

VeroStar™ VSP600L

VeroStar VSP600L Precision Antenna Support Full GNSS Spectrum + L-band Corrections

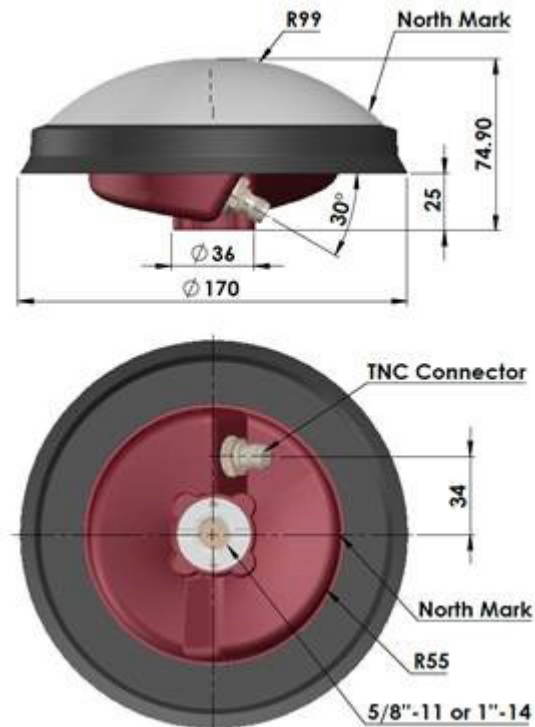
PRELIMINARY

Overview

The patent pending, compact VeroStar™ VSP600L antenna supports the full GNSS spectrum (all constellations and signals) plus L-band correction services. The antenna provides exceptional low elevation satellite tracking with a high efficiency radiating element. The VeroStar element has a low axial ratio through all elevation angles providing strong multi-path rejection. The antenna also exhibits a very stable phase center variation and a strong PCV repeatability.

The VeroStar™ VSP600L provides high receive gain over the full GNSS spectrum: Low GNSS band (1164MHz to 1300MHz) L-band correction services (1539MHz to 1559MHz) and High GNSS band (1559MHz to 1610 MHz). It has a robust pre-filtered LNA, with high IP3 to minimize de-sensing from high-level out-of-band signals, including 700MHz LTE, while still providing a noise figure of 1.6dB.

The performance of the VeroStar™ VSP600L antenna rivals all compact full band GNSS antennas but is lighter, smaller, more power efficient, more robust and very economical.



Applications

- High Precision GNSS systems
- Land Survey
- Marine
- RTK/PPP systems
- Reference Networks
- Deformation Monitoring Stations

Features

- Light, compact and very robust design
- Very Tight Phase Center Variation (<2mm)
- Low axial ratios from zenith to horizon
- Low current (60mA)
- Invariant performance from: +3 to 16VDC
- High G/T at low elevation angles

Benefits

- Consistent performance across all frequency bands
- Broadest tracking elevation (0° - 90°)
- Extreme precision
- Excellent multipath rejection
- REACH, and RoHS compliant
- Reduced time to market

About Tallysman: With global headquarters and manufacturing in Ottawa, Canada, Tallysman is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Tallysman's mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at www.tallysman.com

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VeroStar VSP600L Precision Antenna

Support Full GNSS Spectrum + L-band Corrections

Antenna

Architecture full GNSS frequency crossed dipoles

		Gain	Axial Ratio
		dBic typ. at Zenith	dB at Zenith
GNSS			
GPS	L1	4.0	<1
	L2	4.5	<1
	L5	4.0	<1
GLONASS	G1	4.0	<1
	G2	4.5	<1
	G3	4.5	<1
Galileo	E1	4.0	<1
	E5a	4.0	<1
	E5b	4.5	<1
	E6	4.0	<1
BeiDou	B1	4.0	<1
	B2	4.5	<1
	B2a	4.0	<1
	B3	4.0	<1
QZSS	L1	4.0	<1
	L2	4.5	<1
	L6	4.0	<1
IRNSS/NavIC	L5	4.0	<1
L-Band		4.0	<1
Other			
Axial Ratio at 0°		5dB max	
G/T at 10°		-25.5dB/K	
Phase Centre Variation		±2mm across all frequencies	
Efficiency		≥70%	

Mechanical

Mechanical Size See Drawing

Weight 500g

Environmental

Operating Temp. Range .. -40°C to +85°C

Vibration MIL STD 810D

Shock Vertical axis: 50 G, other axes: 30 G

Compliance IP67, RoHS, REACH, and RED compliant

Other

Warranty One year – parts and labour

Ordering Information

VSP600L with 37dB LNA with TNC connector

33-VSP600L-01-yy

Y1Y2 = Radome/Base definition

Y1 = radome colour (0 = N/A, W = white, G = grey, A = aviation white)

Y2 = base colour (0 = N/A, G = grey, R = red)

Low Noise Amplifier (LNA) (Measured a Vcc = 3V, Temperature=25°C)

Frequency Bandwidth ... 1164-1300 MHz, 1559-1610MHz, 1539-1559MHz

Architecture Pre-filtered

Out-of-Band Rejection ... **Upper Band:**
1430 MHz 60dB
>1630MHz 75dB
>1710 MHz >60dB

Lower Band:

< 800 MHz > 60 dB

< 900 MHz > 28 dB

< 1000 MHz > 15 dB

Gain 37 dB min

Gain Flatness 1dB over full frequency

Current 50mA

P1dB output +6dBm

Noise Figure 1.6 typ at 25°C

VSWR <1.5:1 max.

Supply Voltage Range ... +3 to 16VDC nominal,

Group Delay Variation ... <10ns

Gain flatness w/temp... 3 dB max over operational temperature range

VeroStar Antenna Dimensions

