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BIGTREETECH
PANDA PWR V1.0
Intelligent Power
Management
Module

BIGTREETECH PANDA PWR V1.0 Intelligent Power Management Module User Manual

Contents

BIGTREETECH PANDA PWR V1.0 Intelligent Power Management Module

Product Information

Specifications

- MCU: ESP8684-MINI-1-H4
- IEC-C14 Input Voltage: 100VAC~240VAC
- Type-C Input Voltage: 5V
- Maximum Output Current: 1.5A+1.5A
- PC Connection Interface: Type-C

Product Usage Instructions

Instructions
USB Interface

- **USB1 (5V Output, Controllable):** Used for modules that require control switches, such as a USB light strip.
- **USB2 (Fixed 5V Output):** Can provide power to some modules, such as Panda Touch.

Bind Key

- **Bind a Panda Touch:** Long press for several seconds to enter the binding mode.
- **Activate the 220V Power Supply:** Activate the 220V power supply by double-clicking the Bind key.

Web UI

- **View Power Parameters:** Before proceeding, you must bind a Panda Touch, obtain the IP address from the Panda PWR interface, and then enter the IP address in your computer or mobile browser.
- **OTA:** Click the Config button to enter the OTA page. Click the Select File button to update the firmware. After the upgrade is completed, a success prompt will be displayed.

How to Bind Panda PWR and Panda Touch

1. Open the Panda PWR page.
2. Bring Panda PWR and Panda Touch Closer Together.
3. Press and hold the bind button for about 3 seconds, wait for the light to turn blue and enter a breathing state, then wait for a pop-up prompt to appear and click confirm.
   NOTE: Please bring Panda PWR and Panda Touch closer together and complete the confirmation within 15 seconds, otherwise, it will prompt a binding timeout, and the PWR light will turn red. Re-binding will be required at this point.

Unbind Panda PWR from Panda Touch
If you wish to bind another printer, you must first unbind the current connection.

Enable Automatic Power-Off Function
When you need the printer to shut down after printing, activate the automatic power-off switch, configure the countdown time and temperature limit values, and start the countdown when the conditions are met. After the countdown is completed, Panda PWR will automatically cut off the power supply to the printer.

Frequently Asked Questions (FAQ)

- **Q: How do I clear electricity consumption?**
  A: To clear electricity consumption, please refer to the product manual for specific instructions on this feature as it may vary based on product version and settings.

