

# TW3400



## 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 weatherproof enclosure. Optional components include a 10 cm ground plane (P/N 23-0067-0), an L-bracket mount (P/N 23-0040-0) or a pipe mount (P/N 23-0065-0).



### Applications

- High-accuracy & mission-critical global positioning
- Precision agriculture, mining, and construction
- Law enforcement and public safety
- Avionics
- Law enforcement and public safety
- Fleet management and 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 weatherproof 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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Frequency Coverage: L1/G1

**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 at 10°	-	Efficiency	-
PC Variation	-	PCO	-

## Mechanicals

**Size** 66.5 mm (dia.) x 21 mm (h.)  
**Weight** 150 g  
**Radome** Radome: EXL9330, Base: Zamak White Metal  
**Mount** -  
**Available Connectors** Please refer to ordering guide

## Environmental

**Operating Temperature** -40 °C to + 85 °C  
**Storage Temperature** -50 °C to + 95 °C  
**Vibration** MIL-STD-810D Method 514.4 and 514.5  
**Shock** Vertical axis: 50 G, other axes: 30 G  
**Salt Fog** MIL-STD-810F Section 509.3  
**IP Rating** IP69K  
**Compliance** IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

## Warranty:

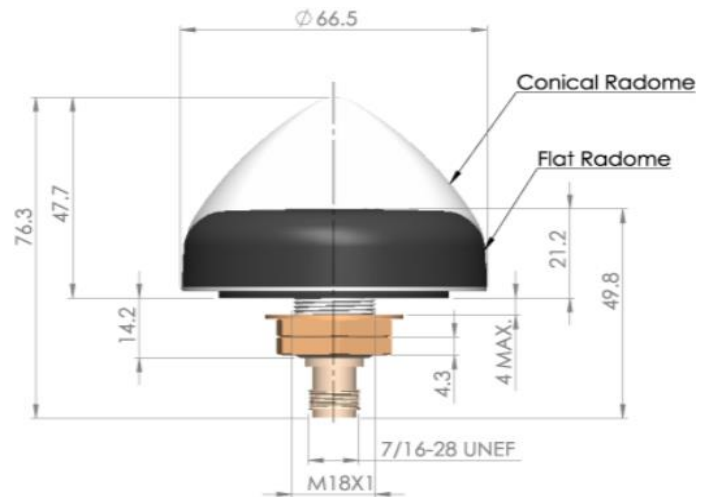
**Parts and Labour** 1-year standard warranty

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

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

**Architecture** LNA stage 1 → filter → LNA stage 2  
**Gain** 28 dB min.  
**Noise Figure** 0.95dB typ. [1575MHz] | 0.94dB typ. [1591MHz] | 0.97dB typ. [1606MHz]  
**VSWR** < 1.5:1 typ. | 1.8:1 max.  
**Supply Voltage Range** Impedance, 50 ohms  
**Supply Current** 2.5 to 12 VDC nom. (16 VDC max.)  
**ESD Circuit Protection** 13 mA typ.  
**P 1dB Output** 15 kV air discharge  
**Group Delay** 3.1 dBm @ 1575 MHz  
**PCO** 8 ns typ. @ (1570.42 to 1580.42 MHz)  
 3.1 dBm @ 1575 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/>