



3.5 Inch LCD Display for the Raspberry Pi User Guide

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3.5 inch Raspberry Pi LCD Display with Touch screen Module

1.Introduction

The 3.5 inch touch screen module is designed especially for Raspberry Pi. which plugs directly on top and displays the primary output like what is normally sent to the HDMI or Composite output.

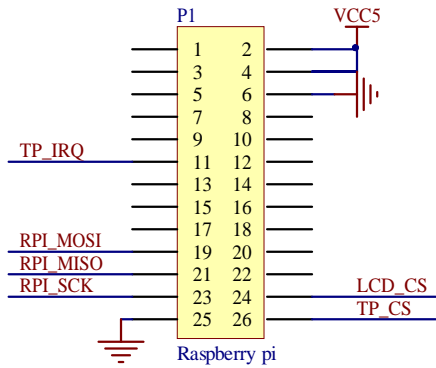
2.Specification:

- Compatible with Raspberry Pi A, A+B and B+
- 480x320 QVGA Resolution
- RGB 65K true to life colors
- TFT Screen with integrated 4-wire Resistive Touch Panel
- Display full GUI output / primary output
- Powered directly off the Raspberry Pi

3. Pin Definition

P1 (Raspberry Pi Connector)		
Pin	Symbol	Description
1	unused	
2	+5V	+5V Supply Pin, connected to the main 5V supply of the Raspberry Pi
3	unused	
4	+5V	+5V Supply Pin, connected to the main 5V supply of the Raspberry Pi
5	unused	
6	GND	Ground Pin, connected to the main system Ground of the Raspberry Pi
7	unused	
8	unused	
9	unused	
10	unused	
11	TP_IRQ	Interrupt for the touchscreen controller
12	unused	
13	unused	
14	unused	
15	unused	
16	unused	
17	unused	
18	unused	
19	RPI_MOSI	MOSI Pin for the SPI
20	unused	
21	RPI_MISO	MISO Pin for the SPI
22	unused	
23	RPI_SCK	Clock Pin for the SPI
24	LCD_CS	Chip Select Pin for the SPI to the LCD
25	GND	Ground Pin, connected to the main system Ground of the Raspberry Pi
26	TP_CS	Chip Select Pin for the SPI to the Resistive Touch Controller chip

4.Interface Description:



5.Installation

5.1 The display module support the Raspberry Pi A、 A+ B and B plus, it easily connected to a Raspberry Pi, by simply aligning the Female 26 way header with the Raspberry Pi's Male 26 way header, and connecting them together ensuring the alignment is correct and all pins are seated fully and correctly.

Connect with B



Connect with B+



5.2 Download the image which is based on the official Raspbian Operating System and install into your PI (We have packaged a system image with the LCD driver for you)

Link: <https://copy.com/CuiAGFtJSeie9rWF>

5.3 Operating System Images:

You can refer to the raspberry office install installation guides

<http://www.raspberrypi.org/downloads/>

If you not want to re-install the system, provide the driver for raspbian, you can follow use step and step instructions to install by yourself.

1\Find the [RPI_TOUCH_SPI_3.5_RASPBIAN.tar.gz](#) or down load the file here:

2\Copy the [RPI_TOUCH_SPI_3.5_RASPBIAN.tar.gz](#) file to the raspberry system and extract it

