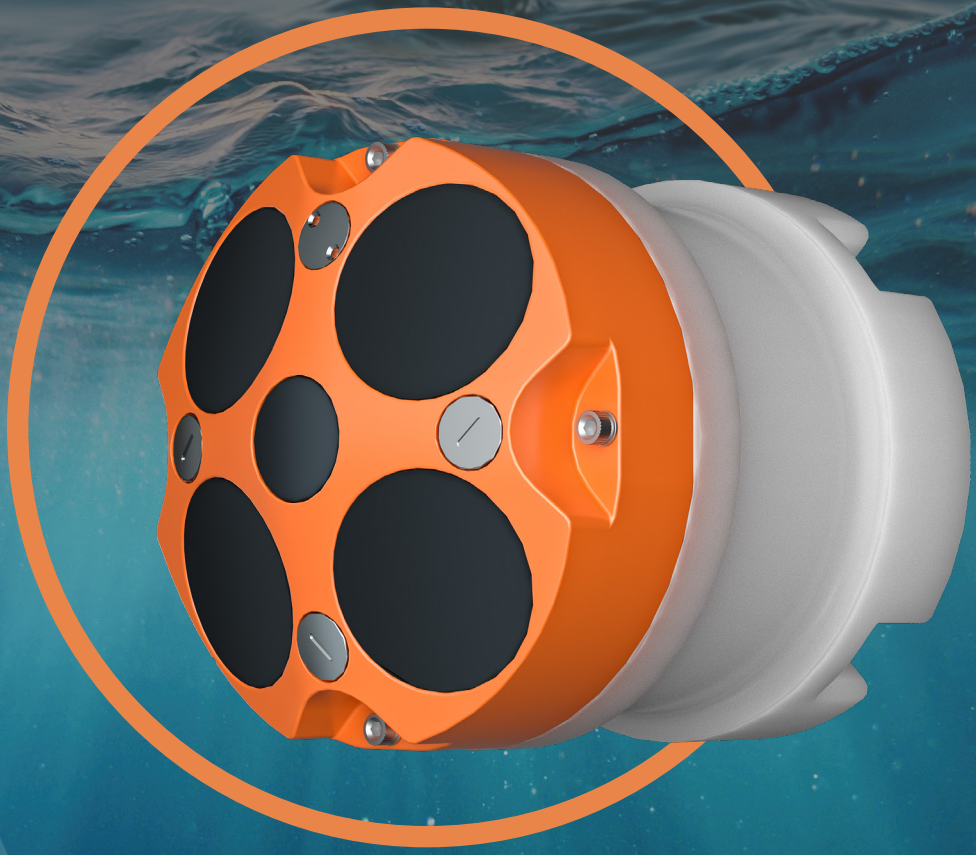
CHCNAV

RS-1200

HIGH ACCURACY ADVANCED ACOUSTIC DOPPLER CURRENT PROFILERS



MARINE SURVEY
& CONSTRUCTION

CHCNAV

ADCP WITH SUPERIOR PRECISION ACROSS VARIED ENVIRONMENTS

The RiverStar Series ADCP, available in RS-1200 model, provides unparalleled accuracy in both shallow and deep water environments. Utilizing a 5-beam solution and 300kHz central depth measurement, these advanced ADCPs excel in a variety of water conditions, from slow to fast currents and shallow to deep waters. When paired with the CHCNAV Apache 4 USV, operational efficiency reaches new heights, requiring only one boat and one remote control for fieldwork, marking a significant advancement in hydrological surveying.

SMART SYSTEM

The RS-1200 ADCP feature a fully automated measurement mode, eliminating the need for manual configuration of flow measurement parameters. Data can be stored both in on-board memory and synchronized via software, ensuring reliable data retention and accessibility for comprehensive analysis.

DEEP-WATER MEASUREMENT

Equipped with a 300 kHz central depth measurement capability, both models support depths up to 180 meters. This extends the measurement range by 30% and allows the integration of external low frequency echosounders in high sediment environments, increasing versatility and accuracy.

