

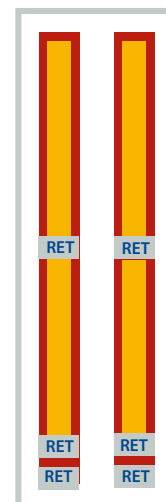
# M6WHMU01

3x 12 Port Antenna, 65 Degree Base Station Sector Antennas

## Kaelus Next Generation Base Station Antennas

- Tri-sector Monopole
- Innovative slotted disc antenna technology
- High gain over an extended tilt range
- Fully integrated Remote Electrical Tilt, AISG compatible
- Each Sector Supports MIMO: 4x4 on Low Band and Mid Band

GENERAL	LB R1	LB R2	MB Y1	MB Y2	MB Y3	MB Y4
Frequency Range	694-960	694-960	1695-2690	1695-2690	1695-2690	1695-2690
Gain Over All Tilts [dBi]	15.5	15.5	15.5	15.0	15.5	15.0
Polarization	X	X	X	X	X	X
Azimuth Beamwidth [°]	65	65	65	65	65	65
Electrical Downtilt Range [°]	2-12	2-12	2-12	2-12	2-12	2-12
Ports Per Band	2	2	2	2	2	2



x3

## Specifications and Layouts

MECHANICAL SPECIFICATIONS	
Antenna Dimensions: Length, Diameter[inch mm]	107.5 x 23.6   2730 x 600
Net Weight (Antenna) [lbs kg]	253.5   115
Connector Type	4.3-10 Female
Connector Quantity Per Sector	12
Connector Position	Bottom
Wind Load, Calculation* [mph km/h]	93.2   150
Wind Load, Maximum [lbf N]	TBD
Survival Wind Speed [mph km/h]	124   200
Radome Material	GRP
Radome Colour [RAL]	7047
Product Environmental Compliance	RoHS
Lightning Protection	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

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ELECTRICAL SPECIFICATIONS	LB R1/R2			MB Y1/Y3					MB Y2/Y4					
Frequency Range [MHz]	699-798	791-862	880-960	1695-1880	1900-2025	2110-2170	2300-2500	2500-2690	1695-1880	1900-2025	2110-2170	2300-2500	2500-2690	
Gain, Average [dBi]	Min Tilt	14.9	15.4	15.9	14.5	14.6	15.4	16.2	16.4	14.0	14.1	14.9	15.7	15.9
	Mid Tilt	15.1	15.6	16.1	14.7	14.8	15.6	16.4	16.6	14.2	14.3	15.1	15.9	16.1
	Max Tilt	14.9	15.4	15.9	14.5	14.6	15.4	16.2	16.4	14.0	14.1	14.9	15.7	15.9
Gain, Over All Tilts [dBi]	15.0 ±0.5	15.5 ±0.5	16.0 ±0.5	14.6 ±0.5	14.7 ±0.5	15.5 ±0.5	16.3 ±0.5	16.5 ±0.5	14.1 ±0.5	14.2 ±0.5	15.0 ±0.5	15.8 ±0.5	16.0 ±0.5	
Azimuth Beamwidth [°]	68.0 ±6.0	63.0 ±5.0	57.0 ±5.0	62.0 ±5.0	62.0 ±4.0	69.0 ±5.0	67.0 ±4.0	62.0 ±5.0	62.0 ±5.0	62.0 ±4.0	69.0 ±5.0	67.0 ±4.0	62.0 ±5.0	
Elevation Beamwidth [°]	11.7 ±1.0	10.3 ±1.0	9.2 ±1.0	10.5 ±0.5	9.5 ±0.5	9.0 ±0.5	7.8 ±0.5	7.3 ±0.5	10.5 ±0.5	9.5 ±0.5	9.0 ±0.5	7.8 ±0.5	7.3 ±0.5	
Electrical Downtilt [°]	2x 2-12			2x 2-12					2x 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	
Front-to-Back Ratio, Total Power, ±30° [dB]	22	22	22	25	25	25	25	25	25	25	25	25	25	
First Upper Side Lobe Suppression [dB]	16	16	16	17	17	17	17	17	17	17	17	17	17	
Upper Side Lobe Suppression [dB]	15	15	15	15	15	15	15	10	15	15	15	15	10	
Polarization [°]	±45			±45					±45					
Impedance [Ω]	50			50					50					
VSWR	< 1.5:1			< 1.5:1					< 1.5:1					
Return Loss [dB]	< -14.0			< -14.0					< -14.0					
Cross Polar Isolation [dB]	25 (Typical 28)			25 (Typical 28)					25 (Typical 28)					
Interband Isolation [dB]	25			30					30					
Passive Intermodulation (PIM) 3rd order, 2x20W [dBc]	< -153			< -153					< -153					
Maximum Effective Power Per Port [W]	350			350					350					

PRODUCT VARIANT	
Single RET Firmware Configuration	M6WHMU01-V1
Multi RET Firmware Configuration	M6WHMU01-V2
Dual RET, Single RET Firmware Configuration	M6WHMU01-V3
Dual RET, Multi RET Firmware Configuration	M6WHMU01-V4

SHIPPING AND ORDER INFORMATION	
Packing Size: Length, Width, Depth [inch mm]	110.2x27.6x27.6   2800x700x700
No Bracket: Shipping Weight [lbs kg], P/N	346.1   157   M6WHMU01-Vx-P

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 11.1 ([www.ngmn.org](http://www.ngmn.org)) within parameters shown on this datasheet.

All specifications are subject to change without notice. Visit [www.kaelus.com](http://www.kaelus.com) for the most current data sheets.

