OBM-G5
Monitoring Gateway

OBM-G5 RS485 to GPRS

Online Monitoring Included!

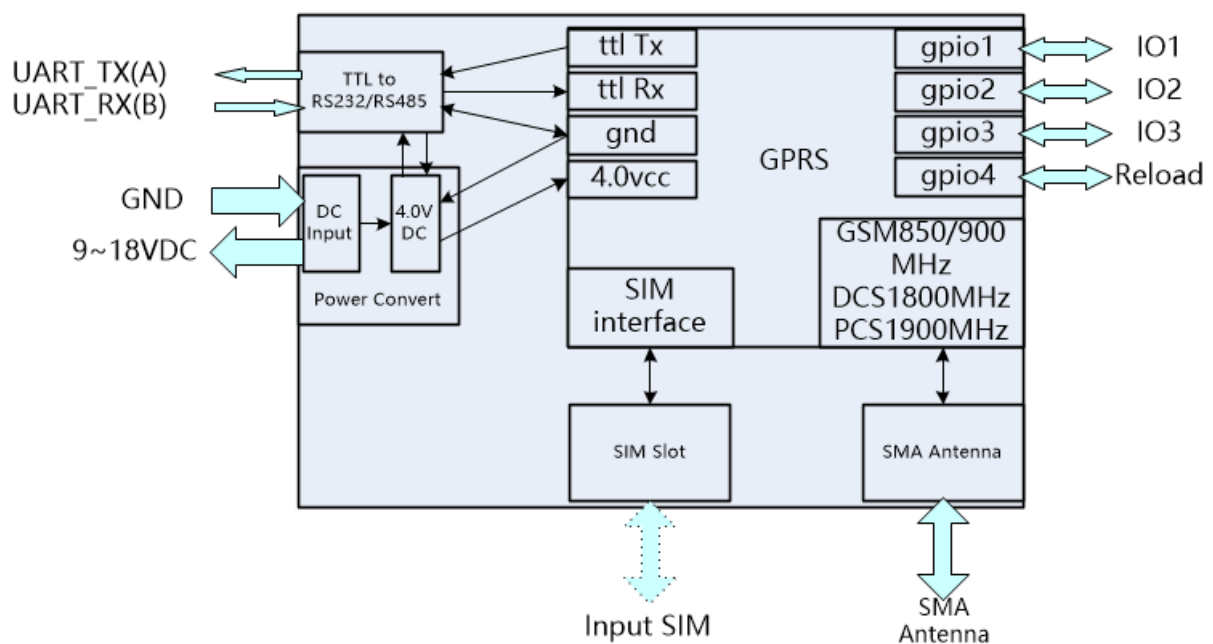# User Manual

V 1.0

PRODUCT OVERVIEW

General Description

The Owen Brothers OBM-G5 allows you to remotely monitor your devices online.
The gateway can connect up to 32 devices.
Supports Electric, Gas & Water Meters, Temperature Sensors, Fuel Sensors, Environment Sensors and Much More

The Owen Brothers OBM-G5 module is an Ethernet RJ45 interface serial server
Ultra-small size: 61 x 26 x 17.8mm

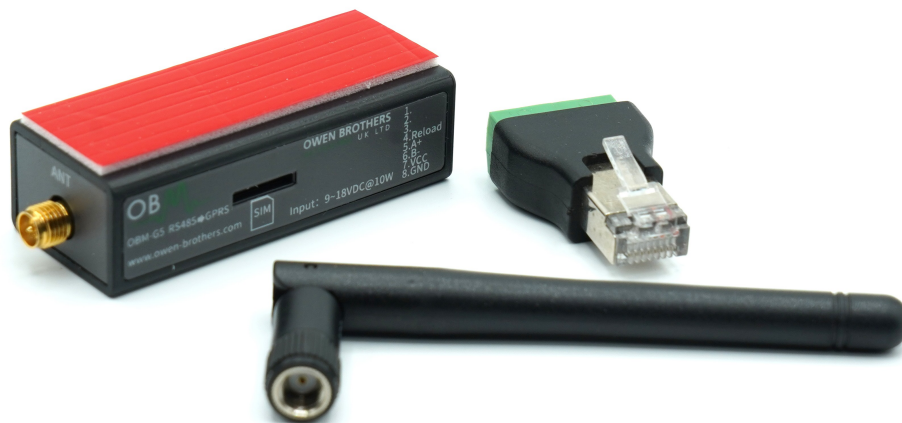Owen Brothers OBM-G5 Internal Frame Diagram