SHALLOW WATER ADAPTABILITY

The RS-1200 automatically switch to Pulse Coherent Signal mode in shallow and low flow water. The RS-1200 has a minimum layer thickness of only 2 cm and a blind area of only 15 cm, allowing data collection in water as shallow as 30 cm, making it ideal for a variety of water conditions.

HIGH ACCURACY

The innovative hardware design of the RS-1200 significantly reduces noise, improving the signal-to-noise ratio by 5dB. Accuracy is increased by more than 50% compared to traditional methods, providing reliable and precise data for various applications.

USER-FRIENDLY SOFTWARE ECOSYSTEM

HydroProfiler for PC supports custom page layouts and data output, and is compatible with external echo sounders. It provides seamless data transfer via network serial port/TCP/UDP protocols, ensuring efficient and flexible data management for comprehensive hydrological analysis.

Easysail for CHCNAV Apache 4 USV allows data switching for velocity profile pseudo-color maps, satellite maps, video, and other data types. It supports output of flow summary tables, flow test records, and results tables, and features one-click file transfer and code sharing back to a computer.

VERSATILE CARRIER COMPATIBILITY

The RS-1200 ADCP can be mounted on various types of surface vessels, including USVs, trimarans, cableway towing systems, motorized survey vessels, and channel buoys. Their flexibility ensures that our ADCPs can be used effectively in a wide range of hydrological survey scenarios.

CHCNAV

INTELLIGENT HYDROLOGICAL SOLUTIONS

HYDROLOGICAL TESTING

Suitable for a variety of water environments, including shallow and deep waters with low and high flow velocities, the RS-1200 provide accurate flow velocity and direction data for comprehensive hydrological analysis.

ENVIRONMENTAL MONITORING

Provide detailed flow velocity and direction data at various water depths, helping to understand and manage water resources by providing critical data for environmental assessments.

ECOLOGICAL FLOW

Conduct flow tests in small flow environments, providing essential data for ecological flow studies to maintain ecological balance and support conservation efforts.

OCEAN FLOW FIELD

Provide current magnitude and direction data at fixed locations in ocean flow fields for marine studies and understanding of ocean currents and their impact on the marine environment.

CHANNEL MONITORING

Provide accurate, fixed-point flow velocity and depth data for channel monitoring and management to ensure safe and efficient navigation of waterways.

SPECIFICATIONS

RS-1200	
Product image	
Frequency	1200 kHz
Transducer	5 beams
Water velocity profiling	
Water velocity profiling	±20 m/s maximum; ±5 m/s default
Resolution standard	1 mm/s
Number of cells	260
Cell size	0.02 ~ 2 m
Profiling range	0.1 ~ 40 m
Accuracy	± 0.25% ±2 mm/s
Bottom tracking	
Depth range	0.1 ~ 55 m
Accuracy	± 0.25% ±2 mm/s
Velocity range	±20 m/s maximum; ± 5m/s typical
Vertical beam (Depth measurement)	
Frequency	300 kHz
Range	0.2 ~ 180 m
Standard sensors	
Compass: range/accuracy/resolution	0~360° / ±0.1° / 0.01°
Tilt (pitch and roll): range/accuracy/resolution	±40° / ±0.15° / 0.01°
Temperature: range/accuracy/resolution	-10°C ~ 85°C / ±0.1°C / 0.01°C
General features	
Operating mode	Broadband / pulse-coherent; automatic / manual
Data output rate	1 ~ 20 Hz
Voltage range	11 ~ 36 V DC
Material	Engineering plastics
Size (Height × Diameter)	191 mm × 170 mm
Weight	3.88 kg
Communication	RS232, 115200 (default), 4800 ~ 115200
Internal storage	32 G (extensible)
Storage temperature	-30°C ~ 70°C
Operation temperature	-5°C ~ 50°C
Software	HydroProfiler, EasySail (Android)

* Specifications are subject to change without notice.

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