

# HPT-DA-20P-0727-65R17-E

## Base Station Antenna

### Features:

- 2\*690-960/4\*1710-2690MHz
- 20Port(12-Port 4.3/10(F) 1-Port (MQ4+MQ5))
- Each Band Individually Adjustable



### Electrical Properties

Frequency range (MHz)		2*(690-960) (R1/R2)				4*(1710-2690) (Y1/Y2/Y3/Y4)			
		690-803	790-862	824-894	880-960	1710-1990	1920-2200	2200-2490	2490-2690
Gain (dBi)	At mid tilt	15.1	15.4	15.4	15.6	17.1	17.4	17.7	17.8
	Over all tilts	14.9±0.5	15.2±0.5	15.2±0.5	15.4±0.5	16.9±0.5	17.3±0.5	17.6±0.5	17.7±0.5
First Upper Side Lobe Suppression (dB)		> 15	> 15	> 15	> 15	> 15	> 15	> 15	> 15
Horizontal 3 dB beam width (°)		69±6	66±6	63±6	60±6	63±6	62±5	60±6	58±7
Vertical 3 dB beam width (°)		10.9±1	9.8±0.8	9.4±0.7	8.9±0.6	7.9±0.6	7.1±0.6	6.4±0.5	5.8±0.5
Max. power per input (W)		300 (at 50°C ambient temperature)				150 (at 50°C ambient temperature)			
Polarization(°)		±45							
Electrical downtilt (°)		2-12							
VSWR		< 1.5							
Cross polar isolation (dB)		>25							
Interband isolation (dB)		≥ 25							
Front to back ratio, ±30° (dB)		>25							
Cross polar ratio, 0° (dB)		16							
Intermodulation IM3 (dBc)		≤ -153 (2 x 43 dBm carrier)							
Impedance (Ω)		50							
Grounding		DC grounding							

## Electrical Properties

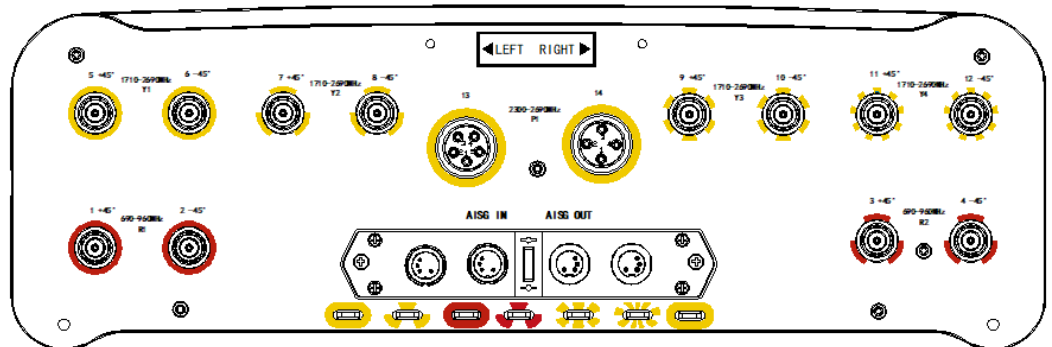
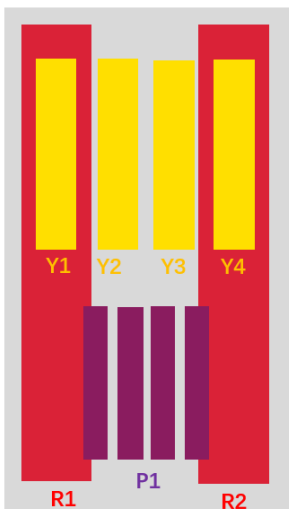
General parameters	Frequency range (MHz)	P1( 2300-2690)	
	Polarization(°)	±45	
	Electrical down-tilt (°)	2-12	
	Impedance (Ω)	50	
	Lightning Protection	DC Ground	
Calibration And electrical parameters	Coupling factor between calibration port and each antenna port (dB)	-26±2	
	Max. amplitude tolerance from calibration port to input ports (dB)	< 1.0	
	Max. phase tolerance from calibration port to input ports (°)	≤10	
	Ports VSWR	<1.5	
	Avg. power capacity (W)	50	
	Intra-band isolation (dB)	≥20	
	Inter-band isolation (dB)	≥20	
Radiation parameters	Single column beam	Horizontal 3dB beam width (°)	90
		Gain (dBi)	14.7
		Vertical-3dB Beamwidth (°)	8.3
		Cross Polar Discrimination at Boresight (dB)	≥15
		First upper side lobe suppression (dB)	≥15
		Front to back ratio (dB)	≥25
	65° Broadcast Beam	Horizontal 3dB beam width (°)	65
		Gain (dBi)	16.1
		Vertical-3dB Beamwidth (°)	8.3
		Cross Polar Discrimination at Boresight (dB)	≥15
		Front to back ratio (dB)	≥25
		First upper side lobe suppression (dB)	≥15
	Service beam	0° direct beam gain (dBi)	20.0
		0° direction beam horizontal 3dB beam width (°)	27
		0° direction beam cross polar ratio at Boresight (dB)	≥17
		0° direction beam front to back ratio (dB)	≥30

