



TW3070 Permanent Mount GPS L1 Antenna

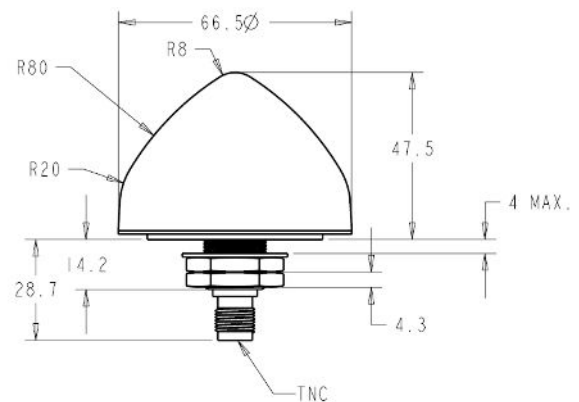
The TW3070 by Tallysman Wireless is a professional grade, permanent mount GPS L1 antenna, specially designed for professional precision timing applications.

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 ± 10 MHz 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, 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 mast mount is available (P/N#23-0040-0).



TW3070 Dimensions (mm)



Applications

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

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) 4 dBic at 90°
Axial Ratio (over full bandwidth) 4 dB at 90°

Electrical

Architecture 3 stage LNA circuit + a mid section SAW filter.
(Pre-filter option available)
Frequency Bandwidth 1575 MHz ± 10 MHz
Polarization RHCP
Gain 40 dB min. (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 15 mA typ.
ESD Circuit Protection 15 KV air discharge

Mechanicals & Environmental

Mechanical Size 66.5 mm dia. x 47.5 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

TW3070 – GPS L1 antenna, dark gray, TNC connector 32-3070-0-00
TW3070 – GPS L1 antenna, white, TNC connector 32-3070-0-01

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