TW3370/TW3372 40dB Wideband GPS/GLONASS Antenna

The TW3370/TW3372 is a high Gain (40dB) GNSS antenna covering the GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS & MSAS) frequency band (1575 to 1606 MHz). It features a patch element with 40% wider bandwidth than previously available in this format. Unlike its competitors, both GPS-L1 and GLONASS signals are included in the 1dB received power bandwidth.

The TW3370/TW3372 has a three stage Low Noise Amplifier with a mid-section SAW. A tight pre-filter is available with the TW3372 to protect against saturation by high level sub-harmonics and L-Band signals making it particularly suitable for timing applications.

The TW3370/TW3372 has a 19mm (3/4 Inch) though hole, permanent mount white-metal base, with an industrial-grade, IP67 compliant conical radome. The standard connector is a TNC Jack (female). An L-bracket for pole mount is available.

Applications
- Timing applications
- Fixed installations
- Cost Sensitive Mission Critical Positioning

Features
- 40dB LNA Gain
- 1 dB LNA Noise Figure (TW3370)
- Available Pre-filter (TW3372)
- Wide voltage input range: 2.5 to 10 VDC
- IP67 Compliant conical radome
- Low Power: 9mA typ. at 2.3Vcc min.

Benefits
- Bandwidth fully Includes GPS-L1 & GLONASS
- Excellent multipath rejection
- Increased system accuracy
- Excellent signal to noise ratio
- Great out of band signal rejection
- Ideal for harsh environments
- RoHS compliant

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TW3370/TW3372  40dB Wideband GPS/GLONASS Antenna Specifications

**Antenna**
- **Architecture**: Wideband Single Feed Patch
- **1 dB Bandwidth**: 31 MHz
- **10dB Return Loss Bandwidth**: 45 MHz
- **Antenna Gain (with 100mm ground plane)**: 4.5 dBi
- **Axial Ratio**: <4dB @ 1590MHz, 8 dB typical at band-edges

**Electrical**
- **Architecture**: TW3370 - LNA stage 1 -> SAW filter -> LNA stage 2
  - SAW Pre-filter -> LNA stage 1 -> SAW filter -> LNA stage 2
- **Filtered LNA Frequency Bandwidth**: 1575 to 1606 MHz
- **Polarization**: RHCP
- **Gain**: 41 dB min., TW3370 40 dB min., TW3372
- **Gain flatness**: +/- 2 dB, 1575 to 1606 MHz
- **Out-of-Band Rejection**:
  - <1500 MHz >35 dB
  - <1550 MHz >25 dB
  - >1640 MHz >35 dB
- **VSWR (at LNA output)**: <1.5:1
- **Noise Figure**: 1 dB typ. TW3370, 2.5 dB typ. TW3372
- **Supply Voltage Range (over coaxial cable)**: +1 to 10 VDC nominal
- **Supply Current**: 15 mA max.
- **ESD Circuit Protection**: 15 KV air discharge

**Mechanicals & Environmental**
- **Mechanical Size**: 66.5 mm dia. x 21 mm H
- **Connector**: TNC Jack (female)
- **Cable (Option)**: Custom flying cable assembly available.
- **Operating Temperature Range**: 40 to +85 °C
- **Enclosure**: Radome: ASA Plastic, Base: Zamak White Metal
- **Weight**: 150 g
- **Fixed-Mount**: IP67 and RoHS compliant
- **Shock**: Vertical axis: 50 G, other axes: 30 G
- **Vibration**: 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G
- **Warranty**: One year, parts and labour

**Ordering Information**
- TW3370 – GPS/GLONASS Antenna TNC Connector: 32-3370-xx-yy
- TW3372 – GPS/GLONASS Antenna TNC Connector: 32-3372-xx-yy

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