PANDA PWR V1.0
User Manual

Revision Log

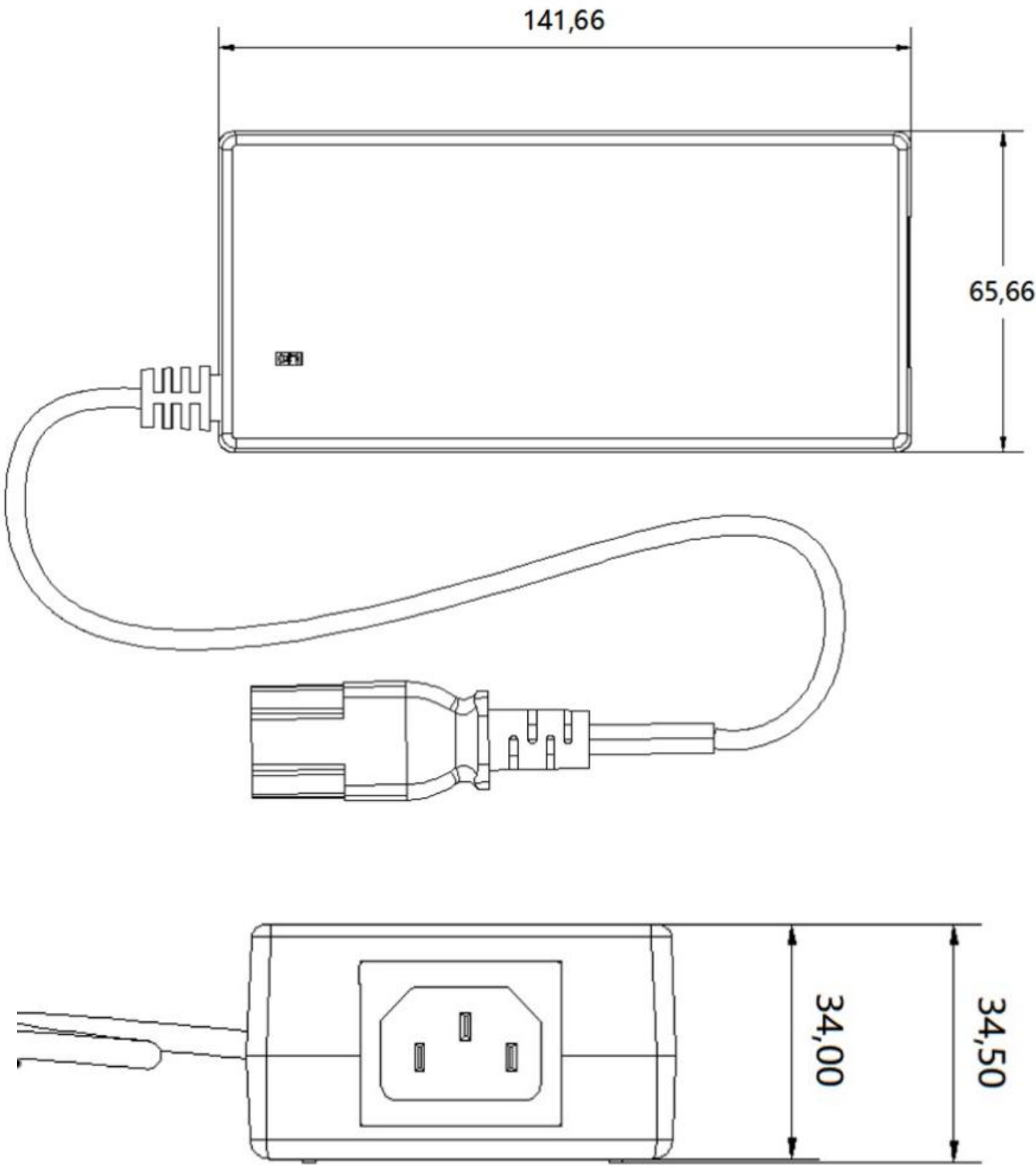| Version	Date	Revisions
v1.00	June 19th, 2024	Initial Version

Product Profile

The BIGTREETECH PANDA PWR is a power management and control device for printers. It powers the printer and displays real-time power on the PANDA TOUCH, also enabling on/off control via a WiFi connection with PANDA TOUCH. Additionally, the PANDA PWR features a USB port to power the PANDA TOUCH directly.
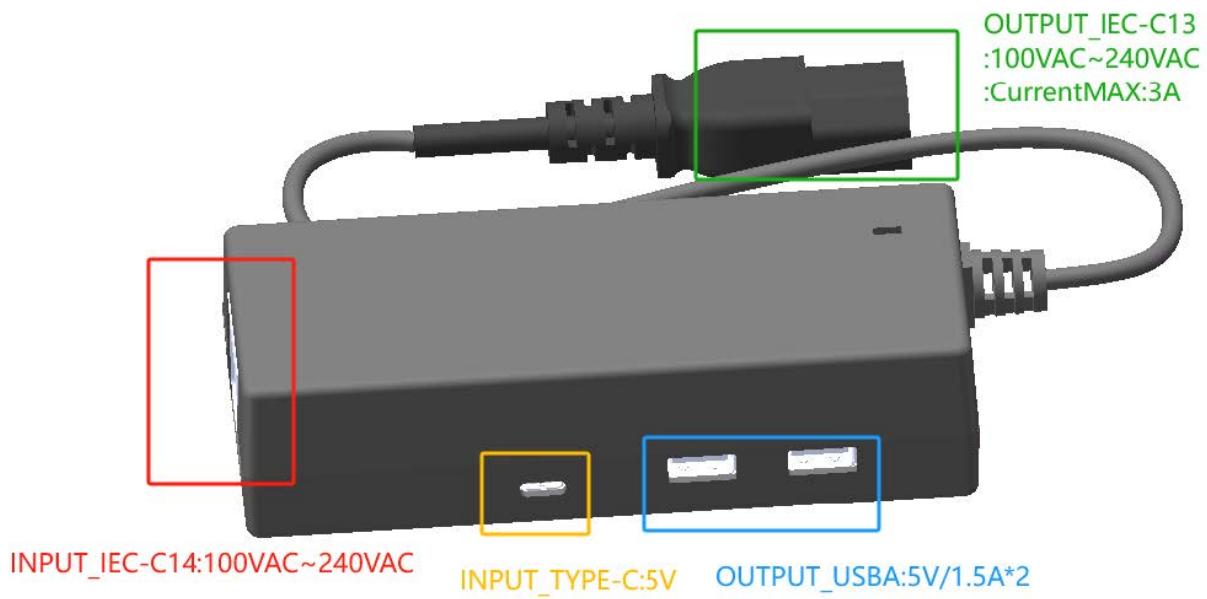
Specifications

