

C-NAV DGPS

The C-Nav1010 is an “All-in-view” receiver with 16 tracking channels (14-Channels for L1 GPS and 2-channels for Satellite Base Augmentation Systems [SBAS]). Each C-Nav1010 receiver also incorporates an L-Band demodulator for reception of the C-Nav correction signal service. External RTCM inputs from other sources, such as the IALA Beacon Service or third party Reference Stations, may also be utilized.



THE C-NAV1010 GPS RECEIVER:

- The **C-Nav1010** GPS receiver provides sub-meter differential positioning accuracy worldwide between 72N and 72S.
- The **C-Nav1010** is the first L1 only GPS system that is capable of creating a PPP solution using Global correction data.
- The **C-Nav1010** GPS receiver has integrated SBAS (WAAS/EGNOS) receiver capability and external RTCM inputs.
- The **C-Nav1010** GPS receiver is small and lightweight for fast and easy setup.
- The **C-Nav1010** GPS receivers are easily configured utilizing “C-Setup”, a PC based software.
- The **C-Nav1010** GPS receiver includes intuitive LED displays on the front panel showing configuration and operational parameters.



Contract Holder
FSS Contract GS-07F-5671P

For more information go to www.cnavgps.com

FEATURES

- "All-in-view" tracking on 16 channels (14-channels for L1 GPS + 2-channels for SBAS)
- Global sub-meter accuracy using C-Nav. corrections
- Fully automatic acquisition of satellite broadcast corrections
- Configurable for global L-band satellite coverage – RTG or SBAS (WAAS, EGNOS)
- Rugged and lightweight package for mobile applications
- Accepts external GPS correction input in NCT or RTCM v2.2
- L1 full wavelength carrier tracking
- C/A & P1 code tracking
- User programmable output rates
- Minimal data latency
- 2 separate SBAS (WAAS/EGNOS/) channels
- Superior interference suppression
- Patented multipath rejection
- Supports NMEA 0183 v3.00 messages
- 1PPS Output

PHYSICAL/ENVIRONMENTAL

- Size (L x W x H): 8.11" x 4.9" x 2.56" (206 x 126 x 65mm)
- Weight: 3.3 lbs (1.5 kg)
- Front Status Indication: Power/GPS Status, Augmentation Status, Interface Status
- External Power
 - Input Voltage: 9-36 VDC
 - Consumption: <5 W
 - Reverse Polarity Protection: Yes
- Connectors
 - I/O Ports: 2 x 9 pin Positronic
 - DC Power: 1 x 9 pin Positronic
 - RF Connector 1: TNC (with 5 VDC bias for antenna/LNA)
 - RF Connector 2: TNC (with 5 VDC bias for antenna/LNA) (R-Model only for separate L-Band antenna)
 - 1PPS Output: On I/O Port 1 & Power Port
- Temperature (ambient)
 - Operating: -30° C to +70° C
 - Storage: -40° C to +85° C
- Humidity: 95% non-condensing
- Tested in accordance with MIL-STD-810F for: Low pressure, solar radiation, rain, humidity, salt fog, sand dust, and vibration



PERFORMANCE

GPS RECEIVER PERFORMANCE

- Real-time C-Nav. DGPS Accuracy
 - Position (H): <1 meter
 - Position (V): <1.5 meter
 - Velocity: 0.01 m/s
- User Programmable Output Rates
 - PVT: 1Hz (5Hz, 10Hz Optional)
 - Raw data: 1Hz (5Hz, 10Hz Optional)
- Data Latency
 - PVT: < 100 ms at all nav rates
 - Raw data: < 100 ms at all rates
- Time-to-first-fix
 - Cold Start, Satellite Acquisition: < 45 seconds (typical for TTFF)
 - Satellite Reacquisition: < 1 second
- Dynamics
 - Acceleration*: up to 4g
 - Speed*: < 1,000 knots (515m/s)
 - Altitude*: < 60,000ft (18.3km)
- 1PPS Resolution < 50ns RMS

*Restrictions due to export control laws

I/O CONNECTOR ASSIGNMENTS

- Data Interfaces: 2 full duplex; 4800, 9600, 19200, 38400, 57600, 15200
1 x RS232
1 X RS232/422 (Configurable)

COMMUNICATIONS PORT FUNCTIONS

- NCT Proprietary: Data, Control
- RTCM Input: Code Corrections
- NMEA Output: Data

INPUT/OUTPUT DATA MESSAGES

- NCT Proprietary Data: PVT, Raw Measurement, Satellite Messages
Nav Quality, Receiver Commands
- NMEA Messages (Output): ALM, GBS, GGA, GLL, GRS, GSA, GST, GSV, RMC, VTG, ZDA
- Code Corrections: RTG (proprietary) – Internal LBM
SBAS (WAAS/EGNOS) – Internal GPS
DGPS (RTCM Type 1, 3, & 9) – External Input

LED DISPLAY FUNCTIONS (DEFAULT)

- Power/GPS Status
- Starfire Status
- Data I/O Activity

COMPLIANCE/APPROVALS

- Compliance with the following standards:
 - > FCC Part 15 Class B, CE

C-NAVIGATOR® CONTROL DISPLAY UNIT OPTION

- Dimensions (W x H x D): 13.4" x 10.3" x 3.3" (34.0 x 26.2 x 8.4cm)



C-NaviGator® Control Display Unit

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