

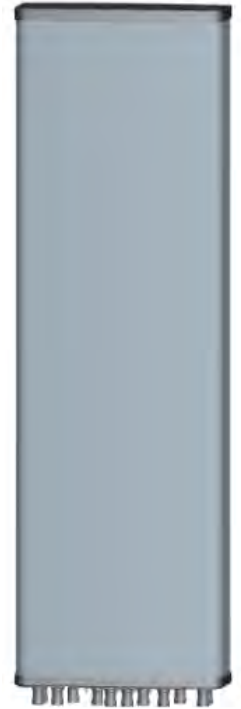
Frequency Range	617-894x2 1695-2690x4 3300-3800x1
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2°-12°x7

Type **BMF7-2A4J1Q-RG65**

2x617-894 /4x1695-2690 /3300-3800 MHz 65°, 2 x16 / 4 x17 / 17 dBi, 2 x2°-12° / 4 x2°-12° / 2°-12°Tilt Antenna With 7 Integrated RCUs.

Electrical Specifications

General parameters	Frequency range(MHz)		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)	17.2
		Horizontal 3dB beam width(°)	65
		Vertical 3dB beam width(°)	4
		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)	18.1
		Horizontal 3dB beam width(°)	65
		Vertical 3dB beam width(°)	4
		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)	22.6
		0°direct beam horizontal 3dB beam width(°)	19
		0°direct beam front to back ratio(dB)	≥28
		0°direct beam cross polar ratio(axial)(dB)	≥18





Base Station Antennas

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Type **BMF7-2A4J1Q-RG65**

Frequency Range(MHz)		2x617-894			4x1695-2690			
		617-698	698-824	824-894	1695-1920	1920-2180	2300-2400	2490-2690
Polarization		±45°						
Horizontal 3dB Beamwidth(°)		71	65	60	66	63	58	60
Vertical 3dB Beamwidth(°)		12.5	11	9.5	9.2	8.2	7.2	6.5
Gain (dBi)		14.3	15	15.5	16.3	16.6	16.9	17.1
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 x12,Bottom 1xMQ5 Male+1xMQ4 Male iRCU in:1 x 8 pin male iRCU out:1 x 8 pin female
Dimensions,HxWxD(mm)/(inches)	2080 x 499 x 180 / 81.9 x 19.6 x 7.1
Packing Size(mm)/(inches)	2395 x 620 x 325 / 94.3 x 24.4 x 12.8
Weight ,w/o Mounting kit(kg)/(lbs)	46 / 101.2
Weight with Downtilt Bracket(kg)/(lbs)	53 / 116.6
Weight with Fixed Bracket(kg)/(lbs)	51 / 112.2
Packing Weight(with Downtilt Bracket) (kg)/(lbs)	61 / 134.2
Packing Weight (with Fixed Bracket)(kg)/(lbs)	59 / 129.8
Max. Wind Velocity(mph)	150
Mounting hardware	Φ 50 mm ~ Φ 115 mm
Mechanical tilt	0-15°
Operational Temperature(°C)	-40 to +65
Operational Humidity(%)	<95
Wind Load at 100mph (Frontal/lateral/Rearside(N))	1291/207/967

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BMF7-2A4J1Q-RG65 A01

Frequency Range	617-894x2 1695-2690x4 3300-3800x1
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2°-12°x7

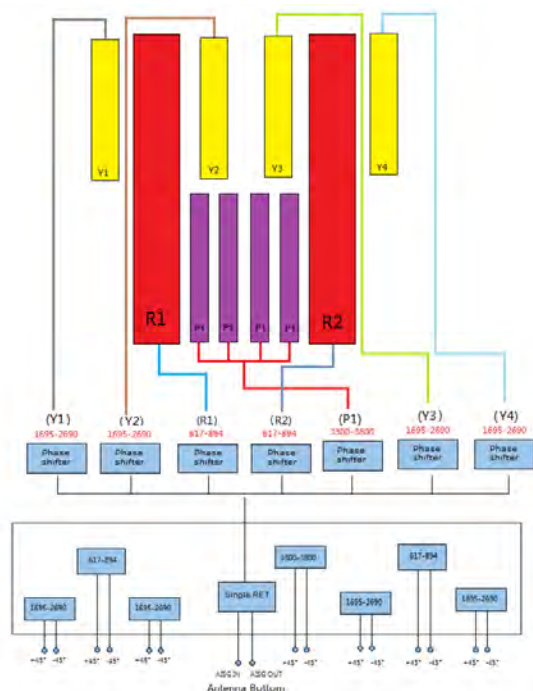
Type **BMF7-2A4J1Q-RG65**

Integrated RET Properties

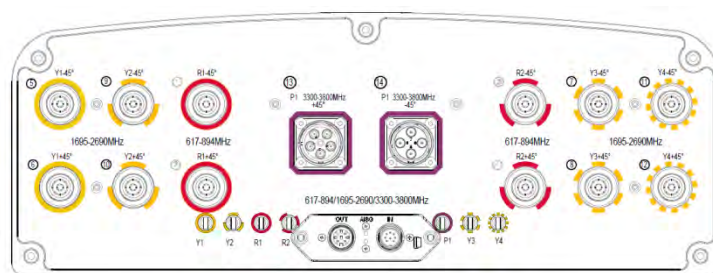
RET Type	7 x Type 1 Single RET	
Protocols	Compliant to AISG 2.0/3GPP	
Input voltage range	+10~+30VDC(pin 6)	
Power consumption	<2W(stand by);<13W(motor activated)	
Connectors	AISG	2 x 8 pin connector acc. To IEC 60130-9 Acc.to AISG Daisy chain in:male Daisy chain out:female
	Antenna	Two motor shaft(Embedded 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