- MCU: ESP8684-MINI-1-H4
- IEC-C14 Input Voltage: 100VAC~240VAC
- Type-C Input Voltage: 5V
- Maximum Output Current: 1.5A+1.5A
- PC Connection Interface: Type-C

Dimensions

141,66

65,66

34,00

34,50

Interface

Interface Diagram

OUTPUT_IEC-C13
:100VAC~240VAC
:CurrentMAX:3A

INPUT_IEC-C14:100VAC~240VAC

INPUT_TYPE-C:5V
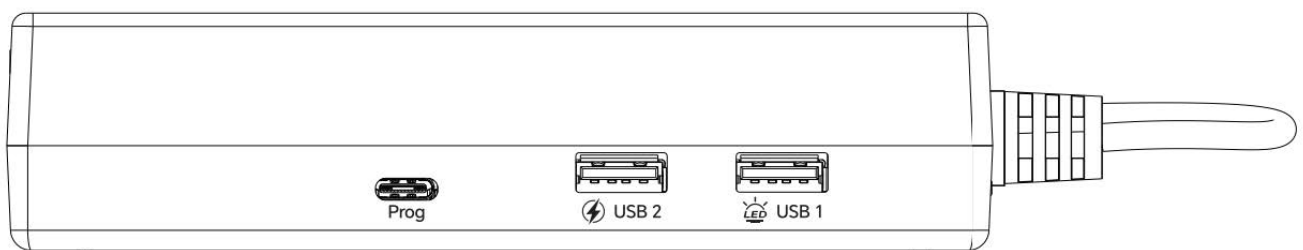
OUTPUT_USBA:5V/1.5A*2

Interface Introduction

- IEC-C14: AC voltage input of 100VAC~240VAC
- IEC-C13: AC voltage output of 100VAC~240VAC, rated load current 3A TYPE-C: 5V input, can communicate with a computer
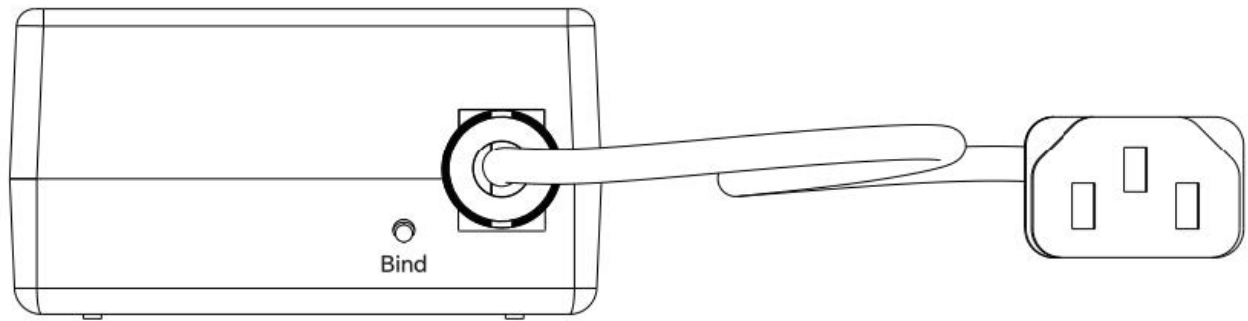- USBA: Two 5V/1.5A outputs

