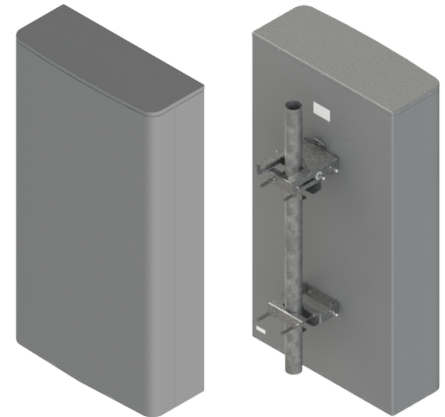


## Dual-Band 2/3 Multibeam 120° Sector 4x4 Antenna with RET [617-960 and 1695-2690 MHz]

### GP6320-08238

#### Description:

- 2/3 beam antenna for high-capacity venue and macro applications
- 2-beam (8-port) 617-960 MHz; each beam with 4x4 MIMO capability
- 3-beam (12-port) 1695-2690 MHz; each beam with 4x4 MIMO capability
- Patented technology allows for stable azimuth beam directions over the entire operating frequency band
- Excellent alternative to large lens-based multibeam antennas



#### Electrical Specifications

| Frequency Band [MHz]                     | 617-698             | 698-806 | 806-896 | 896-960 | 1695-1910      | 1930-2020 | 2110-2200 | 2305-2360 | 2496-2690 |
|------------------------------------------|---------------------|---------|---------|---------|----------------|-----------|-----------|-----------|-----------|
| Input Connector Type                     | 8 x 4.3-10(F)       |         |         |         | 12 x 4.3-10(F) |           |           |           |           |
| Gain, max. (dBi)                         | 13.6                | 14.5    | 14.3    | 13.7    | 17.7           | 18.3      | 18.7      | 18.6      | 18.9      |
| Gain, avg. (dBi)                         | 12.7                | 13.4    | 13.1    | 12.5    | 15.6           | 16.7      | 17.4      | 16.8      | 17.1      |
| Azimuth Beamwidth (°)                    | 36.5                | 33.1    | 28.8    | 26.8    | 24.2           | 24.0      | 22.7      | 21.2      | 19.6      |
| Azimuth Beam Spacing (°)                 | 50                  |         |         |         | 35             |           |           |           |           |
| Azimuth Beam Crossover (dB)              | 7.9                 | 10.2    | 12.8    | 15.1    | 6.9            | 7.9       | 9.1       | 10.8      | 12.7      |
| Elevation Beamwidth (°)                  | 35.6                | 31.4    | 28.1    | 27.0    | 14.8           | 13.6      | 12.3      | 11.3      | 10.6      |
| Electrical Downtilt Range (°)            | 2-14                |         |         |         | 0-10           |           |           |           |           |
| Front-to-Back Ratio, 180° (dB)           | 35                  |         |         |         |                |           |           |           |           |
| Cross-Pol Discrimination@Boresight (dB)  | 19.6                | 19.7    | 16.2    | 12.5    | 23.2           | 24.9      | 25.3      | 24.4      | 27.3      |
| VSWR /RL (dB)                            | 1.5:1 / 14.0        |         |         |         |                |           |           |           |           |
| Port-to-Port Isolation, Intrabeam (dB)*  | 25                  |         |         |         |                |           |           |           |           |
| Port-to-Port Isolation, Interbeam (dB)** | 14                  |         |         |         |                |           |           |           |           |
| PIM @ 2x43 dBm, (dBc)                    | -153                |         |         |         |                |           |           |           |           |
| Max Power per Port (W)                   | 200                 |         |         |         |                |           |           |           |           |
| Max Total Input Power (W)                | 1600                |         |         |         |                |           |           |           |           |
| Polarization (°)                         | Dual slant 45 (±45) |         |         |         |                |           |           |           |           |
| Impedance (Ω)                            | 50                  |         |         |         |                |           |           |           |           |

