



Ai-Thinker AiPi CamD Firmware Development Board User Guide

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Ai-Thinker AiPi CamD Firmware Development Board



Product Information

Specifications:

- **Firmware Version:** AiPi-Cam-D
- **Firmware Burning Tool Version:** bouffalolabdevcube-v1.8.3
- **Firmware Download Link:** [Download](#)
- **Firmware Source Code:** [GitHub](#)

Product Usage Instructions

Firmware Burning

To burn the firmware onto the module, follow these steps:

1. Connect the cables to the serial port of the module.
2. Download the firmware burning tool from [here](#).
3. Download the firmware from the [GitHub repository](#).
4. Start the burning tool.
5. Press and hold the download button on the module.
6. Press the reset button on the module and release it.
7. The module will enter the burning mode.

Use Steps

USB Camera

To use the USB camera feature, follow these steps:

- Connect the DVP camera to the module via the FPC socket.

Use Steps

To use the module, follow these steps:

1. Power on the module.
2. Use a mobile phone or computer to connect to the Wi-Fi hotspot named "AiPi-Cam" with password "12345678".
3. Open a web browser and enter the website <http://192.168.169.1>.
4. Click on "Start Stream" to check if the camera image is displayed.

Additional functions:

- To take a screenshot, press the S2 (Boot) button. The screenshot will be saved in JPG format on the inserted SD card. The images are named numerically starting from 0.
- To view the saved images, remove the SD card from the module and use a card reader to access its contents.
- To enable the LED flash function, long press the S2 (Boot) button for about 2 seconds and release it. Repeat the operation to turn off the flash.

Shooting Rendering:

The module's LED light function can be used for shooting rendering. When the flash function is turned on, the LED light will illuminate. Corresponding information will also be printed on the serial port.

FAQ

- **Q: How can I download the firmware burning tool?**

A: You can download the firmware burning tool from [here](#).

- **Q: Where can I find the firmware source code?**

A: The firmware source code is available on the [GitHub repository](#).

- **Q: How do I take a screenshot?**

A: Press the S2 (Boot) button to take a screenshot. The image will be saved in JPG format on the inserted SD card.

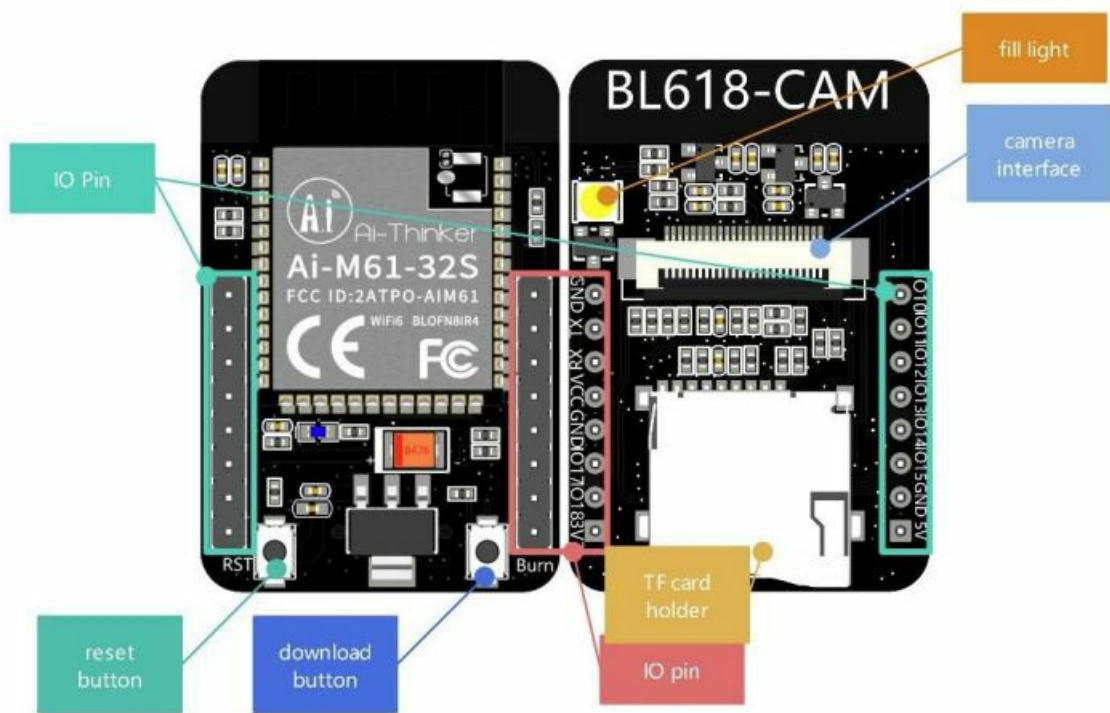
- **Q: How can I view the saved images?**

A: Remove the SD card from the module and use a card reader to access its contents.