Instructions

USB Interface

Prog   USB 2   USB 1

1. USB1 (5V Output, Controllable)

   Used for modules that require control switches, such as a USB light strip.

2. USB2 (Fixed 5V Output)

   Can provide power to some modules, such as Panda Touch.

Bind Key

1. Bind a Panda Touch

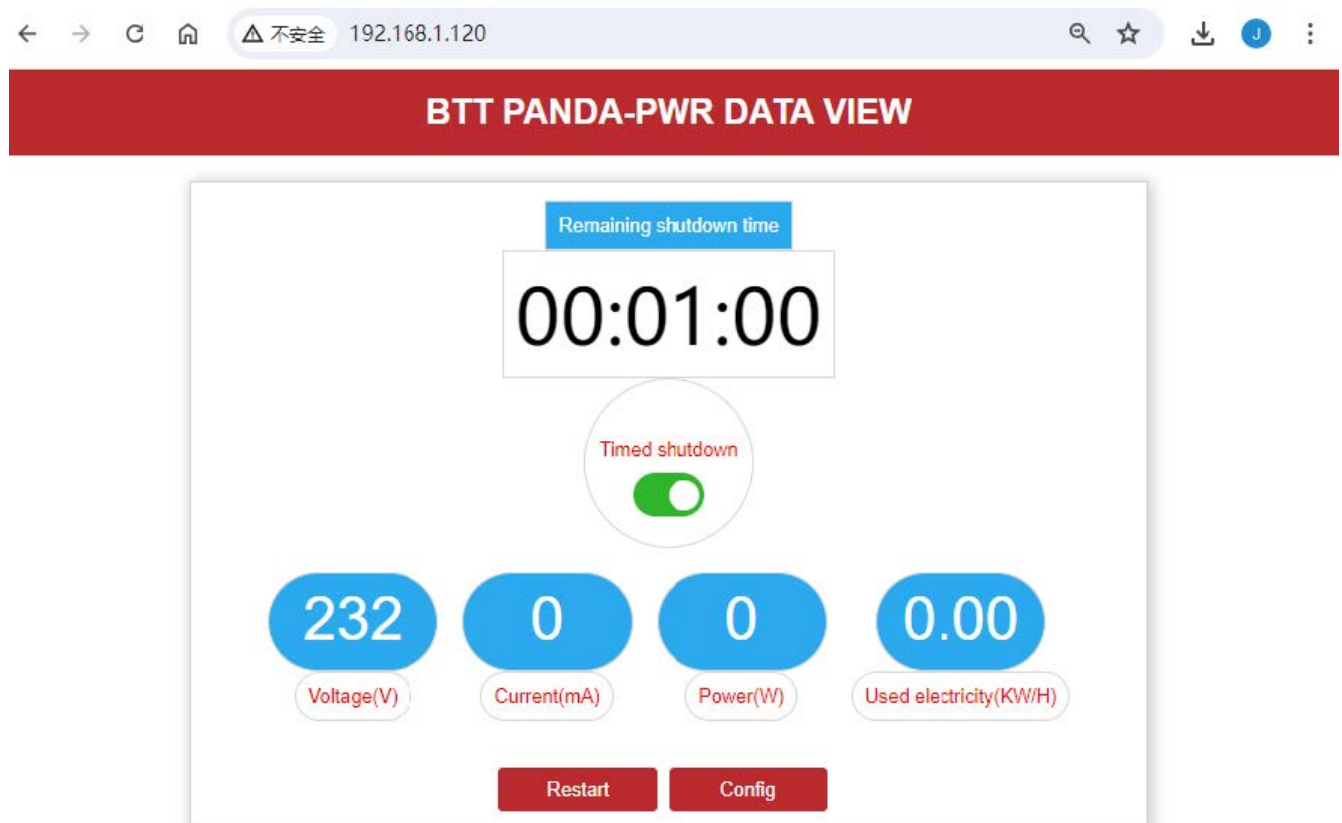   Long press for several seconds to enter the binding mode.