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

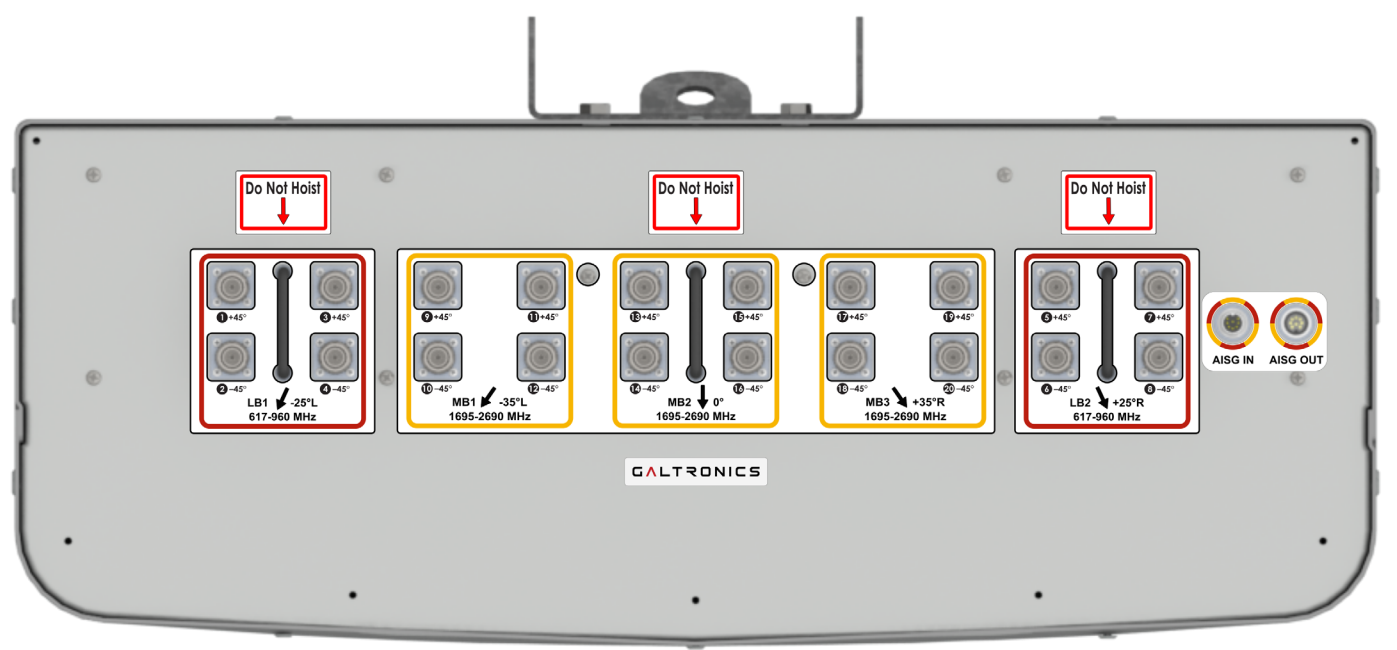
\*\* Port-port isolation between any combination of ports between different beams

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Electrical Specifications - BASTA

|                                               |         |         |         |         |           |           |           |           |           |
|-----------------------------------------------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|
| Frequency Band [MHz]                          | 617-698 | 698-806 | 806-896 | 896-960 | 1695-1910 | 1930-2020 | 2110-2200 | 2305-2360 | 2496-2690 |
| Gain Over All Tilts, avg. (dBi)               | 12.8    | 13.4    | 13.2    | 12.6    | 15.6      | 16.7      | 17.5      | 17.0      | 17.4      |
| Gain Over All Tilts Tolerance (dB)            | 0.5     | 0.5     | 1.0     | 0.8     | 1.3       | 1.1       | 0.8       | 1.5       | 1.5       |
| AZ Beamwidth Tolerance (°)                    | 2.3     | 2.7     | 1.6     | 1.3     | 2.7       | 3.2       | 2.2       | 2.6       | 2.6       |
| EL Beamwidth Tolerance (°)                    | 3.5     | 3.4     | 3.3     | 3.3     | 1.3       | 0.6       | 0.7       | 0.7       | 0.9       |
| Upper Sidelobe Suppression, Peak to +20° (dB) | N/A     |         |         |         | 15.2      | 14.3      | 15.8      | 14.4      | 14.7      |
| Front-to-Back Ratio, Total Power, +/-30° (dB) | 24      | 26      | 25      | 26      | 30        | 31        | 30        | 29        | 28        |
| Cross-Polar Discrimination at Boresight (dB)  | 17.5    | 17.0    | 12.9    | 10.3    | 18.4      | 19.8      | 19.5      | 17.1      | 21.1      |
| Azimuth Beam Peak Tolerance (°)               | 1.2     | 1.3     | 1.4     | 1.2     | 0.9       | 0.6       | 0.6       | 0.8       | 0.8       |
| Azimuth Beam Crossover Tolerance (dB)         | 0.8     | 1.3     | 1.2     | 2.9     | 0.9       | 0.7       | 1.2       | 1.2       | 1.9       |

