

Mid-Band 6-Beam 4x4 Antenna [1695-2690 MHz]

GP5124-07276

Description:

- 4x4 MIMO 6-beam antenna for high-capacity stadium/venue or special events applications
- 6-beams (24-ports) 1695-2690 MHz; each beam with 4x4 MIMO capability
- 6° Fixed Electrical Downtilt
- Patent pending technology allows for stable azimuth beam directions over the entire operating frequency band
- Excellent alternative to large lens-based multibeam antennas
- External ruggedized features of the antenna enclosure provide added protection during the installation process
- Optional heavy-duty transport case to prevent damage for multiple deployment scenarios



4x4 MIMO 1695-2690 MHz 6-Beam Antenna

Electrical Specifications

| Frequency Band [MHz] | 1695-1910 | 1930-2020 | 2110-2200 | 2305-2360 | 2496-2690 |
|---|-----------------------------------|---------------|-----------|---------------|---------------|
| Gain, max. (dBi) | 20.3 | 20.7 | 21.1 | 21.3 | 21.8 |
| Gain, avg. (dBi) | 18.8 | 19.5 | 20.1 | 19.6 | 20.4 |
| Azimuth Beam Width, 3dB (°) | 11.6 | 10.5 | 10.0 | 9.2 | 8.4 |
| Azimuth Beam Width, 10dB (°) | 20.3 | 18.4 | 17.5 | 16.2 | 14.8 |
| Azimuth Beam Spacing (°) | 16 | | | | |
| Azimuth Beam Crossover (dB) | 7.1 | 8.4 | 9.4 | 11.6 | 12.9 |
| Elevation Beam Width, 3dB (°) | 15.6 | 14.5 | 12.8 | 12.2 | 10.8 |
| Elevation Beam Width, 10dB (°) | 27.6 | 25.8 | 22.1 | 21.6 | 18.9 |
| Electrical Downtilt (°) | 6 FET (per each 4x4 beam cluster) | | | | |
| First Upper Sidelobe Suppression (dB, avg.) | 23 | 21 | 18 | 20 | 22 |
| Front-to-Back Ratio, 180° (dB, avg.) | 38 | 40 | 39 | 36 | 37 |
| Cross-Polar Discrimination @ Boresight (dB, avg.) | 22 | 23 | 24 | 20 | 30 |
| VSWR (max.) / RL (dB, min.) | 1.31:1 / 17.5 | 1.33:1 / 17.0 | | 1.27:1 / 18.5 | 1.40:1 / 15.5 |
| Port-to-Port Isolation, Intrabeam* (dB, min.) | 29 | | 28 | | 27 |
| Port-to-Port Isolation, Interbeam** (dB, min.) | 17.5 | 18.0 | 22.0 | 14.5 | 16.5 |
| PIM @ 2x43 dBm, dBc (max.) | -153 | | | | |
| Max Power per Port (W) | 100 | | | | |
| Polarization (°) | Dual slant 45 (±45) | | | | |
| Impedance (Ω) | 50 | | | | |

* Port-port isolation between each cluster of four ports in the same 4x4 MIMO beam

** Port-port isolation between any combination of ports between different beams

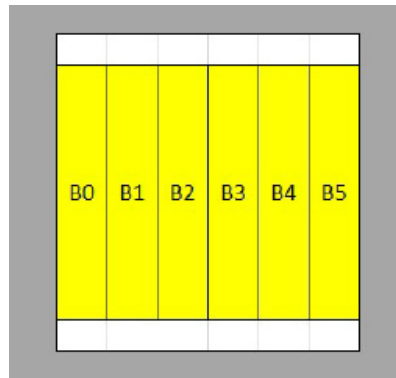
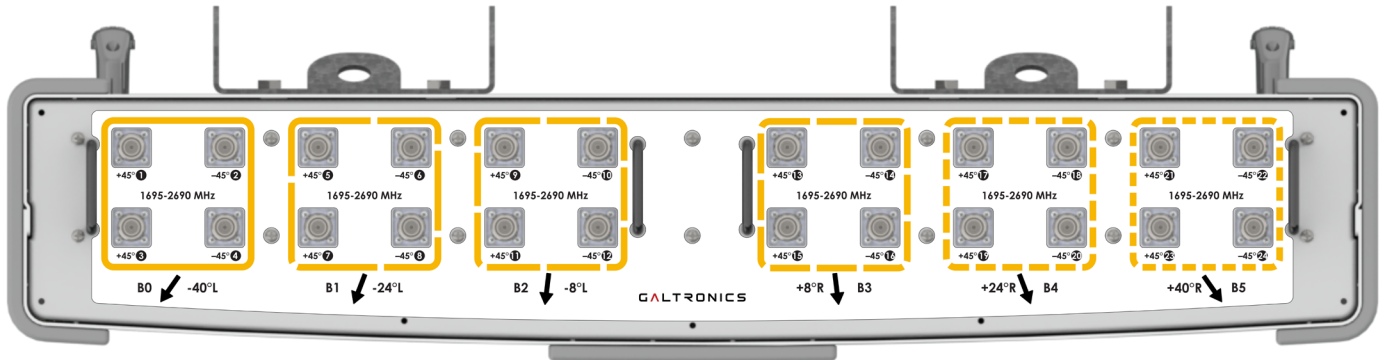
Electrical Specifications - BASTA

