C-Nav™

oceaneering.com/cnav

C-Nav7000®

Petrobras Annex V compatible DGNSS Receiver

The C-Nav7000® is designed to fulfill the Petrobras Annex V requirements for RTCM-104 correction inputs to GNSS receivers. The system includes maximum redundancies to ensure effective operation and support.

FEATURES

Integrated *C-Nav3050®* receiver with UHF and IALA corrections

Visual indication of RTCM-104 correction source status

Pre-configured for Petrobras frequencies

C-Nav7000®

GNSS Receiver

The user can select one of two ultra-high frequency (UHF) channels as primary while monitoring the other. Should the selected UHF channel fail, the unit will automatically fall back to the corrections from the International Association of Lighthouse Authorities (IALA) beacon receiver. UHF channels can either be manually set or search all Petrobras channels automatically.

The selected RTCM-104 correction stream is sent to the integral C-Nav3050® and is also available on an external port. The C-Nav3050® will automatically start using the RTCM-104 correctors in the event of loss of C-Nav high accuracy PPP correctors.

Features

- Integrated C-Nav3050® GNSS receiver
- User choice of correction options:
  - Public SBAS services (WAAS, EGNOS, MSAS, GAGAN)
  - IALA beacon receiver modules
  - UHF corrections receiver module
- Centimetric C-Nav RTK (with RTK Extend™) available
- C-Nav PPP GNSS correction services
- Across-the-room verification of operational parameters and channel availability
- Correction source prioritization feature
- 2 x Pacific Crest ADL RXO receiver modules
- 1 x Hemisphere SBX-4™ receiver module

- For more information: **oceaneering.com/cnav**

Dimensions / Weight / Power	
Size	19 in rack unit - 2U high, 16 in deep
Weight	5.5 lb / 2.5 kg
External Power	12 VDC @ 60 W

Front Panel Controls
UHF module select
2 x screen key for UHF channel selection
Manual / auto scan mode

Front Panel Indicators
Power on / off
UHF channel selected
Correction source selected
Correction data present

C-NAV3050® Specifications	
C-Nav series (95%)	3.1 in / 5.9 in 8 cm / 15 cm
Code DGNSS (<124 miles / 200 km)	0.01 ms
Velocity	17.7 in / 45 cm + 3 ppm 35.4 in / 90 cm + 3 ppm
RTK extend (<15 mins)	1.2 in / 3 cm + 1 ppm 2.4 in / 6 cm + 2 ppm

User Programmable Output Rates	
Position / Velocity / Time	1 or 5 (10, 25, 50, & 100 Hz optional)
Raw Data	1 or 5 (10, 25, 50, & 100 Hz optional)

Data Latency	
Position / Velocity / Time	10 ms at all rates
Raw Data	10 ms at all rates

Time-to-First-Fix	
Cold / Warm / Hot	<60 s / <50 s / <20 s (Typical values measured per ION STD-101)

Dynamics	
Acceleration*	Up to 6 g
Speed*	< 515 m/s / 1,000 knots
Altitude*	< 60,000 ft / 18.3 km

I/O Connector Assignments	
C-Nav3050®	Typical Connections (See C-Nav3050® Brochure)
RTCM-104 Out	2 x RTCM-104 corrections output ports from selected UHF/IALA source Baud rate: 9.6kb 2 x connectors: DB-9, RS-232
UHF Configuration	Connector: DB-9 female, RS-232 (for configuration)
UHF Antenna	Connector: Female TNC
IALA Configuration	Connector: DB-9 female, RS-232 (for configuration)
IALA Antenna	Connector: Female TNC

Module Options
2 x UHF based on Pacific Crest ADL RXO receiver
1 x IALA based on Hemisphere SBX-4™ receiver

Input / Output Data Messages	
NMEA 0183	ALM, GBS, GGA, GLL, GRS, GSA, GSV, RMC, RRE, VTG, ZDA, NCT
Differential Correction	RTCM 2.3 and 3.0 SBAS and C-Nav (proprietary)
RTK Correction	CMR/CMR+, RTCM, NavCom Ultra RTK
Receiver Control	NavCom Proprietary Commands (ASCII)

Compliance / Approvals - C-Nav3050®
IMO Performance Standard for GPS > IEC 60529
FCC Part 15 Class B, CE
QC Message Strings Comply with Recommendations
OGP 373-19 and IMCA S 015 (June 2011)
Designed to IEC 60945

* In compliance with US and international export control laws.

OCEANEERING®

03.27.2017

OCEANEERING®

oceaneering.com