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:
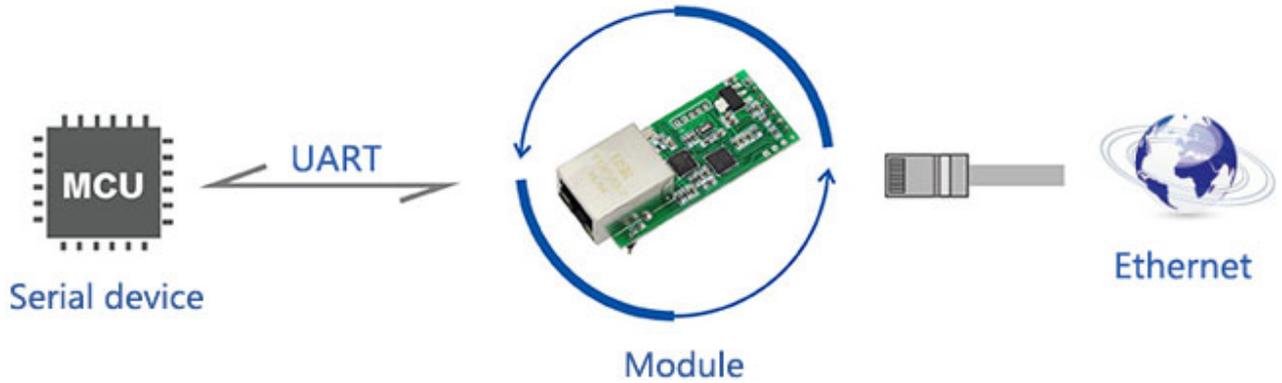
Extend the communication distance for serial devices:

Manage multi serial client devices remotely via one web server:
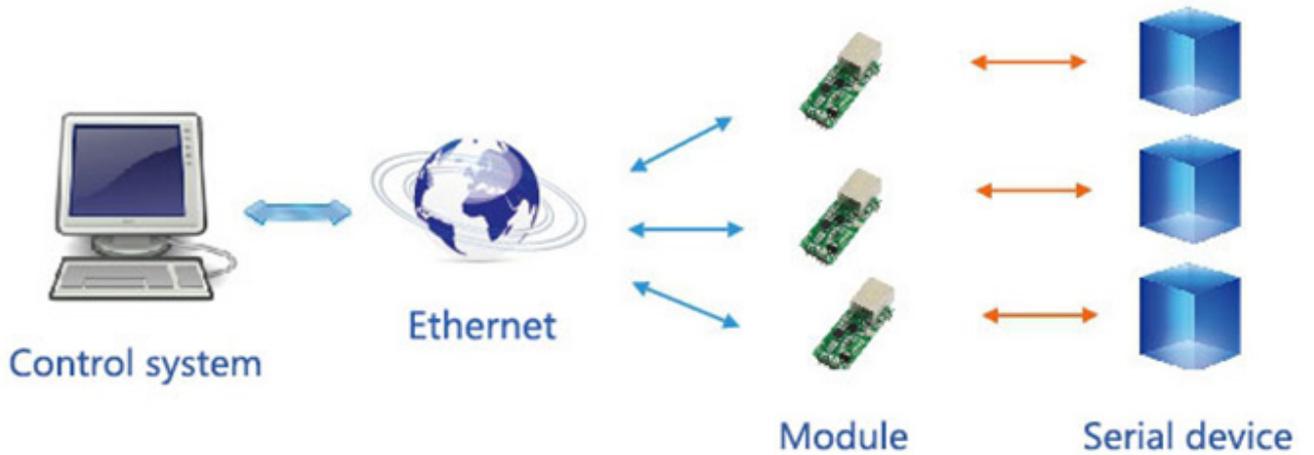
Manage serial server remotely via multi web clients:
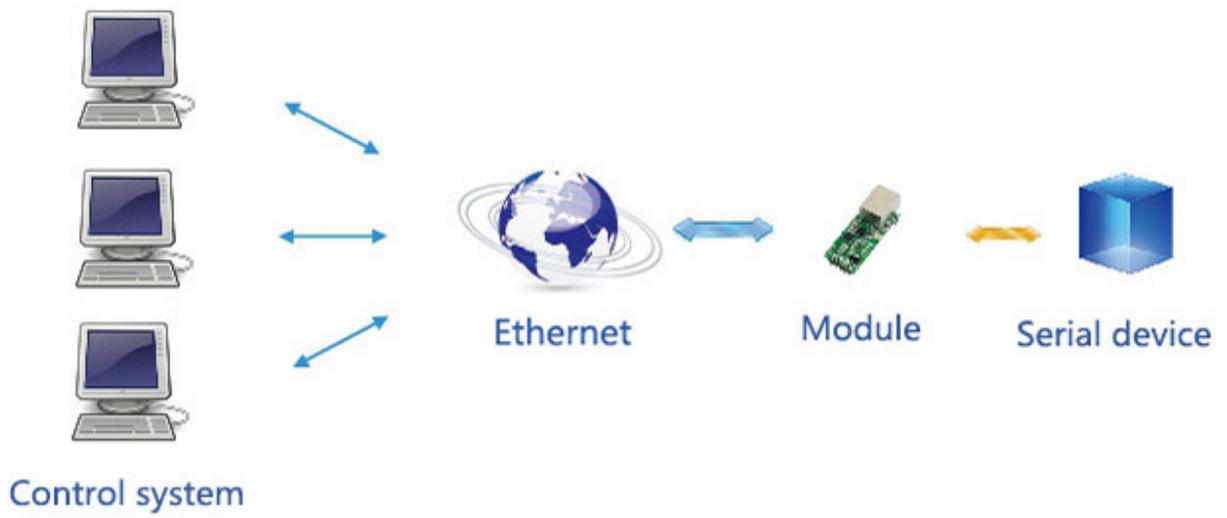
Photos

