

TTTT90AP-1XR



8-port sector Planar Array Antenna, 2496–2690 MHz, 90° HPBW, 1x RET

- Excellent solution for site sharing and maximizing capacity
- Employs state-of-the-art ultra wideband technology providing excellent RF performance in all bands
- MIMO ready

OBSOLETE

This product was discontinued on: **March 27, 2020**

Replaced By:

T4-90A-R1

Planar Array Antenna, 2300–2690 MHz, 90° HPBW, 1xIntRET

General Specifications

| | |
|---|--|
| Antenna Type | Sector |
| Band | Single band |
| Calibration Connector Interface | N Female |
| Calibration Connector Quantity | 1 |
| Color | Light Gray (RAL 7035) |
| Grounding Type | RF connector inner conductor and body grounded to reflector and mounting bracket |
| Performance Note | Outdoor usage |
| Radome Material | PVC, UV resistant |
| Radiator Material | Low loss circuit board |
| RF Connector Interface | 4.1-9.5 DIN Female |
| RF Connector Location | Bottom |
| RF Connector Quantity, high band | 8 |
| RF Connector Quantity, total | 8 |

Remote Electrical Tilt (RET) Information

| | |
|--------------------------------|-----------------------------------|
| RET Interface | 8-pin DIN Female 8-pin DIN Male |
| RET Interface, quantity | 1 female 1 male |

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|--|----------------------------|
| Input Voltage | 10–30 Vdc |
| Internal RET | High band (1) |
| Power Consumption, idle state, maximum | 1 W |
| Power Consumption, normal conditions, maximum | 10 W |
| Protocol | 3GPP/AISG 2.0 (Single RET) |

Dimensions

| | |
|---|---------------------|
| Width | 307 mm 12.087 in |
| Depth | 118 mm 4.646 in |
| Length | 1610 mm 63.386 in |
| Net Weight, without mounting kit | 15.5 kg 34.172 lb |
| TDD Column Spacing | 58 mm 2.283 in |

Electrical Specifications

| | |
|---------------------------------|-----------------|
| Impedance | 50 ohm |
| Operating Frequency Band | 2496 – 2690 MHz |
| Polarization | ±45° |

Electrical Specifications, Broadcast 65°

| | |
|--|--------|
| Beamwidth, Horizontal | 68 ° |
| Beamwidth, Vertical | 5 ° |
| Beamwidth, Vertical Tolerance | ±0.5° |
| CPR at Boresight | 17 dB |
| Front-to-Back Total Power at 180° ± 30° | 32 dB |
| Gain | 18 dBi |
| Null Fill | -21 dB |

Electrical Specifications, Single Column

| | |
|--|--------|
| Beamwidth, Horizontal | 96 ° |
| Beamwidth, Vertical | 4.7 ° |
| Beamwidth, Vertical Tolerance | ±0.25° |
| CPR at Boresight | 15 dB |
| CPR at Sector | 13 dB |
| Front-to-Back Total Power at 180° ± 30° | 30 dB |

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| | |
|-------------------------------------|----------|
| Gain | 17.2 dBi |
| Input per Port, maximum | 250 W |
| USLS at Main Beam up to +10° | 18 dB |