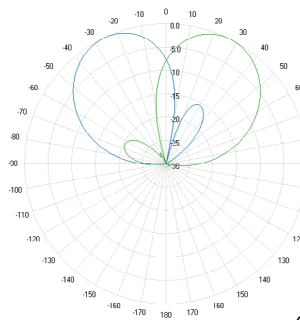
Bottom Plate & Port Designation Details



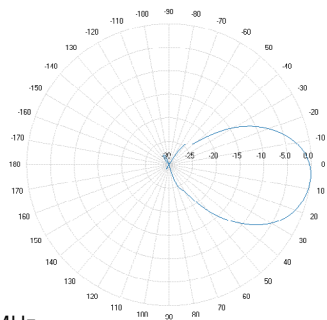
Port/Beam Designator Table

| Frequency Range | Ports   | Beam ID | AZ Beam Direction | Downtilt | Actuator ID | Controller ID |
|-----------------|---------|---------|-------------------|----------|-------------|---------------|
| 617-960 MHz     | 1 - 4   | LB1     | -25° L            | 2-14°    | R0          | GP6320-08238  |
| 617-960 MHz     | 5 - 8   | LB2     | +25° R            | 2-14°    | R1          |               |
| 1695-2690 MHz   | 9 - 12  | MB1     | -35° L            | 0-10°    | R2          |               |
| 1695-2690 MHz   | 13 - 16 | MB2     | 0°                | 0-10°    | R3          |               |
| 1695-2690 MHz   | 17 - 20 | MB3     | +35° R            | 0-10°    | R4          |               |

