

reCamera 2002 Series

封面

slogan: vision AI for everywhere

User Manual

Version 1.0

About reCamera 2002 series

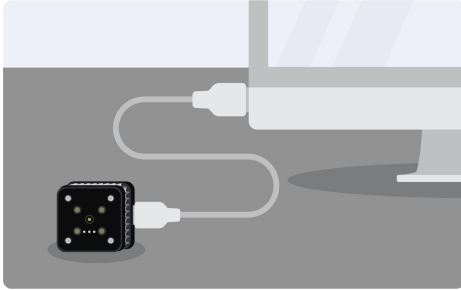
reCamera is an open-source and tiny size AI camera, programmable and customizable, powered by an RISC-V Soc. delivering on-device TTOPS AI performance with video encoding 5Mbps to FFS. The modular hardware design and expandable interfaces offers the most versatile platform for developers building vision AI systems.

Part List

- | | |
|-------------------|----|
| • reCamera 200x | x1 |
| • USB Type-C Wire | x1 |
| • Ethernet Wire | x1 |
| • User Manual | x1 |

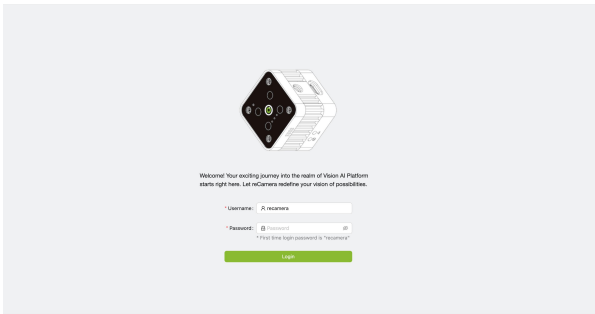
Getting Started

1. Connect your device to a computer using a USB cable.
2. Open a web browser and enter "**192.168.42.1**" in the address bar. This will direct you to the device's Dashboard made with Node - Red.



Login

1. Enter the default username "recamera" and password "recamera" in the login page.
2. After first time logging in, you will be prompted to change the password. The new password must be at least 8 characters long and include a combination of numbers, symbols, and letters.

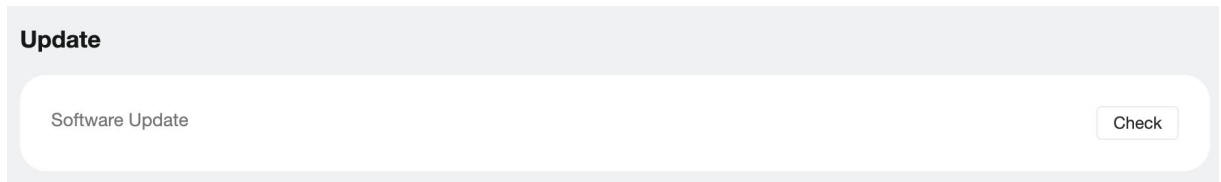


View Dashboard

1. Once you have logged in with the new password, you will be redirected to the dashboard.
2. The dashboard provides a camera preview and access to various device settings.
3. You can always go to Workspace to modify this dashboard.

Update

1. To check for updates, go to the dashboard and look for the "Update" option. Click on it to check if there are any available firmware update



- 2.
3. Alternatively, you can visit the official GitHub repository of the device to download the latest firmware. Follow the instructions provided on the repository to update the device. [GitHub – Seeed-Studio/OSHW-reCamera-Series: reCamera is an opensource camera platform](#)

(企微他自动把链接都改成了名字 T T 只想放原链接在里面)

