**CLEAN WATER**

**HWM**

# Multilog 2 with MetriNet
## Water Quality Monitoring System

Multilog 2 with MetriNet combines the market leading telemetry logger with ATi's pioneering multi-parameter system to deliver real-time water quality data.

MetriNet uses a series of smart digital sensors to continually measure a range of water quality parameters including residual chlorine, turbidity, pH, conductivity, dissolved oxygen temperature and more.

### Key Features and Benefits

- **Telemetry:** NBIoT LTE-based cellular communication standard with fallback 2G capability

- **Serial input option:** for connection to digital meters, SonicSens level sensor, Modbus, SDI12, RS232, Badger/Sensus/Neptune serial meter interfaces

- **4 channel logging:** 8 or 16 channels available on request

- **Fast logging:** primary logging to 1 second as standard - 25hz for transient events

- **Alarm:** full alarm functionality

- **Robust:** rugged die cast aluminium case

- **True readings:** true max and min flow and investigation of pressure spikes

- **Pulse interval timing:** smooths reading of infrequent pulses

- **External antennas:** support improved signal strength - contact HWM for more information

- **Local data download:** 10 pin military plug connected to laptop or desktop PC

- **Fully waterproof:** the IP68 rating has been tested at 10m depth over a 24 hour period

- **Interchangeable M-nodes:** wide variety of water quality parameters available

- **Sensors connected in series:** can be used in closed bypass arrangement to completely eliminate water loss

- **Ultra low-powered:** M-nodes run autonomously for years on small batteries

- **Multiple sampling rates:** user-selectable to minimise power consumption

### Applications

Multilog 2 is a highly advanced and versatile multi-channel data logger designed to monitor any combination of digital and analogue signals.

Multilog 2 transmits data through an integral modem with GPRS/2G, 4G, LTE-M (Cat-1) and other NBIoT cellular options available.

As well as a wide variety of water quality parameters, the combination of Multilog 2 and MetriNet has the capability to measure pressure, flow and pressure transient.

At the heart of the MetriNet system are ATi's new M-nodes series of smart digital sensors. M-nodes are connected to the water supply using a purpose designed flow cell arrangement and can operate up to pressures 6 bar.

**MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL**

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## Input Options

| | |
|---|---|
| Digital | Uni- or bi-directional pulse<br>Up to 64 pulses per second |
| Analogue | Internal Pressure Transducer. External pressure. 4-20mA (optional).<br>0-20 bar / 0-200 meters head / 0-300psig, 0.1% repeatability / please note that the logger is calibrated to 10 bar as standard.<br>(20 bar calibration must be specified at time of order if required)<br>Leak noise, 0-10V, 0-1V, temperature or 4-20 mA variants |
| Serial Input | Proprietary serial interface for SonicSens 2 ultrasonic level monitors and third party devices like Serial Meters using Modbus, SDI12 and RS232 |

## Communication

| | |
|---|---|
| Local | Hi-speed USB for connection to hand held devices, Windows tablets, laptop or desktop PC |
| Internal Cellular Modem | Cellular modem supporting 2G/3G/NBIoT/LTE-M (Cat-1) with SMS backup where available - contact HWM for available options<br><br>GPRS/3G/4G NBIoT can send data down to every 15 minutes, with appropriate battery pack |
| Accelerated dial-in | Dial-in rate is increased if alarm situation is triggered.  Logger can accelerate dial-in at alarm level for multiple applications - including SonicSens 2 Flow, Pressure and other alarmed sensors. |

## M-Nodes

| | |
|---|---|
| Available M-nodes | Free chlorine, total chlorine, pH, turbidity, conductivity, ORP, fluoride, dissolved oxygen, dissolved ozone, chlorine dioxide, peracetic acid, hydrogen peroxide |

## Features

| | |
|---|---|
| Frequency | Variable logger sample rate from 1s to 24hrs (this may affect battery life and communication costs) |
| Logger/Site ID | 7 alphanumeric characters. Readable factory set serial number in firmware |
| Dimensions | 257H x 129W x 77D (mm)<br>10.1" x 5" x 3" |
| Construction | Die-cast aluminium enclosure, powder-coat spray painted |
| Weight | 1.6kg (3.5lb) |
| Operating Temp. | -20 to +60$^{\circ}$C (-5 to +140$^{\circ}$F) |
| Ingress Protection | IP68 submersible |
| Power | Dependent upon the number of sensors connected, call frequency and signal condition. External power connection is available for battery box or mains connection |
| Memory | Standard recording: 2 million readings (optional up to 64 million readings and expandable HC SD card) |
| Fast Logging (secondary channel) | Secondary, fast channel supports sampling up to 25 Hz and record average. minimum, maximum, standard deviation or time interval between pulses (for data smoothing) |
| Pulse Interval Timing | Count and Event logging modes independent for both channels.  Pulse Interval Timing helps to smooth readings (e.g. leakage) in low flows by counting the time between each pulse (event mode). This is available in addition to totalling the pulses (count mode) |
| Alarms | Multiple alarm options including Rate of Change, Profile, Minimum Night Flow and Threshold.  16 alarms per logger.  Can be programmed to auto dial up to 8 telephone numbers on alarm.  Over 16 alarms per logger depending on channel configuration |

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