



When precision matters...

A Tallysman *Accutenna*[™] TW2926 Embedded Multi-Constellation + L-Band Antenna

The TW2926 is an *Accutenna*[™] technology antenna that covers GPS L1, GLONASS G1, BeiDou B1, Galileo E1, SBAS (WAAS, EGNOS, GAGAN, & MSAS) and the down-link L-Band (1525 – 1559MHz). The TW2920 provides superior multi-path signal rejection, a linear phase response, and tight Phase Centre Variation (PCV). This antenna is ideal for precision agriculture, autonomous vehicle tracking and guidance, and other applications where precision matters.

The TW2920 features a dual-feed wideband patch element, plus a low-loss pre-filter followed by a three stage Low Noise Amplifier (LNA) including an additional mid-section SAW. This configuration provides excellent axial ratio across the full frequency band and strong protection against high level sub-harmonic signals like LTE and near frequency signals such as WiFi.

The TW2926 is available with a variety of connectors and custom cable lengths.

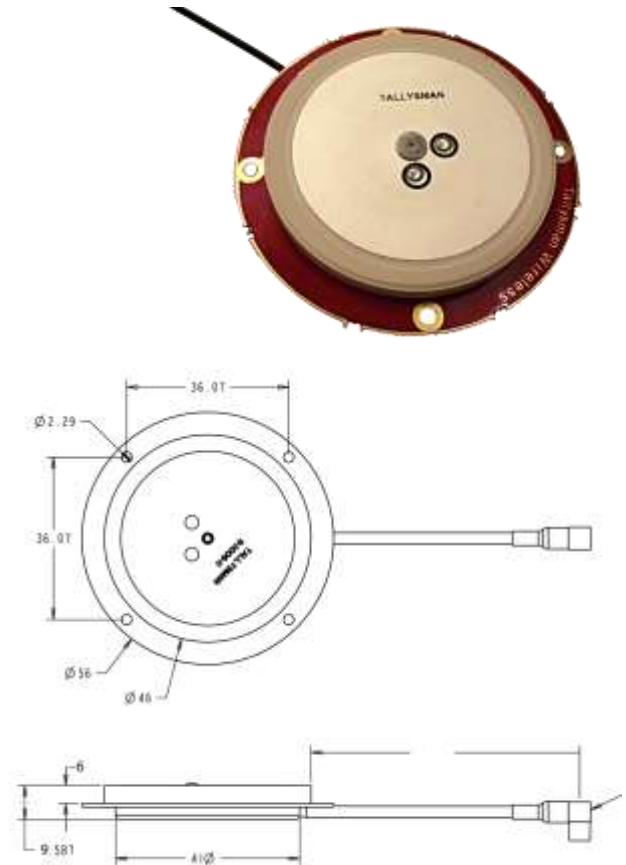
It is highly recommended to take advantage of Tallysman's custom tuning service to ensure optimal performance of this antenna in your housing and with your ground plane.

Applications

- High Accuracy & Mission Critical GNSS
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

Features

- Covers B1 / E1 / L1 / G1 Frequencies, plus L-Band correction services
- Great axial ratio: 1 typ., 3 dB max
- Low noise LNA: ≤ 2.5 dB (including pre-filter)
- High rejection SAW filter
- LNA gain: 28 dB typ.
- Low current: 18 mA typ.
- Wide voltage input range: 2.5 to 16 VDC



Benefits

- 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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Specifications Vcc = 3V, over full bandwidth, T=25°C

Antenna

| | |
|---|-----------------------------------|
| Architecture | Dual Feed Patch, Quadrature Feeds |
| 2 dB Bandwidth | 85 MHz |
| Antenna Gain (with 100mm ground plane) | 4.25 dBic |
| Axial Ratio at Zenith over full bandwidth | 1dB typ. |

Electrical

| | |
|---|--|
| Architecture | Pre-filter ->LNA ->SAW filter-> 2 stage LNA |
| Filtered LNA Frequency Bandwidth | 1510 to 1610 MHz |
| Polarization | RHCP |
| LNA Gain | 28 dB min. or 35dB typ (32 dB min) |
| Gain flatness | +/- 2 dB, 1525 to 1606 MHz |
| Out-of-Band Rejection | <1465 MHz >30 dB >1700 MHz >55 dB |
| VSWR (at LNA output) | <1.5:1 typ. 1.8:1 max. |
| Noise Figure | ≤2.5 dB typ. |
| Supply Voltage Range (over coaxial cable) | +2.5 to 16 VDC nominal (12VDC recommended maximum) |
| Supply Current | 18 mA typ., 25mA max. (@85°C) |
| ESD Circuit Protection | 15 KV air discharge |

Mechanicals & Environmental

| | |
|-----------------------|---|
| Mechanical Size | 56 mm dia. x 9.8 mm H |
| Cable | RG174 or Micro-coax |
| Operating Temp. Range | -40 to +85°C |
| Weight | 45 g |
| Attachment Method | Adhesive or screw mount |
| Environmental | RoHS and REACH compliant |
| Shock | Vertical axis: 50 G, other axes: 30 G |
| Vibration | 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G |

Ordering Information

| | |
|--|------------------|
| TW2926 – Multi-Constellation antenna (28dB) | 33-2926-xx-yyyy |
| TW2920E – Multi-Constellation antenna (35dB) | 33-2920E-xx-yyyy |

Where xx = connector type and yyyy = cable length in mm

Please refer to the Ordering Guide (<http://www.tallysman.com/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available connectors.

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