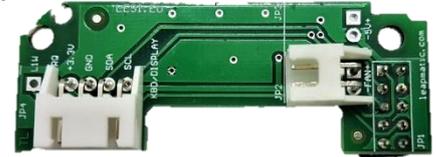


# HATL02F

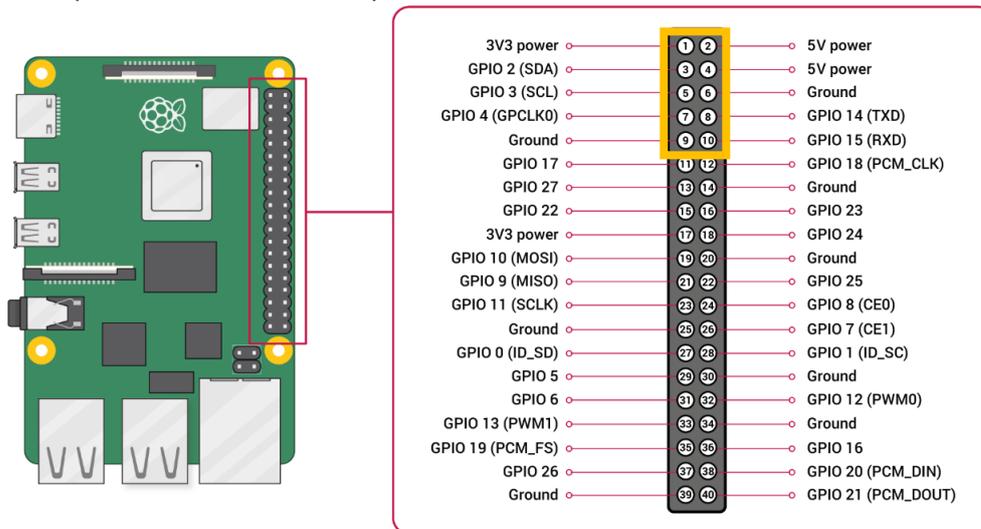
## Automatic fan control module for Raspberry Pi with I2C pins.

Do you want to extend the life of your fan, reduce its noise and control it automatically? With this MaticControl fan module you can! As a bonus, the second connector provides access to the I2C pins and 3,3V power supply.

I2C pins along with a 3.3V pin are often used to connect displays or other modules that use an I2C pins

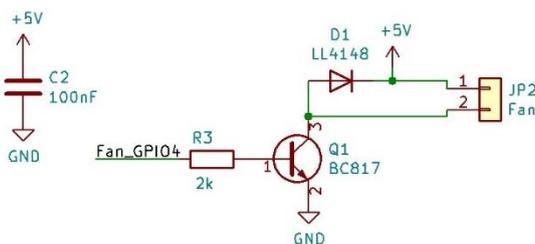


Place it on pins 1-10. And this is all you have to do on the hardware.

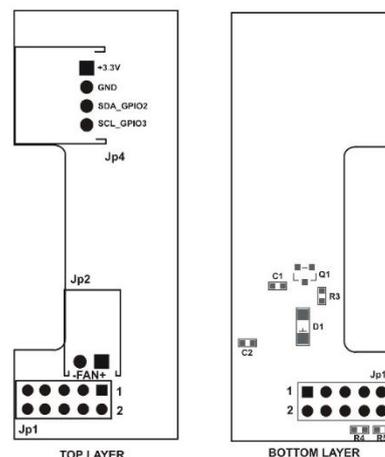


**Note:** This MaticControl module covers the pins for: 5V power supply, GPIO15 (RXD) and GPIO14 (TXD). If you want to use them, we offer modules (HATs) that provide access to these pins via separate connector on the top of the board. **For more see LeapMatic.com**

### Electrical Scheme of the module:



### PCB

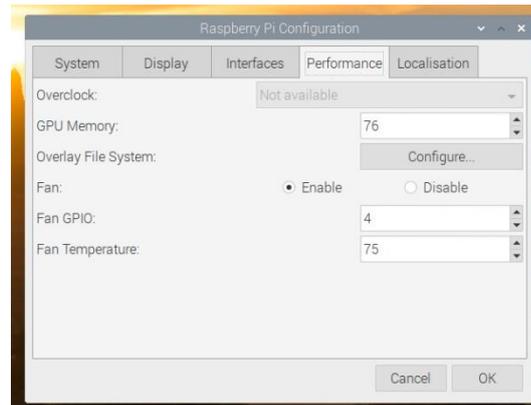
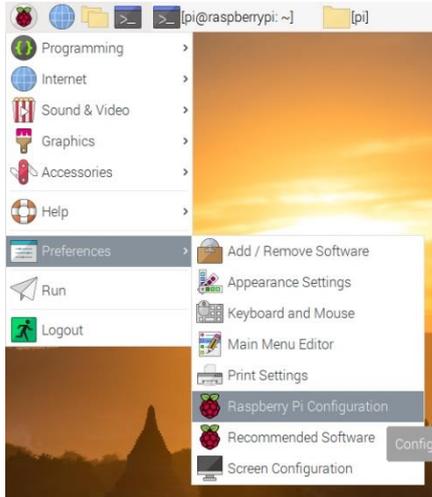


