

User Manual

Equipment you will need:

- Ethernet Cable (Length of choice, however a longer one is recommended depending upon your desired location of surveillance.)
- Raspberry Pi 3 (Other Raspberry Pi's are no longer supported or capable of supporting 'MotionEYEoS').
- USB camera. (USB Cameras work whilst Raspberry Pi Camera Modules may not.)
- Monitor
- Laptop
- Keyboard
- USB or Hard drive (Preferably brand new)
- SD Card.
- A Mobile Device capable of downloading 'Fing', or the 'MotionEYEoS' app.
- Box or 3D printed protective cover for the Raspberry Pi.
- HDMI Cable.

Instructions

1 - Download 'MotionEYEoS'.

First navigate to the following link and download the appropriate Raspberry Pi code.

<https://github.com/motioneye-project/motioneyeos/wiki>

Select **supported devices** to find **Raspberry Pi 3** (*Or your selected device*) and download the file.

🔗 Getting Started

Check out the list of [supported devices](#) and download the OS image file that corresponds to your board.

Then follow the [installation instructions](#) to extract and write the image file to the SD card.

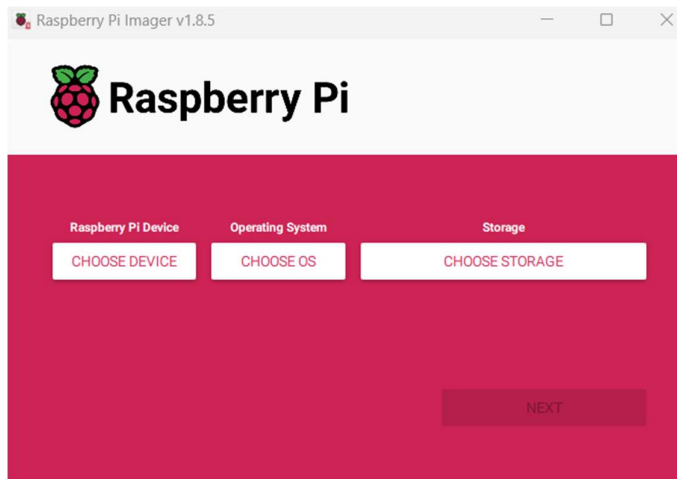
[home](#) | [supported devices](#) | [installation](#)

Raspberry Pi 3 (B, B+, A+, Compute Module 3)

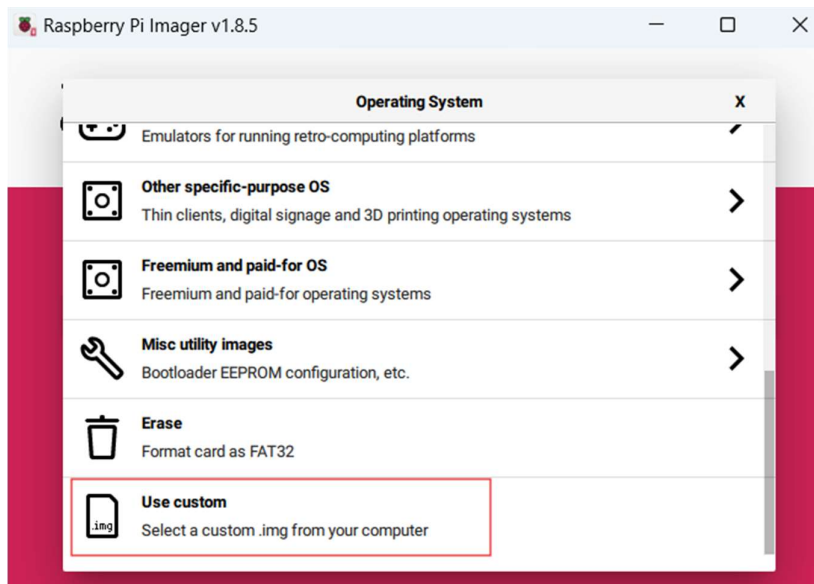
- [board home page](#)
- latest version: [20200606](#)
- kernel: 4.19 (raspbian)

2 – Flash the device

Like flashing all Raspberry Pi devices, use the imager to update your SD card. Which will be inserted into the Raspberry Pi and used to boot the device.

