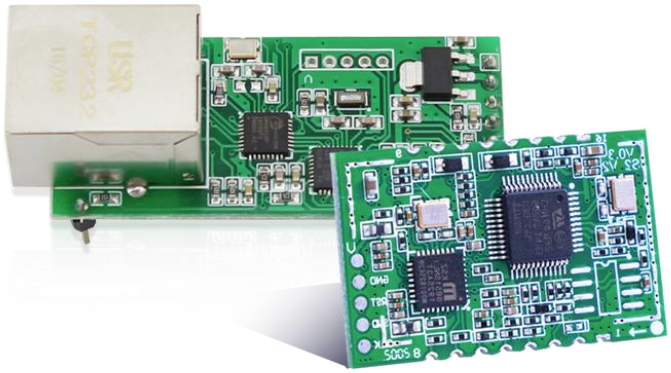
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Communication Expert
of Industrial IOT

Serial to Ethernet Module Specification

USR-TCP232-T2/S2



Introduction

USR-TCP232-T2/S2 is a tiny size serial TTL UART to Ethernet module which can realize data bidirectional transparent transmission between TTL and RJ45 port. Now we have upgraded firmware of the module. In addition to data transparent transmission, it also supports Modbus gateway function like Modbus RTU to Modbus and Modbus Polling. If users have an old version module, you can directly upgrade to experience new functions.

In firmware, the functionality of the two modules is identical. In hardware, the T2 is equipped with Ethernet port, which is packaged with pins. But the S2 module is SMD package without Ethernet port.

These modules can also be applied in RS232/485 by level shift circuit. USR-TCP232-T2/S2 is based on Cortex-M0 core. It has characters of low power, fast speed and high efficiency.

Product Features

- ARM core, Cortex-M0 solution, equipped with deeply optimized TCP/IP protocol stack. It has low latency and strong scalability, stable and reliable.
- Supports custom webpage function to help users improve brand influence.
- Upgrade firmware via network.
- Wide baud rate: 600~460.8 Kbps, multiple parity bit: NONE, Odd, Even, Space, Mark
- Supports Modbus RTU to Modbus TCP protocol conversion and multi-host polling.
- Supports keepalive mechanism to quickly detect the dead connections and reconnect.
- Supports hardware and software watchdog, automatically restarts when the device goes down.
- 10/100Mbps Ethernet port and support Auto MDI/MDIX.
- Supports a wide operating temperature, -25℃~75℃.
- Versatile operation modes: TCP Server, TCP Client, UDP, HTTP client.
- Under TCP Server mode, Client number ranges from 1 to 16; default number is 4.
- Support virtual COM, COM Port Redirector USR-VCOM (windows).
- Easy to config: built-in webpage, config software and AT command to set parameters.

