

Modbus RTU <> TCP Converter

讓既有 RS485 / RS232 儀表直接上 SCADA



外觀尺寸 110 × 90 × 26 mm (寬 × 深 × 高)

重點功能：網路變更確認式提交 (IETF RFC 6241 NETCONF §8.4 confirmed-commit 機制)

更改 IP 後，必須在新位址登入並確認才生效；靜態 IP 180 秒、DHCP 300 秒內未確認即自動退回原設定。遠端改網路不怕失聯，不必到現場按重置。

產品特色

- **TCP 同時連線多達 16 條**：每埠最多 16 條 Modbus TCP 連線 (兩埠共 32 條)，多台 SCADA 同時讀寫
- **雙序列埠**：RS232 + RS485，每埠獨立 Modbus TCP 埠，RTU / ASCII 各自設定
- **公平輪流**：所有連線輪流使用匯流排，每台從站分到的讀取量相差不到 3%；滿線時自動回收閒置最久的連線
- **請求排隊逾時**：排隊過久的請求直接回 0x0B，不佔匯流排，多台 SCADA 不會越排越久
- **自動輪詢延遲**：混接真實儀表與 USB-RS485 設備也能穩定讀取
- **標準閘道例外**：0x0A / 0x0B 讓 SCADA 分辨「閘道沒路」與「從站沒回」
- **透明轉送**：功能碼與資料原封不動，從站例外照原樣回傳
- **HTTPS 網頁管理**：即時計數器、設定套用失敗自動退回、繁體中文 / 英文介面

產品規格

外觀尺寸	110 × 90 × 26 mm (寬 × 深 × 高)	重量	95 ± 10 g
電源輸入	DC 9 ~ 24 V	處理器	MediaTek MT7688 (580 MHz)
記憶體	128 MB DDR2 / 32 MB Flash	序列埠	Port 1 = RS232、Port 2 = RS485
序列協定	Modbus RTU / ASCII (每埠設定)	鮑率	1200 – 115200 bps
資料格式	7 / 8、N / E / O、1 / 2	從站位址	Unit ID 1 – 247；0 = 廣播
Modbus TCP	每埠一個 TCP 埠 (502 / 503)	TCP 同時連線	每埠最多 16 條 (共 32 條)
乙太網路	10/100 Mbps RJ45；靜態 IP / DHCP	Wi-Fi	802.11 b/g/n 2.4 GHz · AP 模式
管理	HTTPS 網頁 (TCP 8443)	指示燈	SYS、PWR、RX、TX、LAN
看門狗	硬體看門狗，當機自動重啟	儲存溫度	-25 ~ 80 °C
即時時鐘 RTC	選配：Epson RX-8010，斷電保持時間；不連網路也能記錄正確的事件時間		
實測效能	9600 bps 讀 50 個暫存器時每埠約每秒 2.3 筆；每埠 16 條連線 1 小時零逾時、零斷線		

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Put existing RS485 / RS232 instruments straight onto SCADA



Dimensions 110 × 90 × 26 mm (W × D × H)

Key feature: confirmed commit for network changes (IETF RFC 6241 NETCONF §8.4 confirmed-commit mechanism)

A new IP takes effect only after a login and confirmation at the new address; without confirmation within 180 s (static IP) or 300 s (DHCP) the previous settings return automatically. Change the network remotely without losing the unit or sending someone to press reset.

Features

- **Up to 16 concurrent TCP connections:** up to 16 Modbus TCP connections per serial port (32 across both ports), so many SCADA / HMI clients can read and write at once
- **Two serial ports:** RS232 + RS485, each with its own Modbus TCP port and RTU / ASCII setting
- **Fair turn-taking:** all connections take turns on the bus, every slave gets within 3% of the same read share; the connection idle longest is recycled when full
- **Request queue timeout:** requests queued too long get 0x0B without using the bus, so clients never fall further behind
- **Automatic delay between polls:** stable reads even with real meters and USB-RS485 devices on one bus
- **Standard gateway exceptions:** 0x0A / 0x0B tell SCADA "no path" from "slave did not answer"
- **Transparent forwarding:** function codes and data pass unchanged; slave exceptions are returned as sent
- **HTTPS web management:** live counters, automatic rollback of a failed apply, Traditional Chinese / English

Specifications

Dimensions	110 × 90 × 26 mm (W × D × H)	Weight	95 ± 10 g
Power input	DC 9 ~ 24 V	Processor	MediaTek MT7688 (580 MHz)
Memory	128 MB DDR2 / 32 MB flash	Serial ports	Port 1 = RS232, Port 2 = RS485
Serial protocol	Modbus RTU / ASCII (per port)	Baud rates	1200 – 115200 bps
Data format	7 / 8, N / E / O, 1 / 2	Slave addresses	Unit ID 1 – 247; 0 = broadcast
Modbus TCP	one TCP port per serial port (502 / 503)	TCP connections	up to 16 per port (32 in all)
Ethernet	10/100 Mbps RJ45; static IP / DHCP	Wi-Fi	802.11 b/g/n 2.4 GHz, AP mode
Management	HTTPS web UI (TCP 8443)	LEDs	SYS, PWR, RX, TX, LAN
Watchdog	hardware watchdog, restarts on a hang	Storage temp.	-25 ~ 80 °C
Real-time clock	optional: Epson RX-8010, keeps time through power loss; correct event timestamps without a network		
Measured performance	about 2.3 transactions a second per port at 9600 bps reading 50 registers; 16 connections per port for 1 hour with zero timeouts and zero disconnects		