

EnviroLog 4G

Control, Logging and Telemetry Module

Valeport's EnviroLog 4G is a rugged, ultra-low-power 4G remote control, telemetry and logging module providing a flexible solution for harsh environmental conditions. It has an industry-leading range of data collection, delivery and management options. The EnviroLog 4G is effectively a "platform" that offers fully scriptable operational scenarios for the collection, handling and delivery of data from a number of Valeport instruments. Specific data collection scenarios can be scripted quickly and with no firmware development involved and even updated 'over the air' with no need to visit the site. Valeport can assist with sample scripts for you to adapt if required.

EnviroLog 4G has highly efficient power management capabilities that enable long battery life even when performing complex scripts and calculations.

Markets

- Environmental monitoring
- Surface Water and Wastewater
- Utilities
- Industrial
- Coastal monitoring

DATA SHEET

Product Details



HYDROMETRY



TELEMETRY



VALEPORT.CLOUD

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Operating Modes

For battery operation, the EnviroLog 4G stays in ultra low-power sleep mode and wakes up on a trigger or internal timer to collect data from the interfaced instrument(s). It will transmit the data as scheduled, or on scripted conditions.

Data Collection

- 2 x serial: RS232, RS485, Modbus
- 2 x digital/pulse-count/event detection inputs
- 1 x 24-bit differential ADC (e.g. pressure transducer)

Serial input 300 to 460800 baud (optional flow control and fast wake-up from sleep on received data)

Analogue 3V excitation reference output
24-bit resolution
Single-ended: 0V to 1.5V / differential: $\pm 1.5V$

Digital/Pulse 64Hz max

Data Delivery

The EnviroLog 4G can deliver data in a fully transactional manner over 4G by:

- HTTP / HTTPS Post
- FTP Push
- FTP+TLS Secure Push

The outbound connection from the EnviroLog 4G can also query the server to request updates (e.g. instrument firmware, configurations or Lua apps) as well as requesting diagnostic data and logs.

Servers Cloud: Amazon AWS, Microsoft Azure
SCADA FTP, private server

Data formats CSV, XML, JSON, Binary – all with optional gzip compression

Lua Scripting

The flexible Lua scripting engine has full control to accept or collect sample data from serial | ModBus | SDI-12 | Analogue/pulse.

Data can be calculated and formatted in any ASCII (e.g. CSV, XML, JSON, etc.) or binary format, and any alarm conditions can be detected.

It also provides full control over delivery schedules and triggers.

Configuration and Setup

Configuration and administration of the EnviroLog 4G:

- USB on Windows (no driver needed)
- Over the air with IoT server
- Over the air with Terminal (ToA) access

Connected devices can be configured locally, or remotely, with full pass-through facilities.

Storage

128MB of non-volatile flash memory - up to 2 000 000 data points
(chip-on-board for maximum reliability)

Terminal-Over-the-Air (ToA)

The Terminal Over the Air mechanism connects a TCP/TLS socket to an Internet server and provides a full remote link to the EnviroLog 4G's terminal interface.

Remote Management & Update

Can be controlled through the IoT server for:

- Firmware and Lua App upgrades
- Configuration changes
- Diagnostic requests
- Executing arbitrary Lua code (e.g. to control and reconfigure connected devices)

Data Transmission - 4G

Band Worldwide LTE (Cat 1), UMTS/HSPA+ and GSM/GPRS/EDGE coverage

SMS Fully scriptable binary/text SMS bi-directional transmission

Hardware Options

Daughter-board PCBs for RS485/Power Output controls

Power Supply

Can run from internal batteries and/or external DC supply:

- a. Internal primary Lithium 7.2VDC battery pack (2 packs of 2xLSH20)
- b. External 9-28VDC (not internally isolated)
- c. Automatically switches to the highest voltage

The EnviroLog 4G can provide DC output to the connected instruments under script control

Physical

Case Rugged IP68 (2 metres for 72 hours) die-cast aluminium case

Size 250mm x 210mm x 65mm

Weight 1.3kg (excluding batteries)

Temperature -20°C to +70°C

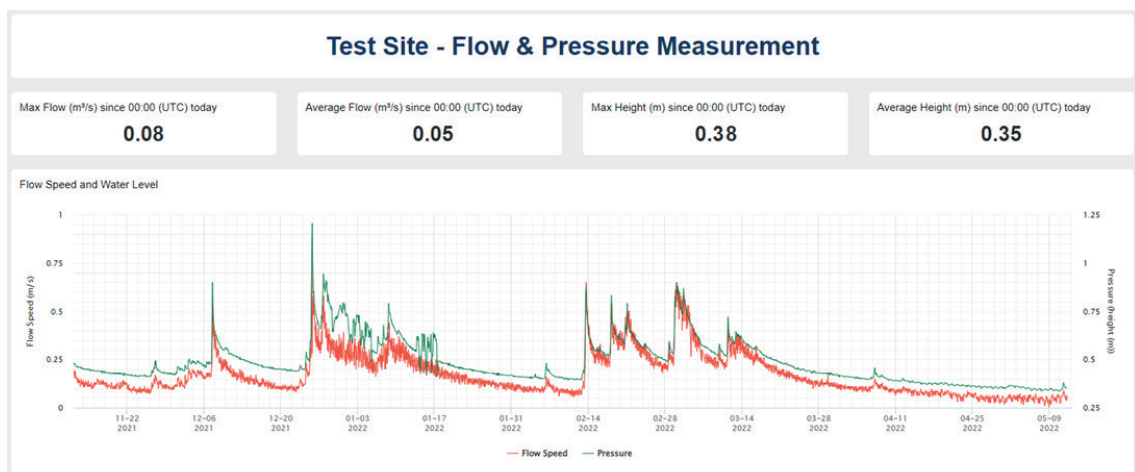
Connectors

- Souriau UTS HiSeal
- TNC

Approvals

- FCC 47 CFR Part 15B -USA
- ICES-3 (B) /NMB-3 (B)-Canada
- CE RE Directive 2014/53/EU-Europe
- RoHS

VALEPORT.CLOUD DATA HOSTING EXAMPLE



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