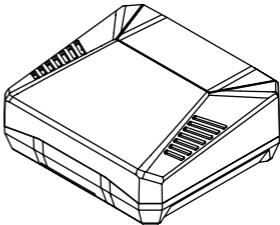
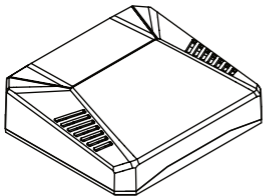


# Argon ONE V3 / M.2 NVMe PCIe



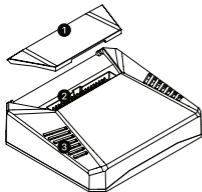
## Product Guide



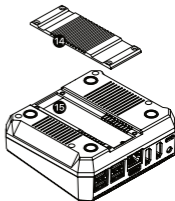
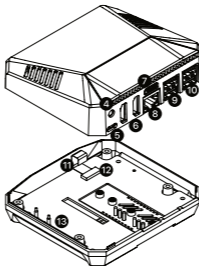
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## A. ARGON ONE V3 / M.2 NVMe PCIE PARTS



**ARGON ONE V3**



**ARGON ONE V3  
M.2 NVMe PCIE**

- ❶ Magnetic Removable Top Cover
- ❷ 40 Pin GPIO Access
- ❸ Exhaust vents
- ❹ 3.5mm Audio Port  
(Works only with Argon BLSTR DAC)

- ❺ USB-C Power In
- ❻ 2 x Type A HDMI
- ❼ Power Button
- ❽ Gigabit Ethernet

- ❾ 2 x USB 3.0
- ❿ 2 x USB 2.0
- ⓫ PCIe Film Strip
- ⓬ PCIe Socket

- Ⓜ Power Pogo Pins
- Ⓝ THRM L M.2 Heatsink
- Ⓞ M.2 NVMe Drive Socket

## B. ARGON ONE V3 FEATURES

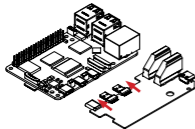
<b>Durable and Functional Case Material for Passive Cooling</b>	Whole top of the case is injected aluminum alloy and injected ABS plastic bottom
<b>More efficient Active Cooling</b>	Blower type 30mm PWM Programmable fan. Full fan power control vis-a-vis CPU Temp response via Argon Script
<b>Internal MicroController for Power Button and FAN Control Functions</b>	Powered by Raspberry Pi <b>RP2040 Chip</b> . New Hacker Friendly feature.
<b>Built-in IR Receiver</b>	(GPIO 23) Works with Argon Remote once Argon Script is installed, but is fully user Programmable for other remotes in LIRC
<b>Multi function Power Button and Power Management</b>	Safe shutdown with power cut, Reboot, Always ON Mode
<b>2 Regular HDMI</b>	Converted the micro HDMI of the RPi 5 to Regular HDMI
<b>GPIO Access</b>	Full GPIO Access with Magnetic cover

## C. ARGON ONE V3 ADD ON MODULES

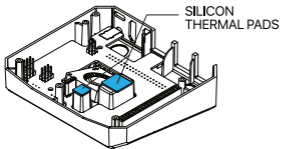
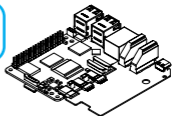
<b>Add ON: Argon ONE M.2 NVMe PCIe Expansion Board</b>	Fully compatible with the Argon ONE M.2 NVMe PCIe Expansion Board for the M.2 NVMe Storage via the PCIe of the RPi 5
<b>Add ON: Argon BLSTR DAC</b>	Full high definition 24-bit 192kHz Texas Instruments PCM5122 digital audio codec (DAC) via the 3.5mm jack
<b>Add ON: Argon PWR Uninterrupted Power Supply Module</b>	Argon PWR UPS   5.1V 5A PD UPS with internal RTC

## D. ASSEMBLY INSTRUCTIONS

1. Connect the Raspberry Pi® 5 to HDMI-Power Board. Place the Silicon Thermal Pads on the Argon ONE V3 case heatsinks (CPU and PMIC).



