

UCTRONICS 5-Inch HDMI LCD Display with Capacitive Multi-Touch Touchscreen User Guide

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FIG 1 CONNECTORS

SKU: U6103

Package Contents

- 1 x UCTRONICS 5" LCD HDMI display with a capacity multi-touch touchscreen
- 1 x Micro-HDMI to HDMI adapter cable for Raspberry Pi 4 and other micro-HDMI devices
- 1 x HDMI-to-HDMI connector as an HDMI cable alternative for Pi 3B+ and earlier models
- 1 x Micro USB to USB cable for USB touch controller
- 1 x Instruction manual

UCTRONICS Team

- Website: www.uctronics.com
- GitHub Link For Software Package : https://github.com/UCTRONICS/UCTRONICS_HDMI_CTS
- Email: support@uctronics.com

Introduction

This UCTRONICS Display is a 5" LCD capacitive touchscreen display which receives video/audio signals through the HDMI port, and the touchscreen input through a micro-USB port. It requires three connections: 1)a USB cable connected to a 5V power supply, 2)an HDMI cable and 3)another USB cable (for touchscreen) both connected to the video output device. The 5-finger touch feature requires OS and software support.

It is well integrated with single-board com-puters such as the Raspberry Pi series, and serves as a small screen for your PC or video game consoles. The micro-HDMI to HDMI adapter cable is to use with micro-HDMI de-vices like the Raspberry Pi 4, and the HDMI-to-HDMI connector is an alternative to a stand-ard HDMI cable.

Note

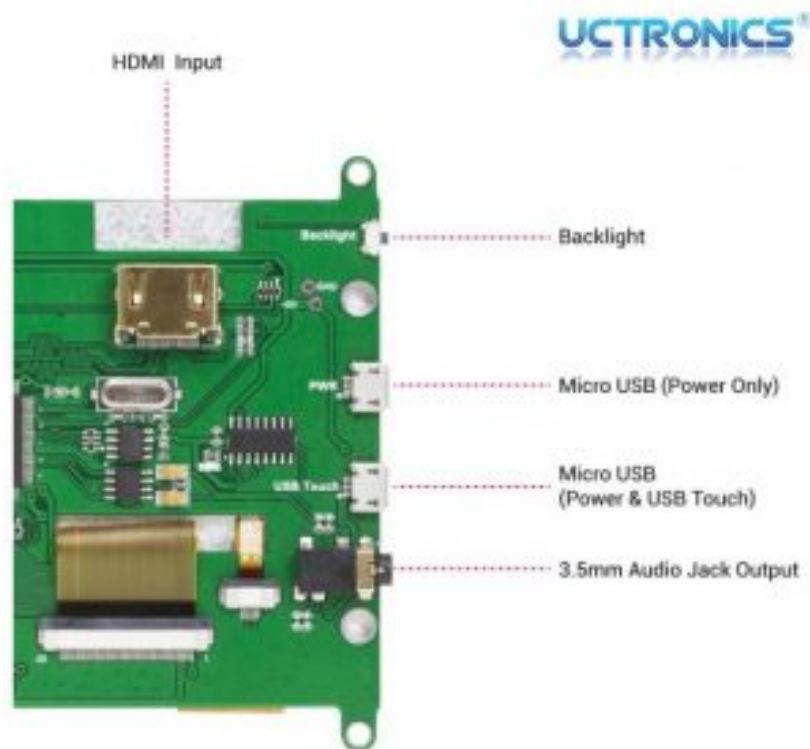
1. The native pixels of this display is 800 x 480. It will downscale HDMI inputs with larger resolutions and squeeze the original aspect ratios to match its own.
2. Avoid EMI (electromagnetic interference) while using this display. The capacitive touchscreen may misbehave when placed near some power adapters, mouse, or data cables.
3. Feed enough power to this display with an extra cable. An underpowered display may encounter unstable connections. Power adapters are preferred over onboard USB ports. We've included one cable, but you need two for both power and touch.
4. The touchscreen double-click action is not per-fectly supported in Raspbian due to the limited response time and system driver issues. It will work properly on another operating system such as Win-dows 10.
5. The USB touch port also takes power input, so you can try to power the display and add touchscreen support with a single cable. However, the Raspberry Pi does not natively support HDMI hotplug, and you need to set `hdmi_force_hotplug=1` in `config.txt`. Please refer to the official page for more details:

<https://www.raspberrypi.org/documentation/configuration/config-txt/video.md>

Features and Specs

- Native Resolution: 800 x 480
- Supported Input Resolution: Up to 1920 x 1080 and auto downscaling
- Power Consumption: 500mA @ 5V
- Plug-and-Play Touchscreen: Capacitive USB-enabled touch controller
- Multi-touch: 5-finger touch (requires OS and software support)
- Raspberry Pi Friendly: Support all RPi models (Pi Zero requires an extra HDMI adapter)
- Touchscreen Monitor: Work as a com-pact monitor with USB touchscreen con-troller
- Backlight Control: On-board mode switch button for turning on/off the LCD backlight
- HDMI Audio Split: Extract audio out of the HDMI signal to the 3.5mm audio jack

CONNECTORS EXPLANATION



The connectors on the back of the display

Use the Display

- Power the display through the PWR port (Micro USB power) until you see the UCTRONICS logo.
- Connect the display to your video output device with an HDMI cable or the HDMI-to-HDMI adapter until you see the video feed. Use the micro-HDMI to HDMI adapter if the connector does not match.
- Connect the USB touch port of the display to the USB port on the video output device to enable touchscreen features.

Add the native resolution to RPi

The input resolution may be downscaled to fit the native pixels, which will make the on-screen contents unreadable. Follow the steps below to add the native 800 x 480 resolution to the Raspberry Pi for a one-to-one mapping with regard to pixels.

```
wget
```

```
https://raw.githubusercontent.com/UCTRONICS/UCTRONICS\_HDMI\_CTS/master/uc586/hdmi\_480x800\_cfg.sh
```

```
sudo chmod +x hdmi_480x800_cfg.sh
```

```
sudo ./hdmi_480x800_cfg.sh
```

For Raspberry Pi 4

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

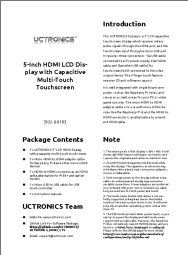
Comment out the following 2 lines

```
#dtoverlay=vc4-fkms-v3d
```





```
#max_framebuffers=2
```

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References

-  [Embedded Camera Modules for Rpi, Arduino, Jetson Nano & NX](#)
-  [UCTRONICS · GitHub](#)
-  [GitHub: Where the world builds software · GitHub](#)
-  [Raspberry Pi Documentation](#)