# ARDUINO SHIELD LCD TOUCH 2.8"

## User Manual

## Overview:

The Arduino 2.8”TFT Touch Shield is designed for all the Arduino compatible boards. It works in 3.3V voltage level. It can be directly plugged on the Arduino and other compatible boards. It will offer display, touch and storage functions for the Arduino board.

## Features:

- Arduino UNO Rev3 / Mega Shield compatible footprint
- Arduino library UTFT support
- TFTResolution : 240 x 320 pixels
- Size : 2.8"
- Colors : 65K
- Backlight : LED
- Driver IC: ILI9325DS

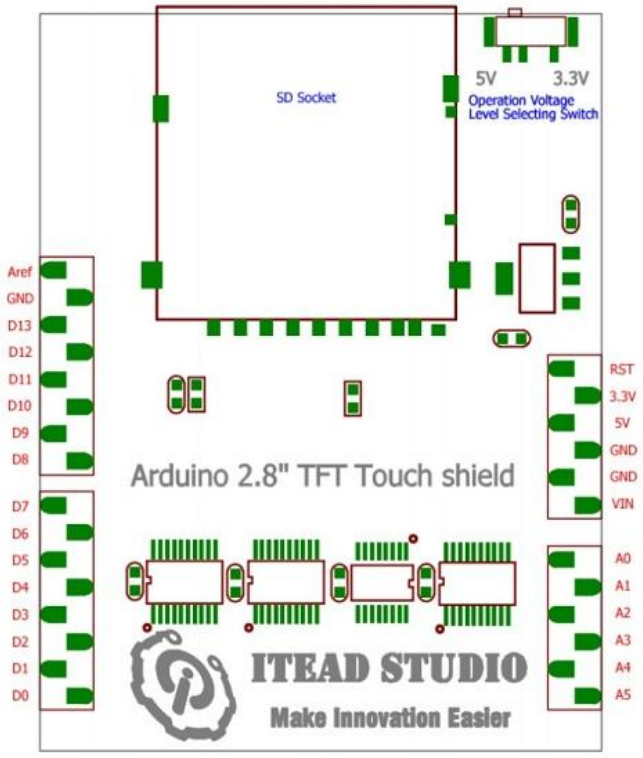
## Specifications:

| | |
|---|---|
| PCB size | 68.6mm X 53.3mm X 1.6mm |
| Power supply | compatible with Arduino |
| RoSH | Yes |

## Electrical Characteristics:

| Parameter | Min. | Typical | Max. | Unit |
|---|---|---|---|---|
| Power voltage | 4.5 | 5 | 5.5 | VDC |
| Input voltage VH | 3 | | 5.5 | V |
| Input voltage VL | -0.3 | 0 | 0.5 | V |

## Hardware:




## Pin map of Arduino 2.8" TFT Touch Shield:

The Arduino 2.8 TFT Touch shield uses the ILI9325DS controller, it support 8bit data interface. The touch IC is TSC2046.

| Arduino PIN | Description |
|---|---|
| D0 | DB8 |
| D1 | DB9 |
| D2 | DB10 |
| D3 | DB11 |
| D4 | DB12 |
| D5 | DB13 |
| D6 | DB14 |
| D7 | DB15 |
| D8 | Touch_Dout |
| D9 | Touch_IRQ |
| D10 | SD_CS |
| D11 | SD_MOSI |
| D12 | SD_MISO |
| D13 | SD_SCK |
| A0 | Touch_Din |
| A1 | Touch_CLK |
| A2 | - |
| A3 | TFT_CS |
| A4 | TFT_WR |
| A5 | TFT_RS |

## *Operation voltage level setting switch:*

When using the Arduino 2.8 TFT Touch shield with 5V operation level development board – like the Arduino UNO, Arduino MEGA and so on, set the operation voltage level switch to 5V side.

When using the Arduino 2.8 TFT Touch shield with 3.3V operation level development board – like the Iteaduino BT, leaf maple, chipKit UNO and so on, set the operation voltage level switch to 3.3V side.

## *Software:*

This shield is compatible with UTFT library for Arduino, chipKit and their compatible boards. Library is found in Software.

