ADVANCED NAVIGATION

GNSS COMPASS
SATELLITE COMPASS

GNSS Compass is a low-cost all-in-one GNSS/INS navigation and heading solution.

It provides accurate dual-antenna GPS-based heading that is not subject to magnetic interference.

It features high accuracy RTK positioning and is plug and play with NMEA 0183, NMEA 2000, and Ethernet interfaces.

ITAR FREE
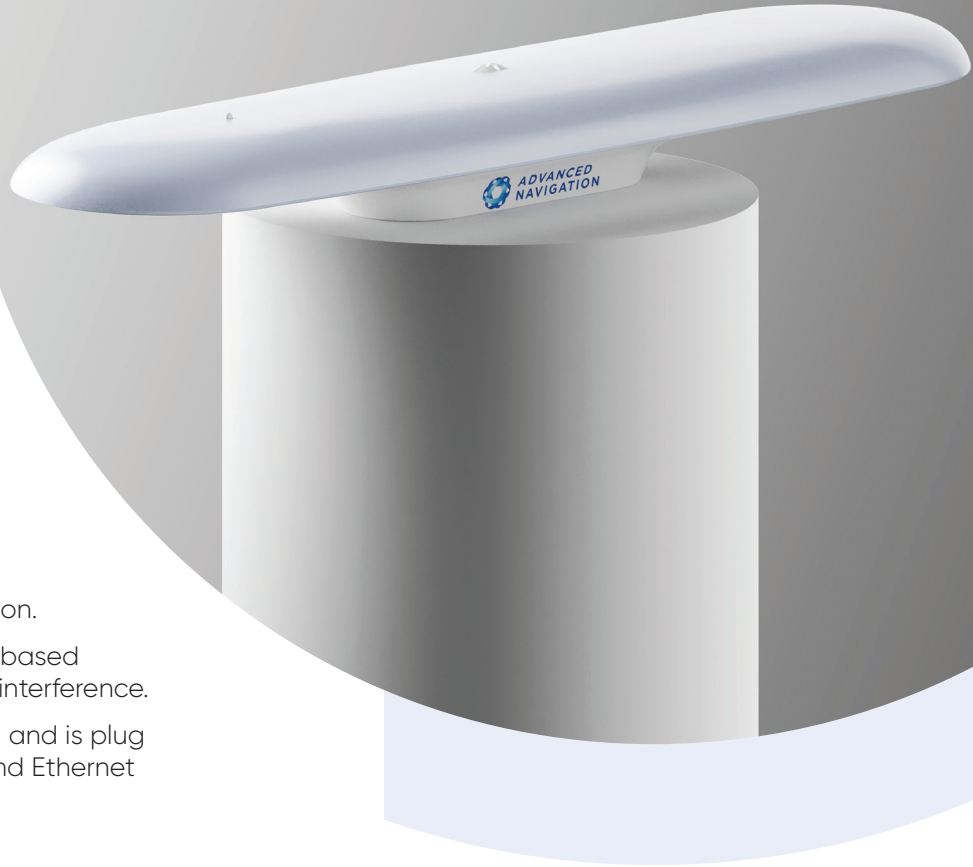
PERFORMANCE

- 0.4 ° Roll and Pitch
- 0.2 ° Heading
- 0.01 m RTK Positioning
- Heave: 5 % or 0.05 m (whichever is greater)

KEY FEATURES

- Dual Antenna Heading
- GPS, GLONASS, Galileo & BeiDou
- Ethernet & Serial Options
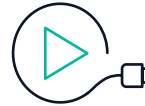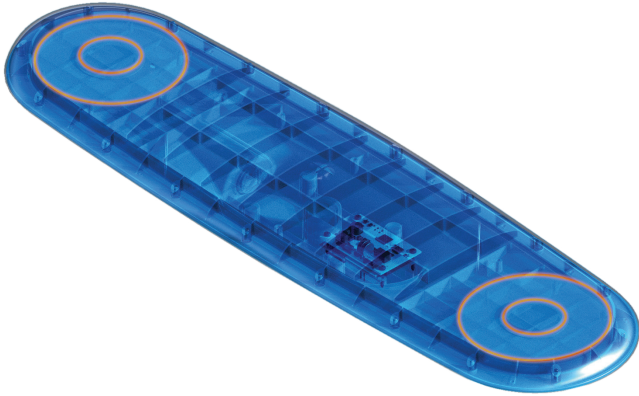- Easy to interface with hydrographic packages

