BIGTREETECH

Panda Branch V1.0
User Manual
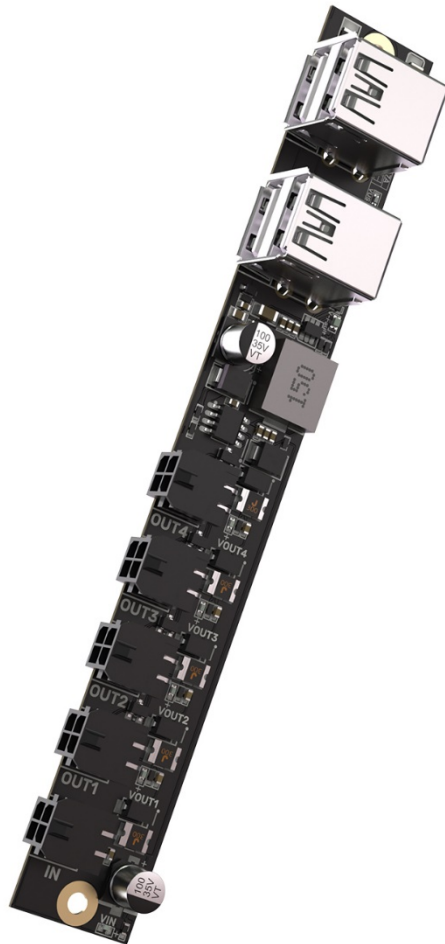
Revision Log

Version	Date	Revisions
v1.00	July 26th, 2024	Initial Version

Table of Contents

1. Product Profile

The BIGTREETECH Panda Branch V1.0 is a power expansion board designed for X1/P1/A1 series printers. It features four 5V outputs, which can be used to power devices such as the Panda Touch, USB fans, and USB light strips. Additionally, it includes the MX3.0 2x2 Pin interface for powering the AMS.

1.1. Features Highlights

Includes four USB-A 5V outputs for powering LED strips, Panda Touch, and other accessories.

Features a reserved DIP switch for precise current output selection at 5V, providing enhanced protection.

Offers integrated reverse connection protection and overcurrent fuses for all output interfaces.
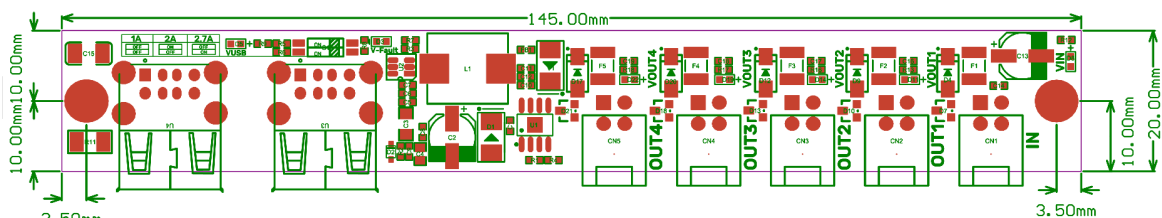
The 5V output includes a fault indicator light that glows red when overcurrent protection is triggered, simplifying troubleshooting during DIY projects.

Designed with a compact 20mm-wide frame, aligning all interfaces in the same direction for cleaner and more practical cable management.
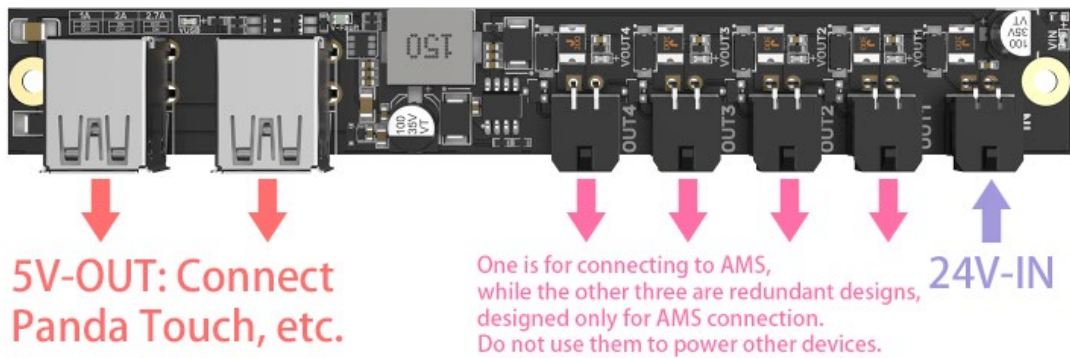
1.2. Specifications

