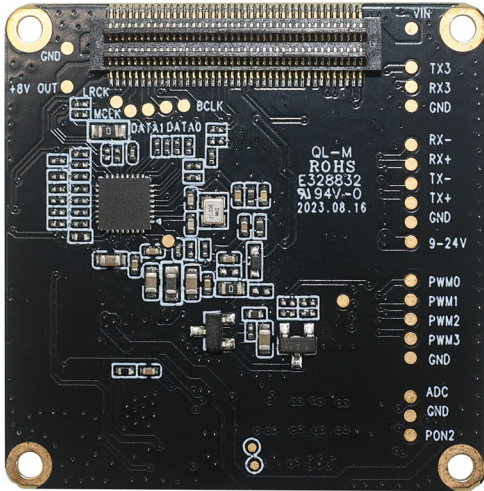
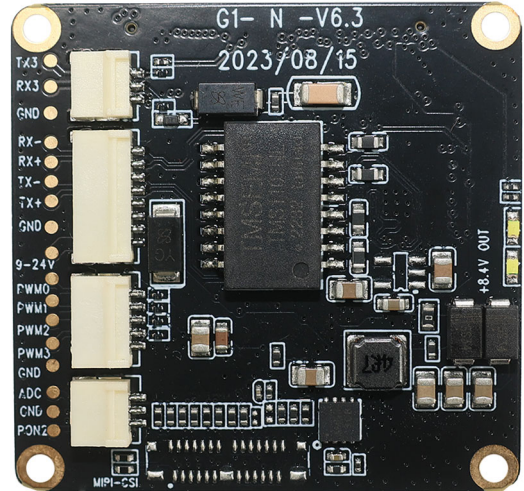


## YDS-G1NK V6.3 Network Expansion Board



Front View



Back View

### Overview

This Ethernet network expansion board is equipped with IP101GR fast Ethernet transceiver, supporting extended network port, PWM, serial port, automatic power-on power supply interface, and MIPI interface.

The board PCB size is 38x38mm, and this Ethernet board must be used with the our company’s designated master board. This board can not work independently.



