

eTracker

True cloud-based sensor configuration, logging, reporting and data analysis all-in-one.

eTracker is the gateway between the sensors and the cloud. Data communication and IT infrastructure are merged under one user interface experience. eTracker was designed from the ground up to embrace the current and future trends of cloud-based remote data acquisition and the Internet of Things (IoT) revolution. This paradigm shift centralizes all the historically isolated processes of remote configuration, programming, logging, and telemetry. Configuration, logging, data processing and analysis is now done in the cloud, eliminating time and cost in programming and maintaining expensive, complex data loggers and communication devices at each remote location.

- Cellular-based telemetry (GSM or CDMA) and station controller.
- Direct Internet compliant data stream using HTTP/HTTPS.
- Sensor measurements stored on easily-accessible SD card.
- Cloud logging: all sensor data is forwarded to the cloud for processing, logging, retrieval and resulting action.
- Integrated sensor interface with ports: 4 analog, 4 pulse, SDI-12 (up to 62 SDI-12 sensors).
- Approximately 20X typical improvement in power consumption vs. typical cellular telemetry.
- Intelligent data management, data buffering, and network verification to ensure successful transmission of critical data.



eTracker embraces Stevens' M2M vision—
“What the sensors Measure, the Mind sees”!

STEVENS
MEASUREMENTS TO MIND

eTracker:

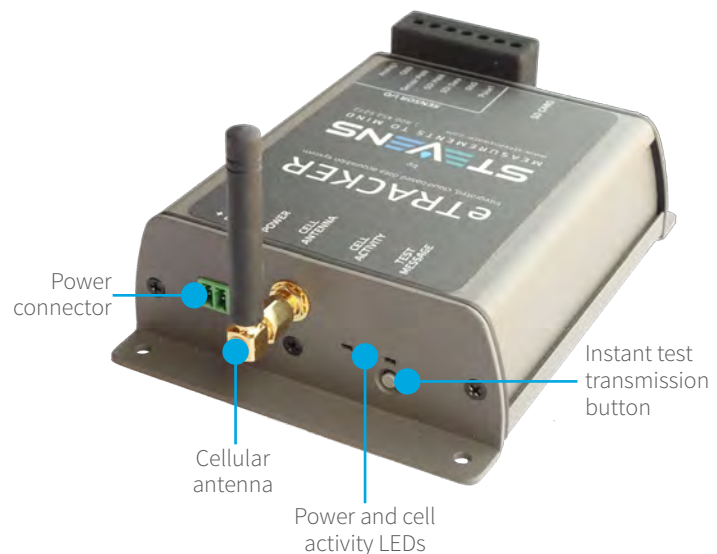
A cloud-based management experience

All configuration, data logging, data storage, custom algebraic equations, custom data formats and forwarding, control, analysis, alarm notifications, data visualization, and reporting is **done in the cloud**.

Unique Features

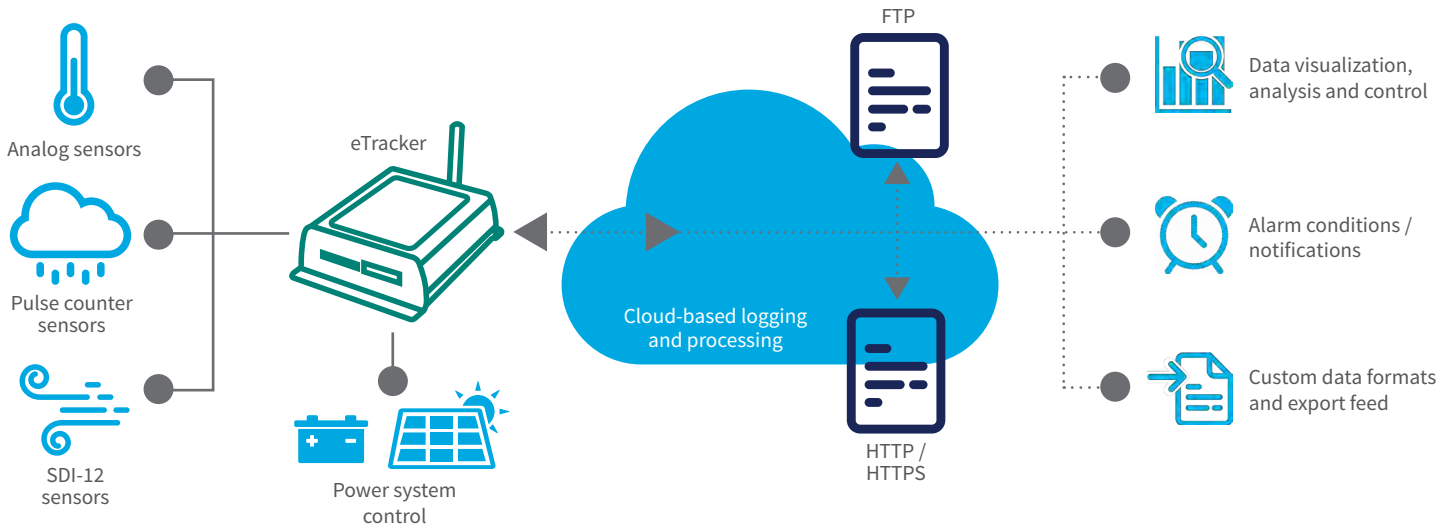
- **Link sensors to the cloud:** Sensor data is linked directly to the cloud-based Amazon service or user's server via the cellular network using HTTP or HTTPS (optional FTP available).
- **Unified data interface experience:** Sensor configuration, data storage, custom algebraic equations, custom data 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 any device connected to the Internet via the cloud-based Stevens-Connect. No custom programming or scripts required.
- **Automated updates:** Updates to firmware and cloud-based application can be automatic.
- **Security:** Three user access levels for configuration, data management interface and visualization. Data is saved on SD card and on the secured and redundant Amazon Cloud Services. Optional data encryption available.
- **Connection verification:** eTracker 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.
- **True cloud data service experience:** Your data is sent directly and securely to the Amazon cloud-based service. No back-end database hosting or web server controlled by Stevens in which data flow takes a detour to the cloud.
- **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.
- **Power control:** Power cycle commands automatically initiated with the Stevens' SOLO power management system.
- **Direct data access options:** Third-party programs can access data using REST API or HTTP post.