**PUSH ALL THE WAY IN  
THE HDMI-POWER BOARD**



Make sure that the HDMI-Power Board is **FULLY CONNECTED** to the RPi 5 to **AVOID POWERING UP ISSUES.**

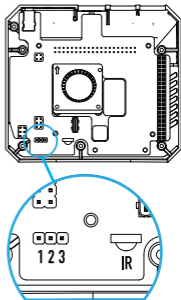
## 2. Select the **Argon ONE V3** Power Button Management Mode:

### ARGON ONE V3 / M.2 NVMe PCIe CASE JUMPER PIN SETTING

JUMPER PIN SETTING	MODE	BEHAVIOUR
Pin 1-2	Default Setting (Mode 1)	You need to PRESS button to Power ON from shutdown or power outage.
Pin 2-3	Always ON (Mode 2)	Power current will flow directly to Raspberry Pi. NO need to PRESS button to power ON from power outage

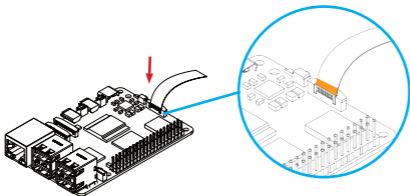
#### DEFAULT SETTINGS

Pin 1-2 or No Pin



3. Connect the PCIe Pipe Flat Flex Cable to the Raspberry Pi® 5 PCIe port.

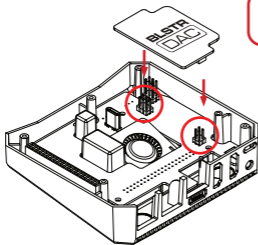
Skip this step if you have not purchased the Argon ONE V3 M.2 NVMe PCIe Case or Expansion Board



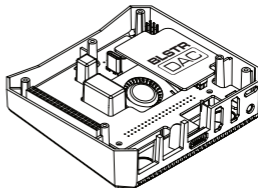
**COPPER SIDE** of the strip should be facing the **white side of the PCIe connector** of the Raspberry Pi® 5.

4. Connect the **Argon BLSTR DAC** Board to the pins of the Argon ONE V3 RP2040-Fan Board.

**Argon BLSTR DAC** is needed to activate the 3.5mm Audio Port.



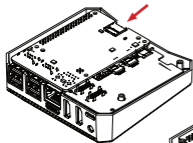
Skip this step if you have not purchased the Argon BLSTR DAC.



Refer to **Configuring Argon BLSTR DAC** page 16.

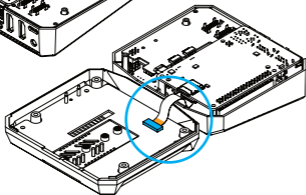


5. Carefully connect Raspberry Pi® 5 HDMI-Power assembly to the female **GPIO** and **6-pin Power port** of the Argon ONE V3 case.



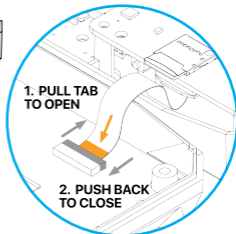
**FOR ARGON ONE V3 CASE ONLY:**

Please make sure that the microSD Card is **NOT INSERTED** to the Raspberry Pi during assembly.

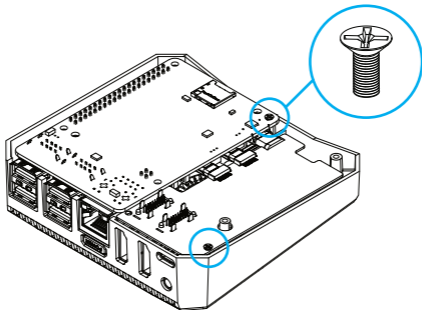


**FOR ARGON ONE V3 M.2 NVMe PCIe**

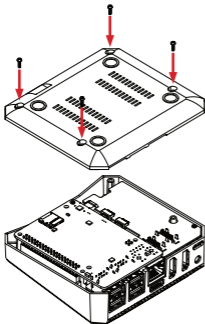
Please connect the PCIe Pipe Flat Flex cable with **COPPER SIDE FACING UP** as shown in the image.



