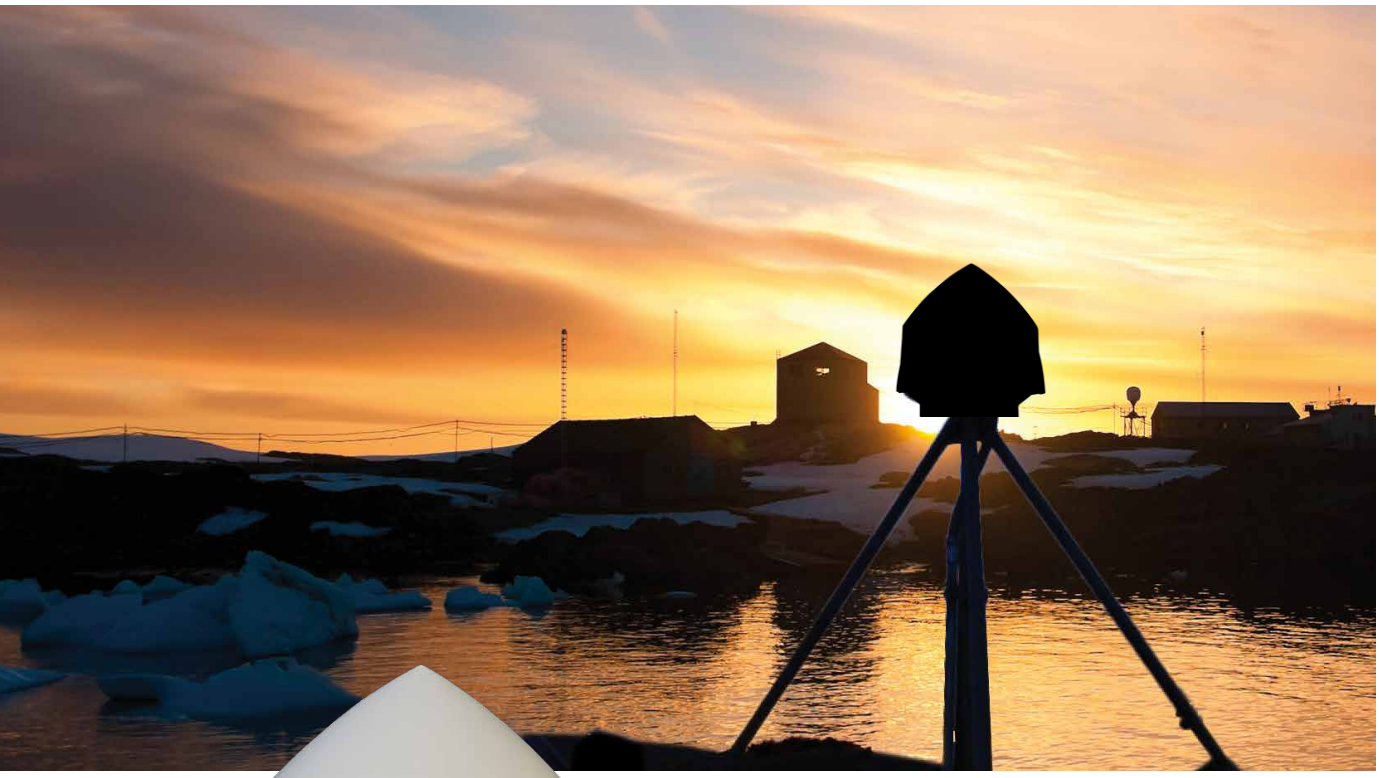
VeraPhase® 6000

High Precision Full GNSS Spectrum Antenna

septentrio Antennas



Scientific

Reference Network Stations

The patented VeraPhase® 6000 antenna, powered by Tallysman, is a full GNSS spectrum antenna including L-band for correction services. It has consistent performance (gain, axial ratio, PCV, and PCO) across the full bandwidth. It provides the lowest axial ratios (horizon to horizon, over all azimuths) across all GNSS frequencies.

KEY FEATURES

- **Low axial ratios from horizon to horizon**
- **Very Tight Phase Center Variation (<1 mm / 0.03 in)**
- **Low current (45mA)**
- **Invariant performance from: +2.7 to 24 VDC**

BENEFITS

- Consistent performance across all frequencies
- Broadest tracking elevation (0° - 180°)
- Extreme precision
- Excellent multipath rejection
- IP 67, REACH, RoHS, WEEE compliant

VeraPhase® 6000

FEATURES

GNSS Frequencies

L-Band (MSS)	
GPS	L1, L2, L5
GLONASS	L1, L2, L3
Galileo	E1, E5a, E5b, E6
BeiDou	B1, B2, B3
SBAS	L1, L5
IRNSS	L5
QZSS	L1, L2, L5, L6

Polarisation **RHCP**

Axial Ratio **< 0.5 db at zenith**

Radiation Coverage (dBic)

	L1	L2
Zenith	6.7	5.8
15° elevation	-3.5	-1.7
10° elevation	-4.3	-2.6
5° elevation	-5.5	-3.5
Horizon	-6.6	-4.4

