TW2643A

CALIAN
Confidence. Engineered.

Multi-Constellation and Active Iridium® Antenna

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

The TW2643A employs Calian's patented Accutenna® technology in a magnet mount, active right hand circularly polarized antenna for the reception of all of the GNSS constellations (GPS-L1/GLONASS-G1/ Galileo E1/ BeiDou B1) plus Iridum: 1559 to 1626.5 MHz frequency band. It is designed to ONLY receive the GNSS and Iridium signals (not transmit). This antenna is uniquely designed for indoor timing applications relying upon both GNSS and Iridium's PNT signal.

The TW2643A features a high performance dual-feed patch element that provides great axial ratio (4 dB max, < 2 dB @ zenith) over the entire Iridium® + upper GNSS frequency band, thus signals at the band edges remain truly circular, unlike the response of single-feed antennas.

The TW2643A is housed in a compact, industrialgrade weatherproof, magnet mount enclosure, with threaded base holes for screw down attachment.

Applications

- Iridium® PNT applications+ GNSS
- Timing (indoor and outdoor)
- Fleet management and asset tracking
- Marine & Avionics Systems
- Law enforcement and public safety

Features

- Custom high-gain, 5 dBic dual-feed patch
- Great axial ratio, < 2 dB over full bandwidth
- 15 kV ESD circuit protection
- IP67 weather proof housing
- Robust industrial-grade enclosure
- Magnet or screw mount

Benefits

- Excellent circular polarized signal transmission
- Industrial temperature range
- Rugged Design
- 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

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Revision: 202410

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Antenna - Measured with a 100 mm ground plane

Technology: Dual-feed RHCP ceramic patch

		Gain dBic typ. at Zenith	Axial Ratio dB at Zenith
GNSS			
GPS / QZSS	L1	4.50	≤ 2
	L2	-	-
	L5	-	-
GLONASS	G1	5.00	≤ 2
	G2	-	-
	G3	-	-
Galileo	E1	3.50	≤ 2
	E5A	-	-
	E5B	-	-
	E6	-	-
BeiDou	B1	3.50	≤ 2
	B2b	-	-
	B2a	-	-
	B3	-	-
IRNSS / NavIC	L5	-	-
QZSS	L6	-	-
L-Band Services (1525 MHz - 1559 MHz)		-	-
Satellite Communications			
Iridium		4.50	≤ 2
Globalstar		-	-
Other			
Axial Ratio at 10°	-	Efficiency	-
PC Variation	-		

Mechanicals

Size	57 mm (dia.) x 16 mm (h.)
Weight	160 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:

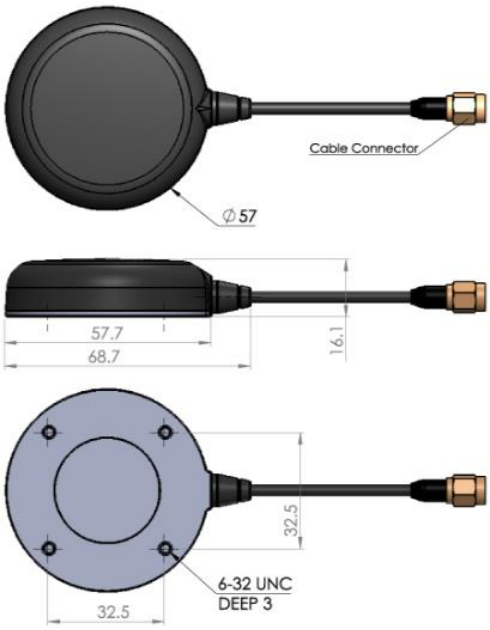
Parts and Labour	3-year standard warranty

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

Upper Band	Lower Band
Frequency Bandwith	
1559 - 1626 MHz	-
Out-of-band Rejection	
> 50 dB @ < 1000 MHz > 30 dB @ < 1400 MHz > 40 dB @ > 1700 MHz	-

Architecture	Non pre-filtered
Gain	26 dB typ.
Noise Figure	1.5 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 **33-2643A-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/

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