

## LTE MIMO, 802.11n High Rejection GNSS GPS/GLONASS Multiband Antennas

PCTEL's SkyLink™ GNSS Dual LTE antennas provide optimal 4G LTE and dual-band 802.11n Wi-Fi coverage in a single, low profile housing. The antennas also incorporate PCTEL's unique SkyLink™ high rejection GPS/GLONASS technology for optimal performance and support of carrier voice and data networks.

### Features

- No tune, multiband coverage: dual 4G LTE, dual or triple 802.11n Wi-Fi, GPS L1/Galileo, and GLONASS L1 frequencies
- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- Attractive low profile housing for added overhead clearance
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions\*
- High performance, low loss cable and high quality connectors for maximum RF system efficiency
- UV resistant black or white housing options complement most vehicular aesthetic requirements



GLHPDLTEMIMO-SF (left)  
BGLHPDLTEMIMO-SF (right)

### Low Noise Amplifier Specifications

|   |
|---|
| Frequency Band:<br>1565-1608 MHz  |
| Amplifier Gain:<br>@ 3.0 VDC: 26 dB (typical)   |
| Output VSWR:<br>2.0:1 (maximum)   |
| DC Current:<br>25 mA (typical)  |
| DC Voltage:<br>2.8-6.0 V (operating)<br>≤ 12.0 V (survivability)                          |
| Noise Figure:<br>< 2.0 dB (typical)   |
| Out-of-Band Rejection:<br>f0 = 1586 MHz<br>f0 ± 50 MHz: ≥ 60 dBc<br>f0 ± 60 MHz: ≥ 70 dBc |

### GNSS Antenna Element Specifications

|  |
|--|
| Frequency Band:<br>1565-1608 MHz               |
| Nominal Gain:<br>3 dBic @ 90°<br>-2 dBic @ 20° |
| Polarization:<br>Right hand circular           |
| Nominal Impedance:<br>50 ohms                  |

\* When properly installed on a vehicle rooftop per PCTEL installation instructions.

## Electrical Specifications - RF Antennas

| Model                               | Elements   | Operating Frequencies                         | Polarization     | Nominal Impedance | Gain* (typical) | Maximum Power | VSWR**  |
|-------------------------------------|--|---|------------------|-------------------|-----------------|---------------|---------|
| GLHPDLTEMIMO-SF<br>BGLHPDLTEMIMO-SF | 4 G LTE Elements (2 each)<br>802.11n Dual-Band Wi-Fi Elements (2 each) | 698-960 MHz<br>1710-2170 MHz<br>2300-2700 MHz | Vertical, linear | 50 ohms           | 2.5 dBi         | 50 watts      | < 2.0:1 |
|                                     |  | 2.4-2.5 GHz<br>4.9-5.9 GHz                    |                  |                   | 3-4 dBi         |               |         |
| GLHPDLTE-SF<br>BGLHPDLTE-SF         | 4 G LTE Elements (2 each)  | 698-960 MHz<br>1710-2170 MHz<br>2300-2700 MHz | Vertical, linear | 50 ohms           | 2.5 dBi         | 50 watts      | < 2.0:1 |
| GLHPDM3-SF<br>BGLHPDM3-SF           | 4 G LTE Elements (2 each)<br>802.11n Dual-Band Wi-Fi Elements (3 each) | 698-960 MHz<br>1710-2170 MHz<br>2300-2700 MHz | Vertical, linear | 50 ohms           | 2.5 dBi         | 50 watts      | < 2.0:1 |
|                                     |  | 2.4-2.5 GHz<br>4.9-5.9 GHz                    |                  |                   | 3-4 dBi         |               |         |

## Mechanical Specifications

| Model                               | Dimensions (OD x H)           | Coax   | Connectors***                     | Gasket Design & Construction  |
|-------------------------------------|-------------------------------|--|-----------------------------------|---|
| GLHPDLTEMIMO-SF<br>BGLHPDLTEMIMO-SF | 5.1 x 3.6 in<br>(130 x 92 mm) | Two-17 feet Pro-Flex Plus 195 (4G LTE Elements)          | SMA Plug (LTE)                    | Countour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation. |
|                                     |                               | Two-17 feet Pro-Flex Plus 195 (802.11n Wi-Fi Elements)   | Reverse Polarity SMA Plug (Wi-Fi) |   |
| GLHPDLTE-SF<br>BGLHPDLTE-SF         | 5.1 x 3.6 in<br>(130 x 92 mm) | Two-17 feet Pro-Flex Plus 195 (4G LTE Elements)          | MSMA (LTE)                        |   |
|                                     |                               | One-17 feet RG-174/U (GNSS Element)                      | SMA Plug (GNSS)                   |   |
| GLHPDM3-SF<br>BGLHPDM3-SF           | 5.1 x 3.6 in<br>(130 x 92 mm) | Two-17 feet Pro-Flex Plus 195 (4G LTE Elements)          | SMA Plug (LTE)                    |   |
|                                     |                               | Three-17 feet Pro-Flex Plus 195 (802.11n Wi-Fi Elements) | Reverse Polarity SMA Plug (Wi-Fi) |   |
|                                     |                               | One-17 feet RG-174/U (GNSS Element)                      | SMA Plug (GNSS)                   |   |

