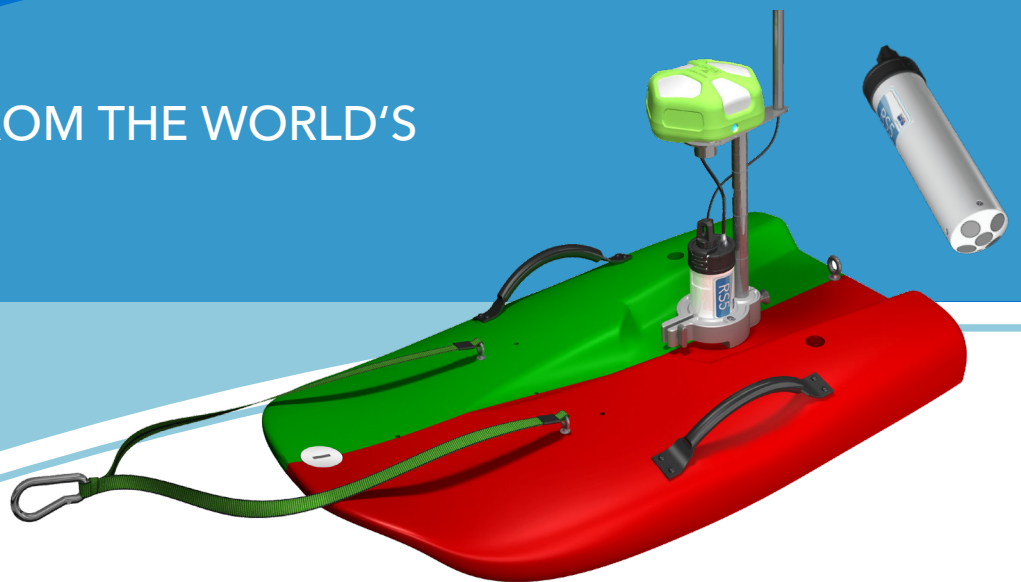


RS5

ROBUST DATA FROM THE WORLD'S
SMALLEST ADCP



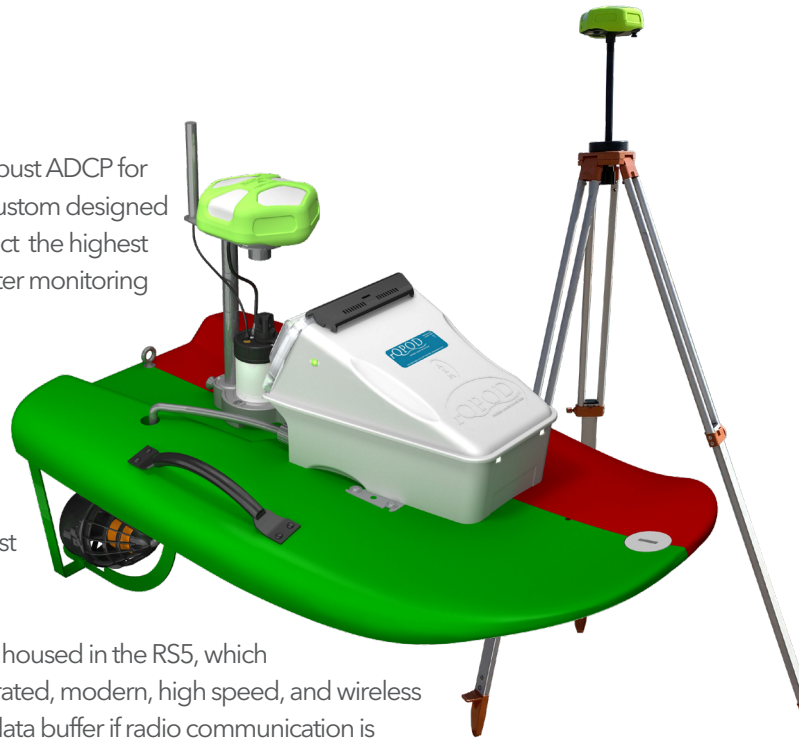
a xylem brand

Friendly Grab-and-Go ADCP

Small yet powerful, the SonTek-RS5 is the world's most compact and robust ADCP for collecting discharge data in rivers, streams and canals. Paired with the custom designed Torrent Board Micro and SonTek-RTK, you will be ready to quickly collect the highest quality measurement possible no matter where your environmental water monitoring takes you.