Device Parameters

Owen Brothers OBM-G5 Technical Specifications

Item	Parameter
Wireless Parameter	
GPRS Band	GSM850, EGSM900, DCS1800, PCS1900
GPRS Transmit Power	GSM850/EGSM900: 5dbm ~ 32.5dbm DCS1800/PCS1900: 0dbm ~ 29.5dbm
GPRS Receiving Sensitivity	<-108.5dBm
GPRS Connection Features	GPRS Multi-Slot Level is 10 (default) GPRS Mobile Station Level B
GPRS Date Features	GPRS Data Downlink Transmission: Up to 85.6 kbps GPRS Data Uplink Transmission: Up to 85.6 kbps Encoding Format: CS-1, CS-2, CS-3 and CS-4
GPRS Antenna Interface Characteristic Impedance	50Ω
Serial Port	
Port Number	1
Interface Standard	RS485
Data Bits	7, 8
Stop Bits	1, 2
Check Bit	None，Even，Odd
Baud Rate	TTL：1200 bps~460800 bps，
Flow Control	No Flow Control Half Flow Control(RS485)
Basic Parameter	
SIM Card Interface	Support Nano-SIM Card: 1.8V, 3V
Working Temp	-40°C ~ 85°C
Storage Temp	-45°C ~ 90°C
Input Voltage	9V ~ 18VDC
Start 20s Average Current	61mA
Networked Standby Average Current	22mA
100 bytes/10 Seconds to Send Data Average Current	57mA
100 bytes/5 Seconds to Send Data Average Current	91mA
100 bytes/2 Seconds to Send Data Average Current	233mA
Peak Current	2A
Size	61 x 26 x 17.8mm

HARDWARE INTRODUCTION

Owen Brothers OBM-G5 is a GPRS solution for serial device networking. Data transmission via GPRS makes product integration very easy. This product meets EMC Class B security level and can pass relevant certification tests in various countries.
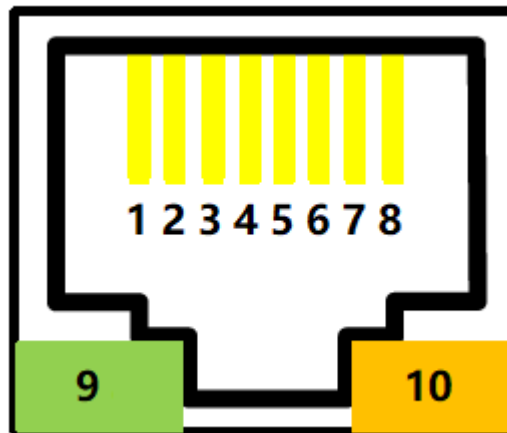
APPEARANCE

Owen Brothers OBM-G5 with standard aerial

Owen Brothers OBM-G5 with extended aerial

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Owen Brothers OBM-G5 Pin Definition

Owen Brothers OBM-G5 RJ45 Interface Pin

Owen Brothers OBM-G5 Interface Definition

Pin	Description	Net Name	Signal Type	Notes
1	GPIO	GPIO	IO	Reserved
2	GPIO	GPIO	IO	Reserved
3	GPIO	GPIO	IO	Reserved
4	Restore to Factory	nReload	I	Default high. Long press this button ("Low">3s) and loose to make the module restore to factory setting.
5	UART_1TX	UART1_TXD	O	RS 485 / A
6	UART_1RX	UART1_RXD	I	RS 485 / B
7	Power VCC	VCC	Power	9 ~ 18VDC
8	Power GND	GND	Power	
9	**Green LED** Net Status	Net	O	Boot On: Power is OK. 2s Off -> 2s On: GPRS Register is OK. 0.1s Off -> 0.1s On: GPRS data is transferring.
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.