- **Q: How do I enable the LED flash function?**

A: Long press the S2 (Boot) button for about 2 seconds and release it to turn on the flash function. Repeat the operation to turn it off.

OVERVIEW



Firmware burning

1. Connect cables to the serial port

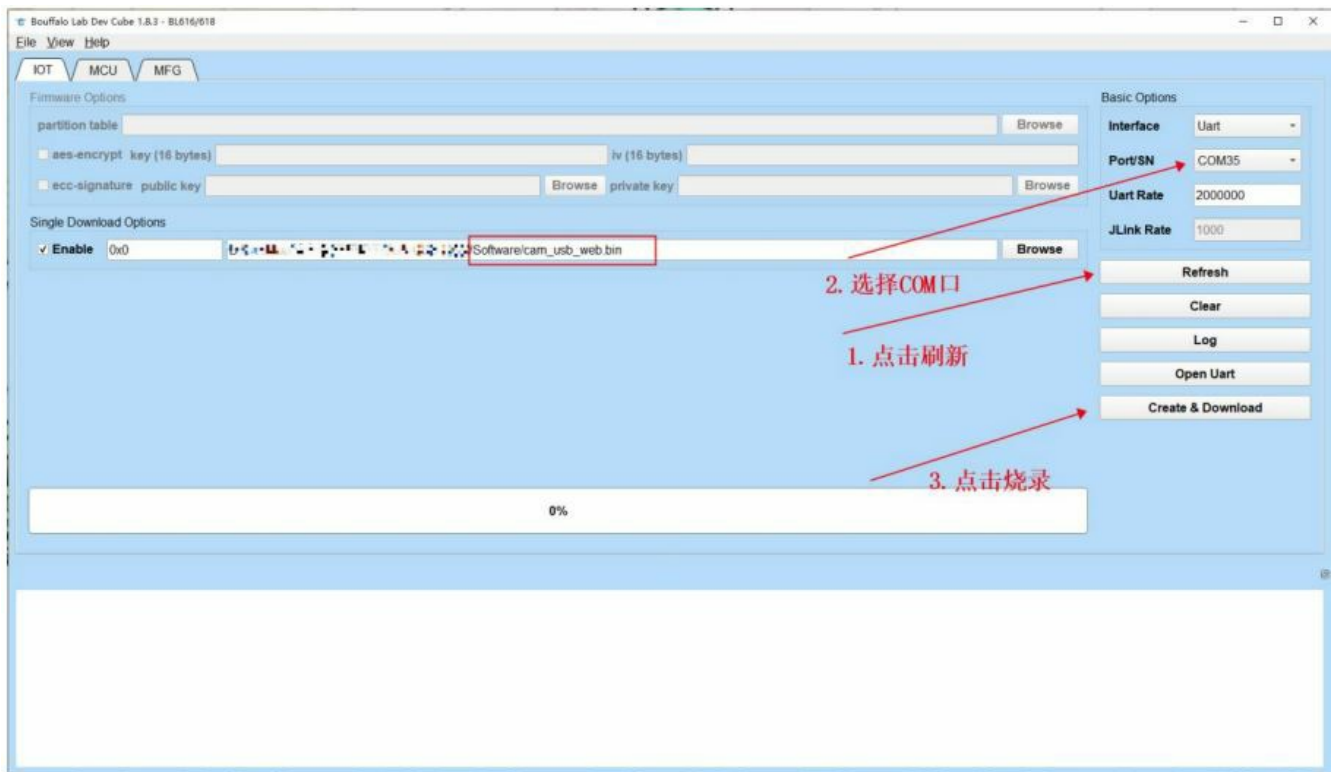
USB转TTL	小安派-Cam
VCC	5V
GND	GND
TXD	RXD
RXD	TXD

2. Burn

Burning tool Download: https://docs.ai-thinker.com/_media/bouffalolabdevcube-v1.8.3.zip

Firmware address: <https://github.com/Ai-Thinker-Open/AiPi-Open-Kits/tree/master/AiPi-Cam> After the burning tool starts, press and hold down the “download button” and then press the “reset button” and release it to enter the burning mode.

