

Base LAN PoE v1.2

SKU:K012-C-V12



Description

Base LAN PoE v1.2 is an **Ethernet control module** integrated with **PoE** (Power Over Ethernet) functionality. It adopts the **W5500** full-hardware TCP/IP embedded Ethernet controller (SPI communication interface) solution, supporting multiple communication protocols (TCP, UDP, IPv4, ICMP, ARP, IGMP, and PPPoE, etc.) and integrates a storage buffer for Ethernet packet processing.

The internal reserved expansion pads can be used to expand **RS485/RS232/CAN** communication modules or add custom designs. It supports PoE power supply and comes standard with rail mounting accessories, allowing easy deployment in industrial settings without the need for additional power cables or structural design. The **Base LAN PoE v1.2**, with its performance and flexibility, provides a more streamlined embedded Ethernet connection solution.

Features

- W5500:
 - Supports 8 independent hardware Sockets for simultaneous communication
 - Supports TCP, UDP, ICMP, IPv4, ARP, IGMP, PPPoE protocols

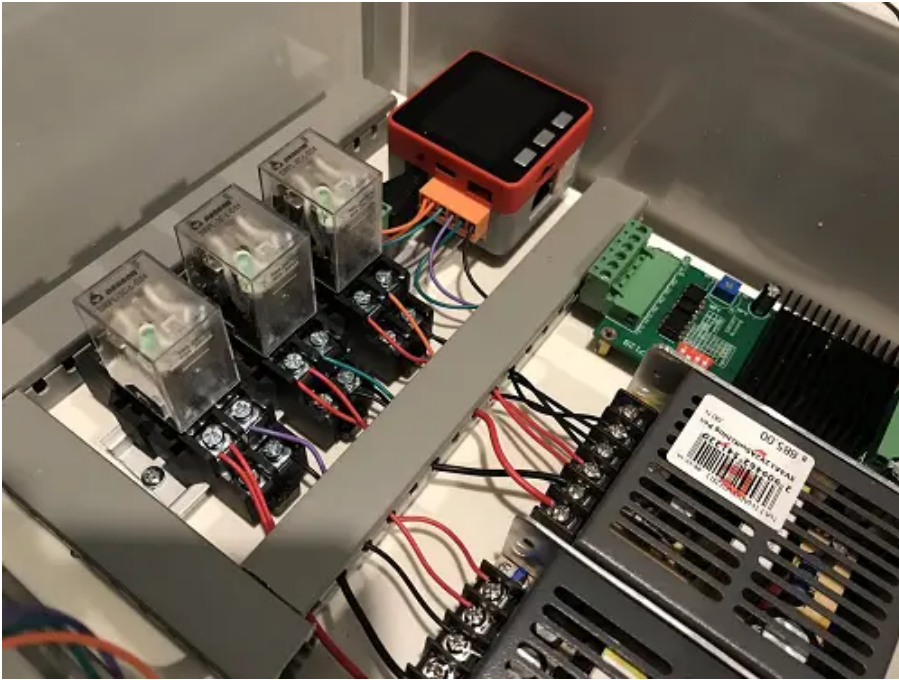
- Integrated 10BaseT / 100Base-T Ethernet PHY
- Wired Ethernet access:
 - RJ45 adaptive 10/100M Ethernet port
- Power input methods:
 - Supports PoE IEEE802.3 AF / Power supply voltage DC 37-57V
 - Supports input power voltage: 9-24V
 - Supports M5-Bus 5V power supply (when used with M5CORE)
- Rail or magnetic fixation
- RS485/RS232/CAN communication expansion board

| Includes

- 1 x Base LAN PoE v1.2
- 1 x RS485-To-TTL adapter board
- 1 x RS232-To-TTL adapter board
- 1 x CAN-To-TTL adapter board
- 1 x HT3.96-4P terminal
- 2 x HT3.96-3P terminals
- 1 x 1.5mm hex wrench
- 1 x 2.0mm hex wrench
- 1 x 2.5mm hex wrench
- 10 x 2mm crimp terminals
- 1 x Magnet (with a hole in the center, 15mm diameter, 3mm thick)
- 1 x 35mm silver metal rail
- 1 x 35mm black rail clip
- 1 x M3*6mm screw (countersunk, machine thread)
- 2 x M3*28mm screws (cup head, machine thread)
- 4 x M2*5mm screws (cup head, self-tapping)
- 1 x 2.54mm-20P straight pin header (total height 5.32mm)
- 1 x Product sticker