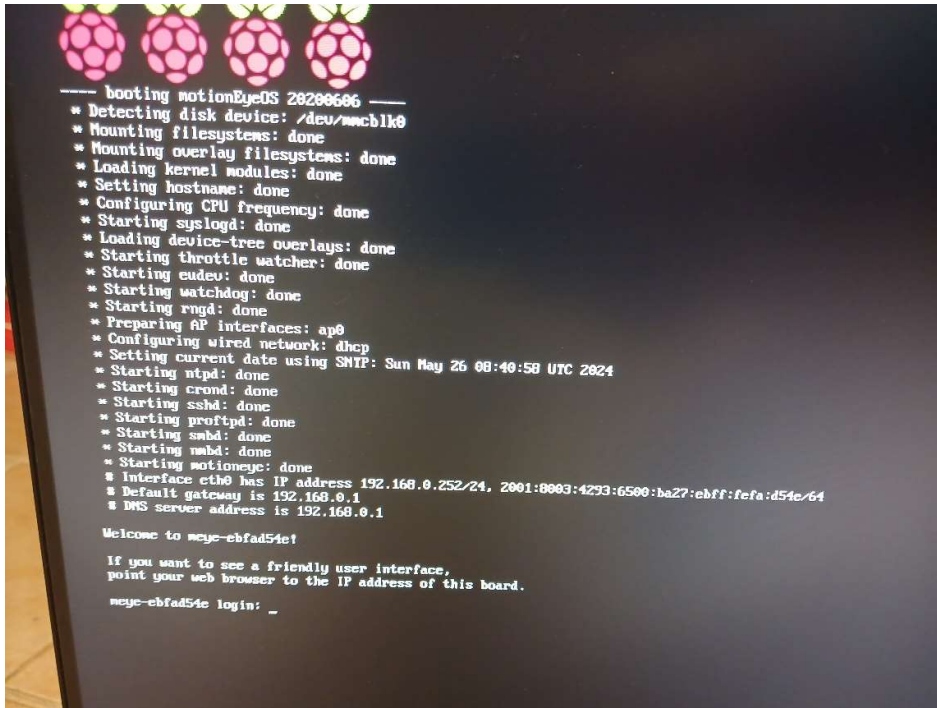


Under **Raspberry Pi Device**, choose your device as usual. Under operating system, select, custom and 'MotionEYEoS'. For storage, make sure to select your SD card. If the SD card was used prior, flashing it will wipe it clean. **If the information is of importance, make sure to save it prior to deletion or use another SD card.**