APPLICATIONS

SEA
- Marine Navigation
- Hydrography

LAND
- Autonomous Agriculture
- Antenna Targeting

FEATURES

PLUG-AND-PLAY NAVIGATION

GNSS Compass is a fully plug and play solution for marine vessels with support for both NMEA 2000 and NMEA 0183.

There is no configuration, setup or calibration required. Reliable position and heading in minutes.

GNSS HEADING

GNSS Compass uses dual GNSS antennas to reliably determine true heading with high accuracy.

It doesn't require motion to work and it isn't affected by magnetic interference.

DUAL FREQUENCY RTK GNSS

GNSS Compass features L1/L2 RTK to deliver real time position accuracy of 10 mm.

It supports all of the current and future satellite navigation systems including GPS, GLONASS, GALILEO and BeiDou.

INTERFACE OPTIONS

GNSS Compass is available in both a serial variant and a Power over Ethernet variant.

The serial variant supports both NMEA 2000 and NMEA 0183 for plug and play connection to existing marine systems while the power over ethernet variant allows simplified power and network cabling with maximum flexibility for new applications.

TIME SERVER

GNSS Compass features a GPS disciplined oscillator allowing it to act as a high accuracy time reference for other systems.

The Power over Ethernet variant supports both PTP and NTP for precise time synchronization across your whole network.

SPECIFICATIONS

NAVIGATION

Horizontal Position Accuracy	1.5 m
Vertical Position Accuracy	2.0 m
Horizontal Position Accuracy (with RTK)	0.01 m
Vertical Position Accuracy (with RTK)	0.015 m
Velocity Accuracy	0.05 m/s
Roll & Pitch Accuracy	0.4 °
Heading Accuracy	0.2 °
Heave Accuracy (whichever is greater)	5 % or 0.05 m
Range	Unlimited
Hot Start Time (orientation)	500 ms
Output Data Rate	Up to 200 Hz

GNSS

Supported Navigation Systems	GPS L1, L2 GLONASS G1, G2 GALILEO E1, E5b BeiDou B1, B2
Acceleration Limit	4 g
Hot Start First Fix	6 s
Cold Start First Fix	30 s
Heading Fix (after valid position)	10 s

COMMUNICATION (Ethernet)

Interface	Ethernet
Speed	10 / 100
Protocol	NMEA 0183 AN Packet Protocol TSS1 Simrad RTCM
Ports	Up to 4 TCP or UDP ports
Timing	PTP Server NTP Server
Timing Accuracy (PTP)	50 ns
Timing Accuracy (NTP)	1 ms

COMMUNICATION (Serial)

Interface	RS422 or RS232 CAN bus
Speed	2400 to 1M baud
Protocol	NMEA 0183 NMEA 2000 AN Packet Protocol TSS1 Simrad RTCM
Timing	1PPS Output
Timing Accuracy	20 ns

HARDWARE (Ethernet)

Power Input	Power over Ethernet (PoE) 802.3af or 802.3at
Power Consumption	1.3 W
Hot Start Battery Capacity	> 24 hrs
Operating Temperature	-40 °C to 85 °C
Environmental Protection	IP67
Shock Limit	75 g 11 ms
Dimensions	672 x 190 x 73.9 mm
Weight	1450 grams

HARDWARE (Serial)

Operating Voltage	9 to 36 V
Power Consumption	1.4 W
Operating Temperature	-40 °C to 85 °C
Environmental Protection	IP67
Shock Limit	75 g 11 ms
Dimensions	672 x 190 x 73.9 mm
Weight	1450 grams

HEAD OFFICE

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