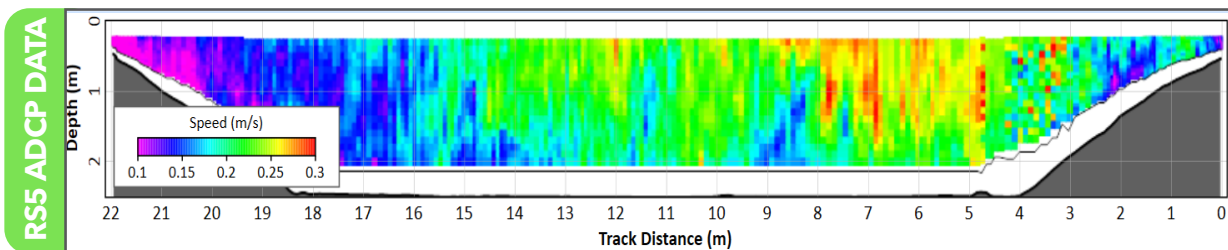
The RS5 incorporates SonTek's proprietary SmartPulse+ that uses both Broadband and Pulse-coherent acoustic processing algorithms. This industry-first algorithm automatically determines the best measurement methodology based on environmental conditions and adjusts instrument settings so the user doesn't have to, ensuring the most accurate and user-friendly data collection possible.

For a simple, streamlined experience, batteries and Bluetooth radio are housed in the RS5, which means there is no need for external electronics boxes. Rely on an integrated, modern, high speed, and wireless Bluetooth Low Energy (BLE5) radio, with 100 m range and five-minute data buffer if radio communication is interrupted.

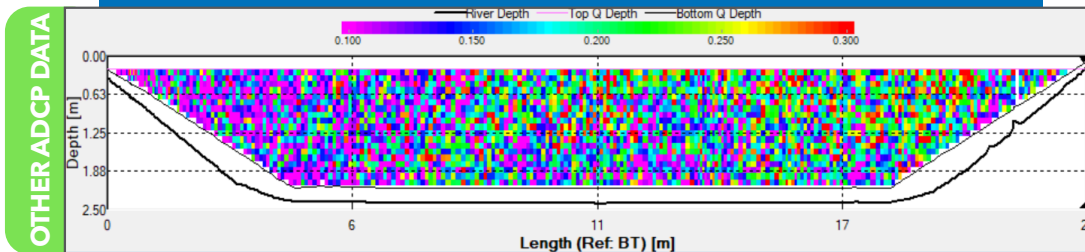


RSQ: Visualize and Process Data Like Never Before

- Collect both moving boat or stationary measurements
- Connect to Network RTK (NTRIP) within network range
- Use GNSS to calculate distance between stations for stationary measurements
- Run and apply Extrap (USGS) to both moving boat and stationary measurements
- Sub-section moving boat transects and recalculate discharge
- Choose beam switching (3-beam solution) when one beam shows interference
- Process *.riv/*.rivr files from SonTek's M9 or S5
- Save data on a PC, external drive, or network
- Custom file naming option
- Select between GNSS or built in magnetic compass for heading



(Above) Visualize the flow structure like never before with SmartPulse+.
(Below) Comparable ADCP data from the same site.



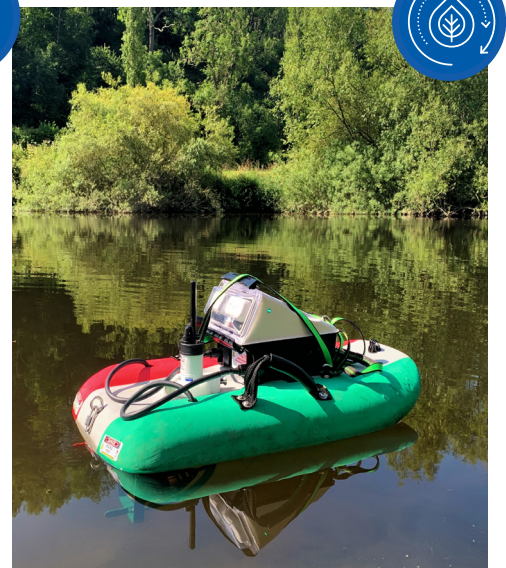
Insert the RS5 into the TB-Micro and pop the GNSS/antenna out in order to pack the whole kit into the backpack for easy transportation and minimal re-assembly between sites!

