

6638318Gv

5-Band, 10-Port, 35°, 65°, XPOL, Panel Antenna, Variable Tilt, 2199 mm

- Penta band antenna, Dual polarisation, 10 connectors
- Independent, continuously adjustable tilt on each band 2-12° / 2-12° / 2-12° / 2-12° / 2-12°
- RET version, 3GPP/AISG2.0 with five integrated RCU

ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 10 colour-coded connectors located at the bottom face.

| Frequency Designation | R1 | Y1 | Y2 | Y3 | Y4 |
|---------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Frequency Range | 698-960 MHz | 1710-2690 MHz | 1710-2690 MHz | 1710-2690 MHz | 1710-2690 MHz |
| Polarisation | Xpol | Xpol | Xpol | Xpol | Xpol |
| Horizontal Beamwidth | 65° | 35° | 35° | 35° | 35° |
| Electrical Downtilt Range | 2-12° | 2-12° | 2-12° | 2-12° | 2-12° |
| Connector Type | (2x) 4.3/10 Female or 7/16 DIN Female | (2x) 4.3/10 Female or 7/16 DIN Female | (2x) 4.3/10 Female or 7/16 DIN Female | (2x) 4.3/10 Female or 7/16 DIN Female | (2x) 4.3/10 Female or 7/16 DIN Female |

ELECTRICAL CHARACTERISTICS

| | | R1 | | | |
|---|---------------------|----------------|----------------|----------------|--|
| Frequency Bands | | 698-960 MHz | | | |
| | | 698-803 MHz | 824-880 MHz | 880-960 MHz | |
| Gain | at Mid Tilt | 14.8 dBi | 15.3 dBi | 15.5 dBi | |
| | Over All Tilts | 14.7 ± 0.6 dBi | 15.2 ± 0.6 dBi | 15.5 ± 0.6 dBi | |
| Input Impedance | | 50Ω | | | |
| VSWR | | < 1.5 | | | |
| Return loss | | > 14 dB | | | |
| Polarisation | | ±45° | | | |
| Horizontal Beamwidth (-3 dB) | | 67° ± 6° | 66° ± 6° | 63° ± 6° | |
| Vertical Beamwidth (-3 dB) | | 10.7° ± 1.1° | 9.2° ± 0.9° | 8.8° ± 0.9° | |
| Electrical Downtilt Range | | 2-12° | | | |
| Intra-Band Isolation | | ≥ 25 dB | | | |
| Inter-Band Isolation | | ≥ 25 dB | | | |
| First Upper Sidelobe Suppression | | ≥ 15 dB | ≥ 15 dB | ≥ 15 dB | |
| Squint | | ≤ 3 dB | ≤ 3 dB | ≤ 3 dB | |
| Front-to-Back Ratio (@ 180° ± 30°) | | ≥ 22 dB | ≥ 23 dB | ≥ 24 dB | |
| Cross Polar Ratio | Main Direction (0°) | ≥ 15 dB | ≥ 15 dB | ≥ 15 dB | |
| | Sector Edges (±60°) | ≥ 8 dB | ≥ 8 dB | ≥ 8 dB | |
| Maximum Average Power Per Port (at 50° C ambient temperature) | | 250 W | | | |
| Intermodulation 3rd Order, 2 x 43 dBm carrier | | <-150 dBc | | | |
| Grounding | | DC Ground | | | |

Standard values based on NGMN-P-BASTA version 11.1 recommendation.



Several patents pending regarding this product. Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

6638318Gv

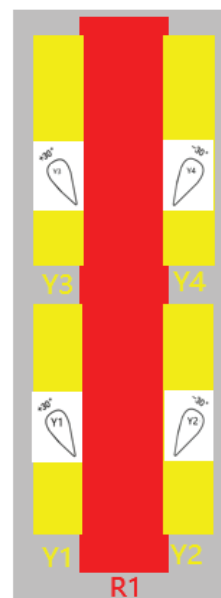
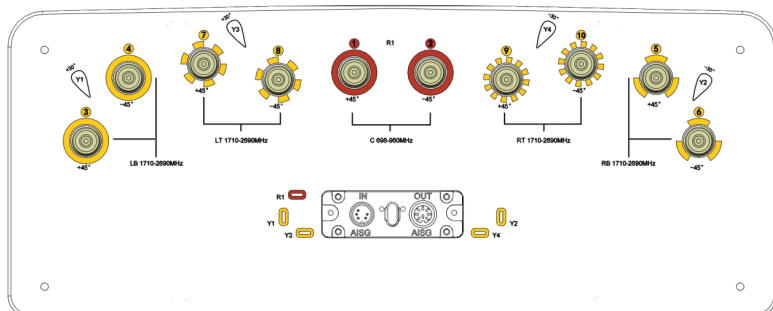
5-Band, 10-Port, 35°, 65°, XPOL, Panel Antenna, Variable Tilt, 2199 mm

