

BIGTREETECH

Panda PWR

User Manual



Product Link: [BIGTREETECH Official Website](#)

Important Usage Information

- In Panda Touch connection mode, should the IP address of the Panda PWR change, you must bring the Panda Touch close to the Panda PWR to acquire the updated IP address.
- Keep the product in a dry area. Do not use in moist environments.
- When connecting to a 220VAC input, first connect the input wires on the Panda PWR before connecting the wires to the socket.
- The TYPE-C port can only be used for input.
- The USB-A port can only be used for output.

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.

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.

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. Use only the supplied antenna.

Revision Log

Version	Date	Revisions
v1.00	August 28th, 2024	Initial Version

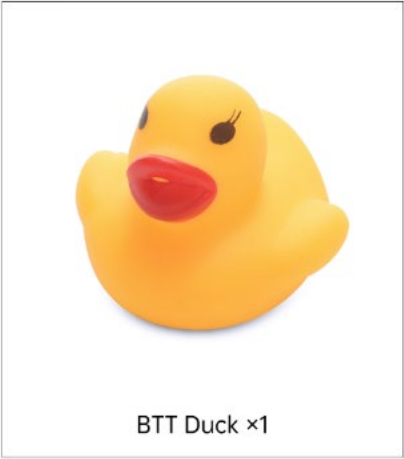
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1. Basic Specifications

Wi-Fi Module	ESP8684-MINI-1-H4
Memory	RAM - 272KB, Flash - 4MB
Connection	2.4G Wi-Fi (IEEE 802.11 b/g/n)
Operating Temperature	-10°C to 60°C

2. Packaging List



3. Operation Guide

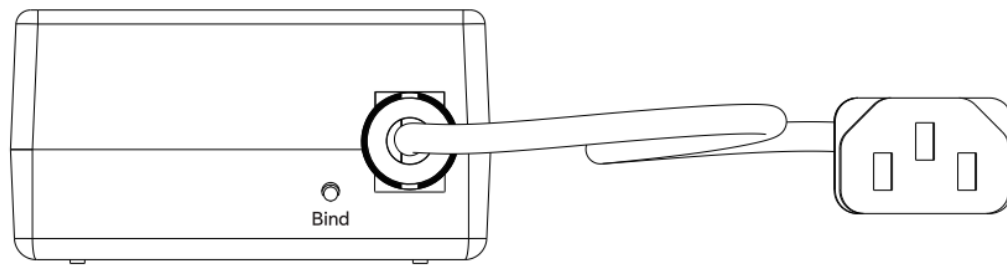
3.1. Interface Description



3.1.1. USB Interface

- **USB1**
5V output, controllable, used for modules that require control switches, such as a USB light strip.
- **USB2**
5V output, always on, can provide power to certain modules, such as Panda Touch.
- **TYPE-C**
Utilized for firmware updates and restoring factory settings.

3.1.2. Button Description



- **Bind a Panda Touch**
Press and hold for about 3 seconds to enter binding mode. Place the Panda Touch on the shell of Panda PWR.
- **Activate the 220V Output**
Double-click the Bind key.
- **Restore Factory Settings**
Press and hold the button for approximately 8 seconds until the indicator light flashes red, indicating that the PWR is resetting.

3.1.3. Indicator Light Description

- **Blue:** Operating in LAN standalone mode.
- **Blue Pulse:** Searching for a Panda IoT Device to bind with.
- **Green:** Normal communication with a Panda IoT Device.
- **Green Flashing:** A communication error with a Panda IoT Device.
- **Red Pulse:** The device is performing a factory reset.

3.2. First Connection

Upon initial setup, the Panda PWR will generate an access point with the default name 'PandaPWR_XXXXXX', where 'XXXXXX' represents a random sequence of six uppercase letters. The default password is a nine-digit number: '987654321'.

3.2.1. Configure the Network Settings

1. Using your mobile phone or PC, connect to the AP named 'PandaPWR_XXXXXX'.



2. Enter the IP address '192.168.4.1' into the browser of your connected device (phone or PC). Typically, after entering the AP password, you should be automatically redirected to the web user interface (UI).

connectivitycheck.platf...

Hello!

Welcome to Panda PWR

;)

PWR Wi-Fi

Connect Panda PWR to your local WiFi

WiFi Select选择

C Refresh

biqu-2.4G-T

WiFi Password密码

Connect连接

Close关闭

3. Choose the Wi-Fi network you wish to connect to and enter its password.

connectivitycheck.platf...

Hello!
Welcome to Panda PWR
;)

PWR Wi-Fi
Connect Panda PWR to your local WiFi

WiFi Select选择 **Refresh**

biqu-m

WiFi Password密码

Connect连接

Close关闭

4. Press the 'Connect' button. Following this, you will be automatically redirected to the control (ctl) page where you can find the updated IP address on the 'Wi-Fi & IP' page.

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PWR Dashboard
V Voltage: 234.0V
A Current: 0.12A
P Power: 15.0W
Energy Usage: 0.016KW/H
Power USB 1 Reset usage
Start shutdown timer定时关机

**You are successful
Connected
the Wi-Fi ! 连接成功**
STA IP信息
192.168.1.104
• If no IP is shown in the STA IP field then check if the PWR network status shows 'Connected'. If it's 'Not Connected' then configure the network settings for PWR first.
Configure Wi-Fi 配置

Wi-Fi&IP AP Ctrl OTA

Wi-Fi&IP AP Ctrl OTA

3.2.2. Configure the AP Name and Password

For easier identification, especially when multiple units are in use, we recommend renaming the AP.

