

GWA-GNSS-AJ-5042

Active GPS-GNSS Patch Antenna

GPS : L1/L2/L5 & GLONASS : L1/L2

BD : B1/B2/B3 & GALILEO : E1/E2/E5a/E5b

Applications

- 1-Autonomous driving
- 2-Radar applications
- 3-Precision agriculture and positioning for vehicles
- 4-Satellite communications

General description

The **GWA-GNSS-AJ-5042** is a high-performance, multi-band active GPS/GNSS antenna engineered to deliver exceptional positioning accuracy across GPS (L1/L2/L5), GLONASS (L1/L2), BeiDou (B1/B2/B3), and Galileo (E1/E2/E5a/E5b) frequency bands. Compared to conventional antennas, it provides superior location accuracy through an ultra-low noise figure of **1 dB**, a high-linearity front-end LNA with an input **P1dB** of approximately **4 dBm**, and an excellent axial ratio. These features make the antenna highly resistant to multipath interference in challenging environments and enable reliable operation in noisy and jamming-prone RF locations.

Electrical Specifications

Frequency Range: 1164-1278 MHz
1556-1615 MHz

Impedance: 50Ω

Noise Figure: ≤1dB

VSWR: 1.5

Polarization: RHCP

Passive Gain: 4dBi @L5 , 4.5dBi @L2, 5.5dBi @L1

Total Gain: 30 ±2 dBi

Connector: SMA Male, RG174 Cable

Axial Ratio : ≤3dB

DC Supply Voltage : 3-12V

DC Current: ≤75mA

Mechanical Specifications

Material : Ceramic

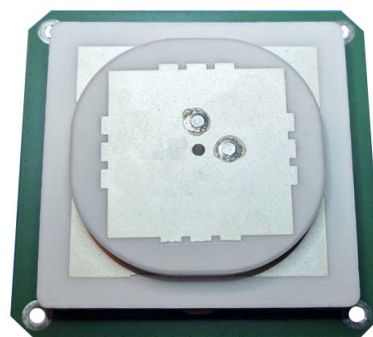
Operating Temperature: -40°C~+70°C

Storage Temperature: -55°C~+85°C

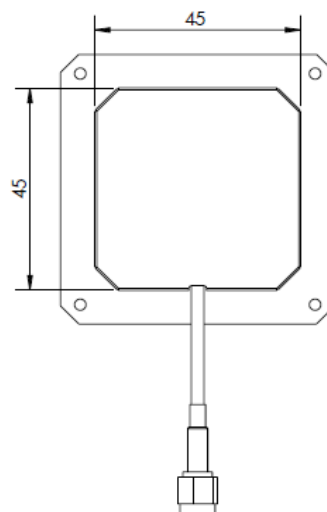
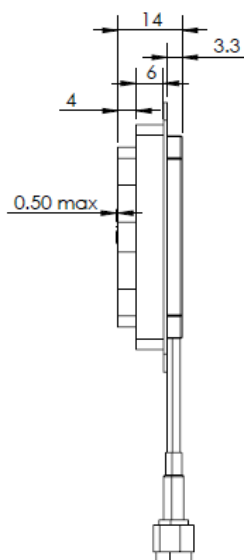
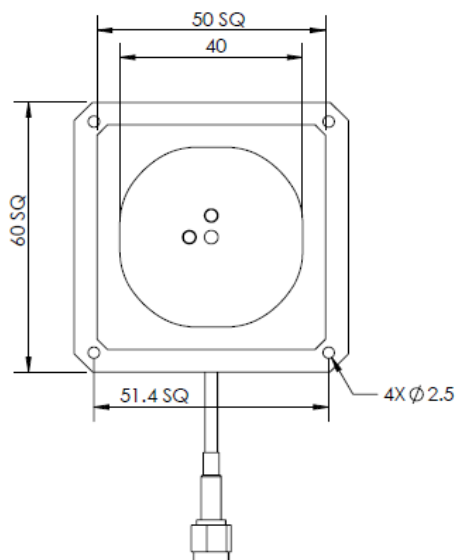
Humidity: 95% RH non-condensing

Weight : 95g

Dimensions: 60mm × 60mm × 14mm



Mechanical Outline



*All dimensions are in millimeters and for reference only and may be subject to change without notice