



4G Wearable Multi-functional Camera – F01

User Manual

V1.9



Statement:

- Thank you for purchasing our company's product. Please read this user manual carefully before use.
- If the product malfunctions during use, please promptly contact our after-sales staff.
- The product will be updated in real-time according to market demands, and the user manual and system program will also be updated accordingly. Upgrades may result in certain functions not matching the user manual. Please refer to the actual product or contact our customer service staff for assistance.
- Any losses incurred due to failure to follow the instructions in the user manual are the sole responsibility of the user.
- The final interpretation of this user manual belongs to our company.

Note:



- The installation and maintenance of this product should be carried out by professionals. Please refrain from disassembling or attempting repairs on your own.
- Avoid using the product in environments with strong electromagnetic radiation to prevent interference with the image signal.
- Avoid using the product in areas where it is exposed to direct sunlight or unstable light sources, as it may affect the lifespan of the photosensitive components.
- To ensure the safe use of the equipment, please use the provided power supply and keep it away from any potential fire sources.



FCC Warning

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.

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

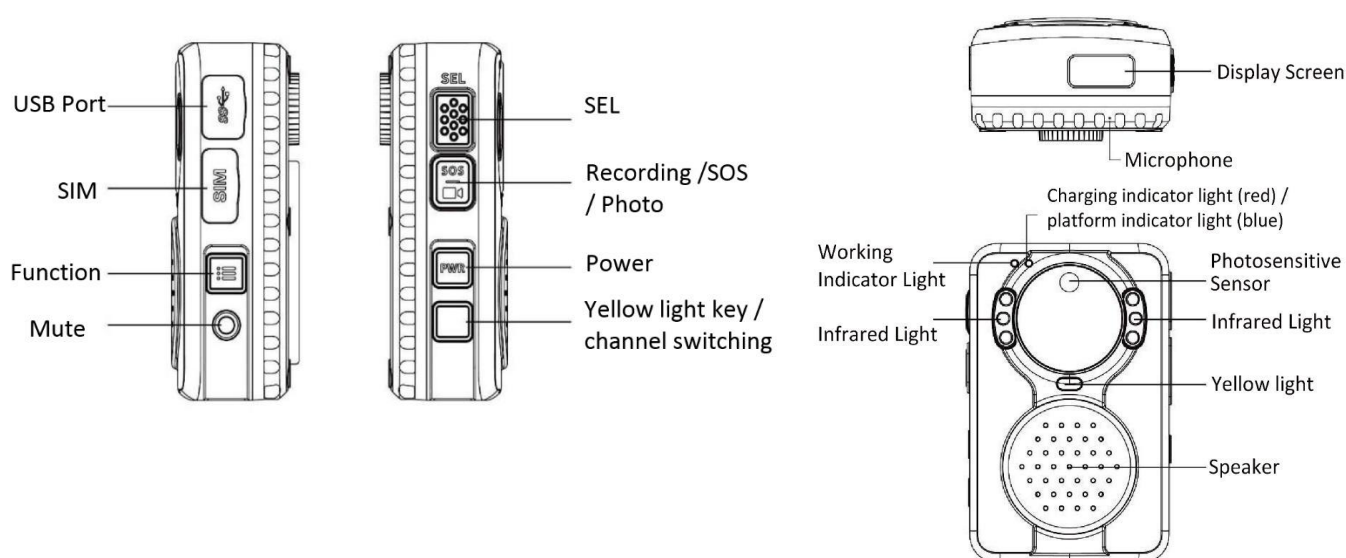
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio 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 FCC Statement of Exposure to RF and the SAR limit for the United States (FCC) is 1.6 W/kg average for each gram of tissue. This device was tested for typical operations of use on the body. This device was tested for typical operations 10mm from the body.

1.Product Introduction

The 4G Wearable Multi-functional Camera is a highly integrated device specifically developed for smart surveillance purposes. This device supports features such as photo capture, video recording, SOS alarm, multi-party intercom, infrared night vision, and 4G wireless transmission. It can directly upload live video, alarm messages, and audio to the platform server via 4G or Wi-Fi network environments. Users can view the transmitted images, alarms, and listen to the audio through the Commander Platform. The product is compact, lightweight, and easy to carry, allowing for convenient one-handed operation. It serves as an excellent tool for on-site disaster relief operations.






