Mechanical Downtilt kits ($^\circ$)	0-12
Radome Color	light gray
Radome Material	Fiberglass
Antenna weight (kg)	≤ 43
Packing weight (kg)	≤ 53
Wind load (N,at 150km/h) Frontal/Lateral/Rearside	2142/293/2320 N
Operating temperature ($^\circ$ C)	-40 ~ +60
Maximum Wind Speed(km/h)	200



Mounting Pipe Diameter (mm)

 $\Phi 50 \sim \Phi 115$

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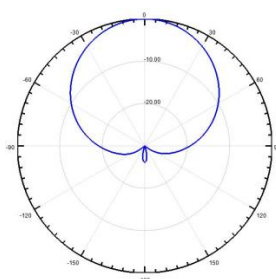
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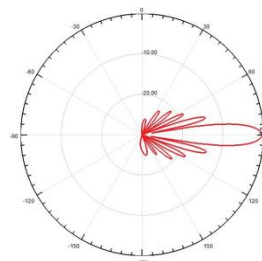
Integrated RET Properties

RET type	Replaceable Integrated RET
RET protocol	AISG 2.0/3GPP
Power supply(V)	10-30 DC
Power consumption(W)	≤ 0.6 (Idle,12V), ≤ 6 (in Motion,12V)
Adjustment time (Full Range)	≤ 4 Mins
Adjustment cycles	> 50,000
Temperature range($^{\circ}\text{C}$)	-40~65
Lightning protection	3KA(8/20 μs) @ Pin5& Pin3; 5KA(8/20 μs) @ Pin1/ Pin6& Pin7
Connectors	2 x 8 Pin circle connector according To IEC 60130- 9 And AISG.Daisy chain in: Male,Daisychainout :FemalePin1:12V;Pin3:RS485B;Pin5:RS485A;Pin6:10- 30V;Pin7:GN D; Pin2 &Pin4 & Pin8:N/C

Pattern



H Pattern



E Pattern

