



**THE DATASHEET OF
2042860001**



GNSS Antennas



GNSS Active Patch and Flexible antennas complement ceramic and LDS-MID chip selections for superior signal processing and ground-independence over a wide range of navigation and tracking applications

Features and Advantages

GNSS Flexible Antenna (Series 206560)

- Topside of the poly-flexible antenna**
Makes for easy peel-and-stick mounting anywhere within the device chassis
- Double-sided adhesive on the antenna reverse**
Enables instant application anywhere on the inner wall of the device chassis by just removing its tape liner
- 6 Micro-coaxial Cable Length options (50, 100, 150, 200, 250, 300mm)**
Extends connectivity for maximum design flexibility
- Low-profile design**
Provides space savings
- UFL-type connector**
Secures to the application's device radio
- Excellent re stripping characteristics**
Allows product re-usage within 48 hours
- Ceramic Patch Antenna**
Delivers high gain, high radiation efficiency performance for the most demanding GPS applications
- Silver Pin**
Positions and fixes the antenna to the PCB (via soldering); provides electrical contact between antenna and board
- GNSS Active Patch Antenna with Low-Noise Amplifier* (Series 206640)**
- IPEX-1 connector**
Secures to the application's device radio
- PCB with integrated LNAs and SAW Filter**
Ensures filtered, amplified signals are transmitted by the ceramic antenna on it

GNSS Flexible Antenna (Series 206560)

GNSS Active Patch Antenna with Low-Noise Amplifier* (Series 206640)

GNSS Active Patch Antenna with Low-Noise Amplifier (Series 206640)

GPS Ceramic Antenna (Series 208890)

*The series 206640 antenna is an active patch antenna with ceramic patch, ground plane (PCB), 2-stage LNA and SAW (Surface Acoustic Wave) filter - all integrated within a compact 25 by 25 by 6.5mm module complete with a 60mm cabled (IPEX-1 connector) extension.

Applications

Automotive

Navigation devices

Commercial Vehicles

High-speed rail

Industrial

Drones

Maritime Port Technology Systems

Surveying and Mapping Systems

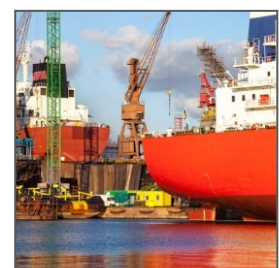
Emergency Response Systems



Automotive



Drones



Maritime Port Technology Systems

Specifications

REFERENCE INFORMATION

Packaging: Tape-and-Reel
 (146216, 146235)
 Tray (146168, 204286, 206640, 208890)
 PET Film (206560)
 Designed In: mm
 RoHS: Yes
 Halogen Free: Yes

ELECTRICAL

RF Power (Watt): 2
 Average Total Radiation Efficiency: Refer to Product Specifications
 Peak Gain: Refer to Product Specifications
 Input Impedance (ohms): 50





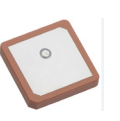


MECHANICAL

Refer to Product Specifications

PHYSICAL

Housing: Ceramic
 (206640, 204286, 146168, 208890)
 Flexi (206560)
 LDS-MID (146216, 146235)
 Plating: Refer to Sales Drawings
 Operating Temperature:
 -40 to +85°C (206560, 206640)
 -40 to +125°C (146168, 146216, 146235, 204286)
 -30 to +85°C (208890)

GNSS Antenna Family

| Antennas | GNSS Flexible Antenna (206560) | GNSS Active Patch Antenna with Low-Noise Amplifier (206640) | Helix GPS Antenna (146235) | RHCP LDS-MID GPS Antenna (146216) | RHCP Ceramic GPS Antenna (146168) | GPS/BEIDOU/ GLONASS Ceramic Antenna (204286) | Low-profile GPS Ceramic Antenna (208890) |
|------------------|---|---|---|---|--|---|---|
| Dimension | 40.40 by 15.40mm | 25.00 by 25.00 by 6.50mm | 3.00 by 5.00 by 4.00mm | 11.80 by 11.55 by 6.00mm | 25.00 by 25.00 by 4.00mm | 25.00 by 25.00 by 4.00mm | 18.00 by 18.00 by 2.00mm |
| PCB Clearance | No clearance | No clearance | 4mm x 6mm | No clearance | No clearance | No clearance | No clearance |
| Material | Flexi | Ceramic + PCB + Tin Plate | LDS | LDS | Ceramic | Ceramic | Ceramic |
| Antenna Type | Dipole | Active Patch | Monopole | PIFA | Patch | Patch | Patch |
| Frequency Range | 1561 – 1602 MHz | 1561 – 1602 MHz | 1561 – 1602 MHz | 1575 MHz | 1575 MHz | 1561 – 1602 MHz | 1575 MHz |
| Return Loss | < -8dB | - 8dB (VSWR 2.5) | <-8dB | <-10dB | <-15dB | <-10dB | <-15dB |
| Peak Gain | 1.5dBi | LNA 28dB | 1.1dBi | 1dBi | 5.5dBi | 5.5dBi | 2.6dBi |
| Total Efficiency | > 74% (50mm) | NA | >50% | >55% | >75% | >70% | >45% |
| Polarization | Linear | RHCP | Elliptic | RHCP | RHCP | Elliptic | RHCP |
| Axial Ratio | N.A. | N.A. | <6.0 | <3.0 | <3.0 | <13.0 | <2 |
| |  |  |  |  |  |  |  |



Ordering Information

| Series No. | Description | Mounting Style |
|------------------------|--|----------------|
| 206560 | GNSS Flexible Antenna | Peel-and-stick |
| 206640 | GNSS Active Patch Antenna with Low-Noise Amplifier | SMT |
| 204286 | GPS/BEIDOU/ GLONASS Ceramic Antenna | Peel-and-stick |
| 146235 | Helix LDS-MID GPS Antenna | SMT |
| 146216 | RHCP LDS-MID GPS Antenna | SMT |
| 146168 | RHCP Ceramic GPS Antenna | Peel-and-stick |
| 208890 | 18x18mm GPS Ceramic Antenna | Peel-and-stick |

www.molex.com/link/gnss-gps.html

Looking for pricing, stock, or lifecycle information?

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-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management