



## TW3072 GPS Brickwall Pre-Filtered Antenna

The TW3072 by Tallysman Wireless is a professional grade, high gain, pre-filtered permanent mount, GPS L1 antenna, with a conical radome specially designed for timing applications in environments characterized by high L-Band RF fields.

The TW3072 features a precisely tuned ceramic patch element, a tight band-pass SAW pre-filter, a first LNA gain stage, an in line SAW filter, followed by a two stage amplifier. It covers the GPS L1 and SBAS (WAAS/EGNOS/MSAS) frequency band (1572.5 to 1578 MHz), and it offers unparalleled out-of-band signal rejection and excellent axial ratio for improved signal reception and multipath rejection.

The TW3042 is housed in a permanent mount industrial-grade weather-proof conical white enclosure, and comes with a TNC Jack (female) connector. An L-bracket for pole mount is available.

### Applications

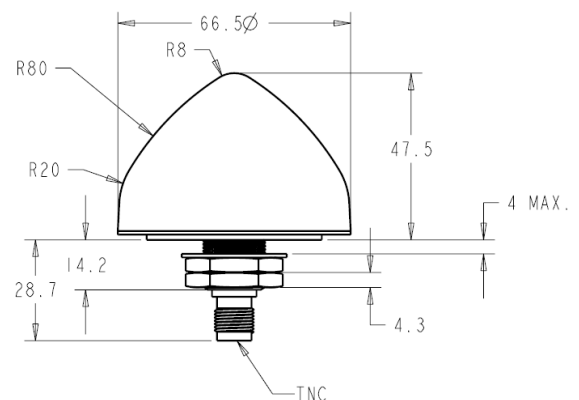
- Anti-Jamming GPS
- Military & Security
- Network Timing and Synchronisation
- Long Cable run installations

### Features

- Narrow pass-band SAW pre-filter
- LNA Noise Figure: <3.3dB
- Axial ratio: <4dB at Zenith
- High LNA gain: 42 dB typ.
- Low current: 20 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.7 to 10 VDC



TW3072 Dimensions (mm)



### Benefits

- Great out-of-band signal rejection
- Ideal for high level RF environments
- Great multipath rejection
- Increase system accuracy
- Great signal to noise ratio
- Weather proof IP67 housing
- RoHS compliant



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## Specifications

Test Conditions: Vcc = 3V, over full bandwidth, T=25°C

### Antenna

Architecture Custom single-feed ceramic patch  
Antenna Gain (100mm ground plane) 5 dBic at 90° on 100mm Ground Plane  
Axial Ratio 4 dB at 90°, 6dB at 20°

### Electrical

Architecture SAW Pre Pre-Filter, 1<sup>st</sup> LNA, in-line SAW filter, two stage LNA  
Frequency Bandwidth 1572.5 to 1578 MHz  
Polarization RHCP  
LNA Gain (including SAW pre-filter) 40 dB min. at 90° (at 1575.42 MHz)  
Out-of-Band Rejection \*Refer to table below  
VSWR (at LNA output) <1.5:1  
Noise Figure 3.3 dB typ.  
Supply Voltage Range +2.7 to 10 VDC nominal  
Supply Current 25 mA Max.  
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

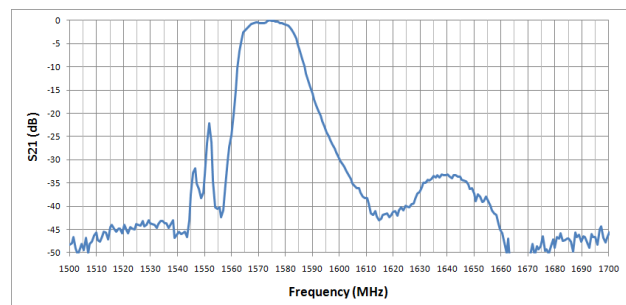
TW3072 – white, TNC connector 32-3072-x-y

Connector: x=1 TNC, x=2 N type  
Color : y=1 White

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Pre-Filter Pass-Band



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Doc # 60-0076-0

Rev 1.0