

BIQU Panda PWR

BIQU BIGTREETECH Panda PWR Smart Power Controller Instruction Manual

Model: Panda PWR

1. PRODUCT OVERVIEW

The BIGTREETECH Panda PWR is an intelligent power controller designed for 3D printers. It enables remote monitoring and control of your 3D printer's power, offering features such as real-time power consumption data, automatic shutdown capabilities, and versatile USB power management. This device is compatible with a wide range of FDM 3D printers, including Bambu-Lab, Creality, and others with 100VAC-240VAC IEC C13 connectors.

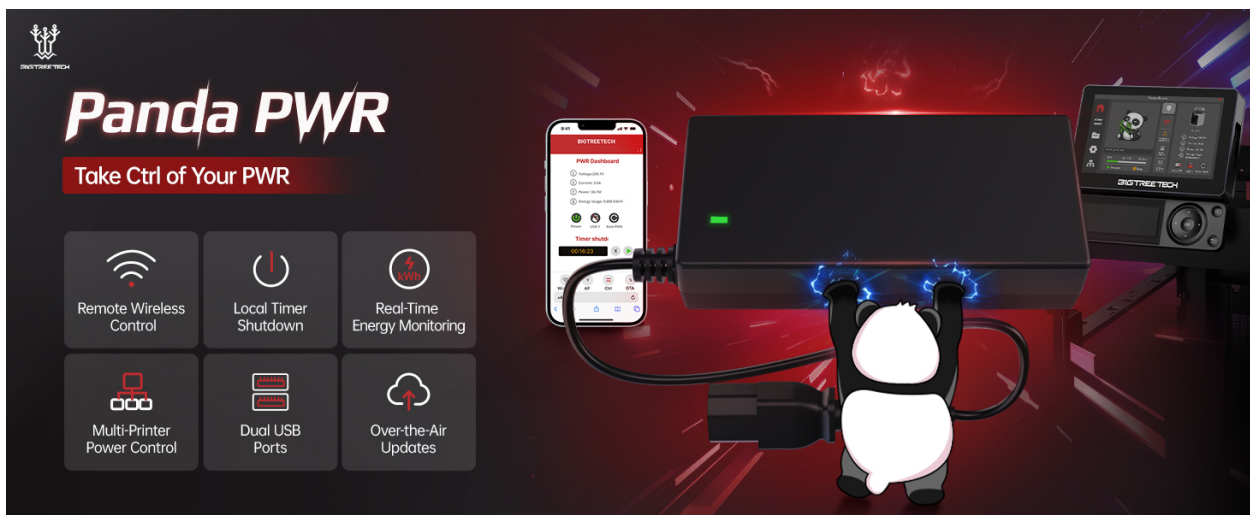


Figure 1: Panda PWR with its remote control interface on a smartphone.

2. SETUP AND INSTALLATION

2.1 Physical Connection

1. **Power Connection:** Connect your 3D printer's power cable to the Panda PWR's IEC C13 output. Plug the

Panda PWR's input cable into a standard 100VAC-240VAC wall outlet.

2. **USB Connections:** The Panda PWR features two USB ports:

- **USB 1 (Controllable):** For devices requiring intermittent power, such as USB light strips or USB fans.
- **USB 2 (Always-On):** Provides continuous power for devices like the Panda Touch.

2.2 Network Configuration (Phone or PC)

1. Plug in your Panda PWR and check for a steady blue indicator light.
2. Using a Wi-Fi enabled device (phone or computer), find and connect to the "PandaPWR" network. The default password is **98765432**. For better security, it is recommended to change this password after initial login.
3. Once the setup page opens automatically, select your preferred Wi-Fi network and enter its password. Your Panda PWR is now set up and ready to use.

