



## TW4500 Wideband Dual Feed Globalstar™ Antenna

The TW4500 by Tallysman Wireless is a low cost 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

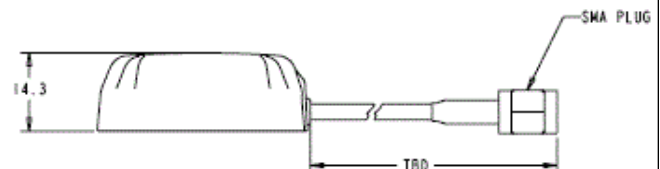
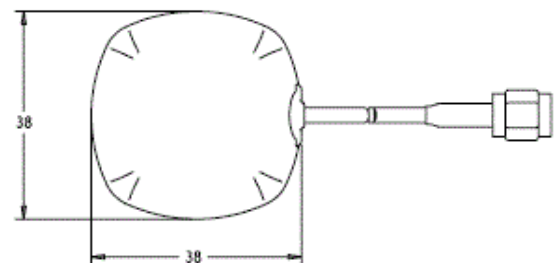
- Simplex Transmit Unit (STU) Applications
- Sea & Land Container Tracking
- Military & Security
- Fleet Management & Asset Tracking
- Marine & Avionics Systems
- Law Enforcement & Public Safety

### Features

- Novel 25mm, wideband dual feed patch
- 4.25 dBic 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





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## 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 / 3metres, other lengths optional
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

TW4500 – Dual Feed, Wideband, Globalstar™ Antenna, 32-4500-xx-yyyy  
xx = connector type, (SMA male standard), yyyy= Coaxial cable length (50cm standard)

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