

VM-1 Basic

"Build-Your-Own" Assembly Instructions

vm-1.com



Version 1.0.1
2025-09-04

VM-1

Bill of materials

Raspberry Pi 5, 2GB RAM
Raspberry Pi Active Cooler
Raspberry Pi 27W USB-C Power Supply
USB stick for Raspberry Pi
Waveshare 1.5" RGB OLED Display Module

Waveshare HDMI to CSI Adapter w./ flat cable
1-2 Micro HDMI to HDMI Adapter Cable
14 Screws M2.5x6
Computer Keyboard, e.g. Raspberry Pi Keyboard
(3D Printer for the enclosure)

Order most parts directly at BerryBase with the link:

<https://www.berrybase.de/loadBasket/8XtXJzICN6P>

(Please double-check your shopping cart and compare with our provided bill of materials.)

1) Enclosure

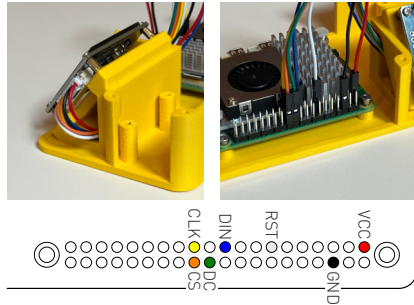
Download the latest 3D-files, unzip them and print them on a 3D-printer nearby.

github.com/zwodev/vml-video-mixer/releases/latest/download/vml_basic_case.zip



Guide the colored display cables through the tunnel at the back of the display.

Plug the seven colored cables into the Raspberry Pi as shown in the diagram.

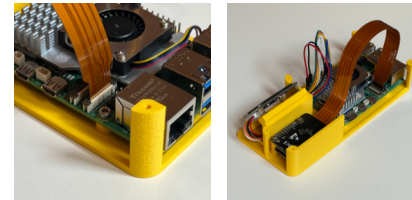


Connect the other end of the flat cable to the Raspberry Pi by gently pulling the brown lever on the CAM/DISP 0 (not CAM/DISP 1!) connector.

Insert the flat cable with the golden contacts facing the LAN/USB connectors.

Push the lever down to secure the cable.

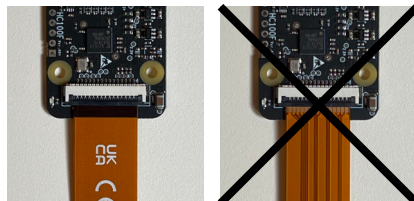
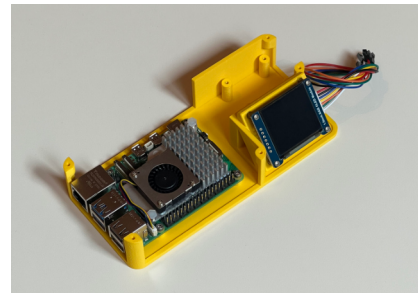
Position the HDMI-to-CSI module upside down on its slot. Fix it with 4 screws.



2) Assembly

Place the Raspberry Pi on its designated position and secure it with 4 screws.

Press the display into the provided four holes.



Gently flatten the cables, mount the lid and secure it with the last screws.



Congratulations! You've successfully assembled your VM-1. Take a short break, have a glass of water, and then continue with the software installation.

3) Installation

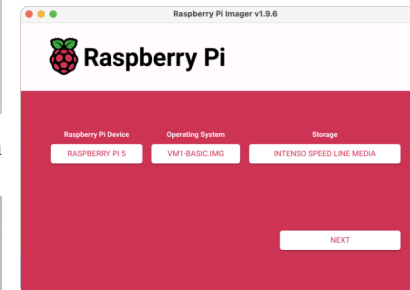
On your laptop or computer, download the VM-1 Image file (~1GB):

github.com/zwodev/vml-video-mixer/releases/latest/download/vml.img.zip

Next, download and install the Raspberry Pi Imager.

raspberrypi.com/software/

Insert the USB stick into your computer and open the Raspberry Pi Imager application.



Within the Raspberry Pi Imager application, as Raspberry Pi Device, choose Raspberry Pi 5.

As Operating System, scroll down to Use custom and select the vml.img.zip file you downloaded earlier.

As Storage, choose your USB stick.

Click Next.

When prompted about custom settings, click No.

Confirm the final warning by clicking Yes and wait until the process has finished.

Unplug your USB stick and insert it into one of the blue USB 3.0 ports of your VM-1.

Connect a screen using the HDMI micro adapter to HDMI 1 (next to the USB-C power socket). Our official recommendation is to use the largest screen available.

Connect a keyboard to a USB port.

Plug in the power supply. Note: The first startup may take a few minutes. The VM-1 will restart during the initial installation.

4) First Steps



After the VM-1 has successfully started, you see the VM-1 logo on the tiny OLED and a blank screen on your main display.

Press [Shift] + [Q] to select the first media slot. Press [3] to navigate to the Source menu. Using the arrow-keys, press [-] to select File and press [↓] and [↑] to choose a video file. Press [-] again to assign the chosen video to media slot Q. Hit [Q] to play the video. Repeat for the media slots W, E, R, T, Y, U and I.

Note: Media slots from Q to I play on HDMI 1, while media slots from A to K (row below) play on HDMI 2.

Top numeric buttons are Edit Buttons:

- [1] Play: Choose if the video loops or not. Clear the media slot if needed.
- [2] Keys: Overview of occupied media slots of the current bank.
- [3] Source: Choose a video file or HDMI 1 if a video camera is connected to the HDMI-to-CSI module. The options Shader and HDMI 2 are not supported yet.
- [4] Devices: Rescan attached devices if you connected/disconnected an external display or camera.
- [5] Settings: General settings like Fade Time, Volume or Show UI.
- [6] Network: The IP, SSD and password of VM-1's Access Point.

[Shift] + [←] or [-]: Switch banks to access more media slots.

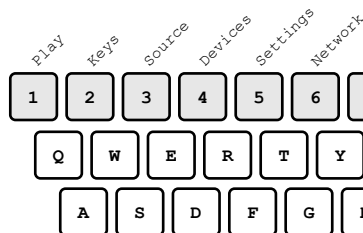
[Shift] + [↑] or [↓]: Change values, e.g. Fade Time.

[Shift] + e.g. [Q]: Switch to e.g. media slot Q without triggering the playback.

On your smartphone: Download the App LocalSend. Connect to the WiFi VM-1 and share videofiles in H.265 format with your VM-1, using LocalSend.

Finally: have fun with your VM-1!

Keyboard guide



Edit Buttons

Media Slot Buttons for HDMI 1

Media Slot Buttons for HDMI 2

Menu Navigation

