



## A Tallysman Accutenna™ TW2505 Embedded Globalstar™ Certified STU Antenna

The TW2505 employs Tallysman's unique Accutenna™ technology in an embedded, passive left hand circularly polarized antenna for the 1610 to 1620 MHz frequency band, certified and specifically designed to maximise the performance of the Globalstar™ STU (Simplex Transmit Unit) Modem.

The TW2505 features a high performance dual-feed patch element that provides great axial ratio (3 dB max) over the entire Globalstar™ frequency band, thus signals at the band edges remain truly circular, unlike the response of single feed antennas.

The TW2505 provides excellent Globalstar™ signal coverage, and comes in a compact circular form factor with a built-in 50 mm diameter ground plane and with a 15 cm RG174 cable.

### Applications

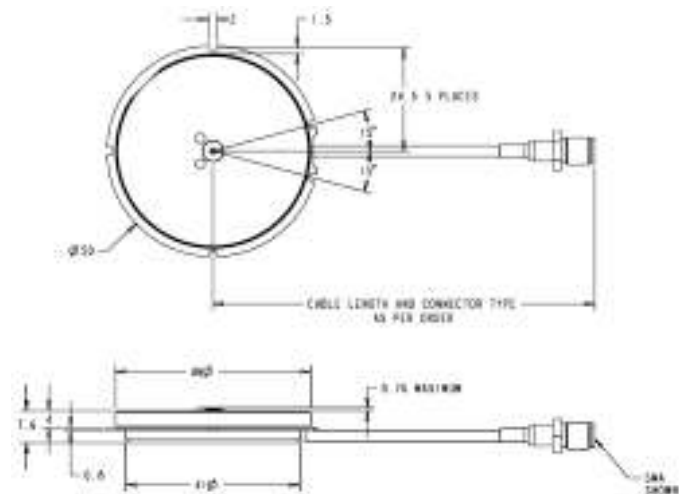
- Simplex Transmit Unit (STU) Applications
- Sea & Land Container Tracking
- Military & Security
- Fleet Management & Asset Tracking
- Marine & Avionics Systems
- Law Enforcement & Public Safety

### Features

- Custom high gain 4.25 dBic dual-feed patch
- Great axial ratio, 3 dB over full bandwidth
- 15 KV ESD circuit protection
- Robust design
- Small form factor



TW2505 Dimensions (mm)



### Benefits

- Excellent circular polarized signal transmission
- Industrial temperature range
- Rugged Design
- RoHS compliant



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

#### Antenna

Architecture	Dual, quadrature feeds
Antenna Gain (100mm ground plane)	4.25 dBic
Axial Ratio (over full bandwidth)	≤3 dB

#### Electrical

Architecture	Hybrid 90° phase signal splitter
Frequency Bandwidth	1615 MHz ± 10 MHz
Polarization	LHCP
Gain flatness	≤1 dB, from 1610 to 1620 MHz
VSWR (at antenna)	<1.5:1
Return Loss (over 10 dB bandwidth)	<-20dB
ESD Circuit protection	15 KV air discharge
Cross Polarization Rejection	15 dB minimum across the band

#### Mechanicals & Environmental

Mechanical Size	50 mm dia. x 7.8 mm H
Cable	RG174 / 15 cm, custom lengths optional
Operating Temp. Range	-40 to +85 °C
Weight	100 g
Attachment Method	Adhesive or screw mount
Environmental	RoHS compliant
Shock	Vertical axis: 50 G, other axes: 30 G
Vibration	3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G
Warranty	One year – parts and labour

#### Ordering Information

Legacy Part Numbers:

TW2505 – Globalstar™ STU antenna, 15cm cable, SMA Male	32-2505-0
TW2505 – Globalstar™ STU antenna, 15cm cable, MCX R/A	32-2505-5
TW2505 – Globalstar™ STU antenna, 15cm cable, MMCX R/A	32-2505-6

\* As a result of a growing product portfolio, Tallysman has rationalized its part number system. No changes have been made to the mechanical or electrical properties of these products. Where administratively possible, please use the following Part Numbers.

TW2505 – Globalstar™ STU antenna, 33-2505-xx-yyyy-zz

Where xx = connector type, yyyy = cable length in mm and zz = assigned by Tallysman for custom tuning

Please refer to the Ordering Guide (<http://www.tallysman.com/orderingguide.php>) for the current and complete list of available connectors.

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