

 SINGULARITY COMPUTERS

# STREAM-S ITX

## MANUAL

V0.2

Table of Contents

Introduction ..... 2

Specifications & Included Items ..... 2

Attach PowerBoard to PSU .....3

Install PowerBoard & PSU..... 4

Install Radiator on Rear Wall ..... 6

Install 2.5" Drives ..... 6

Stream-S ITX PowerBoard.....7



## Introduction

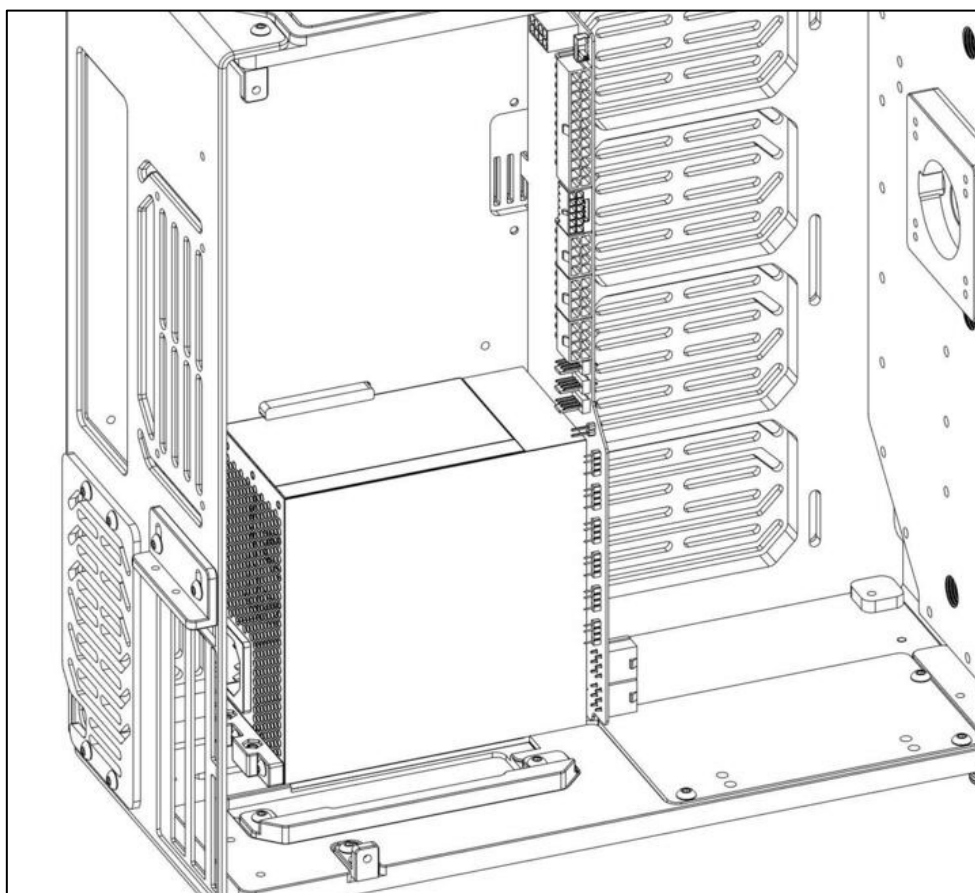
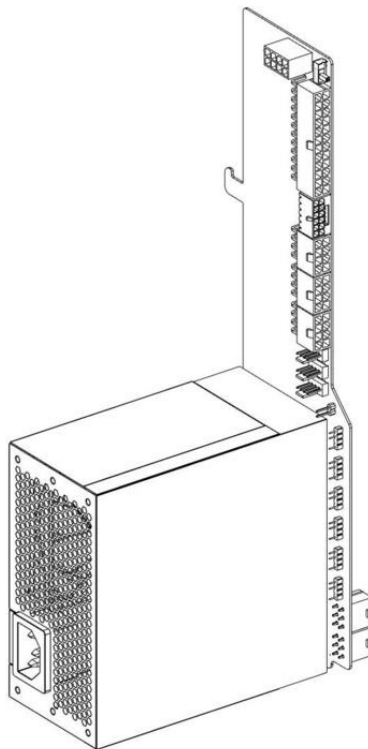
Stream-S is an SFF case designed for high end water-cooling. It has a distribution plate on the front panel which integrates a pump and reservoir. It fits x2 240mm radiators, a full-sized GPU and 2x 2.5" drives. Stream-S is the first case which does not need wires for the main cables. It has a PowerBoard which connects directly to the PSU and includes flexible PCBs which connect the PowerBoard to the motherboard and GPU. The PowerBoard and flexible PCBs remove the need for cable management and make the cables extremely clean and compact which is particularly important for an SFF case.

