

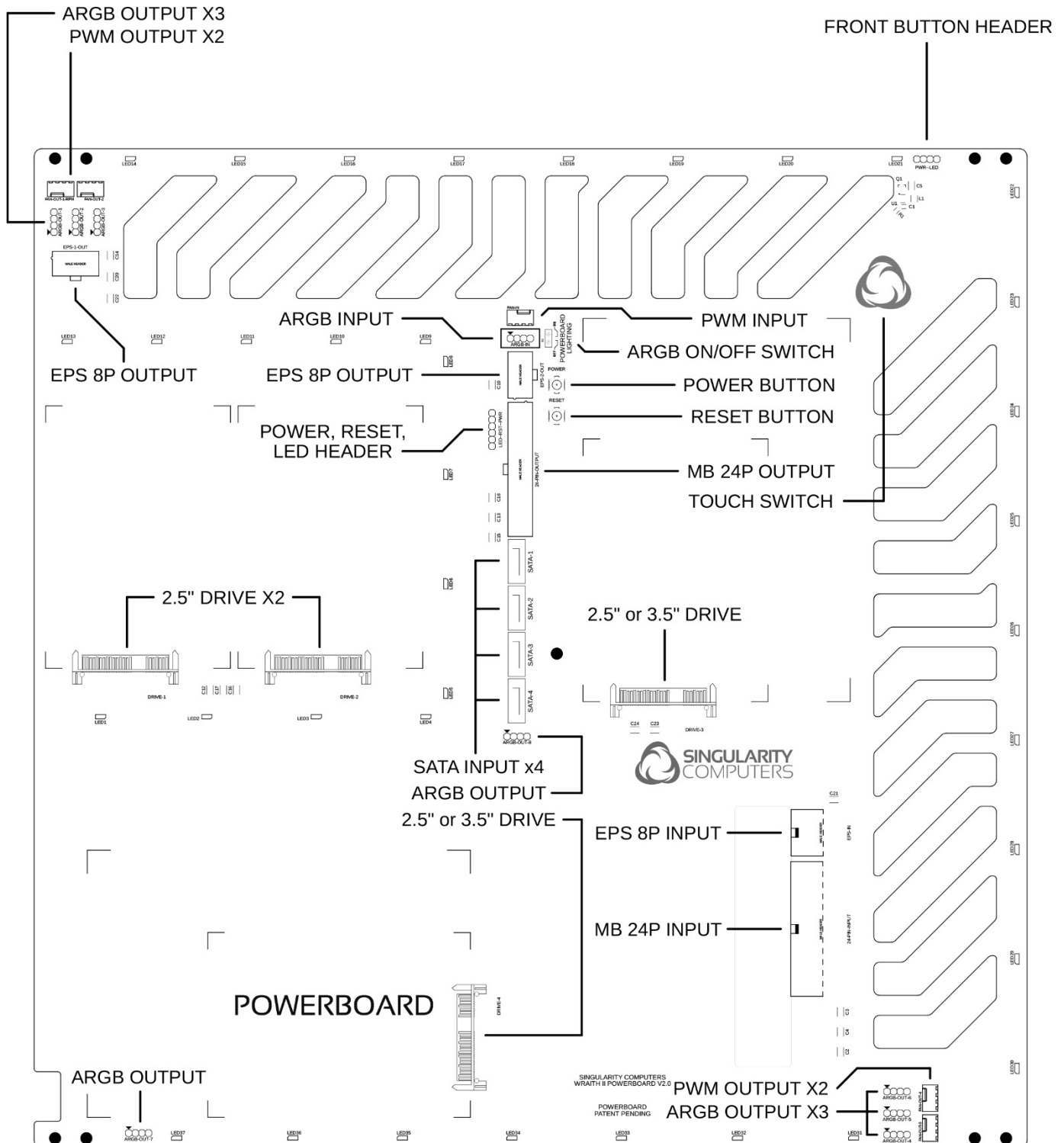
WRAITH 2.0 VOLTA



POWERBOARD MANUAL

Revision 1.00

Wraith 2.0 Volta PowerBoard



⚠ All PowerBoards need PowerBoard Linking Cables.

PowerBoard PSU Cables

The stock cables that come with every power supply can be used, plug in as many cables as input connectors are available.

Singularity Computers offers custom sleeved and shorter PSU cable kits that are a better fit than stock cables.

PowerBoard Linking Cables

Wraith 2.0 Volta comes with a standard kit of PowerBoard Linking Cables which includes 24pin MB x1 and 8pin EPS x1. The pinout of these Linking cables is mirrored and the lengths are custom to achieve an arch. The connectors are also female on both sides (refers to the pin and not to the connector housing). PWM and ARGB linking cables are also included to connect from Your motherboard or controller to the PowerBoard PWM and ARGB inputs. Use our Cable setup guide if making custom Linking Cables.