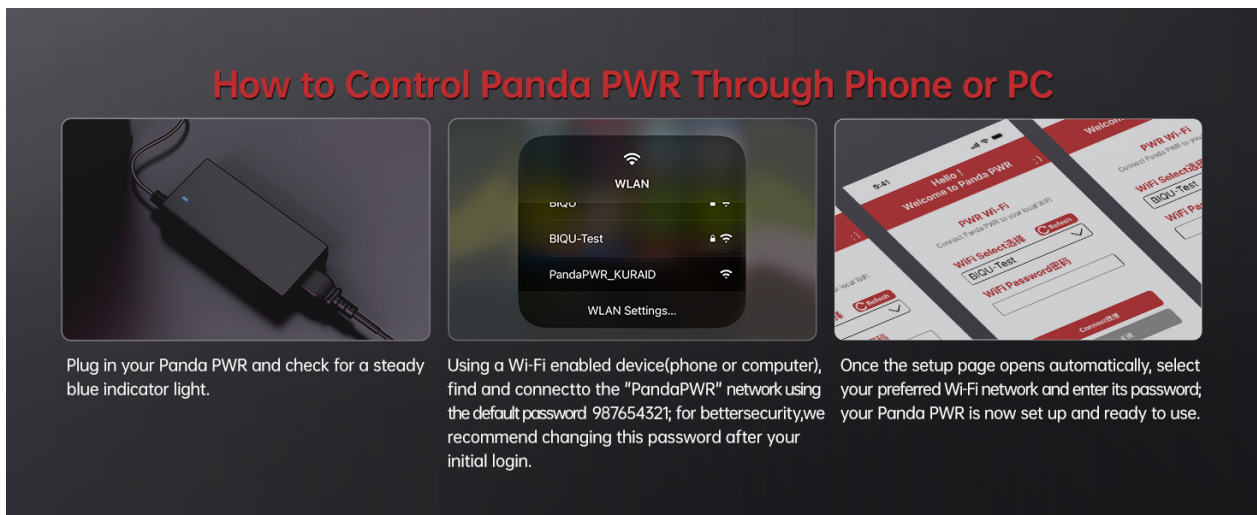
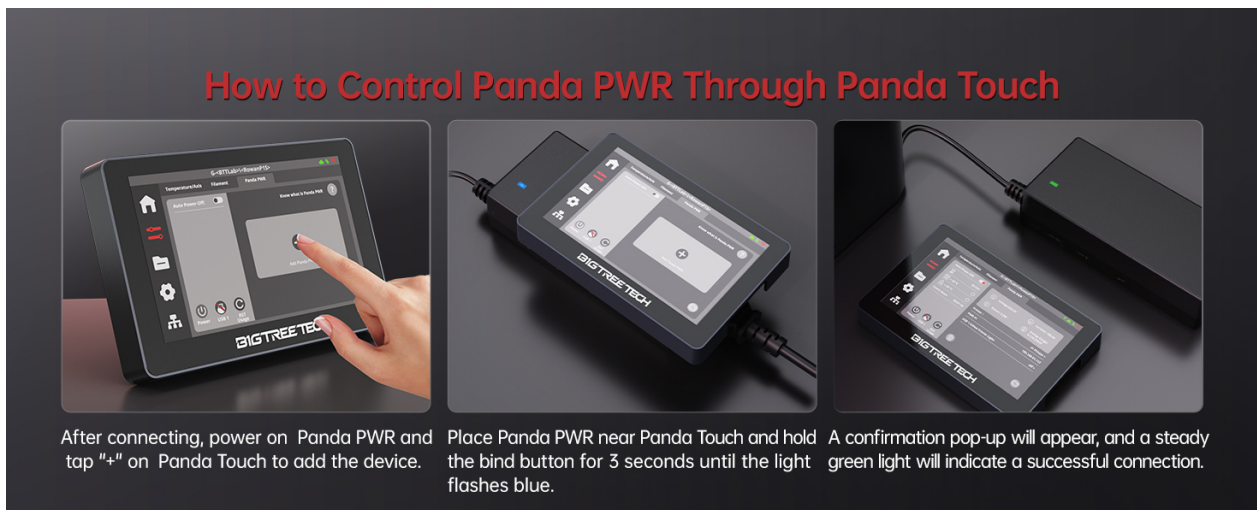


Figure 2: Connecting Panda PWR to a phone or PC.

2.3 Panda Touch Integration (for Bambu-Lab Printers)

1. After connecting the Panda PWR to power, tap the "+" icon on your Panda Touch device to add the device.
2. Place the Panda PWR near the Panda Touch and hold the bind button for 3 seconds until the green light flashes blue.
3. A confirmation pop-up will appear on the Panda Touch, and a steady green light on the Panda PWR will indicate a successful connection.



3. OPERATING INSTRUCTIONS

3.1 Remote Power Control and Monitoring

Access the Panda PWR's web UI via your device on the same local area network (LAN) to monitor real-time readouts of voltage, current, power, and energy usage. You can also remotely control the power of your 3D printer and the controllable USB port.



Figure 4: Remote monitoring and control via web UI.

3.2 Auto Post-Print Shutdown (with Panda Touch)

When integrated with Panda Touch, the Panda PWR supports automatic shutdown of your Bambu-Lab printer after a print job is completed. This feature helps conserve energy by preventing the printer from remaining idle and consuming power.

3.3 Local Timer Power-off

The Panda PWR includes a local countdown shutdown capability, allowing you to schedule your printer to power off even if the internet connection is lost. The shutdown timer can be adjusted from the web UI on your phone or PC.



Figure 5: Setting a local timer for power-off.

3.4 Dual USB Port Functionality

The Panda PWR provides two USB ports for peripheral power needs:

- **USB 1 (Controllable):** Ideal for accessories like USB light strips and USB fans, allowing on-demand control.
- **USB 2 (Always-On):** Supplies continuous power for devices requiring constant operation, such as the Panda Touch. This port allows you to power on the printer via Panda Touch even when the printer is initially off.



Figure 6: Dual USB port overview.

3.5 Group Power Management

For users with multiple Bambu-Lab printers, equipping each with a Panda PWR allows for centralized group power management from a single Panda Touch. Up to 10 Bambu-Lab printers can be controlled this way.

