

# P6BTLU01

6-Port, 65 Degree, Base Station Sector Antenna

## Kaelus Next Generation Base Station Antennas

- Innovative slotted disc antenna technology
- High gain over an extended tilt range
- Fully integrated Remote Electrical Tilt, AISG compatible
- Supports MIMO: 2x2 on Low Band and 4x4 on Mid Band
- Electrical specifications as per NGMN P-BASTA version 11.1



| GENERAL (BASTA)               | LB R1   | MB Y1     | MB Y2     |
|-------------------------------|---------|-----------|-----------|
| Frequency Range               | 694-960 | 1695-2690 | 1695-2690 |
| Gain Over All Tilts [dBi]     | 17.0    | 18.0      | 18.0      |
| Polarization                  | X       | X         | X         |
| Azimuth Beamwidth [°]         | 65      | 65        | 65        |
| Electrical Downtilt Range [°] | 2-12    | 2-12      | 2-12      |
| Ports Per Band                | 2       | 2         | 2         |

## Specifications and Layouts

| MECHANICAL SPECIFICATIONS                                 |                              |
|---|------------------------------|
| Antenna Dimensions: Length, Width, Depth [inch mm]        | 94.4x13.7x6.1   2398x348x155 |
| Net Weight (Antenna) [lbs kg]                             | 59.5   27                    |
| Connector Type  | 4.3-10 Female                |
| Connector Quantity  | 6                            |
| Connector Position  | Bottom                       |
| Windload, Calculation* [mph km/h]                         | 93.2   150                   |
| Windload, Frontal [lbf N]                                 | 241.9   1076                 |
| Windload, Lateral [lbf N]                                 | 40.2   179                   |
| Survival Wind Speed [mph km/h]                            | 150   241                    |
| Radome Material   | GRP                          |
| Radome Colour [RAL]                                       | 7035 (Light Gray)            |
| Product Environmental Compliance                          | RoHS                         |
| Mech Distance Between Mounting Points - Antenna [inch mm] | 89.4   2270                  |
| 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                    |
| RET Interface (Quantity)                                  | 2 (1 Male + 1 Female)        |

# P6BTLU01

6-Port, 65 Degree, Base Station Sector Antenna

| ELECTRICAL SPECIFICATIONS (BASTA)                    | LB R1     |           |           | MB Y1/Y2  |           |           |           |           |      |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|
| Frequency Range [MHz]                                | 694-790   | 790-862   | 880-960   | 1695-1880 | 1900-2025 | 2110-2170 | 2300-2500 | 2500-2690 |      |
| Gain, Average [dBi]                                  | Min Tilt  | 16.6      | 16.8      | 17.1      | 17.2      | 17.5      | 17.8      | 18.1      | 18.3 |
|  | Mid Tilt  | 16.8      | 17.0      | 17.3      | 17.4      | 17.7      | 18.0      | 18.3      | 18.5 |
|  | Max Tilt  | 16.6      | 16.8      | 17.1      | 17.2      | 17.5      | 17.8      | 18.1      | 18.1 |
| Gain, Over All Tilts [dBi]                           | 16.7 ±0.5 | 16.9 ±0.5 | 17.2 ±0.5 | 17.3 ±0.5 | 17.6 ±0.5 | 18.0 ±0.5 | 18.2 ±0.5 | 18.3 ±0.5 |      |
| Azimuth Beamwidth [°]                                | 70.0 ±5.0 | 68.0 ±5.0 | 66.0 ±5.0 | 69.0 ±5.0 | 65.0 ±5.0 | 65.0 ±5.0 | 62.0 ±5.0 | 60.0 ±5.0 |      |
| Elevation Beamwidth [°]                              | 8.0 ±0.5  | 7.5 ±0.5  | 7.0 ±0.5  | 5.5 ±0.5  | 5.2 ±0.5  | 5.0 ±0.5  | 4.7 ±0.5  | 4.5 ±0.5  |      |
| Electrical Downtilt [°]                              | 2-12      |           |           | 2x 2-12   |           |           |           |           |      |
| Elevation Downtilt Deviation [°]                     | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       |      |
| Front-to-Back Ratio, Total Power, ±30° [dB]          | 25        | 25        | 25        | 25        | 25        | 25        | 25        | 25        |      |
| First Upper Side Lobe Suppression [dB]               | 17        | 17        | 17        | 17        | 17        | 17        | 17        | 17        |      |
| Upper Side Lobe Suppression [dB]                     | 15        | 15        | 15        | 15        | 15        | 15        | 15        | 15        |      |
| Polarization [°]                                     | ±45       |           |           | ±45       |           |           |           |           |      |
| Impedance [Ω]  | 50        |           |           | 50        |           |           |           |           |      |
| VSWR   | < 1.5:1   |           |           | < 1.5:1   |           |           |           |           |      |
| Return Loss [dB]                                     | < -14.0   |           |           | < -14.0   |           |           |           |           |      |
| Cross Polar Isolation [dB]                           | 30        |           |           | 30        |           |           |           |           |      |
| Interband Isolation [dB]                             | 35        |           |           | 35        |           |           |           |           |      |
| Passive Intermodulation (PIM) 3rd order, 2x20W [dBc] | < -153    |           |           | < -153    |           |           |           |           |      |
| Maximum Effective Power Per Port [W]                 | 350       |           |           | 350       |           |           |           |           |      |

## PRODUCT VARIANT

|                                   |             |
|-----------------------------------|-------------|
| Single RET Firmware Configuration | P6BTLU01-V1 |
| Multi RET Firmware Configuration  | P6BTLU01-V2 |

## SHIPPING AND ORDER INFORMATION

|  |                                |                |
|--|--------------------------------|----------------|
| Packing Size: Length, Width, Depth [inch mm] | 111.9x19.7x11.8   2842x500x300 |                |
| No Bracket: Shipping Weight [lbs kg], P/N    | 72.8   33.0                    | P6BTLU01-Vx-P1 |
| Fixed Bracket: Shipping Weight [lbs kg], P/N | 77.2   35.0                    | P6BTLU01-Vx-P2 |
| Tilt Bracket: Shipping Weight [lbs kg], P/N  | 81.6   37.0                    | P6BTLU01-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 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.