產品規格：

| | | |
|-------|---------------------------|--|
| Basic | Sensor | SONY IMX385 |
| | Chipset | Ambarella S5L |
| | HOV | $\geq 166^\circ$ |
| | Recording Resolution | 2 million pixels, JPG |
| | Frame rate | 1920X1080(FHD)+1280X720 (HD) |
| | images | 30 FPS |
| | video format | MP4 |
| | Compression | H.264 AVC/H.265 HEVC |
| | Dual stream | The main stream resolution is 4M (4 Megapixels) at 1080P, while the sub-stream resolutions include 720P, 480P, and CIF. |
| | LCD display screen | 0.68-inch 96*32 OLED screen. |
| Basic | Night vision compensation | LED yellow light compensation and infrared night vision capabilities. Clear facial expressions can be observed up to a distance of 5 meters, while human body contours can be distinguished up to a distance of 20 meters. |
| | IR | Automatic infrared night vision on/off, automatic switching between night and day. |
| | Data interface | Type C USB · Nano SIM |
| | Battery capacity | 6000mAh, 4 hours and 30 minutes |
| | 4G | Global frequency band |
| | full charge time | 4 hours and 30 minutes |
| | Wi-Fi | support 802.11b/g/n/a/ac, 2.4GHz & 5.2GHz |
| | GPS | GPS · Wi-Fi · LBS |





| | | |
|-------------------|-------------------|---|
| | support agreement | IPv4 , ARP, IEEE 802.1X, RTSP/RTP/RTCP, DHCP, NTP client |
| | SOS | SOS key press will be notificated on the platform (only for 4G/3G device) |
| | Storage | Built in 64GB eMMC |
| Working condition | Temperature | -20°C--60°C |
| | Humidity | >95% |
| | Waterproof | IP56 |
| Other | Size | 101mm(H) × 64mm(W) × 40mm(T) |
| | Wight | 270g |



1. Product Features

1.1. Key Description




| Butto n | Icon | Fashion | Function | Functional description |
|------------|---|-------------|-----------|--|
| Power |  | short press | No effect | <p>When the device is in the power-off state, there will be no visible or active functions. The device will remain inactive and unresponsive.</p> <p>When the device is in the power-on state, but not actively engaged in any actions or functions, it will also appear idle. There will be no visible or active movements or actions taking place on the device's screen or interface.</p> |
| | | long press | power on | <p>When the device is in the power-off state, you can initiate the power-on process by performing a long press of 3 seconds or more. Press and hold the designated power button or switch for at least 3 seconds until the device powers on and becomes active.</p> |



| | | | | |
|-----------|---|-------------|-----------------------------|---|
| | | | | <p>Conversely, when the device is in the power-on state, performing a long press of 3 seconds or more on the power button or switch will initiate the power-off process. Hold the power button for at least 3 seconds until the device shuts down and enters the power-off state.</p> |
| SEL |  | short press | navigate to the next option | <p>Short press the SEL button. This action will cause the menu page to scroll or move down to the next item.</p> |
| Recording |  | short press | recording video | <p>When the device is in the power-on state and you are on the recording preview interface, you can start recording by pressing the designated button or icon once. This action will initiate the recording process, and the device will start capturing video.</p> <p>To stop the recording, press the same button or icon again. This will signal the device to stop recording, and the captured video will be saved.</p> |
| Photo |  | short press | photo | <p>In the pause recording mode, you can switch to the photo mode by performing a short press on the designated function button. This action will transition the device from video recording mode to photo mode.</p> <p>Once you are in the photo mode, you can capture a photo by performing a short press on the SOS/record button/camera button (whichever is applicable on your device). This action will initiate the photo capture process, and the device will capture a still image.</p> |
| SOS |  | long press | SOS alarm | <p>When the device is connected to the platform, performing a long press (3 seconds or more) will</p> |

