

Senquip ORB-C3 Datasheet

Ultimate outdoor reliability.



Monitoring and control of outdoor assets, industrial sensors, and exposed machines. Ideal for power-constrained and environmentally challenging applications.

PURPOSE: Reliable monitoring and control for outdoor, exposed industrial machines and solar-powered sensing nodes.

SENSING: GNSS, pitch/roll, vibration, temperature, analogue, pulse, frequency, 4–20 mA, resistance, RS232, CAN, RS485, configurable termination, Modbus, Bluetooth, configurable outputs, precision voltage output, configurable sensor supply, tamper, system health.

NETWORK: Wi-Fi and 4G LTE to the Senquip Portal, your server, or SCADA. Direct-to-Cell Satellite ready.

POWER: Solar or 10–75 VDC input with long-life, wide-temperature LTO battery for backup and powering external sensors.

EDGE PROCESSING: On-device JavaScript for data conditioning, local control, custom alerts, protocol handling, and payload generation for third-party systems.



Technical Specification

Power	External supply: 10VDC to 75VDC Solar: typical 24V 10W, with regulator and backup battery internal to the Senquip ORB Internal LTO backup battery: 7.2V, 1500mAh , -30°C to 80°C charge and discharge, 5000 cycles Typical current draw (LTO): 45uA (sleep), 40-70mA (measure), 100mA (Wi-Fi), 120mA (4G LTE)
Configuration	Local via embedded webserver or Senquip Connect App for Android and iOS 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 ±5m (<2.5m CEP-50), speed ±1km/h. Time to first fix typically < 60 sec Bluetooth version 4.2 Accelerometer: 3-axis, ±16G. Pitch and roll accuracy ±1°, 100Hz vibration Ambient temperature: -40 to 85°C, accuracy ±1°C Supply, and internal LTO battery monitoring Tamper detection with mechanical switch Hall effect sensor for magnetic triggering
Multi-purpose Inputs/Output	5 multi-purpose input outputs Input : 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) Direct resistance measurement (0-5kΩ) Output: Switch to ground 250mA Switch to input power, 100mA Switch to internal boost, 100mA Boost configurable 5-25V, 100mA Precision output voltage (0-10V)
Serial	RS232 (3-wire), RS485 (2-wire) with configurable termination Serial capture or MODBUS RTU Master CAN Bus: High Speed CAN FD (4Mbps), line Faults to ±60V, configurable termination SDI-12, 1-Wire
Network	Global 4G LTE CAT-1 bis – USA Qualcomm chipset SIM card holder for Nano-SIM, eSIM on request Wi-Fi (2.4GHz) Direct to Cell Satellite ready Endpoint: Senquip Portal and 3rd party MQTT(S), HTTP(S), UDP servers Data format: JSON or custom
Mechanical	Dimensions: 153mm wide, 174mm height (including cable gland), 50mm depth Weight: 400g excluding mounting brackets Enclosure material: UV stabilised glass filled nylon, stainless steel and brass components Ships with stainless pole and wall mounting brackets Terminal block wire size: 24 (min) to 16 (max) AWG
Environmental	Operating temperature: -30°C to 80°C Water Ingress: IP67
Warranty	1 year from date of purchase

Part Number	Network Features
ORB-C3-S	Wi-Fi, 4G LTE-CAT-1, Satellite Ready