- Dimensions: 145mm x 20mm
- Power Input: DC 24V
- Output Voltage: 5V, 2.7A (Peak)
- 5V Output Ports: 4
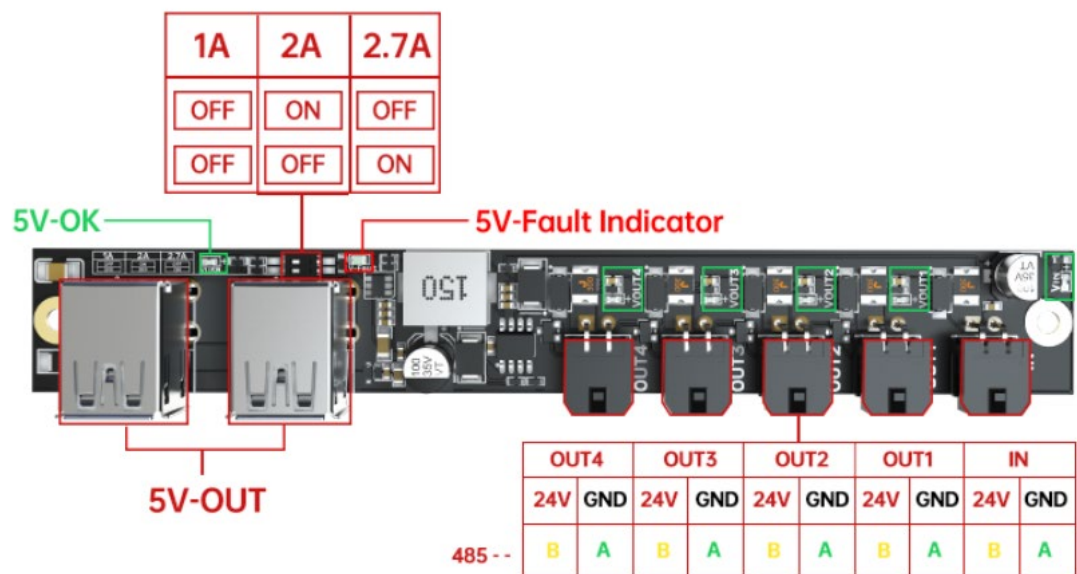- MX3.0 2x2 Pin Interfaces

1.3. Dimensions

2. Interface

2.1. Interface Diagram

5V-OUT: Connect Panda Touch, etc.

One is for connecting to AMS, while the other three are redundant designs, designed only for AMS connection. Do not use them to power other devices.

24V-IN

2.2. Pin Description

1A	2A	2.7A
OFF	ON	OFF
OFF	OFF	ON

5V-OK

5V-Fault Indicator

5V-OUT

	OUT4		OUT3		OUT2		OUT1		IN	
	24V	GND	24V	GND	24V	GND	24V	GND	24V	GND
485 - -	B	A	B	A	B	A	B	A	B	A

3. Connection Diagram

Panda Branch + Panda Touch + AMS + 3D Printer

Compatible with X1/P1/A1 Series Printers

Connect to AMS.

