

# Wireless IP-Capable Datalogger

DATA ACQUISITION | HYDROLOGY | GROUNDWATER | FLOOD | WATER QUALITY

## General Description

The iRIS 270 is the perfect marriage of the proven iRIS design legacy with a future-proof architecture. It is **compact, cost effective, ruggedized, IP-capable and easily configured** - and due to its dual telemetry slots the iRIS 270 extends the telemetry options and the range of pluggable devices.

The **dual telemetry slots support wireless 4G/3G modem, Iridium satellite, ethernet, and RS232/RS485**. They can be used to provide for communication redundancy: for example two cellular modules each with a different SIM card from independent ISP providers or a communications device connected via RS232/RS485 paired with an Iridium satellite module. Devices that will be developed in the future can be added easily.

The iRIS 270's **WiFi hotspot enables access to the device wirelessly** using HyQuest Solution's **free-of-charge iLink software** (Windows, Android). With a max. range of 80 m in clear line of sight (and a strong signal from the connected device), the user can edit settings while reading the staff gauge on the riverbank, doing a stream flow gauging, or sitting in his car in rainy conditions. iLink helps configuring the logger, checking settings and calibrations for QA/QC, performing **real-time diagnostics** to resolve technical issues, and downloading data. The optional HydroTel™ software can be used for remote configuration and data downloading.

## Main Features

### iRIS 270 in short

- Dual-comms option
- Modem: built in 4G with 3G fallback
- Aluminium die-cast housing
- IP67 and optional IP68
- Low power consumption
- Battery operated and solar chargeable
- Up to 50 virtual sensors
- Non-volatile memory
- Local wireless configuration and data download

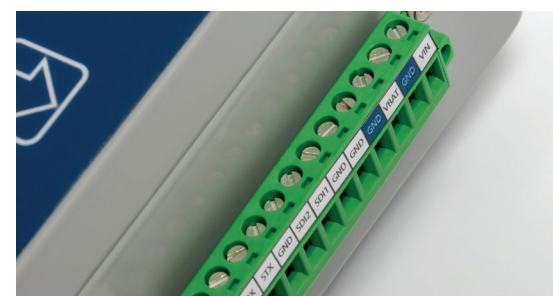
### Further features

- Automatic recognition of connected SDI12 sensors, and self-registration into the datalogger configuration
- Small graphics LCD display and 5 button keypad for viewing general and sensor information, running totals, etc.
- Calibrations, firmware upgrades and service and maintenance records stored in allocated non-volatile memory

## Applications

The iRIS 270 is especially suitable for

- Data Acquisition
- Hydrometric Stations
- Automatic Weather Stations
- Environmental Monitoring
- Agrometeorological Monitoring



## Technical Specifications

### Digital Input/Output

- 1 digital I/O channel, 1 digital output channel, 2 digital input channels
- Inputs: clean contact to 0 V **or** 3.6-12 V DC referenced to GND
- Outputs: switched 12 V **or** open-drain sinking to 0 V, both limited to 100 mA

### Analogue Input/Output

- 2 analogue inputs: uni-polar, 16 bit resolution, 30 V DC surge-protection
- Input ranges: 0-0.1 V, 0-2.5 V, 0-5 V, 0-30 V
- Internal 100  $\Omega$  sink resistors allow use of input current (0/4-20mA).
- 1 analogue (excitation) output for energizing passive instruments (e.g. potentiometer type wind vanes) or alternatively for sending a derived analogue signal to other equipment, selectable as 0-5 V or 4-20 mA

### Communications

- Dual telemetry slots for wireless 4G/3G modem, Iridium satellite, ethernet, RS232/RS485
- Non-isolated 2-wire half-duplex RS232/RS485 sensor port
- SDI12 instrumentation port (two terminals), complies with SDI12 V1.3
- Wi-Fi

### Power Supply

- External 12 V SLA or 11.1 V Li-Ion battery, integral charger 10-30 V DC input, optional: solar panel
- Lowest power mode current 7 mA
- Over voltage and reverse polarity protected with self-resetting fuse
- Voltage of battery and charger input: monitored, logged, displayed, alarmed
- Vin cable length max. 3 m

### Data Storage: Flash Memory

- Total 32 MB, of which 16 MB allocated to logged data/stored images (1,398,101 samples)
- Typical autonomy: 2 parameters logged every 15 minutes and battery voltage logged hourly will give almost 10 years of storage.

### Status LEDs

- 1 LED for overall operational state
- 3 LEDs for status of communication devices (comms1, comms2, Wi-Fi)

### Real-time Clock

- High accuracy, backed by on-board lithium battery to prevent loss of date/time

### Environmental Conditions

- Enclosure: IP67, die-cast aluminium alloy, hard grey paint finish, neoprene gasket
- Operating temperature: -40 °C to +70 °C (-40 °F to +158 °F)
- Storage temperature: -40 °C to +85 °C (-40 °F to +185 °F)

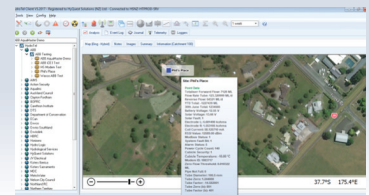
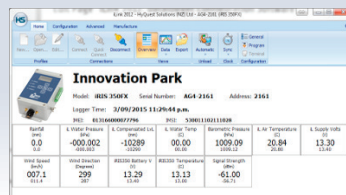
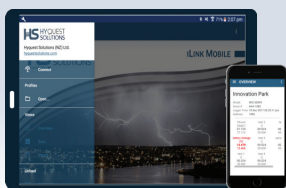
### Size (WxHxD) and Mass

130 x 220 x 75 mm (5.12 in x 8.66 in x 2.95 in); 1.4 kg

### Conformity / Compliance

RoHS, FCC, CE (WEEE pending)

## Software: iLink & HydroTel™



## Reseller

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