- Navigate to the AP page by clicking the "AP" button, where you can modify the AP name and password. Confirm changes by clicking the "OK" button.

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Panda PWR

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PWR AP信息 !

AP Name名称

PandaPWR_BTT

AP Password密码

123456789

OK 确认

- Set the PWR AP name using the 'AP Name' field. We recommend changing the default 'AP Password'. If you forget the password, you'll need to hold the 'bind' button for 8 seconds to reset it to the factory default.

Wi-Fi&IP

AP

Ctrl

OTA

3.3. Work Modes

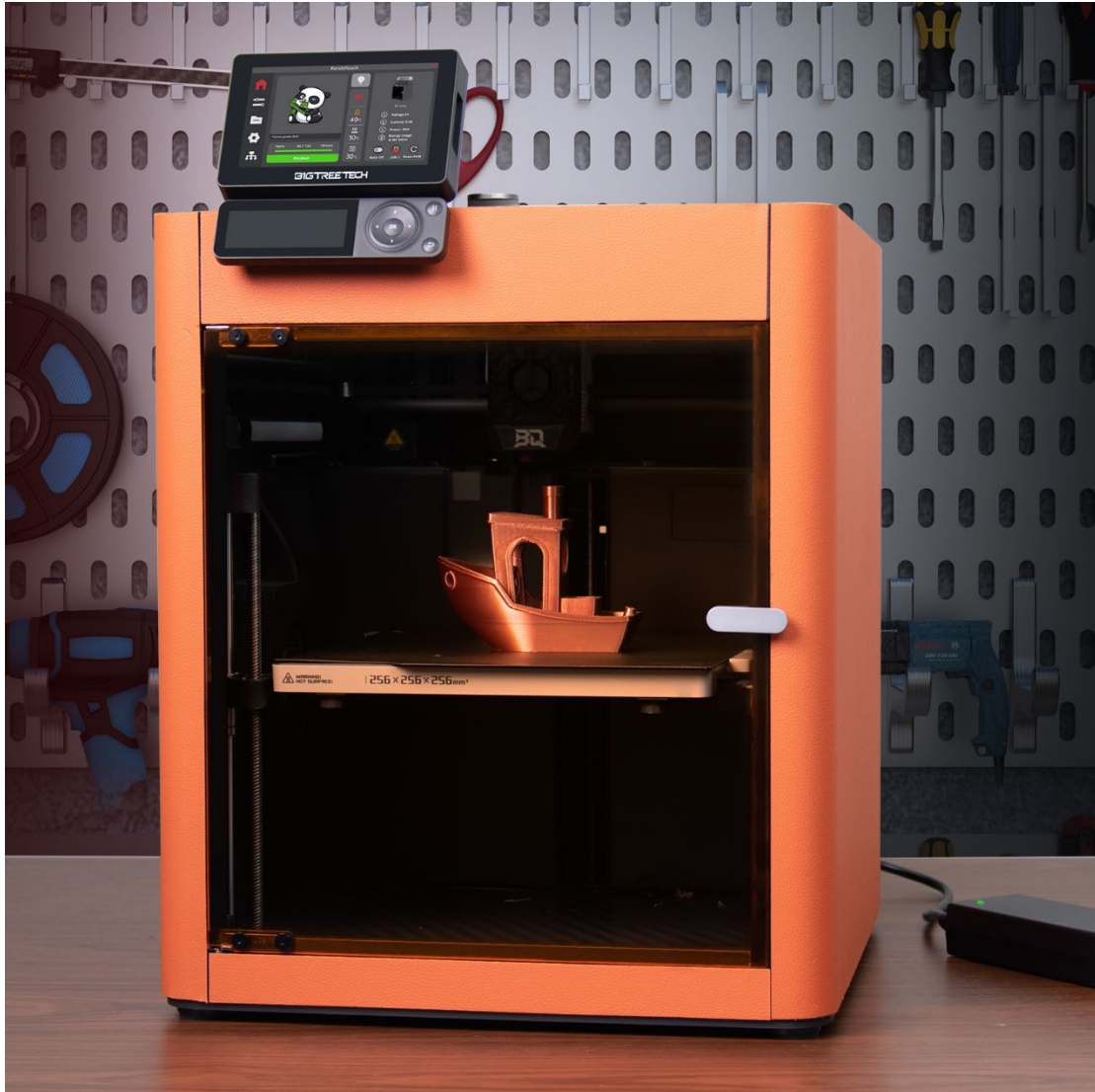
3.3.1. LAN Standalone Mode

In this mode, you can use mobile phones or computers to remotely control the Panda PWR via the WEB-UI.



3.3.2. Panda Touch Connection Mode

In this mode, control is managed through the Panda Touch.