| | | | | |
|--------------------------------------|---|-------------------|---|--|
| | | | | <p>trigger an audible alarm sound. This audible alarm serves as an alert or warning signal.</p> <p>However, if the device is not connected to the platform, performing a long press will only trigger a vibration response from the device, typically in the form of button feedback or haptic feedback.</p> |
| Yellow light key / channel switching |  | short press twice | switch channels | When the device is connected to the platform server, performing two short presses in quick succession will trigger the channel switching functionality. |
| | | long press | Yellow light | When you are on the power-on preview interface, you can control the yellow light by performing a long press on the designated button for 1-3 seconds. |
| Function |  | short press | Video/Photography/Function Confirmation | <p>In the preview interface, performing a short press will switch to the recording/photo interface.</p> <p>In the menu interface, a short press is used for confirmation or selection.</p> <p>While in the recording mode, a short press will not trigger any specific action.</p> <p>When the screen is turned off, performing a short press on the designated button will illuminate the screen.</p> |
| | | long press | enter menu | <p>In the preview interface, performing a long press will enter the menu interface.</p> <p>To enter the menu interface, follow these steps:</p> <ol style="list-style-type: none"> 1. Make sure you are in the preview interface. |





| | | | | |
|----------|---|-------------|------|--|
| | | | | <p>2. Locate the designated button or icon for accessing the menu interface.</p> <p>3. Perform a long press, usually lasting for 1 second or longer.</p> <p>4. This will trigger the action to enter the menu interface and display relevant options and functions.</p> <p>While in the recording mode, a long press does not trigger any specific action.</p> |
| SIM |  | card | SIM | Inserting the SIM card enables real-time transmission of images with the platform. |
| USB Port |  | USB Port | USB | Data transmission interface: This is the interface used to transfer data, such as images and videos, between the device and other devices or platforms. It can be a USB port, a wireless connection (such as Wi-Fi), or any other interface that facilitates data transfer. |
| Mute |  | short press | Mute | Pressing the mute button once will put the device in mute mode, indicating that the speaker is turned off. Pressing the mute button again will cancel the mute and turn on the speaker. |










2.2 Indicator Light Explanation




| Indicator Light Names | Functional description |
|--------------------------|---|
| Charging indicator light | <p>During the charging process, the indicator light will be red.</p> <p>Once the battery is fully charged, the red indicator light will automatically turn off.</p> |

| | |
|--------------------------|---|
| Platform indicator light | When connected to the platform server, the blue indicator light will illuminate. When the connection to the platform server is disconnected, the blue indicator light will turn off. |
| Working indicator light | <p>1.During the recording process, the yellow light remains continuously lit.</p> <p>2.When taking a photo, the yellow light will flash briefly.</p> <p>3.When the battery is low, the red light will flash.</p> <p>4.The flashing yellow light indicates a pause in the recording state.</p> |
| IR | When using night vision, the image switches to black and white. In this mode, the device activates the infrared light to provide illumination. |
| Yellow light | It can be used as an illumination light and a fill light. |

2.3 Interface Icon Explanation

| Status | Definition |
|---|---|
| Bar Icon | |
|  | Turn on GPS. This icon indicates that GPS is not acquiring a signal. |
|  | Turn on GPS. This icon indicates that GPS has successfully acquired a signal. |

| | |
|---|--|
|  | <p>4G enabled. This icon indicates that the device has acquired a 4G signal.</p> <p>The black bars represent signal strength, with 3 bars indicating the strongest signal.</p> |
|  | <p>With an X icon, it indicates that the device is not able to connect to the 4G signal.</p> |
|  | <p>When the device is connected to a usable network, and a cloud icon appears on the preview interface, it indicates that the device can connect to the platform.</p> |
|  | <p>Wi-Fi enabled, the white icon indicates successful Wi-Fi connection, and the white curved lines represent signal strength. Three curved lines indicate the strongest signal.</p> |
|  | <p>Wi-Fi enabled, the white icon indicates that the device is not connected to Wi-Fi.</p> |
|  | <p>Indicates that the device is in AP Mode.</p> |
|  | <p>Indicates the current remaining battery level of the device. When it displays as empty and shows 'Power off xx seconds,' it means the device's battery is critically low and will shut down soon.</p> |
|  | <p>Indicates that the device's battery is fully charged.</p> |
|  | <p>Start recording, simply press the Record/Capture button to start recording.</p> |

| | |
|--|---|
|  00:00:30 | Recording in progress, the timer is continuously counting, indicating that the device is currently recording. |
|  | In photo mode, press the Record/Photo button once to capture a photo. |
|  006784 | In photo mode, it indicates the remaining number of available shots. |
| 14:33:25 | It indicates the current time of the device. |

2.4 Charging instructions.

This high-definition camera comes with a built-in rechargeable battery. When charging, please use a compatible charger (DC 5V/3A). During charging, the red indicator light will remain on, and it will turn off when the charging is complete.

