

# ComNav®

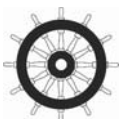
New



## G2 and G2B GNSS Satellite Compass

### Accurate Heading and Precise Position for Professionals

- **New:** Supports both GPS and **GLONASS** satellites for complete redundancy
- **New:** Heading accuracy < 0.25° rms
- **New:** Position accuracy < 0.3m 95% confidence (DGPS)
- **New:** An integrated 9 Axis Inertial Measurement Core (IMC technology) provides enhanced roll, tilt and heading stability even during momentary loss of satellite signals
- **New:** IMO Compliant G3 color display system (optional)
- **New:** Engineered enhancements to exceed sealed IP67 rating
- **New:** Extended 2 year warranty
- NMEA 0183 and NMEA 2000® interface
- Heave, Pitch, Roll and Rate of Turn as standard output
- Heading updates 1 to 20 Hz
- BAUD Rate selectable: 4800, 9600, 19200, 38400, 115200
- Fully compatible with on board NMEA 0183 and NMEA 2000® RADAR, ECDIS, AIS, Cameras, SONAR, PC and Autopilots
- Compact integrated surface mounting (Pole mount optional)
- IMO Compliant, Wheelmark and USCG approved
- Pre-programmed default settings for Heading, Rate of Turn, Course over Ground, Lat/Long position, Time & Date
- 1PPS output standard
- 15 meter serial cable standard (30 meter optional)
- 6 meter NMEA 2000® Cable (Optional)
- CE certified for EMI and RFI immunity
- Worldwide service



# G2 and G2B

## SYSTEM CONFIGURATION & OPTIONS

### SPECIFICATIONS

<b>Receiver Type:</b>	L1, C/A code, with carrier phase smoothing
<b>Channels:</b>	Two x 32 parallel tracking GPS, GLONASS, SBAS
<b>Update Rate:</b>	Standard 10 Hz, Selectable up to 20 Hz (position and heading)
<b>Horizontal Accuracy:</b>	< 0.3 m 95% confidence (DGPS)* < 2.5 m 95% confidence (autonomous, no SA)**
<b>Heading Accuracy:</b>	< 0.25° rms
<b>Pitch / Roll Accuracy:</b>	< 1° rms
<b>Heave Accuracy:</b>	< 30 cm rms
<b>Rate of Turn:</b>	45° / sec max
<b>Start-up Time:</b>	< 60 sec typical
<b>Heading Fix:</b>	< 10 sec
<b>Satellite Reacquisition:</b>	< 1 sec
<b>Timing Output:</b>	1PPS, 50 ns accuracy, CMOS

### BEACON RECEIVER SPECIFICATIONS (G2B)

<b>Channels:</b>	2-channel, parallel tracking
<b>Frequency Range:</b>	283.5 to 325 kHz
<b>Operating Modes:</b>	Automatic (signal strength or range) and manual
<b>Compliance:</b>	IEC 61108-4 Beacon Standard

### COMMUNICATIONS

<b>Serial Ports:</b>	1 full-duplex RS-232 and 1 full-duplex RS-422,
<b>Baud Rates:</b>	Selectable 4800 - 115200
<b>Correction I/O Protocol:</b>	RTCM v2.3 (DGPS), RTCM SC-104
<b>Data I/O Protocol:</b>	NMEA 0183 / NMEA 2000® / Proprietary ASCII
<b>Heading Warning I/O:</b>	Open relay system indicates invalid heading
<b>NMEA Heading Messages:</b>	\$GPHDT, \$GPROT, \$PSAT, \$GPHDM, \$GPHDG
<b>Timing Output:</b>	1PPS CMOS, active low, 10KΩ, 10pF load

### ENVIRONMENTAL

<b>Operating Temperature:</b>	-32°C to +74°C (-25°F to + 165°F)
<b>Storage Temperature:</b>	-40°C to +85°C (-40°F to + 185°F)
<b>Humidity:</b>	0 - 99% non-condensing