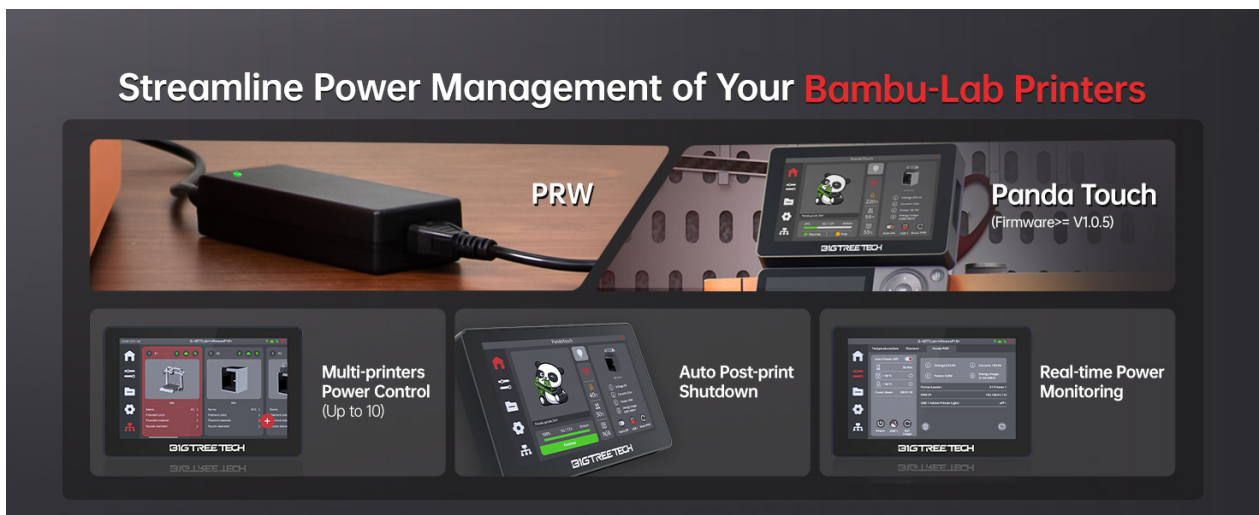


Figure 7: Group power management interface.

4. MAINTENANCE AND UPDATES

4.1 Firmware Updates (OTA)

The Panda PWR is designed for continuous improvement through Over-The-Air (OTA) firmware updates. These updates will integrate new features and enhance compatibility with Klipper firmware and various IoT ecosystems. Regularly check for and install available updates to ensure optimal performance and access to the latest functionalities.



Figure 8: Over-The-Air firmware update process.

4.2 Cleaning and Care

Keep the Panda PWR clean and free from dust. Use a soft, dry cloth for cleaning. Avoid using liquid cleaners or solvents that could damage the device.

5. TROUBLESHOOTING

- **Device Not Powering On:** Ensure the power cable is securely connected to both the Panda PWR and the wall outlet. Verify the power switch is in the 'On' position.
- **Cannot Connect to Wi-Fi:** Double-check the Wi-Fi password. Ensure your device is within range of the Panda PWR's network. If using the default password, consider changing it for security and re-attempting connection.
- **Panda Touch Integration Issues:** Ensure your Panda Touch firmware is V1.0.5 or higher. Follow the binding steps carefully, ensuring the Panda PWR is close to the Panda Touch during the process.
- **Remote Control Not Responding:** Verify that both your controlling device (phone/PC) and the Panda PWR are connected to the same local area network (LAN).
- **USB Ports Not Functioning:** Check the connections of the USB devices. Ensure the controllable USB port (USB 1) is activated via the web UI or Panda Touch if applicable.

6. SPECIFICATIONS

Feature	Detail
Model	Panda PWR

Brand	BIQU
Compatibility	FDM 3D printers with 100VAC-240VAC IEC C13 connector (e.g., Bambu-Lab X1/P1/A1, Creality Ender Series, K1/K1C/K1 Max, Neptune 3/4, Kobra 2, BIQU B1/BX/Hurakan)
Input Voltage	100VAC-240VAC
Output Current	Rated load 9A
USB Ports	1x Controllable USB (5V/1.5A), 1x Always-On USB (5V/1.5A)
Connectivity	Wi-Fi (LAN control via web UI or Panda Touch)
Safety Features	Over-voltage, Over-current, Short-circuit protection
Dimensions	9.65 x 3.7 x 2.83 inches (Package)
Weight	14.4 ounces
Included Components	Panda PWR unit



Figure 9: Built-in safety features of Panda PWR.

6.1 Wide Compatibility

The Panda PWR is compatible with a broad range of FDM 3D printers that use a 100VAC-240VAC IEC C13 power connector. This includes popular models from Bambu-Lab, Creality, and other manufacturers.

Wide Compatibility

Suitable for 3D printers with 100VAC-240VAC IEC C13 connectors

Bambu-Lab

P1/X1 Series and A1
(not compatible with A1 mini)



Cre-ality

Ender Series and K1 Series



Other Common FDM Printers



Figure 10: Examples of compatible 3D printers.

7. WARRANTY AND SUPPORT

7.1 Warranty Information

Please refer to the product packaging or the official BIQU website for detailed warranty information. Keep your proof of purchase for any warranty claims.

7.2 Technical Support

For technical assistance, troubleshooting, or further inquiries, please contact BIQU customer support through their official channels. Support contact information can typically be found on the product packaging or the BIQU official website.