2.5 Introduction to Basic Functions

2.5.1 Power On/Off

In power-off state, press and hold the power button for more than 3 seconds to turn on the device. It will emit a startup sound and enter the image preview interface once the startup is successful. In power-on state, press and hold the power button for more than 3 seconds to turn off the device. It will emit a shutdown sound and power off.

2.5.2 Image Preview

If F01 is already connected to the platform server, you can preview the live video feed through Wi-Fi or 4G connection on the Windows iCommander or iOS iCommander app.

2.5.3 Recording

In the power-on state, press the menu button to switch to the recording mode. When the LCD screen displays the recording interface, press the recording button to start recording. The recording time will be displayed on the LCD screen, and the working indicator light will turn yellow as shown in the following image.



Translation: "During recording, press the recording button again to end the recording. The device will automatically save the recorded file. The screen will display the time interface, and the yellow working indicator light will turn off. The recording files are saved in the format of '20220221_xxxx_0001000x.mp4,' where the first 8 digits '20220221' represent the date (year, month, day), and the middle and last digits 'xxx_0001000x' represent the serial number. You can view or play the

recordings by connecting the device to a computer, as shown in the following image."



2.5.4 Taking photos

In the powered-on state, press the recording button/SOS/take photo button briefly to switch to pause recording. Then, press the function button briefly to switch to photo mode. When the LCD screen displays the photo interface, press the capture button to take a photo. During capturing, the working indicator light will flash yellow briefly. The following image shows the photo mode.



During capturing, the LCD screen will briefly display the remaining number of available photos. After capturing, it will return to the time screen, and the yellow



working indicator light will turn on and off. The photos are saved in the format of '20220222_xxxx_0001~000x.jpg' and can be viewed by connecting the device to a computer. The following image shows the photo mode.



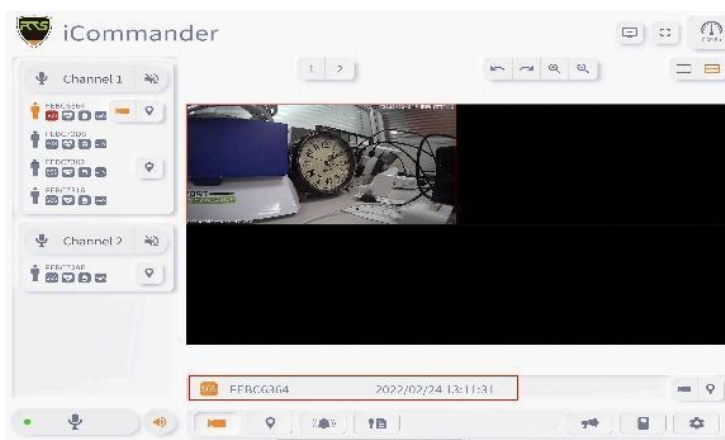
2.5.5 Light Compensation

In the preview interface or during recording, long-press the "Yellow Light Button/Channel Switch" for 1-3 seconds to turn on/off the yellow light. In low-light conditions, the yellow light can be used as an illumination light and fill light. Refer to the image below for reference.



2.5.6 SOS Alarm

When connected to the platform server, long-pressing the SOS button will immediately trigger the SOS alarm on the device, emitting an SOS alert sound. Simultaneously, an SOS message will be sent to the server. The SOS messages can be viewed on the iCommander App, as shown in the first image (Image 1). If the device is not connected to the platform, long-pressing the SOS button will only trigger a vibration response, as shown in the second image (Image 2).



(Image 1)



(Image 2)

2.5.7 Speaker On/Off Switch

To turn off the speaker, short press the mute button. To turn on the speaker, short press the mute button again. Refer to the image below.

Note: When the speaker is turned off, the SOS alarm sound, power-off beep, and speaker during intercom are all disabled.



