Serial to WiFi and Ethernet Converter

Model: USR-W610

USR-W610 Serial to WIFI and Ethernet Converter, which can realize bi-directional transparent transmission between RS232/RS485 and WiFi and Ethernet.

- **RS232 or RS485 ports, can't be worked simultaneously**
- **Hardware watchdog, stable connection**
- **Modbus RTU to TCP, Modbus Polling**
- **Serial to WIFI OR Serial to Ethernet OR WIFI to Ethernet**

Introduction

Serial To WiFi and Ethernet Converter USR-W610, which can realize bidirectional transparent transmission between RS232/RS485 and Ethernet/WiFi. Through simple configuration via Web Server or setup software can assign working details, realize serial data and TCP/IP data package transparent transmission by converter.

Features

1.Support WIFI@2.4GHz 802.11b/g/n wireless standards.

2.Support TCP Server/TCP Client/UDP Server/UDP Client/HTTP Client mode.

3.Support AP, STA, AP+STA.

4.Support RS232 or RS485 serial ports.

5.Support electrostatic protection.

6.Support identity packet function.

7.Support heartbeat packet function.

8.Support Websocket function.

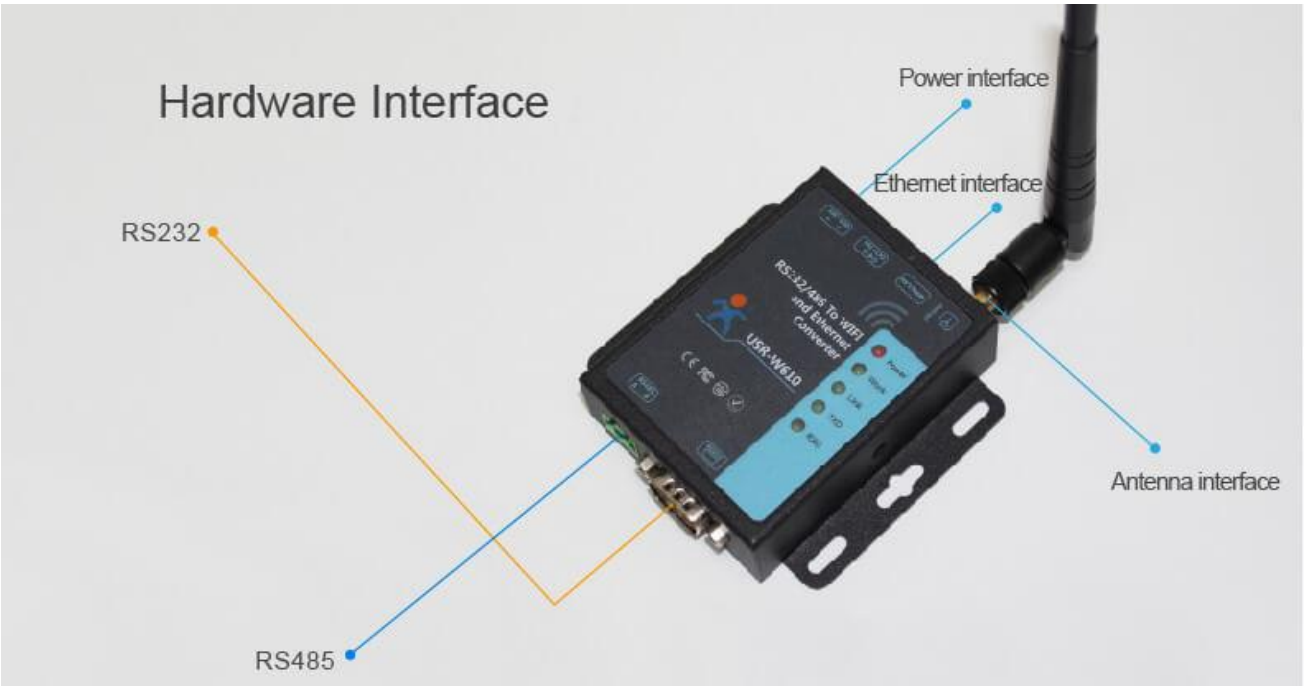
9.Support timeout reset function, timing reset function.

