



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, with threaded base holes for screw mount. It comes standard with 5 metres of cable and is available with a wide range of connector options.

Applications

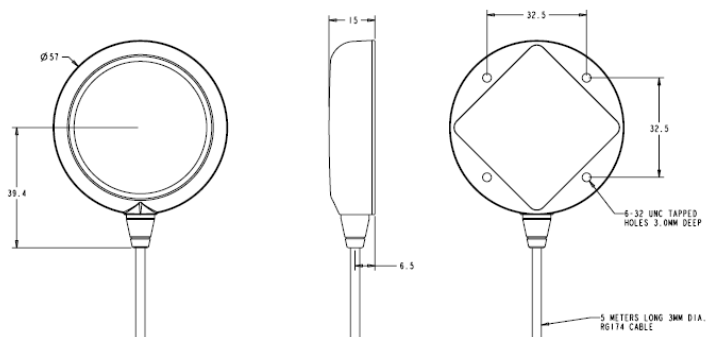
- High Accuracy & Mission Critical GPS
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

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: +3.0 to 10 VDC
- Weather proof housing: IP67



TW2010 Dimensions (mm)



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)	5 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	+3.0 to 10 VDC nominal
Supply Current	10 mA typ.
ESD Circuit protection	15 KV air discharge

Mechanicals & Environmental

Mechanical Size	57 mm dia. x 15 mm H
Connectors	SMA, TNC, MCX Male (Plug). Other connectors optional
Cable	RG174 / 5 metres, custom lengths optional
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Aluminum
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

TW2010 – GPS L1 antenna, 5 metre cable, SMA Male	32-2010-0
TW2010 – GPS L1 antenna, 5 metre cable, TNC Male	32-2010-1
TW2010 – GPS L1 antenna, 5 metre cable, MCX Male	32-2010-2

Please contact Tallysman Wireless for additional information

Tallysman Wireless Inc

308 Legget Drive, Suite 202
Ottawa, ON K2K 1Y6 Canada
Tel 613 591 3131
Fax 613 591 3121
sales@tallysman.com

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