Dimensions

Unit: mm

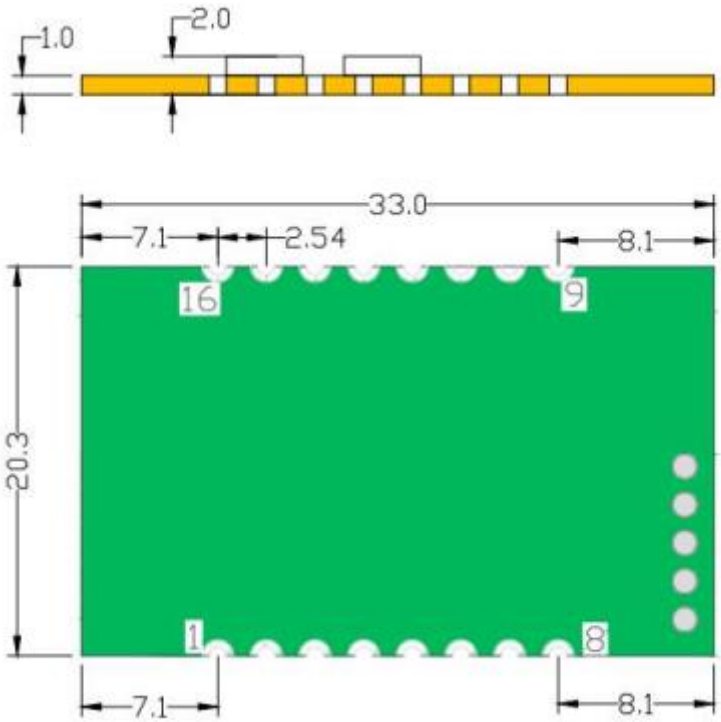


Figure 1 **Dimension of TCP232-S2**

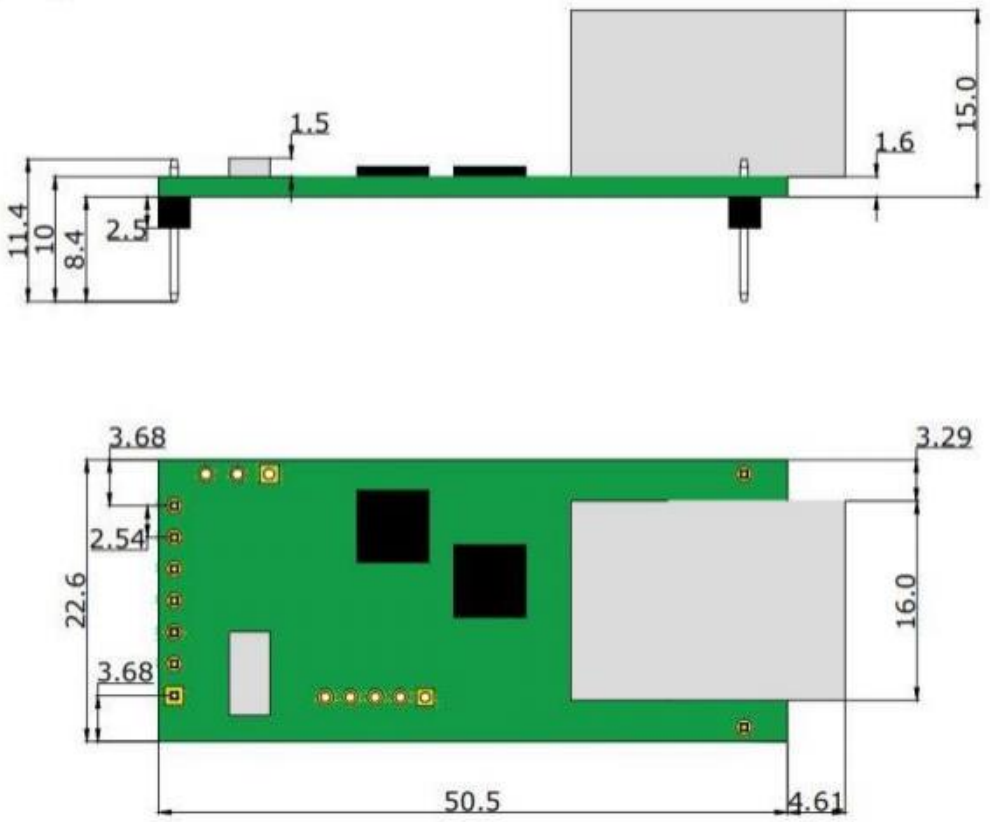


Figure 2 **Dimension of TCP232-T2**

Specifications

	USR-TCP232-T2	USR-TCP232-S2
Processor	ARM Cortex-M0, 48MHz	
Power Supply		
Power Input	VCC: 3.0~3.6V VDD: 5.0~7.0V	DC 3.0~3.6V
Working Current	170mA@5.0V / 170mA@3.3V	150mA@3.3V
Ethernet Port		
Ethernet Port	1 x RJ45, 10/100Mbps, auto MDI/MDIX	PHY signal
Serial Port		
Serial Port	1 x TTL, 3.3V level	
Baud Rate	600~460.8 Kbps	
Data Bits	5,6,7,8	
Stop Bit	1,2	
Parity Bit	None, Odd, Even, Mark, Space	
Serial Packeting	Packeting Time: Four-byte sending time Packeting Length: 400 Bytes	
Serial Packet Cache	Receive: 800 Bytes	
Physical Parameters		
Dimension(L*W*H)	50.5*22.6*15.0(mm)	33.0*20.3*2.0(mm)
Operating Temperature	-25~75℃	
Storage Temperature	-40~105℃	
Operating Humility	5%~95% RH(non-condensing)	
Storage Humility	5%~95% RH(non-condensing)	
Software		

Network Protocol	IP, TCP/UDP, DHCP, RCMP, HTTP, IPv4, DNS
IP Mode	DHCP, STATIC IP
DNS Service	√
Config Method	AT Command, Built-in webpage, Config Software, Config Protocol
Work Mode	TCP Server/TCP Client/UDP Server /UDP Client/Httpd Client
Modbus Gateway	Modbus RTU to Modbus TCP, Multi-host Modbus Polling
User-Defined Webpage	√
TCP Server	Maximum: 16 clients Default: 4 clients
Network Packet Cache	Send: 6K Bytes Receive: 4K Bytes
Additional Features	RFC2217 Similar, Heartbeat Packet, Registration Packet, Index, No Data Restart
Others	
Certificate	CE, FCC, RoHS
Warranty	1 year

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