

ComNav[®]



ComNav G4 & G4B Navigator

Vector Sensor for Precise Heading and Positioning

- Affordable solution delivers 2D GPS heading accuracy better than 0.1 degree
- Differential positioning accuracy of less than 1m (DGPS)
- Integrated gyro and tilt sensor deliver fast start-up times and provide heading updates during temporary loss of GPS
- Fast heading and positioning output rates up to 10 Hz
- Differential options including SBAS (WAAS, EGNOS, etc.) and optional beacon differential
- Integral Display and User interface installed separately near operator
- G4B can utilize terrestrial Radio Beacon Signals for DGPS corrections
- Two antennas mounted separately to meet desired accuracy
- The status lights and menu system make the G4 Series easy to monitor and configure
- Advanced applications with user friendly configuration menu
- Low power consumption
- CE compliant for EMI and RFI immunity
- One year warranty

G4 Series Specifications

| | |
|---------------------------------|---|
| Receiver Type: | L1, C/A code, with carrier phase smoothing |
| Channels: | Two 12-channel, parallel tracking (Two 10-channel when tracking SBAS) |
| Update Rate: | Standard 5Hz, optional up to 10 Hz (position and heading) |
| Horizontal Accuracy: | < 1 m (DGPS)* < 2.5 m (autonomous, no SA)** |
| Heading Accuracy: | < 0.3° @ 0.5 m antenna separation < 0.15° @ 1.0 m antenna separation < 0.10° @ 2.0 m antenna separation |
| Pitch / Roll Accuracy: | < 1.5° @ 0.5 m antenna separation |
| Rate of Turn: | 90° / sec max |
| Start-up Time: | < 60 sec typical |
| Heading Fix: | < 20 sec |
| Satellite Reacquisition: | < 1 sec |
| Maximum Update Rate: | 10 Hz (heading and positioning) |
| Antenna Input Impedance: | 50 Ω |

Beacon Receiver Specifications (G4B version)

| | |
|-------------------------|---|
| Channels: | 2-channel, parallel tracking |
| Frequency Range: | 283.5 to 325 kHz |
| Operating Modes: | Automatic (signal strength or range) and manual |
| Compliance: | IEC 61108-4 beacon standard |

Communications

| | |
|---------------------------------|-----------------------|
| Serial Ports: | 2 full duplex RS-232C |
| Baud Rates: | 4800 - 57600 |
| Correction I/O Protocol: | RTCM SC-104 |
| Data I/O Protocol: | NMEA 0183 |

Environmental

| | |
|-------------------------------|--|
| Operating Temperature: | -32°C to +74°C (-25°F to + 165°F) |
| Storage Temperature: | -40°C to +85°C (-40°F to + 185°F) |
| Humidity: | 95% non-condensing |
| Shock and Vibration: | EP 455 |
| EMC: | FCC Part 15, Subpart B, Class B, CISPR22, CE |

Power

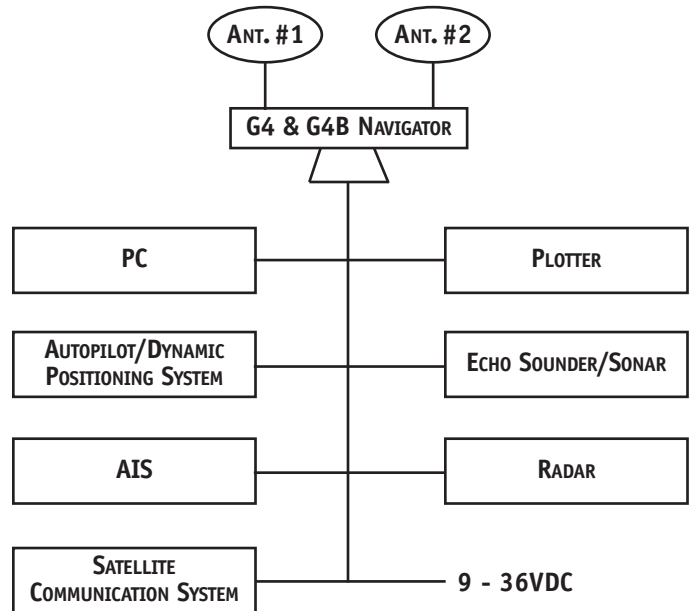
| | |
|--|-------------------|
| Input Voltage: | 9 to 36 VDC |
| Power Consumption: | < 5 W |
| Current Consumption: | < 360 mA @ 12 VDC |
| Antenna Voltage Output: | 5 VDC |
| Antenna Short Circuit Protection: | Yes |

Mechanical

| | |
|----------------------------|--|
| Dimensions: | 189mm L x 114mm W x 71mm H (7.4" L x 4.5" W x 2.8" H) |
| Weight: | 0.86kg (1.9lb) |
| Status Indication: | Power, primary GPS lock, secondary GPS lock, differential lock and heading lock |
| Power Switch: | Miniature push-button |
| Power Connector: | 2-pin, micro-Conxall |
| Data Connectors: | DB9-female |
| Antenna Connectors: | TNC-male |

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CONNECTIONS



Aiding Devices

Gyro: Single axis gyro provides reliable <1° heading for periods up to 3 minutes when loss of GPS lock has occurred

Tilt Sensor: Assists in fast start up of RTK solution

* Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for local services), and ionospheric activity.

** Depends on multipath environment, number of satellites in view, and satellite geometry.

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ISO 9001



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