RS485

RS485 uses two wire links. A(DATA+), B(DATA-). Connect A(+) to A(+), B(-) to B(-) for communication.
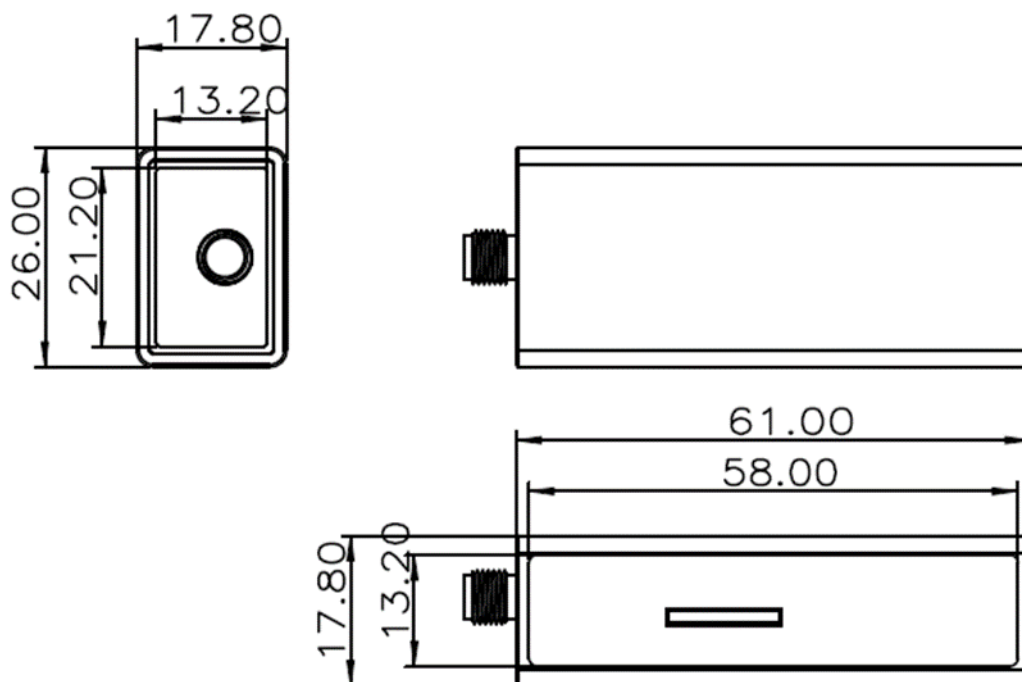Add 120Ohm terminal resistor for over cable over 300 meters in length.
Maximum 32 Devices.

Communication Settings

Baud Rate: 9600

Parity: None

Data Bits: 8

Stop Bits: 1

Mechanical Size

The dimensions of Owen Brothers OBM-G5 are defined as following pictures(mm):

Owen Brothers OBM-G5 Mechanical Size

RJ45 4PIN Connector

OBM-G5 4PIN Connector

Online Monitoring

The OBM-G5 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).
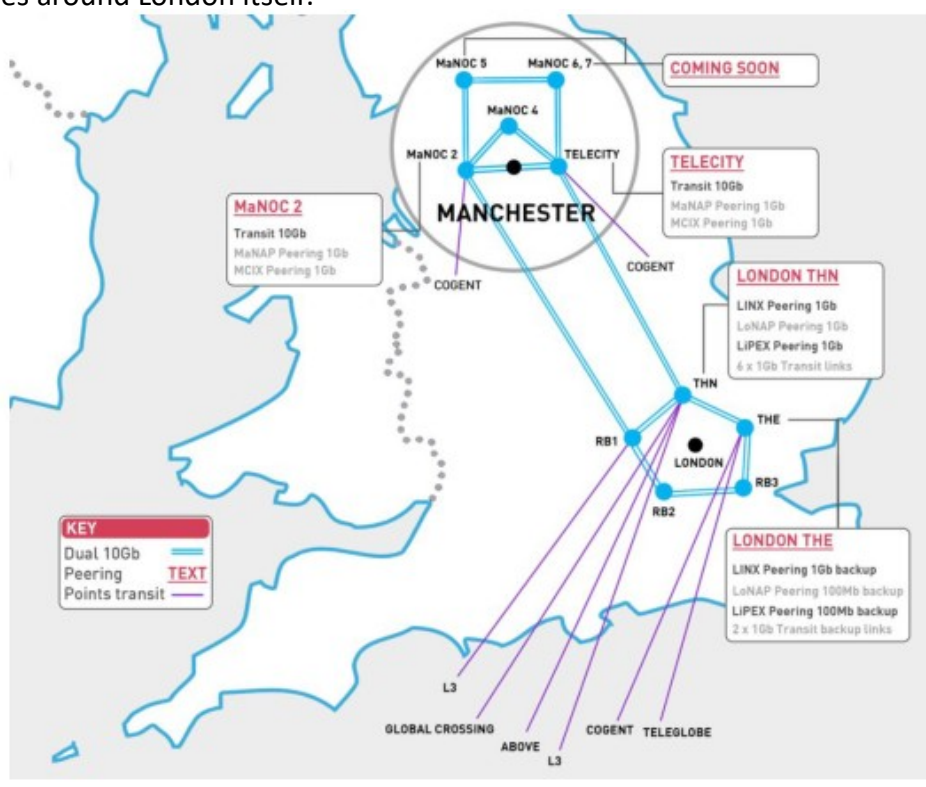
100% Carbon Neutral Hosting