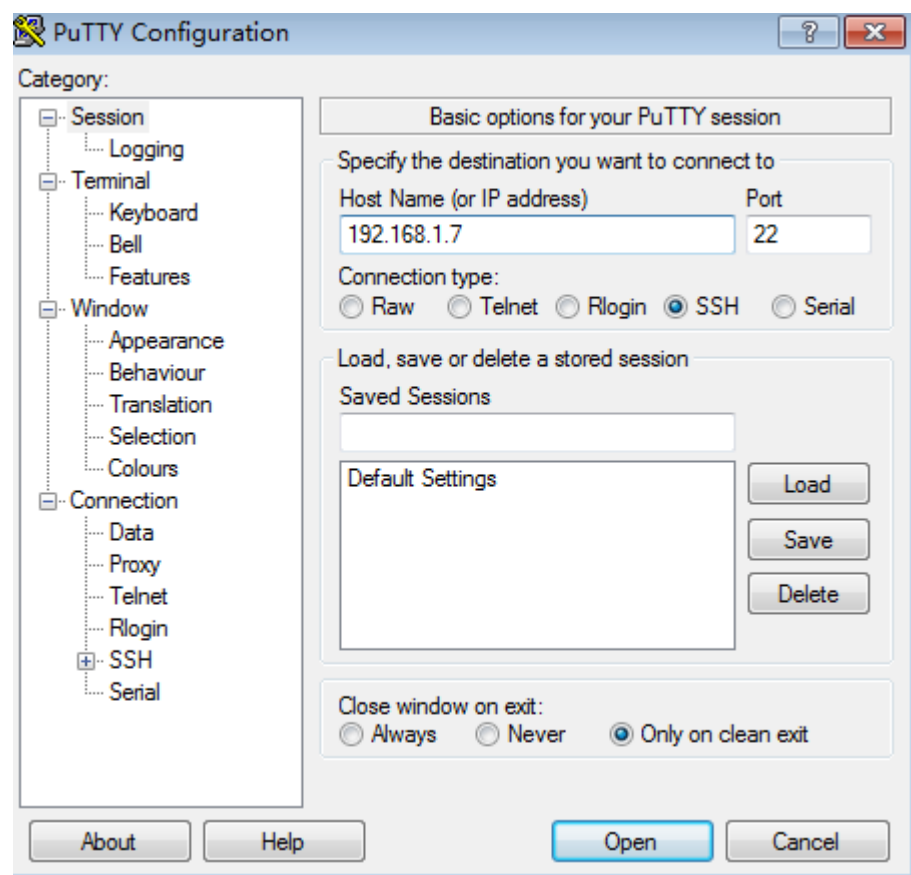
3\Run the [SPI_3.5_RASPBIAN](#) script file which under the [RPI_TOUCH_SPI_3.5_RASPBIAN](#) folder

```
cd RPI_TOUCH_SPI_3.5_RASPBIAN
```

```
sudo ./SPI_3.5_RASPBIAN
```

4\when the script run finished ,restart and you can use the touch function.

5\SSH into your raspberry PI



5.4 input the user ID: pi , password : raspberry

```
pi@raspberrypi: ~
login as: pi
pi@192.168.1.7's password:
Linux raspberrypi 3.12.26 #55 PREEMPT Thu Sep 11 15:04:36 CST 2014 armv6l

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Tue Sep 16 04:29:15 2014 from 192.168.1.3
pi@raspberrypi ~ $
```

When connect successes,pls input: `DISPLAY=:0.0 xinput_calibrator` to Calibrate the display



The putty will show a group date as the following picture :

```
pi@raspberrypi: ~
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Tue Sep 16 04:29:15 2014 from 192.168.1.3
pi@raspberrypi ~ $ DISPLAY=:0.0 xinput_calibrator
Calibrating EVDEV driver for "ADS7843 Touchscreen" id=6
current calibration values (from XInput): min_x=257, max_x=3962 and min_
y=211, max_y=3823

Doing dynamic recalibration:
Setting new calibration data: 258, 3957, 224, 3820

--> Making the calibration permanent <--
copy the snippet below into '/etc/X11/xorg.conf.d/99-calibration.conf'
Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "ADS7843 Touchscreen"
    Option "Calibration" "258 3957 224 3820"
EndSection
pi@raspberrypi ~ $
```

Create a new TXT file

```
Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "ADS7843 Touchscreen"
    Option "Calibration" "258 3957 224 3820"
EndSection
```

Copy the date to the TXT file

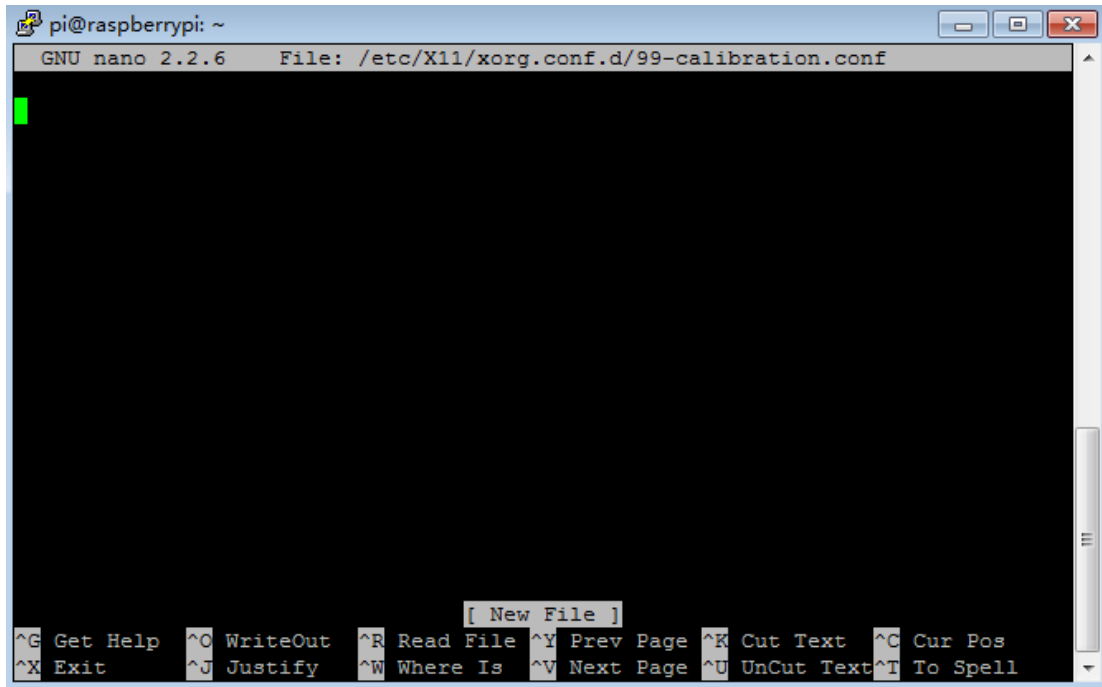
5.5 Delete the system calibrate file

```
sudo rm /etc/X11/xorg.conf.d/99-calibration.conf
```

```
pi@raspberrypi ~ $ sudo rm /etc/X11/xorg.conf.d/99-calibration.conf
pi@raspberrypi ~ $
```

