DENGYO

Base Station Antennas

Type BMF9-2B2J1L-RE65

Frequency Range	698-960x2 1695-2690x2 2490-3800
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2°-12°x5

2 x698-960 /2 x1695-2690 /4x2490-3800 MHz 65°, 2 x17/ 2 x18 / 4x16 dBi, 2 x2°-12° / 2 x2°-12° / 2°-12° Tilt Antenna With 5 Integrated RCUs.

Electrical Specifications

General parameters	Frequency range（MHz）		2490~2690	3300~3800
	Polarization		±45	
	Electrical downtilt(°)		2~12	
	Electrical downtilt tolerance(°)		±1	
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	
	Max.phase tolerance from calibration port to input ports(°)		≤10	
	Ports VSWR		<1.5	
	Avg. power per capacity (W)		40	
	Co-polarization isolation between ports(dB)		≥20	
	Cross-polarization isolation between ports(dB)		≥23	
Radiation parameters	Single column Beam	Gain(dBi)	15	15.5
		Horizontal 3dB beam width(°)	80	65
		Vertical 3dB beam width(°)	6.5	5
		Cross polar ratio(dB，0°)	≥16	
		Front to back ratio(dB)	≥25	
		Vertical sidelobe suppression for first sidelobe above main beam(dB)	≥15	
	65° Broadcast beam	Gain(dBi)	16.3	16.5
		Horizontal 3dB beam width(°)	65	
		Vertical 3dB beam width(°)	6.5	5
		Cross polar ratio(dB，0°)	≥16	
		Front to back ratio(dB)	≥25	
		Vertical sidelobe suppression for first sidelobe above main beam(dB)	≥15	
	Service beam	0°direct beam gain(dBi)	20	21
		0°direct beam horizontal 3dB beam width(°)	≤28	
		0°direct beam front to back ratio(dB)	≥28	
		0°direct beam cross polar ratio(axial)(dB)	≥18	

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Frequency Range(MHz)		2x698-960			2x1695-2690			
		698-824	824-894	880-960	1695-1920	1920-2180	2300-2400	2490-2690
Polarization		±45°						
Horizontal 3dB Beamwidth(°)		71	65	60	68	65	62	58
Vertical 3dB Beamwidth(°)		8	7.1	6.5	6.5	5.5	5	4.5
Gain (dBi)		15.5	16.1	16.5	16.8	17.2	17.5	17.3
Electrical Downtilt		2°-12°			2°-12°			
Upper Sidelobe Suppression(dB)	First	≥16	≥16	≥16	≥16	≥16	≥16	≥16
Front-to-Back Ratio Total Power,±30° (dB)		≥22	≥23	≥24	≥25	≥25	≥25	≥25
Cross polar ratio	Main direction(dB)	≥17	≥17	≥17	≥17	≥17	≥17	≥17
	±60° (dB)	≥7	≥7	≥7	≥7	≥7	≥7	≥7
Isolation ports		≥25 dB						
Isolation Frequency		≥30 dB						
VSWR		< 1.5						
Intermodulation IM3		< -150 dBc(2x43dBm carrier)						
Impedance		50 Ω						
Max. Power per Input (at 50°C ambient temperature)		500 W			250 W			
Lightning Protection		DC Ground						

Mechanical Specifications

Radome Material	Fiberglass
Connector Type and Location	4.3-10 Female x8,Bottom 1xMQ5 Male+1 xMQ4 Male iRCU in:1 x 8 pin male iRCU out:1 x 8 pin female
Dimensions,HxWxD(mm)/(inches)	2690 x 499 x 180 / 106.3 x 19.6 x 7.1
Packing Size(mm)/(inches)	3130 x 560 x 300 / 123.2 x 22.0 x 11.8
Weight ,w/o Mounting kit(kg)/(lbs)	48 / 105.6
Weight with Downtilt Bracket(kg)/(lbs)	55 / 121
Weight with Fixed Bracket(kg)/(lbs)	53 / 116.6
Packing Weight（with Downtilt Bracket）(kg)/(lbs)	64 / 140.8
Packing Weight（with Fixed Bracket）(kg)/(lbs)	62 / 136.4
Max. Wind Velocity(mph)	150
Mounting hardware	¢ 50 mm ~ ¢ 115 mm
Operational Temperature(°C)	-40 to +65
Operational Humidity(%)	<95
Wind Load at 100mph (Frontal/lateral/Rearside(N))	1660/266/1243