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.
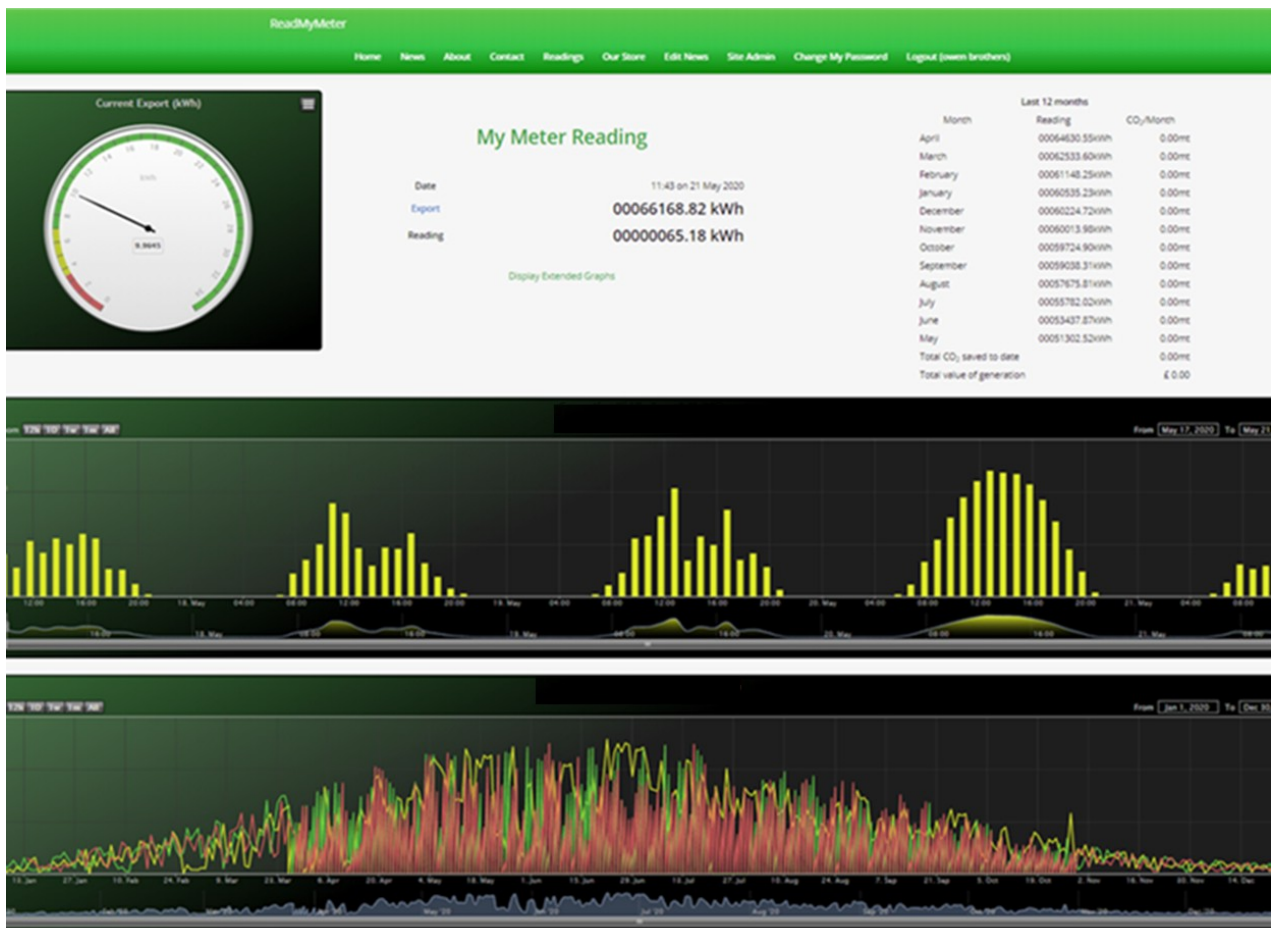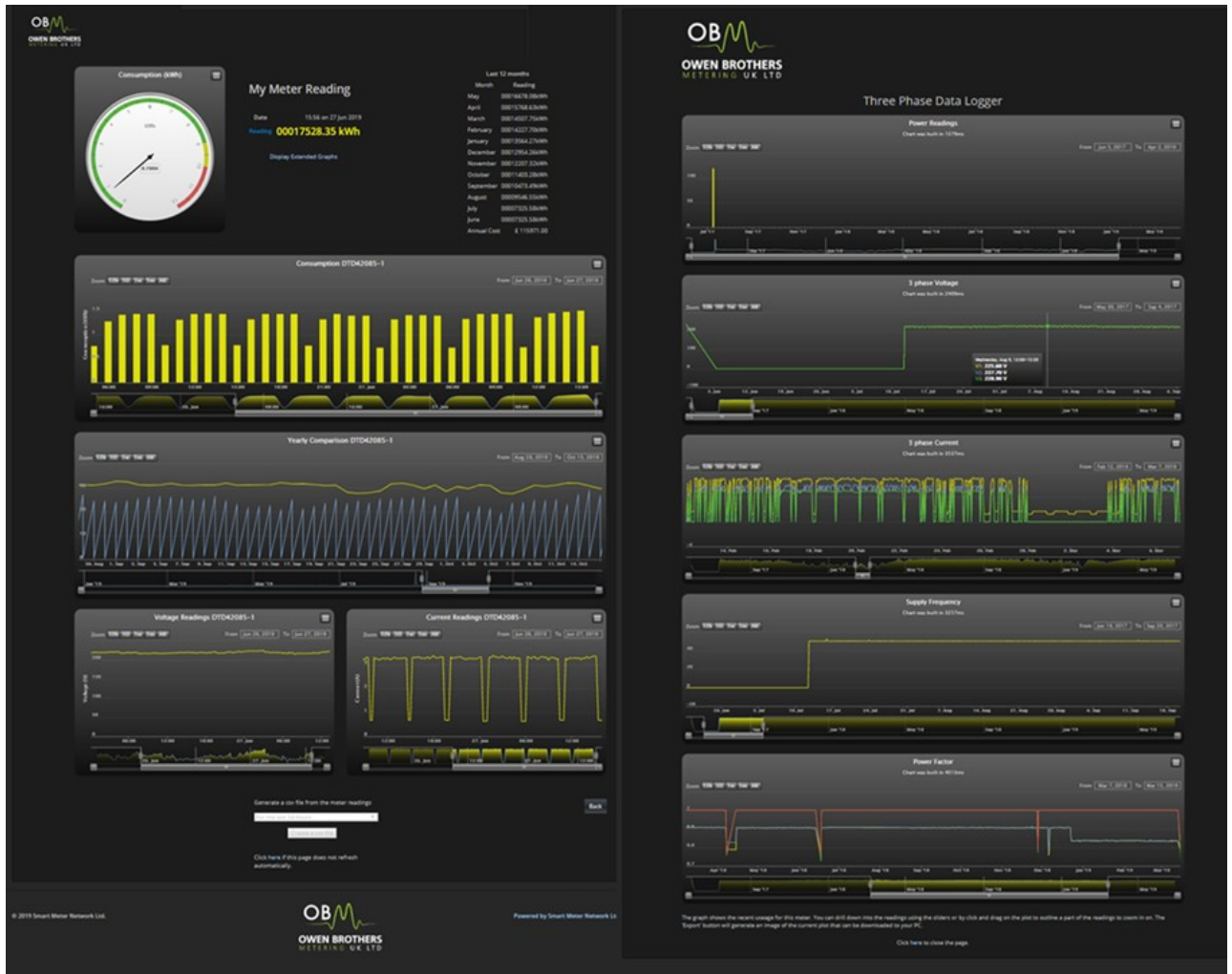Graphical display provides easy reading at a glance.
Raw Data can be downloaded in CSV or Excel formats.

Connect up to 32 Devices to 1 OBM-G5 RS485 Gateway.

Dashboard Examples:

Owen Brothers OBM-G5

Device Compatibility:

The OBM-G5 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-G5 Gateway to make the readings available online.

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