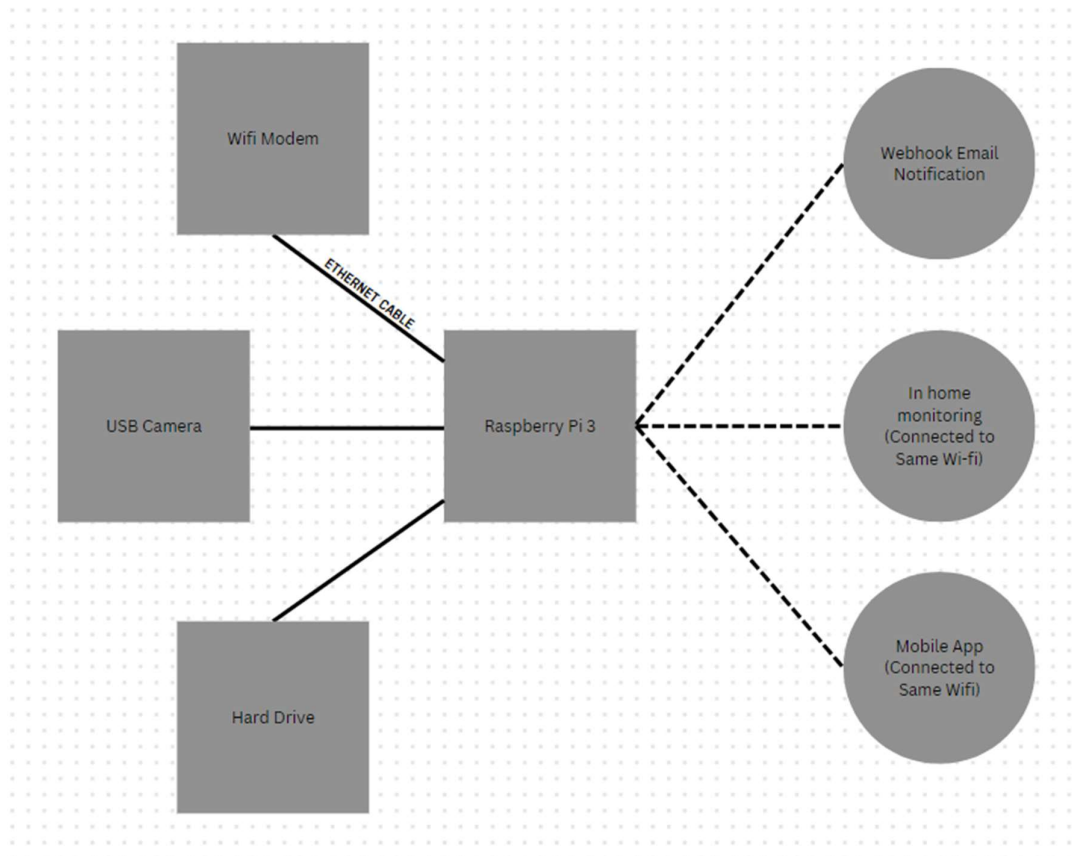


3 – Connect the device.

For the initial booting, connect the device via HDMI to a monitor and keyboard. This way, the booting of the device can be seen. Without the HDMI connection, confirming whether the device is operational is unachievable. For the time being, connecting to the USB is not necessary, but it can be installed currently.



The connection diagram is as is:



4 – Signing In

Upon connecting, the monitor will show the IP address of the Raspberry Pi. To access the system type in the IP address on Google. The GUI should appear, by selecting the top left a sign in option will open.

To sign in is simple, the system has no password for the time being and can be accessed by entering 'admin' which is the default username. All sign-in information can be modified upon entry.

5 – Saving the collected data to a USB.

The USB will have to be cleared prior to use. It will fail to save as easily and require significant modifications in the USB's address.

By typing 'df -h' into the monitor and keyboard setup, you will be able to get the name of your hard drive. Though it should be 'sda1'. If it is 'sda1' the address can be provided as so, to save the information.

File Storage ▼

Storage Device 6557 USB (/dev/sda1) ▼

Root Directory /dev/sda1

Disk Usage 0.3/14.4 GB (1%)

6 – Setting up notifications.

Setting up notifications depends upon the user. It depends upon the user, I used a webhook from IFTTT and supplied the link in the Motion Notifications section to get simple notifications for detected movement.