Beam Forming Weights

| | | | Port 1 | Port 2 | Port 3 | Port 4 | Port 5 | Port 6 | Port 7 | Port 8 |
|-----|--|--------------|--------|--------|--------|--------|--------|--------|--------|--------|
| P0 | Tapered_Broadcast_65° for tilt 0-8 | Amp(voltage) | 0.33 | 0 | 1 | 0 | 1 | 0 | 0.33 | 0 |
| | | PHz | 0 | 0 | 110 | 0 | 110 | 0 | 0 | 0 |
| P1 | Tapered_Broadcast_65° for tilt 0-8 | Amp(voltage) | 0 | 0.33 | 0 | 1 | 0 | 1 | 0 | 0.33 |
| | | PHz | 0 | 0 | 0 | 110 | 0 | 110 | 0 | 0 |
| P0 | FullPower_Broadcast_65° for tilt 0-8 | Amp(voltage) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| | | PHz | 60 | 57 | 0 | 117 | 0 | 0 | 0 | 0 |
| P1 | FullPowerBroadcast_65° for tilt 0-8 | Amp(voltage) | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | PHz | 0 | 0 | 0 | 0 | 55 | -123 | 0 | -68 |
| P0 | Tapered_Power_Broadcast_90° for tilt 0-3 | Amp(voltage) | 0.52 | 0 | 1 | 0 | 0.68 | 0 | 0.43 | 0 |
| | | PHz | 0 | 0 | 114 | 0 | 105 | 0 | -9 | 0 |
| P1 | Tapered_PowerBroadcast_90° for tilt 0-3 | Amp(voltage) | 0 | 0.52 | 0 | 1 | 0 | 0.68 | 0 | 0.43 |
| | | PHz | 0 | 0 | 0 | 114 | 0 | 105 | 0 | -9 |
| P0 | Tapered_Power_Broadcast_90° for tilt 4-8 | Amp(voltage) | 0.52 | 0 | 1 | 0 | 0.68 | 0 | 0.43 | 0 |
| | | PHz | 0 | 0 | 124 | 0 | 108 | 0 | 4 | 0 |
| P1 | Tapered_PowerBroadcast_90° for tilt 4-8 | Amp(voltage) | 0 | 0.52 | 0 | 1 | 0 | 0.68 | 0 | 0.43 |
| | | PHz | 0 | 0 | 0 | 124 | 0 | 108 | 0 | 4 |
| +45 | Service Beam_0° for tilt 0-8 | Amp(voltage) | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | | PHz | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| -45 | Service Beam_0° for tilt 0-8 | Amp(voltage) | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| | | PHz | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 | Service Beam_30° for tilt 0-8 | Amp(voltage) | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | | PHz | 0 | 0 | 100 | 0 | 200 | 0 | 300 | 0 |
| -45 | Service Beam_30° for tilt 0-8 | Amp(voltage) | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| | | PHz | 0 | 0 | 0 | 100 | 0 | 200 | 0 | 300 |
| +45 | Service Beam_-30° for tilt 0-8 | Amp(voltage) | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | | PHz | 0 | 0 | -100 | 0 | -200 | 0 | -300 | 0 |
| -45 | Service Beam_-30° for tilt 0-8 | Amp(voltage) | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| | | PHz | 0 | 0 | 0 | -100 | 0 | -200 | 0 | -300 |

Electrical Specifications

| | |
|--|------------------|
| Frequency Band, MHz | 2496–2690 |
| Gain, dBi | 17.8 |
| Beamwidth, Horizontal, degrees | 96 |
| Beamwidth, Vertical, degrees | 4.7 |
| Beam Tilt, degrees | 0–8 |
| USLS, typical, dB | 18 |
| Coupling level, Amp, Antenna port to Cal port, dB | 26 |
| Coupling level, max Amp Δ, Antenna port to Cal port, dB | ±2 |
| Coupler, max Amp Δ, Antenna port to Cal port, dB | 0.9 |
| Coupler, max Phase Δ, Antenna port to Cal port, degrees | 7 |
| CPR at 3 dB Horizontal Beamwidth, dB | 14 |

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|---|-------------|
| Isolation, Cross Polarization, dB | 25 |
| VSWR Return loss, dB | 1.45 14.7 |
| PIM, 3rd Order, 2 x 20 W, dBc | -143 |
| Input Power per Port, maximum, watts | 250 |

Electrical Specifications, BASTA

| | |
|---|-------------------------------------|
| Frequency Band, MHz | 2496–2690 |
| Gain by all Beam Tilts, average, dBi | 17.2 |
| Gain by Beam Tilt, average, dBi | 0° 17.2 4° 17.3 8° 17.3 |
| Beamwidth, Horizontal Tolerance, degrees | ±7.9 |
| Beamwidth, Vertical Tolerance, degrees | ±0.3 |
| CPR at Sector, dB | 11 |

Mechanical Specifications

| | |
|---|---|
| Mechanical Tilt Range | 0°–17° |
| Wind Loading @ Velocity, frontal | 559.0 N @ 150 km/h (125.7 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 114.0 N @ 150 km/h (25.6 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear | 677.0 N @ 150 km/h (152.2 lbf @ 150 km/h) |
| Wind Speed, maximum | 241 km/h (150 mph) |

Packaging and Weights

| | |
|-----------------------|---------------------|
| Width, packed | 413 mm 16.26 in |
| Depth, packed | 257 mm 10.118 in |
| Length, packed | 1740 mm 68.504 in |
| Weight, gross | 23.3 kg 51.368 lb |

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| CE | Compliant with the relevant CE product directives |
| CHINA-ROHS | Above maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

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REACH-SVHC Compliant as per SVHC revision on www.commscope.com/ProductCompliance

ROHS Compliant/Exempted

UK-ROHS Compliant/Exempted



Included Products

- BSAMNT-3 – Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance