



APXV3RR13A-C-A20

Twin Beam Dual Polarized Antenna, 1710-2170, 33deg, 20dBi, 1.3m, VET, 0-10deg

This twin beam (split beam) antenna offers excellent horizontal and vertical pattern control in 2 sectors with 60 degrees of separation in azimuth. It is ideal choice for ultra-high dense urban areas. It provides a solution to easily upgrade from a standard 3 sector site to a 6 sector site without adding additional antennas. The wideband design allows the antenna to be used in the 1800, 1900, and 2100 MHz bands. Additionally, two sectors can be vertically electrical tilted independently.

FEATURES / BENEFITS

- Twin beam (split beam) with 4 ports — supports two 33 degree sectors with 60 degrees of separation in azimuth
- High gain design — ideal for coverage penetration
- Independent electrical downtilt — allows for greater flexibility in system design
- High suppression of upper sidelobes — reduces cell interference
- Designed with low windload — minimizes tower loading



APXV3RR13A-C_Image

Technical features

ELECTRICAL SPECIFICATIONS

| Electrical Specification Header | | ELECTRICAL SPECIFICATIONS Y1 | | |
|-------------------------------------|-------|------------------------------|--------------|--------------|
| Frequency Band | Mhz | 1710-1890 | 1850-1990 | 1920-2170 |
| Polarization | - | Slant +/- 45 | Slant +/- 45 | Slant +/- 45 |
| Impedance | Ohms | 50 | 50 | 50 |
| Passive Intermodulation | dBc | | | |
| Maximum Effective Power per Port | Watts | 300 | 300 | 300 |
| Gain | dBi | 19.9 | 19.9 | 20.6 |
| VSWR | - | <1.5:1 | <1.5:1 | <1.5:1 |
| Return Loss | dB | >14 | >14 | >14 |
| Cross Polar Isolation | dB | >30 | >30 | >30 |
| Azimuth Beamwidth 3dB | Deg | 37.1+/-1.9 | 35.8+/-0.8 | 34.2+/-2.4 |
| Front-To-Back, at +/-30 Total Power | dB | >24 | >24.3 | >24.3 |
| Elevation Beamwidth 3 dB | Deg | 7.9+/-0.4 | 7.5+/-0.4 | 7+/-0.6 |
| Electrical Downtilt | Deg | 0 to 10 | 0 to 10 | 0 to 10 |
| Elevation Downtilt Deviation | Deg | <0.45 | <0.34 | <0.44 |
| First Upper Side Lobe Suppression | dB | >18.8 | >15.6 | >15.5 |



ELECTRICAL SPECIFICATIONS

| Electrical Specification Header | ELECTRICAL SPECIFICATIONS Y2 | | | |
|-------------------------------------|------------------------------|--------------|--------------|--------------|
| Frequency Band | Mhz | 1710-1890 | 1850-1990 | 1920-2170 |
| Polarization | - | Slant +/- 45 | Slant +/- 45 | Slant +/- 45 |
| Impedance | Ohms | 50 | 50 | 50 |
| Passive Intermodulation | dBc | | -150 | -150 |
| Maximum Effective Power per Port | Watts | 300 | 300 | 300 |
| Gain | dBi | 19.9 | 19.9 | 20.6 |
| VSWR | - | <1.5:1 | <1.5:1 | <1.5:1 |
| Return Loss | dB | >14 | >14 | >14 |
| Cross Polar Isolation | dB | >30 | >30 | >30 |
| Azimuth Beamwidth 3dB | Deg | 36.9+/-1.7 | 35.4+/-0.8 | 33.9+/-2.1 |
| Frotn-To-Back, at +/-30 Total Power | dB | >24.2 | >24.4 | >24.4 |
| Elevation Beamwidth 3 dB | Deg | 7.9+/-0.5 | 7.3+/-0.4 | 6.8+/-0.7 |
| Electrical Downtilt | Deg | 0 to 10 | 0 to 10 | 0 to 10 |
| Elevation Downtilt Deviation | Deg | <0.58 | <0.6 | <0.84 |
| First Upper Side Lobe Suppression | dB | >19.4 | >17.6 | >16.7 |

MECHANICAL SPECIFICATIONS

| | | | | |
|---------------------------------|---------|---------------------------------------|--|--|
| Dimensions - H x W x D | mm (in) | 1360 x 400 x 160 (53.5 x 15.7 x 6.3) | | |
| Weight (Antenna Only) | kg (lb) | 23.6 (52) | | |
| Weight (Mounting Hardware only) | kg (lb) | 6.5 (14.3) | | |
| Packing size- HxWxD | mm (in) | 1520 x 520 x 320 (59.8 x 20.5 x 12.6) | | |
| Shipping Weight | kg (lb) | 33.7 (72.3) | | |
| Connector type | | 4 x 7-16 DIN Female at bottom | | |
| Adjustment mechanism | | External Ret solution | | |
| Radome Material / Color | | Fiberglass / Light Grey RAL7035 | | |

TESTING AND ENVIRONMENTAL

| | | | | |
|------------------------------|---------|-------------------------|--|--|
| Temperature Range | °C (°F) | -40 to 70 (-40 to 158) | | |
| Lightning protection | | Direct Ground | | |
| Survival/Rated Wind Velocity | km/h | 200 (160) | | |
| Wind Load @Rated Wind Front | N | 740 | | |
| Wind Load @Rated Wind Side | N | 333 | | |
| Wind Load @Rated Wind Rear | N | 740 | | |

ORDERING INFORMATION

| Order No. | Configuration | Mounting Hardware | Mounting pipe Diameter | Weight |
|------------------|-----------------------|-------------------|------------------------|---------|
| APXV3RR13A-C | Manual tilt control | Included | 50-115mm | 33.7 kg |
| APXV3RR13A-C-A20 | External RET included | Included | 50-115mm | 34.7 kg |

External Document Links

Notes
Models Available



APXV3RR13A-C-A20

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APXV3RR13A-C: No ACU included (33.7kg, including mounting hardware)

APXV3RR13A-C-A20: (2) Pre-commissioned external ACUs included (34.7kg, including mounting hardware)

All electrical parameters are following NGMN 9.6 BASTA requirements