Demo Board Manual

megawin

MG32F02U
Smart Card + LCD
Demo Set
Using Manual

Version 1.0

Date 2024/06/14

List of Contents
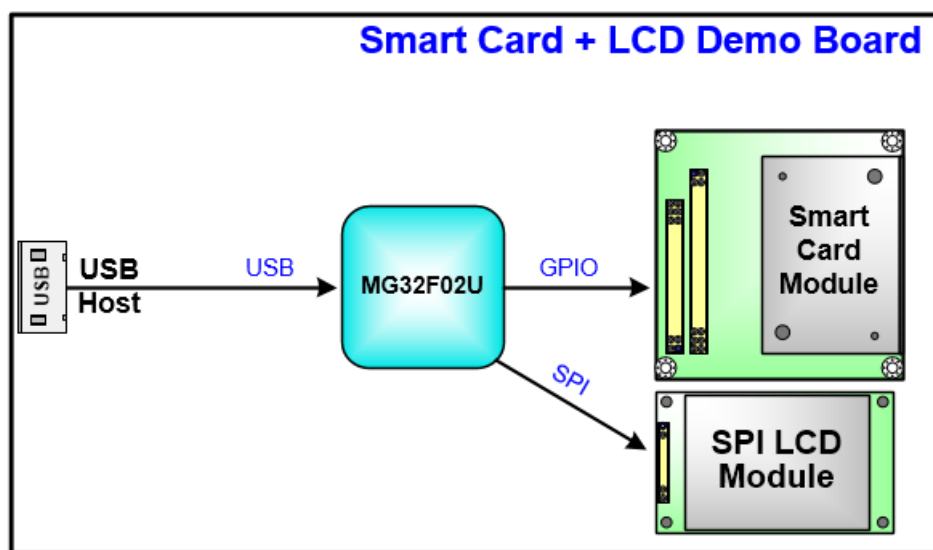
1. Introduction

PCB Version

MG04-04A(MG32F02U_LCD)

DB01-06(SMART_CARD)