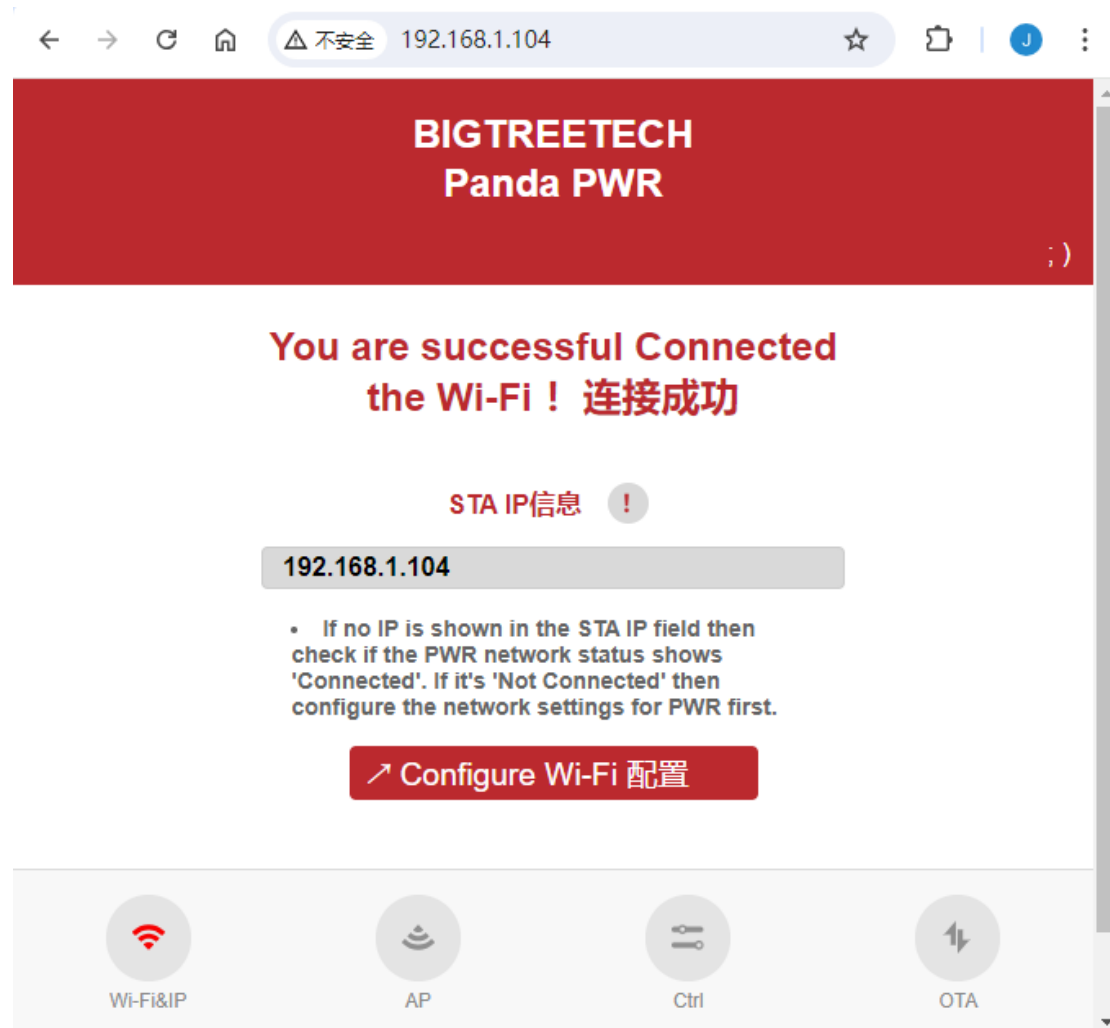
3.3.3. How to Switch Work Modes

To switch from LAN standalone mode to Panda Touch connection mode, press and hold the Bind button for approximately 3 seconds. If the binding is successful, the device will remain in Panda Touch connection mode. If not, it will revert to LAN standalone mode.

3.4. WEB UI Operation Guide

3.4.1. Configure Network

- Click the "Wi-Fi&IP" button to navigate to the Wi-Fi page, where the IP address is displayed.
- To modify the IP address, click the "Configure Wi-Fi" button.