Features

Benefits

Vertical acoustic beam	Superior channel definition for the most accurate cross-sectional area, for discharge applications. Measures the depth directly under the system and extends maximum discharge depth if bottom-tracking is out of range.
SmartPulse+®	An intelligent algorithm utilizing Pulse-coherent and Broadband acoustic profiling that automatically adjusts based on conditions. Reliable bottom tracking and velocity profiling in water depths shallower than ever. Visualize velocity data like never before with cell sizes down to 2.5 cm.
360° compass and two-axis tilt sensor	Reports vessel heading, magnetic error and compensates for motion due to surface conditions. Tilt sensor uses pitch and roll to correct depth and velocities.
Bottom-tracking	Acoustically track vessel speed over ground. Also supplies secondary depth measurement.
RTK GPS (Option)	Ultra precise positioning as an alternative to bottom tracking in moving bed or other difficult situations. Geolocate each sample (or ensemble) during measurement. Corrections are sent from the SonTek RTK base station or a local NTRIP.
DGNSS (Option)	Integrated DGNSS smart antenna for position as a backup or alternative to bottom tracking in moving bed or other difficult conditions.

Ultimate flexibility with the world's **SMALLEST ADCP**



Water Supply Management

Extreme Weather Conditions

Environmental Monitoring



SPECIFICATIONS

Water Velocity Profiling	Profiling Range	0.1-6 m ^{(*)1}
	Velocity Range	+/- 5 m/s
	Accuracy	1% +/-0.002 m/s
	Resolution	0.001 m/s
	Number of Cells	Up to 128
	Cell Size	2.5-30 cm
	Data Output Rate	1.0 Hz
Bottom Tracking	Depth Range	0.1-6 m ^{(*)1}
	Accuracy ^{(*)2}	1% +/- 0.002 m/s
	Resolution	0.001 m/s
Depth Measurement	Range	0.1-6.5 m ^{(*)1}
	Accuracy	1% +/-0.005 m
Sensors	Temperature Sensor	Resolution: ±0.01°C Accuracy: ±0.5°C
	Compass/Tilt Sensor	Range: ±180° Pitch/Roll, 0-360° Heading Heading Accuracy: ±2° Pitch/Roll Accuracy: ±1°
Transducers	Total Number, Frequency	Five, 3.0 MHz
	Beam Angle	25°
	Beam Width	3°
	Bandwidth	25%
Battery Characteristics	Input Voltage	3.3-4.2 VDC
	Power Source	Li-Ion
	Battery Life	1 x size 18650 Seven hours continuous use, typical settings
	Power Consumption	1.0 W (Average)
	Dimensions	19.2 mm x 69.7 mm
	RTK Rover Battery Life	1 x size 18650 5 hours continuous use, typical settings
	RTK Base Station	1 x size 18650 14 hours continuous use, typical settings
Communications	Radio Protocol	Bluetooth Low Energy (BLE5)
	Range	100 m ^{(*)3}
	Bluetooth Compliance	FCC Part 15, FCC ID: XPNINAB30 ISED Certification: 8595A-NINAB30
Environmental	Operating Temperature	-5° to 45°C (23°F to 113°F)
	Storage Temperature	-20° to 70°C (-4°F to 158°F)
	Storage with Battery Temperature ^{(*)5}	-20° to 45°C (-4°F to 113°F)
RS5 Physical Properties	Dimensions - TB-Micro	80 cm (31.5") x 46.5 (18") cm x 15 cm (6")
	Weight in Air - TB-Micro	4.2 kg (9.3 lbs)
	Dimensions - RS5 Unit	24 cm (9.5") x 5 cm (2.2")
	Weight in Air - RS5 Unit	0.45 kg (1.0 lbs)
	Weight in Water - RS5 Unit	0.15 kg (0.33 lbs)
	Waterproof Rating	IP-67
DGNSS	Horizontal RMS	SBAS (WAAS): <0.3 m (0.98 ft)
	2DRMS	SBAS (WAAS): <0.6 m (1.96 ft)
	Frequency	Multi-frequency, multi-constellation
	GNS3M Atlas Subscription	
SonTek-RTK	Horizontal Accuracy	(Quality 4) < 0.02 m
	Vertical Accuracy	(Quality 4) < 0.04 m
	Frequency	L1C/A, L2C, Multi-GNSS
	Base-to-Rover Range	250 m Line of sight

^{*}Additional notes
¹ Maximum range will vary with environmental conditions.
² Bottom velocity accuracy.
³ When using provided SonTek USB radio with antenna.



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