

OBM-E5
Monitoring Gateway

OBM-E5 RS485 to Ethernet
User Manual

Available with or without
Online Monitoring



PRODUCT OVERVIEW

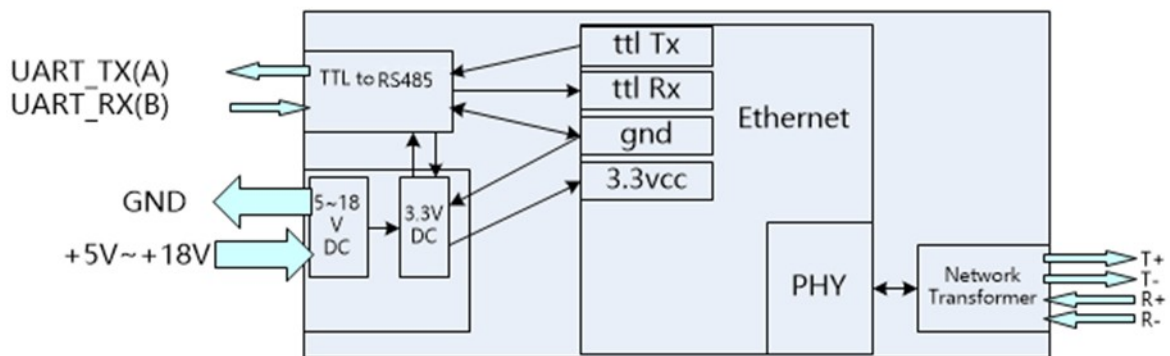
General Description

The Owen Brothers OBM-E5 allows you to remotely monitor your devices locally on your network. With our online monitoring package you can monitor your devices online at www.readmymeter.co.uk

The gateway can connect up to Multiple devices.

Supports Electric, Gas & Water Meters, Temperature Sensors, Fuel Sensors, Environment Sensors and Much More

The Owen Brothers OBM-E5 module is an Ethernet RJ45 interface serial server
Ultra-small size: 61 x 26 x 17.8mm



Owen Brothers OBM-E5 Internal Frame Diagram

1.2. Device Parameters

Table1. OBM-E5 Technical Specifications

Item	Parameters
System Information	
Processor/Frequency	Cortex-M3/96MHz
Flash/SDRAM	2MB/128KB
Operating System	FreeRTOS
Ethernet Port	
Port Number	1
Interface Standard	10/100 Base-T Auto-Negotiation
Transformer	Integrated
Network Protocol	IP, TCP, UDP, DHCP, DNS, HTTP Server/Client, ARP, AutoIP, ICMP, Telnet, NTP, Modbus TCP
Security Protocol	TLS 1.2 AES 128Bit DES3
Serial Port	
Port Number	1 RS485
Data Bits	5,6,7,8
Stop Bit	1,2
Check Bit	None, Even, Odd
Baud Rate	TTL: 600 bps~460800 bps
Flow Control	No Flow Control Software Xon/ Xoff flow control
Software	
Web Pages	Http Web Configuration
Configuration	Web CLI XML import Telnet
Firmware Upgrade	Webpage
Basic Parameter	
Size	61 x 26 x 17.8 mm
Operating Temp.	-40 ~ 85°C
Storage Temp.	-45 ~ 105°C, 5 ~ 95% RH (no condensation)
Input Voltage	5~18VDC
Working Current	~100mA
Power	<400mW