## YDS-G1NK V6.3 Network Expansion Board

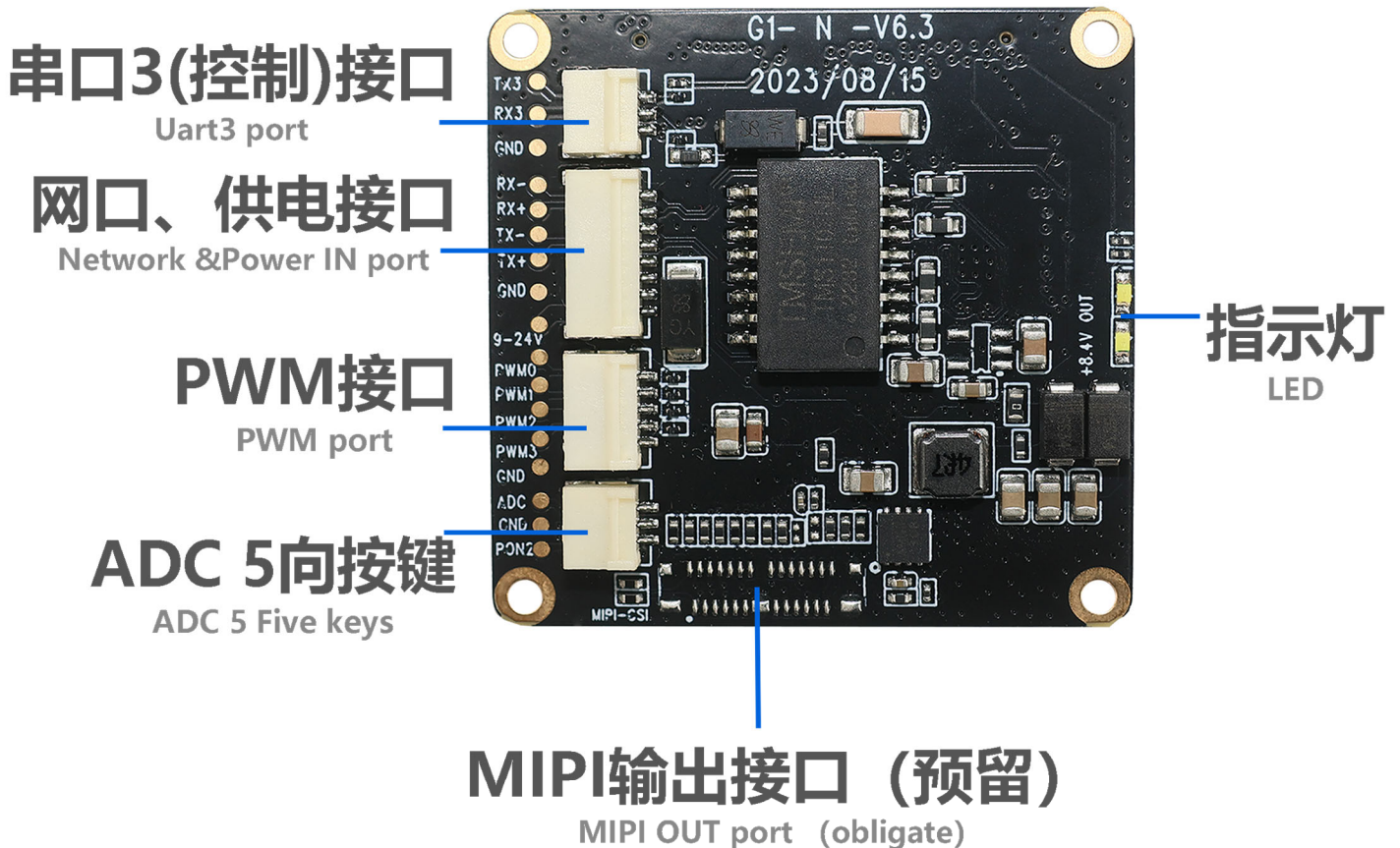
### Specifications

<b>Model No.</b>	<b>YDS-G1NK V6.3</b>
<b>Ethernet Transceiver</b>	IP101GR
<b>Power Supply</b>	Supports 3 Power Supply Methods At The Same Time (1) 5V USB to Type-C Port Power Supply (2) 9V-24V WiFi Board Power Supply (3) 6.8V-8.4V Battery Power Supply (The 3-Axis Gimbal Version Does Not Support 5V USB)
<b>Transmission Rate</b>	100 Mbps
<b>Serial Port / UART</b>	RX3, TX3, GND
<b>LED Indicator</b>	White Light Indicator at Network Working Status
<b>PWM</b>	PWM0, PWM1/UART3_GND
<b>ADC Button</b>	Up, Down, Left, Right, OK 5-Way ADC Buttons Power Button
<b>Operating Temperature</b>	-10°C to +60°C Without Housing
<b>Storage Temperature</b>	-20°C to +80°C
<b>Humidity</b>	20% to 80%
<b>PCB Dimensions</b>	38 x 38 mm
<b>PCB Screw Hole Spacing</b>	34 mm
<b>PCB Screw Hole Diameter</b>	2 mm
<b>Extendable Functions</b>	PWM0, PWM1/UART3_GND