Motion Notifications ▼

Send An Email OFF

Call A Web Hook ON

Web Hook URL <https://maker.ifttt.com/trigger>

HTTP Method POST (json) ▼

Run A Command OFF

Run An End Command OFF

Primary

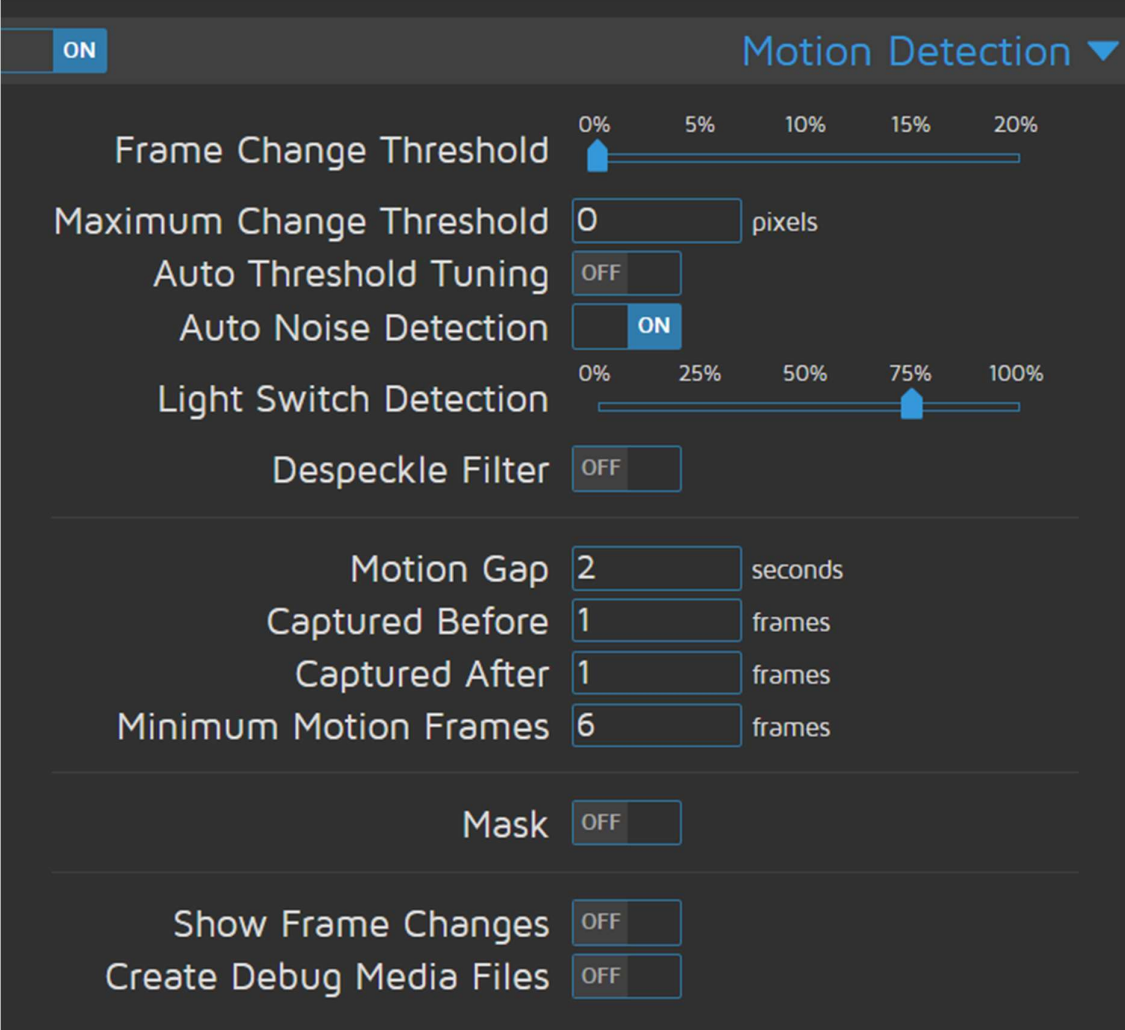
Promotions 50 new
Uber One, Radium PCs, Prime Vi...

Social 50 new
LinkedIn, YouTube, Nicko Ren (vi...

□ ☆ ↻ me	The event named "motion_detected" occurred on the Maker Webhooks service - What: motion_detected When: May ...	7:26 PM
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□ ☆ ↻ me	The event named "motion_detected" occurred on the Maker Webhooks service - What: motion_detected When: May ...	7:25 PM
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□ ☆ ↻ me	The event named "motion_detected" occurred on the Maker Webhooks service - What: motion_detected When: May ...	7:24 PM

7 – Setting up motion detection.

Setting up motion detection is a complicated matter which requires **individual testing** based on your own components. For a fast paced detection system which picks up minor movements, settings such as mine are recommended.



The image shows a settings window for 'Motion Detection'. At the top left, there is a toggle switch labeled 'ON'. The title 'Motion Detection' is at the top right with a dropdown arrow. The settings are organized into several sections separated by horizontal lines. The first section includes: 'Frame Change Threshold' with a slider from 0% to 20% (set at 0%); 'Maximum Change Threshold' with a text input '0' and the unit 'pixels'; 'Auto Threshold Tuning' with a toggle switch 'OFF'; 'Auto Noise Detection' with a toggle switch 'ON'; 'Light Switch Detection' with a slider from 0% to 100% (set at 75%); and 'Despeckle Filter' with a toggle switch 'OFF'. The second section includes: 'Motion Gap' with a text input '2' and the unit 'seconds'; 'Captured Before' with a text input '1' and the unit 'frames'; 'Captured After' with a text input '1' and the unit 'frames'; and 'Minimum Motion Frames' with a text input '6' and the unit 'frames'. The third section includes: 'Mask' with a toggle switch 'OFF'. The final section includes: 'Show Frame Changes' with a toggle switch 'OFF'; and 'Create Debug Media Files' with a toggle switch 'OFF'.

ON Motion Detection ▼

Frame Change Threshold 0% 5% 10% 15% 20%

Maximum Change Threshold 0 pixels

Auto Threshold Tuning OFF

Auto Noise Detection ON

Light Switch Detection 0% 25% 50% 75% 100%

Despeckle Filter OFF

Motion Gap 2 seconds

Captured Before 1 frames

Captured After 1 frames

Minimum Motion Frames 6 frames

Mask OFF

Show Frame Changes OFF

Create Debug Media Files OFF