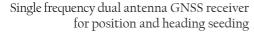






Accurate and precise position, heading, heave, pitch and roll in a single compact unit



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 $F280^{\circ}$ 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

F280

The Specification in this Data Sheet applies to the $F280^{\$}$, which is one model within the F280 Series $^{\$}$.

The F280 $^{\circ}$ is Single Frequency multi GNSS system with SBAS and DGPS GNSS corrections capabilities (30cm positional accuracy). Higher accuracy models also available.

Dynamic Positioning Information	Positional Accuracy (RMS)	0.30m with DGPS corrections	
		0.30m with SBAS corrections	
		1.20m with GNSS corrections (Standalone)	
	Pitch and Roll <u>(1σ)</u>	0.025°	
	True Heading <u>(lσ)</u>	0.04° (2m baseline) 0.025° (4m baseline)	
	Heave <u>(1σ)</u>	5cm or 5% (online) 3.5cm or 3.5% (iHeave)	
	Velocity <u>(lσ)</u>	0.014 m/s	
Physical	Dimension	127mm x 155mm x 113mm 5in x 6.lin x 4.4in	
	Weight	2.2kg (4.9lbs)	
	Power	9-36Vdc, 15 Watts (110-240Vac adaptor supplied)	
	Antennas	Single Frequency, Multi-GNSS, SBAS Capable	
	Antenna Cables	15m (49.2ft) standard. 30m (98.4ft) optional.	
	Operating Temperate	-10° to 60°C (14° to 140°F)	
	Waterproof	1P67 Rated. Maximum depth of 1m (3.2ft) – when Power and Antenna Connectors are mated.	
PC System Requirements	Web Interface – Compatible with all major Web Browsers		





iHeave	compensation and is Attitude and Position hydrographic survey swells often up to 76 bathymetric measurer heave measurement insensitive to ocean sy iHeave algorithm anal accurate determination	fully integrated with the F280 Precision ning Systems. In many parts of the world, is severely affected by low frequency ocean 0 seconds long, resulting in distortions in ments. Conventional techniques for real-time can only offer limited accuracy and are wells exceeding 10 to 20 seconds. The inbuilt lyzes theraw motion data and allows a more on of the real heavemotion experienced by a e output of precise heave values for all ocean
Interfaces	Ethernet 100Mbit Serial Port 1	Full Control and Configuration, High Speed Data Output (COMPAC) User-Configurable for position, Heading and Attitude Strings. Users May Chose From: TSSI TSSHHRP EMI000 EM3000 COMPAC GGA GST GSV GGK HDT PASHR PRDID PTCF RMC ROT VTG UTC ZDA PPS SPD
	Serial Port 2&3	As Serial Port 1
	GNSS Correction Port Other	Correction Input (DGPS) Formats RTCM 2.1/2.2/2.3/CMR, CMR+ 1PPS on BNC

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Issue No. 1.1. (2021)

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