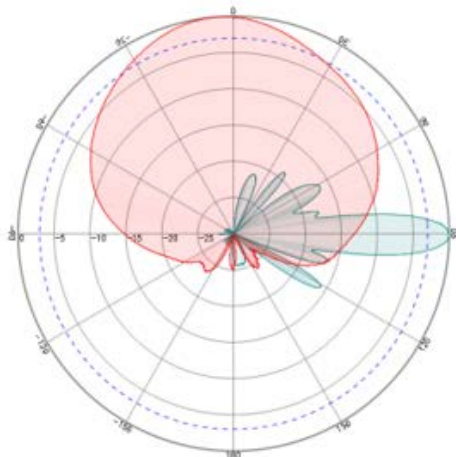
## Mechanical Specifications

Connector Type	4.3/10(F) x 16+MQ5 x 1+MQ4 x 1
Connector position	Bottom
Electrical Tilt Control	FDD: Integrated RET, Each Band Individually Control
	TDD: Integrated RET, Single internal RET control for all four antenna arrays
Mechanical Tilt Range	0-8
Radome Material	Fiberglass
Antenna Weight(kg)	33/38.5 (clamps incl.)
Bracket Diameter(mm)	50-125
Maximum Wind Speed(km/h)	200
Wind Load frontal [N] at 150 Km/h	1050
Wind Load rear side [N] at 150 Km/h	1170
Wind Load lateral [N] at 150 Km/h	510
Operating Temperature (°C)	-40 ~+60
Antenna Dimensions (H x W x D)(mm)	2100x497x197
Packing Size (H x W x D) (mm)	2310 x 572 x 272

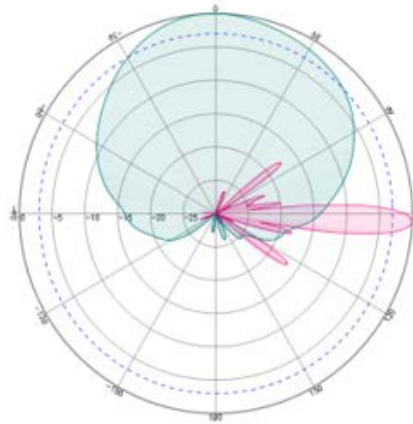
## Integrated RET Specifications

Protocols	Compliant With AISGV2.0 And 3GPP
Supply Voltage, VDC	10–30DC
Power Consumption	<2W (standby); < 10W (motor activated)
Safety Standard	Compliant to EN 60950/UL 60950/ RoHs (Restriction of Hazardous Substances), CE
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, Line to Ground 8/20 us @ 6kA $\geq\pm 5$ Repetitions Line to line , 8/20 us @ 3kA $\geq\pm 5$ Repetitions
Connectors	2 x 8 Pins Connector According To IEC60130-9 AND AISG 1 x Daisy Chain In : Male 1 x Daisy Chain Out : Female Pin3:RS485B; Pin5:RS485A; Pin6:10~30V; Pin7: DC return Female connector: 4 PINs ,Male connector: 4 PINs

