

TW2712

Multi-Constellation Antenna

Frequency Coverage: GPS L1 | GALILEO E1 | BEIDOU B1 | GLONASS G1

The TW2712 employs Calian's patented Accutenna® technology covering the BeiDou B1, Galileo E1, GPS-L1, GLONASS-G1 and SBAS (WAAS, QZSS, EGNOS & MSAS) frequency band (1557 to 1606 MHz). It is especially designed for precision industrial, agricultural, safety and security applications. It provides truly circular response over its entire bandwidth thereby producing superior multipath signal rejection.

The TW2712 has a low axial ratio, excellent phase linear response and a tight phase centre variation, providing the performance normally associated with higher priced antennas.

The TW2712 features a dual-feed wideband patch element, with one LNA per feed, a mid section combiner and SAW filter, and a final output gain stage. The TW2712 has a pre-filter to provide extra protection against saturation by strong near frequency or harmonic signals, such as LTE.

The TW2712 is housed in a compact, industrial-grade weatherproof, magnet mount enclosure, and is available with a variety of connectors and cable lengths.

The antenna can be ordered without the magnet. In such cases, the magnet is replaced with a plastic plug to provide a smooth under surface.



Applications

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

Features

- Covers B1 / E1 / L1 / G1 Frequencies
- Great axial ratio: 1 typ., 3 dB max
- Low noise LNA: ≤ 2.5 dB
- High-rejection SAW filter
- LNA gain (26 dB typ.)
- Low current (12 mA typ.)
- Wide voltage input range: 2.5 to 16 VDC

Benefits

- 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 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

Revision: 202407

Contact us:
info@tallysman.com
T: +1 613 591-3131

Multi-Constellation Antenna

Frequency Coverage: GPS L1 | GALILEO E1 | BEIDOU B1 | GLONASS G1

Antenna - Measured with a 100 mm ground plane

Technology Dual-feed RHCP ceramic patch

		Gain	Axial Ratio
		dBic typ. at Zenith	dB at Zenith
GNSS			
GPS / QZSS	L1	4.75	≤ 2
	L2	-	-
	L5	-	-
GLONASS	G1	4.75	≤ 2
	G2	-	-
	G3	-	-
Galileo	E1	4.75	≤ 2
	E5A	-	-
	E5B	-	-
	E6	-	-
BeiDou	B1	4.75	≤ 2
	B2b	-	-
	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	-		

Mechanicals

Size	57 mm (dia.) x 16 mm (h.)
Weight	110 g
Radome	LEXAN™ EXL9330, Base: Zamac Metal
Mount	Magnetic, adhesive, or permanent
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
IP Rating	IP67
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

Warranty:

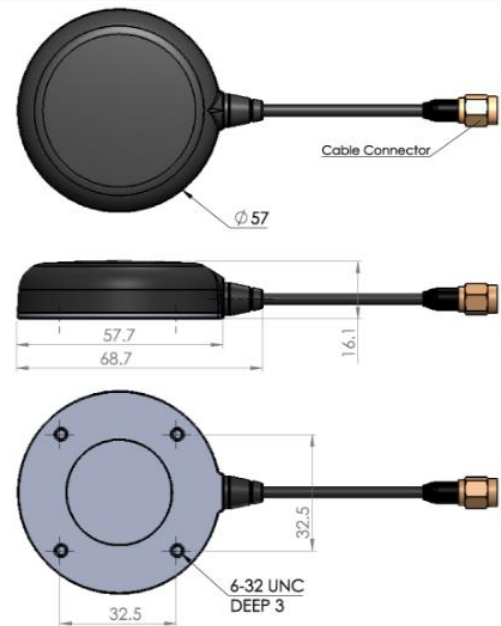
Parts and Labour	3-year standard warranty
------------------	--------------------------

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

Upper Band	Lower Band
Frequency Bandwidth	
1559 - 1606 MHz	-
Out-of-band Rejection	
> 60 dB @ < 1500 MHz > 45 dB @ < 1540 MHz > 45 dB @ > 1640 MHz	-

Architecture	Pre-filtered
Gain	26 dB typ.
Noise Figure	2.5 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	12 mA typ.
ESD Circuit Protection	15 kV air discharge
P 1dB Output	-
Group Delay	-
PCO	-

Mechanical Diagram - Units in 'mm'



Ordering Information

Part Number **33-2712-xx-yyyy**

Where xx = connector type and yyyy = cable length in mm

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