A TIME AND PLACE *for everything*™



TW3070 Permanent Mount GPS L1 Antenna

The TW3070 by Tallysman Wireless is a professional grade, permanent mount GPS L1 antenna, specially designed for professional precision timing applications.

The TW3070 features a custom high performance, wide band patch element, a 40dB gain LNA stage and a high rejection out-of-band SAW filter. It provides ±10MHz bandwidth centred on 1575.42 MHz and covers the GPS L1, Galileo E1 and SBAS (WAAS/EGNOS/MSAS) signals, and it provides great axial ratio, excellent circular polarized signal reception, great multipath rejection and great out-of-band signal rejection.

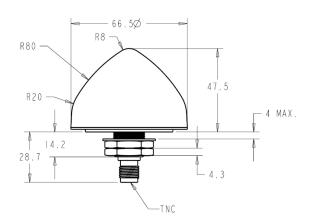
The TW3070 is housed in a compact, industrialgrade weather-proof, domed shaped enclosure. Its radome is available in dark gray or white, it comes with a TNC female connector, and a L-bracket for mast mount is available (P/N#23-0040-0).

Applications

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



TW3070 Dimensions (mm)



Features

- Great axial ratio
- Low noise LNA: 1 dB
- High rejection SAW filter
- High gain: 40 dB typ.
- Low current: 15 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) Axial Ratio (over full bandwidth)

Electrical

Architecture

Frequency Bandwidth Polarization Gain Out-of-Band Rejection

<1560 MHz >1600 MHz >1620 MHz

VSWR (at LNA input) Noise Figure Supply Voltage Range Supply Current ESD Circuit Protection

Mechanicals & Environmental

Mechanical Size Connector / Cable Operating Temp. Range Enclosure

Weight Attachment Method Environmental Shock Vibration Warranty 4 dBic at 90° 4 dB at 90°

3 stage LNA circuit + a mid section SAW filter. (Pre-filter option available) 1575 MHz ± 10 MHz RHCP 40 dB min. (at 1575.42 MHz) >42 dB >31 dB >45 dB <1.5:1 1 dB typ. +3.0 to 10 VDC nominal 15 mA typ. 15 KV air discharge

66.5 mm dia. x 47.5 mm H TNC female bulkhead / Custom cable assembly available -40 to +85 °C Radome: Dark Gray or White ASA Plastic Base: Zamak White Metal 150 g L-Bracket option: P/N# 23-0040-0 IP67 and RoHS compliant Vertical axis: 50 G, other axes: 30 G 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G One year – parts and labour

Ordering Information

TW3070 – GPS L1 antenna, dark gray, TNC connector TW3070 – GPS L1 antenna, white, TNC connector

Please contact Tallysman Wireless additional information

Tallysman Wireless Inc

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