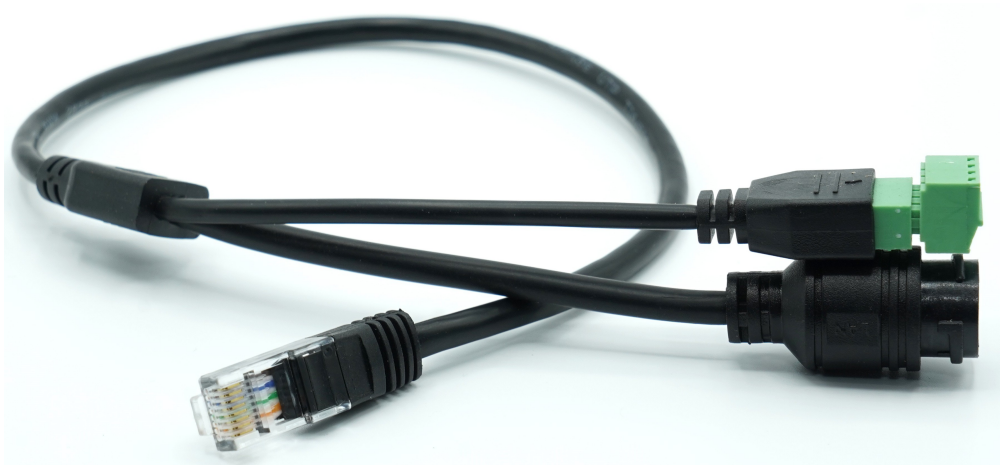
HARDWARE INTRODUCTION

Owen Brothers OBM-E5 is a Ethernet solution for serial device networking. Data transmission via Ethernet makes product integration very easy. This product meets EMC Class B security level and can pass relevant certification tests in various countries.

APPEARANCE

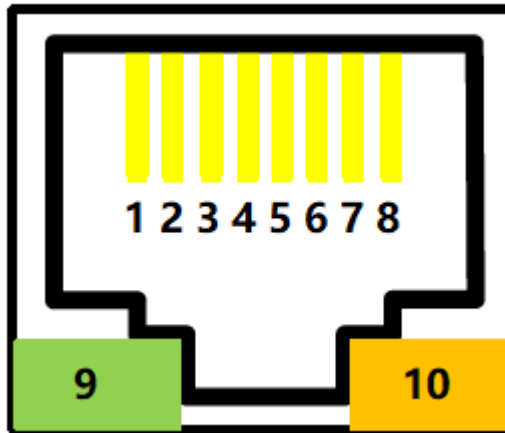


OBM-E5 Appearance



OBM-E5 Ethernet Adapter

Owen Brothers OBM-E5 Pin Definition



Owen Brothers OBM-E5 RJ45 Interface Pin

Owen Brothers OBM-E5 Interface Definition

Pin	Description	Net Name	Signal Type	Comment
1	Ethernet TX+	TX+	O	Connect to Standard Ethernet RJ45 PIN1
2	Ethernet TX-	TX-	O	Connect to Standard Ethernet RJ45 PIN2
3	Ethernet RX+	RX+	I	Connect to Standard Ethernet RJ45 PIN3
4	Ethernet RX-	RX-	I	Connect to Standard Ethernet RJ45 PIN6
5	UART1_TXD	RS485_A+	IO	RS485 A+
6	UART1_RXD	RS485_B-	IO	RS485 B-
7	Power VCC	VCC	Power	5 ~ 18VDC
8	Power GND	GND	Power	
9	Green LED Net Status	Net	O	On: Bootup OK. 0.3s Off -> 3s On: Ethernet connection is OK. 0.3s Off -> 0.3s On: No Ethernet connection.
10	Amber LED Data Transfer	Active	O	Off: No data transfer 0.3s Off -> 0.9s On: UART TX Output 0.3s Off -> 0.3s On: UART RX Receive On: UART bidirection.

<Notes>

I — Input; O — Output; I/O: Digital I/O; Power—Power Supply

RS485

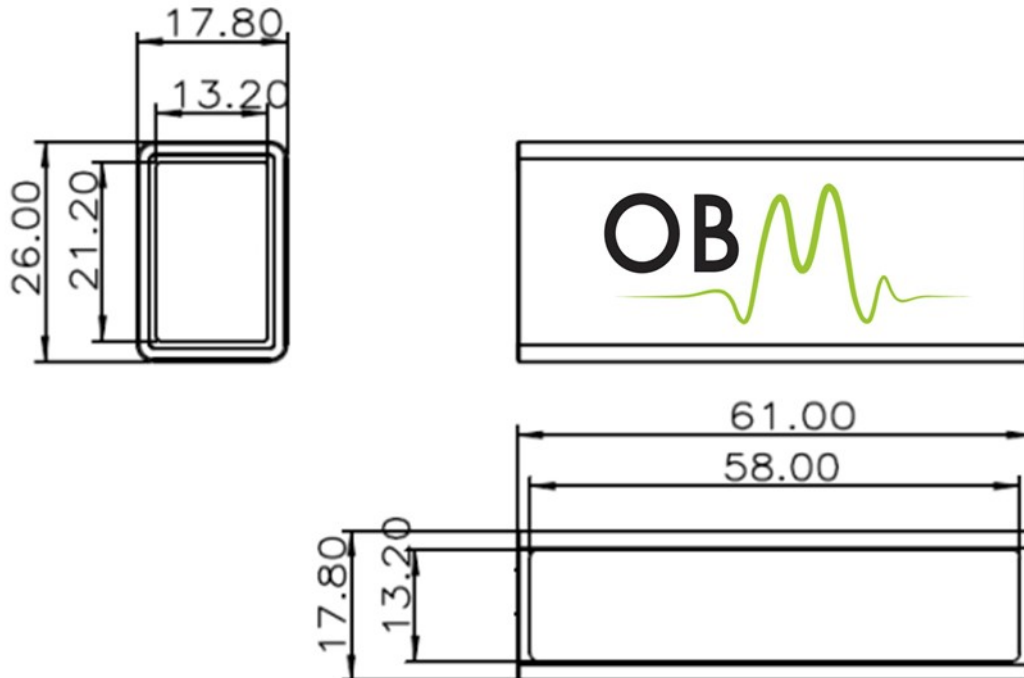
RS485 uses two wire links. A(DATA+), B(DATA-). Connect A(+) to A(+), B(-) to B(-) for communication. Add 120Ohm terminal resistor for over cable over 300 meters in length.