10.Support Web Server, setup software, serial/network AT command to configure module.

11.Support hardware reload.

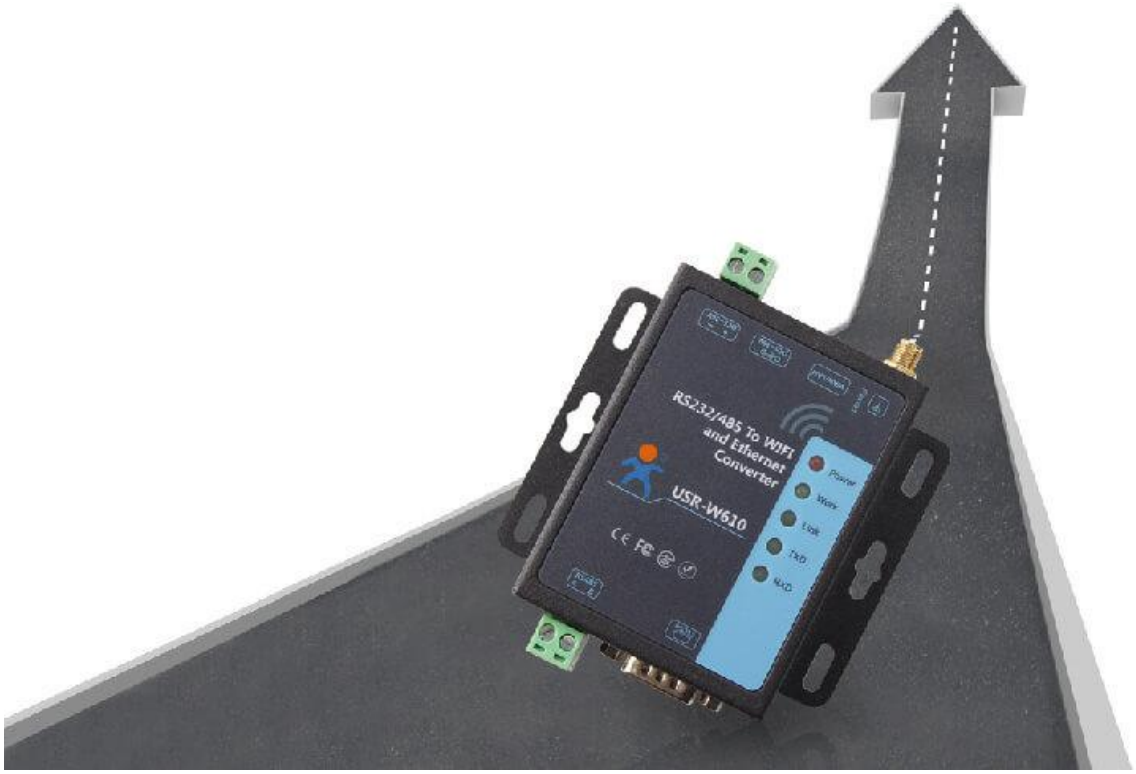
12.Support usrlink.

