



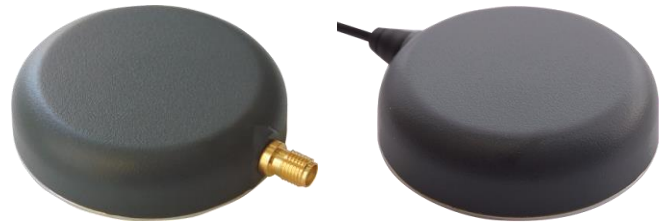
When precision matters...™

TW2010 Magnet Mount GPS L1 Antenna

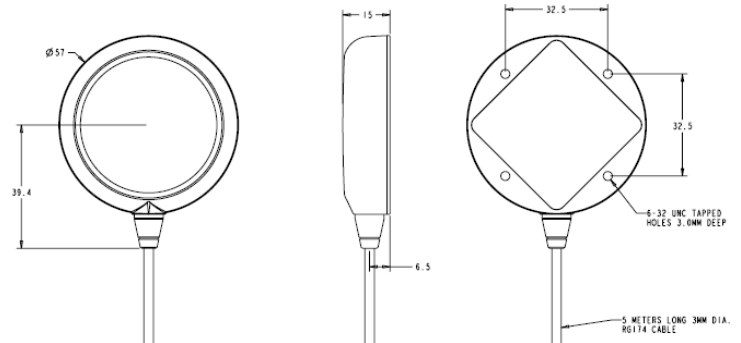
The TW2010 by Tallysman Wireless is a professional grade, magnet mount, GPS L1 antenna, specially designed for industrial, agricultural and military precision positioning and timing applications.

The TW2010 features a high performance custom tuned ceramic patch element, 15 KV ESD circuit protection, a high gain two-stage low noise amplifier (LNA) with a mid section high rejection SAW filter. It covers the GPS L1 and SBAS (WAAS/EGNOS/MSAS) frequency band (1572.5 to 1578 MHz), and it offers great circular polarized signal reception, multipath rejection and out of band signal rejection.

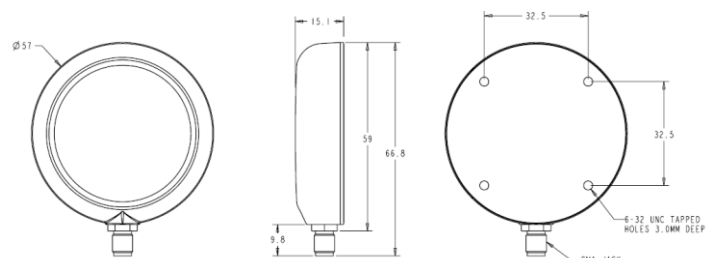
The TW2010 is housed in a compact, industrial-grade weather-proof, magnet mount enclosure.



Dimensions (mm) p/n 32-2010-0



Dimensions (mm) p/n 32-2010-7



Applications

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

Features

- Very low noise LNA: 1 dB
- Great axial ratio: <4dB at Zenith
- High rejection SAW filter
- High gain: 28 dB typ.
- Low current: 10 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.5 to 16 VDC
- Weather proof housing: IP67

Benefits

- Great 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	Custom single-feed ceramic patch
Antenna Gain (100mm ground plane)	4 dBic at 90°
Axial Ratio (over full bandwidth)	4 dB at 90°, 6dB at 20°

Electrical

Architecture	Input LNA, mid section SAW filter, output LNA
Frequency Bandwidth	1572.5 to 1578 MHz
Polarization	RHCP
Gain	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 output)	<1.5:1
Noise Figure	1 dB typ.
Supply Voltage Range	+2.5 to 16 VDC nominal (12 VDC recommended max.)
Supply Current	10 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:	
TW2010 – GPS L1 antenna, 5 metre cable, SMA Male	32-2010-0
TW2010 – GPS L1 antenna, Bulkhead SMA Female	32-2010-7

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.

TW2010 – GPS L1 antenna 33-2010-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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