Default Communication Settings

Baud Rate: 9600
Parity: None
Data Bits: 8
Stop Bits: 1

Mechanical Size

The dimensions of Owen Brothers OBM-E5 are defined as following pictures(mm):



Owen Brothers OBM-E5 Mechanical Size

Online Monitoring

The OBM-E5 Gateway creates a secure connection to our dedicated secure servers

High Performance Secure Servers:

We operate the latest range of Dell PowerEdge servers which are renowned for quality, performance and data centre efficiency.

All traffic passes through Cisco equipment, including Anomaly Detection Systems (ADS), Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS).

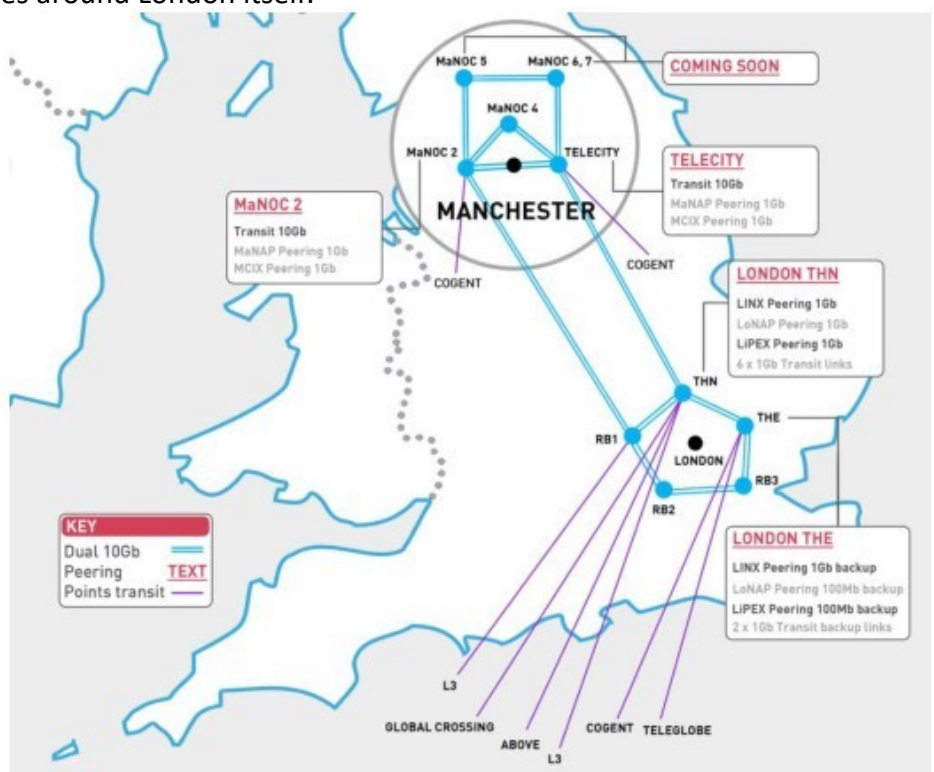
100% Carbon Neutral Hosting

Owen Brothers Metering UK Limited is proud to be working with the 1st hosting provider to be 100% carbon neutral under BSI PAS 2060.