## YDS-G1NK V6.3 Network Expansion Board

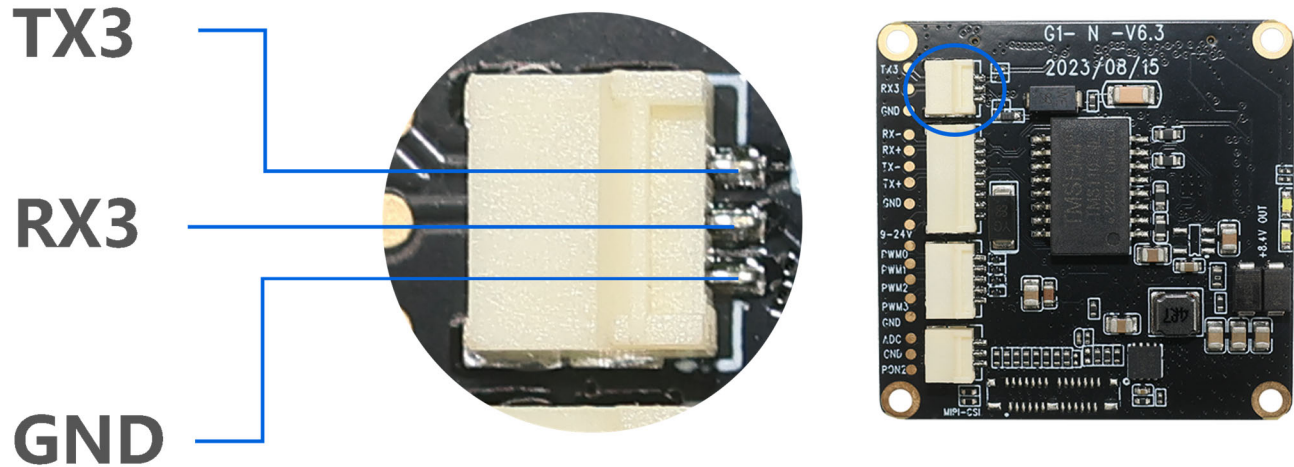
### Hardware Interface Function Description

IP101GR is an IEEE 802.3/802.3u compliant single-port Fast Ethernet Transceiver for both 100Mbps and 10Mbps operations. It supports Auto MDI/MDIX function to simplify the network installation and reduce the system maintenance cost. To improve the system performance, IP101GR provides a hardware interrupt pin to indicate the link, speed and duplex status change. IP101GR provides Media Independent Interface (MII) or Reduced Media Independent Interface (RMII) to connect with different types of 10/100Mbps Media Access Controller (MAC). IP101GR is designed to use category 5 unshielded twisted-pair cable or Fiber-Optic cables connecting to other LAN devices.

