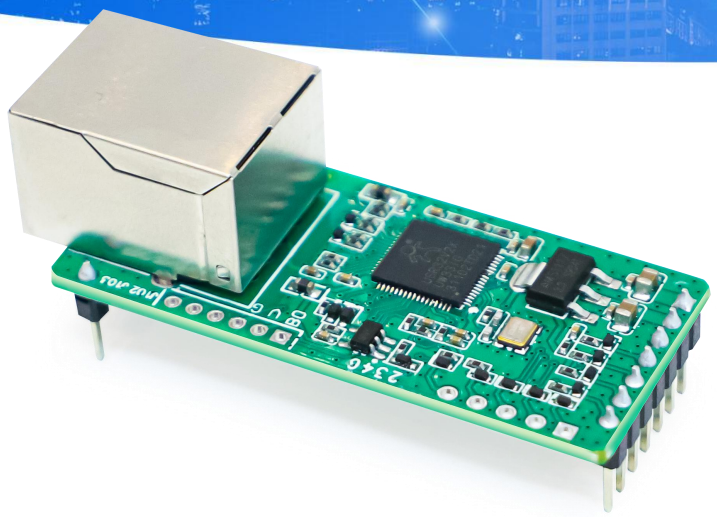
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Communication Expert
of Industrial IOT

TTL to Ethernet Module

USR-TCP232-T0



Introduction

The USR-TCP232-T0 is a tiny size serial TTL UART to Ethernet module which can realize data bidirectional transparent transmission between TTL and RJ45 port. It features an integrated TCP/IP protocol stack.

This product comes with an RJ45 Ethernet port and supports TCP/UDP protocols, as well as DHCP and DNS functionalities. Configuration of product parameters can be conveniently achieved through serial AT commands, network configuration protocols, Config tool, or built-in web page.

Its plug-in package design enables quick integration into on-site applications. Widely used in industrial PLC supervision and control, medical equipment networking monitoring, industrial automation networking monitoring, and other application scenarios.

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Product Features

- Flexible operating modes including TCP Client, TCP Server, UDP Client, UDP Server.
- Compact size,
- Wide range baud rate: 300-921600bps.
- Convenient configuration: AT command, network configuration protocol, built-in web page or config tool.
- TCP Server supports up to 16 client connections, displaying connected IPs and calculating data transmission/reception based on connections.
- Features timeout restart (restart without data) with configurable time settings.
- Custom registration and heartbeat packet mechanisms ensure reliable connections, eliminating dead connections.
- DHCP functionality for automatic IP acquisition; configurable DNS server address for domain name resolution.
- Supports virtual serial ports, compatible with independently developed USR-VCOM software.
- Equipped with hardware watchdog for ultra-high reliability.