2.6 Menu Introduction

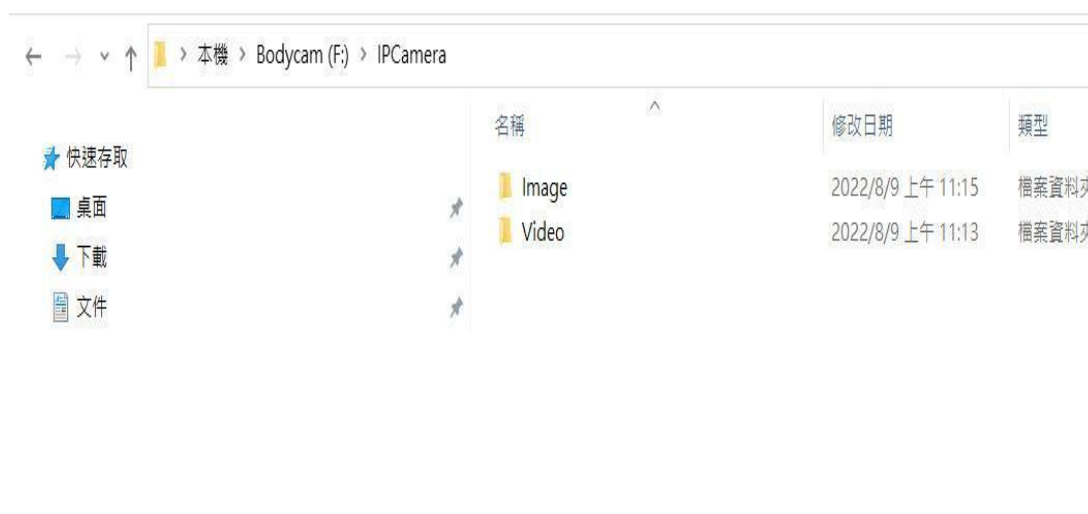
2.6.1 Main Menu

When in the preview interface, long-press the function button to enter the main function settings interface. The main menu options include USB settings, LTE settings, Wi-Fi settings, platform IP settings, GPS settings, system information, and exit. In the menu interface, short-press the function button to confirm, and short-press the SEL button to move to the next function item.

2.6.2 USB Settings

- U-Disk Mode: When 'U-Disk Mode' is selected, the camera can be directly connected to a computer via a USB cable. In this mode, the device acts as a portable disk, allowing the computer to access the data inside the device, including video files and image files. Refer to the second image for the 'video' directory and 'image' directory.
- USB Settings 'OFF': This means that the U-Disk mode is turned off.





2.6.3 LTE Settings

In the powered-off state, insert a 'Nano-SIM' 4G card (supporting full network coverage) into the designated slot.

In the 4G settings interface, set LTE to 'ON', and the device will automatically connect to 4G. Once the 4G connection is successful, the preview interface will display a white 4G signal icon, as shown in the following image, indicating that it has connected to the platform server.

(Refer to the appendix at the end of the document for instructions on installing the SIM 4G card)



2.6.4 Wi-Fi Settings

- In the Wi-Fi settings interface, when Wi-Fi is set to 'ON', the device turns on Wi-Fi. When both Wi-Fi and 4G are enabled, the device will prioritize using the Wi-Fi network.
- In the Wi-Fi settings interface, when Wi-Fi is set to 'OFF', the device turns off Wi-Fi.
- When the Wi-Fi settings interface activates 'AP' mode, it enters the AP mode state. At this time, when you scan for Wi-Fi networks on your PC, you will see the RTS-F01 SSID with the password: 12345678. This AP mode is primarily used for the Web Config page. For more details, please refer to Chapter 2.7.

2.6.5 Platform Communication Settings

Platform Server: Press and hold the function key on F01 to enter the Cloud settings page. Set the relevant parameters as shown in the following figure:

Cloud: Set to 'ON' to enable the platform server.

Set to 'OFF' to disable the platform server.

IP: Enter the IP address of the platform server. The following figure shows an example IP.



Steps to Connect F01 to the Platform Server:

1. Set the Server IP in the Cloud settings of F01 and set Cloud to 'ON.'
2. Turn on 4G or Wi-Fi. When the device is connected to an available network, it will automatically connect to the platform server.



3. Once F01 is successfully connected to the platform server, a cloud symbol will appear on the preview interface of F01, and a voice prompt will indicate the successful connection to the platform.

4. After connecting to the platform, F01 can perform operations such as image preview, recording, photography, monitoring, GPS positioning, and receiving alarms through the platform. The device's GPS location is uploaded in real time to the platform server. Pressing the SOS button for more than 3 seconds triggers an alarm and sends alarm information to the platform server, which can be viewed through the iCommander app. (For specific operations of the iCommander app, please refer to the iCommander App User Manual)."

