

A Tallysman *Accutenna* TM TW4721 Wideband Dual Feed GPS/GLONASS/BeiDou/Galileo Antenna

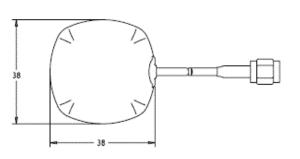
The TW4721 is a compact, wideband *Accutenna*[™] technology GNSS antenna from Tallysman that provides accurate reception for all upper L- band GPS, GLONASS, Beidou, and Galileo signals (L1, G1, B1, B1 BOC, B1-2, E1) and associated augmentation signals (WAAS, EGNOS and MSAS SBAS).

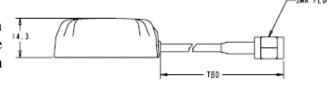
The TW4721 features a novel 25mm dual feed wideband patch element that, in sharp contrast with its competitors, provides a truly circularly polarized response, with a typical axial ratio of less than 2dB over the full bandwidth. This provides a more linear carrier phase response and substantially improved multipath rejection for higher precision applications.

The TW4721 is the smallest, lightest, wideband GNSS antenna available. It is housing in a compact IP67 magnetic or adhesive mount enclosure and is available with a wide range of connector options and custom coax cable lengths.

The antenna can be ordered without the magnet. In such cases, the magnet is replaced with a plastic plug to provide a smooth under surface, with the option of ordering it with or without 1.1 mm doublesided VHB tape on the bottom.







Applications

- Cost Sensitive Mission Critical Positioning
- UAV / UAS
- Covert surveillance
- Fleet Management & Asset Tracking

Features

- Dual feed patch element
- 40% wider bandwidth, small footprint
- Axial ratio: 2 dB typ...
- Low noise LNA: 1 dB
- High rejection mid-section SAW filter
- High gain: 26 dB typ.
- Wide voltage input range: 1.8 to 16 VDC
- IP67 weather proof housing
- Low Power: 10mA typ. over supply range.

Benefits

- Greatly enhanced multipath rejection
- improved GNSS reliability
- Excellent signal to noise ratio
- RoHS compliant
- Ideal for harsh environments
- Excellent out of band signal rejection



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

Antenna

Architecture Wideband Dual Feed Patch Element

2 dB radiated power bandwidth (RHCP) 47 MHz
Antenna Gain (with 100mm ground plane) 4.5 dBic @ 1582.5MHz
Axial Ratio over full bandwidth <2dB typ. 3dB max.

Polarization RHCP

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Electrical

Architecture Dual Feed Patch -> Hybrid->LNA stage 1 -> SAW filter-> LNA stage 2

Filtered LNA Frequency Bandwidth 1559 to 1606 MHz

 Gain
 26dB min, 1559 MHz to 1606MHz

 Gain flatness
 +/- 2dB, 1559 MHz to 1606MHz

Out-of-Band Rejection <1500MHz >40dB <1525MHz >45dB >1630MHz >45dB

VSWR (at LNA output) <1.5:1 Noise Figure 1.0dB typ.

Supply Voltage Range (over coaxial cable) +1.8VDC to 16VDC nominal (12VDC recommended maximum)

Supply Current 10mA typ.
ESD Circuit Protection 15KV air discharge

Mechanicals & Environmental

Mechanical Size 38mm x 38mm dia. x 14.3mm High

Cable RG174
Operating Temp. Range -40°C to +85°C

Enclosure Radome and base: ASA plastic
Weight 50gm (Enclosure + SMA connector 34gm, cable 0.31gm/cm)

Attachment Method Magnetic or Adhesive

Environmental IP67, REACH and RoHS compliant Shock Vertical axis: 50G, other axes: 30G

Vibration 3 axis, sweep = 15 min, 10 to 200Hz sweep: 3G

Warranty One year, parts and labour

Ordering Information

TW4721 – GPS/GLONASS/BeiDou/Galileo Antenna 33-4721-xx-yyyy

xx = connector type 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 radomes and connectors.

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