Note: (1) Physical RET Unit
containing (7) Single RET



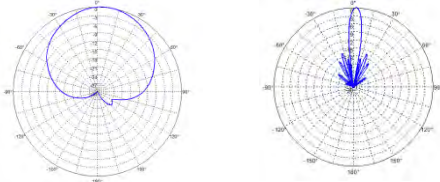
Frequency Range	Array	RET Unique ID
617-894MHz	R1	NDPMXXXXXXXX-6089R1
617-894MHz	R2	NDPMXXXXXXXX-6089R2
1695-2690MHz	Y1	NDPMXXXXXXXX-1727Y1
1695-2690MHz	Y2	NDPMXXXXXXXX-1727Y2
1695-2690MHz	Y1	NDPMXXXXXXXX-1727Y3
1695-2690MHz	Y1	NDPMXXXXXXXX-1727Y4
3300-3800MHz	P1	NDPMXXXXXXXX-3338P1



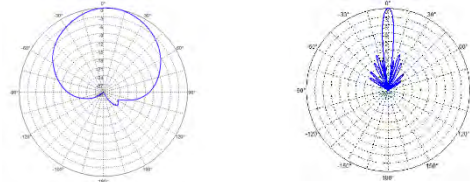
Frequency Range	617-894x2 1695-2690x4 3300-3800x1
Polarization	$\pm 45^\circ$
Half-Power Beam Width	65°
Electrical Downtilt	2° - $12^\circ \times 7$

Type BMF7-2A4J1Q-RG65

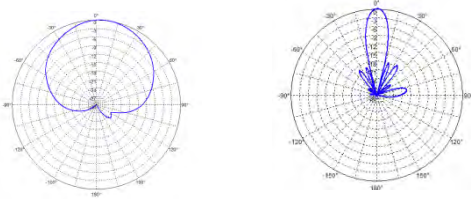
Radiation Pattern (617 - 824MHz)


Horizontal Pattern Vertical Pattern

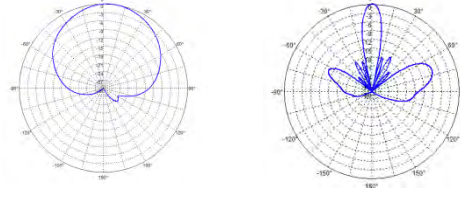
Radiation Patterns (824 - 894 MHz)


Horizontal Pattern Vertical Pattern

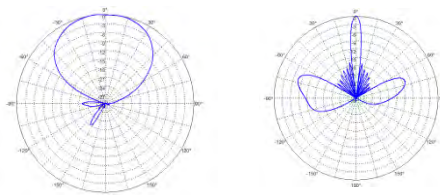
Radiation Patterns (1695 - 2170 MHz)


Horizontal Pattern Vertical Pattern

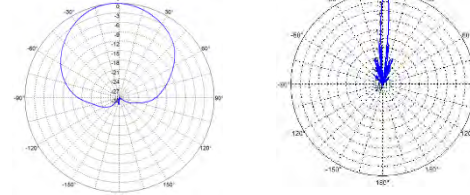
Radiation Patterns (2300 - 2400 MHz)


Horizontal Pattern Vertical Pattern

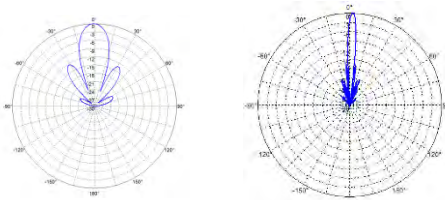
Radiation Pattern (2490- 2690 MHz)


Horizontal Pattern Vertical Pattern

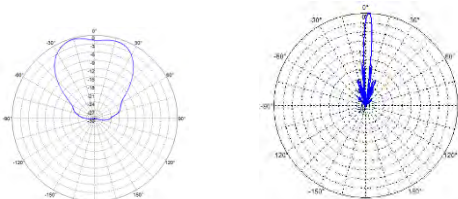
Radiation Pattern (3300- 3800 MHz)


Horizontal Pattern Vertical Pattern

Radiation Pattern (3300- 3800 MHz)(Service Beam)


Horizontal Pattern Vertical Pattern

Radiation Pattern (3300- 3800 MHz)(Broadcast Beam)


Horizontal Pattern Vertical Pattern



Base Station Antennas

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	1695-2690x4
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Beamforming Weights

Broadcast Beamwith 65°	Frequency Range(Mhz)	Port	P1	P2	P3	P4	P5	P6	P7	P8
	3300-3800	Amplitude	0.5	1	1	0.15	0.5	1	1	0.15
		Phase(°)	-180	0	-10	0	-180	0	-10	0
	3300-3800	Amplitude	1	1	1	1	1	1	1	1
		Phase(°)	0	0	0	0	0	0	0	0
Service beam	Frequency Range(Mhz)	Port	P1	P2	P3	P4	P5	P6	P7	P8
0°	3300-3800	Amplitude	1	1	1	1	1	1	1	1
		Phase(°)	0	0	0	0	0	0	0	0
30°	3300-3800	Amplitude	1	1	1	1	1	1	1	1
		Phase(°)	0	130	260	390	0	130	260	390