3.4.2. Restore Factory Settings

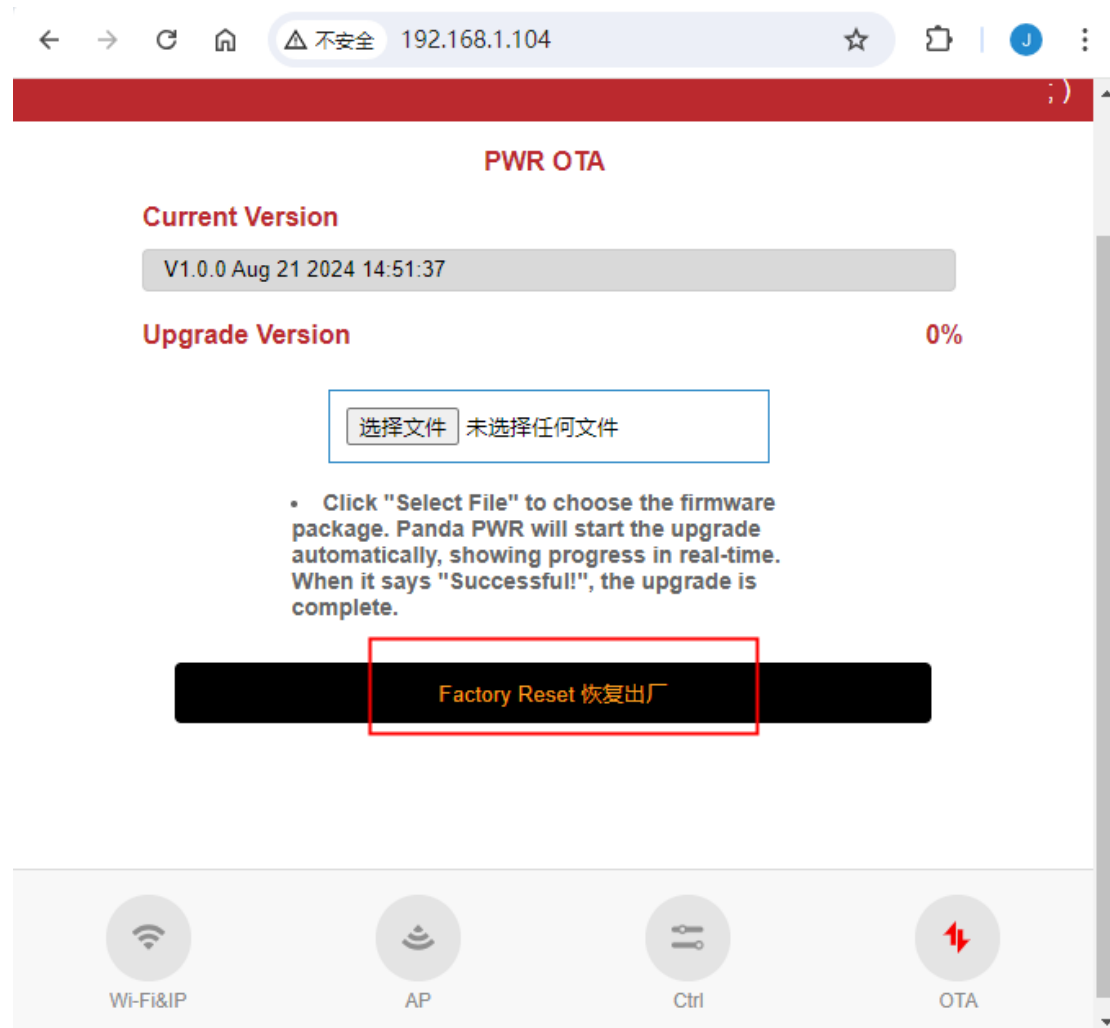
Restoring the factory settings will reset the Wi-Fi name of the Panda PWR to 'Panda PWR_XXXXX', where 'XXXXX' is a randomly generated sequence of five uppercase letters.

This measure is designed to prevent the presence of multiple Panda PWR Wi-Fi names in the same vicinity, reducing the potential for user confusion. Furthermore, the Wi-Fi login password will be reset to '9876543210'.

Method 1:

Click the "OTA" button to switch to the OTA page.

Click the "Factory Reset" button to restore the factory settings.



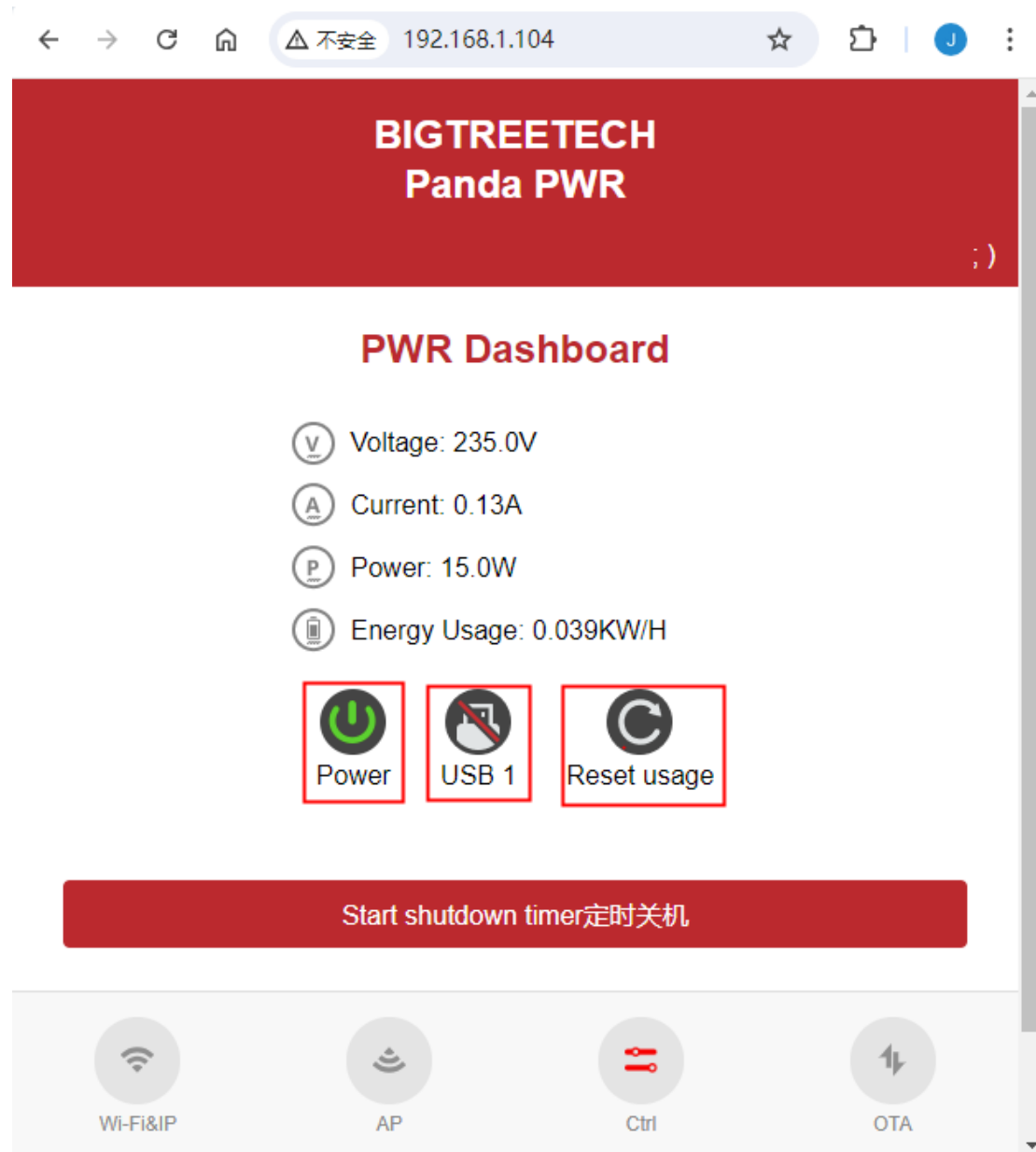
Method 2:

Press and hold the "Bind" button for approximately 8 seconds until the indicator light flashes red, indicating that the PWR is resetting.

3.4.3. Control Panda PWR by WEB-UI

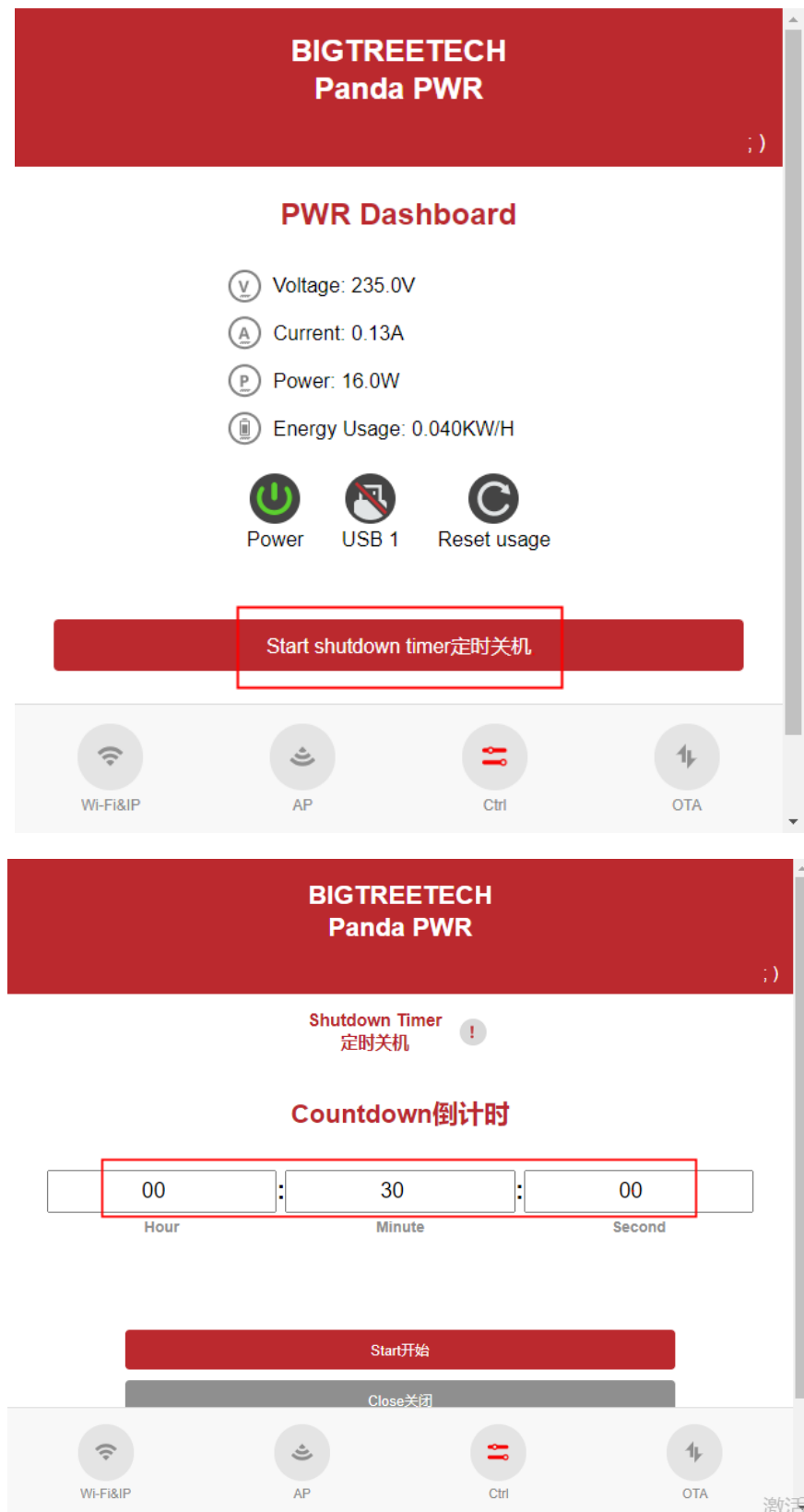
Basic Control

- Click the "Power" button to toggle the external power supply on and off.
- Click the "USB 1" button to toggle the USB1 port on and off.
- Click the "Reset Usage" button to clear the power consumption data.

