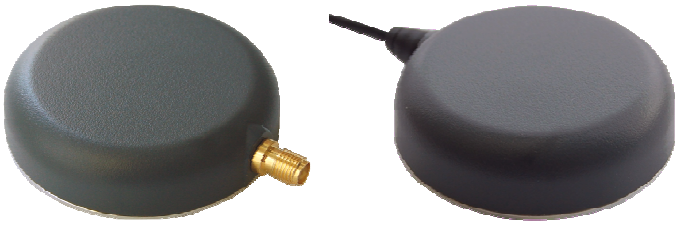
A Tallysman *Accutenna*™ TW2410/TW2412 Magnetic Mount GPS/GLONASS Antenna

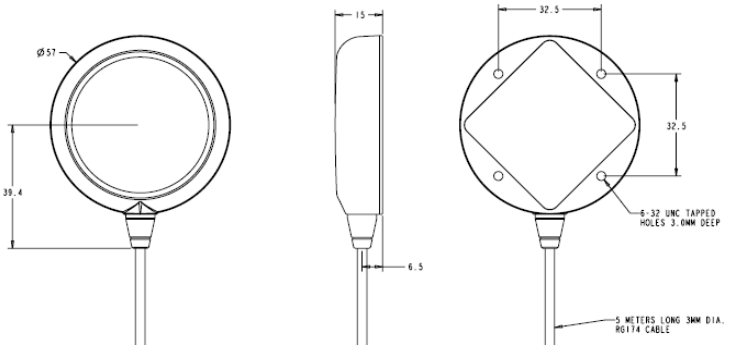
The TW2410/TW2412 employs Tallysman's unique *Accutenna™* technology covering the GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS & MSAS) frequency bands (1574 to 1606 MHz). It is especially designed for precision industrial, agricultural and military OEM applications. It provides truly circular response over its entire bandwidth thereby producing superior multipath signal rejection.

The TW2410/TW2412 features a dual-feed wideband patch element, with a two stage Low Noise Amplifier, comprised of one input LNA per feed, a mid section SAW to filter the combined output, and a final output gain stage. This configuration provides excellent axial ratio that is constant across the full frequency band. An optional tight pre-filter is available with part number TW2412 to protect against saturation by high level sub-harmonics and L-Band signals.

The TW2410/ TW2412 is housed in a compact, industrial-grade weather-proof, magnet mount enclosure, and is available with a variety of connectors.



Dimensions (mm)



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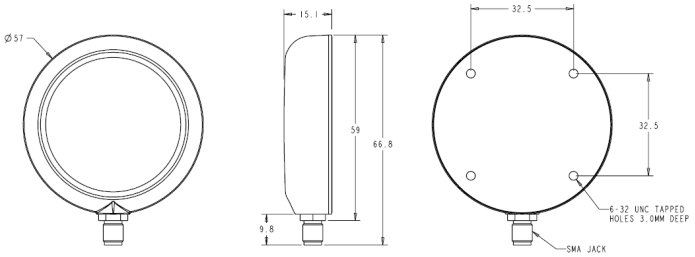

Applications

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

Features

- Great axial ratio: 1 typ., 3 dB max
- Low noise LNA: ≤1 dB
- High rejection SAW filter
- LNA gain: 28 dB typ.
- Low current: 15 mA typ.
- Wide voltage input range: 2.5 to 16 VDC
- IP67 weather proof housing

Benefits

- Excellent multipath rejection
- Increased system accuracy
- Excellent signal to noise ratio
- Great out of band signal rejection
- Ideal for harsh environments
- RoHS compliant

TW2410/TW2412 Magnet Mount GPS/GLONASS Antenna

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

Antenna

Architecture	Dual, Quadrature Feeds
1 dB Bandwidth	30 MHz
Antenna Gain (with 100mm ground plane)	4.25 dBic
Axial Ratio over Bandwidth @zenith	1 dB typ,

Electrical

Architecture		One LNA per feed line, mid section SAW filter	
Filtered LNA Frequency Bandwidth		1574 to 1606 MHz	
Polarization		RHCP	
LNA Gain		28 dB min., 1575.42 to 1606 MHz	
Gain flatness		+/- 2 dB, 1575 to 1605 MHz	
Out-of-Band Rejection	<1500 MHz	>32 dB (TW2410)	>50dB (TW2412)
	<1550 MHz	>25 dB (TW2410)	>50 dB (TW2412)
	>1640 MHz	>35 dB (TW2410)	>70 dB (TW2412)
VSWR (at LNA output)		<1.5:1	
Noise Figure		≤1 dB typ.	
Supply Voltage Range (over coaxial cable)		+2.5 to 16 VDC nominal (12VDC recommended maximum)	
Supply Current		15 mA typ, 25mA Q max (85°C).	
ESD Circuit Protection		15 KV air discharge	

Mechanicals & Environmental

Mechanical Size	57 mm dia. x 15 mm H
Cable	RG174 / 5 metres, other lengths optional
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Zamak white metal
Weight	110 g
Attachment Method	Magnet or permanent (pre-tapped 4 x 6-32 UNC)
Environmental	IP67 and RoHS 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

Legacy Part Numbers:

TW2410 – GPS/Glonass Antenna, 5 metre cable, SMA Male	32-2410-0
TW2410 – GPS/Glonass Antenna, SMA female on housing	32-2410-7

* As a result of a growing product portfolio, Tallysman has rationalized its part number system. No changes have been made to the mechanical or electrical properties of these products. Where administratively possible, please use the following Part Numbers:

TW2410: 33-2410-xx-yyyy-zz TW2412: 33-2412-xx-yyyy-zz

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

Please refer to the Ordering Guide (http://www.tallysman.com/orderingguide.php) for the current and complete list of available connectors.

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Rev 4.0