2. Activate the 220V Power Supply

   Activate the 220V power supply by double-clicking the Bind key.
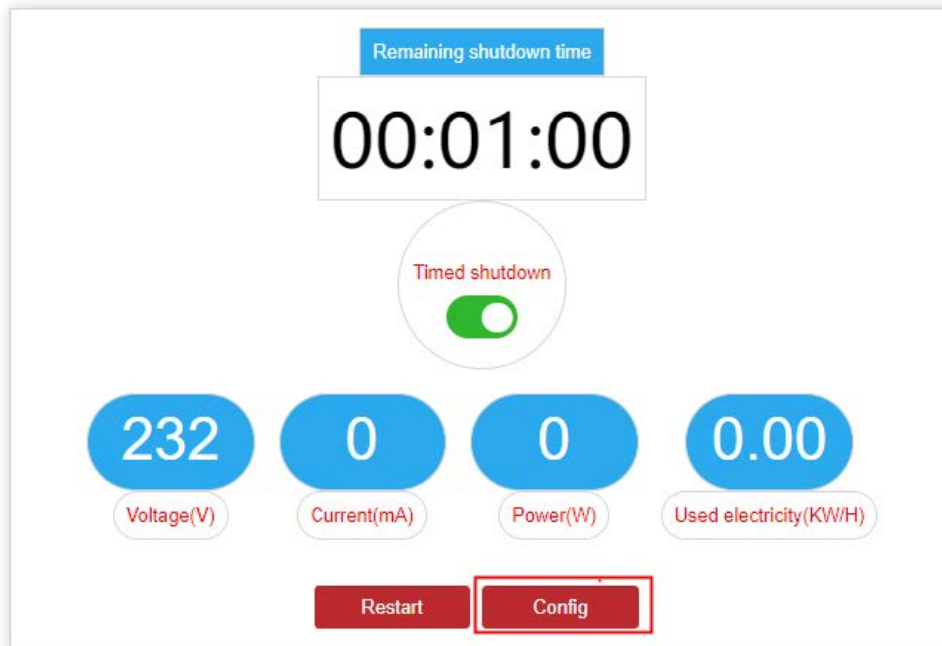
Web UI

1. View Power Parameters

   Before proceeding, you must bind a Panda Touch, obtain the IP address from the Panda PWR interface, and then enter the IP address in your computer or mobile browser.

2. OTA

   Click the "Config" button to enter the OTA page.

Remaining shutdown time

00:01:00

Timed shutdown

232	0	0	0.00
Voltage(V)	Current(mA)	Power(W)	Used electricity(KW/H)

Restart　　Config

Click the "Select File" button to update the firmware.

BTT PANDA-PWR SETTINGS MANAGER

*Refresh to update wifi network list

Set up WIFI

Network List:　test1

Password:

Back　　Refresh　　Confirm

OTA firmware

选择文件 未选择任何文件　　Process:0%

version　V1.0.0 Jul 19 2024 17:38:43

After the upgrade is completed, a success prompt will be displayed.