| Applications

- M5Core + LAN for transmission with controller



- PC and Core wired video data transmission



| Specifications

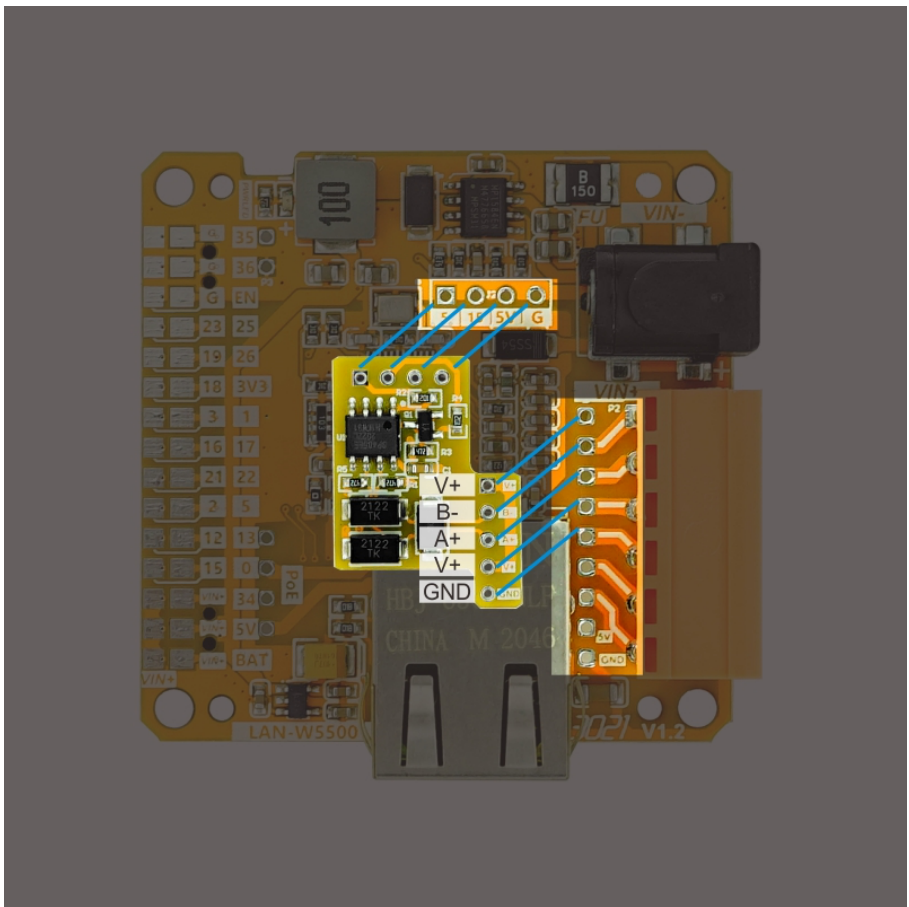
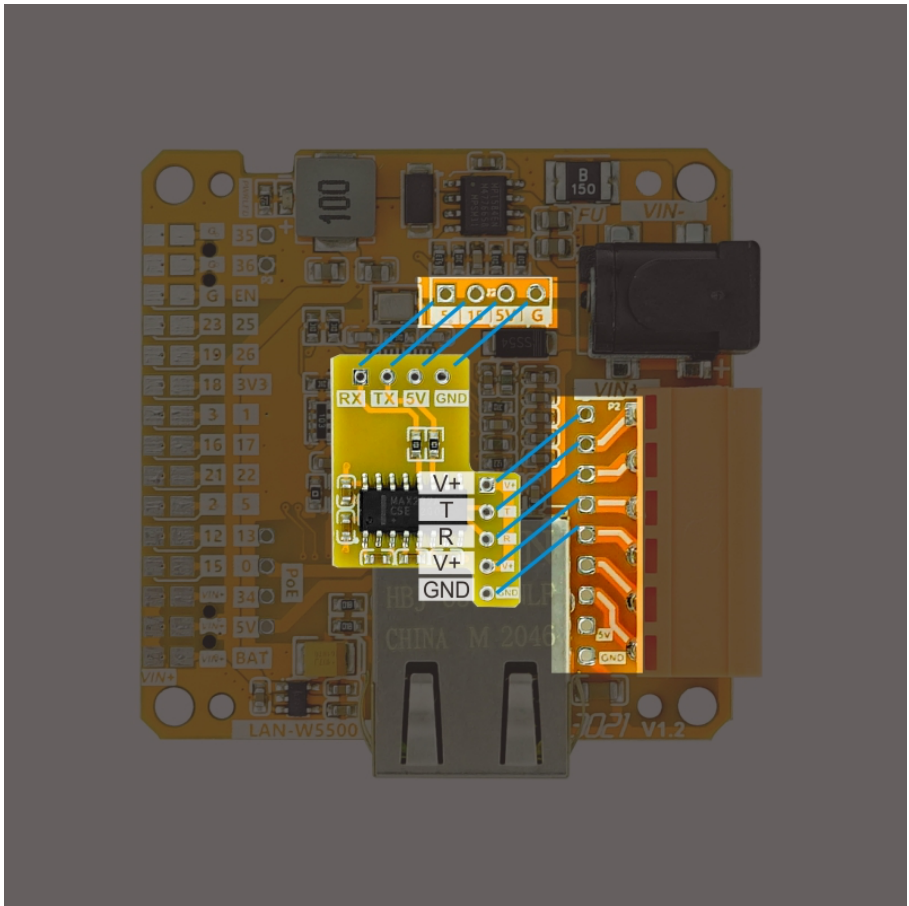
Specification	Parameters
W5500 Ethernet Controller	Supports TCP/IP protocol family: TCP, UDP, ICMP, IPv4, ARP, IGMP, PPPoE
	Supports 8 independent hardware Sockets for simultaneous communication
	Supports high-speed SPI (SPI MODE 0, 3)
	Integrated 32Kbytes TX/RX Buffers
RS485-To-TTL	SP485EEN-L/TR
RS232-To-TTL	MAX232ESE
CAN-To-TTL	CA-IS3050G
Ethernet Port	RJ45 adaptive 10/100M Ethernet port

