



Product Specification(Pre-released)

SL-HA-1L8M-2P609017-16P1724D19-E12-V02

698-960/8*1695-2400MHz

65/33/33/33/33/33/33/33/33deg 17/19/19/19/19/19/19/19/19dBi XXXXXXXXXX18-port antenna

Integrated and replaceable RCU, each band individually adjustable

18x4.3-10(F) connectors @bottom

Antenna Specifications

Electrical Properties					
Frequency Range(MHz)		R1: 698-960			
		698-803	790-862	820-894	880-960
Gain (dBi)	at middle tilt	15.5	15.8	16.1	16.5
	over all tilt	15.3±0.7	15.6±0.6	15.9±0.6	16.3±0.6
Polarization		+45°/-45°			
Horizontal -3dB Beamwidth(°)		68±5	66±4	64±4	61±5
Vertical -3dB Beamwidth(°)		8.5±1.0	8.0±1.0	7.5±0.8	6.5±0.7
Electrical Downtilt(°)		2-12, continuously adjustable			
First Upper Side Lobe Suppression (Typ.)(dB)		≥15.0	≥15.0	≥15.0	≥15.0
Cross Polar Ratio (0°)(dB)		≥17.0	≥17.0	≥17.0	≥17.0
Cross Polar Ratio (±60°)(dB)		≥8.0	≥7.0	≥6.0	≥6.0
Front to Back Ratio, ±30°(dB)		≥25.0	≥25.0	≥25.0	≥25.0
VSWR		<1.5			
Cross-polar Isolation (dB)		≥26			
Inter-band Isolation (dB)		≥26			
PIM3 (2x43 dBm carrier)(dBc)		≤-153			
Impedance(Ω)		50			
Grounding		DC Ground			
Max. Average Input Power per Port(W)		350 (at 50°C ambient temperature)			

Electrical Properties					
Frequency Range(MHz)		Y1&Y3/Y2&Y4/Y5&Y7/Y6&Y8 1710-2690			
		1710-1920	1920-2170	2300-2490	2490-2690
Gain (dBi)	at middle tilt	18.2	18.5	18.8	19.2
	over all tilt	18.0±0.5	18.3±0.5	18.6±0.5	19.0±0.5
Polarization		+45°/-45°			



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Horizontal -3dB Beamwidth(°)	32±5	30±5	28±4	26±4
Vertical -3dB Beamwidth(°)	8.7±0.9	8.3±0.7	7.6±0.7	5.8±0.6
Electrical Downtilt(°)	2-12, continuously adjustable			
First Upper Side Lobe Suppression (Typ.)(dB)	≥15.0	≥15.0	≥15.0	≥15.0
Cross Polar Ratio (0°)(dB)	≥17.0	≥17.0	≥17.0	≥16.0
Beam Center Direction-Horizontal(°)	±30.0	±28.0	±26.0	±24.0
Horizontal Side Lobe Suppression (Typ.)(dB)	≥15.0	≥15.0	≥15.0	≥15.0
Front to Back Ratio, ±30°(dB)	≥25.0	≥25.0	≥25.0	≥25.0
VSWR	<1.5			
Cross Polar (Intra band) Isolation (dB)	≥26			
Interbeam Isolation (dB)	≥16			
PIM3 (2x43 dBm carrier)(dBc)	≤-153			
Impedance(Ω)	50			
Grounding	DC Ground			
Max. Average Input Power per Port(W)	250 (at 50℃ ambient temperature)			

Values based on NGMN-N-P-BASTA V11.1

A member of



Certifications



Mechanical Properties

Radome Material	Fiberglass
Radome Colour	Light Grey
Connector Type	4.3-10(F)×18
Antenna Dimension (H×W×D)(mm)	2700×499×205
Packing Size (H×W×D)(mm)	3000×535×230
Antenna Net Weight(kg)	≤52
Installation Kit Weight(kg)	7.8(2 units)
Shipping Weight(kg)	70



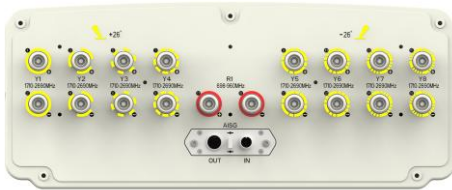
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Mechanical Downtilt(°)	0-10
Mast Diameter Supported(mm)	50-114
Pole Length(mm)	>2900
Operating Temperature(°C)	-40--+65
Wind Load (at 150 km/h)	1900*781*2091N (Frontal/Lateral/Rear side)
Maximum Wind Speed (km/h)	200

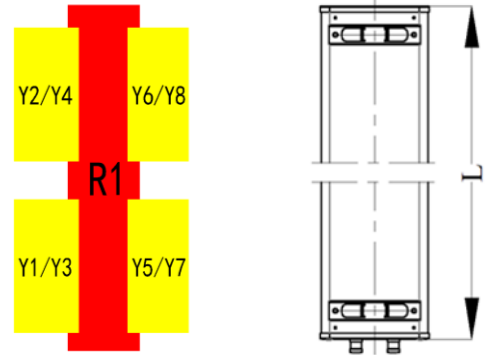
RET Properties

Power Supply	10-30V dc
Power Consumption	≤2W (Idle), ≤10W (in Motion)
Hardware Interface	RS 485A/B(pin5, pin3); power supply(pin1, pin6); DC return(pin 7); according to AISG 2.0/3GPP
Logical Interface	HEX Coded Commands Based on HDLC Protocol
Protocol Supported	AISG 2.0/3GPP
Adjustment Time (Full Range)	<90s(typical, depending on model)
Adjustment Cycles	>20000
Torque Max.	≥160 mN.m
Lightning Protection Rate	IEC 61000-4-5 Current Pulse Profile, 8/20 μs Min. @8kA±5 Repetitions
Connectors	2 Circle Connector According to IEC 60130-9 and AISG. Daisy Chain In: Male, Daisy Chain Out: Female

Antenna Ports



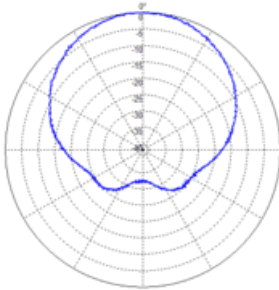
Array Layout



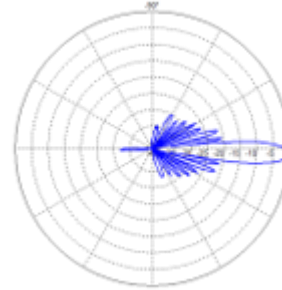
Reference Radiation Patterns

698-960MHz(65 deg)

Horizontal Pattern

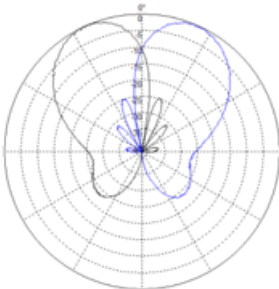


Vertical Pattern



1710-2690MHz(33degtwin-beam)

Horizontal Pattern



Vertical Pattern

