

C-NAV DGPS

The C-Nav 2000 RM sensor consists of a 10-channel dual frequency precision GPS receiver, two additional channels for receiving Satellite Based Augmentation System (SBAS) signals and an L-Band demodulator for reception of C-Nav correction service. The sensor can output raw data as fast as 50Hz and Position Velocity Time (PVT) data as fast as 25Hz through two 115kbps serial ports.



THE C-NAV 2000 RM RECEIVER:

- The **C-Nav 2000 RM** GPS receiver unit provides performance of several decimeters at either 1 or 5 updates per second. The receiver is ideally suited for positioning of dynamic and static vessels or vehicles on a global basis.
- The **C-Nav 2000 RM** receivers feature 10 channels of continuous GPS satellite tracking contained within a compact, rugged, weatherproof housing. For ease of operation and system integration, the C-Nav GPS unit has a single, rugged, waterproof 8-pin connector that provides RS-232 serial ports, a CAN BUS and DC power. During operation, the C-Nav GPS System can output a subset of NMEA-0183 messages, including QA/QC data. It is also capable of outputting RAW GPS measurement binary data for archiving and post-mission kinematic post-processing analysis.
- The **C-Nav 2000 RM** receiver is a single integrated package combining; antenna, geodetic quality dual frequency GPS receiver, communications link, data demodulator, and control processor, which is rugged, reliable and able to withstand the offshore environment.

FEATURES

- "All-in-view" tracking
- Global decimeter-level accuracy using RTG corrections
- Fully automatic acquisition of satellite broadcast corrections
- Configurable for global L-band satellite coverage – StarFire, WAAS, EGNOS
- Single, integrated package - simple installation
- Rugged, waterproof, and dust resistant housing and connector
- Wide-range (10-40 VDC) power supply
- L1 & L2 full wavelength carrier tracking
- C/A, P1 & P2 code tracking
- User programmable output rates
- Minimal data latency
- 2 separate SBAS (WAAS/EGNOS) channels
- Superior interference suppression
- Patented multipath rejection
- Supports NMEA 0183 v3.01 messages
- Self-survey mode (position averaging)
- CAN bus interface

PHYSICAL/ENVIRONMENTAL

- Size: D x H: 9.8 x 7.25 inches (24.8 x 18.7 cm)
- Weight: 5.5 lbs (2.4 kg)
- Power:
 - Input Voltage: 10-40 VDC
 - Consumption: <10 W (normal operating conditions)
1.2 A max @ 12 VDC
- I/O Connector: Rugged weather resistant and waterproof
8-Pin connector design
- Temperature:
 - Operating: -20° C to +70° C
 - Storage: -40° C to +85° C
- Humidity: 100% non-condensing

PERFORMANCE

- L-band receiver frequency
Automatically selected: 1525 to 1560 MHz
- Real-time StarFire
DGPS Accuracy:
 - Position (H): 10 cm
 - Position (V): <30 cm
 - Velocity: 0.02 m/s
- Time-to-first-fix:
 - Cold Start: 90 sec (typical)
- Reacquisition:
 - "Coast" for 30 seconds with GPS lock: < 2 sec
 - L-band loss for more than 30 seconds with GPS lock: < 30 sec

I/O CONNECTOR ASSIGNMENTS

INPUT/OUTPUT DATA MESSAGES

- NCT Proprietary Data: PVT
 - Raw Measurement
 - Satellite Messages
 - Nav Quality
- NMEA Messages (Output): GGA, GLL, GSA, GST, RMC, VTG, ZDA, NAVQ, RXQ, SATS
- Code Corrections:
 - RTG (proprietary) – Internal LBM
 - WCT (proprietary) – Internal LBM
 - SBAS (WAAS/EGNOS) – Internal GPS
- Diagnostic Data/Command Serial port data
rate is selectable: 4.8, 9.6, 19.2, 38.4 kbaud
- RAW GPS 'Binary' data port is fixed at 38.4 kbaud