Hardware Interface

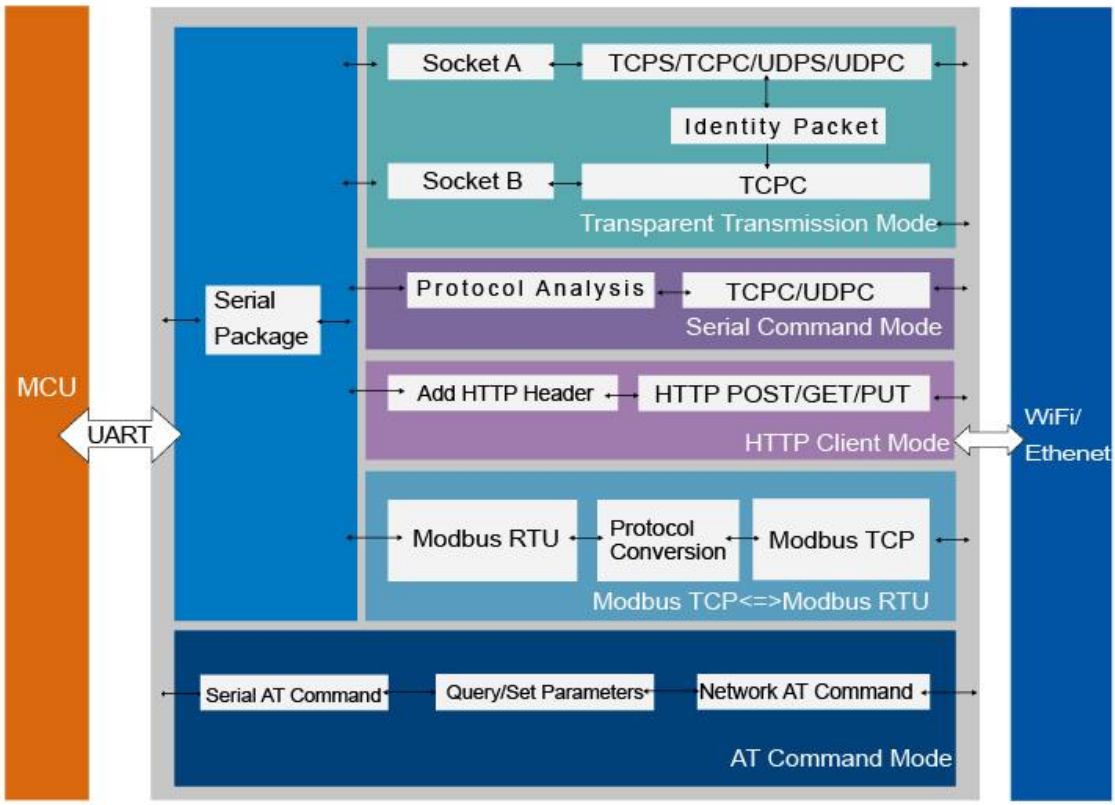


Products Iteration

Dual power interface & Modbus polling function.



