



A TIME AND PLACE *for everything™*

TW3130 Permanent Mount GPS L1 Antenna

The TW3130 by Tallysman Wireless is a professional grade, permanent mount GPS L1 antenna, specially designed for professional precision timing applications.

The TW3130 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 $\pm 10\text{MHz}$ bandwidth centred on 1575.42 MHz and covers all GPS L1, Galileo E1 and SBAS (WAAS/EGNOS/MSAS) signals. It features great axial ratio over the entire frequency range ($<3\text{dB}$), excellent circular polarized signal reception, great multipath rejection and out-of-band signal rejection.

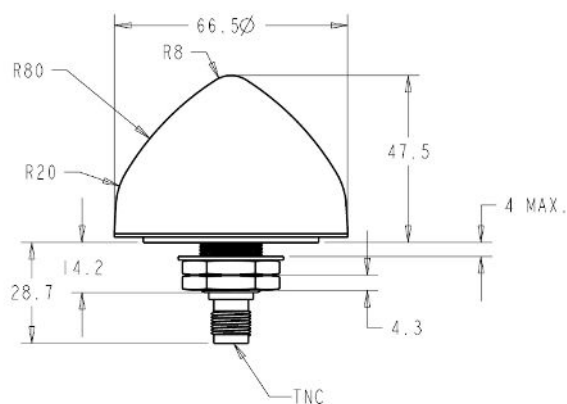
The TW3130 is housed in a compact, industrial-grade weather-proof, domed shaped enclosure. Its radome is available in dark gray or white, it comes with a TNC female connector and a L-bracket for pole mount is available (P/N#23-0040-0).

Applications

- High Accuracy, Mission Critical GPS Timing
- Military & Security
- Network Timing and Synchronisation



TW3130 Dimensions (mm)



Features

- Great axial ratio: 1 dB typ.
- 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

Architecture	Dual, Quadrature Feeds
Antenna Element Gain (100mm ground plane)	4.25 dBi at 90°
Axial Ratio (over full bandwidth)	1dB typ. , 3 dB max

Electrical

Architecture	2 stage LNA circuit + a mid section SAW filter
Frequency Bandwidth	1575 MHz ± 10 MHz
Polarization	RHCP
Gain	30 dB min. (at 1575.42 MHz)
Out-of-Band Rejection	<1560 MHz >1600 MHz >1620 MHz
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 45 mm H
Connector / Cable	TNC female bulkhead / Custom cable assembly available
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: Dark gray or white ASA Plastic Base: Zamak White Metal
Weight	150 g
Attachment Method	L-bracket option: p/n 23-0040-0
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

TW3130 – GPS L1 antenna, Dark gray radome, TNC connector	32-3130-0-00
TW3130 – GPS L1 antenna, White radome, TNC connector	32-3130-0-01

Please contact Tallysman Wireless for other available connector options

Tallysman Wireless Inc

106 Schneider Road, Unit 3
Ottawa ON K2K 1Y2 Canada
Tel 613 591 3131
Fax 613 591 3121
sales@tallysman.com

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