192.168.1.120 显示

update succeed

确定

Network List: test1

Password:

Back   Refresh   Confirm

OTA firmware

选择文件 espnow_example.bin   Process:100%

version   V1.0.0 Jul 19 2024 17:38:43
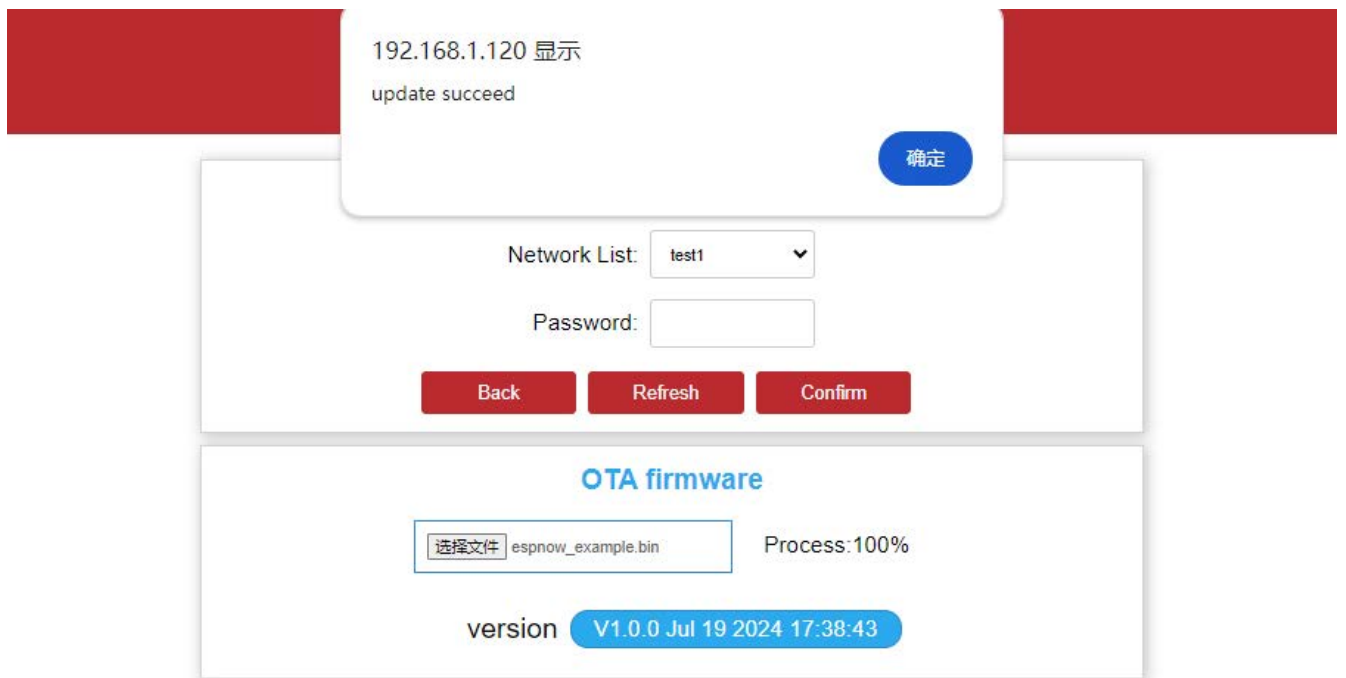
How to Bind Panda PWR and Panda Touch

Open the Panda PWR page.

P-<炫迈的打印>

Temperature/Axis   Filament   Panda PWR

Auto Power-off:

Know what is Panda PWR   ?

