



Vector Compact GPS Compass

Compact GPS Positioning and Heading Smart Antenna

- Provides position, heading, pitch, roll, and heave
- Excellent in-band and out-of-band interference rejection
- 2° (RMS) heading accuracy in an amazingly small form factor
- Integrated gyro and tilt sensors deliver fast start-up times and provide heading updates during temporary loss of GPS and satellites
- Differential position accuracy of 1m, 95% of the time
- Accurate heading for up to 3 minutes during GNSS outages
- COAST technology maintains differentially corrected positioning for 40 minutes or more after loss of differential signal
- Offered as a Serial or NMEA 2000 version



Vector Compact – S MSRP \$1,159.
Vector Compact – N MSRP \$999.

Vector Compact GPS Compass offers superior navigation including accurate positioning and heading performance. V104 uses SBAS (WAAS, EGNOS, MSAS, etc.) for differential GPS position allowing Hemisphere GNSS to provide a low cost and highly effective positioning and heading based smart antenna.

The rugged and low-profile enclosure combines Hemisphere GNSS' Crescent[®] Vector technology and two multi-path resistant antennas for accuracy, portability and simple installation. The smart antenna, measuring less than a half meter in length, mounts easily to a flat surface or pole. The stability and maintenance-free design of Vector Compact provides traditional GPS position and heading at a low cost, replacing the combination of low-accuracy GPS and fluxgate compass.



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GPS Receiver Specifications

Receiver Type: Vector GPS L1
Compass Signals Received: GPS
Channels: 24
GPS Sensitivity: -142 dBm
SBAS Tracking: 2-channel, parallel tracking
Update Rate: 10 Hz standard (position and heading)
Rate of Turn: 90°/s maximum
Compass Safe Distance: 30 cm (11.8 in)
Cold Start: < 60 s (no almanac or RTC)
Warm Start: < 20 s typical (almanac and RTC)
Hot Start: < 5 s typical (almanac, RTC and position)
Heading Fix: < 20 s typical (valid position)
Maximum Speed: 1,850 kph (999 kts)
Maximum Altitude: 18,288 m (60,000 ft)

Positioning and Heading Accuracy

Position: Single Point ¹: 3 m (95%)
SBAS ²: 1 m (95%)
Heading: 2° (RMS)
Pitch/Roll: 2° (RMS)
Heave: 30 cm ³

Communications

Ports: 2 full-duplex RS232 ⁴ or 1 NMEA 2000 ⁵
Baud Rates: 4800, 9600, 19200, 38400, 57600, 115200
Correction I/O Protocol: RTCM SC-104
Data I/O Protocol: NMEA 0183⁵, NMEA 2000⁵,

Power

Input Voltage: 8-36 VDC
Power Consumption: ~ 2.0 W nom.
Current Consumption: 0.16 A @ 12 VDC
Power Isolation: Isolated to enclosure
Reverse Polarity Protection: Yes

Environmental

Operating Temperature: -30°C to + 70°C (-22°F to + 158°F)
Storage Temperature: -40°C to + 85°C (-40°F to + 185°F)
Humidity: 100% non-condensing
Shock and Vibration: IEC 60945
EMC: CE (IEC 60945 Emissions and Immunity), FCC Part 15 Subpart B, CISPR22
IP Rating: IP69
Enclosure: UV resistant, white plastic, Geloy CR7520 (ASA)

Mechanical

Dimensions
Not including mount: 25.9 L x 12.9 W x 4.5 H (cm)
10.2 L x 5.1 W x 1.8 H (in)
Including mount: 25.9 L x 12.9 W x 12.8 (cm)
10.2 L x 5.1 W x 5.0 H (in)

Weight

Not including mount: 0.42 kg (0.9 lb)
Including mount: 0.51 kg (1.1lb)
Power/Data Connector: 8-pin Male for Serial or 5 Pin Male NMEA 2000 Micro connector

Aiding Devices

Gyro: Provides smooth heading, fast heading reacquisition and reliable 2° per minute heading for periods up to 3 minutes when loss of GPS has occurred
Tilt Sensors: Provide pitch and roll data, assist in fast start-up and reacquisition of heading solution

¹ Depends on multipath environment, number of satellites in view, satellite geometry, no SA, and ionospheric activity

² Depends on multipath environment, number of satellites in view, SBAS coverage and satellite geometry

³ Based on a 40-second time constant

⁴ Serial model only

⁵ NMEA 2000 model only

Authorized Distributor: