



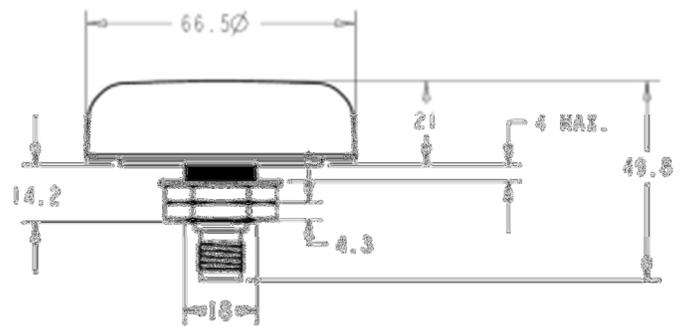
When precision matters...™

TW3440/TW3442 GPS/GLONASS/Galileo Timing Antenna

The TW3440/TW3442 are professional grade 40dB fixed mount Timing antennas covering the GPS L1, GLONASS L1, Galileo, and SBAS (WAAS, EGNOS & MSAS) frequency bands (1574 to 1606 MHz). They are especially designed for mobile, precision and military applications and offer excellent circular polarized signal reception, multipath rejection and out of band signal rejection.

The TW3440/TW3442 each 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 TW3442 to protect against saturation by high level sub-harmonics and L-Band signals.

The TW3440/TW3442 is housed in a permanent mount industrial-grade weather-proof enclosure, and is available with a wide variety of connectors.



Applications

- GPS / GLONASS Long cable Mobile/fixed Installations
- High Accuracy & Mission Critical Global Positioning
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- 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 conical radome (Timing Apps)

Benefits

- Excellent circular polarisation
- Long Cable Runs
- Excellent signal to noise ratio
- Excellent multipath rejection
- Exceptional out-of-band rejection (TW3442)
- Increased system accuracy
- Ideal for harsh environments
- RoHS compliant



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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 -> SAW filter -> 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 (TW3440) >50dB (TW3442)
	<1550 MHz	>25 dB >50dB
	>1640 MHz	>35 dB >70dB
VSWR (at LNA output)	<1.5:1	
Noise Figure	1 dB typ. TW3440	3.5dB typ. TW3442
Supply Voltage Range (over coaxial cable)	2.5 to 16 VDC	
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
Weight	135 g
Attachment Method	Permanent 3/4" (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
Warranty	One year, parts and labour

Ordering Information

TW3440 - GPS/GLONASS/Galileo Antenna	32-3440-xx-yy			
TW3442 - GPS/GLONASS/Galileo Antenna	32-3442-xx-yy			
Connector:	xx = 00 TNC	xx = 01 N Type (add \$2 per unit)		
Radome Colour	yy = 00 Dark grey conical	yy = 01 White conical	yy = 10 Dark grey low profile	yy = 11 White low profile

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