### POWER

<b>Input Voltage:</b>	10 to 36 VDC
<b>Power Consumption:</b>	~ 3 W nominal
<b>Current Consumption:</b>	~ 250 mA @ 12 VDC
<b>Isolation:</b>	Power supply isolated from serial ports
<b>Reverse Polarity Protect:</b>	Yes

### MECHANICAL

<b>Weight:</b>	G2: 2.2 kg (4.8 lb) / G2B: 2.7 kg (5.9 lb)
<b>Power/Data Connection:</b>	18-pin female circular, IP67 sealed cable

### AIDING DEVICES

<b>Gyro:</b>	Provides smooth heading, fast heading reacquisition and reliable < 1° heading for periods up to 3 minutes when loss of GPS has occurred (static conditions)
<b>Tilt Sensor:</b>	Assists in fast start up of heading solutions

- \* 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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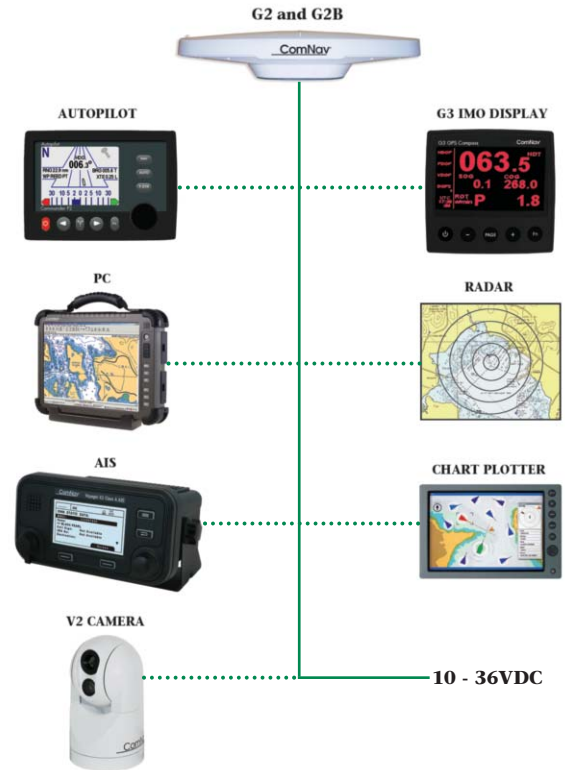


ISO 9001

**ComNav Marine Ltd.**  
 #15-13511 Crestwood Place,  
 Richmond, British Columbia • Canada • V6V 2G1  
 Phone: 604-207-1600 • Fax: 604-207-8008  
 E-mail: sales@comnav.com

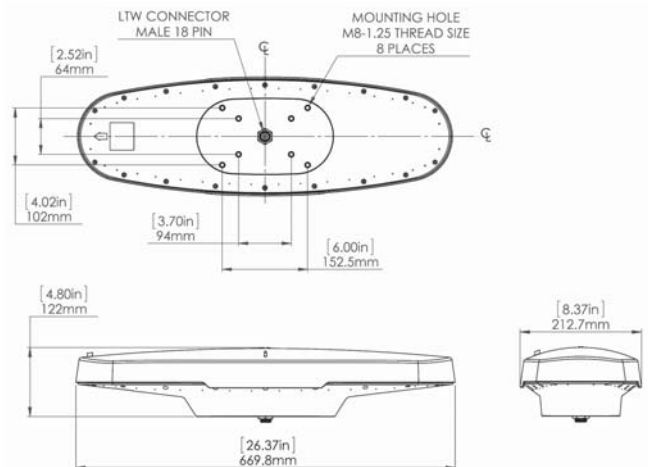
**www.comnav.com**  
**Worldwide Service**

Printed in Canada



**DIMENSIONS:** 669.8mm x 122mm x 212.7mm / 26.37" x 4.80" x 8.37" LxHxW

**WEIGHT:** G2: 2.2 kg (4.8 lb) / G2B: 2.7 kg (5.9 lb)



### ADDITIONAL OPTIONS:

- 30m NMEA 0183 Serial Data Cable
- 6m NMEA 2000® Cable (not IMO compliant)
- Color LCD Sunlight G3 Instrument Display

Represented by:

Specifications subject to change without notice

Rev: May 2015