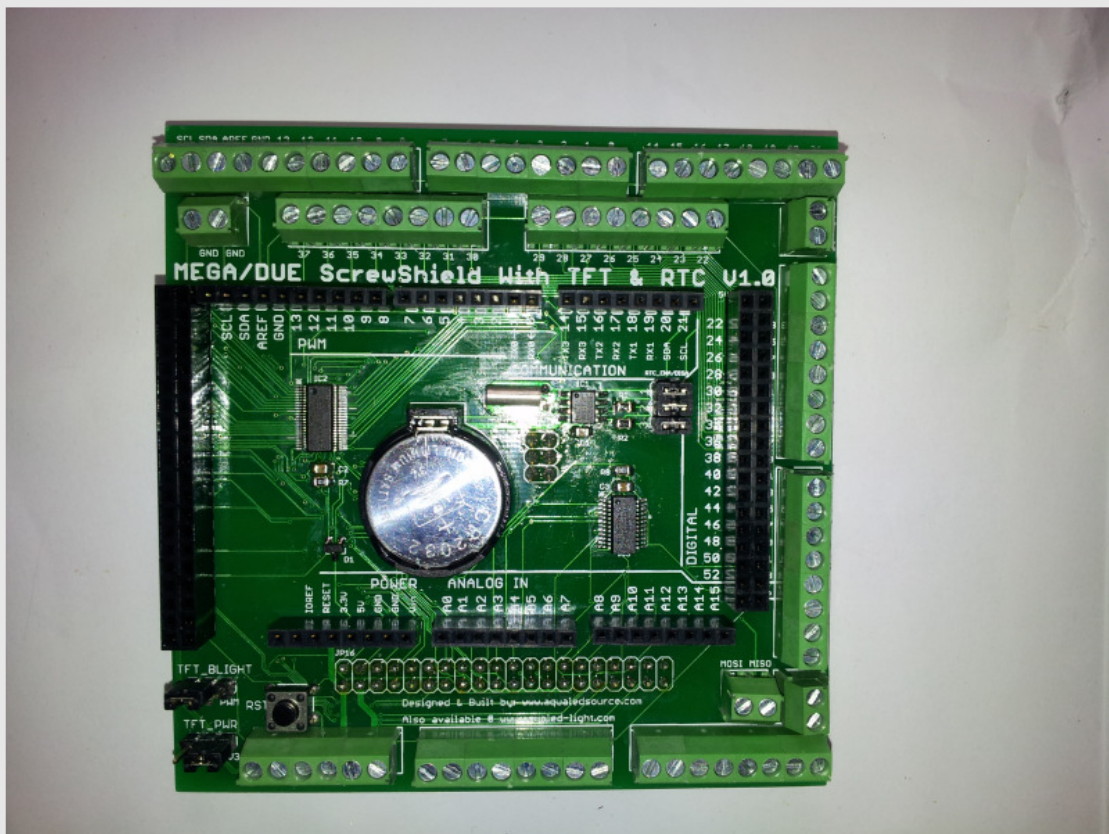


AQUALEDSOURCE

&

AQUALED LIGHT

Arduino Due/Mega R3 with TFT, RTC & Screw terminals



WARNING: Some versions of Arduino have the normal big USB plug on the side, the top of this plug must be insulated with tape or some other good electrical isolator, because the pins of JP1 on the bottom side of the shield PCB might hit that plug. This will cause a short-circuit.

Jumper settings

TFT Backlight:

TFT_BRIGHT => **PWM** (to dim the backlight using PWM on port D10), **ON** (always on at max bright)

TFT voltage selection:

TFT_PWR => **3V3** (for 3.3V TFT's), **5V** (for 5v TFT's)

RTC (DS1307) settings:

Jumper Name: RTC_ENA/DISA

J1 (IN = RTC enable, OUT = RTC disable);

J2 (IN = SCL pull-up resistor on, OUT SCL pull-up resistor off);

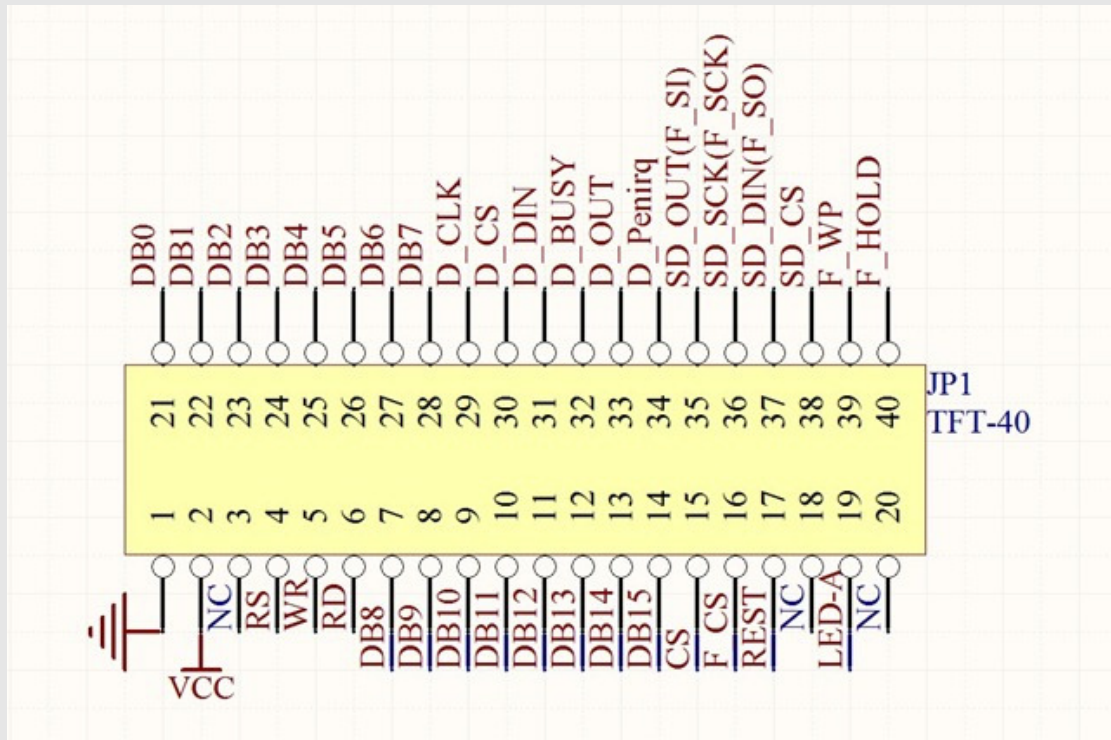
J3 (IN = SDA pull-up resistor on, OUT = SDA pull-up resistor off)