The steps are as follows:



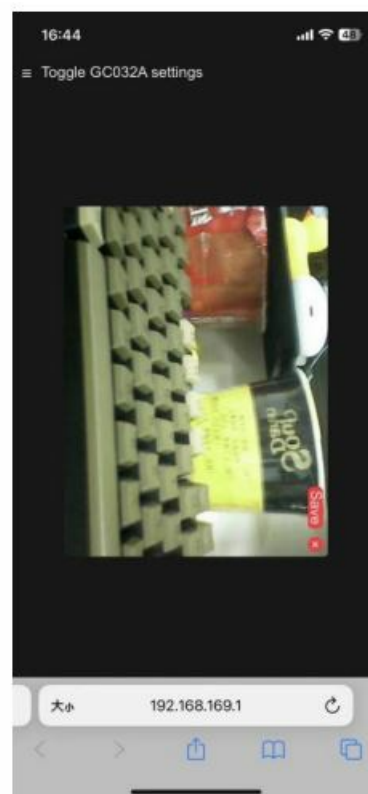
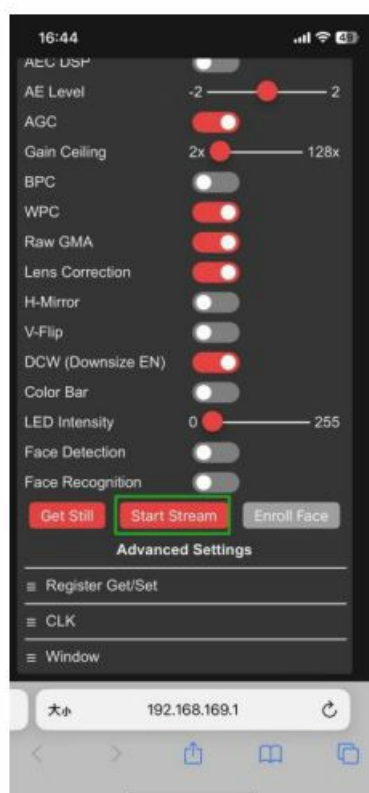
Use Steps

USB Camera

DVP camera is accessed through the FPC socket.

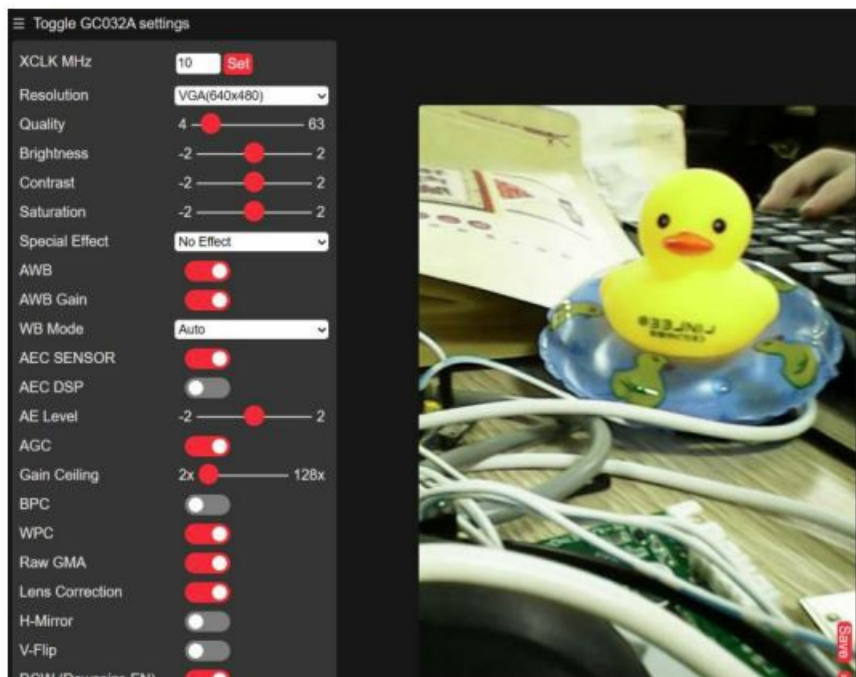
Use Steps

Power on, use mobile phone or computer to connect to hot spot: AiPi-Cam, password: 12345678, Open the web page, enter the website 192.168.169.1, and click Start Stream, whether there is a camera image, as shown below:



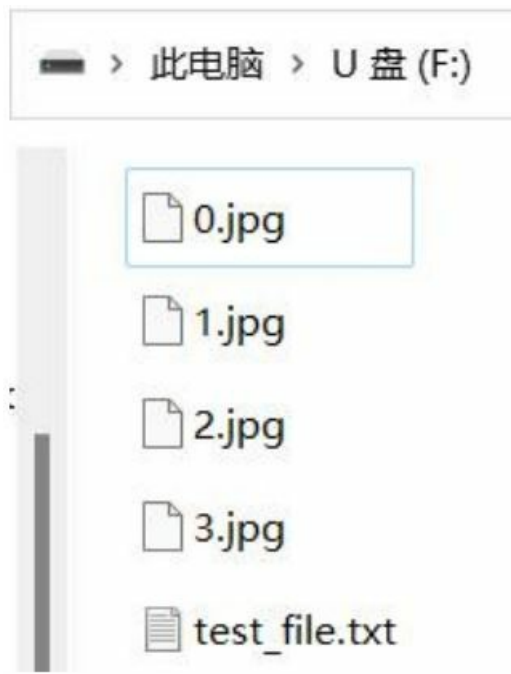
When the module is inserted into an SD card, it supports the photo function. You can take a screenshot of the

current page and save it to the SD card. The image format is JPG. The way to take pictures is to press the S2(Boot) button. The pictures are saved to the SD card and are named by a number, counting from 0. Here are some photos of the duck, as shown:



```
[10:57:47.578]收←◆1 = press_mode
[10:57:49.105]收←◆□[0m[I][MAIN] Write Succeed! photo cnt:0
□[0m[I][MAIN] Write data size:24983 Byte, written size:24983 KB
[10:58:05.710]收←◆1 = press_mode
[10:58:13.642]收←◆[FH]fhost_send_80211_frame fhost_tx_req fail (ret:-3)!
[FH]fhost_send_80211_frame fhost_tx_req fail (ret:-3)!
[10:58:13.695]收←◆[FH]fhost_send_80211_frame fhost_tx_req fail (ret:-3)!
[FH]fhost_send_80211_frame fhost_tx_req fail (ret:-3)!
□[0m[I][MAIN] Write Succeed! photo cnt:1
□[0m[I][MAIN] Write data size:27944 Byte, written size:27944 KB
[10:58:13.768]收←◆[FH]fhost_send_80211_frame fhost_tx_req fail (ret:-3)!
[FH]fhost_send_80211_frame fhost_tx_req fail (ret:-3)!
[10:58:16.499]收←◆1 = press_mode
[10:58:21.117]收←◆□[0m[I][MAIN] Write Succeed! photo cnt:2
□[0m[I][MAIN] Write data size:27320 Byte, written size:27320 KB
[10:59:11.267]收←◆1 = press_mode
[10:59:22.949]收←◆□[0m[I][MAIN] Write Succeed! photo cnt:3
□[0m[I][MAIN] Write data size:35268 Byte, written size:35268 KB
[10:59:58.327]收←◆WPA AP-STA-DISCONNECTED A8:6D:AA:ED:B0:2F
□[0m[I][MAIN] [APP] [EVT] [AP] [DEL] 7133312101602295808
```

Remove the SD card of the module, use the card reader to read the contents of the SD card, you can see that the picture has been saved to the SD card.



Shooting Rendering:




The module is also equipped with LED light function, long press S2 (Boot) button for about 2 seconds and release, will turn on the flash function, repeat the operation will turn off. The effect is shown below:



The serial port will also print the corresponding information:

```
[11:15:31.898]收←◆led_ctrl:1  
[11:15:34.963]收←◆led_ctrl:0
```

Documents / Resources

 <p>1. Firmware burning</p> <p>1.1 Connect cables to the serial port</p> <table border="1"><thead><tr><th>Pin</th><th>Signal</th></tr></thead><tbody><tr><td>1</td><td>GND</td></tr><tr><td>2</td><td>TX</td></tr><tr><td>3</td><td>RX</td></tr><tr><td>4</td><td>GND</td></tr></tbody></table> <p>1.2 Burn</p> <p>Burning the firmware</p> <p>1. Connect the USB to the PC</p> <p>2. Run the command: <code>python3 burn.py</code></p> <p>3. Wait for the completion of the burning process</p>	Pin	Signal	1	GND	2	TX	3	RX	4	GND	<p>Ai-Thinker AiPi CamD Firmware Development Board [pdf] User Guide</p> <p>AiPi CamD Firmware Development Board, AiPi CamD, Firmware Development Board, Development Board, Board</p>
Pin	Signal										
1	GND										
2	TX										
3	RX										
4	GND										

References

- [AiPi-Open-Kits/AiPi-Cam at master · Ai-Thinker-Open/AiPi-Open-Kits · GitHub](#)
- [User Manual](#)