## Specifications & Included Items

<b>Water-cooling Integration</b>	Reservoir, Pump Top, Pump Cover, Fill Port, Drain Port, Parts of water-cooling loop. Ports: x6 G1/4" BSPP, 1x Fill Port, 1x Drain Port Pump (Not included): Compatible with all DDC pumps. Core Component Connectors: 24pin x1, 8pin EPS x1, PCIE 8pin x3, 12V2X6 x1, 6pin PSU x2.
<b>Electronics Integration</b>	Hubs: PWM x4, ARGB x5 (Single input for all). Extra Power Button. Built-in PSU Jump starter for powering the pump only, for filling the loop. PowerBoard Linking FPC Cables: 24pin x1. 8pin EPS x1. Select either 8pin PCIE x3 or 12V2X6 (non FPC) Cable.
<b>Cables</b>	PWM Female to Female 50cm Black Sleeved x1. ARGB Female to Female 50cm Black Sleeved x1. LED Strips: x3 Installed on the Distribution Plate, the Motherboard Tray, and the Top Panel.
<b>Motherboard Form Factor</b>	Mini-ITX.
<b>Expansion Slots</b>	x2.
<b>Case Form Factor</b>	SFF.
<b>Case Dimensions &amp; Weight</b>	L: 346mm W: 165mm H: 381mm   6kg
<b>Package Dimensions &amp; Weight</b>	L: 406mm H: 225mm W: 441mm. (Case comes fully assembled)   6.5kg
<b>Storage</b>	2x 2.5".
<b>Radiators</b>	40mm x 30mm w/ x1 set of standard 25mm fans.
<b>Max. GPU Length</b>	323mm.
<b>Max. GPU Height</b>	Unlimited.
<b>Max. CPU Cooler Height</b>	138mm.
<b>Max. PSU Length</b>	Compatible only with the <b>Asus ROG Loki series</b> .
<b>Front Panel I/O</b>	n/a   Touch activated button.
<b>Vertical GPU Mount</b>	x1 2 slot. PCIe 4.0 Vertical GPU Riser Cable 20cm.
<b>Materials</b>	061 Aluminum Anodized, Cast Acrylic, Stainless Steel, PCB.
<b>Manufacturing Process</b>	CNC Mill, CNC Lathe, CNC Router, Aluminium Folding, PCB.
<b>Assembly</b>	Distribution Plate Assembled by Hand. Metal Components need to be assembled and attached to the distribution plate by the customer.
<b>Testing/Validation</b>	All Distribution Plates are factory pressure tested and precise fastener tension is applied.