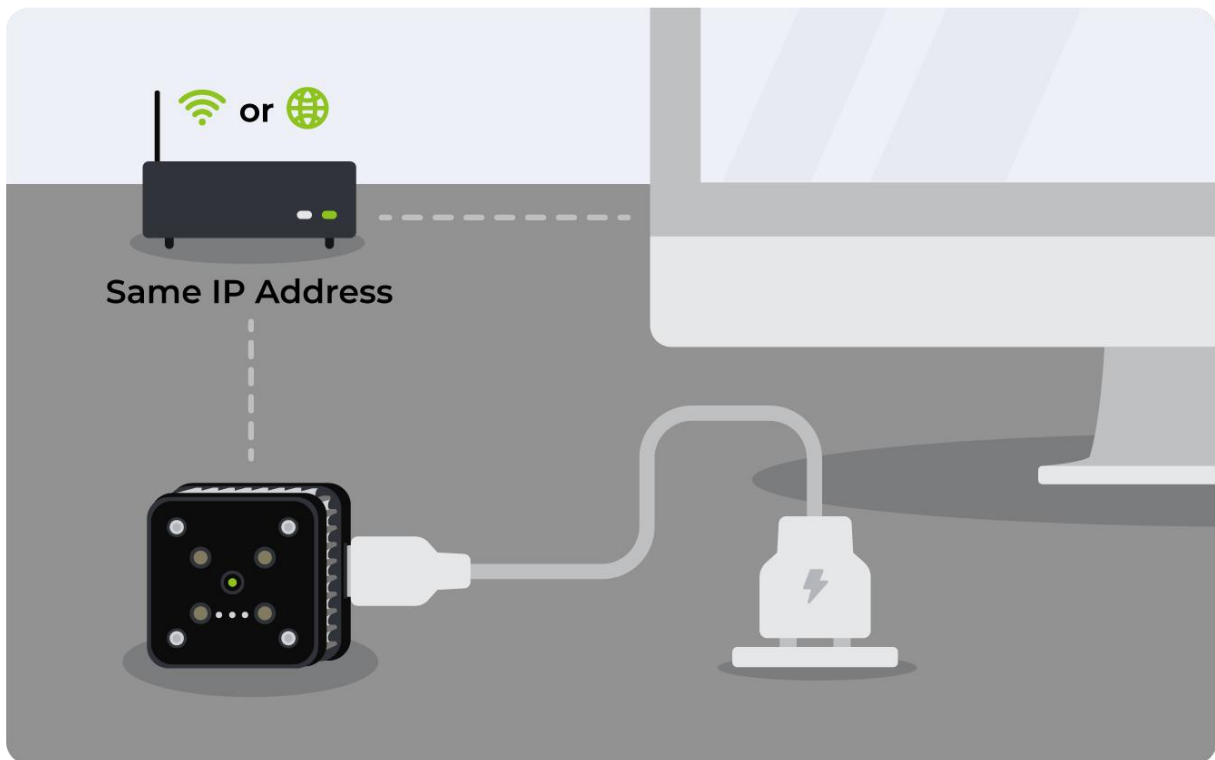
Wireless connection for access

Option 1

1. Power on the device.
2. Connect to the device's access point (AP). The AP name is reCamera_. The naming system is "recamera_" + the last six digits of the mac address on this device. Default password is 12345678
3. Once connected to the AP, open a web browser and enter the device's IP address in the address bar. The default IP address is usually 192.168.100.x. If the IP address has been changed, you will need to use a network scanning tool to find the new IP address.

Option 2.2

1. Power on the device.
2. Connect the device to your local network using an Ethernet cable.
3. Use a network scanning tool to find the device's IP address. The device's hostname is usually "recamera".
4. Open a web browser and enter the device's IP address in the address bar.