+

Add Panda PWR

Power   USB 1RST Usage

- Bring Panda PWR and Panda Touch Closer Together
- Press and hold the bind button for about 3 seconds, wait for the light to turn blue and enter a breathing state, then wait for a pop-up prompt to appear and click confirm.
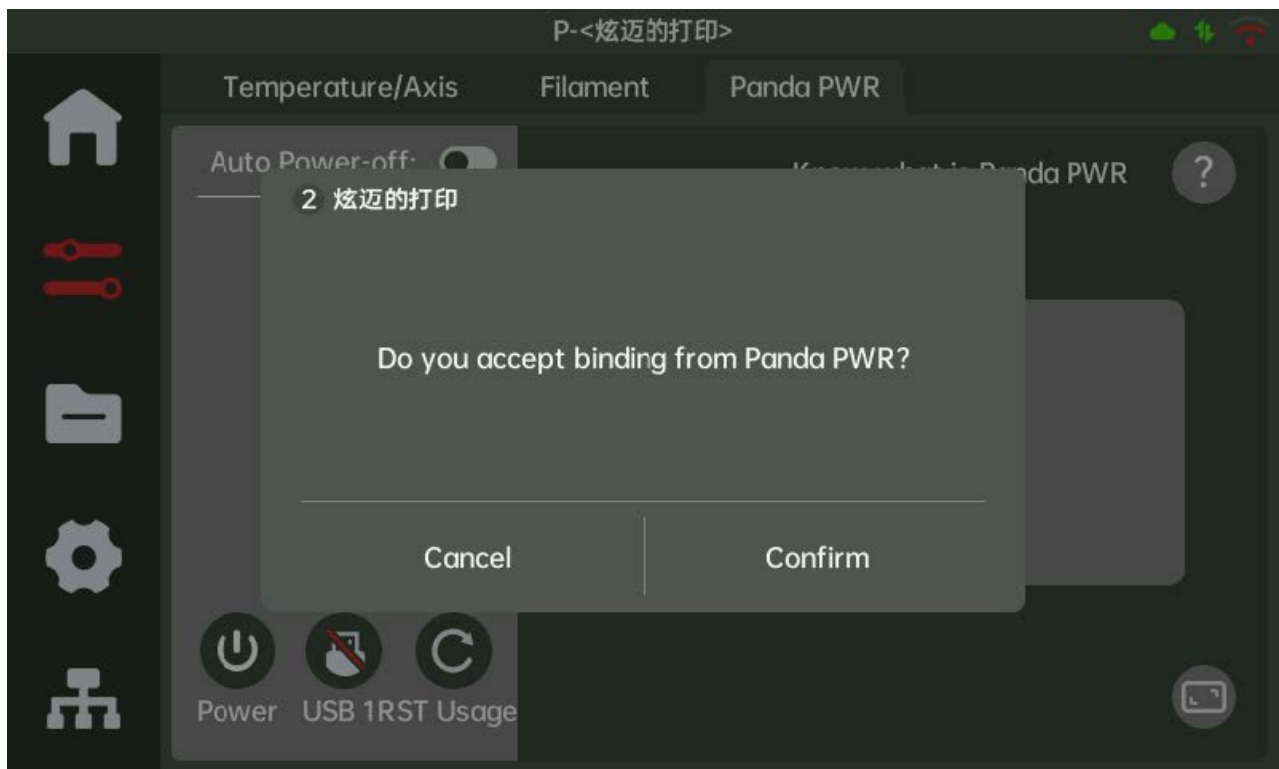
NOTE:
Please bring Panda PWR and Panda Touch closer together and complete the confirmation within 15 seconds, otherwise, it will prompt a binding timeout, and the PWR light will turn red. At this point, re-binding is required.
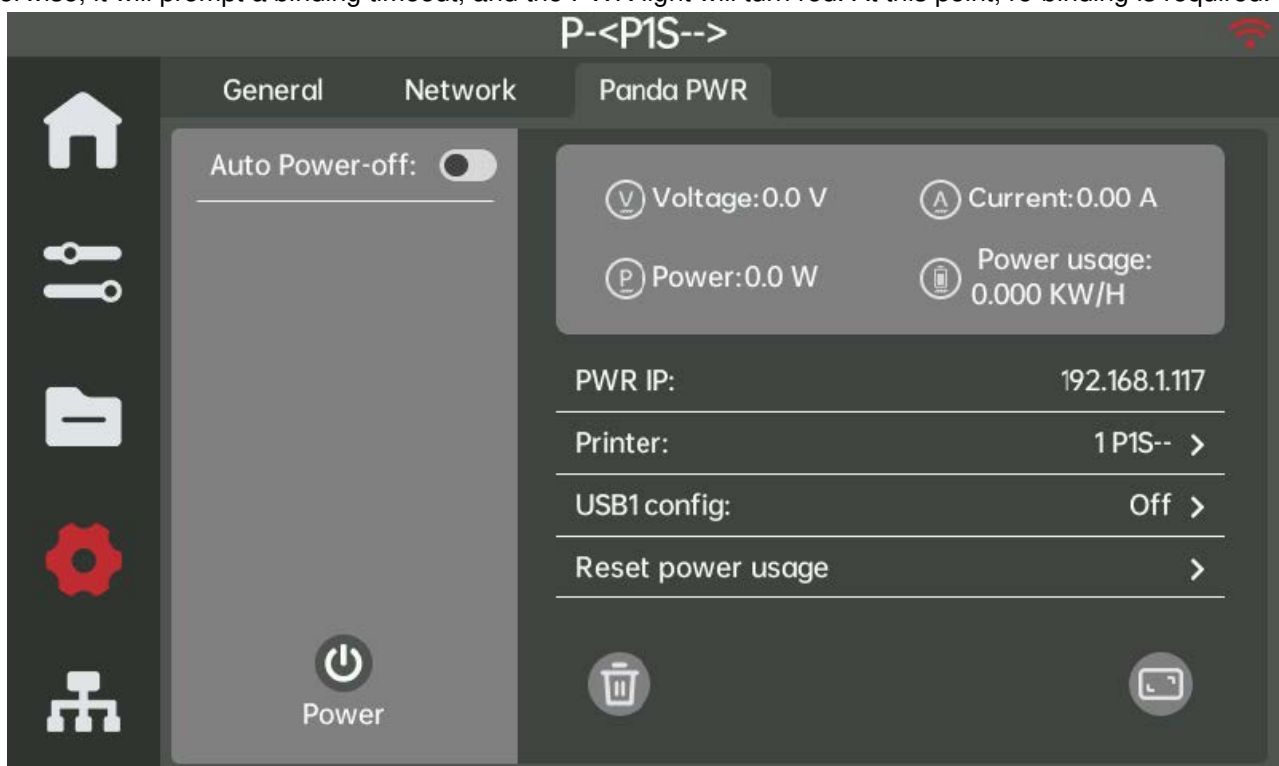
Unbind Panda PWR from Panda Touch
If you wish to bind another printer, you must first unbind the current connection.