## Mechanical &amp; Environmental Specifications

| Part Number      | Radome Color | Radome Construction             | Mounting Method  | Operating/Storage Temperature | Weight | Ingress Protection |
|------------------|--------------|---------------------------------|--|-------------------------------|--------|--------------------|
| GLHPDLTEMIMO-SF  | White        |                                 |  |                               |        |                    |
| BGLHPDLTEMIMO-SF | Black        |                                 |  |                               |        |                    |
| GLHPDLTE-SF      | White        | UV Stable Rugged Thermoplastics | 1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut | -40° C to +85° C              |        | IP67               |
| BGLHPDLTE-SF     | Black        |                                 |  |                               |        |                    |
| GLHPDM3-SF       | White        |                                 |  |                               |        |                    |
| BGLHPDM3-SF      | Black        |                                 |  |                               |        |                    |

\* Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).

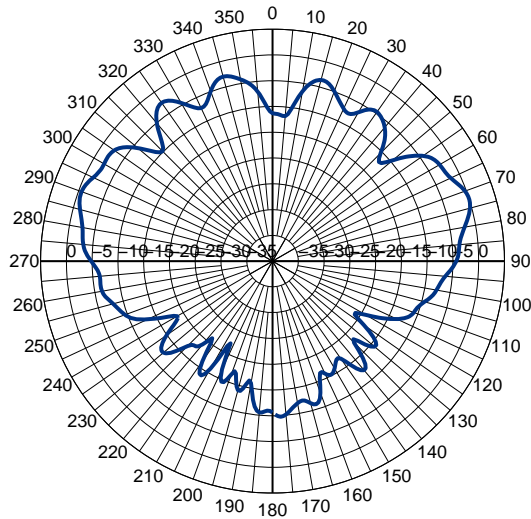
\*\* VSWR < 2:1 across all bands when measured on 1-ft diameter ground plane with 17-ft cable. When measured on 1-ft diameter ground plane with 1-ft cable, VSWR < 2:1 698-960MHz, <2:1 1710-2170MHz, and < 2.5:1 2300-2700MHz.

\*\*\* Consult Customer Service for other connector requirements.

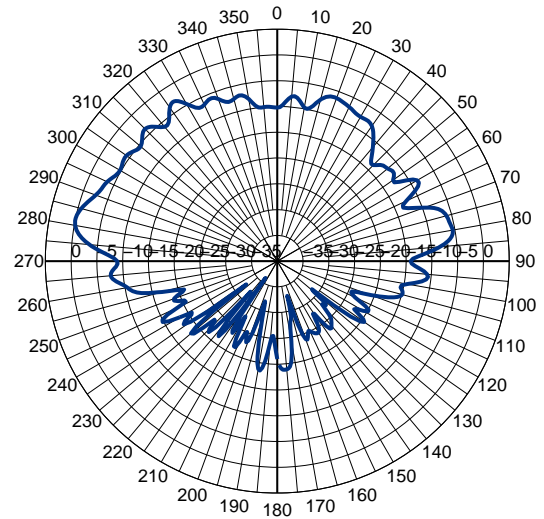
3M is a trademark of 3M Company.



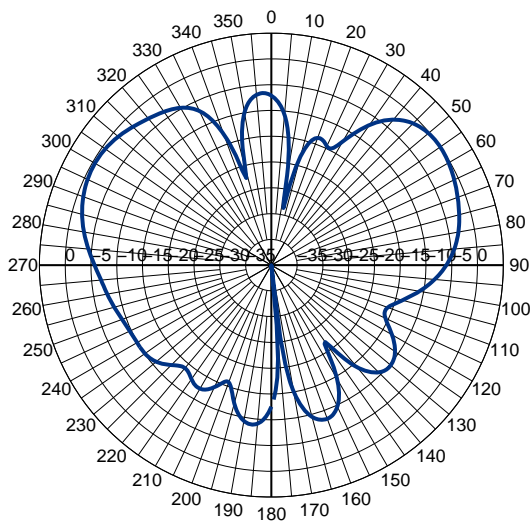
2.4GHz WiFi



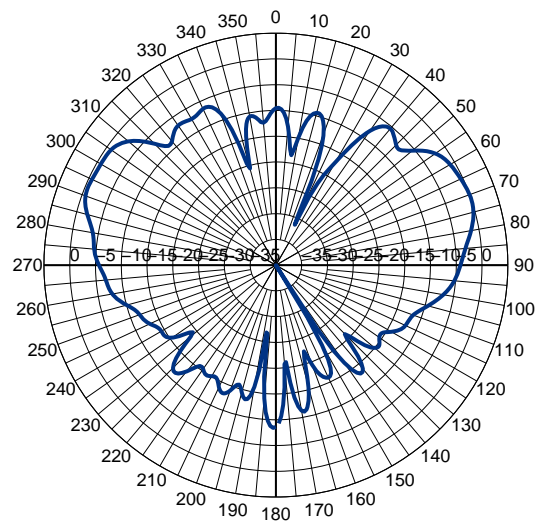
5GHz WiFi



Lowband Cellular/LTE



Highband Cellular/LTE



NOTE: Elevation Patterns are normalized to 0dB.