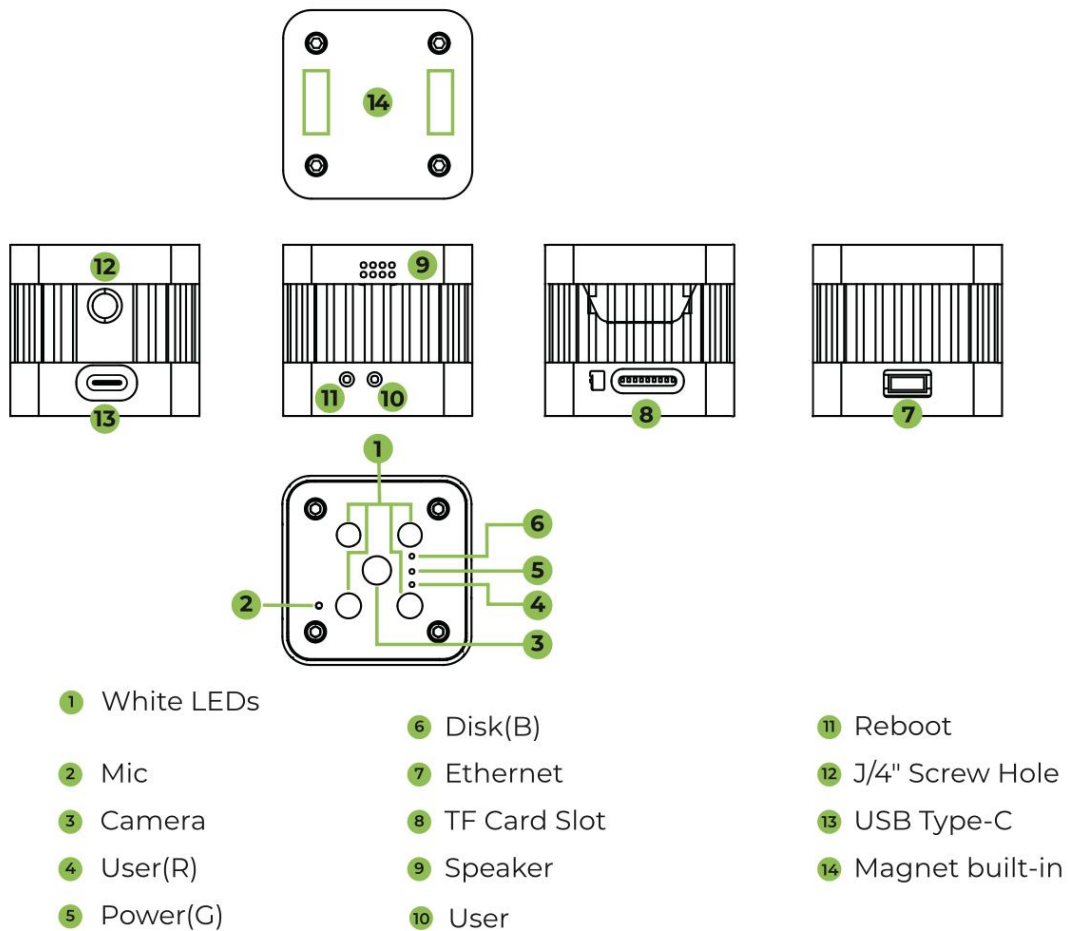
Storage

1. If you need to access the storage on the device, you can use SSH. The root file system (rootfs) is divided into two partitions, A and B. If one partition is damaged and the system cannot boot, you can switch to the other partition.
2. The web login password is stored in the `/etc/secret` file after being encrypted by sha256sum.
3. For file transfer, you can use SCP. Remote login can be done using SSH. Both methods require a password or you can upload a key through the web interface for authentication.

Network Services

1. The device also supports Wi-Fi connectivity. You can scan for available Wi-Fi networks and enter the password to connect.
2. The device supports various network services such as DHCP and DNS.

Interfaces



7: Ethernet port: for wired network connection. Please note this port does not support power. But you can find the POE based board on the Github.

13: USB port: for power and data transimission.

4, 5, 6: Indicator lights: green shows the status of power, blue shows the network connection, and red shows the camera cpu heartbeat. These are also programmable Leds to fit your own needs.

