

# A Tallysman *Accutenna*® TW3740 / TW3742 High Gain Multi-Constellation Antenna

The TW3740 / TW3742 is a precision high gain GNSS antenna covering the BeiDou B1, Galileo E1, GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS, QZSS & MSAS) frequency band (1557 to 1606 MHz). It employs Tallysman's unique *Accutenna®* technology providing truly circular polarized signal reception through the entire bandwidth of the antenna, thereby providing superior multipath signal rejection. It is especially designed for precision timing, industrial, agricultural, military, and other precision applications.

The TW3740 features a three stage Low Noise Amplifier, comprised of one input LNA per feed, a mid section SAW to filter the combined output, and a final output gain stage.

The TW3742 adds an additional pre-filter to provide extra strong protection from near frequency and strong harmonic signals.

The TW3740/ TW3742 is housed in a permanent mount metal base with two nickel coated nuts and a weather-proof enclosure. Two options for mounting are available: an L-bracket (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0).

### **Applications**

- High Accuracy & Mission Critical Global Positioning
- Timing applications
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

#### **Features**

- *Accutenna*® technology
- Great axial ratio: 1 dB typ.
- Low noise LNA: 1 dB
- High rejection SAW filter
- High gain LNA: 40 dB typ.
- Low current: 19 mA typ.
- Wide voltage input range: 2.5 to 16 VDC
- IP67 weather proof housing



TW3740 / TW3742 Conical radome pictured here. Flat radome also available. Also available in White

#### **Benefits**

- Circular polarisation throughout the full bandwidth
- Superior multipath signal rejection
- Excellent signal to noise ratio
- Great out of band signal rejection
- Increased system accuracy
- Ideal for harsh environments
- RoHS and REACH compliant



# TW3740 / TW3742 Multi-Constellation Antenna

**Specifications** Vcc = 3V, over full bandwidth, T=25°C

Antenna

Architecture 2 dB Bandwidth

Antenna Gain (with 100mm ground plane)

Axial Ratio (over full bandwidth)

Electrical

Filtered LNA Frequency Bandwidth

Polarization LNA Gain Gain flatness

Out-of-Band Rejection <1500 MHz

>1640 MHz

VSWR (at LNA output)

Noise Figure

Supply Voltage Range (over coaxial cable)

Supply Current
ESD Circuit Protection

**Mechanicals & Environmental** 

Mechanical Size Operating Temp. Range

Storage Temperature Range

Enclosure Weight

Attachment Method Environmental

Shock Vibration

Salt Spray Warranty Dual, Quadrature Feeds

47 MHz 4.25 dBic

<2 dB typ., 3 dB max.

1559 to 1606 MHz

RHCP

TW3740: 40 dB min., TW3742: 38dB min

+/- 2 dB, 1559 to 1606 MHz

>32 dB (TW3740) >50dB (TW3742)

>35 dB >70 dB

<1.5:1 typ. 1.8:1 max

TW3740: 1 dB typ. TW3742: 3dB typ.

2.5 to 16 VDC nominal (12VDC recommended max.)

19 mA typ.

15 KV air discharge

66.5 mm dia. x 21 mm H

-40 to +85 °C

-45 to +85 °C

Radome: EXL9330, Base: Zamak White Metal

150 g

Permanent ¾" (19mm) through hole mount IP67, RoHS, REACH, and RED compliant Vertical axis: 50 G, other axes: 30 G

3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G

MIL-STD-810F Section 509.4 One year, parts and labour

## **Ordering Information**

TW3740 – Multi-Constellation Antenna 33-3740-xx-yy-zzzz TW3742 – Prefiltered Multi-Constellation Antenna 33-3742-xx-yy-zzzz

Where xx = connector type, yy = shape and colour of radome, and zzzz = length of cable in mm (where applicable)

Please refer to the Ordering Guide (<a href="http://www.tallysman.com/index.php/gnss/ordering-guide/">http://www.tallysman.com/index.php/gnss/ordering-guide/</a>) for the current and complete list of available radomes and connectors.



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