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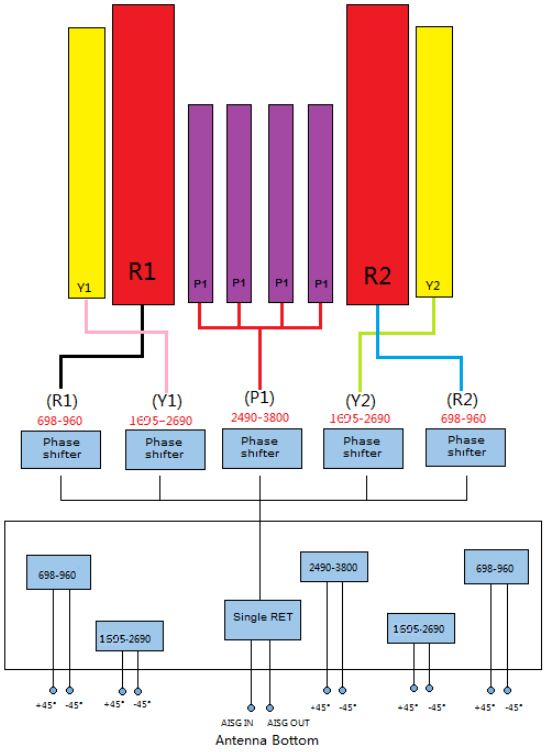
Integrated RET Properties

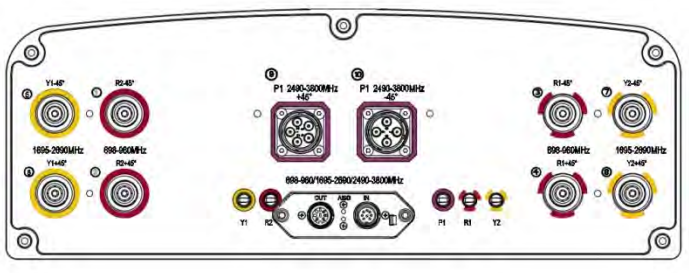
RET Type		5x Type 1 Single RET
Protocols		Compliant to AISG 2.0/3GPP
Input voltage range		+10~+30VDC(pin 6)
Power consumption		<2W(stand by);<13W(motor activated)
Connectors	AISG	2 x 8 pin connector acc. To IEC 60130-9 Acc.to AISG Daisy chain in:male Daisy chain out:female
	Antenna	Two motor shaft(Embedded motor)
Hardware interface	AISG	RS485A/B(pin5/pin3);Power supply(pin6); DC return(pin7)Acc.to AISG
Adjustment time(full range)		40 sec(typically,depending on antenna)
Adjustment Cycles		≥10000
Torque Max		≥160mN.m
Lightning Protection Rating		IEC 61000-4-5 Current Pulse Profile,8/20 μs 10 Repetitions Min.@ 6kA IEC 61312-1 Annex B Current Pulse Profile, 10/350 μs,200 Repetitions Min. @ 0.6KA

COMPREHENSIVE TILT CONFIGURATION



Frequency Range	Array	RET Unique ID
698-960MHz	R1	NDPMXXXXXXXX-7090R1
698-960MHz	R2	NDPMXXXXXXXX-7090R2
1695-2690MHz	Y1	NDPMXXXXXXXX-1727Y1
1695-2690MHz	Y2	NDPMXXXXXXXX-1727Y2
2490-3800MHz	P1	NDPMXXXXXXXX-2538P1