*Get more info from this website: [Hardware Interface | Seeed Studio Wiki](#) (企微他自动把链接都改成了名字 T T 只想放原链接在里面)

Spec

Product Name		reCamera 2002	reCamera 2002w
Processor System	AI Performance	1Tops @ Int8	
	SOC	SG2002	SG2002
	CPU	C906@1GHz + C906@700MHz	
	MCU	8051@8KB SRAM	
	Memory	256MB	
	Video Encode	5MP @ 30Fps	
Camera Sensor		OV5647	
Storage	eMMC	8GB / 64GB	
	Expansion	removable tf card (up to 2TB, not included)	
I/O	Ethernet	100Mbps	
	Wireless	/	WIFI 2.4G/5G BT 4.2/5.0
	USB	USB Type-C (2.0)	
	Button	1 Reboot Button, 1 User Button	
	Fill Light	0.3w White Light	
	Status Light	1 Power Indicator, 2 IO Programmable	
Audio	Mic	On-board Mic	
	Speaker	External Speaker	
Power		USB Type-C 5V-1A	
Operating Temperature		0 ~ 50 C	
Dimension		40x40x36.5mm	
Power		5V 1A	

Port list

- 22: Used for remote ssh login and is open.
- 53: Related to DNS domain name and is required for web redirection. It is open by default.
- 80: The web dashboard interface for http display Node-Red Application.
- 554: Used for rtsp video stream.
- 9090: Used for web terminal. A password is required to log in.

- 1880: Node-red

Warranty Terms and Conditions

- This product is covered by a 1-year limited quality guarantee.
- Warranty coverage is limited to products purchased from the official Seeed Studio website or authorized distributors. Customers need to keep receipts and purchase vouchers.
- To apply for warranty service, please provide the purchased invoice and the device's serial number, and keep relevant documents safe.
- For more information on warranty terms, please visit https://wiki.seeedstudio.com/reCamera_warranty



Support

Tech support email:

If you encounter any issues while deploying or testing, please don't hesitate to contact our technical support team at techsupport@seeed.io, or refer to our online knowledge base, <https://wiki.seeedstudio.com>.

Customized service email:

For further information about customizations, welcome you to directly reach out at edgeai@seeed.cc, we will provide prompt reply.

Discord community:

Welcome to join our official community, where you can exchange product-related questions and get relevant support.