While providing compatible software functions, there are two different hardware versions due to IC short supply, and they will be **delivered randomly**, we don't know in advance which one will be delivered for your order. Please make sure you don't mind it before placing order.

Version A

Version B

Dimensions

Unit : mm
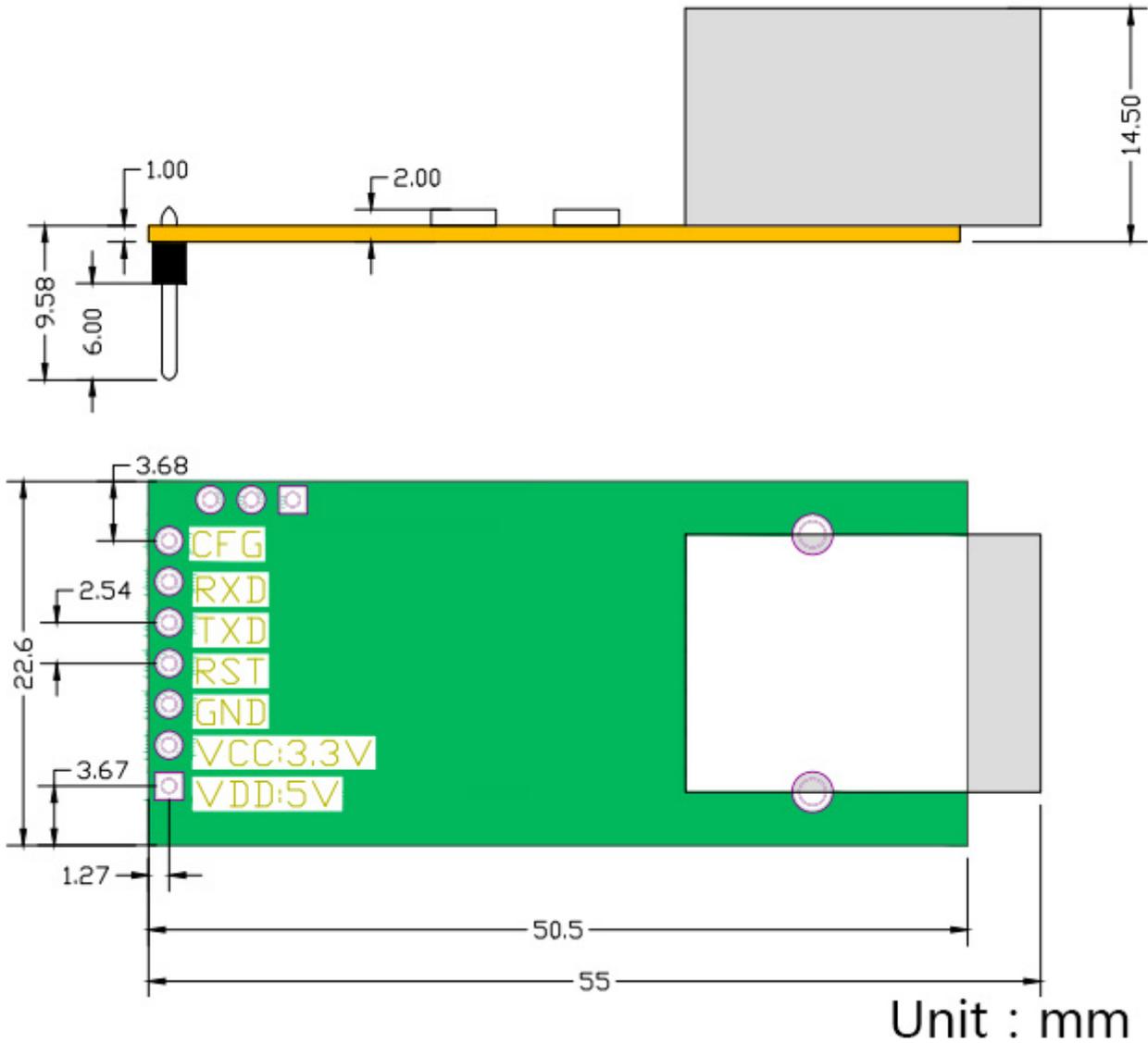
Development Resources

Wiki : www.waveshare.com/wiki/UART_TO_ETH

Selection guide

	RS485 TO ETH	RS485 TO ETH (B)	RS485 TO POE ETH (B)	RS232/485/422 TO POE ETH (B)	RS485 TO WIFI/ETH	RS232/485 TO ETH

ETHERNET					
RJ45 Ethernet	10/100Mbps auto-negotiation				
POE	-		supported		-
WIFI interface	-			802.11b/g/n 2.4GHz	-
UART					
Type	RS485		RS232/485/422	RS485	RS232+RS485 (allows concurrent operation)
Baudrate	600bps~230.4Kbps	300bps ~ 115.2Kbps		300bps ~ 460.8Kbps	600bps~230.4Kbps
Hardware flow	NOT supported				supported
Data bit	5, 6, 7, 8				
Stop bit	1, 2				
Parity bit	None, Even, Odd, Space, Mark				
INTERFACE PROTECTION					
Power supply	reverse-proof, ESD protection, anti-surge				
Ethernet	1.5KV electromagnetic isolation				
RS485	2KV ESD protection, 2.2KΩ pull up/down registers	2KV anti-surge	600W anti-surge, lightningproof, anti-electrostatic 15KV	anti-surge, lightningproof, over-current protection	2KV ESD protection, 2.2KΩ pull up/down registers
Other	-	-	Power isolation, signal isolation protection	-	lightningproof, over-current protection
OPERATING MODE					
Type	TCP Server, TCP Client, UDP Server, UDP Client, etc.				
TCP Server	customizable 1~16 Clients	supports 30 Clients		supports 24 Clients	supports 2-ch Socket, 8 Clients per ch
MISC					

Features	customized heartbeat packets, customized registration packets, customized webpage, RFC2217-like protocol, KeepAlive, timeout auto reboot, short connection, firmware upgrade via network				
	-	Modbus gateway, MQTT/JSON to Modbus		Modbus gateway, MQTT, HTTP Client	Modbus gateway, Websocket (webpage to serial)
Configuration	Built-in webpage, Host computer config software, Serial commands				
Power supply	5~7V	9~24V	6~36V	5~36V	
Operating current	110mA@5V	TBD		127mA@5V	86.5mA@5V
Operating temp.	-25～75℃	-40～85℃			