2.6.7 GPS Settings

In the GPS settings menu, selecting "ON" enables the positioning functionality on the device, allowing the platform to search for the device's location coordinates. Selecting "OFF" in the GPS settings menu disables the positioning functionality on the device.

When the positioning functionality is turned on, the device's LCD will display a location+ symbol to indicate successful positioning. If the display shows a crossed-out location symbol, it indicates unsuccessful positioning.

The device uses GPS positioning as the first priority if GPS signal is available. If there is no GPS signal, it will use WiFi positioning as the second choice.

Generally, GPS signals are stronger outdoors, making it easier to determine the location, while indoors, Wi-Fi positioning is generally used.

Once the device is online on the platform, the location information is sent to the platform server in real-time after successful positioning.



2.6.8 System Information

Long press the function key to enter the menu mode, then press the SEL button to navigate down the options. In the System menu, you can view the system version number.



2.7 Web Configuration: Connecting F01 to the Platform Server

1. Long press the menu key on F01 to enter the menu mode. Navigate to the Wi-Fi option using the menu key, and use the SEL button to move to AP Mode, as

shown in the first image below. Press the menu key to select AP Mode, and F01 will enter AP Mode, as indicated by the red box in the second image below.

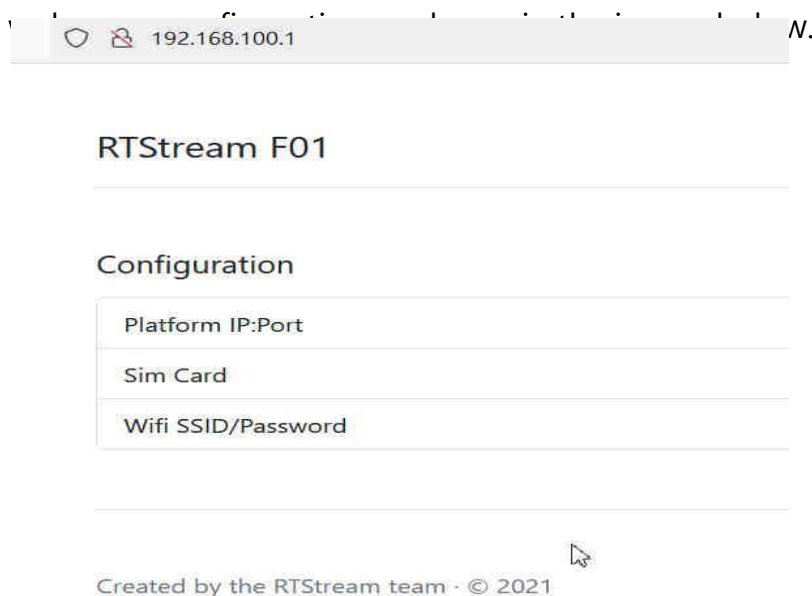


Next, please disable and re-enable the Wi-Fi on your laptop. Then, perform another scan for available SSIDs. You will see RTS-F01, as shown in the first image below. Connect to RTS-F01 using the password: 12345678. At this point, F01 will assign an IP address to your PC, as shown in the second image below.





At this point, open your browser and enter <http://192.168.100.1>. You will see the



If you are using LTE 4G on F01, the configuration steps are as follows: Platform IP: Port ---> SIM Card. Once you have configured the Platform IP ---> SIM Card, the setup is complete, and F01 will exit AP mode. The Platform IP refers to the RTS Server IP, as shown in the two images below. In the second image, on the SIM Card page, if your company has applied for a mobile fixed IP or MDVPN,



you need to enter the APN string. For example, if it is 'ip1', you should change 'internet' to 'ip1' or 'ip2' based on the APN string provided by the telecommunication company. Then press 'Confirm' and a 'Success' message will appear. Wait for about 5-7 seconds, and F01 will exit AP mode. Finally, power off and restart F01.

The following image is an example of an IP address.