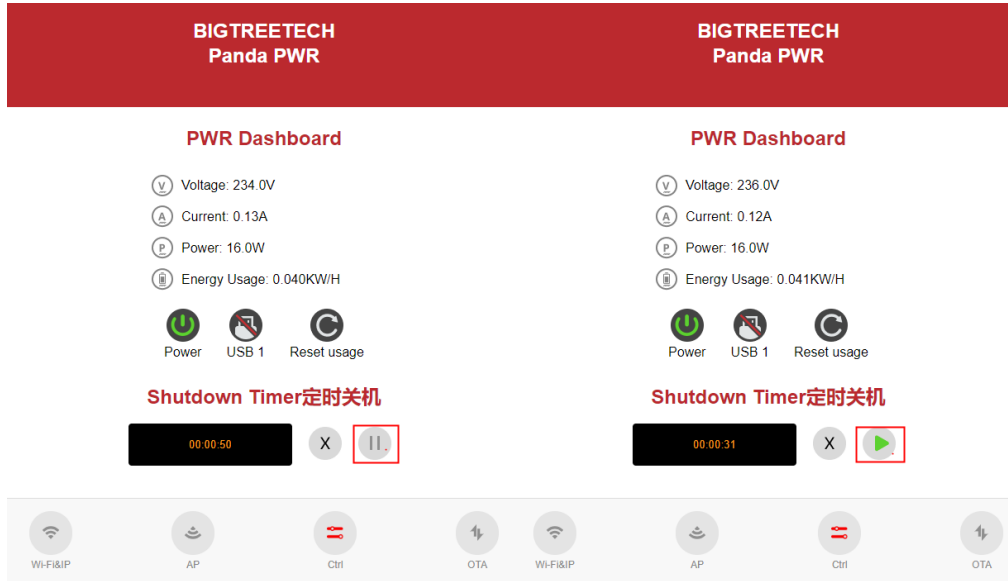


3.4.4. Countdown Control

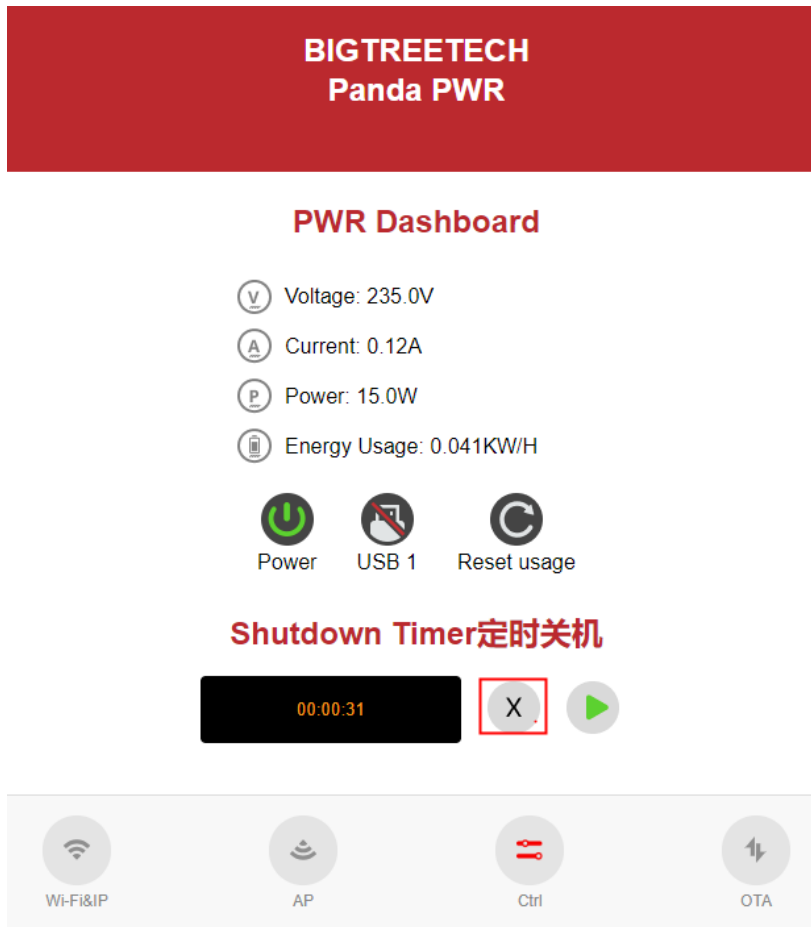
- Click the "Start shutdown" button and enter the target time.



- **Pause/Continue Countdown**



- **Stop Countdown**



3.4.5. Over The Air Updates

- Click the "OTA" button to access the OTA page.
- Click the "Select File" button to choose the .bin file you wish to update.



- Once the update is complete, "Successful" will appear on the right side of the screen.



