

# WORLD DGNSS

## C-Nav3050



### C-Nav3050 FEATURES:

- 66-channel combined GPS / GNSS / L-Band receiver.
- Full Constellation tracking, GPS, GLONASS, **C-NavC<sup>1</sup>** and **C-NavC<sup>2</sup>**, other SBAS (WAAS / EGNOS) signals, and accepts external RTCM input. Corrections over Internet. A choice of data rates make corrections via the internet affordable, and using Iridium delivery, reception at any Latitude is possible.
- C-Nav Corrections Service Over-The-Internet (CCS OTI) - Reliable High Latitude Solution.
- MBRTK - Range and Bearing Solutions.
- Small and lightweight for fast and hassle-free setup.
- Easily configured utilizing C-Nav proprietary PC-based controller software application.
- Easily monitored with intuitive front-panel LEDs or a C-NaviGator III Control / Display Unit.



Contract Holder  
FSS Contract GS-07F-5671P

## FEATURES

- "All-in-view" parallel tracking with 66 channels
- SBAS (WAAS / EGNOS / MSAS / GAGAN) Tracking
- Built-in **C-NavC<sup>1</sup>** and **C-NavC<sup>2</sup>** L-Band receiver
- **C-NavC<sup>2</sup>** operating mode with automatic failsafe to **C-NavC<sup>1</sup>**
- L1, L2, L5, G1 & G2 full wavelength carrier phase tracking.  
Low look angle L-Band antenna. Easily installed in series with the existing GNSS antenna, extends satellite delivered coverage area.
- C-Nav corrections over the internet
- C/A, P1, P2, L2C, L5, G1 and G2 code tracking
- High sensitivity / Low signal level tracking
- Fast signal acquisition / re-acquisition
- Superior interference suppression (both in and out of band)
- Patented multipath rejection
- RTK Extend
- C-Nav Over-The-Air activation capabilities
- Configurable as RTK base or rover
- High accuracy range and bearing data
- Programmable output rates
- Event Marker input / 1PPS output
- 2GB Internal data storage
- C-Setup PC Control Software included

## PHYSICAL/ENVIRONMENTAL

- Size (L x W x H): 6.47" x 4.60" x 2.37" (164 x 117 x 60mm)
- Weight: 1.1 lbs (0.5 kg)
- Front Status Indication: Power/GPS Status, Correction Service Status, Interface Status, and Bluetooth Status
- External Power Input: AC/DC Adapter 110/220VAC  
12VDC Nominal 0.5A  
(9.0V to 32VDC)
- Connectors: I/O Ports: 2 x 9 pin Positronic  
DC Power: 1 x 9 pin Positronic  
RF Connector: TNC (with 5VDC bias for antenna/LNA)
- Temperature (ambient): Operating: -40° C to +70° C (-40° F to 158° F)  
Storage: -40° C to +85° C (-40° F to 185° F)
- Humidity: 95% non-condensing
- Tested in accordance with MIL-STD-810F for: Low pressure, solar radiation, rain, humidity, salt fog, sand dust, and vibration

## COMPLIANCE/APPROVALS

- Compliance with the following standards:
  - > IMO performance standard for GPS: IEC 60529
  - > IMO performance standard for GNSS: IEC 61108-1:2003
  - > NMEA-0183 compatibility up to V4.1
  - > FCC Part 15 Class B, CE
  - > QC message strings comply with recommendations OGP 373-19 and IMCA 5015 (July 2011)
- Type Approvals:
  - > Wheelmark (Only applies to C-Nav3050 with Standard Antenna)
  - > USCG (Only applies to C-Nav3050 with Standard Antenna)

## PERFORMANCE

### GNSS RECEIVER PERFORMANCE

- Accuracy (RMS):
 

RTK (<40km):	Horizontal / Vertical
C-Nav Service:	1cm + 0.5ppm / 2cm + 1ppm
C-Nav Service (95%):	5cm / 10cm
Code DGNSS (<200km):	8cm / 15cm
Velocity:	45cm + 3ppm / 90cm + 3ppm
RTK Extend (<15 mins):	0.01ms
	3cm + 1ppm / 6cm + 2ppm
- User Programmable Output Rates
 

Position / Velocity / Time:	1, 5, 10, 25, 50, & 100 Hz
Raw Data:	1, 5, 10, 25, 50, & 100 Hz
- Data Latency
 

Position / Velocity / Time:	10ms at all rates
Raw Data:	10ms at all rates
- Time-to-First-Fix
 

Cold / Warm / Hot:	<60s / <50s / <20s
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 (typical values measured per ION-STD 101)
- Dynamics
 

Acceleration*:	up to 6g
Speed*:	<515m/s (1000 knots)
Altitude*:	<60,000ft (18.3km)

\*Restrictions due to export control laws

## I/O CONNECTOR ASSIGNMENTS

- Data Interfaces: 2 x RS232 (1 - changeable to RS422, 4800-115200 baud rates)  
1 x USB 2.0 (Host or Device)  
Bluetooth  
Ethernet (10T/100T)

## INPUT/OUTPUT DATA MESSAGES

- NMEA-0183: ALM, GBS, GGA, GLL, GRS, GSA, GST, 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)

## MBRTK - Range and Bearing Option

- High accuracy range and bearing data between vessels
- Multiple remotes can use a common master C-Nav 3050
- RTK levels of accuracy for range, irrespective of differential correctors
- Converter available to emulate a "Fanbeam" output
- Heading accuracy (degrees, at 1 sigma) = 0.6/baseline length in meters
- Baseline horizontal accuracy = 1cm + 1ppm

## C-Monitor

- Control and Quality Assurance Software Windows based software

## C-NavIGator CONTROL DISPLAY UNIT OPTION

- Dimensions (W x H x D): 13.97" x 9.78" x 2.24" (35.5 x 24.8 x 5.7cm)



C-NavIGator III Control Display Unit



Specifications subject to change without notice.  
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