

Benefits

Accurate and precise position, heading, heave, pitch and roll in a single compact unit

Single frequency dual antenna GNSS receiver for position and heading seeding

Ruggedized IP67 Rated Housing

Built in iHeave (no additional software or hardware required)

Improved Heading Lock Stabilization

Optimal performance and accuracy under conditions of poor GNSS access

Applicable for surveying to International Hydrographic Organization (IHO) S-44 standard

F280 series directly supported in leading Hydrographic Survey applications

Easy to use Web Interface

Highly Competitive Price

Round -the-Clock Technical Support



Accurate and reliable MOTION and Positioning data in a compact Ruggedized IP67 Rated Housing.

The F280® GNSS-Aided Inertial Navigation System (Attitude and Positioning Systems) is one of the models within the F280 Series® which is our new generation of high accuracy measurement instruments for use in the marine hydrographic and laser survey market. This new generation of GNSS-Aided INS systems embeds high accuracy inertial components and smart fusion algorithms.

Designed to meet the exacting and demanding requirements of the hydrographic survey market, the F280® instruments are easy to install and use. These instruments produce very accurate positioning, heading and MOTION data in the most dynamic offshore conditions.

The light and rugged F280®, packaged in an IP67 rated housing, is a reliable, repeatable, and cost-effective solution suitable for use on vessels of all sizes. The F280® is one model within the F280 Series® of GNSS-Aided instrument. This model is single frequency, dual antenna multi-GNSS receiver for improved constellation coverage and heading lock stabilization. The unit supports SBAS and DGPS corrections services.

An easy-to-use and intuitive web interface provides configuration, control and processing functionality including built-in iHeave (intelligent heave). In addition to real-time heave measurement and output, the F280® now directly computes and outputs our long-standing and proven iHeave (intelligent Heave) solution without the need for top-side processing or software

The F280® is also available in a Pre-Calibrated Housing Assembly Configuration which removes the need for Field Calibration and therefore facilitates fast and repeatable field deployment and set up.

Features

✓	One-Box solution Survey Grade GNSS, attitude and heave sensor
✓	Connectivity to multiple sensors simultaneously over Ethernet and Serial
✓	Multiple Lever Arms to support precise INS Positioning for Multiple Platforms locations or Sensors
✓	Explicit vessel Centre of Gravity (COG) support for improved heave accuracy
✓	Rapid Heading Initialization (Under 30 seconds typically)
✓	Web-Based Set Up
✓	Real Time Monitoring of MOTION Events
✓	Option for Multiple Configuration Profiles and Instantaneous Recall of Profiles
✓	Tightly Integrated GNSS and Inertial Components resulting in increased accuracy and reduced setting up times when compared to outputs from separate sensors
✓	Enhanced performance under conditions of poor GNSS access
✓	Multi-GNSS support (GPS, GLONASS, BeiDou, GALILEO, QZSS)
✓	Industry standard formats and interfaces
✓	iHeave (Intelligent Heave) Processing Capability included as standard
✓	Compatible with HYPACK, QINSy, CARIS and other navigation packages
✓	ITAR free

Specification

<p>F280</p> <p>The Specification in this Data Sheet applies to the F280®, which is one model within the F280 Series®.</p> <p>The F280® is Single Frequency multi GNSS system with SBAS and DGPS GNSS corrections capabilities (30cm positional accuracy). Higher accuracy models also available.</p>															
<p>Dynamic Positioning Information</p>	<table border="1"> <tr> <td>Positional Accuracy (RMS)</td> <td>0.30m with DGPS corrections</td> </tr> <tr> <td></td> <td>0.30m with SBAS corrections</td> </tr> <tr> <td></td> <td>1.20m with GNSS corrections (Standalone)</td> </tr> <tr> <td>Pitch and Roll (1σ)</td> <td>0.025°</td> </tr> <tr> <td>True Heading (1σ)</td> <td>0.04° (2m baseline) 0.025° (4m baseline)</td> </tr> <tr> <td>Heave (1σ)</td> <td>5cm or 5% (online) 3.5cm or 3.5% (iHeave)</td> </tr> <tr> <td>Velocity (1σ)</td> <td>0.014 m/s</td> </tr> </table>	Positional Accuracy (RMS)	0.30m with DGPS corrections		0.30m with SBAS corrections		1.20m with GNSS corrections (Standalone)	Pitch and Roll (1σ)	0.025°	True Heading (1σ)	0.04° (2m baseline) 0.025° (4m baseline)	Heave (1σ)	5cm or 5% (online) 3.5cm or 3.5% (iHeave)	Velocity (1σ)	0.014 m/s
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<p>PC System Requirements</p>	<p>Web Interface – Compatible with all major Web Browsers</p>														



iHeave	iHeave is a tailored solution specifically for long period ocean swell compensation and is fully integrated with the F280 Precision Attitude and Positioning Systems. In many parts of the world, hydrographic survey is severely affected by low frequency ocean swells often up to 70 seconds long, resulting in distortions in bathymetric measurements. Conventional techniques for real-time heave measurement can only offer limited accuracy and are insensitive to ocean swells exceeding 10 to 20 seconds. The inbuilt iHeave algorithm analyzes the raw motion data and allows a more accurate determination of the real heave motion experienced by a vessel and enables the output of precise heave values for all ocean swells.	
Interfaces	Ethernet 100Mbit	Full Control and Configuration, High Speed Data Output (COMPAC)
	Serial Port 1	User-Configurable for position, Heading and Attitude Strings. Users May Chose From: <ul style="list-style-type: none"> ▪ TSSI ▪ EM1000 ▪ COMPAC ▪ GST ▪ GGK ▪ PASHR ▪ PTCF ▪ ROT ▪ UTC ▪ PPS ▪ TSSHHRP ▪ EM3000 ▪ GGA ▪ GSV ▪ HDT ▪ PRDID ▪ RMC ▪ VTG ▪ ZDA ▪ SPD
	Serial Port 2&3	As Serial Port 1
	GNSS Correction Port	Correction Input (DGPS) Formats RTCM 2.1/2.2/2.3/CMR, CMR+
	Other	IPPS on BNC

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