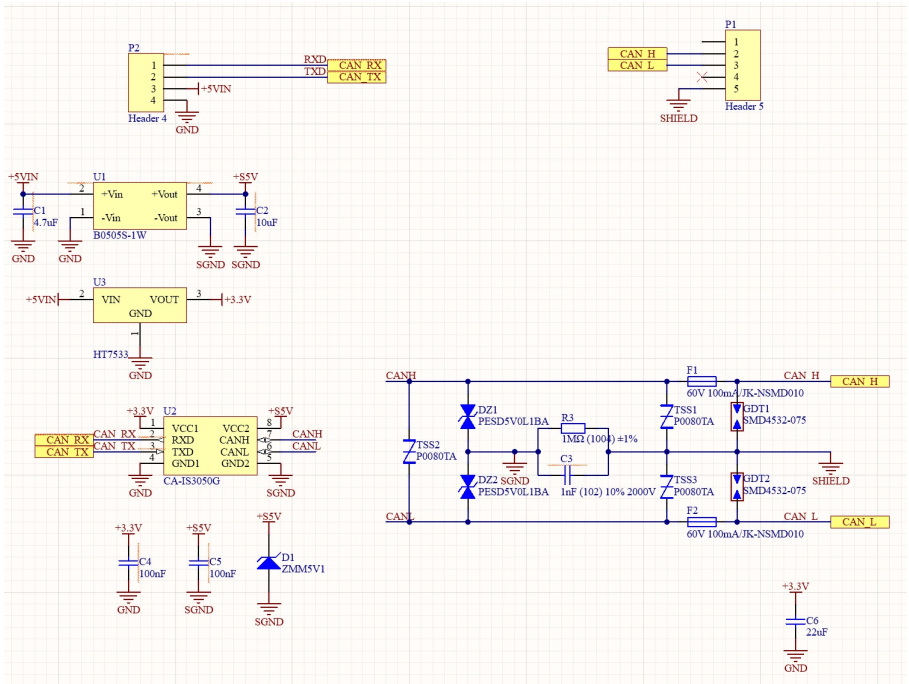
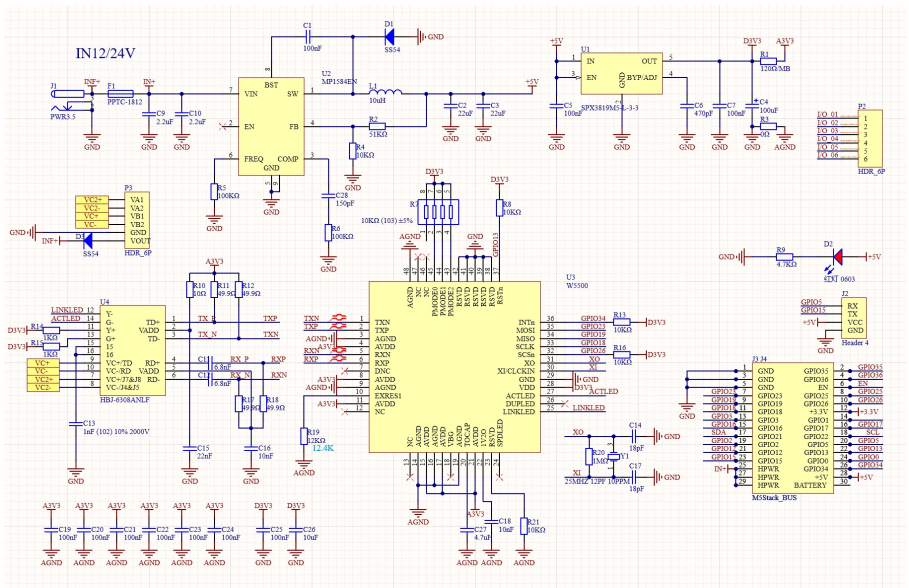
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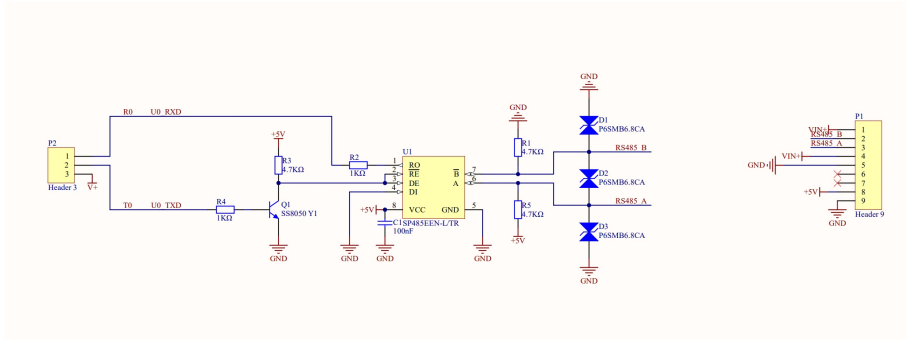
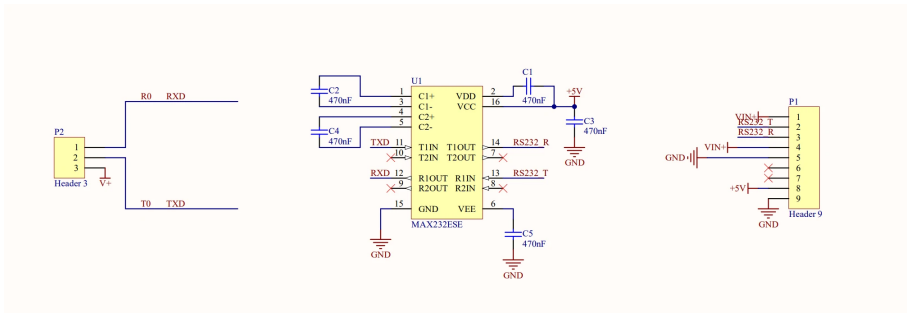
Expansion Board Soldering Positions