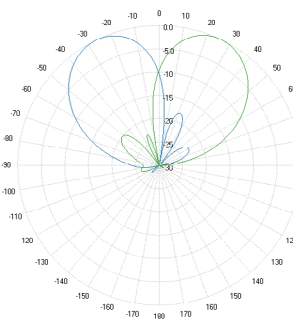
## 2D Antenna Patterns



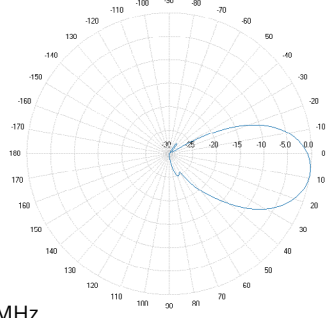
650 MHz



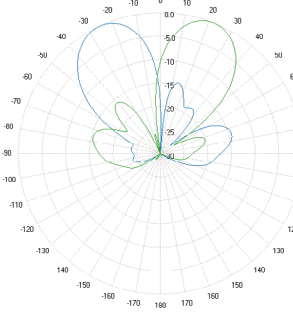
740 MHz



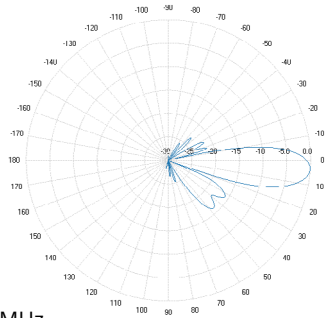
840 MHz



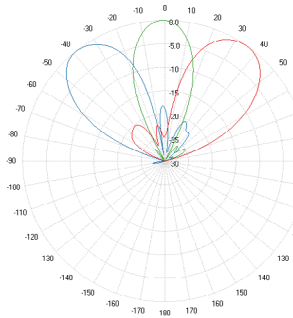
915 MHz



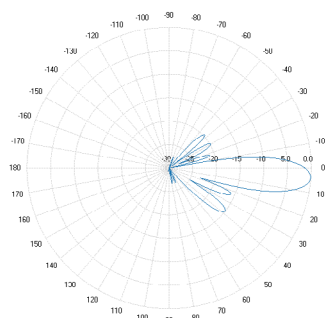
1700 MHz



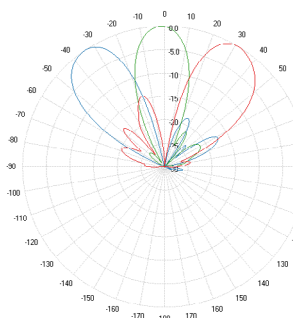
1980 MHz



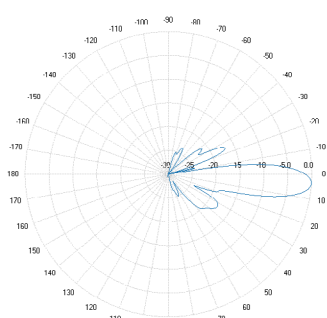
2180 MHz



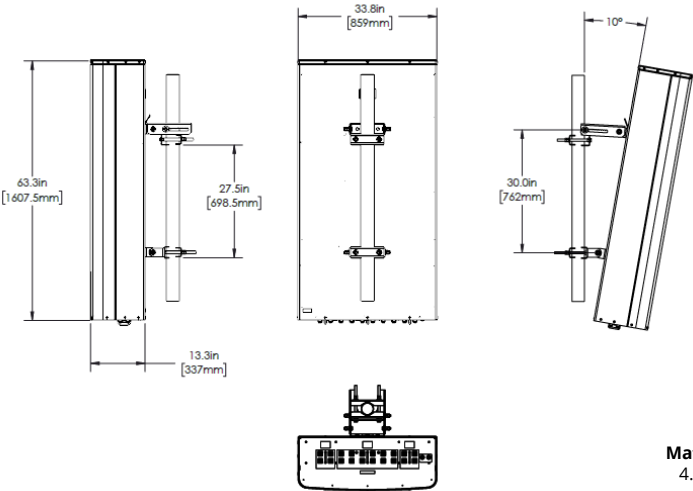
2345 MHz



2510 MHz



Antenna Outline



Mating Connector Torque:  
4.3-10: 3.7 ft-lb ( 5 Nm)

Mechanical Specifications

|                                            |                                                         |
|--------------------------------------------|---------------------------------------------------------|
| Operating Temperature                      | -40° to 158°F (-40° to +70°C)                           |
| Antenna Weight                             | 154 lbs (70 kg)                                         |
| Antenna Bracket Weight                     | 13.4 lbs (6.1 kg)                                       |
| Antenna Dimension (Height x Width x Depth) | 63.3" (1607.5 mm) x 33.8" (859.0 mm) x 13.3" (337.0 mm) |
| Input Connector Type                       | 20 x 4.3-10(F)                                          |
| RET Specification                          | Internal, AISG 2.0                                      |
| Radome Material                            | ASA                                                     |
| Radome Color                               | Gray                                                    |
| Environmental Rating                       | Outdoor                                                 |
| Wind Load, Front (@ 150 km/h)*             | 1482 N / 333 lbf                                        |
| Wind Load, Rear (@ 150 km/h)*              | 1716 N / 386 lbf                                        |
| Wind Load, Side (@ 150 km/h)*              | 727 N / 164 lbf                                         |
| Wind Load, Max (@ 150 km/h)*               | 1895 N / 426 lbf                                        |
| Wind Survival Rating                       | 150 mph (241 km/h)                                      |

\* Wind load based on calculations according to TIA-222-H

Part Numbers & Ordering Options

| Description                                                                   | Color | Mounting Kit                                  | Part Number      |
|-------------------------------------------------------------------------------|-------|-----------------------------------------------|------------------|
| Dual-Band 2/3 Multibeam 120° Sector 4x4 Antenna with 20x 4.3-10(F) Connectors | Gray  | Includes MK-06989 Mounting Bracket Assemblies | GP6320-08238-112 |

Part Numbers, Ordering Options and Accessories

| Description                                                                                                                                                                                                                                                                                                                                                                | Part Number                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <p><b>Heavy Duty Mounting Bracket (wind speed of 150 mph) [Included]</b></p> <p>The MK-06989 standard mounting bracket is suitable for all Galtronics outdoor Base Station Panel Antenna with height between 2.5' and 4', and can be assembled onto poles ranging from 2.0" to 4.5".</p> <p><b>Note:</b> The MK-06989 mounting bracket can also be ordered separately.</p> | <br>MK-06989 |

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