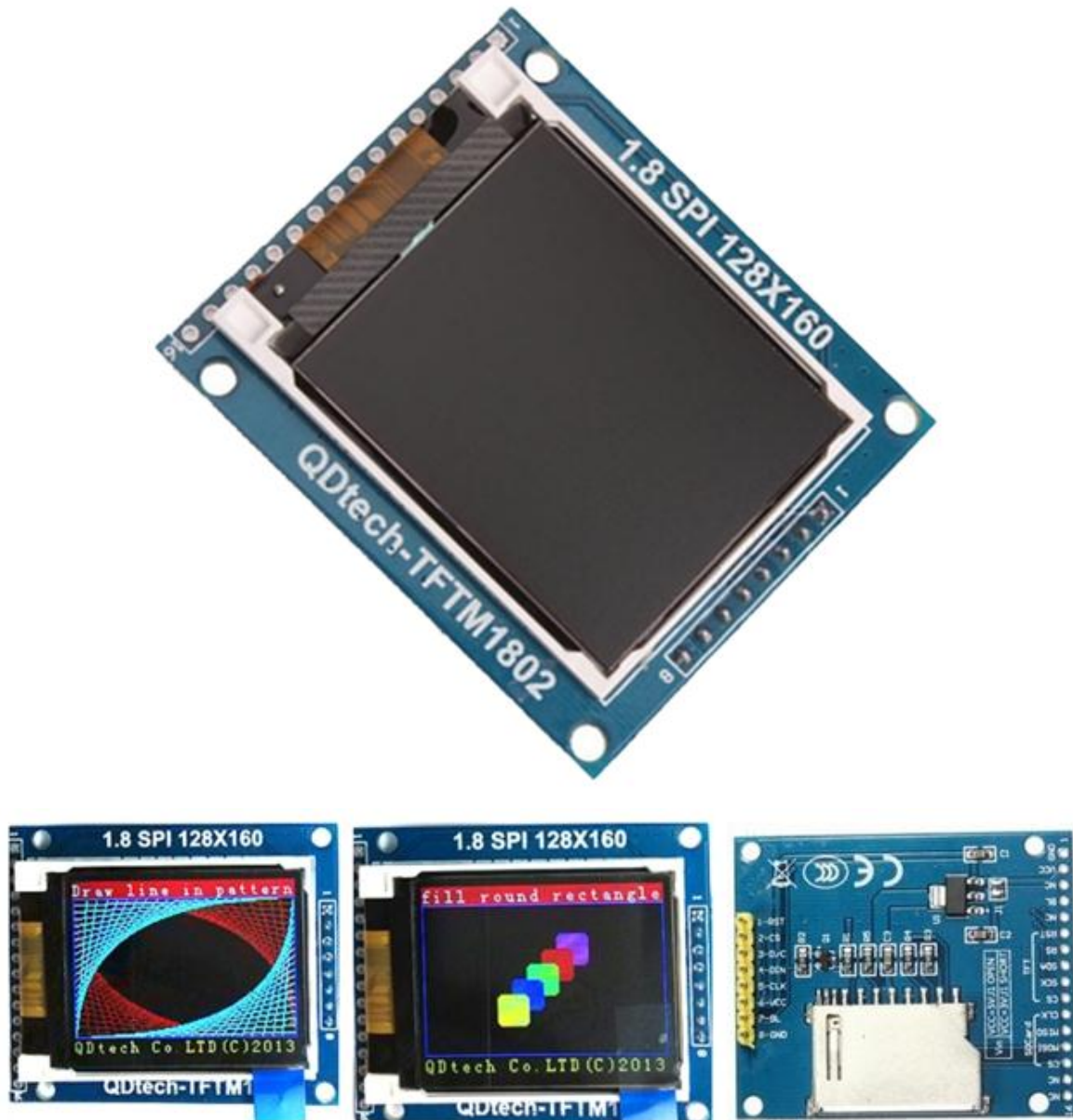


# QD180MA-02A1



## Overview

QD180MA-02A1 module is 1.8" TFT LCD with 65K color 128 x 160 resolutions. The controller of this LCD module is SamSung-S6D02A1, it supports 4 wires SPI control interface. Moreover, this module includes the 5V-3.3V power conversion circuit and BackLight control circuit ,it also includes the SD card socket.

## Features

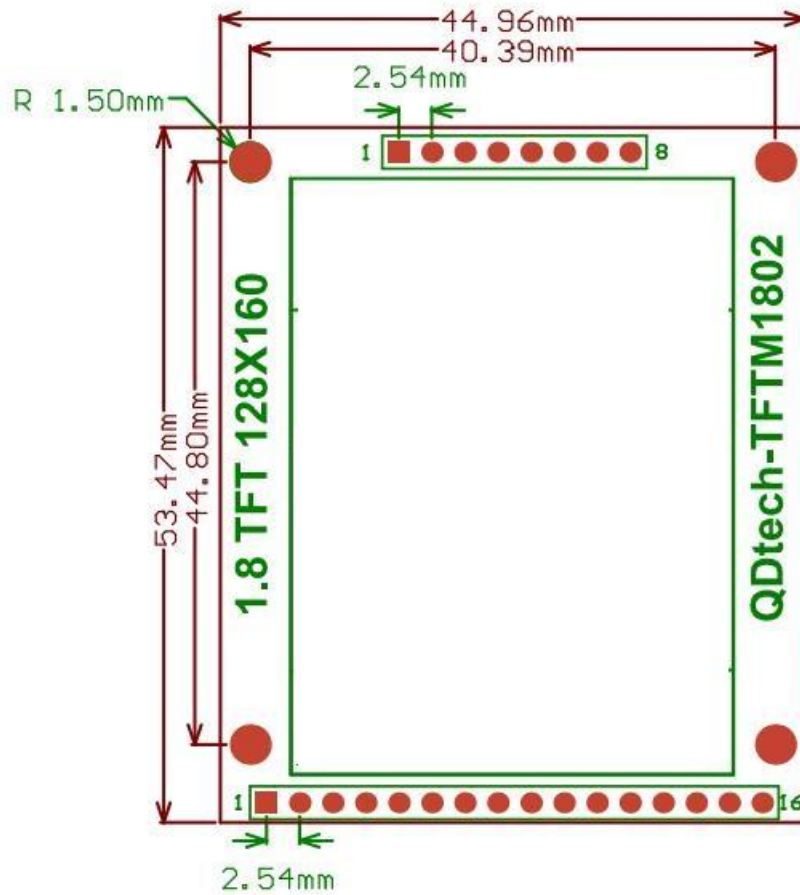
- Compatible with 3.3/5V operation voltage level
- With SD Card Socket
- With BackLight Control circuit
- SPI Serial bus only need 4 IO at least
- Compatible with QD-UTFT Library for arduino.

## Specifications

Item	Description
Display Type	1.77 inch a-si TFT LCD Module
Display Resolution	128XRGBX160 Pixels
Back light	2 chip white LED
Control IC	S6D02A1/ST7735
Interface	4 wires Serial
PCB Module size	44.96mmX53.47mmX1.6mm
Module weight	80g

## 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	3.6	V
	MCU Voltage = 5V	4.5	5	5.5	
BackLight Control	For PWM Mode	-	80	-	KHZ
	For IO Mode	3	3.3	5.5	V
Current Consumption	-	30	-	mA	



- **Provide LCD FootPrint.**  
(See the "1.8\_TFT\_FootPrint\_Protel")
- **Provide schematic diagram.**  
(see the QDtech\_1.8inch LCD Module diagram.pdf)
- **Provide Module structure.**  
(see the QDtech\_1.8inch LCD Module structure.pdf)

## 8Pin-Interface pinMap

NO	Pin Label	Decription
1	RST	LCD Reset(Low level Enable)
2	CE	ChipEnable(Low level)
3	D/C	Cammand/Data Selection(0:cammand;1:Data)
4	DIN	Serial Data input
5	CLK	Serial Clock input
6	VCC	Power Input(3.3V/5V)
7	BL	BackLight Control(High level on)
8	GND	Ground

## Extend 16Pin-Interface pinMap

NO	Pin Label	Decription
1	GND	Ground
2	VCC	Power Input(3.3V/5V)
3	NC	No Connect
4	BL	BackLight Control(High level on)
5	NC	No Connect
6	RST	TFT LCD Reset(Low level Enable)
7	RS	TFTCammand/Data Selection(0:cammand;1:Data)
8	SDA	TFT Serial Data input
9	SCK	TFT Serial Clock input
10	CS	TFT ChipEnable(Low level)
11	CLK	SDCard SPI Serial Clock signal
12	MISO	SDCard SPI Serial Data Output signal
13	MOSI	SDCard SPI Serial Data Input signal
14	CS	SDCard Select signal
15	NC	No Connect
16	NC	No Connect

\*You can choose either of the above two interfaces to wiring

## Software

- TestCode for Arduino(UTFT Library).
- TestCode for ARM CortexM3-STM32.
- TestCode for C51.

\*The testCode include ColorTest、FontTest、GuiTest、PictureTest ,ect.

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## Revision History

Rev.	Description	Release date
V1.0	Initial version	2014/2/25
V1.1	Add BackLight Control.	2014/3/15