

UART TTL to Ethernet Converter

SKU: 12161

Part Number: UART TO ETH

Brand: Waveshare

UPC: 614961950214

\$17.99

1
 ADD TO CART

\$16.89	2+
\$16.09	3+
\$15.39	4+

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DESCRIPTION

PACKAGE CONTENT

UART TTL to Ethernet Converter, Easy-to-use, High-speed, Low-power, High-stability, Upgradable

Overview

The **UART TO ETH** module provides an easy way to communicate between UART and Ethernet, it can be configured via web page.

Features

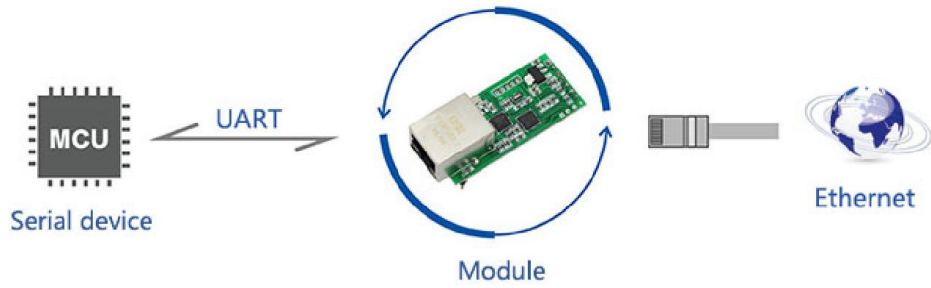
- M0 series 32-bit ARM processor, fast speed, high efficiency
- 10/100M Auto-MDI/MDIX ethernet interface, regardless of cross-over or straight-through cable
- Auto-reconnecting, provides a reliable TCP connection
- Supports time-out reboot (no-data reboot), configurable reboot time
- Flexible serial port data framing, allows kinds of customized packeting
- Baudrate configurable, from 600bps up to 460800bps, supports five parity check options: None, Odd, Even, Mark, Space
- Supports customized heartbeat packets, make sure the connection is truthful
- Supports customized registration packets, detect the connection status, customizable packet header, make the register packets with selected MAC address
- Supports customized web page, allows user to customize the module configuration page
- Supports RFC2217-like protocol, be able to communicate with devices whose serial setting (baudrate, data bit, etc.) may change
- Supports DNS domain name resolution, configurable DNS server
- Supports DHCP, auto-obtained IP or static IP
- Firmware is upgradable via the network
- Restore to factory settings via software and/or hardware
- Comes with default MAC address, which is customizable
- Available working modes: TCP Server, TCP Client, UDP Server, UDP Client, HTTPD Client
- Supported protocols: IP, TCP, UDP, ARP, ICMP, DHCP, DNS, HTTPD Client
- Configurable via web page, AT commands, serial protocol, and network protocol, provides configuration protocol which can be integrated to your own software
- Provided software: module configuration software, TCP/UDP testing tool, VCOM virtual serial port software
- Example code: host computer (socket), VB, C++, Delphi, Android, iOS, etc.

Specification

- Protection: built-in 1.5KV electromagnetic isolation
- Interface: 3.3V TTL (2.54mm pitch pinheader)
- Power supply: 3.3V DC or 5V DC (via different pin)
- Operating current: 150mA (avg)/160mA (max)
- Operating temperature: -25~75°C
- Power consumption: <1W
- Storage condition: -40~105°C, 5~95%RH
- Dimension: 50.5 x 22.6 x 15 (mm)

Application

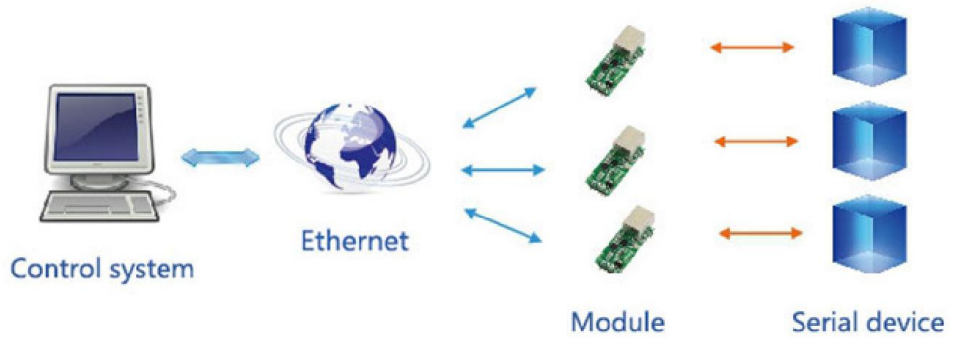
Bi-direction transparent transmission between TTL and wired Ethernet:



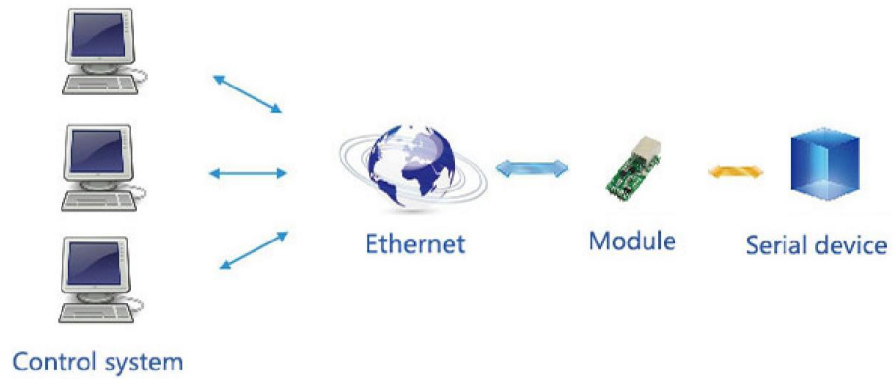
Extend the communication distance for serial devices:



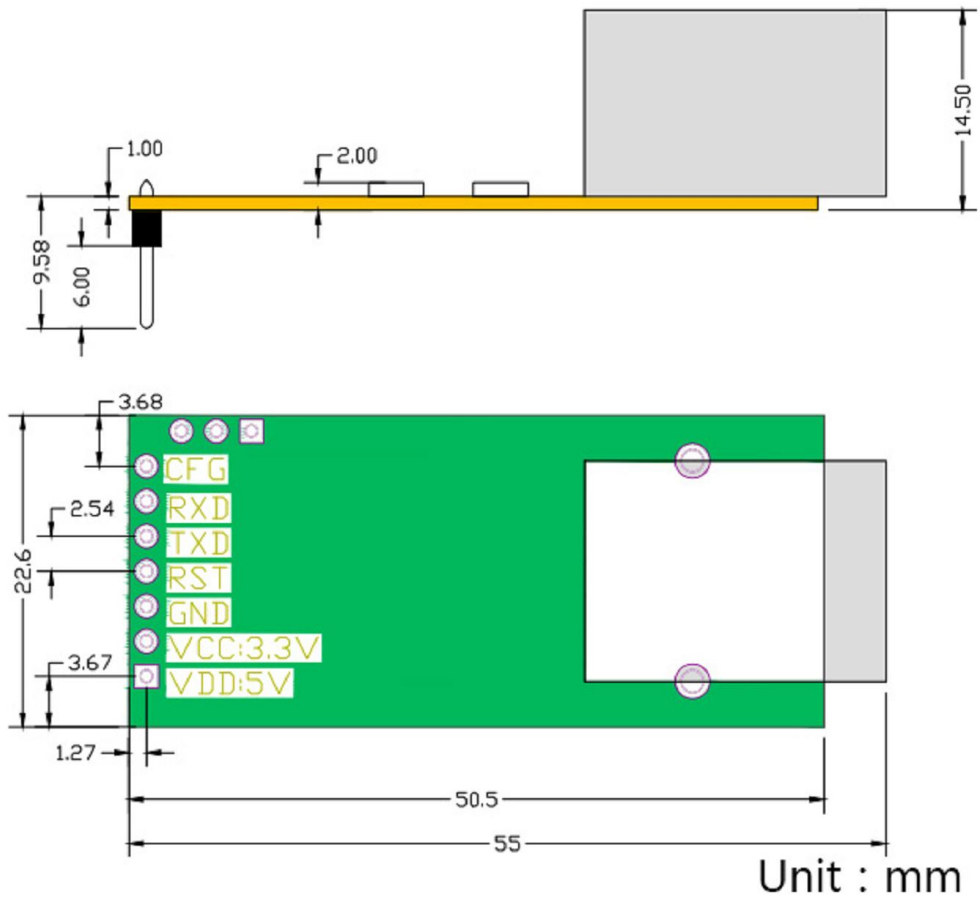
Manage multi serial client devices remotely via one web server:



Manage serial server remotely via multi web clients:



Dimensions



Development Resources

Wiki : www.waveshare.com/wiki/UART_TO_ETH

Selection Guide

COMPARISON	UART TO ETH	RS485 TO ETH	RS232/485 TO ETH
Processor	Cortex-M0	Cortex-M0	Cortex-M4 (up to 120MHz frequency)
Ethernet	RJ45 (10/100Mbps self-negotiation)		
	Protocol: IP, TCP, UDP, ARP, ICMP, DHCP, DNS, HTTPD Client		
	Cache: TX 6Kbyte, RX 4Kbyte		Cache: TX 16Kbyte, RX 16Kbyte
Serial	UART	RS485	RS232+RS485 (allow to work at the same time)
	Baudrate: 600bps~460.8Kbps	Baudrate: 600bps~230.4Kbps	
	Hardware flow: NOT supported		Hardware flow: supported
	Data bit: 5, 6, 7, 8		

	Stop bit: 1, 2		
	Parity bit: None, Even, Odd, Space, Mark		
	Cache: RX 800byte	Cache: TX 2Kbyte, RX 2Kbyte	
	Framing condition: 4 byte time interval, or 400 byte in length	Framing condition: 4 byte time interval, or customizable 0~1460 byte in length	
Features	customized heartbeat packets, customized registration packets, customized webpage, RFC2217-like protocol, KeepAlive, timeout auto reboot, short connection, firmware upgrade via network		
			Modbus gateway, Websocket (webpage to serial)
Working Modes	TCP Server, TCP Client, UDP Server, UDP Client, HTTPD Client		
Client Count	on TCP Server mode, customizable 1~16 Clients		on TCP Server mode, supports 2-ch Socket, 8 Clients per ch
Configuration	Built-in webpage, Host computer config software, Serial commands		
Interface Protection	Power: reverse-proof, ESD protection, anti-surge		
	Ethernet: 1.5KV electromagnetic isolation		
		RS485: 2KV ESD protection, 2.2KΩ pull up/down registers	
		lightning-proof, over-current protection	
Power Supply	3.3V/5V	5~7V	5~36V
Operating Current	150mA@5V	110mA@5V	86.5mA@5V
Temperature	Operating Temperature: -25 ~ 75°C		Operating Temperature: -40 ~ 85°C
	Storage Temperature: -40 ~ 105°C		
Dimensions	50.5mm × 22.6mm × 15mm	70mm × 63.6mm × 25mm	82.8mm × 85.7mm × 25mm