The emissions produced by our servers are offset by renewable energy projects that reduce the use of fossil fuels. These projects are verified by The Voluntary Carbon Standard.

UK Based Data Centres

Our data centres are located in multiple locations through the North West of England and London which are connected by a 10GB rings with another dual fibre ring connecting five data centres around London itself.



Online Monitoring

Dashboards:

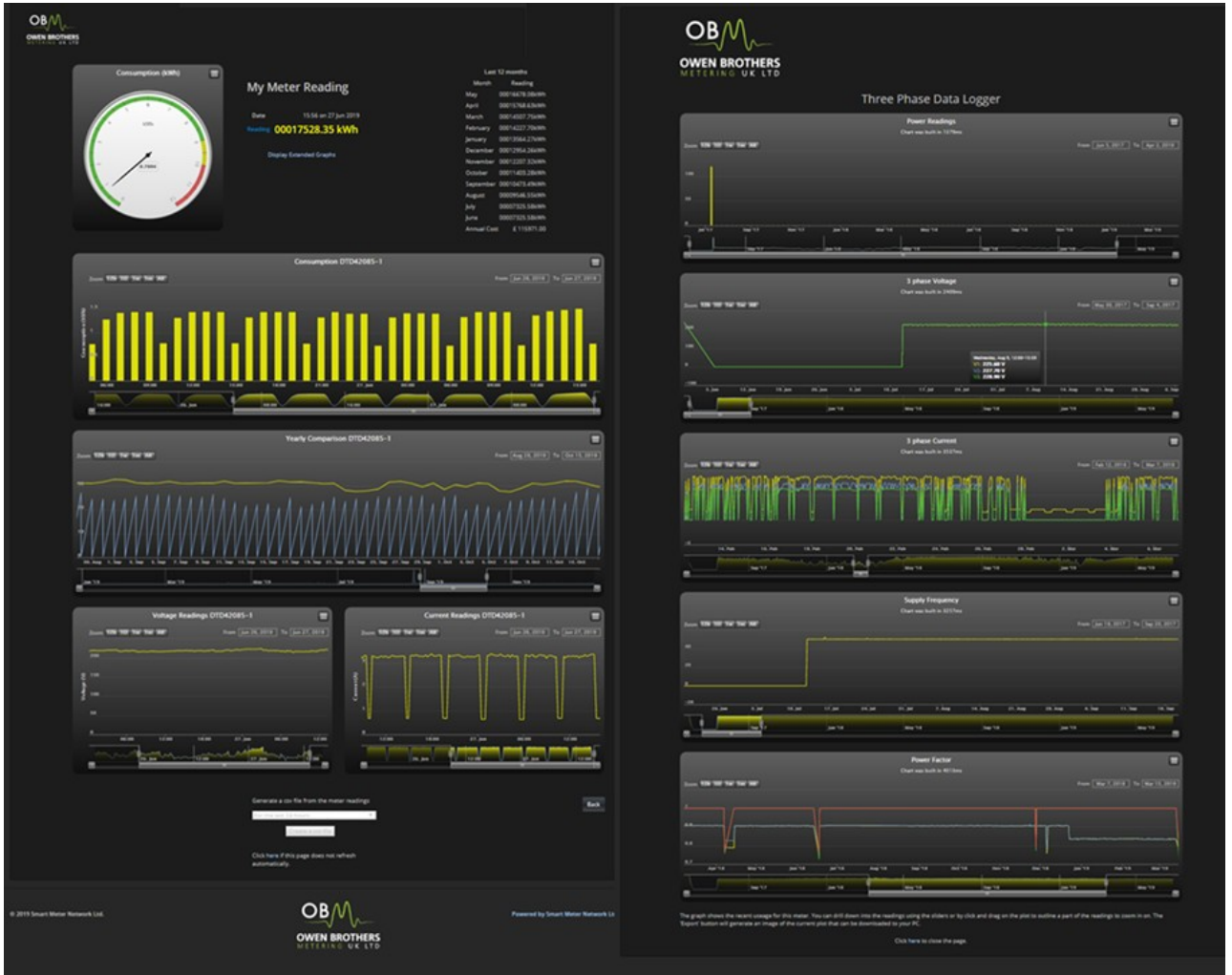
We provide customised dashboards to suit your monitoring needs.
Graphical display provides easy reading at a glance.
Raw Data can be downloaded in CSV or Excel formats.

