TW3322

TALLYSMAN®

When **precision** matters.®

TW3322 Wideband GPS/GLONASS Antenna

Frequency Coverage: **L1/G1**

Overview

The TW3322 high-performance antenna covers the GPS-L1, GLONASS-G1 and SBAS (WAAS, EGNOS & MSAS) frequency band (1574 to 1606 MHz). It features a patch element with 40% wider bandwidth, previously unavailable in this format. Unlike its competitors, both GPS-L1 and GLONASS-G1 signals are included in the 1.0 dB received power bandwidth.

The TW3322 has a tight pre-filter that protects against saturation by high-level sub-harmonics and L-Band signals, followed by a two-stage low noise amplifier with a mid-section SAW filter.

The TW3322 is housed in a permanent mount industrial-grade weather-proof IP69K 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

- Cost-sensitive mission-critical global positioning
- Safety & security
- Fleet management & asset tracking

Features

- Low noise LNA: 2.8 dB typ.
- Pre-filter
- High-rejection mid-section SAW filter
- High-gain: 26 dB typ.
- Wide voltage input range: 2.5 to 12 VDC
- Low power: 9 mA typ.
- IP69K weather-proof housing

Benefits

- Bandwidth fully Includes GPS-L1 & GLONASS-G1
- Excellent multipath rejection
- Increased system accuracy
- Excellent signal-to-noise ratio
- Great out-of-band signal rejection
- 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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Revision: 3.4

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Antenna

Technology Wideband single-feed patch

		Gain dBic typ. at Zenith	Axial Ratio dB at Zenith
GNSS			
GPS / QZSS	L1	4.5	≤ 4.0
	L2	-	-
	L5	-	-
GLONASS	G1	4.5	≤ 4.0
	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	-	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: 50 G, other axes: 30 G
Salt Fog	MIL-STD-810F Section 509.4
IP Rating	IP69K (housing)
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

Warranty:

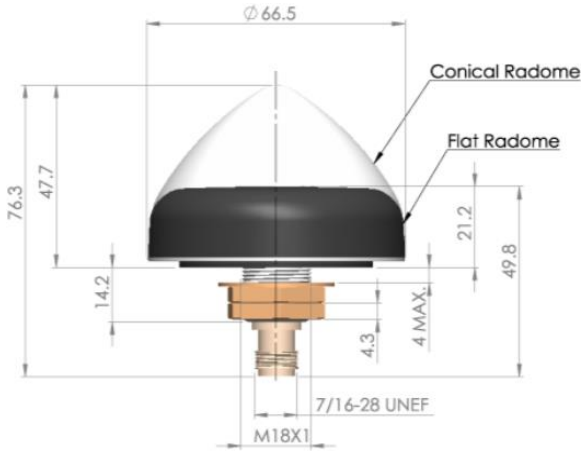
Parts and Labour	One year (Extended warranty available)

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

Frequency Bandwith		Out of Band Rejection	
		Upper Band	Lower Band
1574-1606 MHz	-	<1500 MHz ≥ 84 dB <1550 MHz ≥ 49 dB >1640 MHz ≥ 85 dB	-

Architecture	SAW pre-filter → LNA Stage 1 → SAW filter → LNA stage 2
Gain	26 dB min.
Noise Figure	2.8 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	9 mA typ.
ESD Circuit Protection	15 KV air discharge
P1dB Output	4.5 dBm @ 1575.42 MHz
Group Delay Variation	9 ns typ. @ (1574 to 1606 MHz)

Mechanical Diagram



Ordering Information

Part Number **33-3322-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/