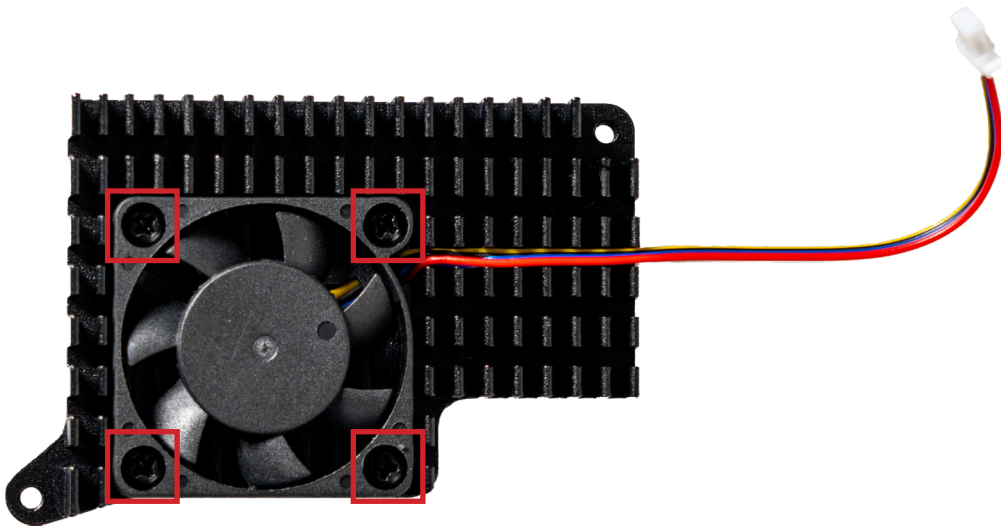# ACTIVE COOLING UNIT FOR RASPBERRY PI 5

RB-Heatsink5

1. GENERAL INFORMATION

Dear customer

Thank you for choosing our product. In the following, we will show you what you need to bear in mind during commissioning and use. Should you encounter any unexpected problems during use, please do not hesitate to contact us.
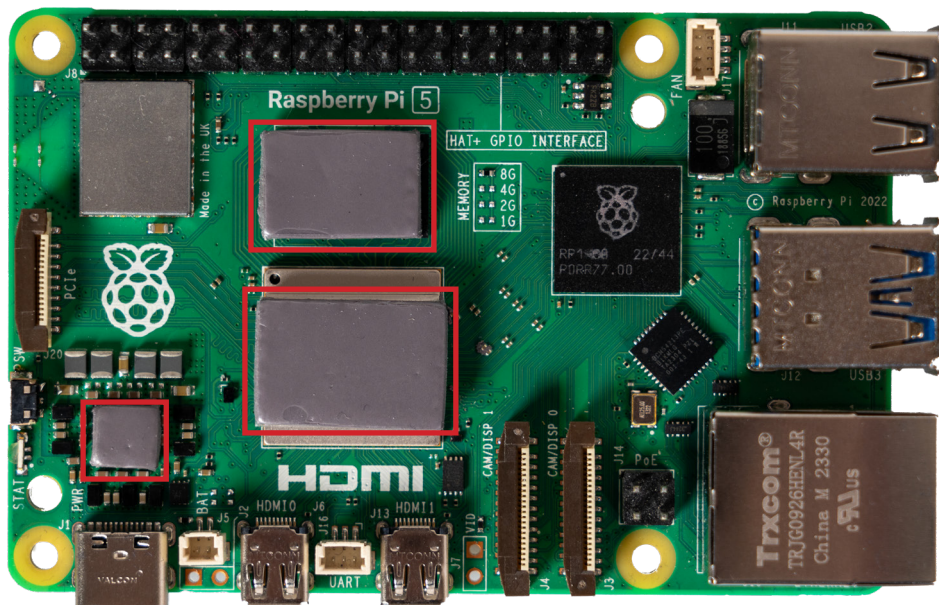
2. ASSEMBLY