## Attach PowerBoard to PSU

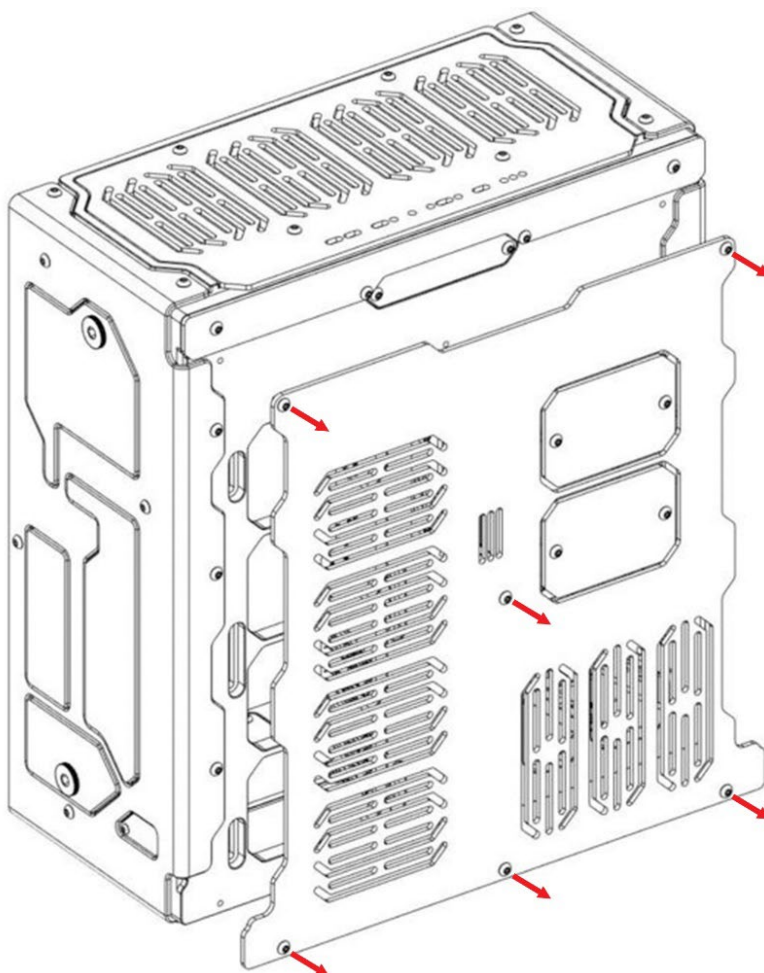
The PowerBoard is designed to fit the **Asus ROG Loki 750W** or **1000W PSUs**. Align the connectors with the PSU and plug it in firmly. Check to make sure that all connectors are plugged in 100% of the way or it can cause damage to the PowerBoard, PSU and other components.



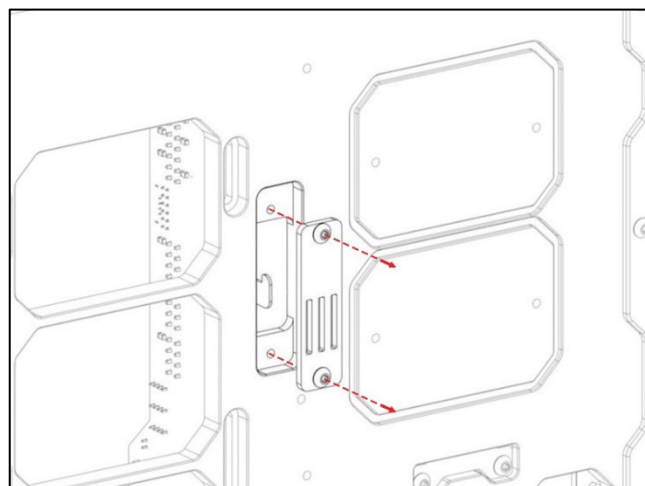


## Install PowerBoard & PSU

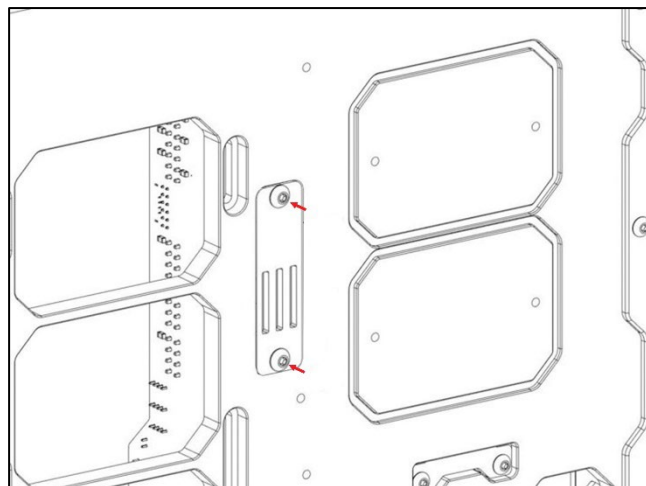
Install the PowerBoard and PSU into the case together. The PowerBoard has a hooked section which attaches to the rear wall of the case. Before you attach this you need to remove the Rear Cover Panel and PowerBoard Attachment Panel. Remove the Rear Cover Panel by undoing the fasteners marked in the diagram below.



