

# TW3400



When precision matters.®

## TW3400 GPS/GLONASS Antenna

Frequency Coverage: L1/G1

### Overview

The TW3400 employs Tallysman's patented Accutenna® technology and covers the GPS-L1, GLONASS-G1 and SBAS (WAAS, EGNOS & MSAS) frequency band (1574 to 1606 MHz). It is especially designed for precision industrial, agricultural, safety and security applications. The TW3400 provides truly circular response over the antennas' entire bandwidth thereby producing superior multipath signal rejection.

The TW3400 features 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 SAW to filter the combined output, and a final output gain stage. This configuration provides an excellent axial ratio that is constant across the full frequency band.

The TW3400 is housed in a permanent mount industrial-grade weather-proof enclosure. Optional components include a 10 cm ground plane (PN 23-0067-0), an L-bracket mount (PN 23-0040-0) or a pipe mount (PN 23-0065-0).



### Applications

- High-accuracy & mission-critical global positioning
- Precision agriculture, mining & construction
- Safety & security
- Avionics
- Law enforcement & public safety
- Fleet management & asset tracking

### Features

- Great axial ratio: 1.0 dB typ.
- Low noise LNA: 1.7 dB typ.
- High-rejection SAW filter
- High-gain LNA: 28 dB typ.
- Wide voltage input range: 2.5 to 12 VDC
- Low current: 13 mA typ.
- IP69K weather-proof housing

### Benefits

- Excellent circular polarisation
- Excellent multipath rejection
- Excellent signal-to-noise ratio
- Great out-of-band signal rejection
- Increased system accuracy
- Ideal for harsh environments
- RoHS and REACH compliant

**About Tallysman:** With global headquarters and manufacturing in Ottawa, Canada, Tallysman is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Tallysman's mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at [www.tallysman.com](http://www.tallysman.com)

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## Antenna

Technology Dual-feed RHCP ceramic patch

		Gain dBic typ. at Zenith	Axial Ratio dB at Zenith
<b>GNSS</b>			
GPS / QZSS	L1	4.25	≤ 1
	L2	-	-
	L5	-	-
GLONASS	G1	4.25	≤ 1
	G2	-	-
	G3	-	-
Galileo	E1	-	-
	E5A	-	-
	E5B	-	-
	E6	-	-
BeiDou	B1	-	-
	B2	-	-
	B2a	-	-
	B3	-	-
IRNSS / NavIC	L5	-	-
QZSS	L6	-	-
L-Band Services (1525 MHz - 1559 MHz)		-	-
<b>Satellite Communications</b>			
Iridium		-	-
Globalstar		-	-
<b>Other</b>			
Axial Ratio	-	Efficiency	-
PC Variation	-		

## Mechanicals

Size 66.5 mm (dia.) x 21 mm (h.)  
 Weight 150 g  
 Radome Radome: EXL9330, Base: Zamak White Metal  
 Mount -

## Environmental

Operating Temperature - 40 °C to + 85 °C  
 Storage Temperature - 50 °C to + 95 °C  
 Vibration MIL-STD-810-D  
 Shock Vertical axis: 50G, other axes: 30G  
 Salt Fog MIL-STD-810F Section 509.3  
 IP Rating IP69K (housing)  
 Compliance IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

## Warranty:

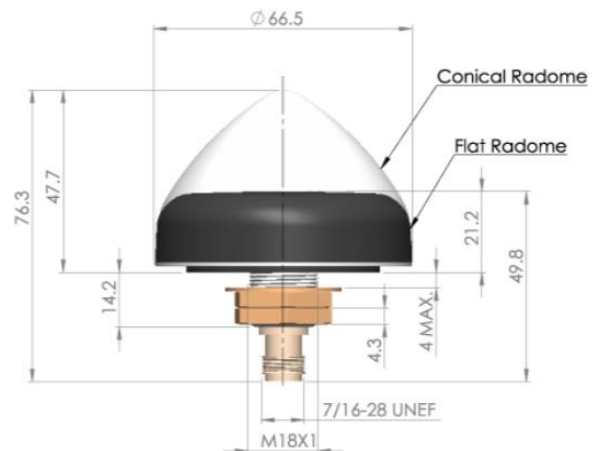
Parts and Labour One year (Extended warranty available)

## Low Noise Amplifier (LNA) - Measured at 3V and 25°C

Frequency Bandwidth		Out of Band Rejection	
		Upper Band	Lower Band
1574 - 1606 MHz	-	< 1500 MHz ≥ 35 dB < 1550 MHz ≥ 19 dB > 1640 MHz ≥ 60 dB	-

Architecture LNA Stage 1 → SAW filter → LNA stage 2  
 Gain 28 dB min.  
 Noise Figure 1.7 dB typ.  
 VSWR < 1.5:1 typ. | 1.8:1 max.  
 Supply Voltage Range 2.5 to 12 VDC nom. (16 VDC max.)  
 Supply Current 13 mA typ.  
 ESD Circuit Protection 15 KV air discharge  
 P1dB Output 3.1 dBm @ 1575 MHz  
 Group Delay Variation 8 ns typ. @ (1570.42 to 1580.42 MHz)

## Mechanical Diagram



## Ordering Information

Part Number **33-3400-xx-yy-zzzz**

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

Please refer to our **Ordering Guide** to review available radomes and connectors at: <https://www.tallysman.com/resource/tallysman-ordering-guide/>