

Cloud Based Telemetry

Stevens Avo with Stevens-Connect

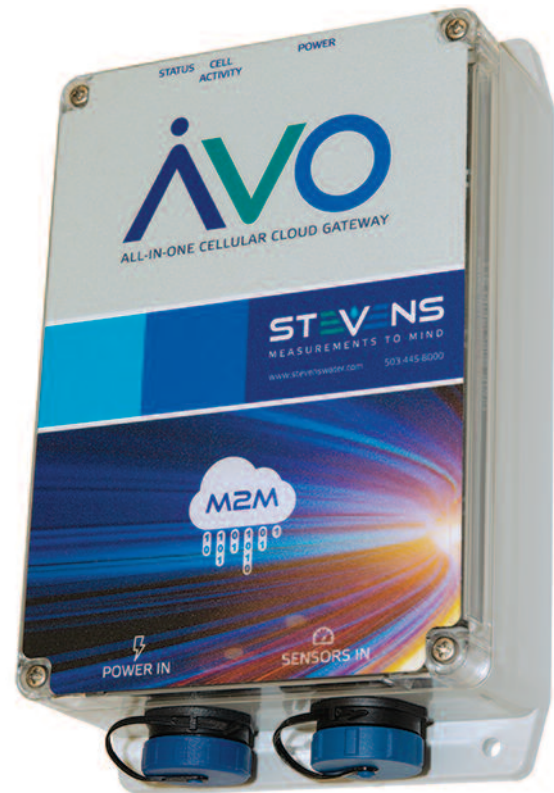
Avo is a complete monitoring station platform, with all hardware, software and services needed to start logging and pushing to the cloud your environmental data within minutes of unboxing. The waterproof and weather-proof (IP67) Avo easily mounts directly to a pole, or it can be placed inside another enclosure with an externally mounted antenna.

Avo connects your sensors to the cloud, sending data via a 3G cellular network (CDMA or GSM) after logging data locally on an SD flash storage card as a backup.

Avo comes pre-provisioned for AT&T or Verizon in the US or can be used with your chosen cellular provider outside the US after inserting a provisioned SIM card. A 10 Ah Li-Ion battery, 5W solar panel, solar charger regulator and one year's usage of the Stevens-Connect cloud hub and cellular data is included. All you need to add is sensors.

FEATURES

- **Unified data interface experience:** Sensor configuration, data storage, custom algebraic equations, custom data formats and forwarding, control, analysis, alarm notifications (email, SMS), reporting and actions all done with one simple cloud-based user interface.
- **Easy configuration:** Configure with your smartphone, tablet or PC via the cloud-based Stevens-Connect. No custom programming or scripts required.
- **Automated updates:** Updates to firmware and cloud-based application can be automatically installed.
- **Security:** Three user access levels for configuration, data management interface and visualization. Optional data encryption available.
- **Redundancy:** All data is saved locally on an SD storage card, and once on the cloud is replicated on a redundant data server and backed up nightly.
- **Connection verification:** Avo verifies connection with cell network and server connection before data is sent. If no connection is available or if data reception is not confirmed, data is saved and sent the next scheduled transmission.
- **Data format flexibility:** Optionally forward data in various formats for third party software platforms, like Aquarius or WISKI, and in other formats such as binary, pseudo-binary, SHEF, and more.
- **Direct data access options:** Third-party programs can access data using REST API or HTTP post.



APPLICATIONS

- Temporary sensor deployments where simplicity and quick assembly and disassembly are important.
- Station setup by non-technical staff.
- Upgrading existing stations by getting data to the cloud.
- Any environmental monitoring application where minimizing complexity and maximizing reliability is important.

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205

(303) 320-4764 • **(800) 833-7958** • FAX (303) 322-7242

email: sales@geotechenv.com website: www.geotechenv.com

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SPECIFICATIONS

General

Processors	16-bit dsPIC microprocessor, and 16-bit TI MSP430
Data Storage	Removable 2 GB SD memory card (FAT 32)
Non-Volatile Memory	All setup parameters
Logging Interval	1 second to 24 hours (sensor dependent)
Reporting Interval	2 minutes to 24 hour
Cellular Communications	<ul style="list-style-type: none"> • Dual band CDMA 800, 1900 MHz • Penta-Band HSPA+ • GSM Quad band 850, 900, 1800, 1900 MHz • UMTS/HSPA Penta Band 850, 900, 1700, 1900, 2100 MHz • EGPRS/WCDMA/HSDPA/HSUPA Protocol Stack

Current Consumption

Listen/Trigger Mode/Idle	<2 mA
Data Receive/Store/Prepare for Tx	150 mA
Data Tx	250 mA

Power

Battery	1100 mAh Li-ion
Tx Output Power	24.3 dBm (270 mW)

Sensor Input

Analog Input	<p>4 analog channels, single-ended</p> <p><i>Input type:</i> 2 wire, 0 – 2.5 V or 4 - 20 mA current loop</p> <p><i>Sensor power:</i> 24 VDC switched (under firmware control)</p> <p><i>Analog to digital (0-2.5 VDC):</i> 21-bit resolution</p>
Pulse Input	<p>3 pulse channels</p> <p><i>Continuity or TTL:</i> 0V to 2.2V - 5V</p> <p><i>Maximum rate:</i> 10 pulses per second</p>
SDI-12 Input	<p><i>Number of sensors:</i> up to 62 sensors (up to 9 parameters per sensor)</p> <p><i>Sensor power:</i> 12 VDC switched, during measurement</p>

Environmental

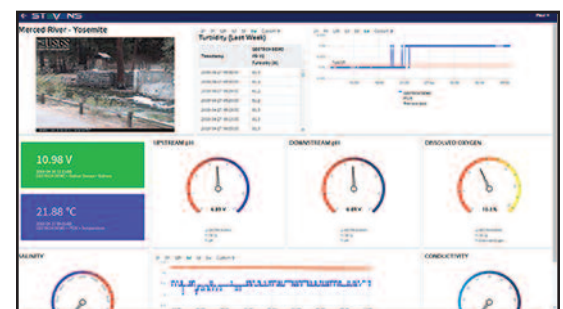
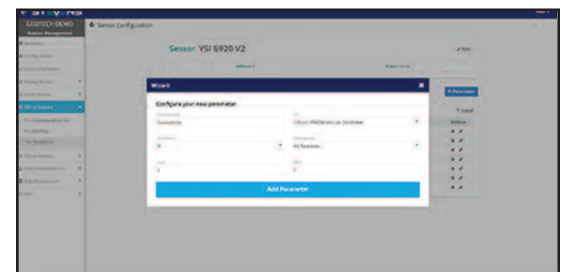
Operating Temperature	-40°C to 75°C (battery won't charge below 0°C)
Storage Temperature	-40°C to 85°C
Lightning Protection	AC transient voltage suppressor (TVS) on each sensor port input

Physical

Dimensions	1.6" (4.1 cm) x 6.7" (17.0 cm) x 4.8" (12.2 cm)
Weight	10.78 oz. (305.6 g)

STEVENS-CONNECT

Use state-of-the art Stevens-Connect software to configure hardware, visualize data, analyze measurements, manage alarms, calculations, and data routing from any computer or smart phone with internet connectivity. Dashboards are customizable, allowing users to store several unique dashboards to meet their project needs.



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