Connect Multiple Devices to 1 OBM-E5 RS485 Gateway.

Dashboard Examples:

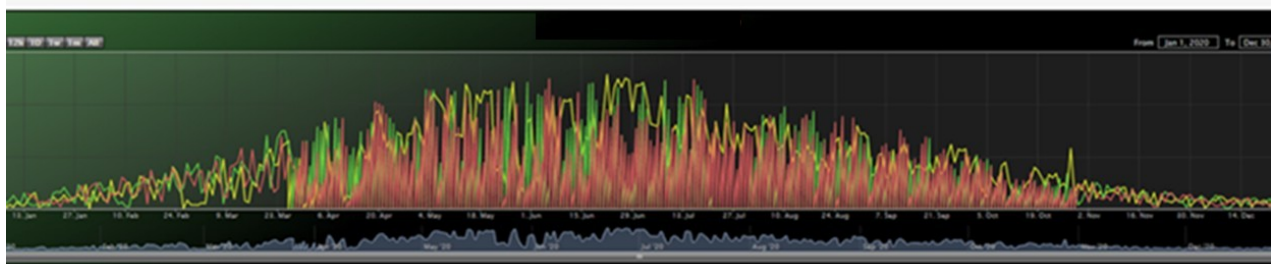
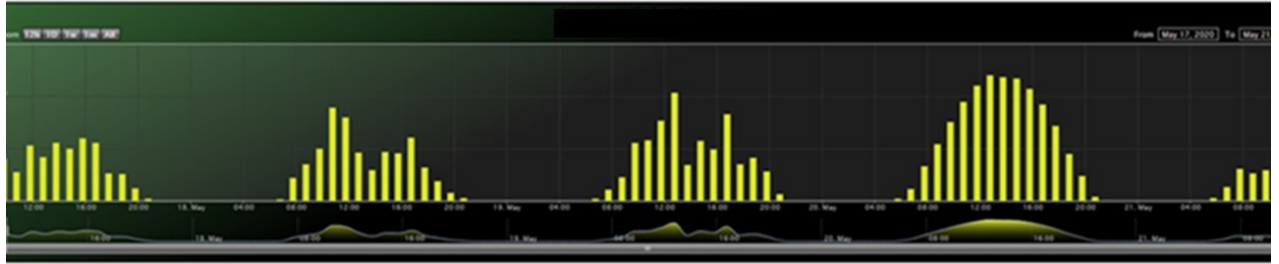
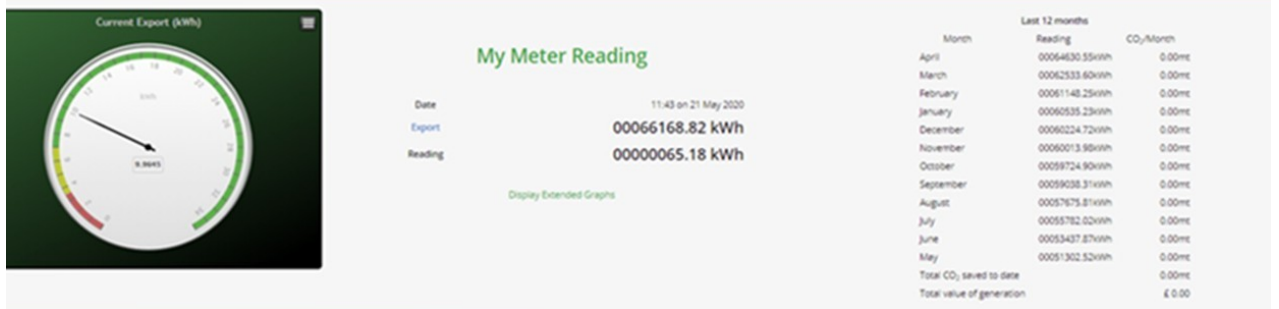


Owen Brothers OBM-E5



ReadMyMeter

Home News About Contact Readings Our Store Edit News Site Admin Change My Password Logout (Owen Brothers)



Device Compatibility:

The OBM-E5 RS485 Gateway is compatible with most RS485 Modbus devices and meters.



Pulsed Output Only?

You can connect Electric, Gas or Water Meters etc that have only a pulsed output to the OBM Digital Pulse Counter.



The OBM Digital Pulse Counter measures pulses emitted from meters and shows the count on the display. This can be connected to the OBM-E5 Gateway to make the readings available online.





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