

PBOQBU01

8-Port Beamforming Antenna

Kaelus Next Generation Base Station Antennas

8T8R Beamforming Antenna

- 3300-4200MHz band
- Four column antenna, designed for beamforming and includes calibration port
- Integrated single RET control, synchronized tilt for all four columns
- Electrical specifications as per NGMN P-BASTA version 12.0

GENERAL (BASTA)	P1	P2	P3	P4
Frequency Range	3300-4200	3300-4200	3300-4200	3300-4200
Gain Over All Tilts [dBi]	15.5	15.5	15.5	15.5
Polarization	X	X	X	X
Azimuth Beamwidth [°]	90	90	90	90
Electrical Downtilt [°]	2-12	2-12	2-12	2-12
Ports Per Band	2	2	2	2



Specifications and Layouts

MECHANICAL SPECIFICATIONS	
Antenna Dimensions: Length, Width, Depth [inch mm]	36x12x5 914x304x127
Net Weight (Antenna) [lbs kg]	17.6 8
Connector Type	4.3-10 Female MQ4 / MQ5
Connector Quantity	8 + 1 CAL
Connector Position	Bottom
Windload, Calculation* [mph km/h]	93.2 150
Windload, Frontal [lbf N]	59.1 263
Windload, Lateral [lbf N]	9.3 41.2
Survival Wind Speed [mph km/h]	124.3 200
Radome Material	ASA
Radome Colour [RAL]	7035 (Light Gray)
Product Environmental Compliance	RoHS
Mech. distance between mounting points - Antenna [inch mm]	832.5
Lightning Protection	Yes - DC Ground

* According to EN 1991-1-4:2005+A 1:2010



REMOTE ELECTRICAL TILT (RET) INFORMATION	
Type	Integrated, Non-Removable
Power Input	10 - 30V DC
Protocol	3GPP/AISG2.0
RET Interface	8-Pin DIN
RET Interface (Quantity)	2 (1 Male + 1 Female)



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ELECTRICAL SPEC				P1 / P2 / P3 / P4												
	Column	Broadcast Beam	Service Beam @ 0deg	Column	Broadcast Beam	Service Beam @ 0deg	Column	Broadcast Beam	Service Beam @ 0deg	Column	Broadcast Beam	Service Beam @ 0deg	Column	Broadcast Beam	Service Beam @ 0deg	
Freq. Range [MHz]	3300 - 3400			3400-3600			3600-3800			3800-4000			4000-4200			
Gain,	Min Tilt	14.9	17.1	21.7	15.1	17.3	21.9	15.3	17.6	22.1	15.6	17.8	22.3	15.6	17.8	21.9
	Mid Tilt	15.1	17.3	21.9	15.3	17.5	22.1	15.5	17.8	22.3	15.8	18.0	22.5	15.8	18.0	22.1
	Max Tilt	14.9	17.1	21.7	15.1	17.3	21.9	15.3	17.6	22.1	15.6	17.8	22.3	15.6	17.8	21.9
Gain, Over All Tilts [dBi]	15.0±0.5	17.2±0.5	21.8±0.5	15.2±0.5	17.4±0.5	22.0±0.5	15.4±0.5	17.7±0.5	22.4±0.5	15.7±0.5	17.9±0.5	22.4±0.5	15.8±0.5	17.9±0.5	22.0±0.5	
Azimuth Beamwidth [°]	93.0±5.0	65.0±5.0	25.0±3.0	91.0±5.0	65.0±5.0	25.0±3.0	90.0±5.0	65.0±5.0	25.0±3.0	89.0±5.0	65.0±5.0	25.0±3.0	86.0±5.0	65.0±5.0	23.0±3.0	
Elev. Beamwidth [°]	5.8±0.5			5.5±0.5			5.4±0.5			5.2±0.5			4.6±0.5			
Electrical Downtilt [°]	2-12															
Elevation Downtilt Deviation [°]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Front-to-Back Ratio, Tot Power, ±30° [dB]	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
First Upper Side Lobe Suppression [dB]	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
Upper Side Lobe Suppression [dB]	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
Horizontal Side Lobe Suppression, 0°, no tapering	N/A	N/A	14	N/A	N/A	14	N/A	N/A	13	N/A	N/A	13	N/A	N/A	12	
Recommended Azimuth Beam Steering range [°]	±35															
Coupling, Antenna Port to Cal port [dB]	-26 ± 2															
Max amplitude variation, Antenna Ports to Cal port [°]	< 1.0															
Max phase variation, Antenna Ports to Cal port [°]	< 7.0															
Polarization [°]	±45															
Impedance [Ω]	50															
VSWR	< 1.5:1															
Return Loss [dB]	< -14.0															
Cross Polar Isolation [dB]	22															
Passive Intermodulation (PIM) 3rd order, 2x20W [dBc]	<150															
Max Effective Power Per Port [W]	50															

PRODUCT VARIANTES	
4.3-10 Connectors	PBOQBU01-V1
MQ4 / MQ5 Connectors	PBOQBU01-V2

SHIPPING AND ORDER INFORMATION		
Packing Size: Length, Width, Depth [inch/mm]	51.2x19.7x11.8 1300x500x300	
No bracket: Shipping Weight [lbs/kg] , P/N	24.5 11.1	PBOQBU01-Vx-P1
Fixed bracket: Shipping Weight [lbs/kg] , P/N	32.5 14.7	PBOQBU01-Vx-P2
Tilt bracket: Shipping Weight [lbs/kg] , P/N	37.5 17	PBOQBU01-Vx-P3

ENVIRONMENTAL COMPLIANCE	
ETSI EN300019-1-1 for Storage	Class 1.2
ETSI EN300019-1-2 for Transportation	Class 2.3
ETSI EN300019-1-4 for Environmental Conditions	Class 4.1E
Cold Temperature Survival [°F/°C]	-40 -40
Hot Temperature Survival [°F/°C]	140 60



Network planning files and datasheet in NGMN XML formats are available on request by email.

Kaelus follows the definitions and recommendations per NGMN P-Basta version 12.0 (www.ngmn.org) within parameters shown on this datasheet.

All specifications are subject to change without notice. Visit www.kaelus.com for the most current data sheets..

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