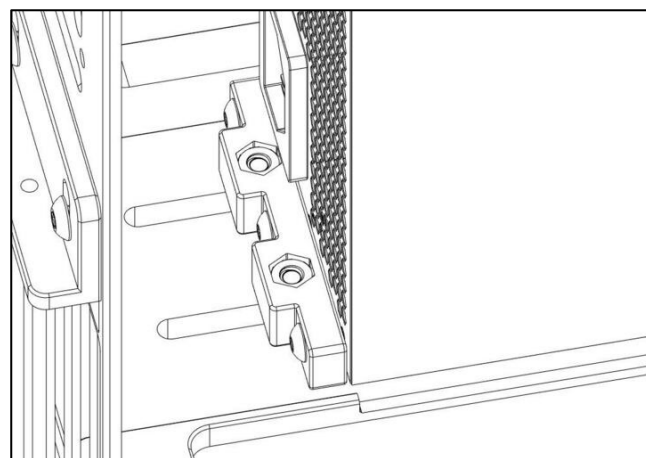
Remove PowerBoard Attachment Panel by undoing the fasteners marked in the diagram on the right.



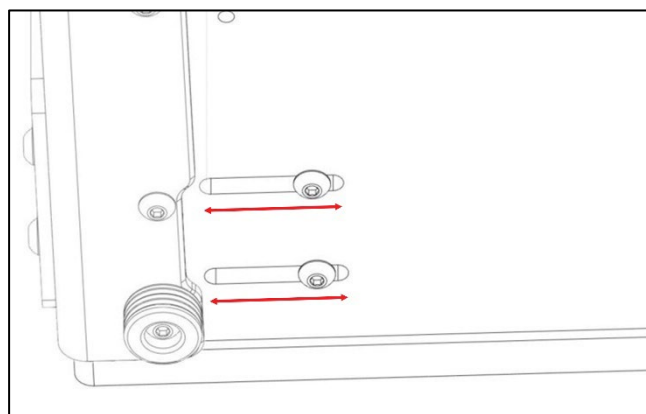
Once the PSU and PowerBoard are installed into the case the PowerBoard Attachment Panel can be re-attached.



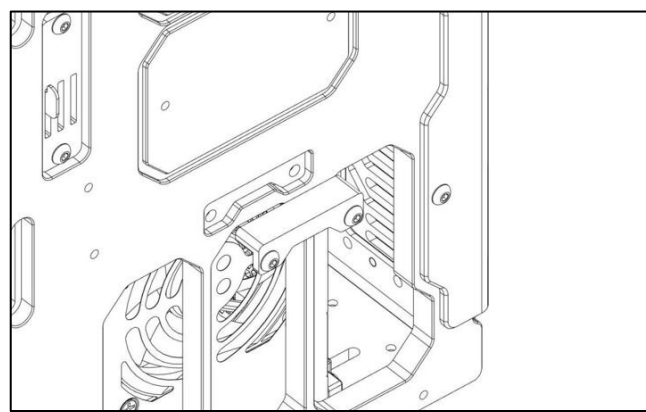
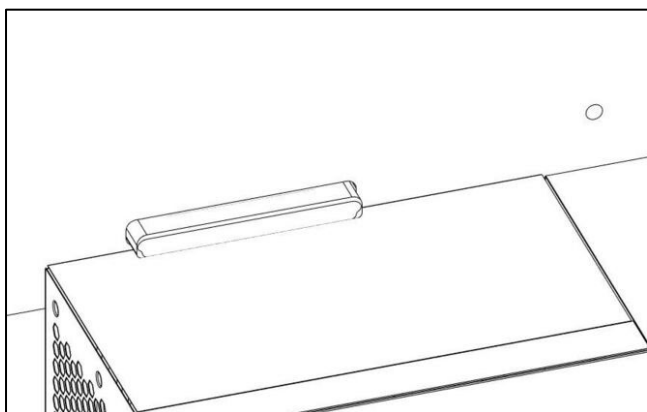
The PSU can also be attached to the Lower PSU Mount. It might be easier to attach this part to the PSU while the PSU is outside of the case. Attach the Lower PSU Mount using the included 0.375" Fasteners x4.



