



9.7" 2k Touch display Casing for Home Assistant Kiosk Display



AxField

[VIEW IN BROWSER](#)

updated 2. 7. 2024 | published 2. 7. 2024

Summary

A neat enclosure to house the cheap 9.7" 2k touch display monitors on Ali

[Gadgets](#) > [Other Gadgets](#)

Tags: [display](#) [raspberrypi](#) [raspberrypicase](#) [raspberrypi4](#)
[touchscreen](#) [homeassistant](#)

Previously I used an HD tablet mounted against the wall but over the years the battery has swollen up to the point that it cracked the display. I found a YouTube vid by @GreatScott where he reviewed the monitor and immediately bought it, not realising it comes without a touch interface. Lucky the seller has a touch version of it - make sure to order the whole kit with Display, Touch and driver board (Full Set)

<https://www.aliexpress.com/item/1005006338359621.html?>

This screen has an oddball resolution of 2048x1536 (4:3 aspect ratio) and for the life of me I couldn't get a Pi3B+ to work with it, so resorted to a spare Pi4 I had here - total overkill really. The standard 4010 kit fan that comes with these RPi started kits is more than sufficient and are completely silent. Just a precaution really - hence the enclosure being so thick

I've also ordered a USB-C breakout board which the enclosure is designed for (sorry for the long link)

https://www.amazon.com/USB-Type-Breakout-Board-Downstream/dp/B07Y3BBYVG/ref=sr_1_20?crid=CH5EM70M8SHE&dib=eyJ2IjojMSJ9.3hjW1BiDHQjCtGJ7FSDh84m0ITo0n0LfXgrOjFhHqQv1cG69IL9fr7YuH3_9CTB7oqQRSggdUf2b5JHZBYCxujM2dNJJ07G0iRbqTgZ3lqV8DQk1hegatb77sTkDyfBo1LpMkwUs2z1dCQnIS1PGycVIDY&dib_tag=se&keywords=usb+c+b

So I made two breakout cables to power the Pi and Display - you only need to supply power to these

https://www.amazon.com/ANMBEST-Connector-Receptacle-Adapter-Support/dp/B091CRLJM2/ref=sr_1_5?crid=CH5EM70M8SHE&dib=eyJ2IjojMSJ9.3hjW1BiDHQjCtGJ7FSDh84m0ITo0n0LfXgrOjFhHqQv1cG69IL9fr7YuH3_9CTB7oqQRSggdUf2b5JHZBYCxujM2dNJJ07G0iRbqTgZ3lqV8DQk1hegatb77sTkDyfBo1LpMkwUs2z1dCQnIS1PGycVIDY&dib_tag=se&keywords=usb%2B

For the HDMI side, I used a modular micro HDMI to mini HDMI arrangement to keep things neat. Something similar to this works well and doesn't take up too much space

https://www.amazon.com/Cablecc-Degree-Angled-Multicopter-Photography/dp/B01787LRFY/ref=sr_1_5?crid=ZHMB6DOLIUCC&dib=eyJ2IjojMSJ9.H6toWbxl5JupUXTldMNbKQe2trPwneTjumsNOTNDpF6v2wkVyxjLZpH6sJmPFHek03L7cnIP9JNtYa10cmR2VnrLgW7JZ_Z3UMqQ1M_yI9GQIGdJ9BLzqipPIjr5qShj0ZPDflvLqCfbjgQ5UOR1803d9xMV3Kk.oMOiNZuyN6_O-YwGzeBQTmMiOABblJcDVIT5Wq3PiMQ&dib_tag=se&keywords=hdmi%2Bmicro%2Bto%2B

The touch USB cable is pretty long, so I cut and shortened it so as to not have too much slack inside the enclosure. You'll also notice a nice big opening in the back of the enclosure to allow cables to pass through making a neat install. I'm running Wifi, but there's enough space for an ethernet cable to go through the hole in the back as well.

Lastly, I've made two elongated holes for the enclosure to sit snugly on two pre-fitted self tapping screws. I suggest you drill and place the screws before fitting the cover of the display to make sure everything aligns properly. Some kapton tape on the back of the display to hold down the excess ribbon cable between the display and controller board finishes things up nicely.

For hardware you'll need M3 x 4OD x 5 deep heatset inserts (4 for the display bezel and 4 for the fan) and then M3x10 socket head cap screws to fasten it all together.

The combination does draw a fair amount of power (almost 2A at 5V constantly. I've opted for a 5V 4A brick that has a USB-C port, but I suspect the RPi 5 PSU would work perfectly as well.

EDIT: Oh yes, to setup an RPi to run in KIOSK mode, follow this tutorial

<https://github.com/MarkWattTech/MarkWattTech-Tutorials/tree/main/A%20DIY%20Home%20Assistant%20Kiosk>

Model files



bottomcase.stl



topbezel.stl

License ©

This work is licensed under a
Creative Commons (4.0 International License)



Attribution—Noncommercial—Share Alike

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✗ | Commercial Use
- ✗ | Free Cultural Works
- ✗ | Meets Open Definition