

TW3322



GPS-L1/GLONASS-G1 Antenna

Frequency Coverage: GPS L1 | GLONASS G1

The TW3322 high-performance antenna covers the GPS-L1, GLONASS-G1 and SBAS (WAAS, EGNOS & MSAS) frequency band (1575 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 weatherproof IP69K 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

- Cost-sensitive mission-critical global positioning
- Law enforcement and public safety
- Fleet management and 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 16 VDC)
- Low power (9 mA typ.).
- IP69K weatherproof 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
- CE RED, RoHS, and REACH compliant

About Calian: With global headquarters and manufacturing in Ottawa, Canada, Calian is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Calian'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.calian.com

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GPS-L1/GLONASS-G1 Antenna

Frequency Coverage: GPS L1 | GLONASS G1

Antenna - Measured with a 100 mm ground plane

Technology Single-feed RHCP ceramic patch

		Gain	Axial Ratio
		dBic typ. at Zenith	dB at Zenith
GNSS			
GPS / QZSS	L1	4.5	≤ 4
	L2	-	-
	L5	-	-
GLONASS	G1	4.5	≤ 4
	G2	-	-
	G3	-	-
Galileo	E1	-	-
	E5A	-	-
	E5B	-	-
	E6	-	-
BeiDou	B1	-	-
	B2b	-	-
	B2a	-	-
	B3	-	-
IRNSS / NavIC	L5	-	-
QZSS	L6	-	-
L-Band Services (1539 MHz - 1559 MHz)		-	-
Satellite Communications			
Iridium		-	-
Globalstar		-	-
Other			
Axial Ratio at 10°	-	Efficiency	-
PCV Φ > 15°	-	PCO	-

Mechanicals

Size	66.5 mm (dia.) x 21 mm (h.)
Weight	150 g
Radome	LEXAN™ EXL9330, Base: Zamac Metal
Mount	Through-hole (100 mm ground plane provided)
Available Connectors	Please refer to ordering guide

Environmental

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +95 °C
Vibration	MIL-STD-810-E - Test Method 514.5
Shock	MIL-STD-810-G - Test Method 516.6
Salt Fog	MIL-STD-810-F - Test Method 509.5
Other Tests	Hail, Humidity, Dust, Rain, Sand, Solar
IP Rating	IP69K
Compliance	IPC-A-610, FCC, CE RED, RoHS, REACH

Warranty

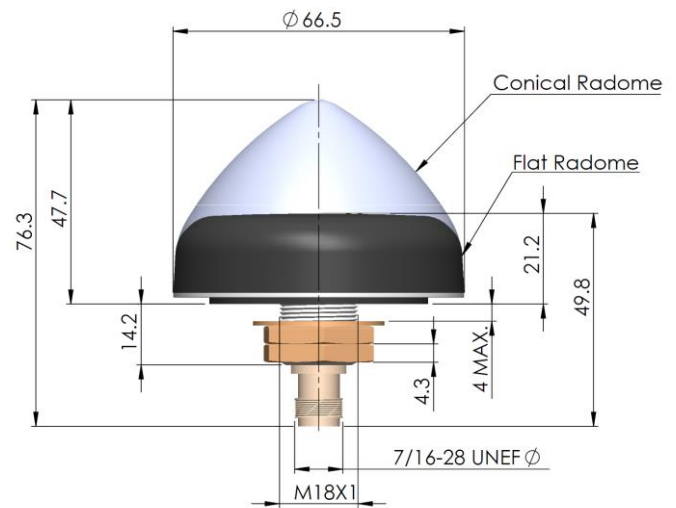
Parts and Labour	3-year standard warranty
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Low Noise Amplifier (LNA) - Measured at 3V and 25°C

Frequency Bandwidth		Out of Band Rejection
Lower Band	-	-
L-Band Corr.	-	> 84 dB @ < 1500 MHz > 49 dB @ < 1550 MHz > 85 dB @ > 1640 MHz
Upper Band	1575-1606 MHz	

Architecture	Pre-filtered
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 16 VDC nominal, up to 50mV p-p ripple
Supply Current	9 mA typ.
ESD Circuit Protection	15 kV air discharge
P 1dB Output	4.5 dBm @ 1575.42 MHz
Group Delay	9 ns typ. @ (1575 to 1606 MHz)

Mechanical Diagram - Units in 'mm' or 'inches' where specified



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/>