

C-NavX1[™] GNSS Receiver



FEATURES

Capable of tracking GPS, GLONASS, BeiDou, Galileo, and QZSS constellations

Multi-redundant Iridium[®] delivery method for C-Nav[®] LEO correction service

Decimeter-level offshore positioning with truly global correction service

C-NavX1™ GNSS Receiver

Additional Features

- » Tri-constellation global navigation satellite system (GNSS) receiver
- » Completely independent, redundant C-Nav augmentation delivery system, exclusively delivered using Iridium's extensive global satellite communications network
- » Global pole-to-pole accuracy
- » All-in-view 226 universal tracking channels for navigation and a satellite-based augmentation system (SBAS), plus Iridium Burst® and SBD® Service Channels
- » Multi-constellation GNSS precise point positioning (PPP) navigation solution using GPS, GALILEO, and GLONASS
- » Multi-constellation carrier and code tracking of:
 - » GPS: L1 C/A, L1C, L1P, L2C, L2P, L5
 - » GLONASS: G1 C/A, G1P, G2 C/A, G2P, G3
 - » Galileo: E1B, E5A, E5B, E5AltBOC
 - » BeiDou: B1, B2, B2A
 - » QZSS: L1 C/A, L1C, L1-SAIF, L2C, L5
 - » SBAS: L1, L5
- » Correction service via Iridium®
- » High-sensitivity/low-signal level tracking
- » Fast signal acquisition/re-acquisition
- » Manages augmentation outages for up to 10 min
- » 1 pulse-per-second (PPS) output
- » C-Setup PC control software included
- » Compatible with the full suite of C-Nav software, including C-Monitor, C-Scape, and C-NaviGator



IridiumEdge™ Antenna courtesy of Iridium Communications, Inc.



Technical Data

GNSS

GNSS Engine	Topcon B125
Tracking Channels	226
GPS	L1 C/A, L1C, L1P, L2C, L2P, L5
GLONASS	G1 C/A, G1P, G2 C/A G2P, G3
Galileo	E1B, E5a, E5b, E5AltBOC
BeiDou	B1, B2, B2A
QZSS	L1 C/A, L1C, L1-SAIF, L2C, L5
SBAS	L1, L5
Time to First Fix	Hot: < 15 s Warm: < 44 s Cold: 60 s
Reacquisition	1 s
1PPS	Relative accuracy: 30 ns Wide positive going: 10 ms LVTTL: 3.3 V Impedance: 50 ohm

Accuracy (95%)

	Horizontal	Vertical
Standalone	6.8 ft / 2.4 m	11.8 ft / 3.6 m
SBAS	5.2 ft / 1.6 m	7.8 ft / 2.4 m
C-Nav [®] LEO	0.32 ft / 0.1 m	0.6 ft / 0.2 m

Hardware I/O

RS-232	2x DSUB9 Connectors
RS-422	2x DSUB9 Connectors
Ethernet	1x RJ45 Connector
1PPS	1x BNC Connector
USB 2.0	1x USB Connector
Standard Baud Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 bps

Software I/O

Ethernet Sessions	8 (max)
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Message Formats

NMEA	DTM, GBS, GGA, GLL, GNS, GRS, GSA, GST, GSV, RMC, VTG, ZDA
Proprietary NMEA	GGA, GST, MDE, SET

Physical and Environmental

Dimensions (L x W x H)	10.4 in x 6.5 in x 3.5 in / 265 mm x 165 mm x 90 mm
Weight	4.9 lb / 2.2 kg (excluding mounting bracket or antenna)
Power Consumption	10 W
Voltage Input	9 to 36 V DC
GNSS Antenna Voltage	5 V DC
GNSS Antenna Current	100 mA
Iridium Antenna Power Consumption	1.6 W (Max)
Iridium Antenna Current	0.2 mA
Ingress Protection	IP67
Operating Temperature	+5 to +131°F / -15 to +55°C
Storage Temperature	-22 to +158°F / -30 to +70°C
Humidity	95% non-condensing
Vibration	IEC60945, Section 8.7
Compliance/Approvals	IEC 60945 NMEA-0183 compatibility up to V4.1 FCC Part 15, Class B CE/UKCA RoHS WEEE QC message strings comply with the recommendations OGP 373-19 and IMCA S015 (July 2011) IP67 rated



