Tallysman Wireless

When precision matters.™

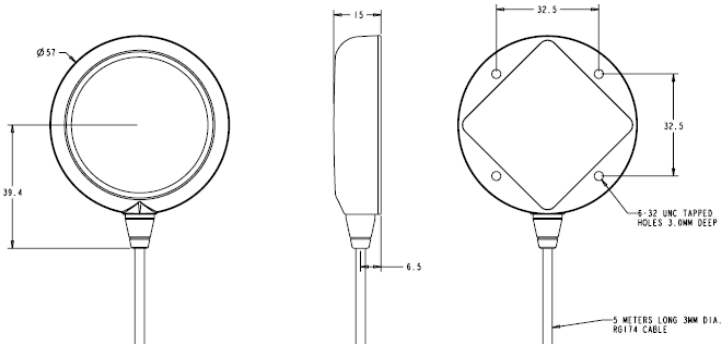
TW2100 Magnet Mount Dual Feed GPS L1 Antenna

The TW2100 by Tallysman Wireless is a professional grade, magnet mount GPS L1 antenna, specially designed for industrial, agricultural and military precision positioning and timing applications.

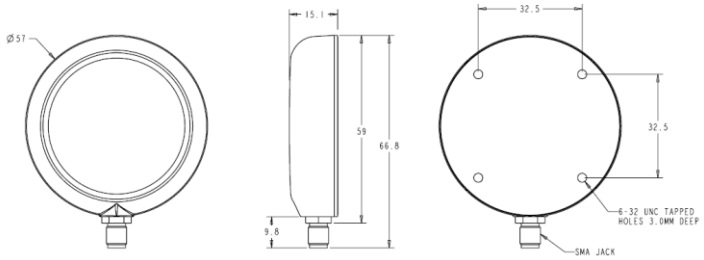
The TW2100 features a custom high performance, dual-feed, wide band patch element. Its LNA configuration provides a LNA for each feed, a mid section high rejection SAW for the combined signal, followed by a final stage of LNA. It provides ±10MHz bandwidth centred on 1575.42 MHz and covers all GPS L1, and SBAS (WAAS/EGNOS/MSAS) signals. It features great axial ratio over the entire frequency range (<3dB), excellent circular polarized signal reception, great multipath rejection and out-of-band signal rejection.

The TW2100 is housed in a compact, industrial-grade weather-proof, magnet mount enclosure and a wide range of connector.

Dimensions (mm) p/n 32-2100-0



Dimensions (mm) p/n 32-2100-7



Applications

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

Features

- Great axial ratio: <3 dB over full bandwidth
- Low noise LNA: ≤1 dB
- High rejection SAW filter
- High gain: 28 dB typ.
- Low current: 15 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.5 to 16 VDC
- Weather proof housing: IP67

Benefits

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

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Specifications

Vcc = 3V, over full bandwidth, T=25°C

Antenna

Architecture	Dual, Quadrature Feeds
Antenna Gain (100mm ground plane)	4.25 dBic
Axial Ratio (over full bandwidth)	<3 dB

Electrical

Architecture		One LNA per feed line, mid section SAW filter, output LNA
Frequency Bandwidth		1575 MHz ± 10 MHz
Polarization		RHCP
Gain (LNA)		28 dB min. at 90° (at 1575.42 MHz)
Out-of-Band Rejection	<1560 MHz	>42 dB
	>1600 MHz	>31 dB
	>1620 MHz	>45 dB
VSWR (at LNA input)		<1.5:1
Noise Figure		1 dB typ.
Supply Voltage Range		+2.5 to 16 VDC nominal (12VDC recommended maximum)
Supply Current		15 mA typ at 25 °C.
ESD Circuit Protection		15 KV air discharge

Mechanicals & Environmental

Mechanical Size	57 mm dia. x 15 mm H
Cable	RG174
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Zamak White Metal
Weight	150 g
Attachment Method	Magnet or permanent (pre-tapped 4 x 6-32UNC)
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
Warranty	One year – parts and labour

Ordering Information

Legacy Part Numbers:

TW2100 – GPS L1 antenna, 5 metre cable, SMA Male	32-2100-0
TW2100 – GPS L1 antenna, Bulkhead SMA Female	32-2100-7

* As a result of a 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.

TW2100 – GPS L1 antenna 33-2100-xx-yyyy

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 4.2