Dimensions

Unit: mm

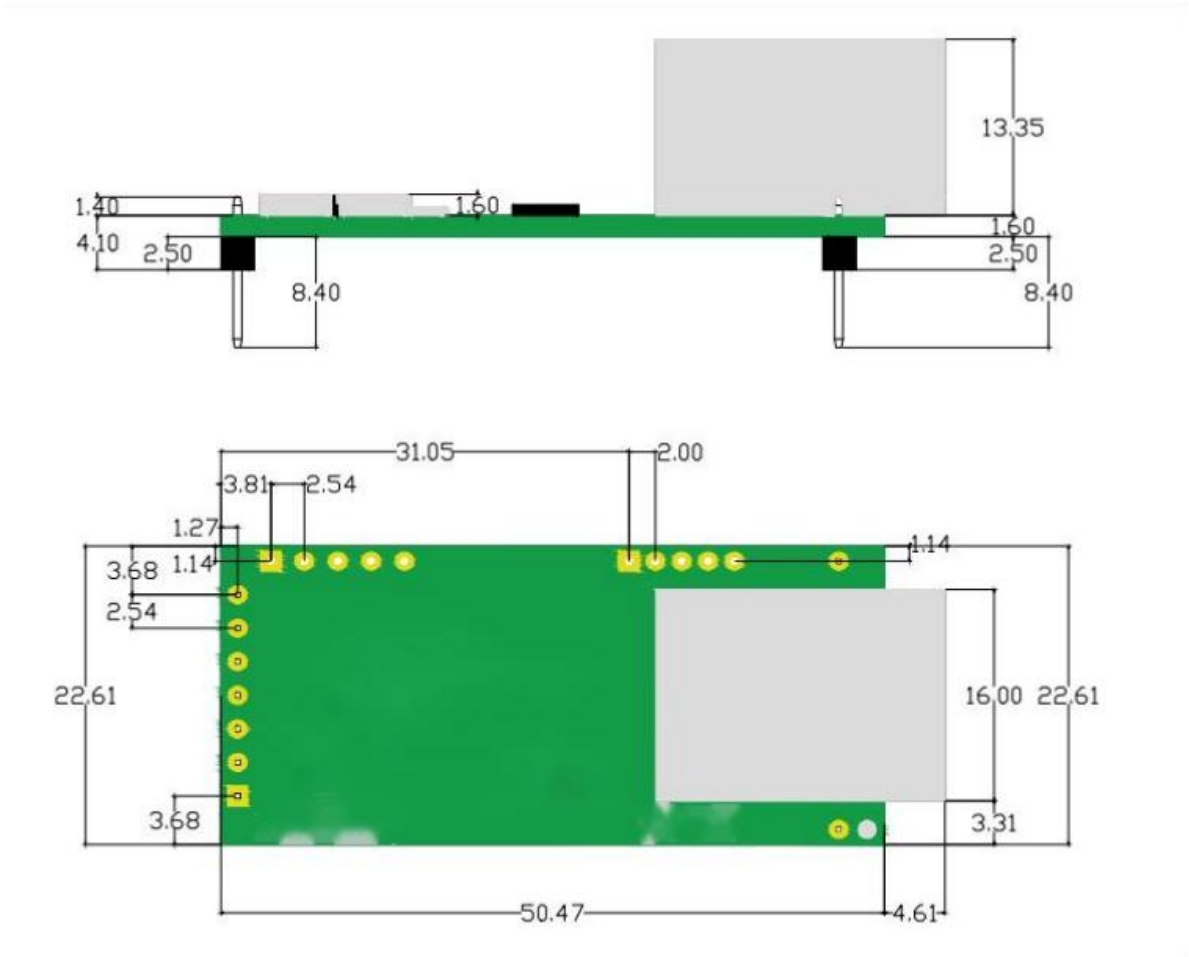


Figure 1 **Dimension of USR-TCP232-T0**

Specifications

Catalog	Parameters	Value
Power	Power Supply	VCC: 3.15～3.45V, 3.3V is commanded VDD: 5.0～7.0V, 5.0V is commanded
	Working Current	100mA@5V/3.3V
Ethernet	Ethernet Port	1*RJ45, 10Mbps
Serial Port	Serial Port	1*TTL, 3.3V
	Baud Rate	300bps~921600bps
	Data Bits	7,8
	Stop Bit	1,2
	Parity Bit	Odd, Even, Mark, Space supported when data bits are 7; None, Odd, Even supported when data bits are 8.
Software Features	Protocols	TCP/UDP/IPV4/ICMP/DHCP/ARP/DNS
	Work Mode	TCP Server, TCP client, UDP server, UDP client
	TCP Server	Up to 16 clients
	IP Address	DHCP, Static
	Registration Packet	√
	Heartbeat Packet	√
	Serial Packet Cache	Receiving:1K Bytes
	Network Packet Cache	Sending: 6K Bytes, receiving: 4K Bytes
	Configuration	Config Tools, AT command, built-in web page
	Packaging mechanism	Packaging Time: 4-byte data transmission time Packaging Length: 400 Bytes
	Additional Features	Link, No Data Restart, UDP data Filtering, PUSR Cloud, Clean cache data
Environmental Characteristic	Operating Temperature	-25℃~+75℃
	Storage Temperature	-40℃~ +85℃
	Operating Humidity	5%~95%(Non-condensing)
	Dimension	50.5*22.6*15mm(L* W* H)
Others	Certificate	RoHS, CE*, WEEE*

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