Header blocks JP16 and JP17:

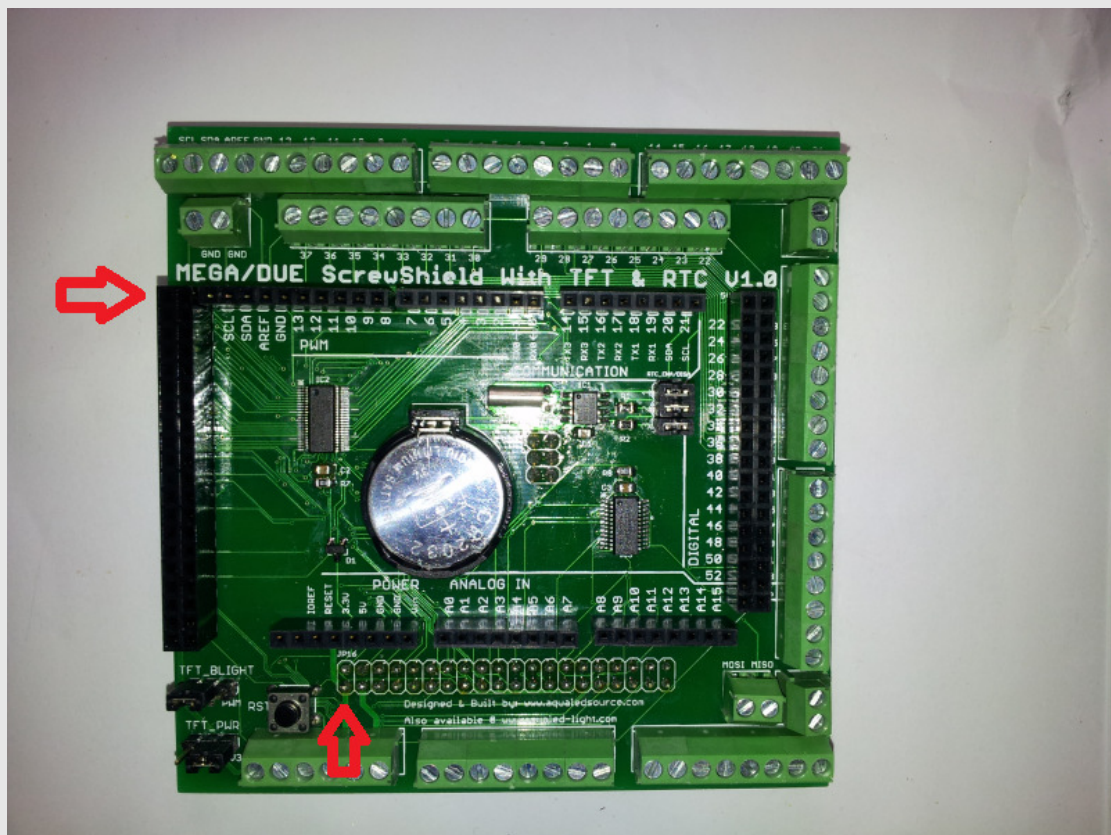
These are the TFT headers, you can use one or the other depending how you like the board displacement, both work the same.

Usually the JP16 is for 5" TFT as they have the connectors on the middle bottom of they're PCB, but can be used with other displays to have a Portrait like TFT orientation.

TFT Header Pinout:



TFT header Pin 1 on shield marked on **RED**:



Code examples using the latest Henning Karlsen library
(<http://www.henningkarlsen.com/electronics/index.php>):

Load libraries:

```
#include <UTFT.h>
#include <ITDB02_Touch.h>
```

Then initialize the TFT and touch like this:

```
UTFT myGLCD(ITDB32WD,38,39,40,41);
ITDB02_Touch myTouch(62,63,64,65,66); //A8 up to A12 Pins on Arduino board
```

If you want to use the SD card on the TFT, this is the code to use in void Setup()

```
file.initFAT(SPI SPEED_VERYHIGH); // Optional, this can be tried to increase the reading
speed if your SD card can handle it
```

Program configuration example:

```
#include <tinyFAT.h>
#include <UTFT.h>
#include <UTFT_tinyFAT.h>
```

```
UTFTf myGLCD(ITDB32WD, 38, 39, 40, 41);
ITDB02_Touch myTouch(62,63,64,65,66); //A8 up to A12 Pins on Arduino board
```

```
Void Setup()
```

```
{
myGLCD.InitLCD(LANDSCAPE);
myGLCD.setFont(BigFont);
```

```
myTouch.InitTouch(LANDSCAPE);
myTouch.setPrecision(PREC_HI);
```

```
file.initFAT(SPI SPEED_VERYHIGH); // Optional, this can be tried to increase the reading
speed if your SD card can handle it
```

```
}
Void loop()
{
}
```