Capture sensor *and* power data with the world's first wireless monitor for energy-intensive systems

21 Inputs

3x Voltage	3x 4-20mA
1x Neutral	2x Digital
4x Current	2x Serial
5x Temperature (or extra Digital inputs)	1x Combined Temperature and Humidity

Modbus RTU (Master) and/or TCP/IP (Master and Slave) functionality is available as an option.

10-Year Battery Life

The **EnCompass** has very low power consumption for nodes and repeaters enabling long battery life. Mains power can be used via a USB adaptor, 24v PSU, or directly from the voltage inputs.

Reliable Transmission

Using an 868MHz mesh network and a protocol designed for superior penetration, low power consumption, high reliability and excellent security ensures unhindered data transfer even in industrial environments.

Tough

The **EnCompass**, with its robust ABS case and component potting, is very resistant to physical and chemical damage, and is well suited to harsh environments. IP67 rated.

Flexible Output Options

Connect seamlessly to/through CSV, SCADA, DCS, LonWorks, BACnet, Modbus, as well as Honeywell Hawk, Trend BMS, eSight and more.

Easy to Update

Upgrading and making configuration changes, locally or over the internet is simple with the GATEWAY hub. Firmware upgrades can be sent wirelessly to all C2i devices.

Rapid Deployment

Installation is quick with the LED range indicator, easy sensor setup and clear configuration pages.

Non-Intrusive

Forget complicated power metering. Using Current Transformers and a local voltage reference point from a standard wall-socket, metering is safe, quick and easy.

This document details the **EnCompass** 868 network node. 3G and LoRa variants are also available.

POWER

Battery	3.6VDC AA or C-Type	See below.
24V PSU	9 - 32VDC	
5V USB Power Adaptor	5VDC	
Mains Input Voltage	Voltage 1-3 range 45VAC – 230VAC. 50/60Hz. Isolated from other I/O.	
Wiring (Mains)	Cage-Clamp terminals rated at 630V, 12A Suitable for cables 0.14-2.5mm^2	
Wiring (Other)	Cage Clamp terminals rated at 250V, 2A Suitable for cables 0.5-1.5mm^2	
Current Consumption	85mA (Transmitting) 20mA (Receiving) 250nA (Sleep Mode)	

BATTERY

Type	Lithium-Thionyl Chloride (Replaceable)
Nominal Voltage	3.6V
Power	2700mAh (AA-type for Nodes) 8500mAh (C-type for Repeaters)
Life	Up to 10 years

PHYSICAL

Dimensions (H x W x D)	235.00 x 154.06 x 73.22 mm
Weight	1.1kg
Enclosure Material	Acrylonitrile Butadiene Styrene (ABS)
Enclosure Rating	IP67
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Thermal Ignition Resistance	HB @ 1.5mm
Approvals	CE

MESH NETWORK

Operating Frequency	868MHz
Communications Range	Up to 1000m Line-of-Sight
Channel Spacing	12.5kHz /25kHz
Receiver Sensitivity	-115dB/m
Maximum Link Budget	135dB/m
Functionality	Bi-directional
Data Rate	2400 Baud
Transmit Power	+20dB/m (100mW)

I/O

Voltage Measurement	3x Voltage, 45 – 230 VAC
Neutral	1x Neutral, 45 – 230 VAC
Current Measurement	4 x Current (CT), 0.333V or 75 mA
Status or Pulsed Count	2x Digital Inputs (Volt Free Contact) *or if selected in place of Temp. inputs* 7x Digital Inputs
Status of Totaliser Output	1x Digital Triac Output
Temperature	5x 10K3A1 Thermistor
4-20mA	3x 4-20 mA (Loop Powered)
Dual Input Interface	1x Temp/RH Input
Serial	1x RS232 1x RS485
Access to User Interface	Local via **Entranet**, or serial connection. Remote *(with siteCONNECT subscription)*

An **Entranet** gateway/receiver is required to operate this network node.