



TW3010 Permanent Mount GPS L1 Antenna

The TW3010 by Tallysman Wireless is a professional grade, permanent mount GPS L1 antenna, specially designed for professional 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, Galileo E1 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.

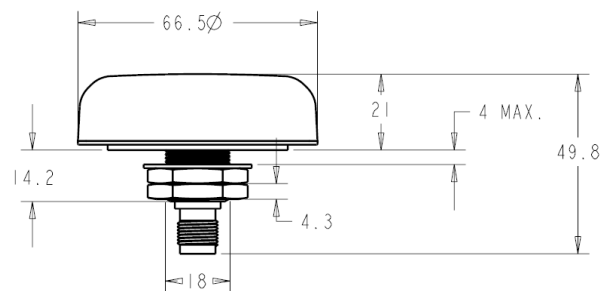
The TW3010 is housed in a permanent mount industrial-grade weather-proof enclosure, and comes with a TNC Jack (female) connector.

Applications

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



TW3010 Dimensions (mm)



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 voltage input range: +3.0 to 10 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. (Pre-filter option available)
Frequency Bandwidth	1575 MHz ± 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	+3.0 to 10 VDC nominal
Supply Current	10 mA typ.
ESD Circuit Protection	15 KV air discharge

Mechanicals & Environmental

Mechanical Size	66.5 mm dia. x 21 mm H
Connector / Cable	TNC female bulkhead (custom cable assemblies available)
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, 18mm/M18 mast mount L bracket option 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

TW3010 – GPS L1 antenna, TNC Female bulkhead connector 32-3010-0

Please contact Tallysman Wireless for other available connector options

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