WL

HYDROTECHNIK UK
TEST ENGINEERING LTD

WATCHLOG **PRO QUAD**

CELLULAR / WI-FI CLOUD GATEWAY & CONTROLLER FOR REMOTE MONITORING

Designed for harsh industrial environments, dust–proof, waterproof, UV resistant and strong, Watchlog Pro QUAD is a programmable device which allows sensor data to be transmitted to our Watchlog cloud monitoring portal or a custom web server via 4G (SIM card) or Wi–Fi.
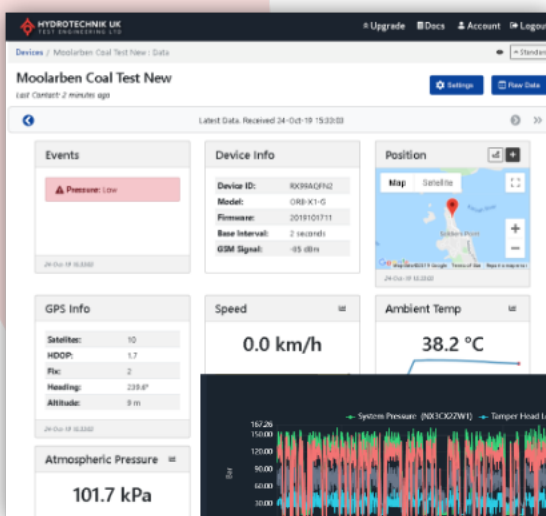
Powered by 10 to 75V DC or solar, the QUAD has GPS position, speed, temperature, angle, vibration, and tamper sensors built–in. External sensors such as pressure, temperature, flow, displacement and other sensors or machine data using common inputs such as 4–20mA, 0–10V, Frequency, Modbus, CANbus and RS232/RS485.

Our powerful cloud platform allows users to monitor and log sensor data on customisable dashboards. Optionally, the Watchlog Pro QUAD can push Sensor data to your own custom or 3rd party platform.

TYPICAL APPLICATIONS

Machine monitoring – create uniform metrics across a fleet.

Machine control – Control the functionality of machines.

Engine diagnostics – monitor for fault codes.

Sensor monitoring – MODBUS, NMEA, 4-20mA, voltage and more.

Safety systems– interlocks, gas concentration, liquid level.

Driver safety -monitor speed, pitch, roll, wind, air quality.

Remote control – write scripts to control attached systems.

Complex sensors – script power control and measurement timing.

Reliability - monitor oil condition, temperatures, pressure and more.

Data consolidation -send data to your preferred endpoint.

Discover more at **www.hydrotechnik.co.uk/watchlog**

WATCHLOG **PRO QUAD**

Features

WiFi +4G LTE4
CAT–M1 for best possible coverage.
CAT–1 for global connectivity

BLUETOOTH
Monitor BLE beacons or
send data to the BLE App

DIRECT TO YOUR SERVER
Send data to the server
of your choice

GPS+GNSS
Accurate position
and speed

NOTIFICATIONS
Receive email and SMS
warnings and alarms

SECURE
Embedded certificates validate
identities, encrypt links and ensure
integrity

SIMPLE SETUP
Use any phone, tablet or computer with
the integrated web server

EXTERNAL ANTENNA
4G and GPS antenna included

FLEXIBLE SENSOR INTERFACE
RS232, RS485, MODBUS, CANBus,
Bluetooth, output, 4–20mA,
pulse and voltage

USER PROGRAMMABLE
Write scripts to manipulate data,
create alerts, control devices,
and create customised payloads

VERSATILE MOUNTING
DIN rail, wall or panel mount

IP67
Waterproof and
Dust proof

BUILT TOUGH
UV resistant and strong

CLOUD SERVICES
Use the Watchlog Portal
to view and store data
and configure and update devices

10 –72VDC
Integrated solar regulator
Internal backup battery

INTERNAL SENSORS
Accelerometer for pitch, roll and vibration.
Tamper detection, temperature, and
voltage monitoring

Order Code

Order Code	Network Features
QUAD–C2–W	Wi-Fi
QUAD–C2–G	Wi-Fi, 4G LTE CAT–M1, GNSS
QUAD–C2–H	Wi-Fi, 4G LTE CAT–1, GNSS

IP67 CE RoHS

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Technical Specifications

Power	External supply: 10VDC to 75VDC Solar: typical 12V 10W, with regulator and backup battery internal to the Watchlog Pro QUAD Internal rechargeable backup battery: 3.7V, 1800mAh LiPo Typical current draw (LiPo): 65uA (sleep), 40-70mA (measure), 100mA (Wi-Fi), 120mA (4G LTE)
Configuration	Local via embedded web server Remote via the Watchlog Portal
Edge Processing	Write and deploy JavaScript applications to manipulate data, create combinational alerts, execute local control, or create customised payloads for sending to 3rd party servers.
Internal Sensors	GPS: horizontal accuracy ±5m (<2.5m CEP-50), speed ±1km/h. Time to first fix typically <60s Bluetooth version 4.2 Accelerometer: 3-axis, ±16G. Pitch and roll accuracy ±1o, 100Hz vibration Ambient temperature: -40 to 85oC, accuracy ±1oC Supply, and internal LiPo voltage monitoring Tamper detection through use of internal light sensor Hall effect sensor for magnetic triggering
Multi purpose Inputs/Output	5 multi purpose input outputs **Input** 100Hz sampling with event capture Analog (0-72V), Digital with configurable threshold Frequency, Duty cycle, Pulse counting (up to 10kHz) 4-20mA sink and source (2 and 3 wire devices) **Output** Switch to ground 250mA Switch to input power, 100mA Switch to internal boost, 100mA Boost configurable 5-25V, 100mA
Serial	RS232 (3-wire), RS485 (2-wire) Serial capture or MODBUS RTU Master 2 x CAN Bus: High Speed CAN FD (4Mbps), Line Faults to ±60V
Network	4G LTE CAT-M1 (QUAD-C2-G) / 4G LTE CAT-1 (QUAD-C2-H) SIM card holder for Micro-SIM (internal soldered SIM optional) Wi-Fi (QUAD-C2-W) Endpoint: Watchlog Portal and 3rd party MQTT(S), HTTP(S), UDP servers Data format: JSON or script your own
Mechanical	Dimensions: 147mm wide, 128mm height (including cable gland), 37mm depth External FAKRA GPS and 4G LTE antenna with 3m cable (included) Weight: 400g excluding antenna Enclosure material: UV stabilised glass filled nylon Stainless lid screws, spring mounted and captive Terminal block wire size: 24 (min) to 16 (max) AWG
Environmental	Operating temperature: -40°C to 85°C Water Ingress: IP67