Redundant design, designed only for AMS connection. Do not use it to power other devices

4x USB-A 5V Output
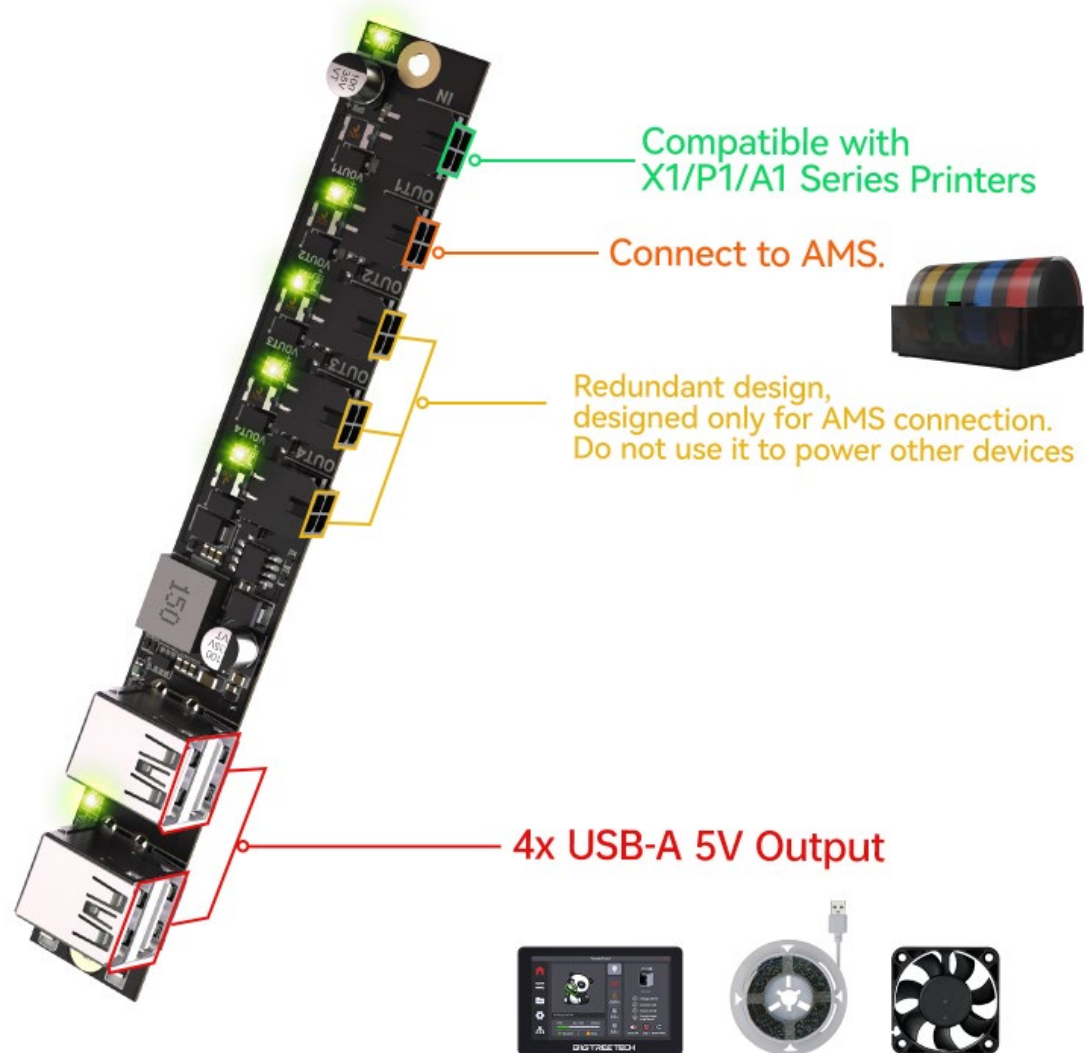
Should you require further resources for this product, you can find them at [GitHub](https://github.com/bigtreetech/). If you cannot find what you need, you may contact our after-sales support (service005@biqu3d.com).

If you encounter any other problems during use or have suggestions or feedback, please contact us. Thank you for choosing BIGTREETECH products.