Power Connectors

The input and output connectors are not wired directly together but they are shared, so if EPS-1-IN is plugged in then any of the EPS outputs can be used, it is not limited to EPS-1-OUT.

ARGB Connectors

The PowerBoard has built-in ARGB lighting and acts as an ARGB hub. An ARGB source, like a motherboard ARGB header, must be connected to the ARGB-IN header on the PowerBoard. The input header is marked with a white rectangle around it for easier identification. The PowerBoard uses this ARGB signal to light up the built-in LEDs and splits this signal to all ARGB outputs. What signal goes into the input will be displayed on the built-in LEDs and all LED strips attached to the ARGB outputs, in parallel. The PowerBoard does not show up as an individual component in ARGB controlling software, but it can be controlled by controlling the motherboard ARGB header, which will show up in software. The PowerBoard LEDs and headers are powered by the power supply 24pin connection, so they will only light up when the system is turned on, but not when the system is turned off or in stand-by mode. The ARGB headers are conveniently located where they are expected to be used, next to radiator mounts, GPU, and CPU waterblocks and close to Elite kits. Do not plug a 4pin/12V RGB device into the PowerBoard, only 3pin/5V ARGB/DRGB (addressable/digital RGB) devices are compatible.

ARGB On/Off Switch

This switch connects/disconnects the ARGB control signal from the built-in LEDs on the PowerBoard. When turned ON, the LEDs will immediately light up. When turned OFF, the LEDs will not light up from the next time the system is turned ON from a cold boot but will display the last colour they were displaying before the switch was turned OFF. After turning the switch OFF, turn off the system, wait 5 seconds and turn the system ON again. This switch does not control ARGB headers, only the built-in LEDs on the PowerBoard.

UV On/Off Switch

This switch turns the built-in UV LEDs on the PowerBoard ON/OFF. It is a live switch, and the UV lighting should immediately turn ON or OFF based on the position of the switch. There is no need to reboot the system.

PWM/Fan Connectors

The PowerBoard acts as a powered PWM/Fan hub. A PWM source, like a motherboard CPU Fan header, must be connected to the FAN-IN header on the PowerBoard. The PowerBoard shares this PWM signal to all PWM outputs. What signal goes into the input will be the same control signal sent to every fan connected to the PowerBoard. The PowerBoard does not show up as an individual component in fan controlling software, but it can be controlled by controlling the motherboard CPU Fan header, which will show up in software. The PowerBoard PWM headers are powered by the power supply, so there is less strain on the motherboard. Only FAN-1-OUT-RPM monitors the speed of a connected fan which is reported back to the motherboard. If no fan is connected to this header, the motherboard will see zero RPM even if all other headers have fans connected to them, so populate FAN-1-OUT-RPM first with a fan that You would like to monitor the RPM of. The PWM headers are conveniently located where they are expected to be used, close to radiator mounts.

Power, Reset, LED Header

Connect the motherboard front panel headers to this header to enable functionality of the touch button on the back side of the PowerBoard, the POWER and RESET buttons on the front side and the header for the front panel button on the case. Refer to the motherboard's manual for the pinout of its front panel header:

Connect PWR_BTN (motherboard) with POWER SW cable to PWR (PowerBoard) Polarity matters, although it varies by motherboard maker. If it is wired the wrong way then the system will automatically turn ON and then OFF, repeatedly. It is the same behaviour from holding the power button indefinitely. If this is the case, turn the power supply main switch to OFF and reverse the connector polarity of the POWER SW cable either on the motherboard or on the PowerBoard side. Connect RESET (motherboard) with RESET SW cable to RST (PowerBoard). +/- Polarity does not matter.

Connect POWER_LED (motherboard) with POWER LED +/- cable to LED (PowerBoard) +/- Polarity does not matter.

FRONT BUTTON HEADER: connect the main power button from the front panel here:

POWER SW cable to PWR (PowerBoard), polarity does not matter.

POWER LED +/- to LED (PowerBoard), polarity does not matter.

Powering on the system

There are up to 4 ways to turn the system on. The first is the main power button that's installed onto the front of the case. Second is the built-in buttons on the PowerBoard. Third is the touch button on the back side, top left corner area of the PowerBoard inside the acrylic cut out, touch the Singularity Computers logo to turn the system on. Fourth is the power button built into the motherboard, it depends on the model whether it has it or not.

SATA Connectors

Connect the SATA inputs into the SATA outputs on the motherboard and install 2.5" and/or 3.5" drives into the PowerBoard. There is no need to connect a SATA power cable to the 2.5" drive, it is powered directly from the PowerBoard.

SATA drive support:

- Drive 1: 2.5"
- Drive 2: 2.5"
- Drive 3: 2.5" or 3.5"
- Drive 4: 2.5" or 3.5"

Mount Drives

To mount drives the rear covers will need to be removed by undoing the fasteners marked in the diagram below.

