



When precision matters...™

TW3010 Permanent Mount GPS L1 Antenna

The TW3010 by Tallysman Wireless is a professional grade, permanent mount GPS L1 antenna, specially designed for precision tracking and timing applications.

The TW3010 features a custom high performance, wide band patch element, a 30dB gain LNA stage and a high rejection out-of-band SAW filter. It provides ± 10 MHz bandwidth centred on 1575.42 MHz and covers the GPS L1, and SBAS (WAAS/EGNOS/MSAS) signals. It provides great axial ratio, excellent circular polarized signal reception, great multipath rejection and great out-of-band signal rejection.

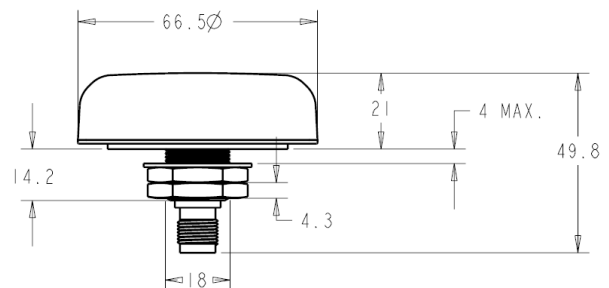
The TW3010 is housed in a permanent mount industrial-grade weather-proof enclosure. Optional Mounts of an L Bracket (PN 23-0040-0) or Pipe Mounts (PN 23-0065-0) are available.

Applications

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



TW3010 Dimensions (mm)
Flat Radome shown. Conical Radome also available



Features

- Great axial ratio
- Low noise LNA: 1 dB
- High rejection SAW filter
- High gain: 30 dB typ.
- Low current: 10 mA typ.
- ESD circuit protection: 15 KV
- Wide supply voltage 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

Antenna Element Gain (100mm ground plane)	4 dBic at 90°
Axial Ratio (over full bandwidth)	4 dB at 90°

Electrical

Architecture	2 stage LNA circuit + a mid section SAW filter.
Frequency Bandwidth	1575 MHz \pm 10 MHz
Polarization	RHCP
Gain	30 dB typ. (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	10 mA typ.
ESD Circuit Protection	15 KV air discharge

Mechanicals & Environmental

Mechanical Size	66.5 mm dia. x 21 mm H
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Zamak White Metal
Weight	150 g
Attachment Method	19mm surface or bracket mount, L-Bracket and Pipe Mount available
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 Number

TW3010 – GPS L1 antenna, 32-3010-xx-yy

Connector: xx 00 TNC xx = 01 N Type (premium applies)
Radome Colour yy = 00 Dark grey conical yy = 01 White conical yy = 10 Dark grey
low profile yy = 11 White low profile

* 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.

TW3010 – GPS L1 antenna 33-3010-xx-yy-zzzz

Where xx = connector type, yy = radome type and colour and zzzz = cable length (where applicable)

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

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