STEELHEAD

All-in-one Integrated Data Acquisition Platform

Seamless Cloud-Computing / Data Logging Interface

STEVENS
MEASUREMENTS TO MIND

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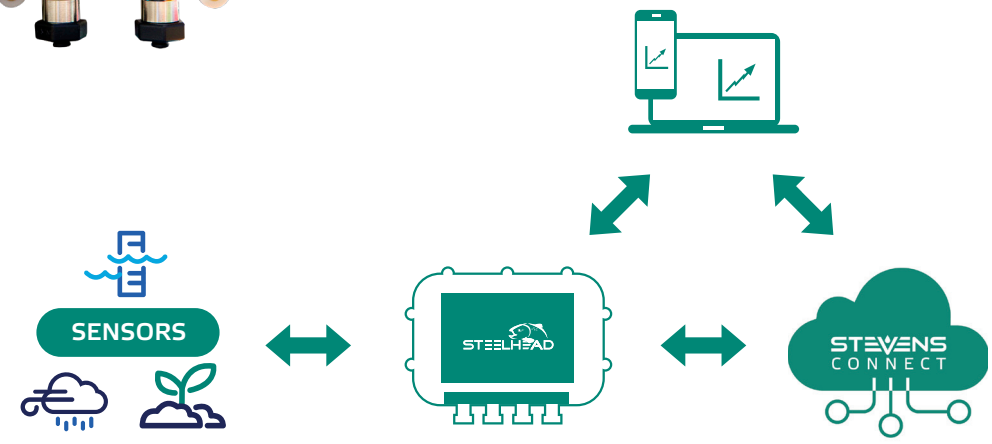

Available on the App Store

GET IT ON Google Play

"Directly link what the sensors Measure to what the Mind sees"

Next Generation

Steelhead is leading the shift to a true Internet of Things (IoT) data acquisition experience that incorporates low-power, all-in-one, and patent technology.

Steelhead is a traditional data logger and provides two-way communications. Simple to set up, collect, manage, and analyze measurement by using the Steelhead mobile app via Bluetooth or Stevens-Connect cloud-based software.

Universal

Mix and match third-party sensor brands and types.

Easily configure to any SDI-12, Modbus RTU over RS-485, and/or Pulse sensors.

Access and Control Your Data Anywhere Anytime

The Steelhead has global cellular coverage easy set-up for seamless data links and actions between the remote sites and data management program.

Quickly visualize and transform your data into easy-to-use information.

Easy Configuration

Simple to set up, collect, manage, and analyze your data. Use the Steelhead mobile app via Bluetooth or Stevens-Connect to get started.

THREE POWER OPTIONS

Battery Only

3-year battery life*

*Assumes 15-minute logging, 12- hour reporting, 2 sensors

Includes an internal 28 Ah non-rechargeable battery

12 Watt Solar Panel

Stevens solar panel optimally designed for the Steelhead

Includes solar panel mounting bracket, an internal battery charging regulator, and both a 10.5 Ah rechargeable and a 28 Ah non-rechargeable battery

External Power

7 to 16V DC / 3-amp power from an AC/DC adaptor or an external battery

Includes an internal 10.5 Ah rechargeable battery. AC/DC adaptor or external battery can be added

Unique Features

ALL-IN-ONE COMPACT DESIGN

- IP-68 (waterproof) enclosure
- Waterproof sensor connectors
- Integrated high-efficiency (MPPT) solar regulator
- Enhanced power surge and lightning protection
- Built-in GPS, internal barometric, humidity, and temperature sensors
- Includes internal batteries and antennas

COMMUNICATIONS

- Integrated 4G Cellular with global coverage via an included SIM card
- Reporting to Stevens-Connect or a third-party server via HTTP/ HTTPS, FTP, or both
- Data logger (no cellular connectivity) is an available option
- Report immediately based on sampled data
- Alarm conditions with auto change of logging and reporting frequency during event

MOBILE APP

- Connect via Bluetooth (BLE)
- Configuration: add/change sensors, reporting/sampling interval, and more!
- SDI-12 Transparent mode: talk directly to the sensor for diagnostics
- Current readings: take an immediate reading
- Download stored data

STEVENS-CONNECT INTEGRATION

- Configuration: add/change sensors, reporting/sampling interval, and more!
- Create interactive dashboards with multiple stations and parameters
- Notifications on measurement thresholds via text and/or email
- Remote troubleshooting: battery voltage and percentage, cell signal strength and network, remote power cycling
- Over-The-Air (OTA) firmware updates

DATA COLLECTION AND ANALYSIS APPLICATIONS

Environmental monitoring	Soil management	Bioremediation
Water resources	Stormwater	Scientific Research
Weather	Tank levels	Precision agriculture and horticulture
Tide gauging	Open and close channel flow	Golf & sports turf management (www.turfpro.com)

TECHNICAL SPECIFICATIONS

Sensor Data	Logging Interval	Configurable from 1 minutes to 24 hours
	Reporting Interval	Configurable from 5 minutes to 24 hours
	On-board storage	400,000 records typical. depending upon the sensor type
Data Memory	64MB Flash memory	Non-volatile Flash Memory, complete data retention with loss of power
Sensor Interface	Supported sensor types	SDI-12 bus
		Modbus RTU over RS-485
		2 Pulse inputs, individually configurable as low speed (<100Hz) or High speed (KHz)
	Sensor Connectors	3 x M12 A connectors. Connect more sensors using split cables or break-out box
	Sensor Power Supply	Switched
	Power Output for Sensors	12V DC with max. current source 200mA
	Parameters	30 sensor parameters in total
	Number of Sensors	10 ~ 20, based on the current consumption and number of parameters
	Internal Barometric Sensor	Range 300 to 1250 hPa | 12-month long-term stability: ±0.33 hPa
		Absolute accuracy pressure (typ.): +/- 0.5 hPa; P=900 ...1100 hPa (T=25° to 40°C)
		Relative accuracy pressure (typ.): ±0.08 hPa, P=900…1100 hPa (T=25° to 40°C)
Communications	Cellular	4G LTE or Cat-M
	Antenna	Internal antenna: 698-875 MHz (1.9 gain) or 1710 – 2500 MHz (3.7 gain)
		Options: SMA connector for external antenna
	Mobile App communication	BLE 5.0 Bluetooth low energy protocol
	GPS	GPS, GLONASS, BeiDou/Compass, Galileo and QZSS
Mechanical/ Environmental	Dimensions	240 mm x 170 mm x 60mm (9.44 in x 6.7 in x 2.3 in)
	Enclosure Material	UV-resistant polymer
	Ingress Protection	IP-68 (dust proof and waterproof up to 1 meter immersion for 30 minutes)
	Operating Temperature	-40°C ~ +80°C (-40°F ~ +176°F)
	Lightning and Power Protection	Dedicated grounding lug
		Each input, output, and sensor power line has isolated gas discharge tubes, series current limiters, transient voltage suppressors (TVS), electrostatic discharge, electrical fast transient and lightning surge protection

** specifications subject to change without notice.*

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