First insert the fan unit into the heat sink and mount it using the four screws provided.
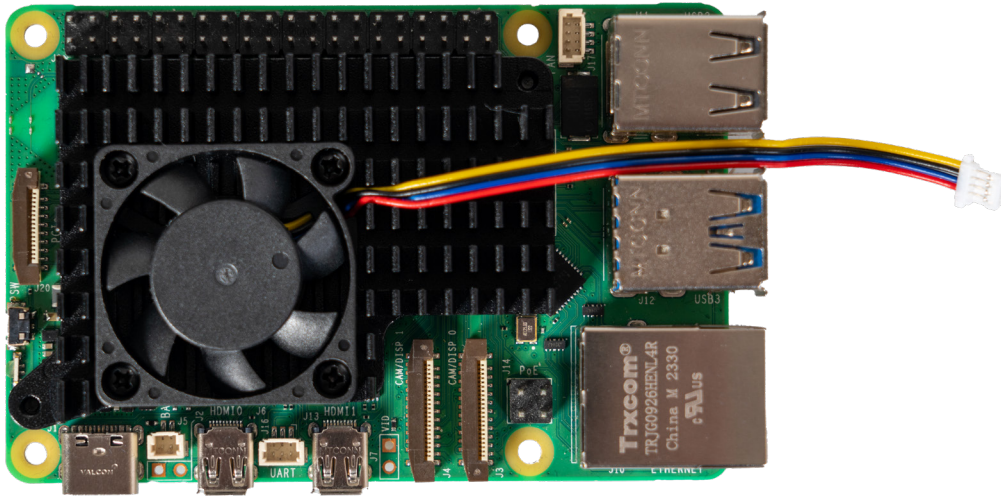

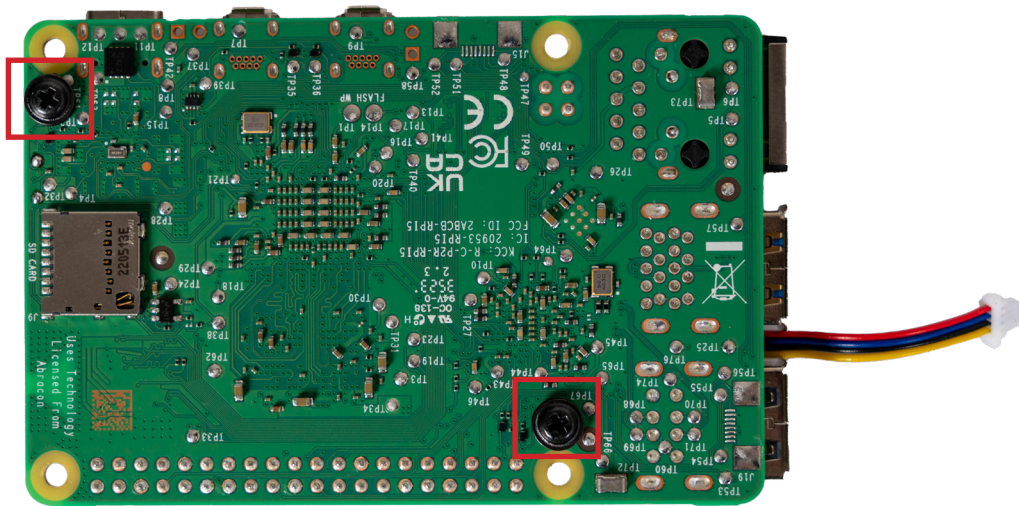Now completely remove the protective film from the thermal pads and place them on your Raspberry Pi.

