



## A Tallysman Accutenna®

### TW3892 GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1 + L-Band

The TW3892 precision tuned dual band, *Accutenna*® technology antenna for reception of GPS L1/L2, GLONASS G1/G2 + BeiDou B1 + Galileo E1+ L-band correction services coverage and is especially designed for precision dual frequency positioning. The TW3892 provides superior multi-path rejection and axial ratio, a linear phase response, and tight Phase Centre Variation (PCV), while protecting against intermodulation and saturation caused by high level cellular 700MHz signals. This antenna is ideal for precision agriculture, autonomous vehicle tracking and guidance, and other applications where precision matters.

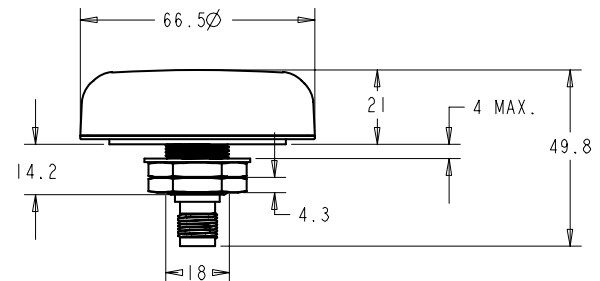
Architecturally, the TW3892 features a dual feed circular stacked patch element. The signals from the two orthogonal feeds are summed in quadrature, pre-filtered in a low loss filter to protect against a wide range of potentially interfering signals, amplified in high linearity, wide-band LNA, then band-split, tightly filtered and amplified prior to signal recombination at the output

The TW3892 covers GPS L2 (1227.6MHz), GLONASS G2 (1248MHz centre), GPS L1/WAAS/EGNOS/MSAS (1575.42MHz), GLONASS G1 (1602MHz, centre), BeiDou B1, Galileo E1. (1561 and 1589 MHz) and L-band correction services (1525-1559MHz)

The TW3892 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.



TW3xxx Dimensions (mm)



### Applications

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

### Features

- Very low Noise Preamp, < 2dB
- 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



## TW3892 GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1 + L-Band

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

#### Antenna

Patch Architecture	Circular, Dual Feed, Dual Stacked Patch				
L1/L2 Gain (100mm ground plane)	4.0 / 4.0 dBic typ at Zenith				
G1/G2 Gain (100mm ground plane),	3.0 /2.5 dBic typ at Zenith				
Axial Ratio @ zenith					
L2	<	<1dB	G2	<	<1.5dB
L-Band		<1dB			
L1/E1		<1dB	G1		<1.5dB
1dB Bandwidth,			L2: 1227MHz-1250MHz	L1: 1525MHz-1606MHz	
Polarization			RHCP,		

#### Electrical

Bandwidth	L2: 1213MHz-1261MHz (Filter bandwidth)	L1: 1525 MHz-1606MHz (Filter bandwidth)		
Overall LNA Gain	35dB 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 @25°C			
VSWR (at LNA output)	<1.5:1			
Supply Voltage Range	+2.5 to 16VDC nominal, up to 50mV p-p ripple			
EMI Immunity	50V/Meter, excepting L1 +/-100MHz and L2 +/- 100MHz			
Supply Current	24 mA typ. at 25°C, 25mA max at 75°C.			
ESD Circuit protection	15 KV air discharge.			
Out-of-Band Rejection	<b>L2</b>	<b>L1</b>		
	<1130MHz	>40 dB	<1450 MHz	>30dB
	<1190 MHz	>30 dB	>1690 MHz	> 30dB
	>1284 MHz	>32 dB	>1730 MHz	> 40dB

#### 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 3/4" (19mm) through hole mount
Environmental	IP67, RoHS 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

TW3892 – GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1 + L-band

33-3892-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.

#### Tallysman Wireless Inc

36 Steacie Drive  
Ottawa ON K2K 2A9 Canada

Tel +1 613 591 3131

Fax 613 591 3121

[sales@tallysman.com](mailto:sales@tallysman.com)

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