Functional Block Diagram



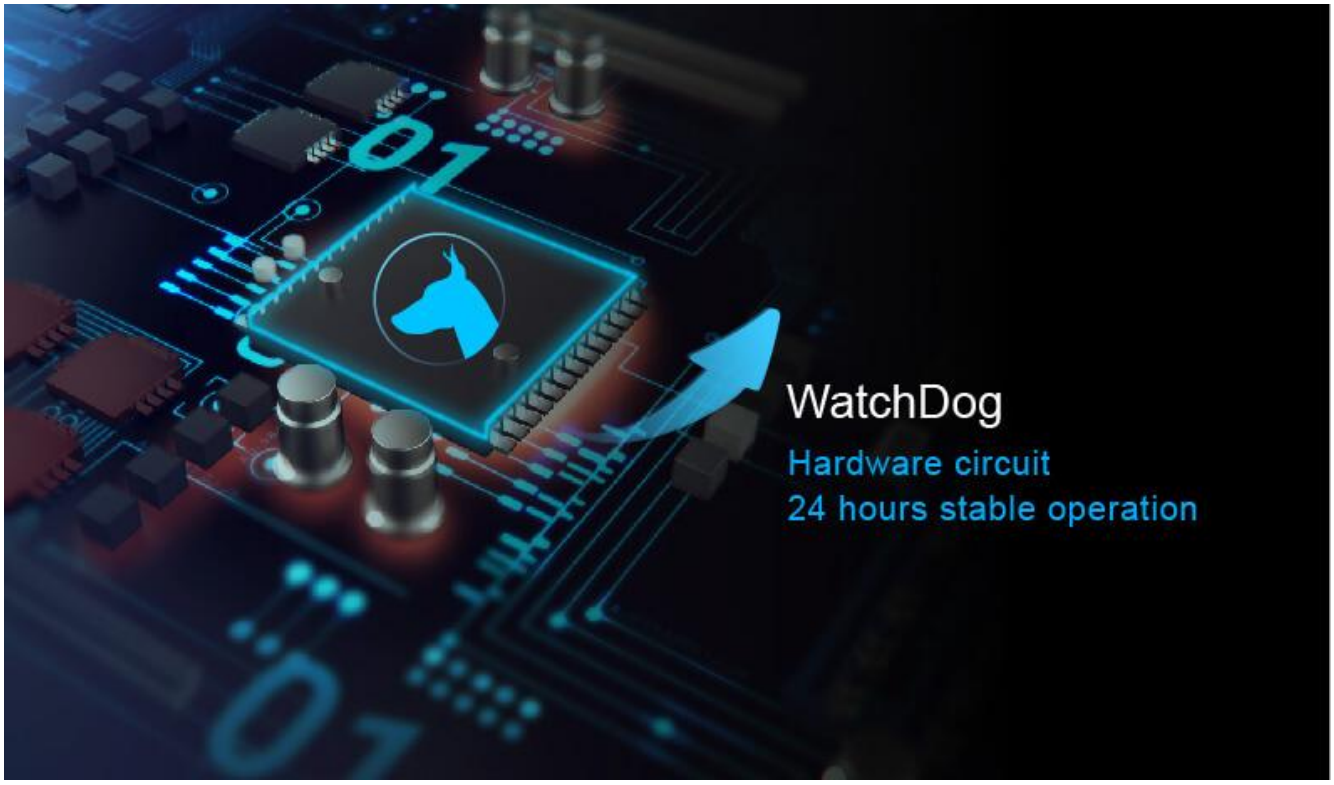
EFT

USR-W610 has passed EFT test, when there is instantaneous high current in the circuit (such as lightning, power switch, etc.), it can ensure that the device hardware is not damaged.

Power: 2KV
Ethernet interface 232 485: 2KV

ESD

WatchDog



Work Mode

Transparent Transmission Mode

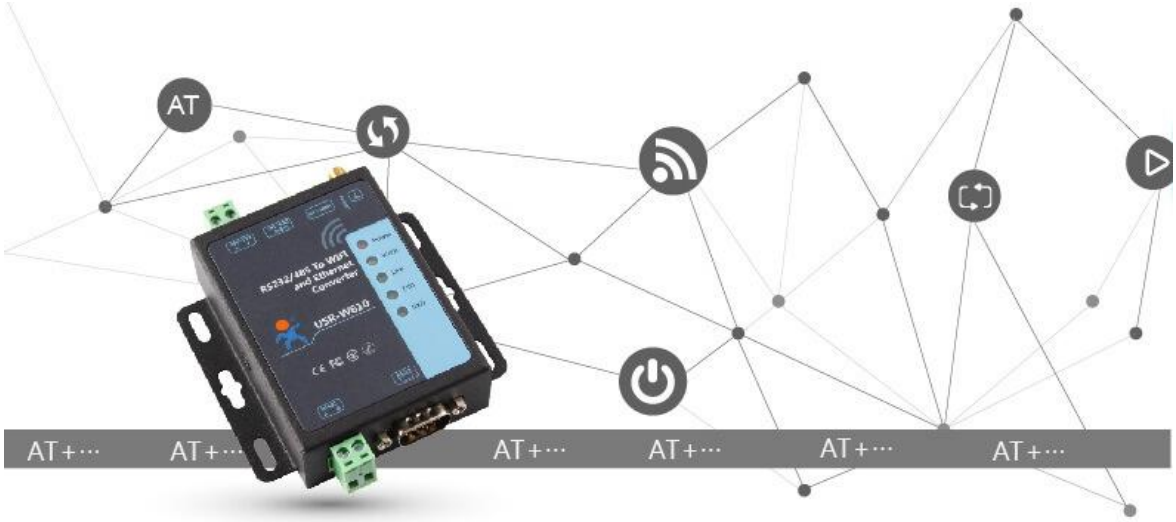
In this mode, all transmitted/received data is not parsed between the serial port and the WiFi interface. It minimizes the complexity of user usage.

HTTP Client Mode

In this mode, serial data will be submitted to the HTTP server via HTTP GET/POST/PUT requesting method.

AT Command Mode

In this mode, user can query/set parameters via serial AT commands or network AT commands.