ATTENTION! There is a protective film on both the front and back of the heat conducting pads. Both must be removed before fitting.
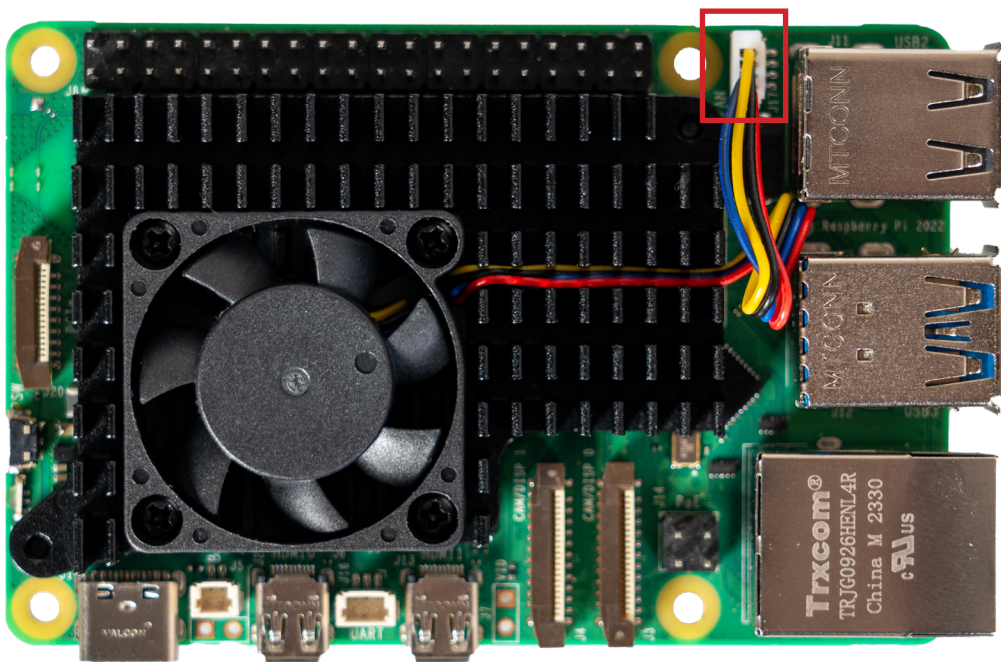
Now place the heat sink on your Raspberry Pi.

Now mount it from the underside of your Raspberry Pi using the two enclosed screws and washers.

Now insert the fan cable into the fan connection of your Raspberry Pi.

The fan is now ready for use. A separate installation and/or configuration is not required.

3. FAN CONTROL

Normally, the fan is automatically controlled by your Raspberry Pi depending on the CPU temperature.

However, you can also use the following commands to control the fan:

Disable the fan:

```
pinctrl FAN_PWM op dh
```

Run the fan at full speed:

```
pinctrl FAN_PWM op dl
```

Automatic control of the fan:

```
pinctrl FAN_PWM a0
```

To change the parameters for automatic fan control, enter the following command:

```
sudo nano /boot/firmware/config.txt
```

Add the following three lines to the end of the file:

```
dtparam=fan_temp0=47000
dtparam=fan_temp0_hyst=6000
dtparam=fan_temp0_speed=165
```

You can adapt the individual parameters to your application.

The first line specifies the temperature threshold in milliCelsius.
The second line specifies the fan hysteresis in milliCelsius.
The third line specifies the fan speed (PWM setting) (0-255).

After you have adjusted the values, you can save the file with **CTRL+O** and **Enter** and close it with **CTRL+X**.

The settings are only applied after the next restart. To do this, enter the following command:

```
sudo reboot
```

4. OTHER INFORMATION

Our information and take-back obligations under the German Electrical and Electronic Equipment Act (ElektroG)

SYMBOL ON ELECTRICAL AND ELECTRONIC EQUIPMENT:
This crossed-out garbage can means that electrical and electronic appliances do not belong in household waste. You must hand in the old appliances at a collection point. Before handing them in, you must separate used batteries and accumulators that are not enclosed by the old appliance.

RETURN OPTIONS:
As an end user, you can hand in your old appliance (which essentially fulfills the same function as the new appliance purchased from us) for disposal free of charge when purchasing a new appliance. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities regardless of whether you have purchased a new appliance.

POSSIBILITY OF RETURN AT OUR COMPANY LOCATION DURING OPENING HOURS:
SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

RETURN OPTION IN YOUR AREA:
We will send you a parcel stamp with which you can return the device to us free of charge. To do so, please contact us by e-mail at Service@joy-it.net or by telephone.

PACKAGING INFORMATION:
Please pack your old appliance securely for transportation. If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

5. SUPPORT

Wir sind auch nach dem Kauf für Sie da. Sollten noch Fragen offen bleiben oder Probleme auftauchen stehen wir Ihnen auch per E-Mail, Telefon und Ticket-Supportsystem zur Seite.

E-Mail: service@joy-it.net
Ticket-System: https://support.joy-it.net
Phone: +49 (0)2845 9360 – 50 (Mon. - Thur.: 09:00 - 17:00 ó clock CET,
Fri.: 09:00- 14:30 ó clock CET)

For further information, please visit our website:
www.joy-it.net

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