



# LAN Module with W5500

SKU: K012-B

Although M5 core is ESP32-based, having Wi-Fi and Bluetooth intergrated, it doesn't stop you enable the Ethernet function. This LAN is a M5 Base that having a W5500 chip, which is a Hardwired TCP/IP embedded Ethernet controller that provides easier Internet connection to embedded systems. This Base is specifically design for industrial application scenarios, comes with couple of HT3.96 connectors, 485 metal rail and magnet discs for easy installation and fixation.

## Product Features

- Input Supply Voltage: 9-24V
- HT3.96 port for supporting RS485
- Support RS485 communication
- Easy to fixed on the wall

## Kit includes

- 1x LAN Base
- 1x TTL-to-RS485 adapter board
- 1x pin header 20pin
- 1x metal rails and magnet discs
- 3x HT3.96 terminal
- 2x 3pin
- 1x 4pin
- 10x cold crimp terminal
- 3x Allen wrench - 1x 1.5mm - 1x 2mm - 1x 2.5mm
- 2x hexagon socket head cap screws M3x28
- 4x hexagon socket tapping screw KA2x4
- 1x countersunk head screw M3x8



## Application

- M5Core + LAN implemented a conveyor controller



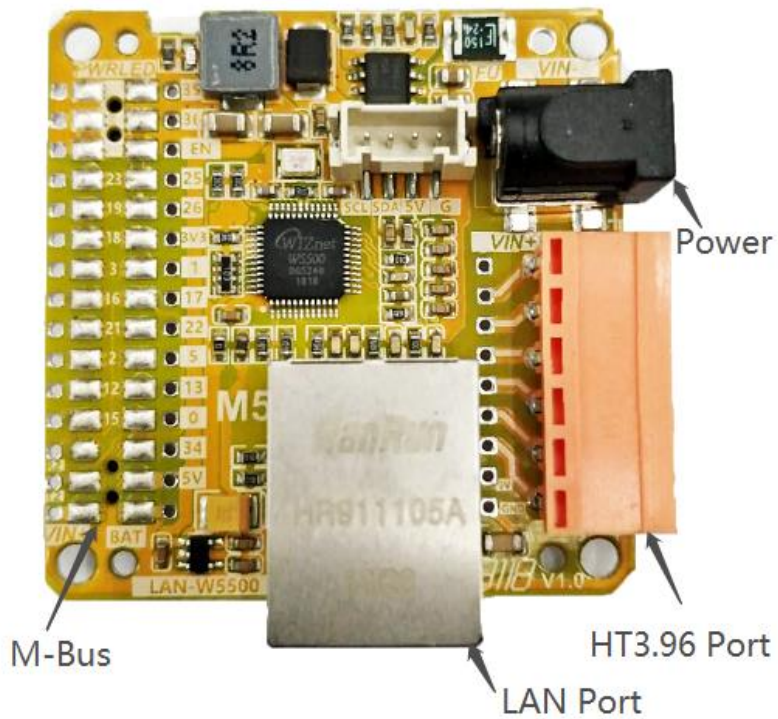
- PC transmits video to Core via cable



**Datasheet - [W5500](#)**

The 6 pin of HT3.96 connector are dangling, you can wired them up with the M-BUS and other circuit as you like.

