




Introduction

This is a 7" HDMI display with capacitive touchscreen. It comes with a 7" LCD screen with capacitive touch panel overlay on it. The touch panel supports up to 5 touch points. And it adopts DFRobot USB free-driver technology, no special requirement of drivers. You can use it as easy as keyboard or mouse. It can be directly plugged to PC for touching control. In combination with HDMI HD screen, it can turn a large PC to a tablet immediately.

The screen supports Windows, Linux and MAC OS. It can be used on LattePanda, Raspberry Pi and other HDMI device. We also make some special hole to make it compatible with Arduino screw hole. You can mount them on the back of the display directly.

There is no need for external power supply for the screen, it can be powered by USB port and HDMI port. The display also supports back light adjustment. It is very convenient to adjust backlight by potentiometer on the back of the display.

 warning_yellow.png Note: Please guarantee the external power supply current is above 1.5A@5V when it is driven by raspberry Pi. The lower current will reduce the touching sensitivity.

Features

- Capacitive Touchscreen, Support 5 Touch Points
- HDMI Interface
- USB Power Supply, Driver-free Installation

Specification

- Operating Voltage: 5V
- Operating Current: 160mA (with HDMI connection)
- Maximum Operating current: 1200mA
- Refresh Frequency: 43Hz (not recommended 60Hz, it will not be full screen)
- Screen Resolution: 1024x600
- Viewing Angle: 60°/70°/70°/70°
- Number of Touch Points: 5
- RGB888-16 Mega True Color

- Video Interface: HDMI
- Touch Interface: Micro-USB
- Outline Dimensions: 165mm x 100mm/6.50" x 3.94"

- Mounting Hole Size: M2.5
- Outside Mounting Size: 155mm x 90mm/6.10" x 3.54"
- Inside Mounting Size: 58mm x 49mm/2.83" x 1.93"
- Weight: to be continued...



Screen Overview

- Standard HDMI
- Standard Micro USB



Tutorial

Touchscreen with Raspberry Pi

You need to reset resolution to avoid touch differentiation caused by resolution difference between Raspberry Pi and the Touchscreen.

- Enter /boot/config.txt, modify or add the project as below:

```
#### remove black borders
disable_overscan=1

#### set specific CVT mode
hdmi_cvt 1024 600 60 6 0 0 0

#### set CVT as default
hdmi_group=2
hdmi_mode=87
```

NOTE: Windows and MAC operating system can capture resolution automatically, so you don't need to modify any parameter.

Firmware Update


Dfu-util (Device Firmware Upgrade Utilities) is a free, open-source, cross-platform firmware update program, it is easy to update firmware for devices with microcontrollers without platform limitations. More information: <http://dfu-util.sourceforge.net> (<http://dfu-util.sourceforge.net>)

In Windows

1. Download the USB installation tool zadig.exe Address:

http://zadig.akeo.ie/downloads/zadig_2.2.exe (http://zadig.akeo.ie/downloads/zadig_2.2.exe)

2. Enter dfu mode Short-circuit the boot's two pins, and then connect it to the computer via USB

 Boot_pin.png

3. Install winUSB

 ZadigregisterwinUSB1.png  ZadigregisterwinUSB2.png


Click Options, check All Devices(1)

Select "STM32 DFU" in the drop-down box (2)

Select "WinUSB" (3)

Click Install Driver(4)

If there is a dialog box, click Continue to install.

When installing winUSB with zadig fails, the following interface will appear. (Win10 does not have the same situation.)  install.png

Win 7 (32-bit/64-bit) Download **msvcr100d.dll**

(<https://github.com/DFRobot/binaryfiles/blob/master/DFR0506/32bits/msvcr100d.dll>), place it in the C:\Windows\System32 directory, and then re-install the driver. There will be no mistakes.

Win 8 32-bit Download **msvcr100d.dll**

(<https://github.com/DFRobot/binaryfiles/blob/master/DFR0506/32bits/msvcr100d.dll>), place it in the C:\Windows\System32 directory, and then re-install the driver.