| Frequency Band [MHz] | 1695-1910 | 1930-2020 | 2110-2200 | 2305-2360 | 2496-2690 |
|---|-----------|-----------|-----------|-----------|-----------|
| Gain Over All Tilts, avg. (dBi) | 18.8 | 19.5 | 20.1 | 19.6 | 20.4 |
| Gain Over All Tilts Tolerance (dB) | 1.2 | 0.9 | 1.0 | 1.9 | 1.2 |
| AZ Beamwidth Tolerance (°) | 1.9 | 1.5 | 1.4 | 1.6 | 1.0 |
| EL Beamwidth Tolerance (°) | 0.9 | 0.5 | 0.5 | 0.7 | 0.8 |
| Upper Sidelobe Suppression, Peak to +20° (dB) | 19.8 | 18.2 | 15.5 | 15.8 | 20.5 |
| Front-to-Back Ratio, Total Power, +/-30° (dB) | 26.1 | 26.8 | 26.2 | 22.9 | 22.6 |
| Cross-Polar Discrimination at Boresight (dB) | 16.7 | 19.8 | 18.8 | 12.5 | 20.7 |

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Bottom Plate & Port Designation Details

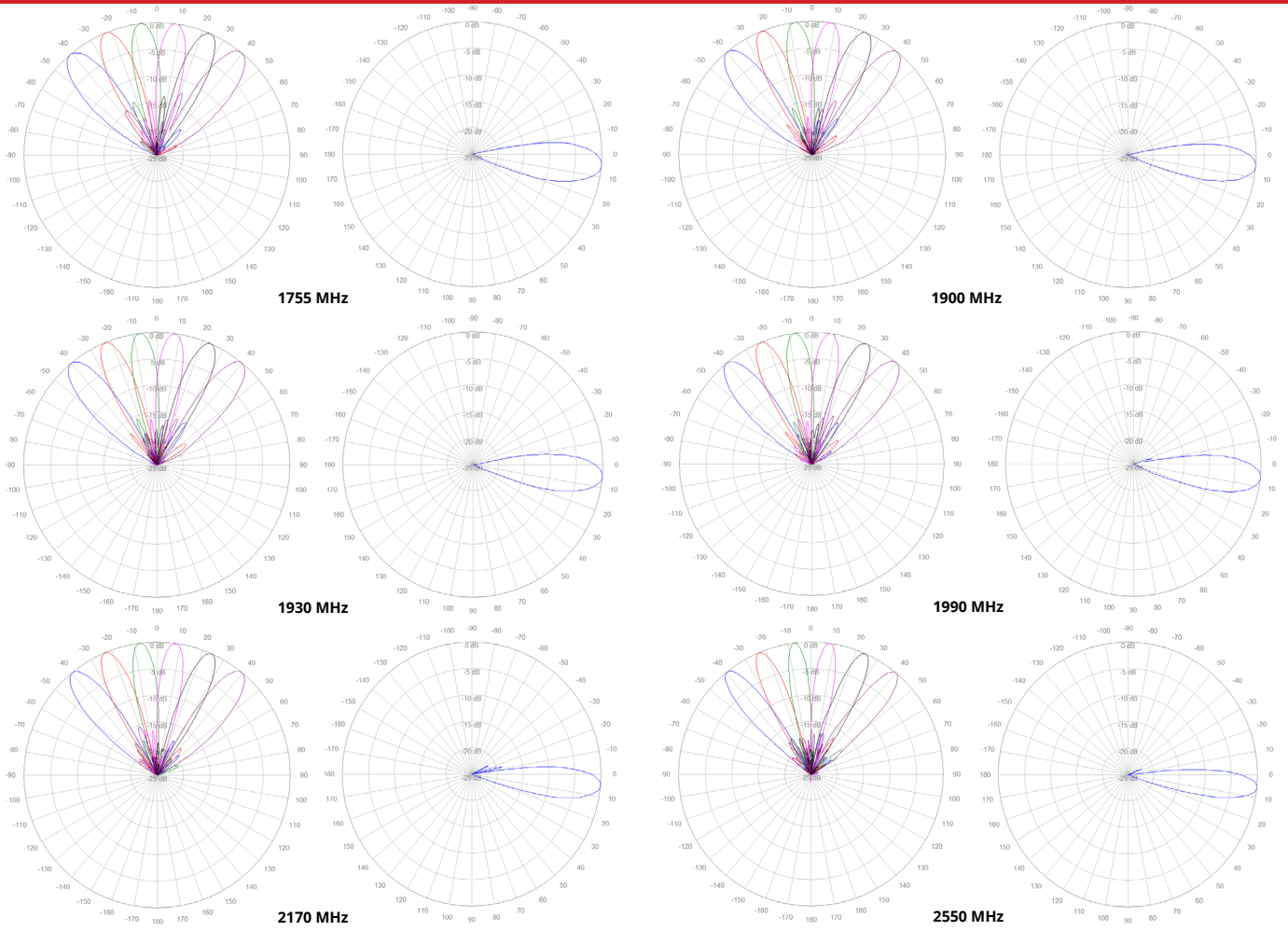


View from behind the antenna

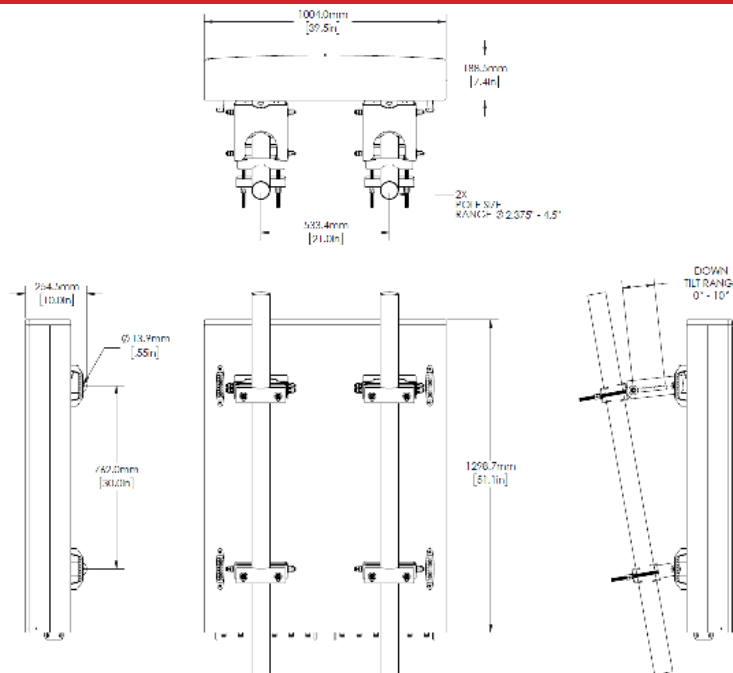
Port/Beam Designator Table

| Frequency Range | Ports | Beam Assignment | AZ Beam Direction | Downtilt |
|-----------------|---------|-----------------|-------------------|----------|
| 1695-2690 MHz | 1 - 4 | B0 | -40° L | 6° Fixed |
| 1695-2690 MHz | 5 - 8 | B1 | -24° L | 6° Fixed |
| 1695-2690 MHz | 9 - 12 | B2 | -8° L | 6° Fixed |
| 1695-2690 MHz | 13 - 16 | B3 | +8° R | 6° Fixed |
| 1695-2690 MHz | 17 - 20 | B4 | +24° R | 6° Fixed |
| 1695-2690 MHz | 21 - 24 | B5 | +40° R | 6° Fixed |

2D Antenna Patterns



Antenna Outline



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Mechanical Specifications

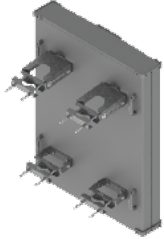
| | |
|--|---|
| Operating Temperature | -40° to 158°F (-40° to +70°C) |
