Point Orange IoT

IP68 rated, low powered Remote Telemetry Unit with software configurable I/O

SALES FLYER

sensor   collection   storage   processing   interaction

Point Orange IoT is a compact Logger/RTU device with integrated battery, multi-band 4G modem supporting NB-IoT and Cat-M1 networks, internal and/or external antenna, flexible I/O options, Modbus and SDI-12 master capability and a submersion sensor.

Point Orange IoT provides remote monitoring of up to 5 programmable sensors. It has software programmable I/O functionality for hundreds of configurable combinations and includes support for analogue, digital and counter inputs. Point Orange IoT can also communicate with third-party serial devices over Modbus (using RS232 and RS485) or SDI-12. In addition to the multiple configuration options, Point Orange IoT offers local monitoring of battery voltage, cellular signal strength and ambient temperature.

The RTU offers a plug and play solution that minimises the need for additional site visits, with remote management functions including remote firmware upgrade enabling associated cost-savings. It can store thousands of records in memory for later retrieval by SCADA systems.

Point Orange IoT was designed from the outset as a self-contained, low cost fit-and-forget unit for use in harsh environments in remote locations. Its design exploits mainstream technologies which help to minimise costs whilst at the same time ensuring reliability and a long product life. The latest developments in low power technology are used, allowing Point Orange IoT to derive all the power it needs (including sensor power, if required) from an internal lithium battery pack. This, together with its multi-band NB-IoT/Cat-M1 capability, ensures a long service life with low infrastructure costs.

KEY FEATURES:

- Remote monitoring of up to 5 sensors
- Software configurable I/O; supports AI, CI and DI
- Powers external current loop and active voltage sensors
- Multi-band 4G modem supporting NB-IoT/Cat-M1 networks (configurable)
- Auto switching internal and external antenna
- Lithium battery with an expected life of 5+ years
- IP68 enclosure is submersible to 4 metres for 4 days
- Connects to Medina or DNP3 Masters
- Modbus master communicating over RS232 and RS485
- SDI-12 interface for third party serial devices
- Remote firmware upgrade
- Remote configuration
- Patented integral submersion sensor
- Rich telemetry functionality including dynamic trending/logging and intelligent alarm reporting
- Flexible integrated installation bracket
- Automatic external power source detection

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Technical Specification

Analogue Inputs	Up to 4 channels Type: Active current, passive current, active voltage, passive voltage Current range: 0-20mA, Voltage range: 0-2V Active AI power supply (12V DC, 80mA) Input impedance: $10.2k\Omega$ Accuracy typically: ±0.5% (Max ±2%) Absolute maximum ratings: ±5VDC Resolution: 16-bits
Counter inputs	Up to 4 channels Volt free, Impedance: $50k\Omega$ 32-bit counter support up to 100Hz
Digital inputs	Up to 5 channels Volt free, Impedance: $50k\Omega$
Power	Internal lithium battery pack Optional external battery pack DC power input (5-8V DC)
WAN Protocols	Medina DNP3 (Level 2+ elements of level 3 and 4)
Serial Protocols	Modbus master (RS232, RS485 full and half duplex) SDI-12 master (up to 10 sensors) Mainstream
Memory	256MB flash memory and 512kB static RAM
Comms	Multi-band NB-IoT/ LTE-M modem (Bands 1,2,3,5,8,12,18,19,20,26, 28 & 39) Auto switching internal and external antenna
Local monitoring	Ambient temperature sensor (± 1˚C) Integrated submersion sensor Battery, loop, and external supply voltages (± 2%) Automatic external power source detection and switching Antenna selection and performance
Remote management	Remote firmware upgrade Remote configuration
Dimensions	156mm × 110mm × 112mm (excluding mating cables) 0.6 Kg (fully assembled)
Environmental	Operating temperature -20˚C to +80˚C Relative Humidity up to 95% non-condensing Protection classification: IP68 4m for 4 days

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Metasphere provides robust asset monitoring of time critical remote operations for operators to gain competitive advantage and meet regulatory compliance.