64-bit Download **msvcr100d.dll**

(<https://github.com/DFRobot/binaryfiles/blob/master/DFR0506/32bits/msvcr100d.dll>), place it in the same directory as zadig.exe. (There will be a new error in the C:\Windows\System32 directory)

 Zadigsameclass.png

- 4. Download the dfu-util tool 32-bit **Click to download** (<https://github.com/DFRobot/binaryfiles/raw/master/DFR0506/dfu-util-0.6.rar>) 64-bit **Click to download** (<https://github.com/DFRobot/binaryfiles/raw/master/DFR0506/dfu-util-0.9-win64.zip>)
- 5. Extract the file to your computer, such as "Desktop > dfu-util-0.9-win64", and use it

without installation

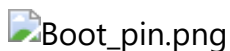
- **6. Firmware update, [Click to download](https://codeload.github.com/DFRobot/DFRobot_RaspberryPi_TouchScreen_Firmware/zip/master)**
(https://codeload.github.com/DFRobot/DFRobot_RaspberryPi_TouchScreen_Firmware/zip/master), unzip and copy the xxxx.dfu, erase.bin, and upload.py from the windows directory to the "desktop > dfu-util-0.9-win64".
- **7. Run upload.py (Windows need to install python firstly. [Click to download](https://www.python.org/downloads/release/python-2714/)**
(<https://www.python.org/downloads/release/python-2714/>).
- **8. The following interface appears, indicating that the program is being burned.**



- **9. After the burning is completed, replug the USB device.**

In Linux

- **1. Enter dfu mode** Short-circuit the boot's two pins, and then connect it to the computer via USB



- **2. Use apt-get for installation of dfu-util** Apt-get install dfu-util
- **3. Use upload.py for firmware upgrade (requires root privileges)**
- **4. Firmware update. [Click to download](https://codeload.github.com/DFRobot/DFRobot_RaspberryPi_TouchScreen_Firmware/zip/master)**
(https://codeload.github.com/DFRobot/DFRobot_RaspberryPi_TouchScreen_Firmware/zip/master).

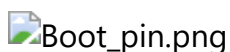
Open the terminal and enter into the newly downloaded firmware directory
(DFRobot_RaspberryPi_TouchScreen_Firmware/linux)

Use sudo python upload.py to run the program.

- **5. Replug the USB device.**

In Mac

- **1. Enter dfu mode** Short-circuit the boot's two pins, and then connect it to the computer via USB



- **2. Open the terminal** Open the launcpad



Search for "terminal" on the top of the screen.



Open the terminal



- 3. Install dfu-util `brew install dfu-util`
- 4. Use `upload.py` for firmware upgrade (requires root privileges)
- 5. Firmware update. **Click to download**
(https://codeload.github.com/DFRobot/DFRobot_RaspberryPi_TouchScreen_Firmware/zip/master) Open the terminal and enter into the newly downloaded firmware directory (DFRobot_RaspberryPi_TouchScreen_Firmware/linux) Use `sudo python upload.py` to run the program.
- 6. Replug the USB device

FAQ

Q&A	Some general Arduino Problems/FAQ/Tips
Q	After connected Raspberry Pi, the sensitivity of the touchscreen became very poor and the response became lower. How to solve it?
A	1. Please check the power of Raspberry Pi. When using the touchscreen, the minimum power supply is 1.5V. 2. Check the resolution configuration, we wrote the Raspberry Pi tutorial for your reference.
A	For any questions, advice or cool ideas to share, please visit the DFRobot Forum (https://www.dfrobot.com/forum/).

More Documents

 **Get 7" HDMI Display with Capacitive Touchscreen**

(<https://www.dfrobot.com/product-1655.html>) from DFRobot Store or **DFRobot Distributor**.

(<https://www.dfrobot.com/index.php?route=information/distributorslogo>)

Home (<https://www.dfrobot.com/>) > **Sensors & Modules** (<https://www.dfrobot.com/category-156.html>) > **LCDs, LEDs & Displays** (<https://www.dfrobot.com/category-53.html>) > **Screens & Displays** (<https://www.dfrobot.com/category-206.html>)

Turn to the Top