



A Tallysman Accutenna®

TW3882 GPS L1/L2 + GLONASS G1/G2/G3 + BeiDou B1/B2 + Galileo E1/E5b

The TW3882 employs Tallysman's unique *Accutenna* technology providing dual band GPS L1/L2, GLONASS G1/G2/G3 + BeiDou B1/B2 + Galileo E1/E5b coverage and is especially designed for precision dual frequency positioning.

The TW3882 features a precision tuned, circular dual feed, stacked patch element. The signals from the two orthogonal feeds are combined in a hybrid combiner, amplified in a wide-band LNA, then band-split for narrow filtering in each band and further amplified prior to recombination at the output.

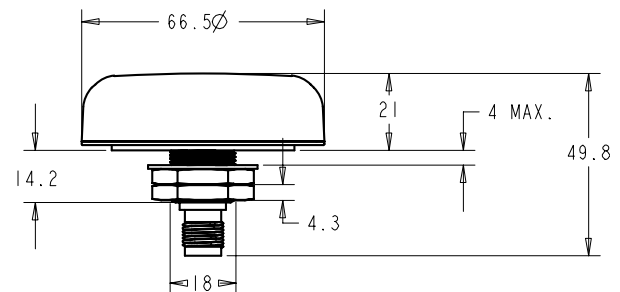
The TW3882 has a pre-filter which increases the antenna's immunity to high amplitude signals, such as LTW and other cellular signals. The TW3882 offers excellent axial ratio and a tightly grouped phase center variation.

The TW3882 is housed in a through-hole mount, weather-proof enclosure for permanent installations. L Bracket or Pipe Mount (part numbers 23-0040-0, 23-0065-0 respectively) are available for non-rooftop installation. A 100mm ground plane is recommended for non-roof-top installations.

This product is also available in an OEM format (TW3887)



TW3870 Dimensions (mm)



Applications

- Precision GPS position
- Dual Frequency RTK receivers
- Mission Critical GPS Timing
- Military & Security
- Network Timing and Synchronization

Features

- Very low Noise Preamplifier, < 2.5dB
- Axial ratio L1: ≤1.0 dB typ. 1.5 dB max.
- Tight Phase Center Variation
- LNA Gain 35 dB typ.
- Low current: 24 mA typ.
- ESD circuit protection: 15 KV
- Invariant performance from: +2.5 to 16VDC

Benefits

- Ideal for L1/L2 RTK surveying systems
- Great multipath rejection
- Increased system accuracy
- Great signal to noise ratio
- IP67, REACH, and RoHS compliant

**TW3882 GPS L1/L2 + GLONASS G1/G2/G3 + BeiDou B1/B2 + Galileo E1/E5b****Specifications** (Measured a Vcc = 3V, and Temperature=25°C)**Antenna**

Patch Architecture

L2 Gain (100mm ground plane), 1207.14-1246MHz

L1 Gain (100mm ground plane), 1575.42MHz-1606MHz

Axial Ratio, L1/G1/E1/B1, L2/G2/B2/E5b

1dB Bandwidth,

Polarization

Circular, Dual Feed, Dual Stacked Patch

3 dBic Min at Zenith on 100mm Ground Plane

4.5 dBic Min at Zenith on 100mm Ground Plane

≤1.0 dB typ. 1.5 dB max., ≤1.5 dB typ. 2.0 dB max.

L2: 1195MHz-1250MHz L1: 1557MHz-1606MHz

RHCP,

Electrical

Bandwidth

Overall LNA Gain

Gain Variation with Temperature.

LNA Noise Figure

VSWR (at LNA output)

Supply Voltage Range

EMI Immunity

Supply Current

ESD Circuit protection

Out-of-Band Rejection

L2: 1189MHz-1261MHz (Filter bandwidth) L1: 1557 MHz-1606MHz (Filter bandwidth)

35dB typ, 32 dB min, each of L1 and L2 Bands,

3dB max over operational temperature range

2.5dB typ at 25°C

<1.5:1 typ. <1.8:1 max.

+2.5 to 16VDC nominal, up to 50mV p-p ripple

50V/Meter, excepting L1+/-100MHz and L2 +/- 100MHz

24 mA typ. at 25°C, 25mA max at 75°C.

15 KV air discharge.

	L1		L2	
	<1450 MHz	>40 dB	<1050 MHz	>50 dB
	<1520 MHz	>30 dB	<1100 MHz	>40 dB
	>1650 MHz	>35 dB	>1350 MHz	>50 dB

Mechanicals & Environmental

Mechanical Size, Ground Plane

Operating Temperature Range

Enclosure

Weight

Attachment Method

Environmental

Shock

Vibration

Salt fog / spray

66mm x 21mm (see drawing on other page), 100mm ground plane recommended

-40°C to +85°C

Radome: EXL9330, Base: Zamak White Metal

185 g

Permanent 3/4" (19mm) through hole mount

IP67, RoHS, RED, and REACH 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

Ordering Information

TW3882 – GPS L1/L2 + GLONASS G1/G2 + BeiDou B1/B2 + Galileo E1

33-3882-xx-yy-zzzz

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

Please refer to the Ordering Guide (<http://www.tallysman.com/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available radomes and connectors.

TallysmanAn ISO 9001:2015
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