The Lower PSU Mount is adjustable so that you can position the PSU & PowerBoard where you need it.

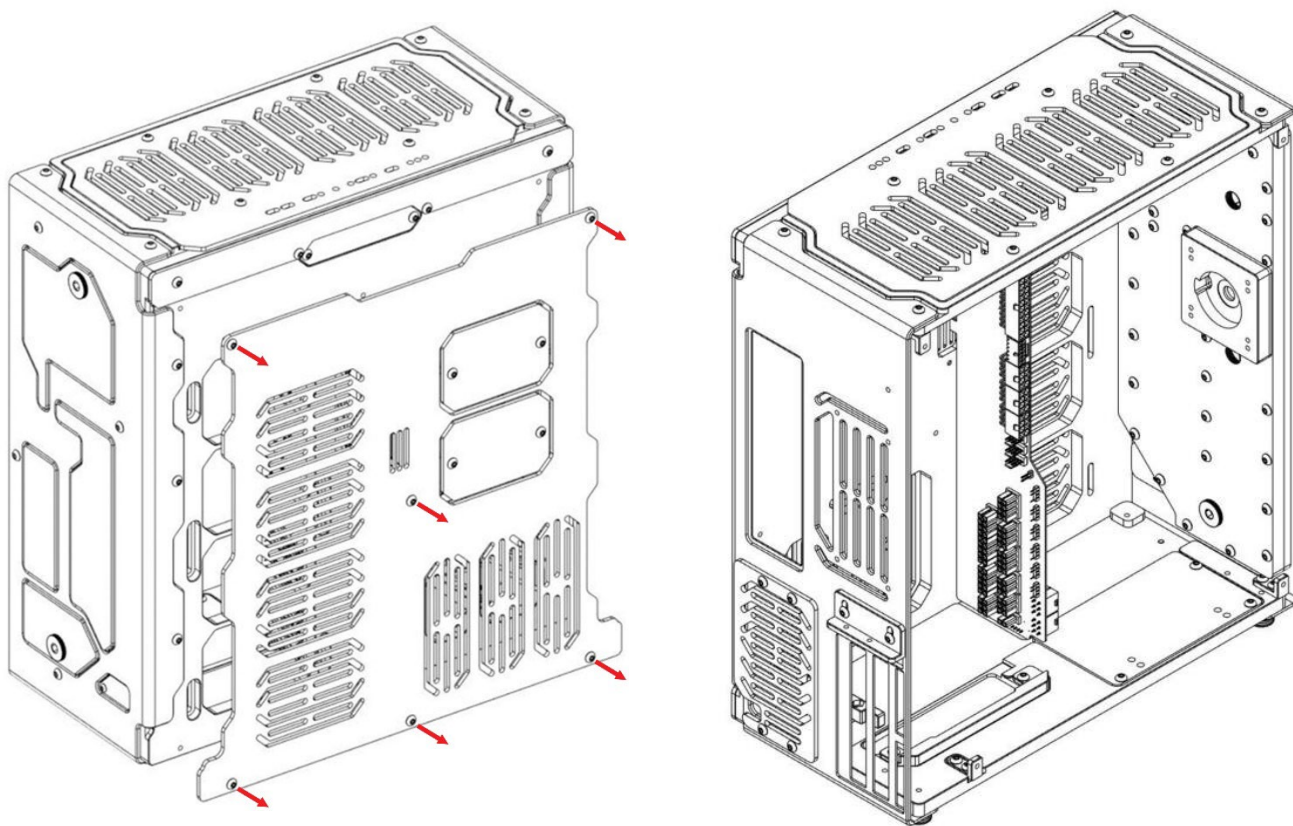


There is a PSU Hold Down Mount which comes preinstalled on the case, it is removable.