| Antenna Weight | 73 lbs (33.2 kg) |
| Antenna Bracket Weight | 13.4 lbs (6.1 kg), 2x Brackets Per Antenna |
| Antenna Dimension (Height x Width x Depth) | 51.1" (1298.7 mm) x 39.5" (1004.0 mm) x 7.4" (188.5 mm) |
| Input Connector Type | 24x 4.3/10 (F) |
| Radome Material | ASA w/Heavy Duty Top/Bottom Caps |
| Radome Color | Gray |
| Wind Load, Front (@ 150 km/h)* | 1666 N / 375 lbf |
| Wind Load, Side (@ 150 km/h)* | 364 N / 82 lbf |
| Wind Load, Maximum (@ 150 km/h)* | 1695 N / 381 lbf |
| Wind Survival Rating | 150 mph (241 km/h) |

* Wind load based on calculations according to TIA-222-G

Part Numbers & Ordering Options

| Description | Color | Mounting Kit | Part Number |
|--|-------|--|------------------|
| 4x4 MIMO 1695-2690 MHz 6-Beam Antenna with 24x 4.3-10 (F) Connectors | Gray | Includes 2x MK-06989 mounting kit assemblies | GP5124-07276-012 |
| 4x4 MIMO 1695-2690 MHz 6-Beam Antenna with 24x 4.3-10 (F) Connectors and Heavy Duty Transport Case | Gray | Includes 2x MK-06989 mounting kit assemblies | GP5124-07276-112 |

Mounting Brackets & Optional Accessories

| Description: | Part Number: |
|---|---|
| <p>Heavy Duty Mounting Bracket (wind speed of 150 mph) [2x Included]</p> <p>The MK-6989 standard mounting bracket allows for easy installation of this Galtronics Multibeam Antenna. It provides 0°-10° of mechanical downtilt adjustability, and fits pole diameters ranging from 2.375" to 4.5".</p> <p>Note: The MK-06989 mounting bracket can also be ordered separately.</p> |  <p>MK-06989</p> |

RFD#: 7276 ; Revision: R3 ; Release Date: February 07, 2023;