ComNav®

New

G7

High Precision GNSS

1 cm Position, 0.01° Heading Capable

Smart RTK Receiver

Base Station or Rover

- Professional RTK receiver suitable for USVs, dynamic positioning, hydrographic and scientific applications
- Multi-frequency Multi-GNSS Constellations
- GPS, GLONASS, BeiDou, Galileo, QSZS and SBAS
- Dual marine grade antenna for precise heading calculations
- Built-in web user interface for secure config., data retrieval and upgrades
- Built-in 4G cellular network modem global coverage
- Built-in network and UHF radio modules
- Advanced low noise, multi-path mitigation technology coupled with high dynamic response
- Wi-Fi, Bluetooth, Ethernet and other Serial communication ports
- GNSS L Band Trimble RTX / OmniSTAR correction service compatible
- Rugged marine grade, sealed to IP67 rating
- Excellent for Static and Dynamic applications
- Data updates selectable 1 to 50 Hz
- NMEA 0183 interface
- FCC and CE certified
- 2 year warranty
- Worldwide service

2 YEAR WARRANTY · CE · FC · NMEA 0183 · Wi-Fi · Bluetooth

G7

SYSTEM CONFIGURATION & OPTIONS

Wind Farm Support

Cable Laying

GNSS CAPABILITIES

Multi-frequency GNSS all in view simultaneously tracked satellites

GPS:	L1C/A, L2C, L2E, L5
GLONASS:	L1C/A, L2C/A, L3 CDMA
Galileo:	E1, E5A, E5B, E5AltBOC, E6
BDS:	B1, B2, B3
QZSS:	L1 C/A, L1 SAIF, L2C, L5, LEX
SBAS:	L1 C/A, L5, WAAS, MSAS, EGNOS
L Band	OmniSTAR VBS, HP and XP

GNSS PERFORMANCE (RMS)*

	Horizontal	Vertical
RTK:	8 mm + 1 ppm	15 mm + 1 ppm
DGPS:	25 cm + 1 ppm	50 cm + 1 ppm
SBAS (WAAS):	0.5 m	0.85 m

Heading Accuracy:	< 0.3°@ 0.5 m antenna separation < 0.1° @ 1.0 m antenna separation < 0.06°@ 2.0 m antenna separation < 0.02°@ 5.0 m antenna separation < 0.01°@ 10.0 m antenna separation
Pitch/Roll Accuracy:	< 0.01° @ 5.0 m antenna separation
Heave Accuracy:	30 cm DGPS, 10 cm RTK
Initialization Time:	< 10 s typical
Initialization Reliability:	> 99.9% **Timing**
(1 PPS) Accuracy:	50 nsec
Rate of Turn:	90°/sec max.
Maximum Speed:	1,850 kph
Maximum Altitude:	18,288 m

ENVIRONMENTAL

Operating Temp:	-40°C to 75°C (-40°F to 167°F)
Storage Temp:	-55°C to 85°C (-67°F to 185°F)
Humidity:	Up to 100%
Waterproof / Dustproof:	IP67
Shock Resistance:	1 m (3.28 ft) fall onto concrete
Vibration:	Mil-STD-810G
Tilt Sensor:	e-Bubble leveling

MECHANICAL

Dimensions (L x W x H):	160mm x 120mm x 56mm 6.4 in x 4.7 in x 2.2 in less
Weight:	than ≤ 1.2kg (2.6lb)

COMMUNICATIONS AND DATA RECORDING

Connectors I/O:	1 x 19 pin aviation plug (1 x Power, 1 x RJ45, 1 x CAN, 2 x RS232, 1 x SMA) 1 x TNC (Radio) 1 mini-USB (firmware upgrade) 1 x TNC GNSS1 1 x TNC GNSS2 1 x TNC (4G Antenna) 1 mini-USB (firmware upgrade) 1 x TNC antenna connector (internal radio)
Data Recording:	Web UI Data Collection Management Software via smart phone (Android optional)
Network Modem:	4G Internal modem cellular global coverage
Wi-Fi:	Integrated module w antenna 802.11 b/g/n, access point mode
Bluetooth:	Internal multimode system compatible w Android, Windows Mobile and Windows desktop OS
UHF Radio:**	Frequency range, 403 - 473 MHz
Data Update Frequency:	Selectable 1, 2, 5, 10, 20, 50 Hz Position and Heading Output
Baud Rates:	1200 to 460800
LAN Network:	HTTP, HTTPS, TCP/IP, UDP, FTP NTRIP Caster, NTRIP Server, NTRIP Client Simultaneously transmits multiple data stream Supports proxy server and route table Supports UDnP ad Zeroconf Supports Email alerts & position monitoring Event marker input
Protocols:	NMEA 0183 v2.x, v4.x (position and heading) RTCM 2.x, RTCM 3.x, input and output NTRIP Client, NTRIP Caster
Web User Interface:	Secure; Allows remote configuration, data retrieval and firmware updates; multiple streaming/ ports

POWER

Input Voltage:	9 to 36 VDC
Power Consumption:	4.3 W normal

CERTIFICATIONS AND CALIBRATIONS

FCC Part 15 (class B Device), FCC Part 22, 24, 90;
CE IEC60945, Bluetooth EPL, IGS and NGS Antenna calibration MIL-STD-810G, IEC68-2-27

DUAL ANTENNA OPTIONS (included)

Dual Marine IP68 w marine mobile 1" dia thread mounts (standard) Dual Geodetic IP65 w land mobile 5/8" dia. mounts (optional)

* Accuracy and reliability specifications may be effected by multipath, satellite geometry and atmospheric conditions. Performance assumes minimum of 5 satellites, coupled with the follow up of recommended general GNSS practices.

** UHF type approvals are country specific

ComNav®

Certified System ISO 9001

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