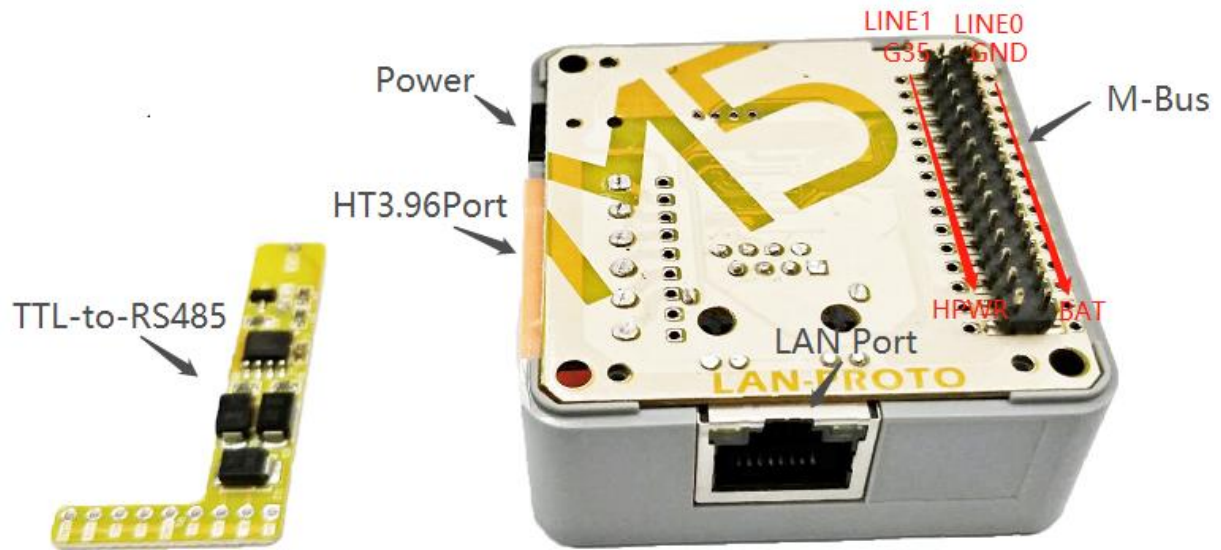
The figure below shows the inner of LAN



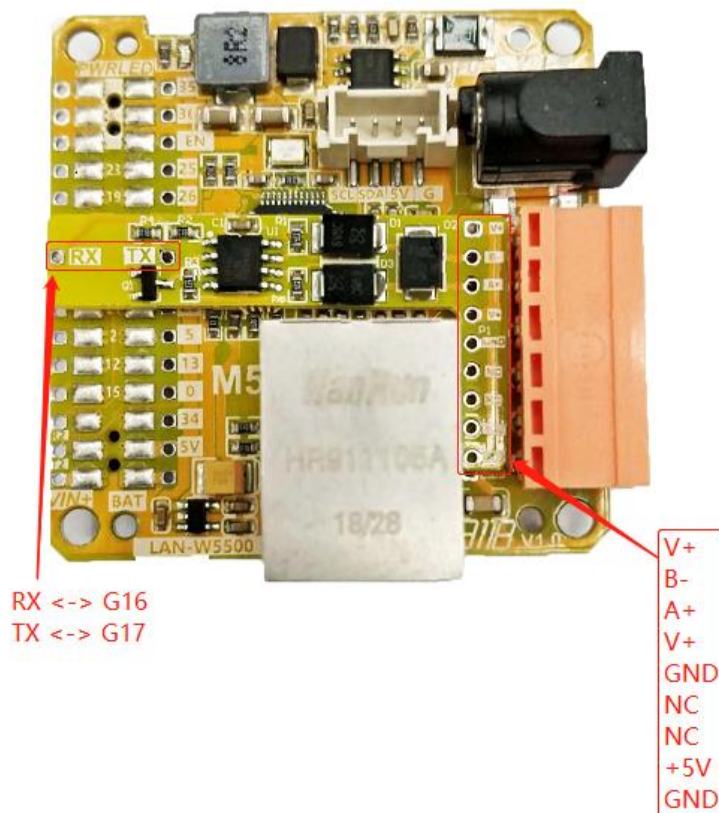
If you need to add RS485 interface, soldering the RS485 board onto the main board pin correspondingly.



### TTL-to-RS485 adapter board and LAN base



The figure below tells you how the TTL-to-RS485 adapter board connected onto LAN backplane  
*The serial port pins on the RS485 board will be connected to the GPIO16 and GPIO17 of the LAN backplane.*



# PinMap

W5500

W5500	ESP32 Chip
MOSI	GPIO23
MISO	GPIO19
CLK	GPIO18
CS	GPIO26
RST	GPIO13
INTn	GPIO34

## M-Bus

GPIO TYPE	Analog Function	M-BUS			Analog Function	GPIO TYPE	
		LINE 0		LINE 1			
		GND	ADC	G35	ADC1_CH7	I	
		GND	ADC	G36	ADC1_CH0	I	
		GND	RST	EN			
I/o/T		G23	MOSI	DAC/SPK	G25	ADC2_CH8	I/o/T
I/o/T		G19	MISO	DAC	G26	ADC2_CH9	I/o/T
I/o/T		G18	SCK	3.3V			
I/o/T		G3	RXD1	TXD1	G1		I/o/T
I/o/T		G16	RXD2	TXD2	G17		I/o/T
I/o/T		G21	SDA	SCL	G22		I/o/T
I/o/T	ADC2_CH2/T2	G2	GPIO	GPIO	G5		I/o/T
I/o/T	ADC2_CH5	G12	IIS_SK	IIS_WS	G13	ADC2_CH4/T4	I/o/T
I/o/T	ADC2_CH3/T3	G15	IIS_OUT	IIS_MK	G0	ADC2_CH1/T1	I/o/T
			HPWR	IIS_IN	G34	ADC1_CH6	I
			HPWR	5V			
			HPWR	BATTERY			

# Schematic