Special Features

Modbus Polling Mode

In this mode, it supports Modbus TCP and Modbus RTU mutual conversion.

Heartbeat Packet Function

USR-W610 supports network heartbeat packet and serial heartbeat packet. The network heartbeat packet notifies the server that it is in an active state, and it maintains the normal connection with the server by continuously sending the heartbeat packet.Serial port heartbeat packet notifies the serial device that USR-W610 is in an active state, and takes the initiative to grab the sensor data can not be initiative to push.

Socket Distribution Protocol

USR-W610 suppports SDP, you can add certain header in serial data. It will send the data to differetnt socket by different header. The data received from different
socket will be added different header before they are sent to serial.

Regular Restart Function

USR-W610 supports timing and timeout restart function, which makes the system run more stable.

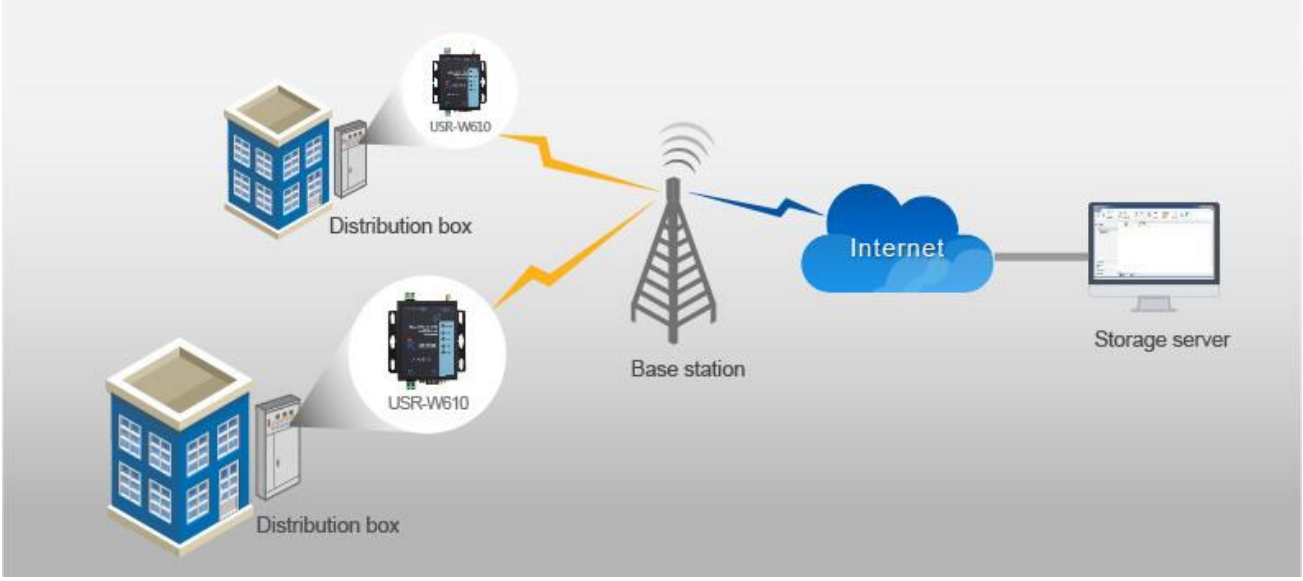
Applications

Intelligent Power Data Acquisition Solutions

1.Build-in routing function, supports wired or WiFi networking method.

2.Remotely monitoring meter data, it not only saves manpower and resources but also facilitates the sudden response measures.

3.Rapid collection of data in the monitoring and management platform, it facilitates the city electricity management then to achieve smart city.



Smart Agriculture

1.Monitoring the situation in the greenhouse,such as utilization rate about water resources, fertilizers and so on.

2.To obtain farmland information and monitor sudden natural disasters, then to carry out standardized control measures.

3.Fully automated operation without human intervention, saving manpower and achieving the precise control of agriculture.

Industrial Detection

1.According to the site environment to choose WiFi or wired networking.

2.Real-time detection of air leakage products mixed in bottle buckles.

3.High sensitivity transmission monitoring data, the accurate data can ensure that monitoring without omission.