

Pico with 2.4" Tenstar SPI LCD

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Introduction



Over the last couple of weeks we have been playing with a lot of LCD Panels from our favorite shop AliExpress. Some have been okay, some have been great (the 0.96" OLED Panels have been my favorite so far) but this display we are going to look at today is fantastic. Why?

- Its bright and clear.
- It has the viewing angle of an OLED
- The backlight doesn't bleed through the LCD.
- It's a great size for most projects.
- The driver supports Text, graphics etc.

This is an LCD you can certainly incorporate in to many projects where an LCD is a requirement. Now things appear and disappear on AliExpress quite a lot, so here is the listing description, and if you search the internet for this you are bound to find these LCDs somewhere?

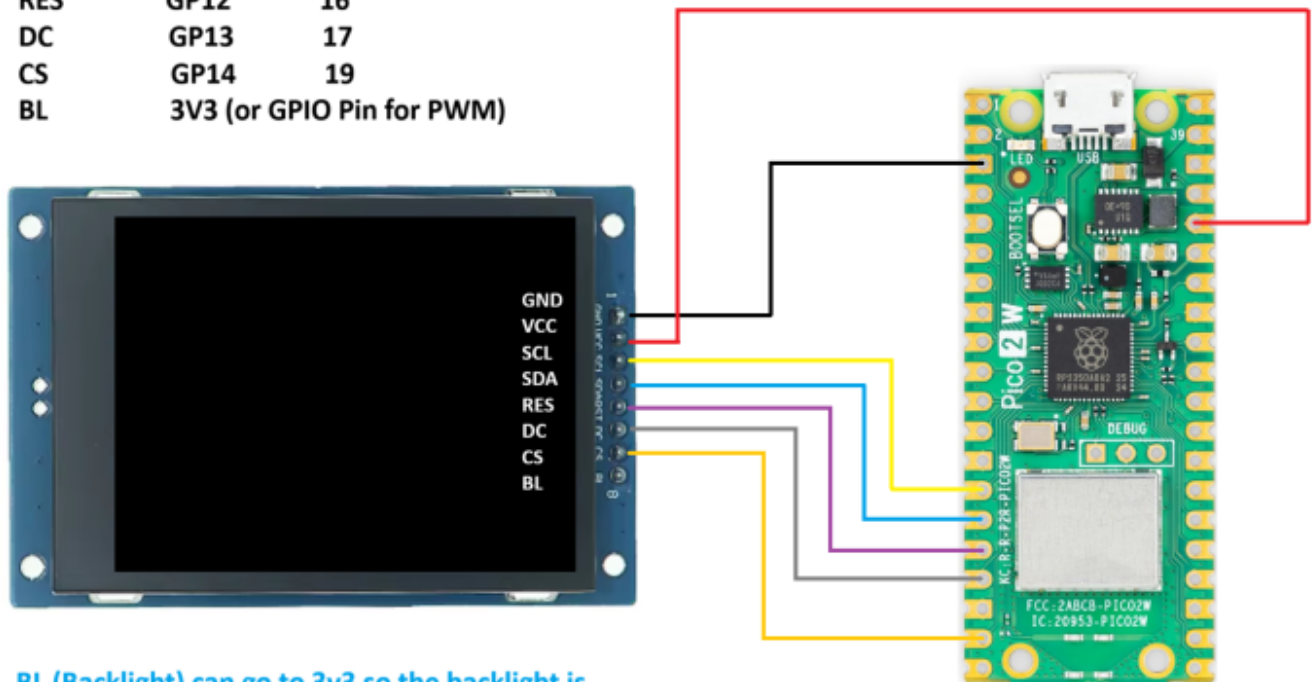
TENSTAR R0B0 2.4 / 2.8 / 3.5 Inch 240x320 320x480 SPI TFT Serial Port Module 5V/3.3V PCB Adapter
T7789V/ST7796S LCD Display

Yes, quite a long description, but searching this will get you one of these LCDs. I recommend you buy at least 2, this makes postage more affordable and means you can have a development and production model.

The Wiring

Here is the wiring diagram, thankfully with a lot of these LCD SPI modules, the pins are in the same order, so once you have a test rig, you can swap displays to try them out (you will need to change the driver also).

LCD	GPIO	Pin	
GND	n/a	3	
VCC	n/a	36	
SCL	GPI10	14	SCK
SDA	GPI11	15	MOSI
RES	GP12	16	
DC	GP13	17	
CS	GP14	19	
BL	3V3 (or GPIO Pin for PWM)		



BL (Backlight) can go to 3v3 so the backlight is always on. Or you can drive it from a GPI Pin, and use software to adjust the brightness.

Just a note on the Pin Labels on the LCD. This LCD is using the following pin labels.

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