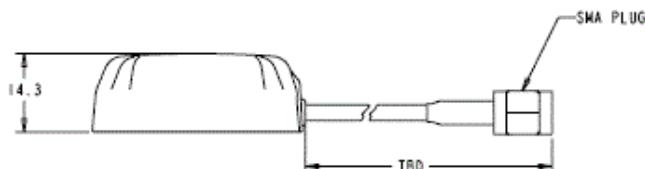
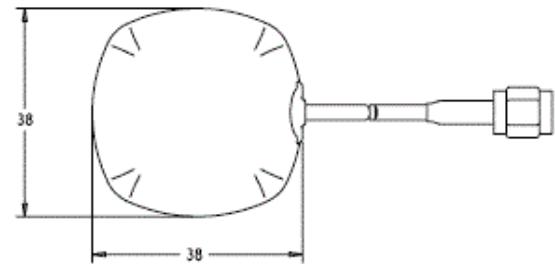


## TW4500 Wideband Dual Feed Globalstar™ Antenna

The TW4500 by Tallysman Wireless is a dual feed, magnetic mount, passive Left Hand Circularly Polarised antenna (LHCP) for the 1610 to 1620 MHz frequency band, specifically designed to maximise the performance of the Globalstar™ STU (Simplex Transmit Unit) modems.

The wideband dual feed patch element in the TW4500 has an excellent axial ratio across the entire Globalstar™ bandwidth. Unlike single feed antennas, the TW4500 provides excellent multipath rejection and a truly circular transmission response across the Globalstar™ band.

The TW4500 is the smallest dual feed, high performance Globalstar™ antenna available. It is housed in a compact IP67 magnetic mount enclosure. It is available with a 50cm coaxial cable that allows for an STU modem to be mounted away from the weather, yet still provide excellent Globalstar™ coverage.



### Applications

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

### Features

- Novel 25mm, wideband dual feed patch
- 4.25 dBi Gain on 100mm Ground plane.
- Great axial ratio, <3 dB over full bandwidth
- Weather proof, IP67 housing
- Low Cost all-plastic housing
- Magnetic mount
- Wide range of connector options

### Benefits

- Truly circular polarized signal transmission
- Environment tolerant tuning
- Truly circular with great multipath rejection
- Industrial temperature range
- Rugged Design
- No compromise for cost sensitive applications
- RoHS compliant



When precision matters.™

# TW4500 Wideband Dual Feed Globalstar™ Antenna

## Specifications

Over full bandwidth, T=25°C

### Antenna

|                                   |                        |
|-----------------------------------|------------------------|
| Architecture                      | Dual, quadrature feeds |
| Antenna Gain (100mm ground plane) | 4.25dBiC               |
| Axial Ratio (over full bandwidth) | ≤3dB                   |
| 1.0 dB Bandwidth                  | 1600MHz to 1630MHz     |

### Electrical

|                                |  |
|--------------------------------|--|
| Architecture                   | Dual Feed Patch -> Hybrid 90° Combiner |
| Polarization                   | LHCP                                   |
| Gain flatness                  | ≤1dB, from 1610MHz to 1620MHz          |
| VSWR (at antenna)              | <1.5:1                                 |
| Return Loss (-10 dB bandwidth) | <-20MHz                                |
| ESD Circuit protection         | 15KV air discharge                     |

### Mechanicals & Environmental

|                       |  |
|-----------------------|--|
| Mechanical Size       | 38mm x 38mm dia. x 14.3mm High                   |
| Connectors            | SMA male standard, others available              |
| Cable                 | RG174  |
| Operating Temp. Range | -40°C to +85°C                                   |
| Enclosure             | Radome and base: ASA plastic                     |
| Weight                | Enclosure + SMA connector 34gm, cable 0.31gm/cm) |
| Attachment Method     | Magnetic   |
| Environmental         | IP67 and RoHS compliant                          |
| Shock                 | Vertical axis: 50G, other axes: 30G              |
| Vibration             | 3 axis, sweep = 15 min, 10 to 200Hz sweep: 3G    |
| Warranty              | One year, parts and labour                       |

### Ordering Information

#### Legacy Part Numbers:

TW4500 - Dual Feed, Wideband, Globalstar™ Antenna, 32-4500-xx-yyyy  
Connector: xx = 00 SMA male , 01 = TNC male 02 = MCX male 03 = MMCX male 04 = SMB male  
05 = MCX right angle male 06 = MMCX right angle male 07 = SMA female 08 = H.FL\*\* 09 = U.FL  
10 = SMA R/A\*\* 11 = Reverse polarity SMA\*\* \*\* Premiums apply. Please contact your Distributor

Cable length: yyyy = cable length in mm

\* 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 new Part Numbers.

TW4500 - Dual Feed, Wideband, Globalstar™ Antenna 33-4500-xx-yyyy

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

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Rev 2.2