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)

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

Features
- Very low Noise Preamp, < 2.5dB
- Axial ratio: <2dB typ.
- 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

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Specifications (Measured a Vcc = 3V, and Temperature=25°C)

**Antenna**
- Circular, Dual Feed, Dual Stacked Patch
- 3 dBi Min at Zenith on 100mm Ground Plane
- 4.5 dBi Min at Zenith on 100mm Ground Plane
- ≤ 2dB typ., 1 dB max at Zenith, 3dB max at horizon
- \[ \text{L2: 1195MHz-1250MHz} \quad \text{L1: 1557MHz-1606MHz} \]
- RHCP,

**Electrical**
- **Bandwidth**
  - \[ \text{L2: 1189MHz-1261MHz (Filter bandwidth)} \]
  - \[ \text{L1: 1557MHz-1606MHz (Filter bandwidth)} \]
- **Overall LNA Gain**
  - 35dBi typ, 32 dB min, each of L1 and L2 Bands,
- **Gain Variation with Temperature.**
  - 3dB max over operational temperature range
- **LNA Noise Figure**
  - 2.5dB typ at 25°C
- **VSWR (at LNA output)**
  - <1.5:1 typ. <1.8:1 max.
- **Supply Voltage Range**
  - 2.5 to 16VDC nominal, up to 50mV p-p ripple
  - 50V/Meter, excepting L1+/-100MHz and L2 +/– 100MHz
- **Supply Current**
  - 24mA typ. at 25°C, 25mA max at 75°C.
  - 15 KV air discharge.
- **EMI Immunity**
  - 250V/Meter, excepting L1+/-100MHz and L2 +/– 100MHz
- **ESD Circuit protection**
  - 15 KV air discharge.

**Mechanicals & Environmental**
- **Mechanical Size, Ground Plane**
  - 66mm x 21mm (see drawing on other page), 100mm ground plane recommended
- **Operating Temperature Range**
  - -40°C to +85°C
- **Enclosure**
  - Radome: EXL9330, Base: Zamak White Metal
- **Weight**
  - 185 g
- **Attachment Method**
  - Permanent ¾” (19mm) through hole mount
- **Environmental**
  - IP67, RoHS, RED, and REACH compliant
- **Shock**
  - Vertical axis: 50 G, other axes: 30 G
- **Vibration**
  - 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G
- **Salt fog / spray**
  - MIL-STD-810F Section 509.4

**Ordering Information**


Where \( xx = \text{connector type}, \ y = \text{shape and colour of radome} \) and \( zzzz = \text{cable length in mm (where applicable)} \)


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