A Tallysman *Accutenna*®
TW4721/TW4722 Wideband Dual Feed GPS/GLONASS/BeiDou/Galileo Antenna

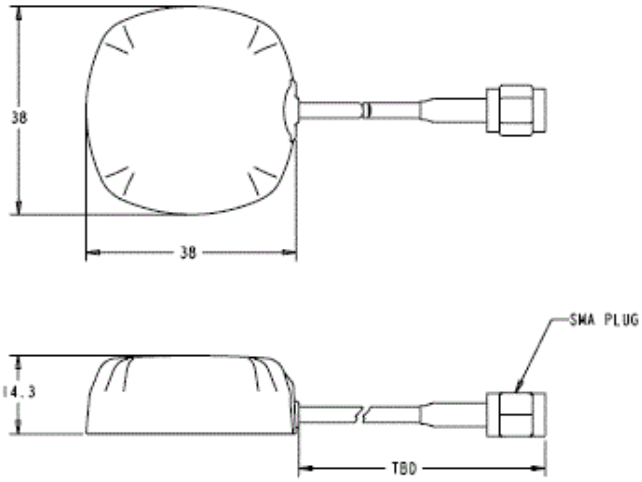
The TW4721/TW4722 is a compact, wideband GNSS antenna that provides accurate reception for all upper L- band GPS, GLONASS, Beidou, and Galileo signals (L1, G1, B1, B1 BOC, B1-2, E1) and associated augmentation signals (WAAS, EGNOS and MSAS SBAS). This antenna employs Tallysman's patented *Accutenna* technology.

The TW4721/TW4722 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 TW4722 is the pre-filtered version of the TW1721. The pre-filter provides protection from near frequency or strong harmonic interfering signals.

The TW4721/TW4722 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 double-sided VHB tape on the bottom.



Applications

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

Features

- Dual feed patch element
- 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

TW4721/TW4722 Wideband Dual Feed GPS/GLONASS/BeiDou/Galileo Antenna

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	TW4721: 26dB min, 29dB max TW4722: 26dB typ.1559 MHz to 1606MHz		
Gain flatness	+/- 2dB, 1559 MHz to 1606MHz		
Out-of-Band Rejection		**TW4721**	**TW4722**
	<1500MHz	>40dB	>57dB
	<1525MHz	>45dB	>62dB
	>1630MHz	>45dB	>50dB
VSWR (at LNA output)	<1.5:1 typ. 1.8:1 max		
Noise Figure	TW4721: 1.0dB typ. TW4722: 3.0dB 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: EXL9330
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
TW4722 - GPS/GLONASS/BeiDou/Galileo Antenna	33-4722-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.

Tallysman Wireless Inc

36 Steacie Drive
Ottawa ON K2K 2A9 Canada
Tel 613 591 3131 Fax 613 591 3121 sales@tallysman.com

Rev 1.8