

# VECTOR V200

## Professional, robust and high performance GPS Compass

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Experience superior navigation from the accurate heading and positioning performance available with the Vector V200 GNSS Compass.

The multi-GNSS Vector V200 supports GPS, GLONASS, BeiDou, Galileo, and QZSS and offers an amazing world-wide 25 cm (RMS) accuracy via Atlas GNSS global correction service.

The Vector V200 offers an incredible combination of simple installation, small form factor, and amazing performance.

The compass - measuring only 35 cm in length - mounts easily to a flat surface or pole. The stability and maintenance-free design of the Vector V200 provides simple integration into autopilots, chart plotters, and AIS systems.

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## KEY FEATURES

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- L1 GPS, GLONASS, Galileo, BeiDou
- 25 cm RMS world-wide positioning accuracy with Atlas corrections
- Integrated gyro and tilt sensors help deliver fast start-up times and provide heading updates during temporary loss of satellites
- Provides heading, positioning, heave, roll and pitch
- Excellent in-band and out-of-band interference rejection
- 0.75 degree heading accuracy

# TECHNICAL SPECIFICATIONS

## Sensor Specifications

Receiver Type: Vector GNSS L1 Compass  
Signals Received: GPS, GLONASS, BeiDou, Atlas, WAAS  
EGNOS  
Channels: 300  
GPS Sensitivity: -142 dBm  
SBAS Tacking: 2-channel, parallel tracking  
Update Rate: 10 Hz standard, 20 Hz optional

## Positioning Accuracy

RMS:	Default	Optional
Autonomous no SA <sup>1</sup> :	1.2m	1.2m
SBAS (EGNAS) <sup>2</sup> :	0.5m	0.5m
Atlas:		0.3m
Heading Accuracy:	2.0	0.75
Pitch/Roll Accuracy:	1.5	1.5
Heave Accuracy:		30cm <sup>3</sup>
Rate of Turn:	90° /s maximum	
Compass Safe Distance:	50 cm <sup>4</sup>	
Cold start:	60 s (no almanac or RTC)	
Warm Start:	20 s typical (almanac and RTC)	
Hot Start:	1 s typical (almanac, RTC and position)	
Heading Fix:	10 s typical (valid position)	
Maximum Speed:	1,850 km/h (999 kts)	
Maximum Altitude:	18,288 m (60,000 ft)	
Differential Options:	Atlas, SBAS, QZSS	

## Communications

Connector:	5-pin	12-pin
Ports:	NMEA 2000 or	RS-232(2Tx,2Rx)
RS-232 (1Tx,1Rx)	RS-422 (2Tx,2Rx)	
Timing Output:		1PPS, CMOS, active high, rising edge sync, 10 kΩ, 10 pF load

Baud Rates: 4800 - 115200  
Correction I/O  
Protocol: RTCM SC-104  
Data I/O Protocol: NMEA 0183, NMEA 2000, Crescent binary<sup>5</sup>

## Power

Input Voltage: 6 to 36 VDC  
Power Consumption: TBD  
Current Consumption: TBD  
Power Isolation: Isolated to enclosure  
Reverse Polarity Protection: Yes

## Environmental

Operating Temperature: -40°C to + 70°C  
Storage Temperature: -40°C to + 85°C  
Humidity: 95% non-condensing  
Vibration: ISO 16750-3 4.1.2.7 & 4.1.2.9  
Mechanical Shock: ISO 16750-3, 4.2, EP 455  
Shock and Vibration; EN 303 413; NMEA 2000

Compass Safe Distance: 50 cm<sup>4</sup>  
EMC: IEC 60945 port; FCC Part 15, Subpat B CISPR22; STD; 432-0010; IEC 60529:2013 (IP69K); EN 301 489-1/-19

## Mechanical

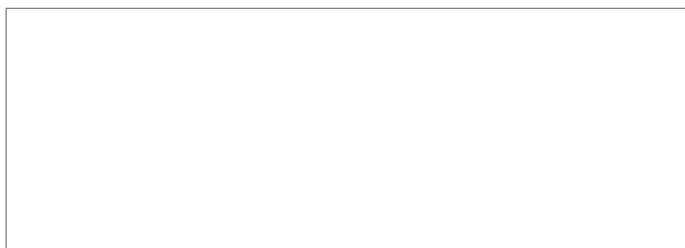
Dimensions:  
No Mount: 34.8 L x 15.8 W x 6.5 H (cm)  
Pole Mount: 34.8 L x 15.8 W x 14.3 H (cm)  
Flat Mount (vsn A): 34.8 L x 15.8 W x 15.0 H (cm)  
Flat Mount (vsn B): 34.8 L x 19.4 W x 7.5 H (cm)  
Weight: 0.75 kg  
Power/Data Connector: 5-pin or 12-pin

## Aiding Devices:

Gyro: Provides smooth heading, fast heading reacquisition and reliable 1° per minute heading for periods up to 3 minutes when loss of GPS has occurred <sup>7</sup>

Tilt Sensor: Provides pitch and roll data and assist in fast start-up and re-acquisition of heading solution.

- <sup>1</sup> Depends on multipath environment, number of satellites in view, satellite geometry, no SA, and ionospheric activity
- <sup>2</sup> Depends on multipath environment, number of satellites in view, WAAS coverage and satellite geometry
- <sup>3</sup> Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for differential services), and ionospheric activity
- <sup>4</sup> Based on a 40 second time constant
- <sup>5</sup> True Heading GNSS proprietary
- <sup>6</sup> Requires a Hemisphere GNSS subscription
- <sup>7</sup> With future firmware upgrade and activation



True Heading Dealer

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True Heading AB tel: +46 08 622 26 60 email: info@trueheading.se www.trueheading.se



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