A Tallysman *Accutenna*®
TW1721 / TW1722 Dual Feed Embedded BeiDou/Galileo/GPS/GLONASS Antenna

The TW1721/TW1722 is a compact, wideband GNSS antenna employing patented *Accutenna*® technology. This antenna 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).

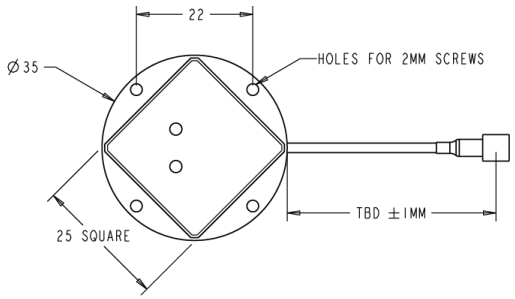
The TW1721/TW1722 features a novel 25mm dual feed wideband patch element that, in sharp contrast with its competitors, provides a truly circularly polarized response, with a typical axial ratio of less than 2dB over the full bandwidth. This provides a more linear carrier phase response and substantially improved multipath rejection for higher precision applications.

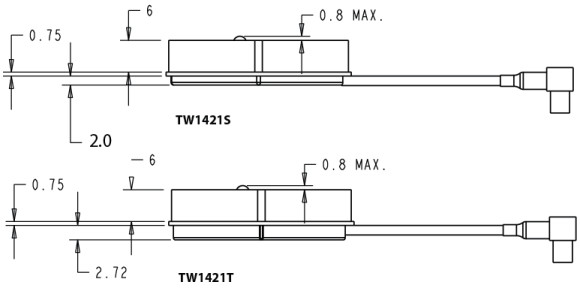
The built-in 35mm circular ground plane should ideally be augmented with a local system ground plane or reflecting surface (DC connection not required).

The TW1722 is the pre-filtered version of the TW1721. The pre-filter provides protection from strong near frequency or harmonic signals, such as LTE.

OEM antennas are easily detuned by the local environment. Tallysman offers custom tuning services for optimized integration into OEM end-user modules.







Applications

- High Accuracy BeiDou, Galileo, GPS & GLONASS
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

Features

- Compact Dual Feed Patch Element
- 2 dB bandwidth 1559-1606MHz
- Very low noise LNA: <1 dB (TW1721)
- Axial ratio: 2 dB typ
- LNA gain: 28 dB typ.
- Wide voltage input range: 1.8 to 16 VDC
- ESD circuit protection: 15KV
- Temperature Compensated Gain

Benefits

- Great multipath rejection
- Increase system accuracy
- Improved carrier phase linearity
- Excellent signal to noise ratio
- Great out of band signal rejection
- Compact form factor
- RoHS compliant
- Reliable performance

TW1721/TW1722 Dual Feed Embedded BeiDou/Galileo/GPS/GLONASS

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

Antenna

Architecture		Dual, Quadrature Feeds
2 dB Bandwidth		47 MHz
Antenna Gain (with 100mm ground plane)		4.5dBic
Axial Ratio over full bandwidth		<2dB typ. 3dB max

Electrical

Filtered LNA Frequency Bandwidth		1559 MHz to 1606MHz	
Polarization		RHCP	
LNA Gain	TW1721	28dB typ., 25dB Min	
	TW1722	27dB typ., 24dB Min	
Gain flatness		+/- 2dB	
Out-of-Band Rejection	TW1721	<1500MHz	>40dB
		<1525MHz	>45dB
		>1630MHz	>45dB
	TW1722	<1500MHz	>50dB
		<1525MHz	>50dB
		>1640MHz	>50dB
VSWR (at LNA output)		<1.5:1 typ 1.8:1 max.	
Noise Figure	TW1721	1.0dB typ.	
	TW1722	3.0dB typ.	
Supply Voltage Range (over coaxial cable)		+1.8 VDC min to +16 VDC max (+12 VDC recommended max)	
Supply Current		10mA typ. 15mA max. (@ 85°C)	
ESD Circuit Protection		15KV air discharge	

Mechanicals & Environmental

Mechanical Size	35mm dia. x 7.25mm
Cable	micro-coax or RG174 coax
Operating Temp. Range	-40°C to +85°C
Weight	18g
Attachment Method	Adhesive or M2 screw mount
Environmental	RoHS and REACH 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

Part Numbers:

TW1721 – GNSS L1 antenna,	33-1721-xx-yyyy-zz
TW1722 – Pre-filtered GNSS L1 antenna	33-1722-xx-yyyy-zz

Where xx = connector type; yyyy = cable length in mm; and zz = assigned by Tallysman

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.

Tallysman An ISO 9001:2015 Certified Company

36 Steacie Drive, Ottawa ON K2K 2A9 Canada

Tel 613 591 3131 Fax 613 591 3121 sales@tallysman.com

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