192.168.100.1/platform.html

RTStream F01

Platform

☒ Enabled

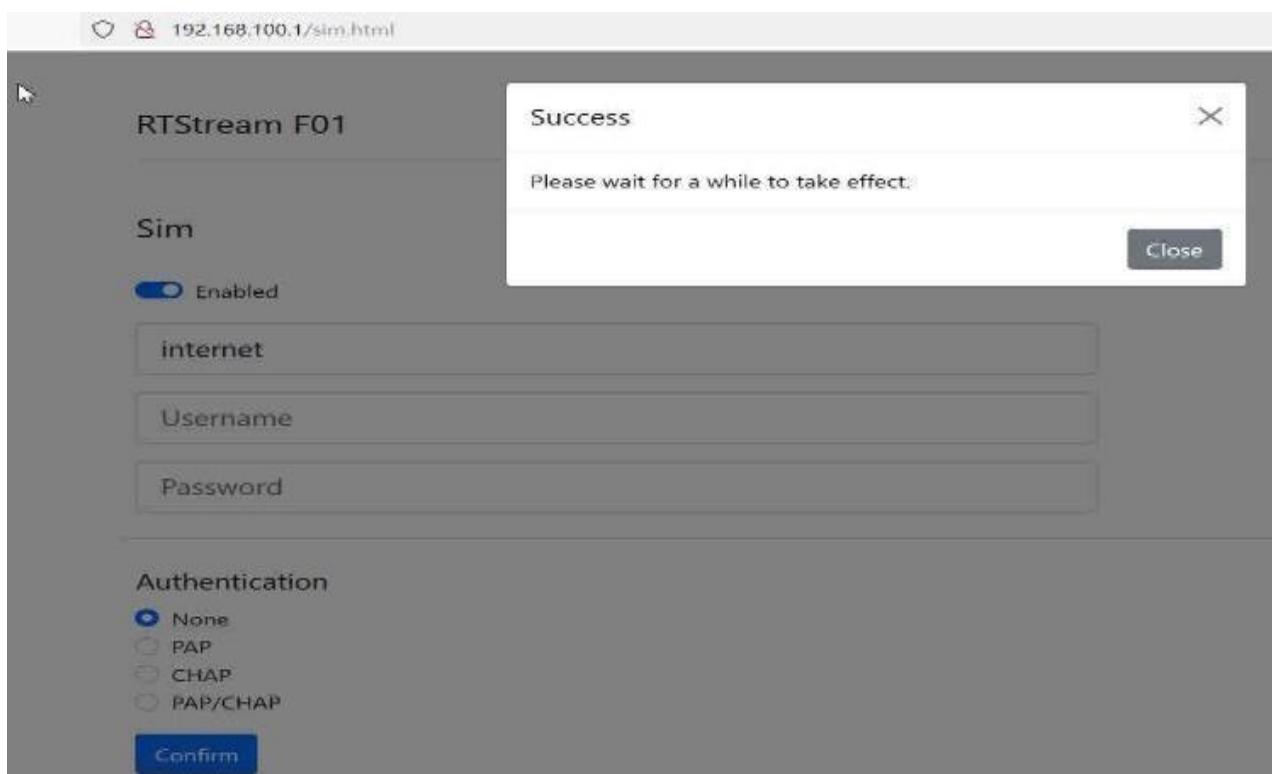
118.163.96.50

8000

Confirm

Set Authentication to None

For the APN string, the default value is 'Internet' as shown in the image. If it is MDVPN or a mobile fixed IP, please refer to the string provided by your telecommunication company and enter it