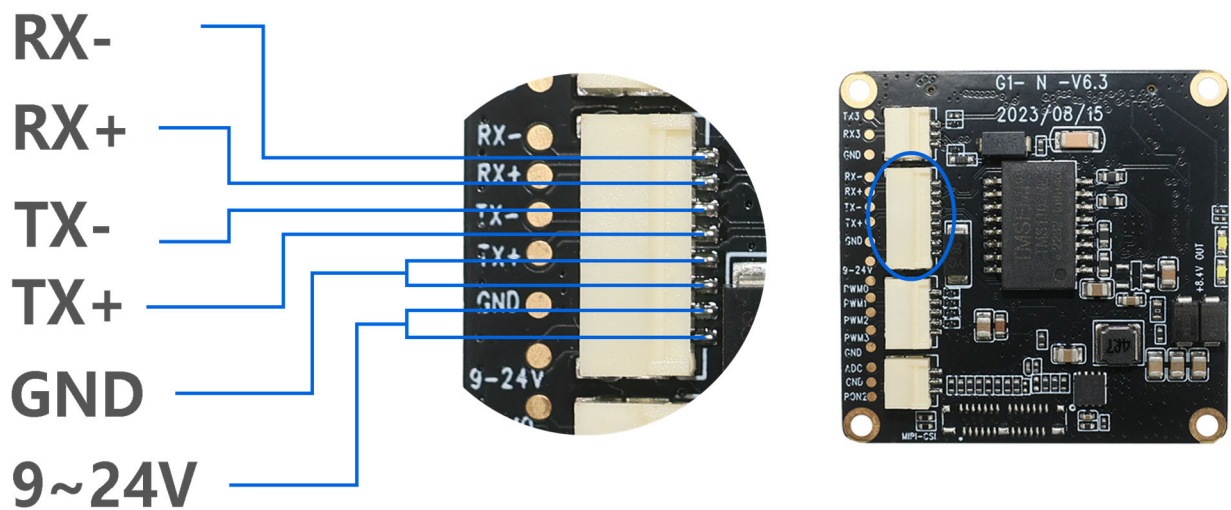


## YDS-G1NK V6.3 Network Expansion Board

Commands can be input through this serial port (UART3) to set and control the camera.

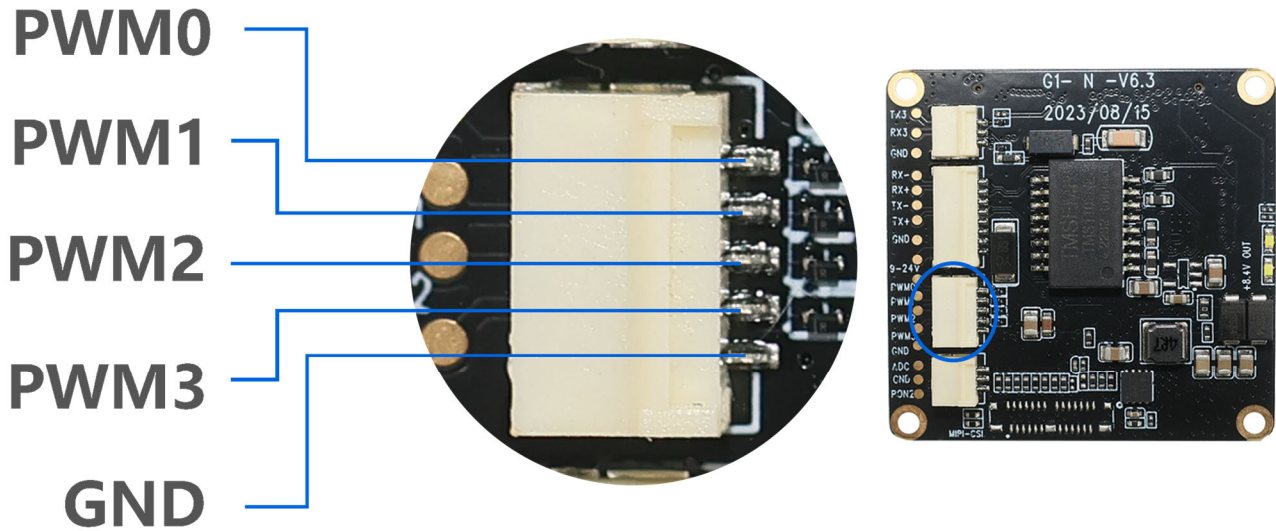


When used with the master board, this power supply interface supports the use of a DC power supply between 9V and 24V, or a lithium battery type 8V to 16.8V to power the camera automatically.