3.4.6.Quick Access

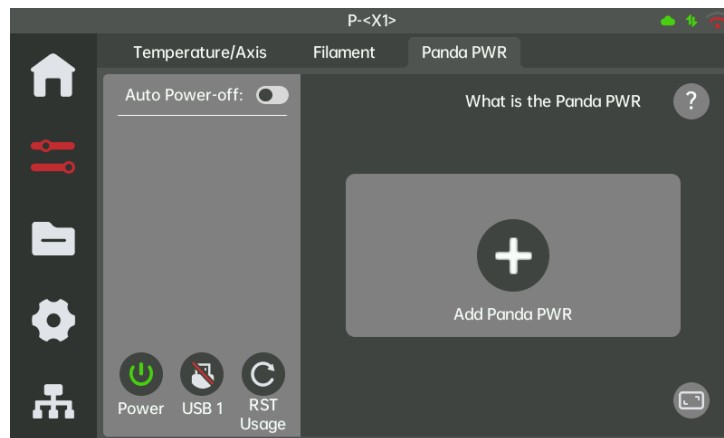
Save the IP browsing page to your phone's home screen for quick and easy access in the future.



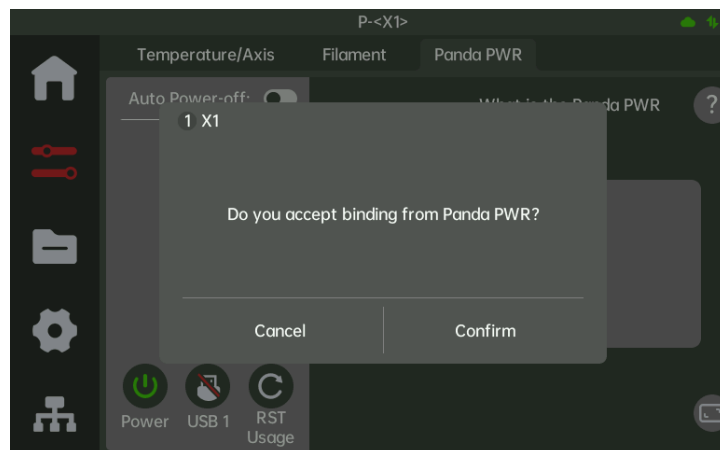
3.5. Control by Panda Touch

3.5.1. Bind to Panda Touch

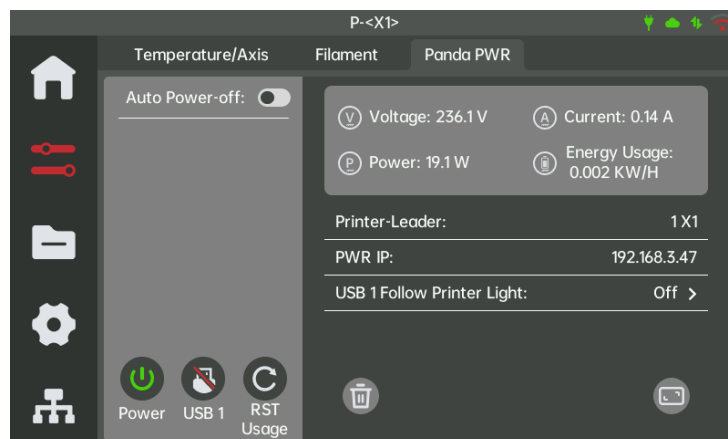
- Open the Panda PWR page.



- Press and hold the "Bind" button until the blue light starts flashing (approximately 3 seconds).
- Place the Panda Touch on the Panda PWR casing to establish a connection.

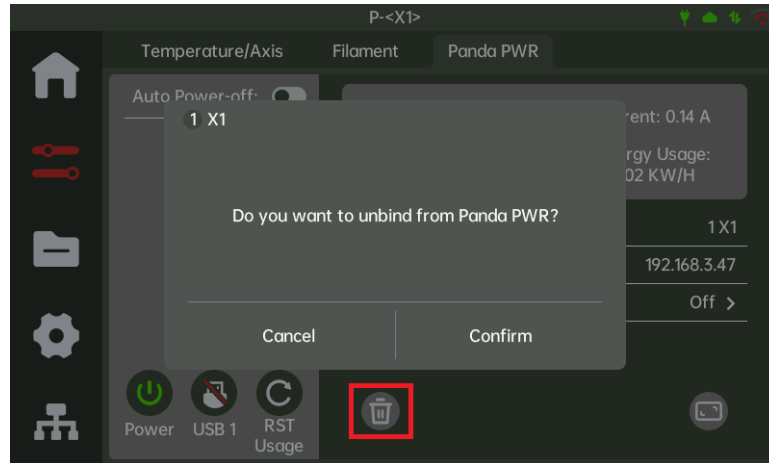


- The Panda PWR data will be displayed on this page once the binding is successful.



3.5.2. Unbind with Panda Touch

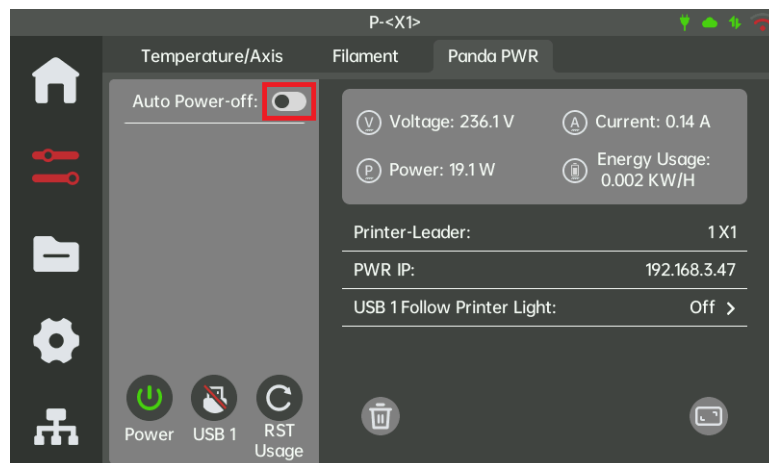
- To bind the Panda PWR to another device, unbind the current connection first.



