

Macquarrie

QUAD-C2 Datasheet



Senquip manufactures rugged, programmable telemetry devices that connect to industrial sensors and system and send the data measured to the Senquip Portal or a server of your choice.

RUGGED: The Senquip QUAD is designed for harsh outdoor environments; up a pole, on a wall or attached to a vehicle.

SENSING: Built in sensors measure GNSS position and speed, temperature, pressure, pitch and roll, vibration, supply and battery voltage, and tamper. Interfaces are provided for RS232, RS485, MODBUS, CAN Bus, Bluetooth, 4-20mA, pulse, frequency, and voltage.

NETWORK: Data measured is transmitted via Wi-Fi or 4G LTE4 and can be delivered to the Senquip Portal or to your own server or SCADA system.

POWER: Power is supplied with solar, or 10V to 75V DC. If a solar panel is used, an internal LiPo battery will keep the device powered during periods without sunlight.

EDGE PROCESSING: Users can write JavaScript to manipulate data, create combinational alerts, execute local control, or create customised payloads for sending to 3rd party servers.

Technical Specification

Power External supply: 10VDC to 75VDC
 Solar: typical 12V 10W, with regulator and backup battery internal to the Senquip 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 webserver
 Remote via the Senquip 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 $\pm 5m$ (<2.5m CEP-50), speed $\pm 1km/h$. Time to first fix typically < 60 sec
 Bluetooth version 4.2
 Accelerometer: 3-axis, $\pm 16G$. Pitch and roll accuracy $\pm 1^\circ$, 100Hz vibration
 Ambient temperature: -40 to 85°C, accuracy $\pm 1^\circ C$
 Ambient pressure: 300 – 11 hPa, accuracy ± 1 hPa
 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

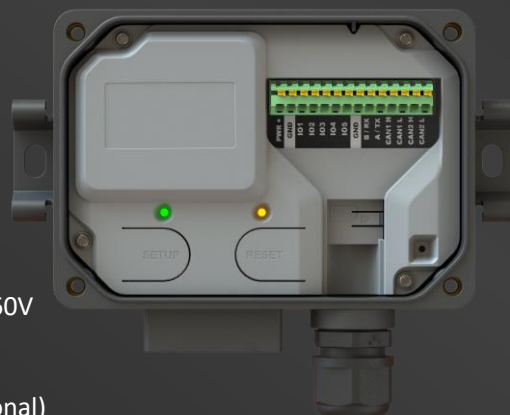
Serial RS232 (3-wire), RS485 (2-wire)
 Serial capture or MODBUS RTU Master
 2 x CAN Bus: High Speed CAN FD (4Mbps), Line Faults to $\pm 60V$

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: Senquip 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
 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

Warranty 1 year from date of purchase



Part Number	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

