

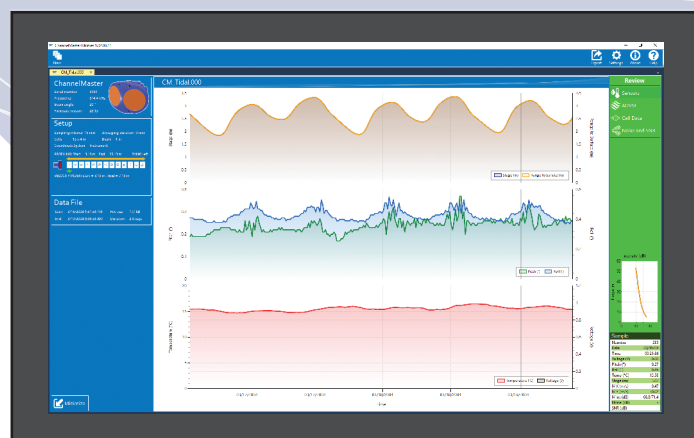
ChannelMaster

Horizontal Acoustic Doppler Current Profiler

The compact, flexible, and affordable **ChannelMaster** is a horizontally-oriented Acoustic Doppler Current Profiler (H-ADCP) designed to collect high-accuracy water velocity, stage, and discharge data for a wide array of applications.

By leveraging Teledyne RDI's BroadBand technology, ChannelMaster allows you to obtain unmatched data quality, even in low velocities and complex flows, where a single cell cannot provide enough information.

The ChannelMaster's innovative design includes everything you need to collect high-quality data. The standard unit comes equipped with temperature, pressure, pitch and roll sensors, and a vertical beam.



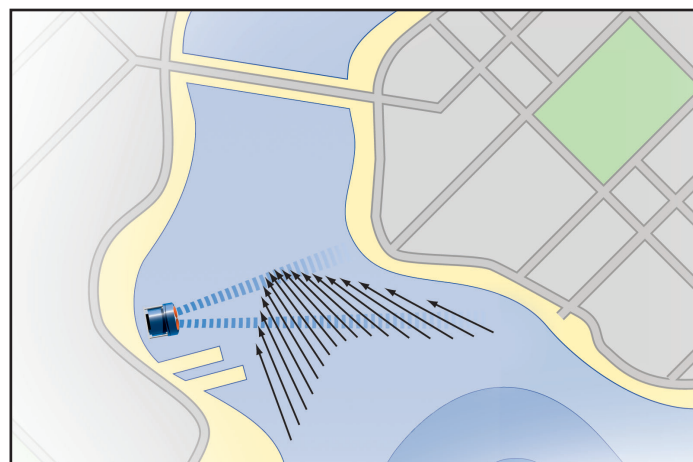
Above: ChannelMaster H-ADCP data sample. Below: The ChannelMaster H-ADCP is installed on a riverbank or near-shore structure to acquire real-time velocity, stage, and discharge data.

PRODUCT FEATURES

- **Accurate:** Teledyne RDI BroadBand technology allows for small cells and/or short averaging sampling intervals, thus increasing your data accuracy.
- **Robust:** Collect highly accurate velocities even in difficult environments such as slow flow or rapidly changing flow.
- **Versatile:** ChannelMaster offers a range of 1-128 user-selectable cell sizes from 25 cm - 8 m and profiling ranges from 1 m - 300 m (frequency dependent).
- **Sturdy:** Comes standard with stainless steel mounting fixture.

Applications

- **Rivers, Streams, and Irrigation Canals:** Monitor discharge and water level for a variety of applications. The ChannelMaster easily integrates with a telemetry or SCADA system, providing you with remote access to your data.
- **Estuaries:** Measure complex currents for environmental monitoring or circulation model calibrations or verifications.
- **Port and Harbors:** Monitor currents to provide velocity information for vessel maneuvering and safety.



ChannelMaster ADCP

Horizontal Acoustic Doppler Current Profiler

TECHNICAL SPECIFICATIONS



		CM300 300 kHz	CM600 600 kHz	CM1200 1200 kHz	
Water Velocity Profiling (Broadband mode)	Profiling range	4 m ¹ to 300 m ²	2 m ¹ to 90 m ²	1 m ¹ to 25 m ²	
	Velocity range	 ±5 m/s default, ±20 m/s maximum			
	Accuracy	 ±0.5% of water velocity relative to ADCP, ±2 mm/s			
	Resolution	1 mm/s	1 mm/s	1 mm/s	
	Number of cells	1-255	1-255	1-255	
	Cell size	1 m to 8 m	0.5 m to 4 m	0.2 m to 2 m	
	Blanking distance	2 m	1 m	0.5 m	
	Data output rate	User-programmable	User-programmable	User-programmable	
Physical Properties	Weight in air	6.8 kg	4.76 kg	3.4 kg	
	Weight in water	3.17 kg	2 kg	1.58 kg	
	Height	18.3 cm	18.3 cm	18.3 cm	
	Width	32.5 cm	26.4 cm	18.3 cm	
	Depth	19.8 cm	19.3 cm	18.9 cm	
Transducer	Geometry	2 beams, ±20°	2 beams, ±20°	2 beams, ±20°	
	Beam width	2.2°	1.5°	1.5°	
	Vertical beam width	6.8°	6.8°	6.8°	
Sensors		Temperature	Tilt (pitch and roll)	Pressure	Acoustic Stage
	Range	-4° to 40°C	±10°	0.1 m to 10 m	0.1 m to 10 m ³
	Accuracy	±0.2°C	±0.2°@2°, ±0.5°@10°	±0.5%	±0.1%, ±3 mm
	Resolution	0.01°C	0.01°	1 mm	0.1 mm
Software	ChannelMaster Utilities: System setup and guided site visit workflow including data retrieval				
	PlanCV: Deployment planning, predicting precision, power usage, etc.				
	WinH-ADCP: System setup, data acquisition, discharge calculation, data display, and summary report				
Other Hardware and Features	• 4mb internal recorder • 25 m power and communications cable standard, longer available				
	• Stainless steel mounting plate • Built-in index-velocity method flow calculator				
Communications	RS-232 with SDI-12, or RS-422	SDI-12 supports v 1.3 (concurrent); Simultaneous SDI-12, and internal logging supported			
	Serial baud rates	300-115,200 bps			
Construction	Cast polyurethane with titanium hardware, mounting plate included				
Power	Voltage	10-18VDC			
	Max. current:	1.5A			
	Power consumption:	0.1W @ 10% duty cycle (typical)			
Environmental	Operating temperature:	-5°C to 45°C			
	Storage temperature:	-20°C to 50°C			

1 Assume one good cell (minimum cell size); range measured from the transducer surface.

2 Assume fresh water; actual range depends on temperature and suspended solids concentration.

3 User-programmable to 18 m maximum.



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ChannelMaster Product Page



Specifications subject to change without notice.

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