



When precision matters...™

## TW3470/TW3472 GPS/GLONASS Timing Antenna\*

The TW3470/TW3472 are professional grade 40dB fixed mount Timing antennas covering the GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS & MSAS) frequency bands (1574 to 1606 MHz). They are especially designed for timing, precision and military applications and offer excellent circular polarized signal reception, multipath rejection and out of band signal rejection.

The TW3440/TW3442 feature a highly circular dual-feed wideband patch element, with a three stage Low Noise Amplifier. This configuration provides excellent axial ratio that is constant across the full frequency band. An optional tight pre-filter is available with part number TW3472 to protect against saturation by high level sub-harmonics and L-Band signals.

The TW3470/TW3472 is housed in a permanent mount industrial grade weather-proof enclosure. Two options for pole mounting are available an L-bracket (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0).



### Applications

- GPS / GLONASS Fixed timing
- High Accuracy & Mission Critical Global Positioning
- Precision Timing, Mining & Construction
- Military & Security
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

### Features

- Great axial ratio: 1 dB typ.
- High gain LNA: 40 dB min.
- Low noise LNA: 1dB/3.5dB typ TW3440/TW3442
- Available sharp pre-filter (TW3442)
- Low current: 21 mA typ.
- Wide supply voltage: 2.5 to 16 VDC
- IP67 weather proof housing
- Available flat-top radome (Mobile Apps)

### Benefits

- Excellent circular polarisation
- Long Cable Runs
- Excellent signal to noise ratio
- Excellent multipath rejection
- Exceptional out-of-band rejection (TW3472)
- Increased system accuracy
- Ideal for harsh environments
- RoHS and CE compliant



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# TW3470/TW3472 GPS/GLONASS Timing Antenna Specifications

## Antenna

Architecture	Dual, Quadrature Feeds
1 dB Bandwidth	32 MHz
Antenna Gain (with 100mm ground plane)	4.25 dBic
Axial Ratio (over full bandwidth)	1 dB typ., 3 dB max.

## Electrical

Architecture	TW3470: One LNA per feed ->Combiner ->SAW -> 2-Stage LNA TW3472: (SAW-> LNA) per feed ->Combiner -> SAW -> 2 Stage LNA,	
Filtered LNA Frequency Bandwidth	1574 to 1606 MHz	
Polarization	RHCP	
LNA Gain	40 dB min., 1575.42 to 1606 MHz	
Gain flatness	+/- 2 dB, 1575 to 1606 MHz	
Out-of-Band Rejection	<1500 MHz	>32 dB (TW3470) >50dB (TW3472)
	<1550 MHz	>25 dB >50dB
	>1640 MHz	>35 dB >70dB
VSWR (at LNA output)	<1.5:1	
Noise Figure	1 dB typ. TW3470	3.5dB typ. TW3472
Supply Voltage Range (over coaxial cable)	2.5 to 16 VDC (12VDC recommended maximum)	
Supply Current	25 mA max at 85 °C	
ESD Circuit Protection	15 KV air discharge	

## Mechanicals & Environmental

Mechanical Size	66.5 mm dia. x 21 mm H
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Zamak White Metal (M18x1thread)
Weight	135 g
Attachment Method	Permanent 3/4" (19mm) through hole mount
Environmental	IP67, CE 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

### Legacy Part Numbers:

TW3470 – GPS/GLONASS Antenna	32-3470-xx-yy	TW3472 –	32-3472-xx-yy
Connector: xx = 00 TNC	xx = 01 N Type (premium applies)		
Radome Colour	yy = 00 Dark conical	yy = 01 White conical	

\* As a result of a growing product portfolio, Tallysman has rationalized its part number system. No changes have been made to the mechanical or electrical properties of these products. Where administratively possible, please use the following Part Numbers.

TW3440 – GPS/GLONASS/Galileo Antenna 33-3440-xx-yy-zzzz TW3442 – 33-3442-xx-yy-zzzz

Where xx = connector type, yy = shape and colour of radome, and zzzz = cable length in mm (where applicable)

Please refer to the Ordering Guide (<http://www.tallysman.com/orderingguide.php>) for the current and complete list of available radomes and connectors.

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Rev 4.3