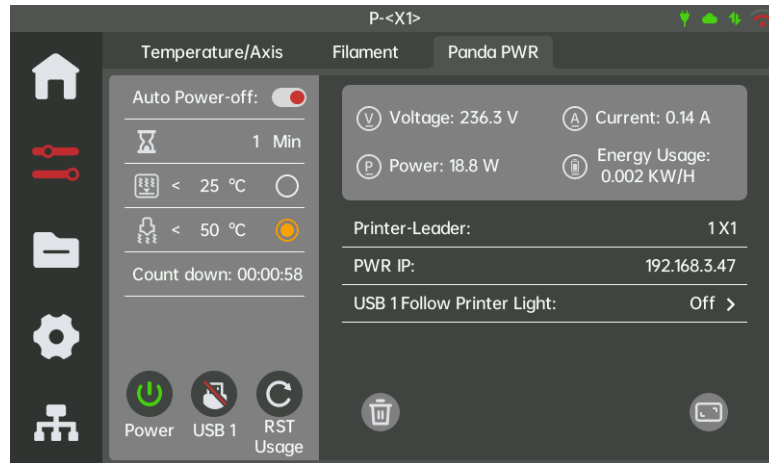
3.5.3. Shut Down After Printing Is Complete

When you need the printer to shut down after printing, activate the auto power-off switch, set the countdown time and temperature limit values, and start the countdown when the conditions are met. After the countdown completes, Panda PWR will automatically cut off the power supply to the printer.

- **Activate Auto Power-Off**

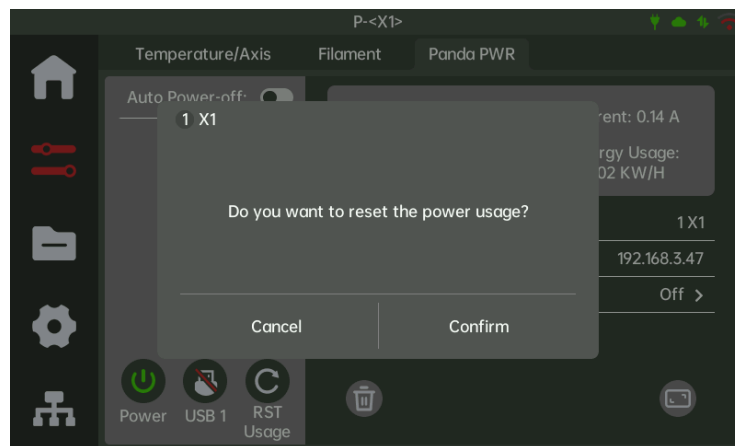


- The countdown will start automatically when the printer is online and the temperature reaches the set limit. If conditions are not met, the countdown will pause and resume once conditions are met again.



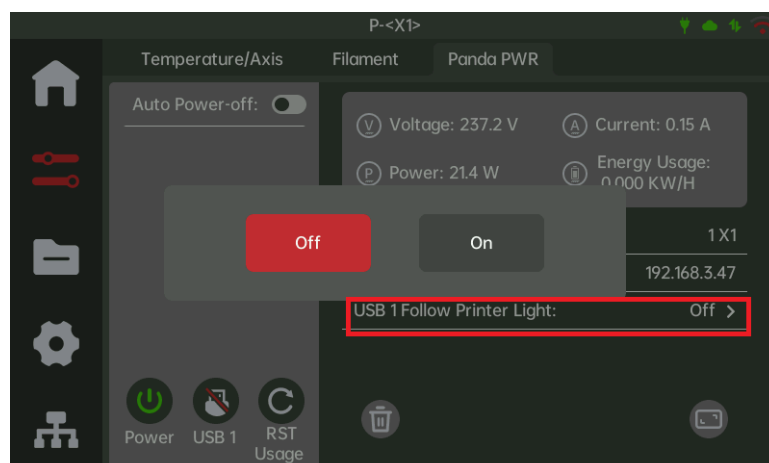
3.5.4. Clear the Power Consumption

The Panda PWR records the power consumption of the load. To reset the data, click the "RST Usage" button.



3.5.5. USB1 Follows the Printer Light

- **Setting to ON:** USB1 will mimic the printer's LED changes. If the LED is on, USB1 outputs 5V; if off, the output is disabled.
- **Setting to OFF:** USB1 operates under manual control only, disregarding the printer's LED status.



4. Firmware

Firmware History

V1.0.0

Initial release of factory firmware.

Feature Requests

We welcome your suggestions for future firmware enhancements. Please submit your feature requests on the official Panda PWR GitHub repository.

[Feature Requests](#)

Recovery Tool

If the Panda PWR fails to start and cannot perform an OTA update, use the recovery tool to restore functionality. [Recovery Tool Download](#)

Technical Support

If you have any questions about product usage or encounter issues, please contact our after-sales team at service001@biqu3d.com.