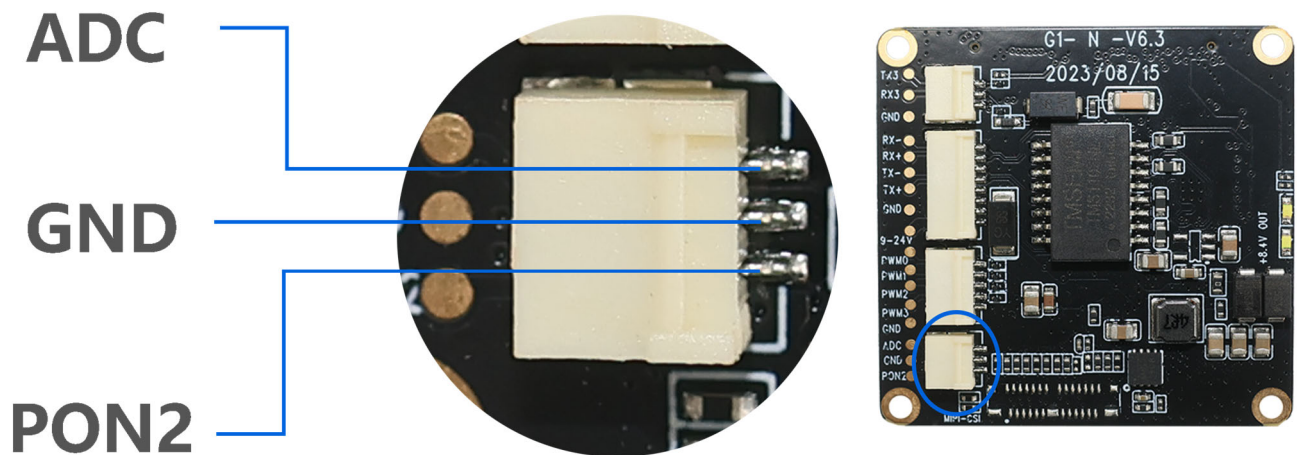


## YDS-G1NK V6.3 Network Expansion Board

The PWM function interface, which can be used to control camera mode switching, photo taking, video recording and other functions.



Supports one ADC button interface, which can be connected to five buttons: up, down, left, right, and OK confirm. It supports external buttons to control the camera power on and off.





## YDS-G1NK V6.3 Network Expansion Board

### Requirements for using the Ethernet Port of the camera

1. The camera can be powered on automatically using 9V-24V power supply; the master board supports three-way simultaneous use, namely Ethernet board power supply, motherboard battery power supply, and Type-C USB power supply. It can also be used with a single power supply.

#### Special note:

The three-axis gimbal does not support 5V USB power supply alone. The battery power supply can support up to 12V; but this does not include the gimbal version, the stable power supply voltage of the battery for gimbal version is 8V.

2. The Ethernet function and the Type-C USB connection to the computer can be used at the same time. When using the USB flash drive or PCCAM mode, you need to connect the Type-C to the computer when the camera is turned off, and the camera will automatically turn on and enter the USB flash drive or PCCAM mode

3. The Ethernet Port of the camera will automatically turn on the Ethernet when it is turned on. It does not support local switching mode. If you need to control the camera to take pictures or set parameters, you can connect the Ethernet port to the network and control the camera in the APP; or input commands through the serial port (UART3) to control the camera.

### Solution 1:

Connect the router through the network cable by the network plug and power supply interface. After turning on the device, the network indicator on the Ethernet board is always on, indicating that the device has been connected to the router network. (Network communication is successful, RTSP output is successful, one of the network port indicator lights is always on, and one of the white lights flashes quickly). Connect the mobile phone to the same network as the camera, enter the APP to control the device to record, take pictures, playback, set parameters, etc.

Connect the computer to the router network, open the PotPlayer player installed on the computer, click the upper left corner of the mouse to open the main menu drop down list, move the mouse to open and then move to the list on the right, left-click "Open Link", enter the address `rtsp://192.168.1.64:554/H264?W=1280&H=720&BR=2000000&FPS=30`, and select OK to display the current camera screen.

## YDS-G1NK V6.3 Network Expansion Board

### Solution 2:

Use the network cable defined by the network port and power supply interface, connect one end of the RJ45 plug directly to the computer, and set the local IP address; Note: You need to set a network IP other than 192.168.1.64, that is, the last digit is not 64. After the setting is successful, call cmd and enter the command ping 192.168.1.64 to check whether it is communicating.

Tip: After using the operation process of Solution 1, if you still cannot connect to the network, it may be that the gateway of the router is not 192.168.1.xx; at this time, you need to enter the router and change the gateway IP address to 192.168.1.xx (xx represents a number).

## 网口板连接主板扩展板接口

Net connect to main board