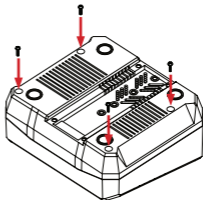
6. Secure **flat head screws** to fasten Raspberry Pi® 5 and HDMI-Power Board assembly to top case.



7. Fasten the bottom cover of the **Argon ONE V3 / M.2 NVMe PCIe** using the **round head screws**.



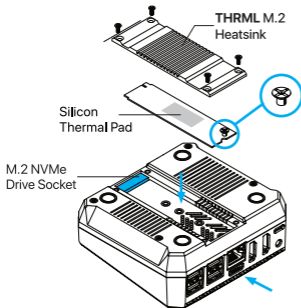
**ARGON ONE V3**



**ARGON ONE V3  
M.2 NVMe PCIe**

To ensure that the NVMe Drive is powered correctly via the POGO PINS make sure that the **Case Bottom** is **SCREWED TOGETHER** with the **Case Top**.

8. Connect your **M.2 NVMe Drive** to the **Argon ONE V3 M.2 NVMe PCIe Expansion Board**. This Board will accept **M.2 Key M** and **M.2 Key B+M** NVMe Storage Drive.



This Board is **NOT compatible** with **M.2 SATA** Storage Drives.

You may move the screw point on the Board to the appropriate size of your Storage Drive.

**PRESS** the **POWER Button** to **TURN ON** after assembly and connecting the Power Supply

## E. INSTALL ARGON ONE V3 POWER BUTTON AND FAN CONTROL SCRIPT

**STEP 1:** Configure the EEPROM Setting to optimize power and boot from NVMe.

1. Connect to the Internet, make sure Raspberry Pi Time is updated and execute in the Terminal.

```
curl https://download.argon40.com/argon-eprom.sh | bash
```

2. Reboot.

**STEP 2:** Install the Argon Control Script and Config.txt Settings

1. Connect to the Internet and execute in the Terminal.

```
curl https://download.argon40.com/argon1.sh | bash
```

2. Reboot.

### UNINSTALL

To uninstall the **Argon ONE V3** script you may do so by clicking the **Argon ONE V3 Desktop icon**.

You may also remove the script via Terminal Shell by typing:

```
argonone-uninstall
```

Always reboot after changing any configuration or uninstillation for the revised settings to take effect.

## F. AUTOMATED SETTINGS IN ARGON ONE V3 SCRIPT

The **ARGON ONE Script** automates the installation of all the libraries, programs and EEPROM and Config settings necessary for the **RP2040** in the **Argon ONE V3 Case** to be able to communicate with the **Raspberry Pi 5** and perform the various functions like Active Cooling and Power Management.

Below are the SETTINGS that were automated by the Argon ONE Script.

	<b>EEPROM Config</b>	<b>config.txt</b>
<b>Argon ONE Power Button</b>	PSU_MAX_CURRENT=5000	usb_max_current_enable=1
<b>Argon ONE V3 M.2 NVME PCIE</b>	BOOT_ORDER=0xf416 PCIE_PROBE=1	dtparam=nvme dtparam=pciex1_1=gen3
<b>Argon BLSTR DAC</b>		dtoverlay=hifiberry-dacplus,slave

## G. DEFAULT ARGON ONE V3 POWER BUTTON AND FAN SETTINGS

Upon installation of the **Argon ONE V3** script by default, the settings of the **Argon ONE V3 Power button** and **cooling system** are as follows:

ARGON ONE V3 STATE	ACTION	FUNCTION
OFF	Short Press	Turn ON
ON	Long Press ( $\geq 3$ s)	Soft Shutdown and Power Cut
ON	Short press ( $< 3$ s)	Nothing
ON	Double tap	Reboot
ON	Long Press ( $\geq 5$ s)	Forced Shutdown

CPU TEMP	FAN POWER
55 C	30%
60 C	55%
65 C	100%

However, you may change or configure the FAN to your desired settings by clicking the **Argon ONE V3** Desktop icon.

