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## TW3430/TW3432 GPS/GLONASS Timing Antennas

The TW3430/TW3432 are professional grade GNSS antennas covering the GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS & MSAS) frequency bands (1574 to 1606 MHz). They are especially designed for precision timing applications and offer excellent circular polarized signal reception, multipath rejection and out of band signal rejection.

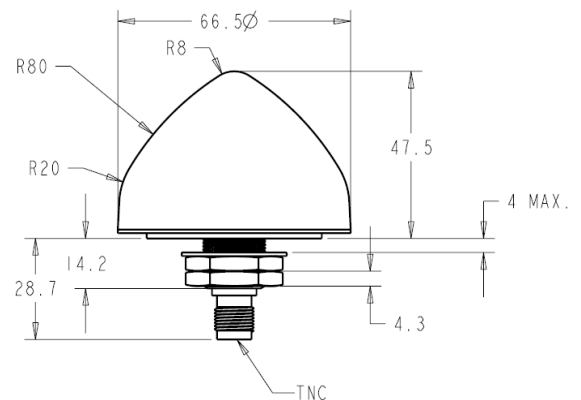
The TW3430/TW3432 feature a highly circular dual-feed wideband patch element, with a two stage Low Noise Amplifier, comprised of one input LNA per feed, a mid-section combining circuit and SAW. This configuration provides an excellent axial ratio that is constant across the full frequency band. An optional tight pre-filter is available with part number TW3432 to protect against saturation by high level sub-harmonics and L-Band signals.

The TW3430/TW3432 are 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).

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



TW3430/3430 Dimensions (mm)



### Features

- Great axial ratio: 1 typ., 3 dB max
- Low noise LNA:  $\leq 1\text{dB}/3.5\text{dB}$  typ TW3430/TW3432
- High rejection mid-section SAW filter
- Available sharp pre-filter (TW3432)
- LNA gain: 28 dB/26dB min TW3430/TW3432.
- Low current: 16 mA typ.
- Wide voltage input range: 2.5 to 16 VDC
- IP67 weather proof housing
- Available flat-top radome (Mobile Apps)

### Benefits

- Excellent multipath rejection
- Increased system accuracy
- Excellent signal to noise ratio
- Exceptional out-of-band signal rejection
- Ideal for harsh environments
- RoHS compliant



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## TW3430/TW3432 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	One LNA per feed line, mid section SAW filter	
Filtered LNA Frequency Bandwidth	1574 to 1606 MHz	
Polarization	RHCP	
LNA Gain	28 dB min., 1575.42 to 1606 MHz, TW3430	
	26dB Min 1575.42 to 1606 MHz, TW3432	
	+/- 2 dB, 1575 to 1605 MHz	
Gain flatness		
Out-of-Band Rejection	<1500 MHz	>32 dB (TW3430)
	<1550 MHz	>50dB (TW3432)
	>1640 MHz	>25 dB
		>50dB
		>35 dB
		>70dB
VSWR (at LNA output)	<1.5:1	
Noise Figure	1 dB typ. TW3430	3.5dB typ. TW3432
Supply Voltage Range (over coaxial cable)	2.5 to 16VDC nominal (12VDC recommended maximum)	
Supply Current	16 mA typ.	
ESD Circuit Protection	15 KV air discharge	

### Mechanicals & Environmental

Mechanical Size	66.5 mm dia. x 47.5 mm H (radome)
Connectors	TNC Jack (female)
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Zamak White Metal
Weight	140 g
Attachment Method	L bracket or ¾" (19mm) through hole mount
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

### Ordering Information

Legacy Part Numbers:

TW3430 – GPS / GLONASS antenna	32-3430-xx-yy	
TW3432 – GPS / GLONASS antenna with pre-filter	32-3432-xx-yy	
Connector:	xx = 00 TNC	xx = 01 N Type (premium applies)
Radome Colour	yy = 00 Dark grey 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.

TW3400 – GPS/GLONASS antenna      33-3400-xx-yy-zzzz      TW3402      33-3402-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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