Note: (1) Physical RET Unit containing (5) Single RET



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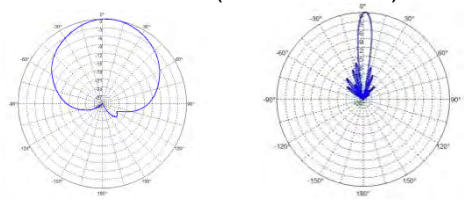
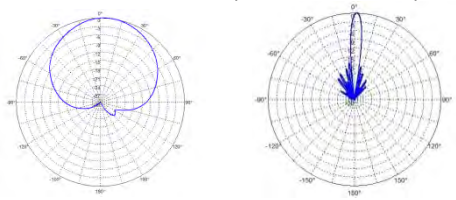
Radiation Pattern (698 - 894MHz)



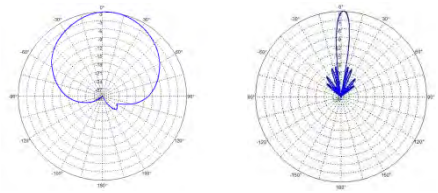
Horizontal Pattern Vertical Pattern

Radiation Patterns (880 - 960 MHz)



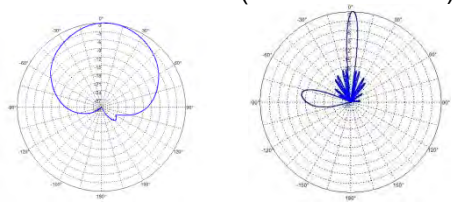
Horizontal Pattern Vertical Pattern

Radiation Patterns (1695 - 2170 MHz)



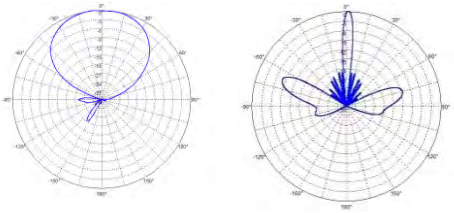
Horizontal Pattern Vertical Pattern

Radiation Patterns (2300- 2400 MHz)



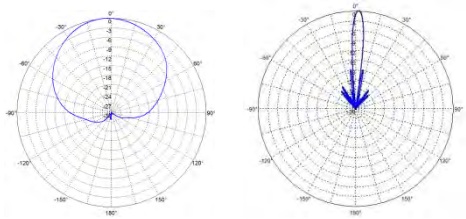
Horizontal Pattern Vertical Pattern

Radiation Pattern (2490- 2690 MHz)



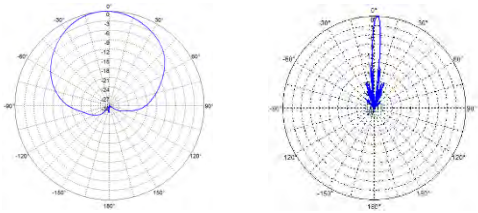
Horizontal Pattern Vertical Pattern

Radiation Pattern (2490- 2690 MHz)



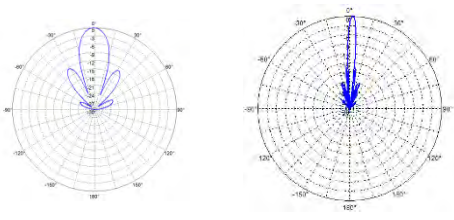
Horizontal Pattern Vertical Pattern

Radiation Pattern (3300- 3800 MHz)



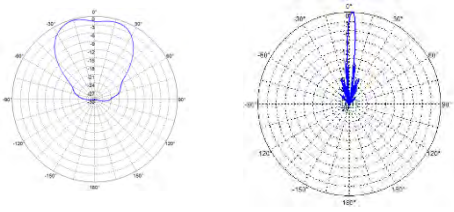
Horizontal Pattern Vertical Pattern

Radiation Pattern (2490- 3800 MHz)(Service Beam)



Horizontal Pattern Vertical Pattern

Radiation Pattern (2490- 3800 MHz)(Broadcast Beam)



Horizontal Pattern Vertical Pattern

