ConnectLinks
NEVER MISS A BEAT

LITE RANGE

MODBUS RTU-TO-TCP BRIDGE LITE

# Your RS-485 meters on SCADA. Nothing on the internet.

It reads up to 32 Modbus RTU devices on two RS-485 buses and serves them to your SCADA or HMI as a Modbus TCP server. No cloud, no radio, no remote administration.

Model **CL-B-M-S-2** 2 × RS-485 · Modbus TCP server




Illustration · front panel and connectors

**2 buses**
independent RS-485 buses, each with its own speed

**32**
Modbus RTU devices, split any way across both buses

**7**
SCADA and HMI clients connected at the same time

**0**
connections to the internet, by design

## From the RS-485 bus to your control room

One box between the field and the SCADA LAN

**YOUR FIELD**
**Energy meters, drives, controllers**
RS-485 bus A · RS-485 bus B

→ both buses at once

**THE BRIDGE**
**Polls every device and answers SCADA from memory**
cached or pass-through
per device

⇢ Ethernet Modbus TCP

**YOUR SCADA**
**SCADA, HMI, historian or PLC on the site LAN**
port 502 · up to 7 clients

**No internet in the box.** It starts no traffic beyond DHCP and time on your LAN, and both can be switched off.

**SCADA sees its health** on unit 255, over the Modbus it already speaks.

## Why it earns its place in the panel

### Your point lists stay valid
Each device is served at its own register addresses, so SCADA tags written for the meter keep working through the bridge.

8 register ranges per device · own addresses

### Two buses, polled together
Put meters on one bus and drives on the other, each at its own speed and parity, and both are read at the same time.

2 × RS-485 · independent baud and parity

### A failed device is never hidden
When a device stops answering, SCADA gets a clear Modbus exception instead of an old value dressed up as a live one.

exception 0x0B by default · last value optional

### One slow device stalls nothing
A silent device costs a single time-out per cycle. Every other device keeps its normal scan rate.

skipped this cycle · retried on the next

### Set up at the panel
Plug in a laptop, add devices, scan and test-read them, and see live status. Nothing to configure from the network.

USB-C · ConnectLinks Configurator (Windows)

### Nothing to attack remotely
No web server, no Telnet, no SSH and no remote set-up path. Writes from SCADA stay refused until you allow them.

no cloud · no radio · signed firmware

**BUILT FOR** • Defence and public sector • Pharma and GMP • Panel builders • Energy metering • SCADA retrofits

## FIELD SIDE

| | |
|---|---|
| RS-485 | 2 independent buses, Modbus RTU master, 2-wire half duplex |
| Devices | Up to 32 in total, split any way across the buses † · addresses 1–247 |
| Serial | 9,600–115,200 bit/s · none, even or odd parity · set per bus |
| Functions | Read 01, 02, 03, 04 · write 05, 06, 15, 16 |
| Scan time | ≈85 ms per transaction at 115,200 bit/s † |

## NETWORK SIDE

| | |
|---|---|
| Server | Modbus TCP server, port 502 (configurable) |
| Clients | 7 at once · a full server refuses a new client and never drops a connected one |
| Idle | Silent connections released after 60 s |
| Ethernet | 10/100 Mbit/s, RJ45 · static IP or DHCP |
| Health | Bridge status on unit 255, input registers 30001–30010 |

## BRIDGING

| | |
|---|---|
| Modes | Cached by default, pass-through per device |
| Ranges | 8 per device, each up to 125 registers or 2,000 coils |
| Memory | 4,096-register shared mirror |
| Unit IDs | Virtual unit IDs mapped to bus and address |
| Writes | Refused as shipped (exception 01) until allowed |

## SET-UP AND SERVICE

| | |
|---|---|
| Configurator | Windows application over USB-C · device scan, test read, live status |
| Firmware | Signed update over USB, never leaves the unit unbootable |
| Clock | From SNTP, a Modbus write or the Configurator |
| Reset | Factory reset by holding the button for 5 s |

## SECURITY

| | |
|---|---|
| Internet | No MQTT, TLS, HTTP or radio; no cloud client of any kind |
| Administration | USB-C Configurator only; no web, Telnet or SSH |
| Network | Modbus TCP has no login: install on a trusted control network |

## HARDWARE

| | |
|---|---|
| Processor | 32-bit Arm Cortex-M4, 80 MHz |
| Indicators | 4 LEDs: system, field, uplink, link · lamp test at power-up |
| Ports | 2 × RS-485, Ethernet RJ45, USB-C, reset button |

## Find the right Lite product for your site

Data from a remote site to your cloud over 4G
**Modbus IoT Gateway Lite — 4G**
CL-G-M-S/C

The site has a network and you want no SIM
**Modbus IoT Gateway Lite — Ethernet**
CL-G-M-S/E

One meter far from mains power and cables
**Modbus IoT Gateway Lite — Battery 4G**
CL-L-M-S/C

Modbus devices in your building management system
**Modbus-to-BACnet Bridge Lite**
CL-B-D-S-2

**ORDER CODE**

### CL-B-M-S-2

Bridge with two RS-485 buses, Ethernet and Configurator software

**EVALUATION UNIT**

Full function for 30 days from the day the clock is set at installation. Make it permanent with a per-unit key, applied at once, no restart.

**LICENSED UNIT**

Permanent from delivery. A factory reset keeps the licence.

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**Tell us about your site**
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† Design target, not yet measured on the finished unit. Preliminary, for evaluation; specifications may change without notice. Full specification and user manual on request.

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