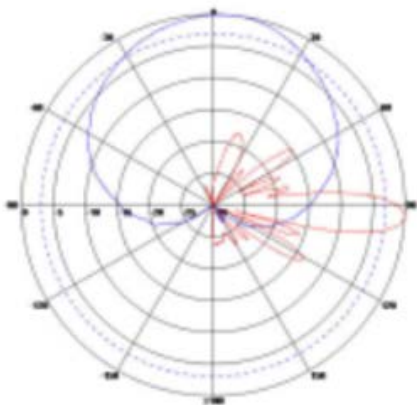




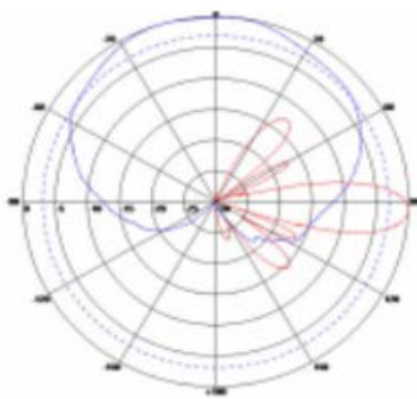
690-960MHz



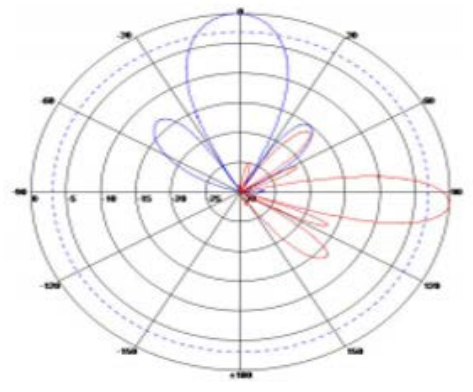
1710-2690MHz



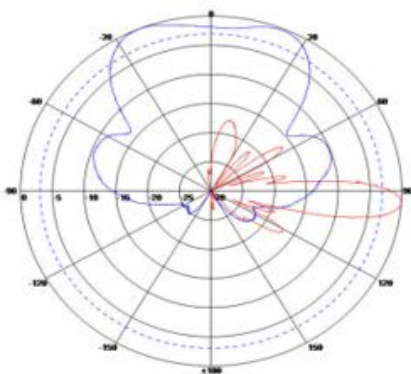
Single Column Beam



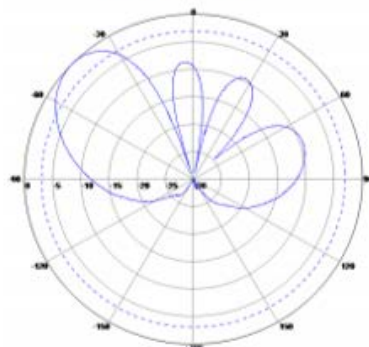
65° Broadcast



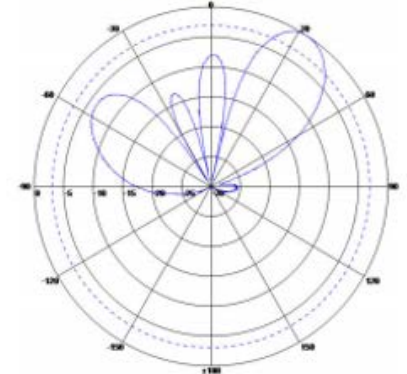
0° Service Beam



BCH Beam



Multi-Beam - 30°



Multi-Beam +30°

2300-2690MHz