## I. Fan Control

About the software settings you have two options:

### 1. Graphical

From Raspberry icon > Preferences> Raspberry Pi Configuration > Performance tab >set fan enable; Fan GPIO 4; and the temperature at which you want the fan to turn on. Save with OK



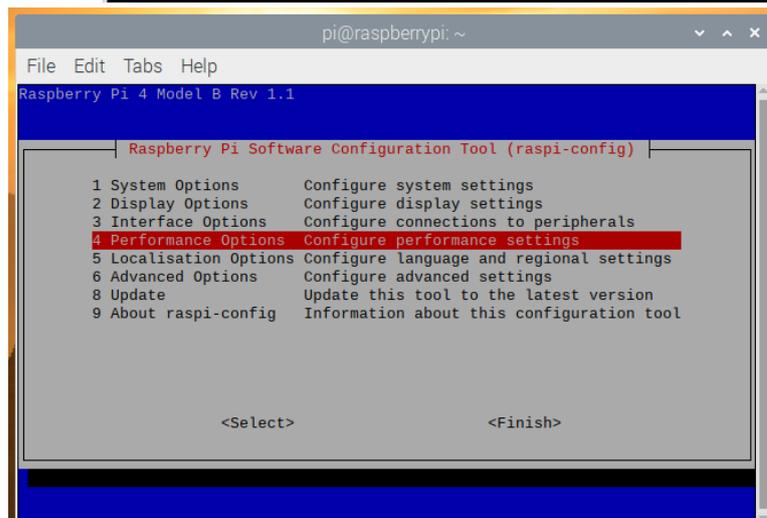
Thus, when the processor reaches the temperature you set, the fan will turn on. It will turn on off only when the processor temperature drops 10 degrees below the set on temperature. (For example, if you set the On temperature to 75 degrees, the fan will turn off when the processor reaches 65 degrees). With these few easy steps, you now have automatic fan control.

### 2. Console

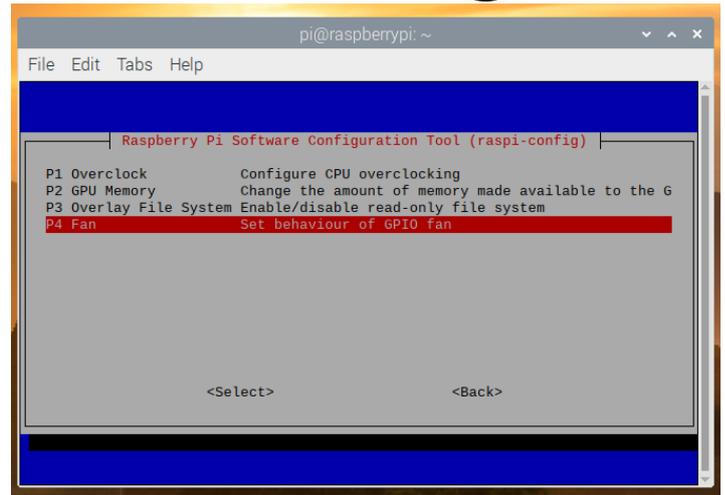
Open the Console and type  
sudo raspi-config

You will open a graphical interface menu where you need to choose Performance Options:

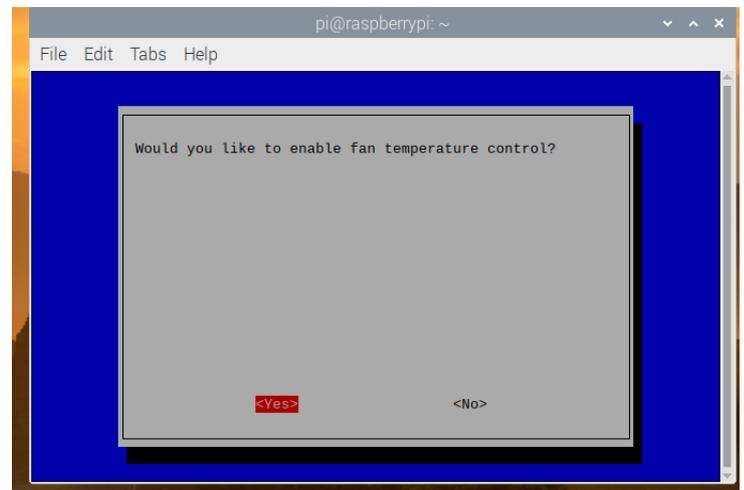
```
pi@raspberrypi:~ $ sudo raspi-config
```