Enable Automatic Power-Off Function

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

Clearing Electricity Consumption

Panda PWR records the power consumption of the load. Press "RST Usage" to clear the power consumption data.

USB1 Follows the Printer Light

When set to ON, USB1 will follow the changes in the printer's LED. If the LED is on, USB1 will output 5V voltage; otherwise, the output will be turned off. Additionally, USB1 supports manual setting for on and off. When set to OFF, USB1 only supports manual control.

Indicator Light Description

- Blue: Unbound status
- Blue Breath: Binding in progress
- Red: Binding timeout
- Green: Normal communication
- Green Flashing: Communication error

Precautions

1. The communication between Panda PWR and Panda Touch uses a short-range method, which may be affected by obstructions. Please ensure there are no obstructions around the Panda PWR.
2. When connecting to a 220VAC input, first connect the input wires on the Panda PWR before connecting the wires to the socket.
3. The TYPE-C port can only be used for input.
4. 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.

Should you require further resources for this product, you can find them at [GitHub](**https://github.com/bigtreetech/**). If you cannot find what you need, you may contact our after-sales support (**service005@biqu3d.com**).
If you encounter any other problems during use or have suggestions or feedback, please contact us. Thank you for choosing BIGTREETECH products.

Documents / Resources

BIGTREETECH PANDA PWR V1.0 User Manual 	**BIGTREETECH PANDA PWR V1.0 Intelligent Power Management Module** [pdf] User Manual 2BAS6-PANDAPWR, 2BAS6PANDAPWR, PANDA PWR V1.0 Intelligent Power Management Module, PANDA PWR V1.0, Intelligent Power Management Module, Power Management Module, Management Module, Module

References

- ○ **bigtreetech (BIGTREETECH) · GitHub**
- **User Manual**