



W5500-SPI-Ethernet Datasheet

W5500 Chip SPI to LAN Ethernet Convertor

USR-ES1 embeds Wiznet's W5500 chip, which uses hardware logic gates to implement the transport layer and network layer of the TCP / IP protocol stack (such as TCP, UDP, ICMP, IPv4, ARP, IGMP, PPPoE, etc.). The data link layer, physical layer and 32 Kbytes of on-chip RAM serve as data transfer buffers. The main control chip of the host computer only needs to perform the processing task of the control information of the TCP / IP application layer. This greatly saves the host computer's workload for data copying, protocol processing and interrupt processing, and improves system utilization and reliability.

During operation, the user can approximate the W5500 as a peripheral RAM of the MCU, which is very simple. The W5500 external interface is a universal 80 MHz high-speed SPI, which extends the highspeed Ethernet solution for various platforms. The auto negotiation status LED shows that the SPI interface is fast and stable. Dimensions and pin compatible official Wiznet module WIZ820io.

80 MHz high speed SPI interface.

Built-in hardware TCPIP protocol stack means users almost don't need to master complex network protocol knowledge

Supports up to 8 socket connections

Supports TCP, UDP, ICMP, IPv4, ARP, IGMP and PPPoE protocols

Integrated data link layer, physical layer

Wake-up support

Supports high-speed serial peripheral interface (SPI mode 0 ~ 3)

Internal 32-Kbyte transmit and receive cache

Embedded 10BaseT / 100BaseTX physical Ethernet layer (PHY)

Support for auto-negotiation (10/100 based full / half duplex)

IP fragmentation is not supported

3.3V working voltage, I/O signal connector 5V withstands the voltage

LED status indicator (full duplex / half duplex, network connection, network speed, active status)

Ultra-small pin package for simple embedded applications

Provide C application routines

Specifications:

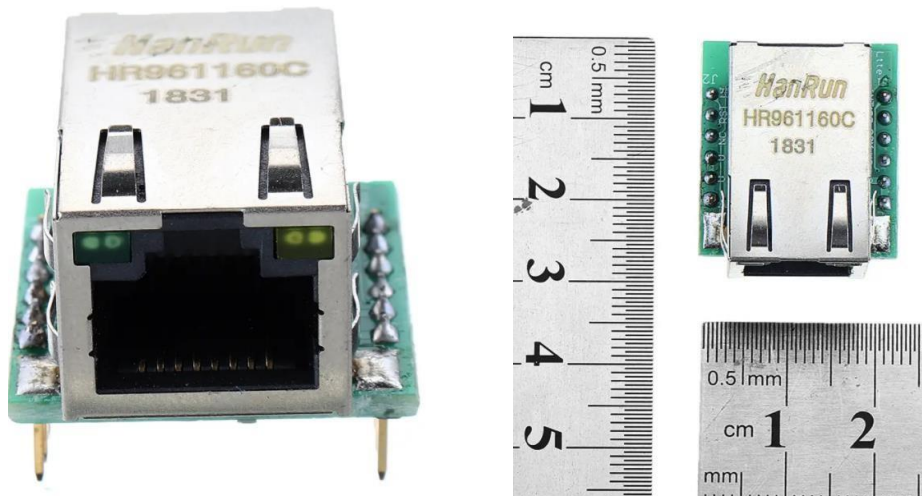
Power supply mode: 3.3V external power supply, current should be greater than 200mA

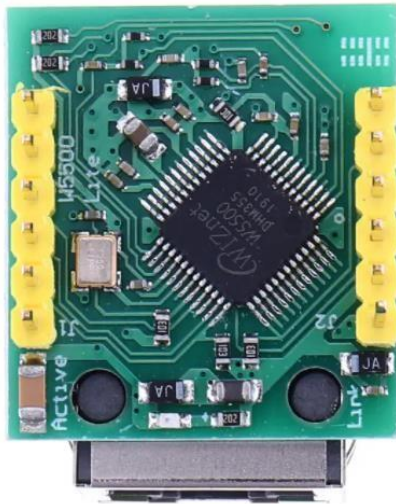
Control interface form: 3.3 V TTL level, SPI interface; 2x single row pin

PCB size (MM): 23 x 25 mm

Dimensions (length x width x height): 28.5 x 23 x 24 mm

images:





Dimensions:

