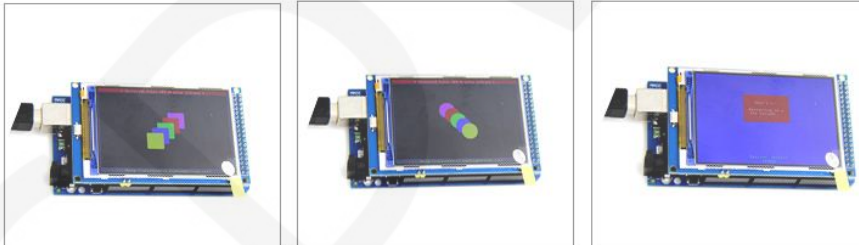
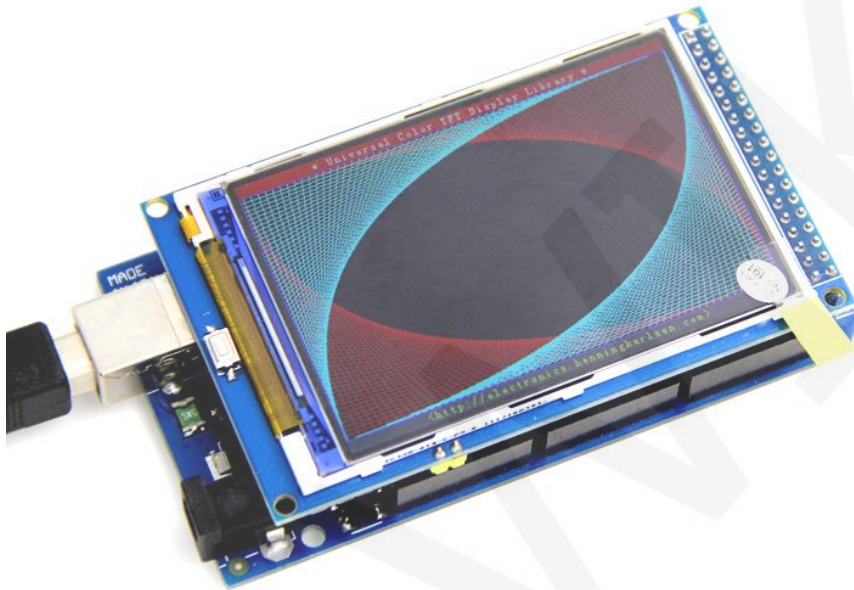


# MAR3201



## Overview

QD320DB16NT9481RA module is 3.2" TFT LCD with 262K color 480x 320 resolutions. The controller of this LCD module is ILI9481, it supports 16-wires DataBus interface. Moreover, this module includes the 5V-3.3V power conversion circuit and Level conversion circuit, This Module can Directly inserted into the **Arduino Mega2560 Board**, it also includes the SD card socket and SPI FLASH circuit.

## Features

- **Support Arduino Mega2560 Directly inserted**
- **With Full-angle IPS TFT panel**
- **OnBoard level conversion chip for 5V/3.3V MCU**
- **Compatible with 3.3/5V operation voltage level**
- **Compatible with Arduino-Series development Board.**
- **Compatible with UTFT / UTFT\_Buttons / Utouch Library for arduino.**
- **provided 12-examples with Arduino ,3-examples with STM32**
- **With SD Card Socket**
- **With SPI FLASH circuit**

## Specifications

Item	Description
Display Type	3.2 inch a-si TFT LCD Module
Glass Type	TFT
Display Resolution	480XRGBX320 Pixels
Back light	6 chip HighLight white LEDs
Control IC	ILI9481
Interface	16Bit parallel interface
PCB Module size	89.92mmX54.25mm
LCD Area(WxHxT)	50.74mmX78.35mmX1.88mm
Active Area(WxH)	67.68mmX45.12mm
Module weight	TBD

## Electrical Characteristics

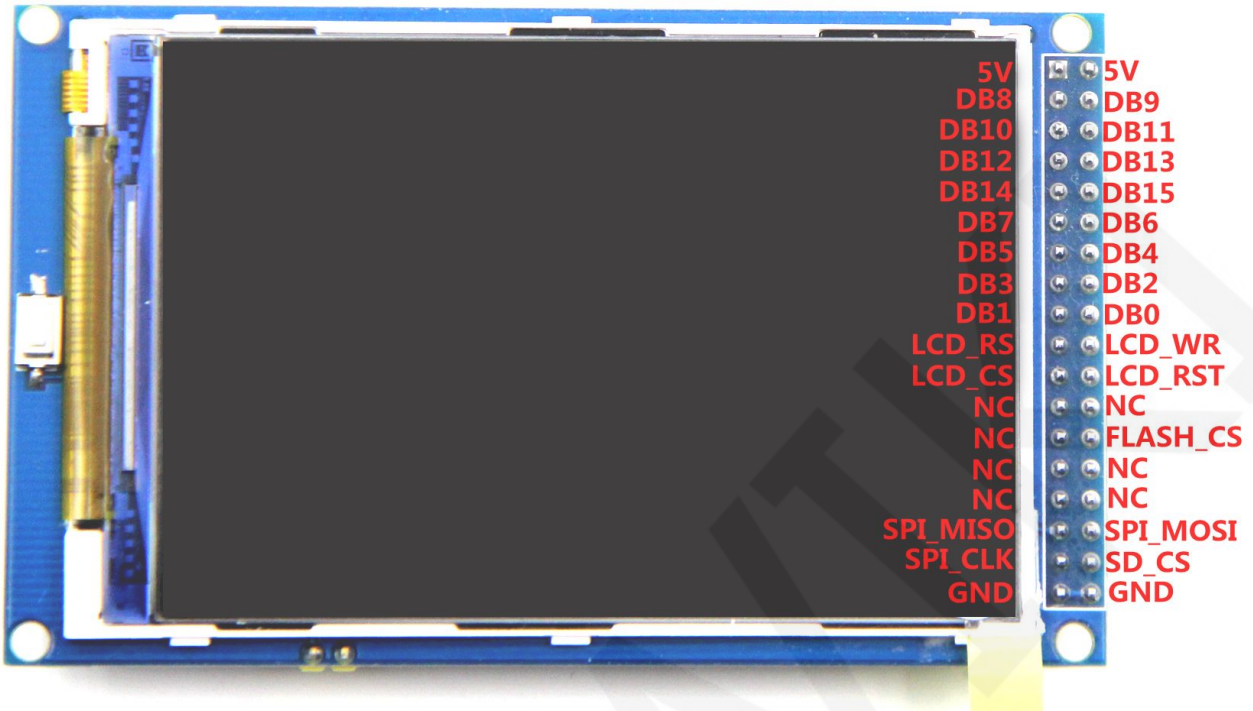
Specification	Min	Type	Max	Unit
Power Voltage(VDD/VCC)	3.3	5	5.5	VDC
IO Pins Voltage	MCU Voltage = 3.3V	3	3.3	V
	MCU Voltage = 5V	4.5	5	
BackLight Voltage	2.8	3.2	3.3	V
Current Consumption	-	100	-	mA

# Hardware

Pin Map			
No	Pin	Type*	Description
1	5V	P	5V Power Supply in
2	5V	P	5V Power Supply in
3	LCD_DB8	I	Data Bus
4	LCD_DB9	I	Data Bus
5	LCD_DB10	I	Data Bus
6	LCD_DB11	I	Data Bus
7	LCD_DB12	I	Data Bus
8	LCD_DB13	I	Data Bus
9	LCD_DB14	I	Data Bus
10	LCD_DB15	I	Data Bus
11	LCD_DB7	I	Data Bus
12	LCD_DB6	I	Data Bus
13	LCD_DB5	I	Data Bus
14	LCD_DB4	I	Data Bus
15	LCD_DB3	I	Data Bus
16	LCD_DB2	I	Data Bus
17	LCD_DB1	I	Data Bus
18	LCD_DB0	I	Data Bus
19	LCD_RS	I	LCD Cammand/Data Selection(0:cammand;1:Data)
20	LCD_WR	I	LCD Write signal
21	LCD_CS	I	LCD Chip Selection,Low level active
22	LCD_RST	I	LCD Reset(Low level Enable)
23	NC	-	No connection
24	NC	-	No connection
25	NC	-	No connection
26	FLASH_CS	I	Exten circuit: SPI_FLASH Chip Sellaction
27	NC	-	No connection
28	NC	-	No connection
29	NC	-	No connection
30	NC	-	No connection
31	SPI_MISO	O	Exten circuit: SPI Bus Data output
32	SPI_MOSI	I	Exten circuit: SPI Bus Data input
33	SPI_CLK	I	Exten circuit: SPI Bus Clock
34	SD_CS	I	Exten circuit: Extern SDCard Chip Sellaction
35	GND	G	Ground
36	GND	G	Ground

\* : P:Power supply;G:Ground;I:Input;O:Output

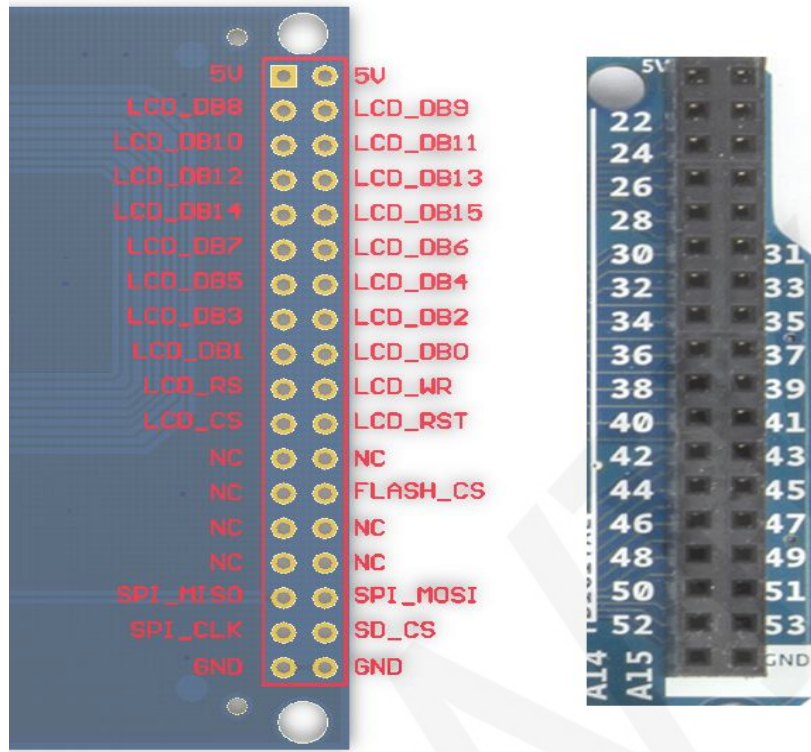
## PinMap



## How to Connect with Mega2560

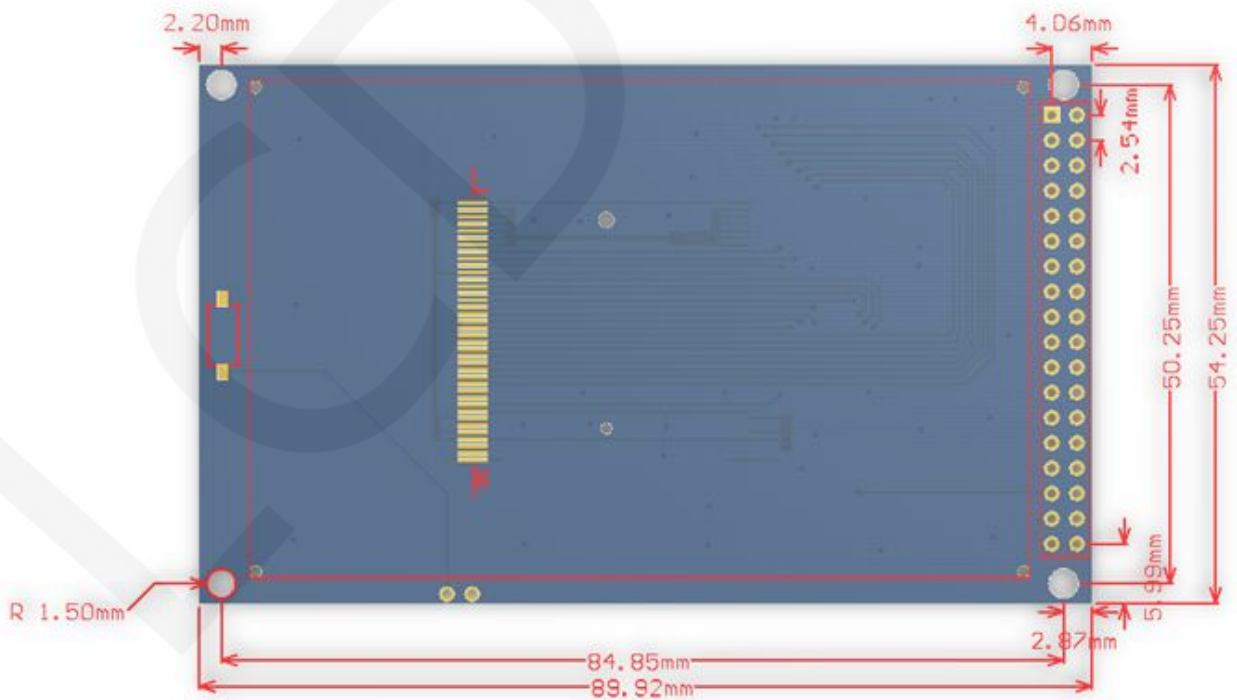


Top view



Top view

## Module Structure





# Development Document

- 6 examples with UTFT librarie for Arduino.
- 6 SDCard Exten examples with SD library for Arduino.
- 3 examples for STM32.
- 1 examples for C51.
- Develop toos and documents.

The development of information we provide:

3.2寸Arduino\_IPS模块配套资料320X480

- ▶ Arduino Demo\_Mega2560
  - ▶ Example01-UTFT\_Demo\_480x320
  - ▶ Example02-UTFT\_ViewFont
  - ▶ Example03-UTFT\_Buttons\_Demo
  - ▶ Example04-UTouch\_ButtonTest
  - ▶ Example05-UTFT\_Textrotation\_Demo
  - ▶ Example06-UTFT\_Buttons\_Bitmap\_Demo
  - ▶ Install libraries
- ▶ SDCard Exten Example
  - ▶ CardInfo
  - ▶ Datalogger
  - ▶ DumpFile
  - ▶ Files
  - ▶ listfiles
  - ▶ ReadWrite
- ▶ C51 Demo\_STC12LE5A60S2
  - ▶ Example01
- ▶ STM32 Demo\_STM32F103RCT6
  - ▶ Example01-Simple Test
  - ▶ Example02-Show Pictures from SDCard
  - ▶ Example03-uCosII+uCgui
- ▶ tft\_drivers
  - ▶ Tools-Image2Lcd 2.9
  - ▶ Tools-PCtoLCD200
  - ▶ User Manual

⑥ Examples for Arduino

⑥ Exten-SDCard Examples for Arduino

① Examples for C51

③ Examples for STM32

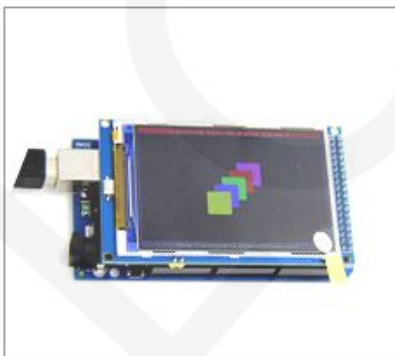
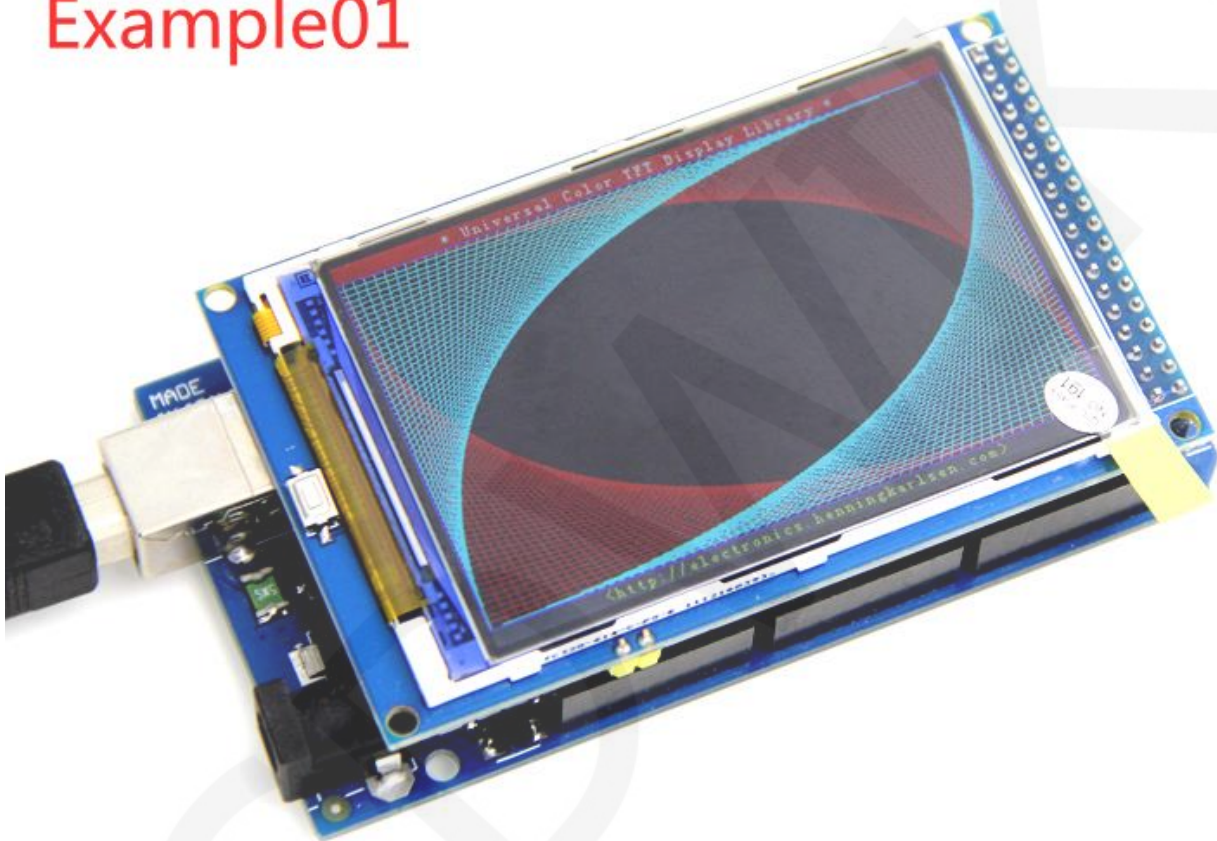
Develop toos and Documents

# Demo Effect

UTFT\_Demo Test for Arduino

Mega2560

Example01



# Example02

## UTFT\_ViewFont





Example03



UTFT\_Buttons\_Demo

Example04



UTouch\_ButtonTest

Example05



UTFT\_Textrotation

Example06



UTFT\_Buttons\_Bitmap

## Revision History

Rev.	Description	Release date
V1.0	Initial version	2014/8/25
V1.1	Correction.	2014/9/15