| ELECTRICAL CHARACTERISTICS | | Y1, Y2, Y3, Y4 | | |
|---|---------------------|--------------------|----------------|----------------|
| Frequency Bands | | 1710-2690 MHz | | |
| | | 1710-1880 MHz | 1920-2170 MHz | 2500-2690 MHz |
| Gain | at Mid Tilt | 17.3 dBi | 18.0 dBi | 18.6 dBi |
| | Over All Tilts | 17.2 ± 0.6 dBi | 17.9 ± 0.6 dBi | 18.5 ± 0.6 dBi |
| Input Impedance | | 50Ω | | |
| VSWR | | < 1.5 | | |
| Return loss | | > 14 dB | | |
| Polarisation | | ±45° | | |
| Horizontal Beamwidth (-3 dB) | | 39° ± 3° | 35° ± 3° | 30° ± 3° |
| Azimuth Beam centers | | (±30°) ± 3° | (±30°) ± 3° | (±30°) ± 3° |
| Vertical Beamwidth (-3 dB) | | 9.8° ± 1.0° | 8.7° ± 0.9° | 6.9° ± 0.7° |
| Electrical Downtilt Range | | 2-12° | | |
| Intra-Band Isolation | | Same beam: ≥ 25 dB | | |
| Beam to beam Isolation | | ≥ 25 dB | | |
| Inter-Band Isolation | | ≥ 25 dB | | |
| First Upper Sidelobe Suppression | | ≥ 15 dB | ≥ 15 dB | ≥ 15 dB |
| Squint | | ≤ 3 dB | ≤ 3 dB | ≤ 3 dB |
| Front-to-Back Ratio (@ 180° ± 30°) | | ≥ 25 dB | ≥ 25 dB | ≥ 25 dB |
| Cross Polar Ratio | Main Direction (0°) | ≥ 15 dB | ≥ 15 dB | ≥ 15 dB |
| | Sector Edges (±60°) | ≥ 8 dB | ≥ 8 dB | ≥ 8 dB |
| Maximum Average Power Per Port (at 50° C ambient temperature) | | 200 W | | |
| Intermodulation 3rd Order, 2 x 43 dBm carrier | | < -150 dBc | | |
| Grounding | | DC Ground | | |

Standard values based on NGMN-P-BASTA version 11.1 recommendation.

6638318Gv

5-Band, 10-Port, 35°, 65°, XPOL, Panel Antenna, Variable Tilt, 2199 mm



| ARRAY LAYOUT | ARRAY | FREQUENCY | CONNECTOR | CONNECTOR TYPE |
|--------------|-------|-----------|-----------|----------------------------------|
| | R1 | 698-960 | 1-2 | 4.3/10 Female or 7/16 DIN Female |
| | Y1 | 1710-2690 | 3-4 | 4.3/10 Female or 7/16 DIN Female |
| | Y2 | 1710-2690 | 5-6 | 4.3/10 Female or 7/16 DIN Female |
| | Y3 | 1710-2690 | 7-8 | 4.3/10 Female or 7/16 DIN Female |
| | Y4 | 1710-2690 | 9-10 | 4.3/10 Female or 7/16 DIN Female |

Diagram shown at right depicts the view from the front of the antenna. The illustration is not shown to scale.

