

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

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Antenna			
Technology		Dual-feed RHCP ceramic patch	
		Gain	Axial Ratio
		dBic typ. at Zenith	dB at Zenith
GNSS			
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)			
Satellite Communications			
Iridium		-	-
Globalstar		-	-
Other			
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 (M18x1thread)
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

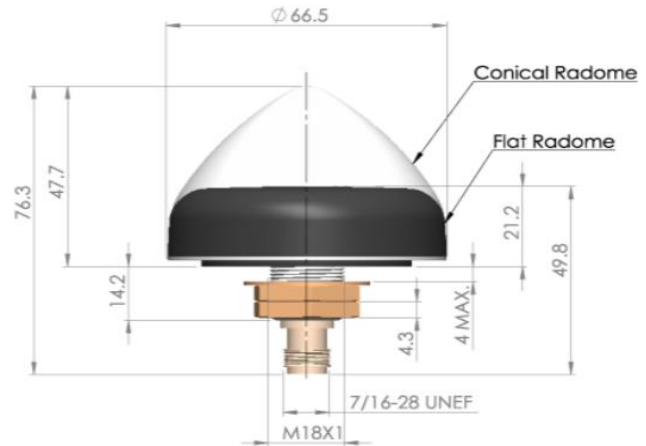
Warranty:	
Parts and Labour	3-year standard warranty

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

Frequency Bandwith	Out of Band Rejection
Lower Band	-
L-Band - Correction Services	-
Upper Band	1574 - 1606 MHz < 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. Impedance, 50 ohms
Supply Voltage Range	2.5 to 12 VDC nom. (16 VDC max.)
Supply Current	13 mA typ.
ESD Circuit Protection	15 kV air discharge
P 1dB Output	3.1 dBm @ 1575 MHz
Group Delay	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/>