Recreat a new calibrate file

```
sudo nano /etc/X11/xorg.conf.d/99-calibration.conf
```

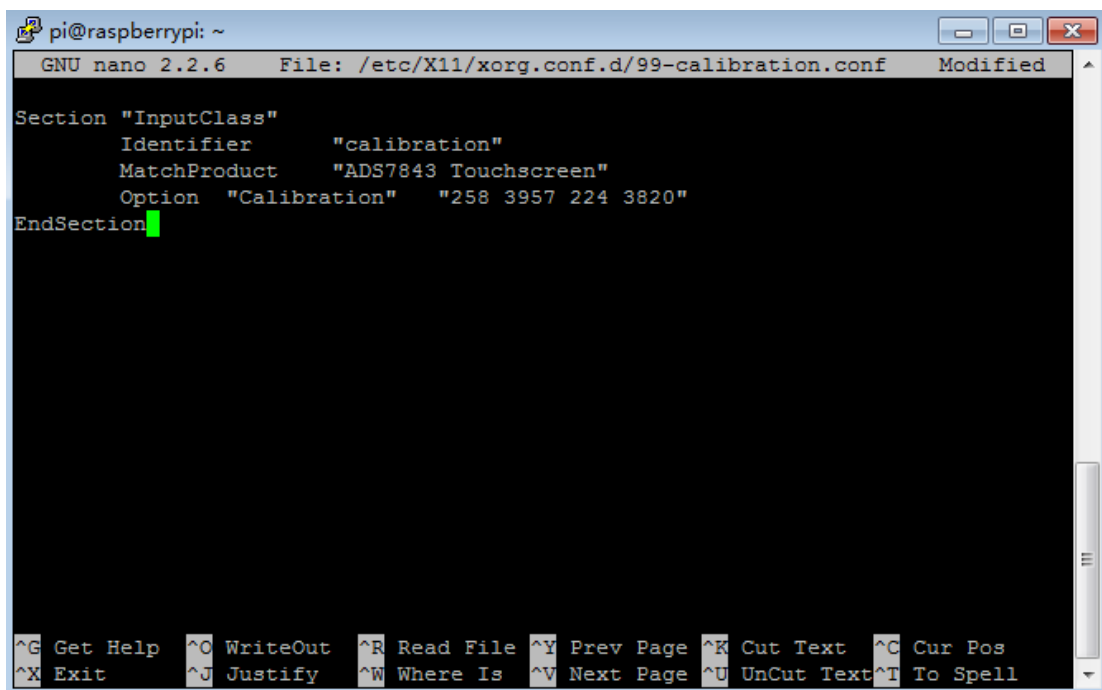


```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /etc/X11/xorg.conf.d/99-calibration.conf

[ New File ]

^G Get Help  ^O WriteOut  ^R Read File  ^Y Prev Page  ^K Cut Text   ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page  ^U UnCut Text ^T To Spell
```

Copy the recate TXT file to in the calibrate file



```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /etc/X11/xorg.conf.d/99-calibration.conf Modified

Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "ADS7843 Touchscreen"
    Option "Calibration" "258 3957 224 3820"
EndSection
```

Press ctrl+x and then choose Y,save and exit .The calibration is finished.you can start your pi and enjoy it.

6. Contact information :

For technical support:service@eleduino.com

For sale support:sales@eleduino.com

Note:

Raspberry Pi is a trademark of the Raspberry Pi Foundation, and all references to the words Raspberry Pi or the use of its logo/marks are strictly in reference to the Raspberry Pi product, and how this product is compatible with but is not associated with the Raspberry Pi Foundation in any way.

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