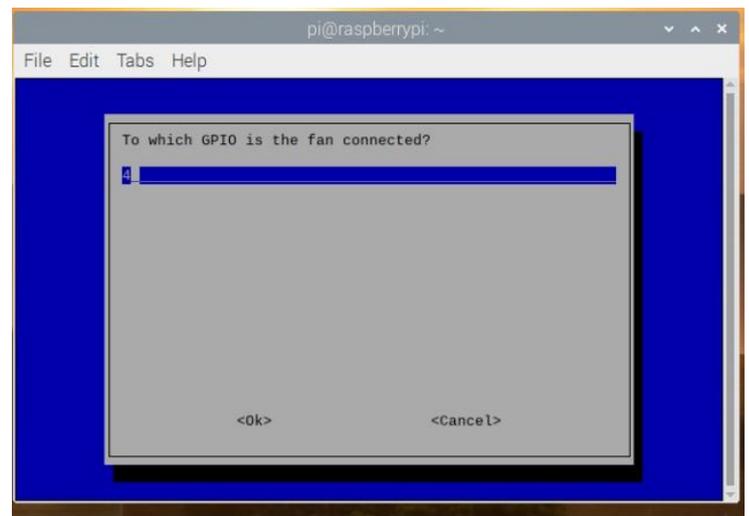
Then Choose “Fan”



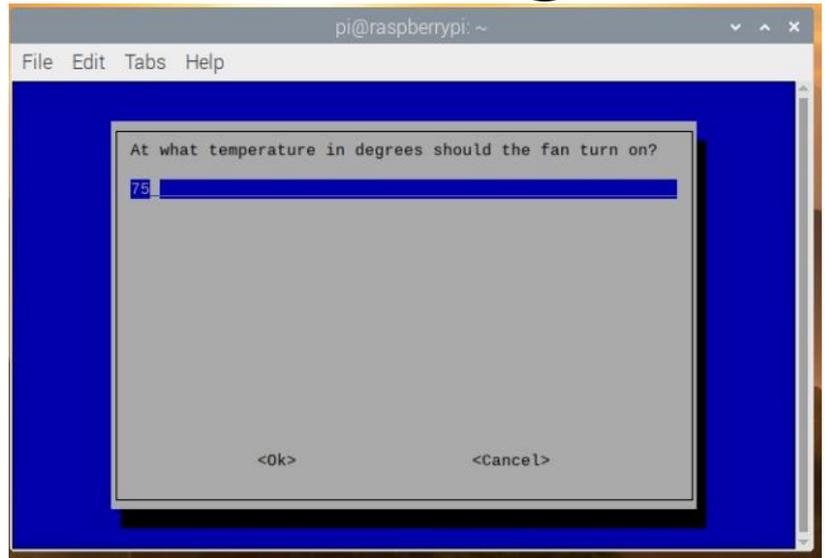
It will ask you if you want to enable fan temperature control? – Choose “Yes”



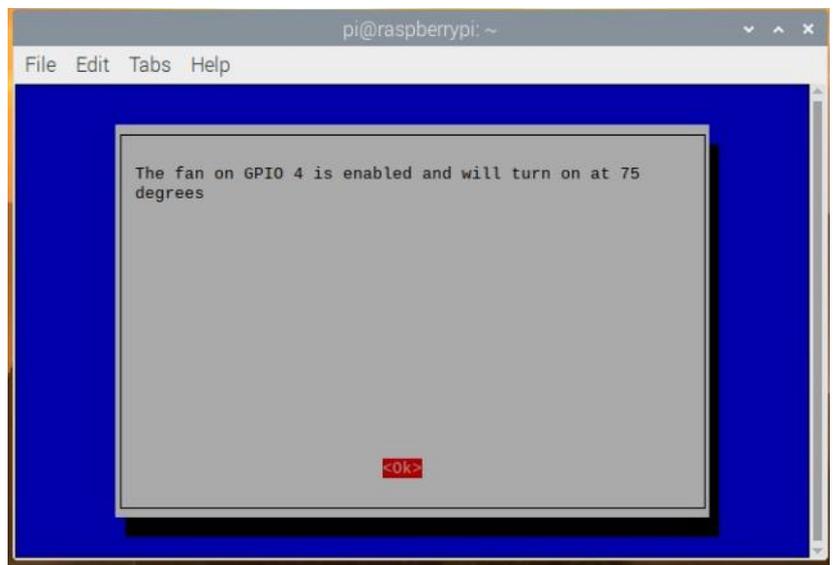
Here you need to set GPIO 4



Then set the temperature on which the fan will turn on



At last the system will inform you about the changes.



## II. I2C pins and 3,3V power supply

GPIO 2 and GPIO 3 - the Raspberry Pi's I2C1 pins - allow for two-wire communication with a variety of external sensors and devices. The I2C pins include a fixed 1.8 k $\Omega$  pull-up resistor to 3.3v. They are not suitable for use as general purpose IO where a pull-up might interfere.

I2C pins along with a 3.3V pin are often used to connect displays or other modules that use an I2C pins.