

TW141

40 dB GNSS In-Line Amplifier

Frequency Coverage: Full GNSS Spectrum

The TW141 is a rugged, waterproof wideband 40 dB gain in-line amplifier, specially designed to boost weak frequency signals from 1100 to 1700 MHz, including L-Band and all GNSS (GPS, GLONASS, BeiDou, and Galileo) signals.

The TW141 provides for much longer cable runs from antenna to receiver without degradation of system sensitivity, for applications such as mast-mount, large vehicle and timing systems.

The TW141 passes DC directly from input to output to support centre conductor DC supply to the antenna, and so avoids the need for an additional bias source or bias "T".

It is enclosed in a robust weatherproof cylindrical nickel-plated brass housing (IP67-compliant) and is available with SMA and TNC female connectors.

Amplifiers are directional and must be installed in the orientation indicated on the product label (arrow points away from antenna).



Applications

- Commercial and Military L-Band Satellite Systems
- Wireless Telecom & Cellular Base Station Timing Applications
- GNSS (GPS, GLONASS, Galileo), SBAS and Telematics Systems
- Commercial and Industrial Timing and Synchronization Applications

Features

- Very low noise figure
- < 25 mA max. current consumption
- Wide input voltage 3.3 to 10 Volts
- Cylindrical nickel-plated brass housing: IP67
- Powered via antenna coax from receiver
- 50 Ohm port impedance
- Available SMA, TNC or N-Type jack connectors
- CE RED, REACH, and RoHS compliant

Benefits

- Improves signal reception
- Enables extended cable runs
- Avoid installation of costly low-loss cable
- Fits in line with antenna cable
- No external DC power supply required
- Easy to install – mounting clamp included

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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Electrical Specifications

Parameter	Value
Operational Frequency	1.1 to 1.7 GHz
I/O VSWR (50 Ω)	1.5 typ., 2 max.
Gain and Flatness	42 dB typ., 40 dB min., ±2 dB flatness
Noise Figure	2 dB typ.
Supply Current	25 mA typ.
Out-of-band Rejection	-
Reverse Isolation	50 dB min.
Supply Voltage Range	3.3 to 10 VDC nominal
Output P1dB (Compression Level)	+7 dBm
Output IP3	+20 dBm
Maximum Input RF Power	-
Group Delay Variation	-

Mechanicals

Size	59 mm (l.) x 20 mm (dia.)
Weight	85 g
Enclosure	Nickel-plated brass
Mount	-
Connectors	SMA, TNC, or type-N (female)

Environmental

Operating Temperature	-40 °C to 85 °C
Storage Temperature	-55 °C to 95 °C
Vibration	-
Shock	-
Salt Fog	-
IP Rating	IP67
Compliance	CE RED, RoHS, and REACH compliant

Warranty

Parts and Labour	-
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Ordering Information

Part Number **32-0141-xx**

Where xx = 00 for SMA (female), 01 for TNC (female) or 14 for type-N (female)

Please refer to our **Ordering Guide** to review available radomes and connectors at:

<https://www.tallysman.com/resource/tallysman-ordering-guide/>

Mechanical Diagram - Units in 'mm'