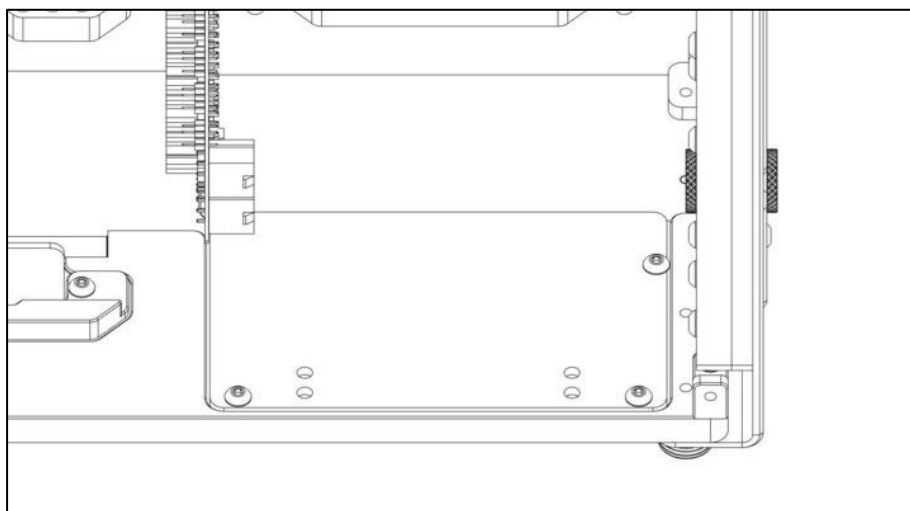
## Install Radiator on Rear Wall

For installation of the radiator on the rear wall of the case the Rear Cover Panel will need to be removed.