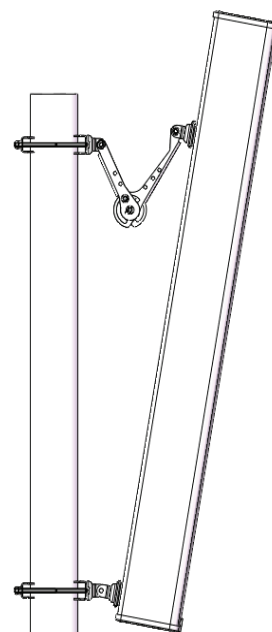
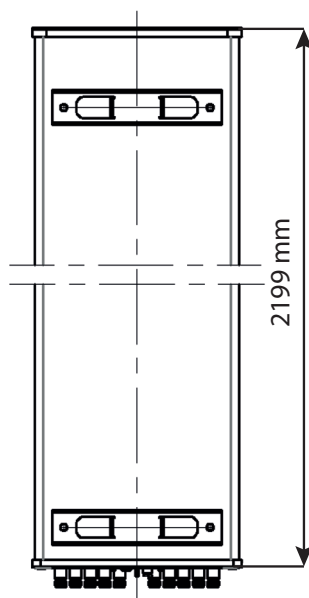
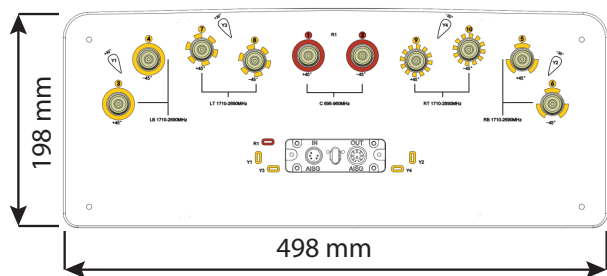
| INTEGRATED RET PROPERTIES | |
|------------------------------|---|
| Protocols | Compliant With AISGV2.0 And 3GPP |
| Power Supply | 10-30VDC |
| Power Consumption | < 1W (Idle), < 10W (In Motion) |
| Angular Accuracy | ≤ 0.5 deg |
| Hardware Interface | RS485 And Power |
| Safety Standard | Compliant to EN 60950/UL 60950/RoHS, CE |
| Remote Control | Can management from OMC, BTS/NodeB |
| Adjustment Time (Full Range) | ≤ 90 s (typical, depending on Antenna type) |
| Adjustment Cycles | > 20,000 |
| Torque Max | ≥ 160 mN.m |
| Lightning Protection Rating | IEC 61000-4-5 Current Pulse Profile, 8kA (8/20 μs), 2.5 kA (10/350 μs) |
| Housing Material | Aluminum |
| Housing Color | Silvery white |
| Mounting | Directly onto Antenna |
| Protection Class | IP65 |
| Operating Temperature | -40° to +60° C |
| Weight | ≤ 500 g |
| Connectors | 2 x 8 Pin Circle Connector According To IEC 60130-9 And AISG. Daisy Chain In : Male, Daisy Chain Out : Female Pin3:RS485+; Pin5:RS485-; Pin6:10~30V; Pin7:GND Female connector: 8 PINs ,Male connector: 5 PINs |

Several patents pending regarding this product. Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

6638318Gv

5-Band, 10-Port, 35°, 65°, XPOL, Panel Antenna, Variable Tilt, 2199 mm

| MECHANICAL CHARACTERISTICS | | PACKAGING |
|--|--|--|
| Dimensions (Height x Width x Depth) | 2199 x 498 x 198 mm (86.5 x 19.6 x 7.7 in) | Carton Box 2.418 x 0.593 x 0.318 m (95.1 x 23.3 x 12.5 in) |
| Weight (excluding mounting accessory) | 35.5 kg (78.2 lbs) | |
| Weight with brackets | 41 kg (90.3 lbs) | |
| Radome Material | Fiberglass (UV, Resistant) | |
| Radome Color | Light Grey | |
| Maximum Wind Speed | 200 km/h (124.3 mph) | |
| Wind Load at 150 km/h | Frontal | 1020 N (229.3 lbf) |
| | Rear | 1140 N (256.2 lbf) |
| | Lateral | 500 N (112.4 lbf) |
| Operating/Storage Temperature | -40° to +60° C (-40° to 140° F) | |
| MOUNTING KIT OPTIONS | POLE DIAMETER | MECHANICAL TILT |
| All mounting bracket kits are ordered separately unless otherwise indicated. | | |
| Mounting and Downtilt Bracket Kit (Included) | Ø50-Ø125 mm (Ø1.9-Ø4.9 in) | 0-10° |



Several patents pending regarding this product. Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.