

MULTI-CONSTELLATIONS ANTENNA

Single band anti-jamming

Option J



This antenna is a precision high-gain GNSS antenna, providing single-band GPS/QZSS-L1, GLONASS-G1, GalileoE1, and BeiDou-B1 coverage, including the satellite-based augmentation system (SBAS) available in the region of operation [WAAS (North America), EGNOS (Europe), MSAS (Japan), or GAGAN (India)].

The anti-jam feature modifies the radiation pattern of the GNSS antenna such that it is "deaf" to signals arriving from 10 ° below and 15 ° above the horizon while slightly increasing the gain of the antenna at zenith. Since jamming signals typically originate at low elevations, the antenna mitigates signals below 15 °.

The antenna features a precision-tuned, dual-feed patch element. The signals from the two orthogonal feeds are combined in a hybrid combiner, amplified in a wideband LNA, then band-split for narrow filtering and further amplified before recombination at the output. The antenna also has a strong pre-filter to mitigate inter-modulated signal interference from LTE and other cellular bands. The antenna offers an excellent axial ratio and a tightly grouped phase centre variation.

General characteristics

- **Weight:** 0,370 kg
- **Dimensions:** 100.0 mm (dia.) x 102 mm (h.)
- **Bandwidth (2dB):** 47 Mhz
- **Color:** black

Mechanical characteristics

- **Vibration :** 3 axes, balayage = 15 min, balayage de 10 à 200 Hz : 3 g
- **Shock:** Vertical axis: 50 G, other axes: 30 G
- **Ratio axes:** <2 dB typ., 3 dB max.
- **Fixation:** Permanent 3/4" (19mm) through hole mounting
- **Support:** in L or on tube

Environmental specificities

- **Compliance:** IPC-A-610, FCC, RED / CE Mark, RoHS, REACH
- **Operating Temperature:** -40°C to + 85°C
- **Storage Temperature:** -50°C to +95°C
- **Humidity / Salt Fog:** MIL-STD-810F Section 509,4
- **IP Rating:** IP67

Electrical characteristics

- **Architecture:** Pre-filter → LNA stage 1 → filter → LNA stage
- **Gain:** 2 38 dB min.
- **Noise Figure:** 3.0 dB typ
- **VSWR:** < 1.5:1 typ. | 1.8:1 max.
- **Supply Voltage Range:** 2.5 to 16 VDC nominal (12 VDC rec. max..)
- **Supply Curren:** 19 mA typ.
- **ESD Circuit Protection:** 15 kV air discharge
- **P 1dB Output:** 11 dBm:
- **Group Delay Variation:** 17 ns @ GPS-L1 | <1.0 ns @ GLONASS-G1
- **Group Delay:** L1 (1575.42 MHz): 31 ± 1 ns

FASTENING KIT INCLUDING

- 1 hollow tube 20cm long
- 1 plate
- M6 and M8 nuts
- M6 and M8 washers
- Fixing brackets

