




WATCHLOG PRO QUAD

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

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.

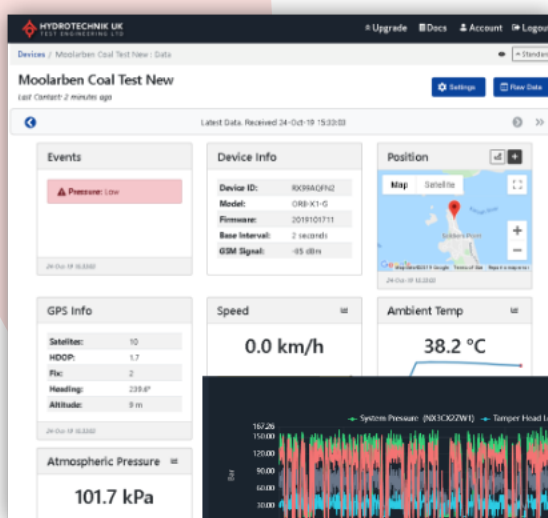
Driver safety – monitor speed, pitch, roll, wind, air quality.

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.





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





WATCHLOG PRO QUAD

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 $\pm 5\text{m}$ ($<2.5\text{m}$ CEP-50), speed $\pm 1\text{km/h}$. Time to first fix typically $<60\text{s}$ Bluetooth version 4.2 Accelerometer: 3-axis, $\pm 16\text{G}$. Pitch and roll accuracy $\pm 1^\circ$, 100Hz vibration Ambient temperature: -40 to 85°C , accuracy $\pm 1^\circ\text{C}$ Supply, and internal LiPo voltage monitoring Tamper detection through use of internal light sensor Hall effect sensor for magnetic triggering	
Multi purpose Inputs/Output	Input	Output
	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)	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 $\pm 60\text{V}$	
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	