LAN BASE V12 comes standard with TTL-RS485 + TTL-RS232 adapter boards for different communication interfaces. The soldering positions are as follows. For actual GPIO connections, refer to the pin mapping table.

- **RS232** adapter board soldering position or **RS485** adapter board soldering position







PinMap

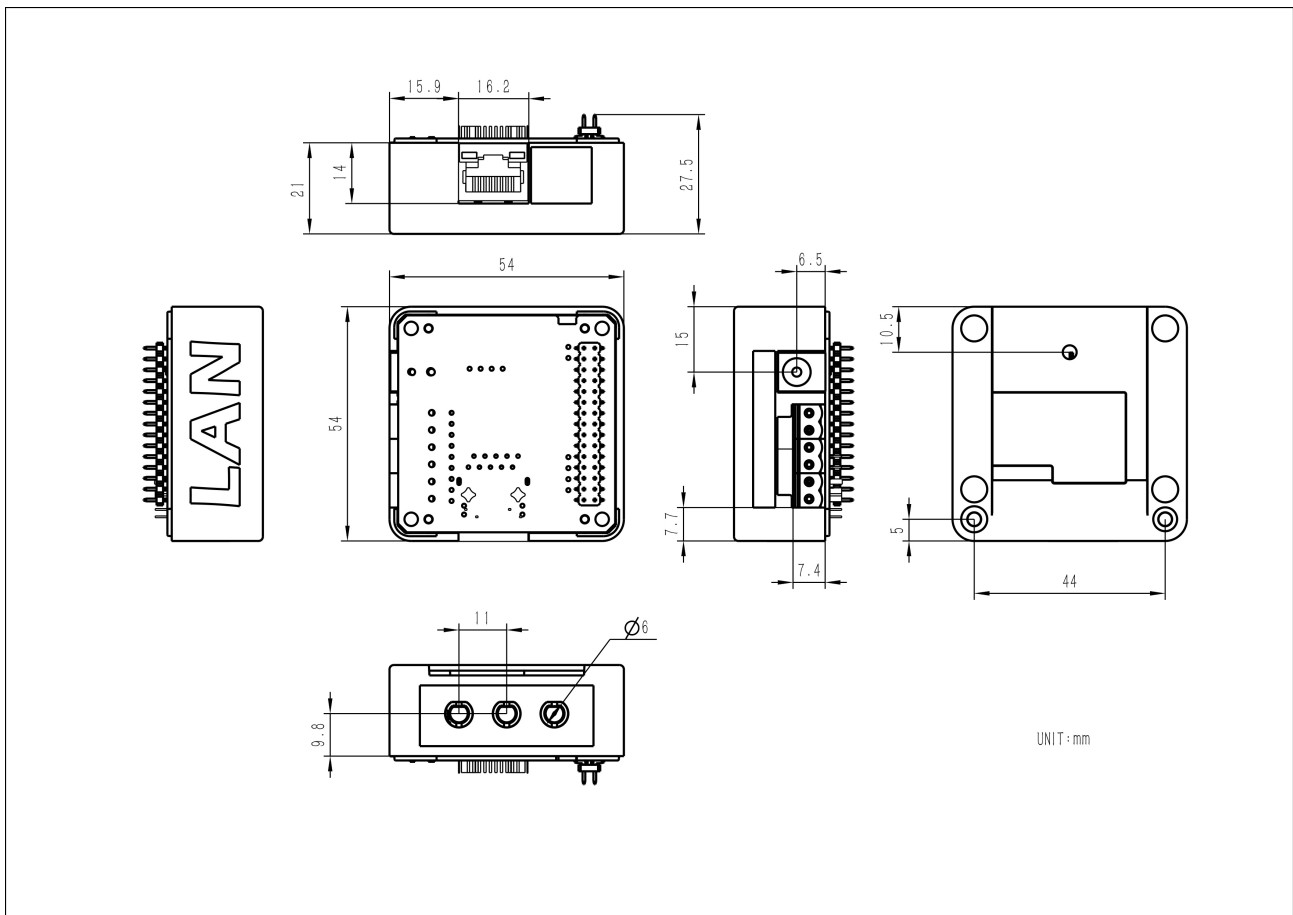
W5500 Ethernet Chip

W5500	ESP32 Chip
MOSI	G23
MISO	G19
CLK	G18
CS	G26
RST	G13
INTn	G34

RS485/RS232/CAN Adapter Board

ESP32 Chip	RS485/RS232
RX	G5
TX	G15

Model Size



Datasheets

- [W5500](#)

Softwares

Arduino

- [Base LAN PoE v1.2 Web Server Example](#)
- [Base LAN PoE v1.2 RS485 Example](#)

UiFlow1

- [Base LAN PoE v1.2 UiFlow1 Docs](#)

EasyLoader

Easyloader	Download	Note
Base LAN Test Easyloader	download	/

| Video

LAN Case - PC uses UDP protocol to transmit video to Core via LAN base

[M5StackLovyanlauncher.mp4](#)

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