192.168.100.1/sim.html

RTStream F01

Sim

☒ Enabled

internet

Username

Password

Authentication

☒ None

☐ PAP

☐ CHAP

☐ PAP/CHAP

Confirm

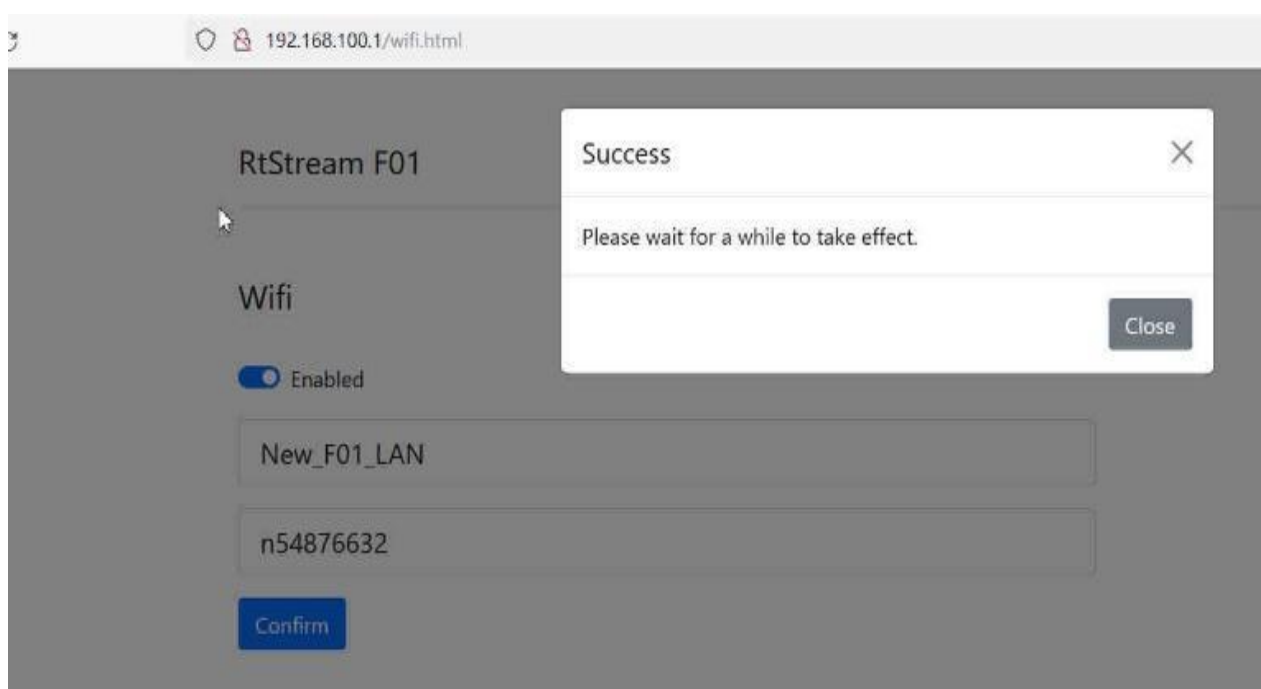
Success

Please wait for a while to take effect.

Close

If F01 is connected to the internet via Wi-Fi, follow the steps below. In the order given, set the Platform IP, then the Wi-Fi SSID and password. After receiving the Success message, wait for approximately 5-7 seconds. The settings are considered complete, and F01 will exit AP Mode. Proceed to power off and restart F01.

The following image is an example of SSID and password



1. 4G SIM card installation method:

With the device powered off, open the protective cover on the slot labeled SIM. Use a pin to push the card holder release button located next to the SIM card slot. The card holder will pop out, allowing you to remove it. Install the 'Nano-SIM' 4G SIM card following the indicated direction on the slot. Gently push it inside, as shown in the image below.



2. IMEI Number Inquiry

2.1 After inserting the SIM card and powering on the F01 device with 4G activated, perform the following steps:

Long-press the function key to access the Wi-Fi menu and set it to AP mode (refer to section 2.7 - Web config for details). Access the Web config page.

192.168.100.1/sim.html in the

RTStream F01

Sim

IMEI: 862/080414/5067

☒ Enabled

APN

Username

Password

Authentication

☒ None
 ☐ PAP
 ☐ CHAP
 ☐ PAP/CHAP

Confirm



If the device cannot be powered on and the buttons are unresponsive, please follow these steps:

1. Connect the device to the power cord and press the power button to see if it can turn on.
2. Charge the device for 2 hours and check if the issue is resolved.
3. Verify if the charger and connection cable are functioning properly.
4. If the problem persists and cannot be resolved, please contact sales1@rtstream.com for further assistance.

If you are experiencing issues with connecting to the platform or no video feed despite having a 4G signal, please follow these steps:

Check if the SIM card has been replaced. If you have replaced the SIM card, make sure to disable the PIN code of the new SIM card. Otherwise, the device won't be able to connect to the network.

1. Verify if the contract period of the SIM card has expired. If it has expired, you may need to contact your Internet Service Provider (ISP) to replace the SIM card.



2. Even if there is a signal, ensure that the SIM card on the F01 device has an upload bandwidth of at least 4 Mbps.

Customer Service

1. Contact Information in Taipei:

Website: www.rtstream.com

e-mail: support@rtstream.com.tw

Tel: 02-22807099