



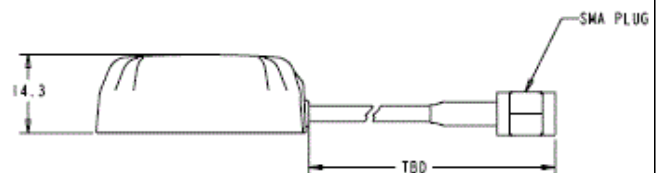
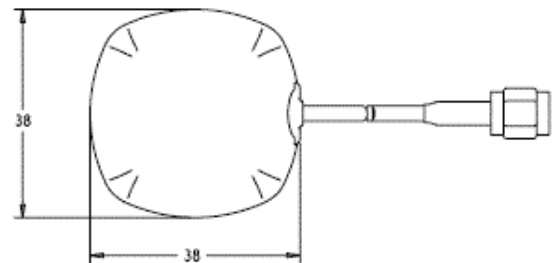
A Tallysman *Accutenna*™ TW4721 Wideband Dual Feed GPS/GLONASS/BeiDou/Galileo Antenna

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

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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