Or via Terminal Shell by typing and following the specified format:

```
argon-config
```

## H. CONFIGURE ARGON BLSTR DAC FOR RASPBERRY PI OS

1. Make sure you have installed the **Argon Configuration Script** into your by running in the **Terminal Shell**:

```
curl https://download.argon40.com/argon1.sh | bash
```

2. To enter the **Argon Configuration Tool** type **argon-config** in the Terminal Shell. Enter number 3 to install **Argon BLSTR DAC** Configuration.

```
-----  
Argon Configuration Tool  
Version 2402004  
-----  
  
Choose Option:  
  1. Configure Fan  
  2. Configure IR  
  3. Configure BLSTR DAC (v3 only)  
  4. Configure Units  
  5. Uninstall  
  
  0. Exit  
[Enter Number (0-5):3
```



3. Once installed you will be able to see this.

```
[Enter Number (0-5):3
-----
  Argon BLSTER DAC Configuration Tool
-----

Select option:
  1. Diable BLSTER DAC
  2. Cancel
[Enter Number (1-2):2
```

4. If you want to configure manually the **ARGON BLSTR DAC** just add the setting in the config file located at **/boot/firmware/config.txt**

```
dtoverlay=hifiberry-dacplus,slave
```

5. Then **Reboot**.

For more information please visit: <https://argon40.com/blogs/argon-resources>

## I. SET UP BUILT-IN INFRARED RECEIVER

The latest version has a programmable Infrared Receiver installed that can turn ON and OFF the device using the proprietary **Argon 40 IR Remote**.

To configure the **Infrared Receiver ON/OFF signal of Argon ONE V3** type in the Terminal Shell:

```
argonone-ir
```

Then follow the instructions as indicated.

## RECOMMENDED IR REMOTE & POWER SUPPLY

### Argon IR Remote

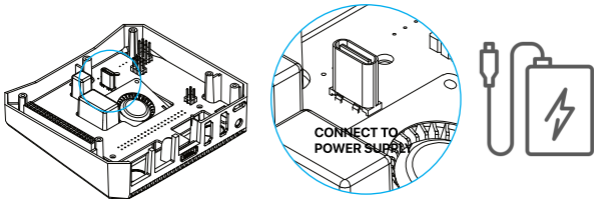
<https://argon40.com/products/argon-remote>

### Argon PWR GaN 27W Power Delivery

<https://argon40.com/products/argon-pwr-gan-usb-c-pd-power-supply-27-watts>

## J. ARGON ONE V3 BASIC HARDWARE TEST

1. **Connect** the **internal USB-C** socket on the RP2040-Fan Board to a 5V Power Supply.
2. **Press** the Power **ON Button**.



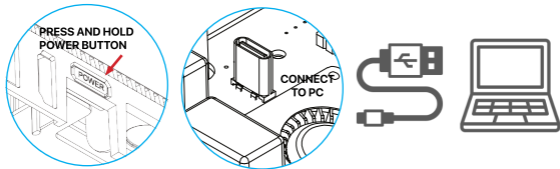
3. This would initiate the internal **FAN to RUN** for **5 SECONDS** and then **STOP**.
4. This would indicate that the RP2040 is able to communicate properly with the Power Button and the internal FAN and that the board is **fully functional**.

## K. UPDATE ARGON ONE V3 FIRMWARE

1. Download in your PC or Raspberry Pi Computer the latest Argon ONE V3 Firmware from the link below:

<https://download.argon40.com/firmware/ArgonOne.uf2>

2. **PRESS** and **HOLD** the **Argon ONE V3 POWER BUTTON** while you **connect internal USB-C** with **Data cable** to your **PC** or **Raspberry Pi computer**.
3. This puts the RP2040 into USB mass storage device mode.



4. Then you can **DRAG** and **DROP** your **LATEST compiled .uf2 firmware file** to the USB mass storage device.
5. Eject device when completed.