



A Tallysman Accutenna® TW3470/TW3472 GPS/GLONASS Timing Antenna*

The TW3470/TW3472 employs Tallysman's unique *Accutenna* technology in its 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 TW3470/TW3472 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).

Please note, we have consolidated our Part Numbering system. As a result, we would prefer you to use the new Part Number (TW3440 or TW3442) where possible as these are identical antennas.



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 TW3470/TW3472
- Available sharp pre-filter (TW3472)
- Low current: 20 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



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 typ. 1.8:1 max.	
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	20 mA typ.; 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: EXL9330, 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

To simplify the Part Numbering system, there has been a part number change. **Please order the TW3440 / TW3442.** There is no electronic nor mechanical differences between these two parts

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/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available radomes and connectors.

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