

TSRS485 Reader-Wi-Fi

Datasheet

The **TSRS485 Reader- Wi-Fi** is Reliable, Flexible and Plug-n-play device to read data over RS485 (Modbus RTU) from any device and transmit that data securely to other devices over Wi-Fi or Ethernet using various IoT protocols (MQTT). Modbus RTU and MQTT protocol handling are integrated into Wi-Fi module for better reliability. This enables this device to use powerful CPU and more memory resources to make Module's software architecture flexible and robust. Most innovative and unique design on Espressif ESP32-Wroom-32D without using any external microcontroller. ESP32-WROOM-32 is a powerful, generic Wi-Fi+BT+BLE MCU module that targets a wide variety of applications, ranging from low-power sensor networks to the most demanding tasks.

For additional information, updated documentation, and a list of accessories, contact us at support@thingslista.com.



Specifications

Wi-Fi Modem

- ESP32-WROOM-32 with 2 Core CPU
- Wi-Fi Protocol: 802.11 b/g/n (802.11n up to 150 Mbps)
- Frequency Range: 2.4 GHz ~ 2.5 GHz
- Bluetooth Protocol: Bluetooth v4.2 BR/EDR and BLE specification
- Bluetooth Radio: NZIF receiver with -97 dBm sensitivity Class-1, class-2 and class-3 transmitter
- Single Ethernet network data transmission port.
- Recommended operating temperature range: -40 °C ~ +85 °C
- GSM phase 2/2+ Class 4 (2 W @ 850/900MHz) Class 1 (1 W @ 1800/1900MHz) compliant
- RF certification: FCC/CE-RED/IC/TELEC/KCC/SRRC/NCC
- Wi-Fi certification: Wi-Fi Alliance
- Bluetooth certification: BQB

Power Requirements

- 9-24VDC/2A

Accessories

Modbus RTU MQTT Gateway
12V/2A Power Adapter

Features

1. Flexible firmware design and architecture
2. Easy to change firmware logic as per client requirement
3. Supports parallel RS485 (Modbus Read/Write RTU) transactions
4. Designed around ESP32-Wroom-32D (Wi-Fi+BT+BLE MCU) module.
5. Data can be send over Wi-Fi or Over Ethernet to other device.
6. Standard JSON payload output
7. Supports up to 800 tags (Modbus registers) in total (Multiple transactions)
8. Supports up to 40 tags (Modbus registers) per transaction (Max Transaction 20.)
9. Configurable data transmission interval
10. Limited data buffering on board to avoid data loss during failover
11. Extensible data buffering using micro SD card for larger data buffering capabilities
12. Robust failover handling.
 - a. Auto reconnect with endpoint.
 - b. Auto reboot if required (no signal or connection fails repeatedly).
13. Externalized configuration parameters
 - a. MQTT Broker URL/IP, Port no, Username & Password,
 - b. RS485 Baud rate for serial port (2400, 4800, 9600, 19200, 38400, 57600, 115200)
14. Secure data transmission over **SSL/TLS**

Warranty

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