LNA

Gain variation with temp.	3dB max over operational temperature range	
LNA gain flatness	1.5 dB over frequency range (typ)	
P1dB output	+12 dBm	
Bandwidth	1164 – 1300 MHz 1559 – 1610 MHz	
LNA noise figure	2.5 dB typ. at 25 °C	
VSWR (at LNA output)	<1.5:1 max.	
Supply voltage range	+2.7 to 24 VDC nominal	
Supply current	<35 mA (35 dB), <45 mA (50 dB)	
Out of band rejection	<800 MHz	>60 dB
	<950 MHz	60 dB
	<1100 MHz	60 dB
	>1450 MHz	60 dB
	<1536 MHz	50 dB
	>1650 MHz	50 dB
	>1800 MHz	>60 dB
Group delay variation	1164-1300 MHz	7ns (max)
	1559-1610 MHz	15ns (max)

Antenna

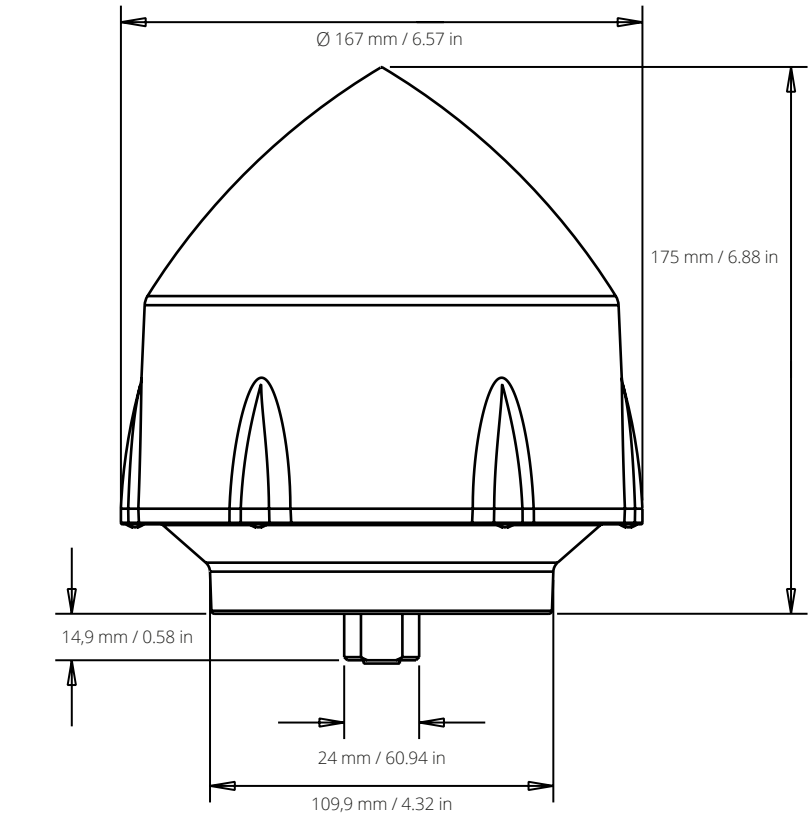
Antenna Gain	5 dBic to 7 dBic (all frequencies)
Efficiency	>70%
Phase centre variation	± 1 mm / 0.04 in
Phase centre offset (RMS)	± 0.2 mm / 0.008 in
IGS reference	TWIVP6050_CONE

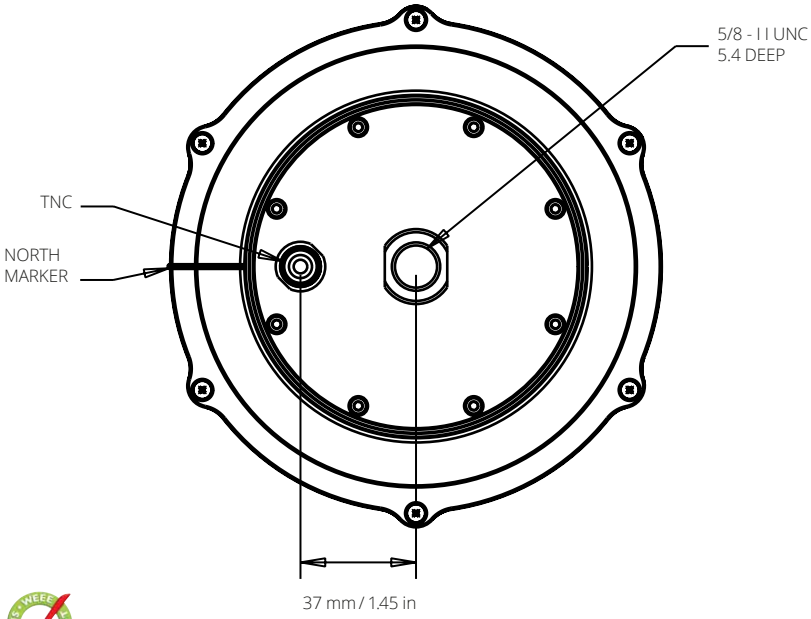
Mechanicals & Environmental

Antenna Reference Plane (ARP)	Bottom of 5/8" thread
North orientation indicator	Mark on radome above connector
Operating temperature range	-40° C to +85° C -40° F to +185° F
Weight	820 g / 1.8 lb
Mounting thread	5/8" x 11 TPI female
Connector	TNC Female
Certification	IP 67, RoHS, WEEE, REACH, CE
Shock	vertical axis: 50 G other axes: 30 G
Vibration	MIL STD 810D

Performance Measured @ Vcc = 3V, and Temperature=25° C / 77° F

DIMENSIONS





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