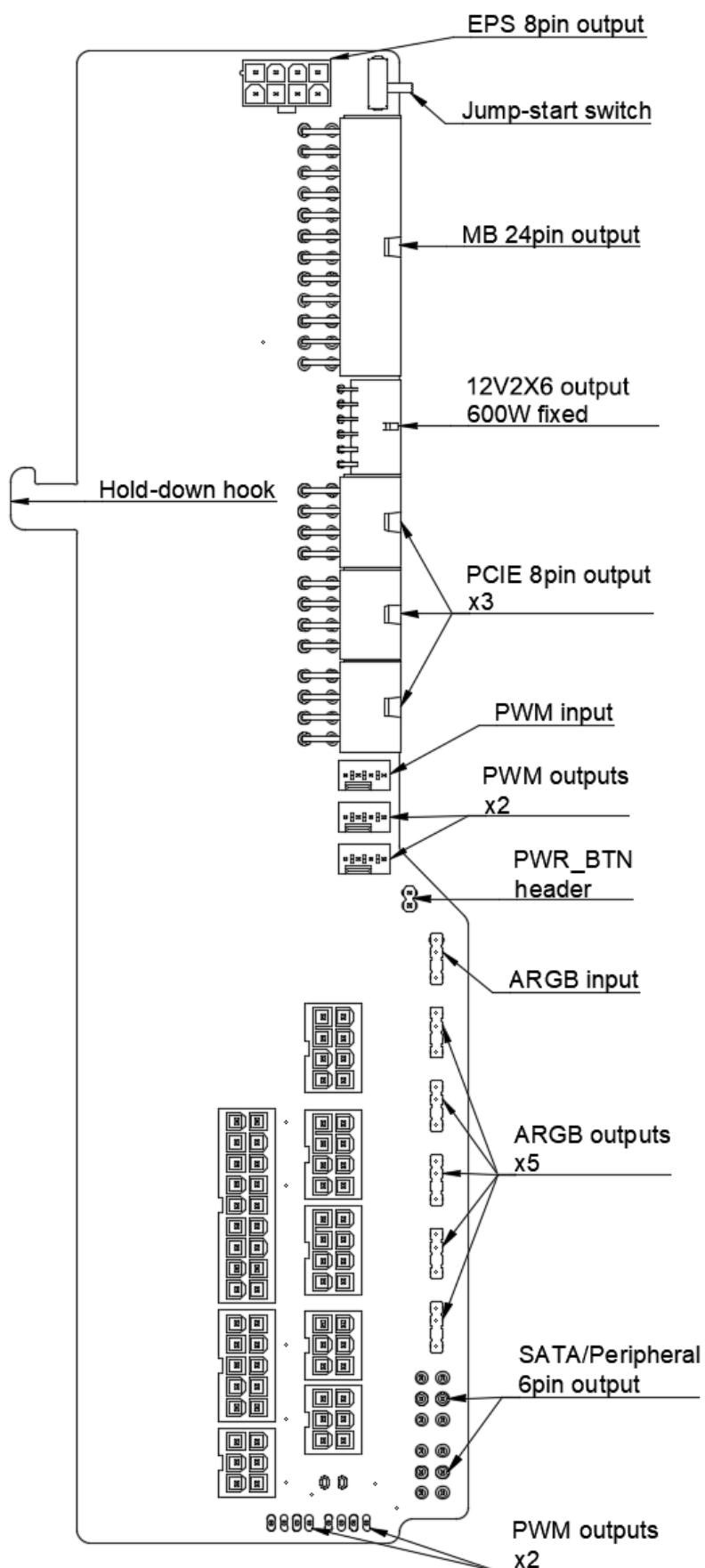


## Install 2.5" Drives

To install 2.5" drives, remove the Drive Mount Panel by undoing the M4 x 6mm Fasteners which hold it to the bottom panel. Use the included M3 x 6mm Fasteners to install the drives, they are mounted sideways vertically.



## Stream-S ITX PowerBoard



**⚠ All PowerBoards need PowerBoard Linking Cables.**



- The Stream-S PowerBoard utilizes a direct-attachment method to connect to the power supply. Before installing the power supply into the case, attach the Stream-S PowerBoard to it. A decent amount of force is needed to make a full connection on all of the connectors. Check for gaps between connectors from all four sides.
- Compatible power supplies:
  - ROG Loki 750W Platinum
  - ROG Loki 850W Platinum
  - ROG Loki 850W Platinum White Edition
  - ROG Loki 1000W Platinum
- The Stream-S PowerBoard provides a 12V2X6 connector supplying up to 600W to a GPU, next to 3x 8pin PCIE output for compatibility.
- The PSU jump-start switch will turn the power supply on without a motherboard installed or connected. This helps with filling the loop as the pump won't need to be powered externally. Unplug the motherboard 24pin and 8pin EPS linking FPC cables along with the GPU power cables to prevent these components from turning on as well. This switch is a toggle-switch so as long as it is in the "ON" position, the power supply is also on.
- The on-board FAN outputs are to power the fans on the 2 radiators, their speed is controlled by the motherboard if it is connected to the "FAN-IN" header. Only FAN-1 has an RPM reading back to the motherboard.
- The on-board ARGB headers are to power 5V addressable/digital LED strips and other RGB devices, their color is controlled by the motherboard if it is connected to the "ARGB-IN" header.
- The 2x SATA/Peripheral 6pin outputs are the same that are on the power supply, plug the factory SATA or Molex cables into these connectors.
- Connect the "PWR" header to the motherboard front panel header, into the PWR\_BTN pins. WARNING: if the system is powered from mains and it automatically turns on and then a few seconds later turns off by itself, then flip this connector around on the PowerBoard side. This is expected behavior if the polarity is wrong.
- Connect the included "HRTN" cable to the touch button PCB piece and to the "HRTN" header on the Stream-S PowerBoard to enable the touch button on the front of the case. This button acts just like a regular button and can be momentarily touched to start the system or can be held for a force-shutdown.