Deployed worldwide

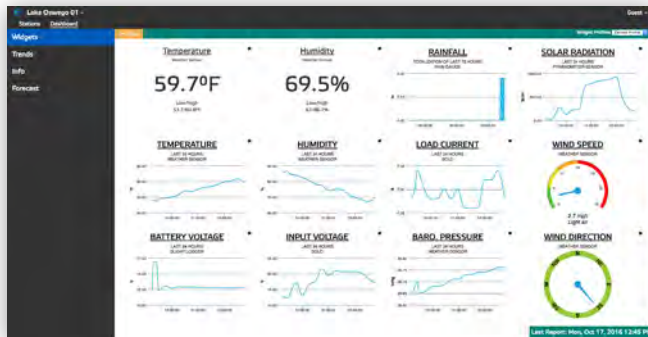


Simple stations.

Interact with your system and data from anywhere.



Stevens-Connect

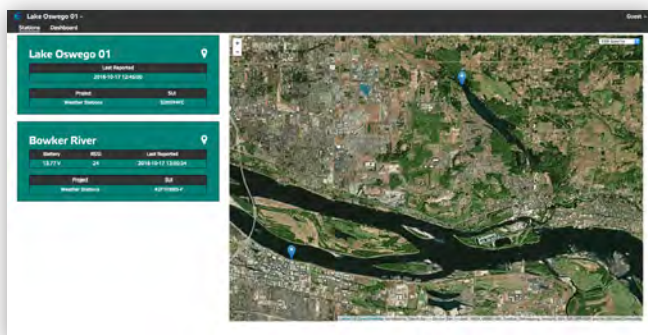


Customize your dashboard display with drag-and-drop data widgets



Data & configuration anywhere.
No dedicated app required.

A cloud-based interface to configure hardware, visualize data, analyze measurements, manage alarms, calculations, and data routing.



Summary of all monitoring locations



Easily chart trends of any parameter

TECHNICAL SPECIFICATIONS

KEY FEATURES

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 hours
Cellular antenna	External SMA
LED indicators	Power, cell network, test message
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

Normal operation:

Listen/trigger mode/idle	<2 mA
Data receive/store/prepare for transmission	150 mA
Data transmit	250 mA

POWER

Input voltage	10 to 18 VDC (reverse polarity protection)
TX output power	24.3 dBm (270 mW)

PERFORMANCE MEASUREMENTS

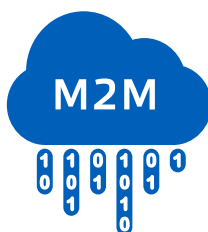
Battery and RSSI (signal strength), internal diagnostic log file

eTracker:

True cloud computing,
NOT cloud *viewing*.

THIS IS M2M.

MEASUREMENTS TO MIND



SENSOR INPUT

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

ENVIRONMENTAL

Operating temperature	-40°C to 75°C *
Storage temperature	-40°C to 85°C *
Lightning protection	AC transient voltage suppressor (TVS) on each sensor port input

PHYSICAL

Dimensions (H x L x W)	1 3/8" (3.5 cm) x 5 1/8" (13 cm) x 3 3/4" (9.7 cm)
Weight	10.78 oz (305.6 g)

* SIM Card selection may limit this range for GSM version

ORDERING INFORMATION

PART #	DESCRIPTION
80060-60B	eTracker for GSM
80060-60A	eTracker for CDMA
80060-502	Mini sensor interface box
80060-505	Full sensor interface box
93777	Antenna, dual-band 900/1900 MHz, 5dB gain, Omni with N female
92824-002	Cable assembly, cell modem to bulkhead, N to SMA, 2 ft.
92845-010	LMR400, N-to-N, antenna cable length per 10 feet
93772	Antenna, 900 Mhz, 70 MHz BW, 11DB, Yagi with N female
93950-108	Antenna, 700-2500 MHz wideband, high gain, log periodic with N female



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