TW1600

CALIAN
Confidence. Engineered.

Iridium® Antenna

Frequency Coverage: Iridium

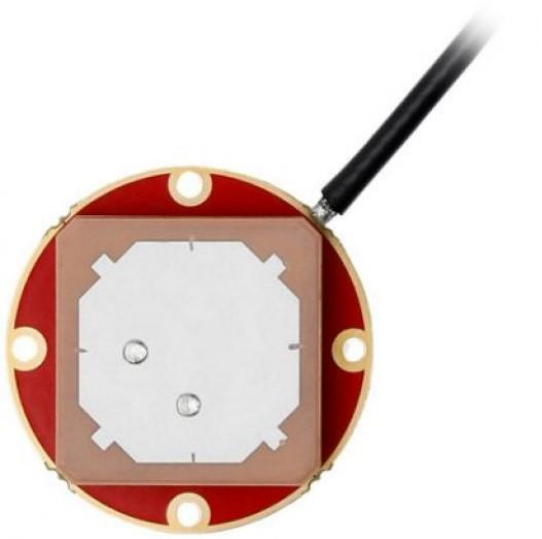
Overview

The TW1600 employs Calian's patented Accutenna® technology in a low cost OEM dual-feed, passive Right Hand Circularly Polarized antenna (RHCP) for the 1616 MHz to 1626 MHz frequency band, specifically designed to enhance the signal-to-noise ratio of communications over the Iridium® satellite communications network.

The wideband dual-feed patch element in the TW1600 has an excellent axial ratio across the entire Iridium® bandwidth. Unlike single-feed antennas, the TW1600 provides excellent multipath rejection and a truly circular transmission response across the Iridium® band.

The TW1600 includes a built-in 35 mm circular ground plane but best performance is obtained with this augmented with a local system ground plane or reflecting surface equivalent to 100 mm (dia.)iameter (DC connection not required).

OEM antennas are easily detuned by the local environment. Calian offers custom tuning services for optimized integration into OEM end-user modules.



Applications

- Higher C/No values for Iridium® communications
- Sea & Land Container Tracking
- Law enforcement and public safety
- Fleet management and asset tracking
- Marine & Avionics Systems
- Law enforcement and public safety

Features

- Compact Dual-feed Patch Element
- Axial ratio, ≤ 3 dB over full bandwidth
- High-gain (4.5 dBic)
- Robust design
- Small form factor

Benefits

- Better axial ratio at lower elevation angles
- Higher Rx and Tx success rates
- Compact form factor
- RoHS 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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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	-	-
	L2	-	-
	L5	-	-
GLONASS	G1	-	-
	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		4.5	≤ 1
Globalstar		-	-
Other			
Axial Ratio at 10°	-	Efficiency	-
PC Variation	-		

Mechanicals

Size	35 mm (dia.) x 8.8 mm
Weight	18 g
Radome	-
Mount	Adhesive | 4 · M2 screws
Available Connectors	Refer to Ordering Guide

Environmental

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +95 °C
Vibration	MIL-STD-810D
Shock	Vertical axis: 50 G, other axes: 30 G
Salt Fog	-
IP Rating	-
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

Warranty

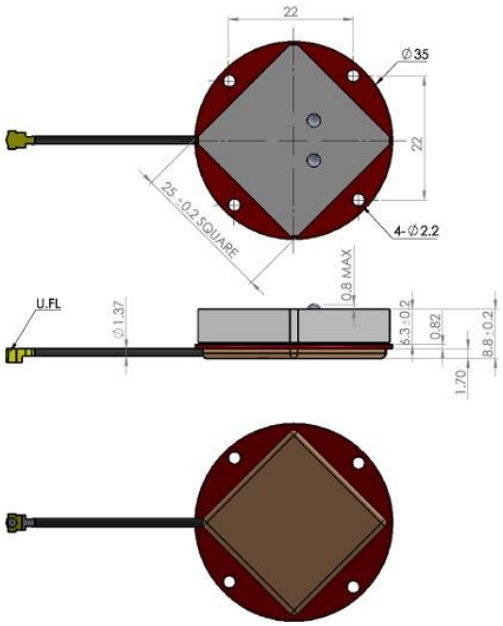
Parts and Labour: 1-year standard warranty

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

Upper Band	Lower Band
Frequency Bandwith	
1616 - 1626 MHz	-
Out-of-band Rejection	
-	-

Architecture	Passive
Gain	-
Noise Figure	-
VSWR	< 1.5:1 typ., 1.8:1 max.
Supply Voltage Range	-
Supply Current	-
ESD Circuit Protection	-
P 1dB Output	-
Group Delay	-
PCO	-

Mechanical Diagram



Ordering Information

Part Number **33-1600-xx-yyyy**

Where xx = connector type yyyy= cable length (in mm) and zz = reserved for Calian's use

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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