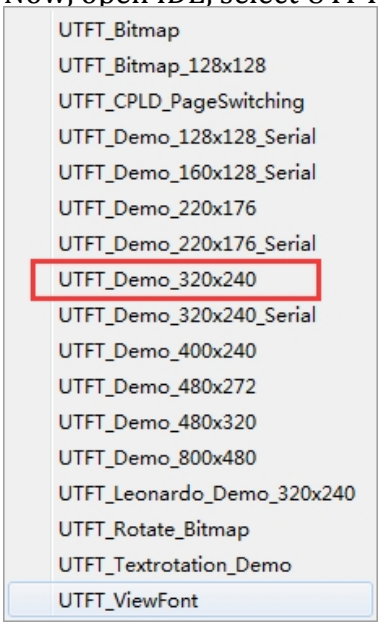
## *Instruction:*

First, download the UTFT library from software, extract the library in the libraries folder. Assure that this is the only UTFT library in your Arduino IDE.

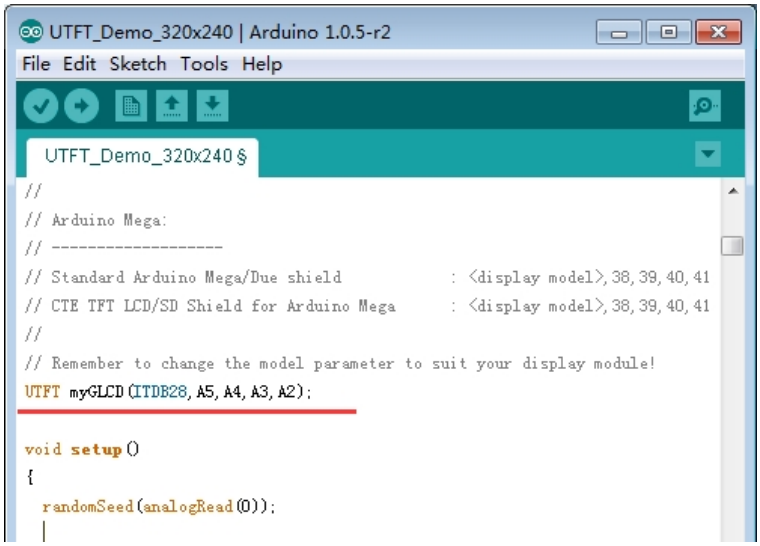
Second, open the file Arduino\libraries\UTFT\hardware\avr\HW_AVR_defines.h, comment out the definition about shield, and save the file.

#define USE_UNO_SHIELD_ON_MEGA 1

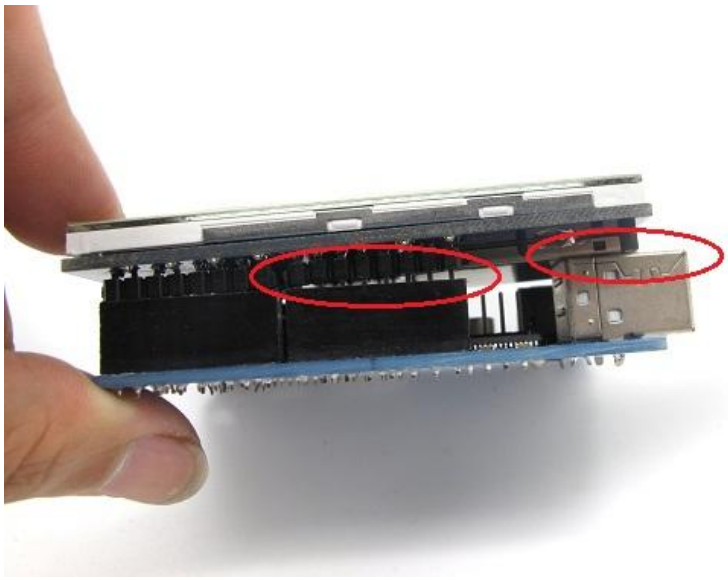
Now, open IDE, select UTFT AVR demo




Before upload to your Mega or UNO, you need to modify some parameters. The original parameter of demo shall be replaced to (ITDB28, A5, A4, A3, and A2)



Now, you can upload the demo to Mega/UNO. Suggest that plug the LCD shield in your Mega/UNO while demo uploading. If not, you'd better press the reset button after demo uploading.



It's pretty normal, and won't affect anything, if the shield doesn't clink 100% to clink onto the Arduino Uno R3, and that's because of the USB port.

## *How to open Software:*

- Enter to http://www.ekt2.com/products/productdetails?ProductId=94F2B94C-9795-4D25-B89C-C49F7886FA5E
- Press the icon to download software