<https://discord.seeed.cc>



FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other

antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Operational Description

1. Peripheral

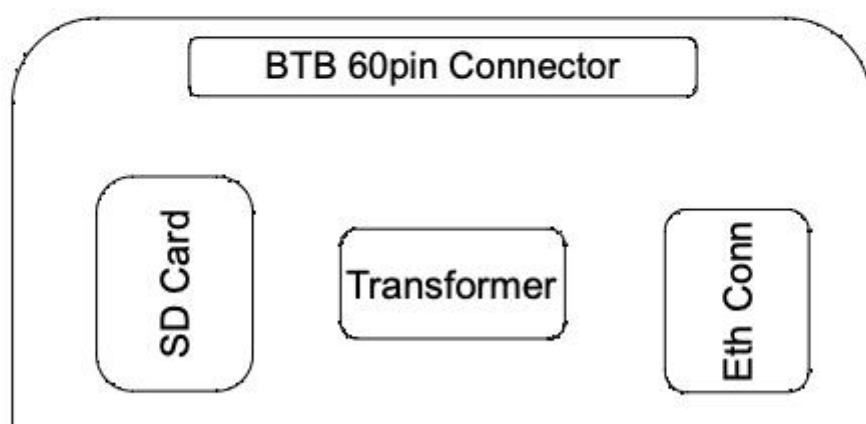
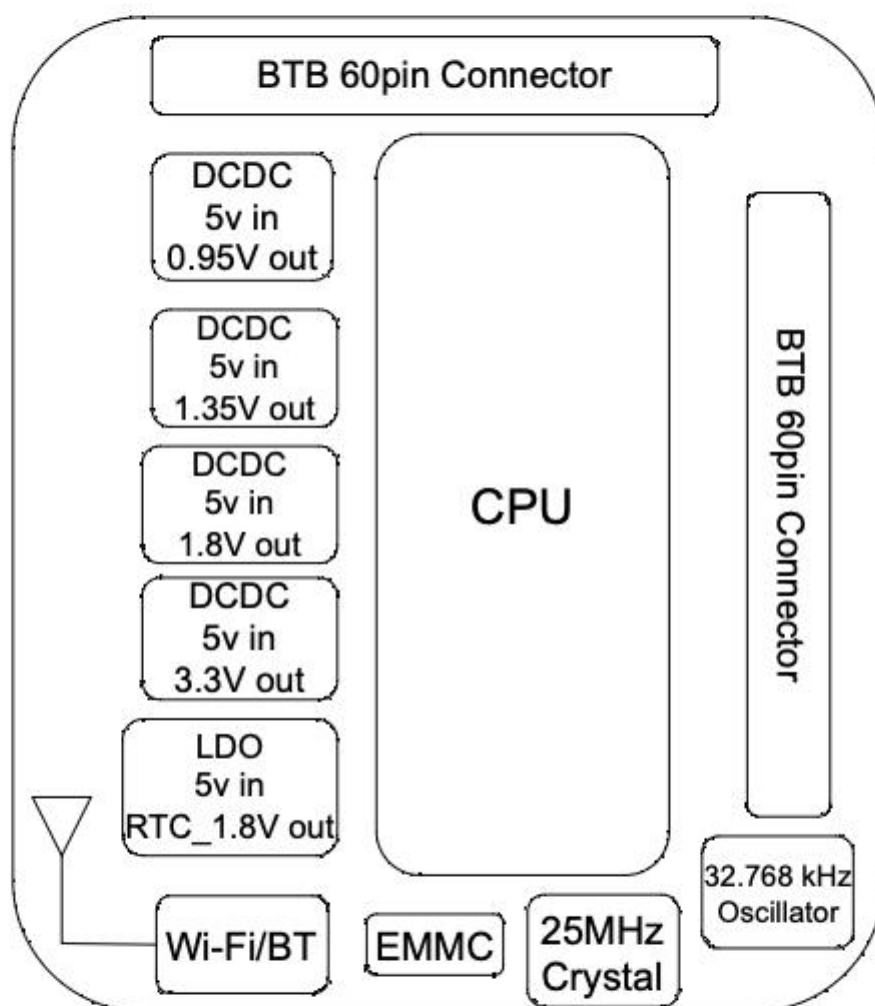
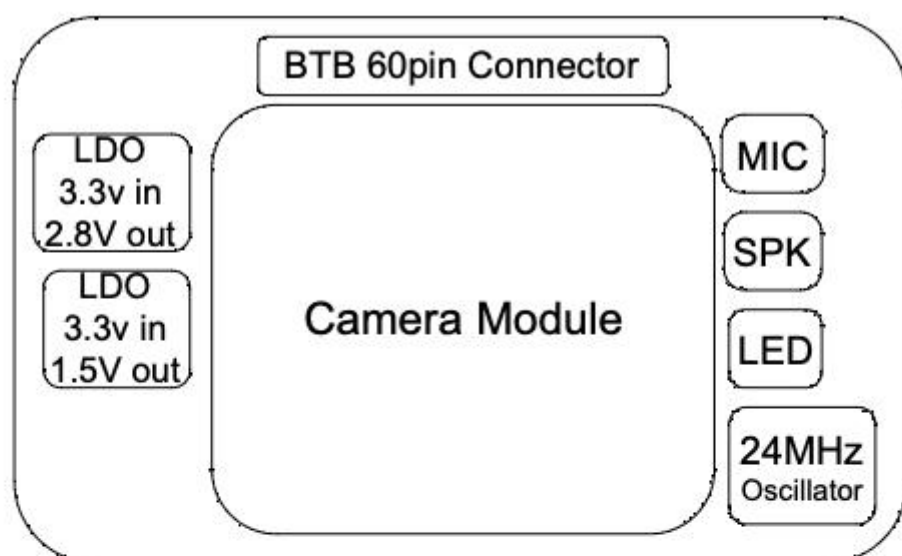
1pcs 100Mbit/s Ethernet RJ45 port

1pcs USB type C power port (also can be used to update firmware)

1pcs Micro SD card slot

2pcs buttons

Block Diagram



FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.