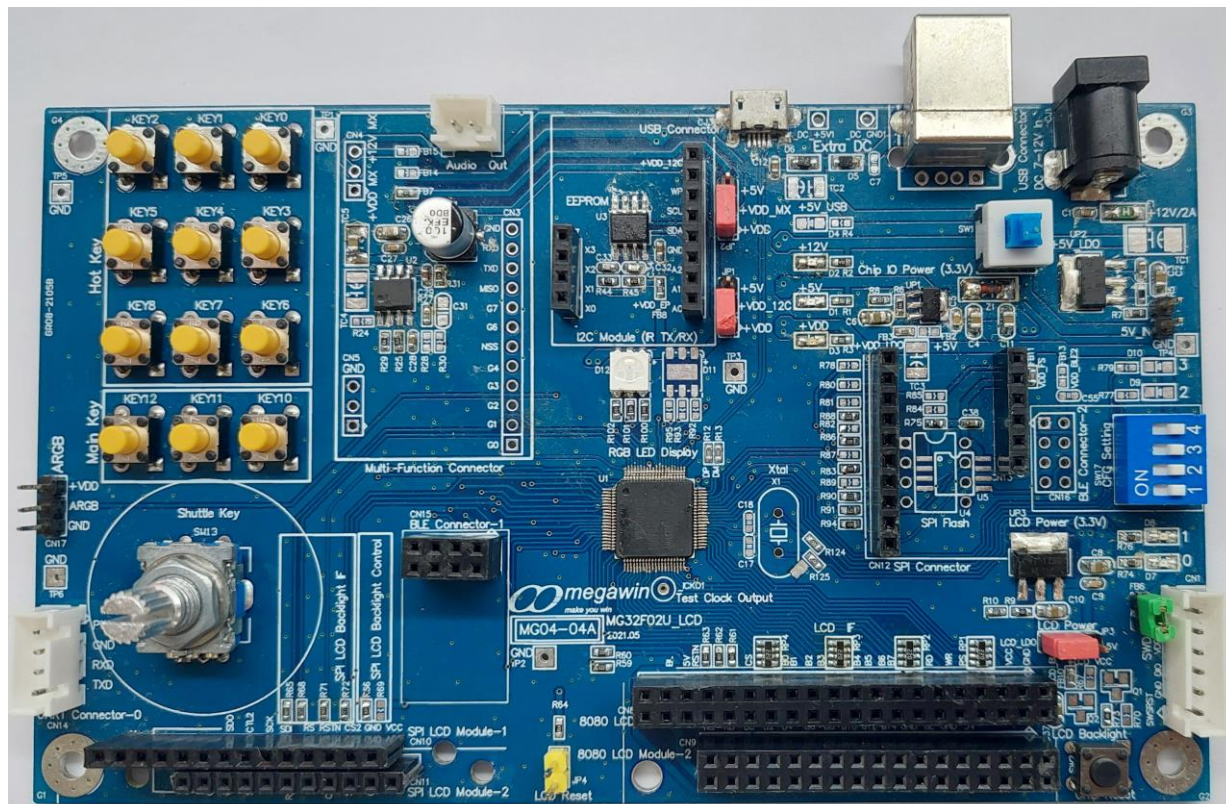## Features

1. SPI LCD Display: Display picture on 240x320 LCD through SPI interface.
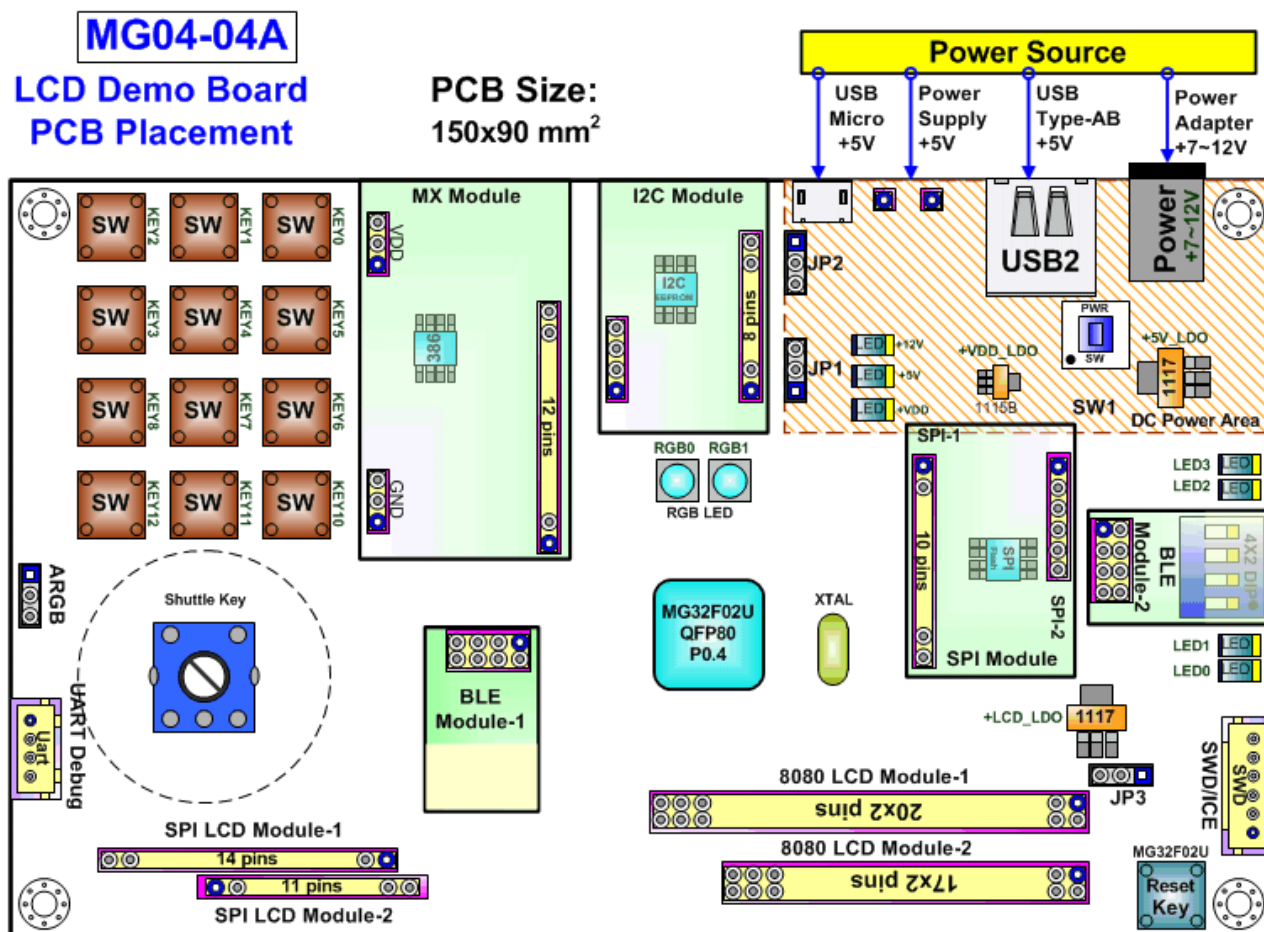
2. Smart Card: Smart Card Module.

System Block

2. PCB Information

PCB Placement and Function Block Diagram

Main Board Pictures

PCB Outline and Options

◆ **DC Input Power Source**

User can input +5 volt DC power to the Micro USB connector, the optional A/B-type USB connector from external USB power source or on board +5V/GND connection holes from external power supply. The push button SW1 is used to turn on/off the input DC +5V power.

These is one optional +7~12 volt DC input to the DC power jack from external power adapter. The input +7~12 volt DC power can also generate the +5 volt DC power by through the optional +5V_LDO power regulator.

◆ **SWD Connector**

User can connect the MG32F02U128 MCU to the external SWD controller or debug ICE by through the SWD connector.

◆ **UART Connector**

User can connect the MG32F02U128 MCU to the external UART controller or PC COM port by through the UART Debug connector.

◆ **JP1 : I2C module power option**

Pin-1,2 short : +VDD (+VDD LDO power regulator)

Pin-2,3 short : +5V

◆ **JP2 : MX module power option**

Pin-1,2 short : +VDD (+VDD LDO power regulator)

Pin-2,3 short : +5V

◆ **JP3 : LCD module power option**
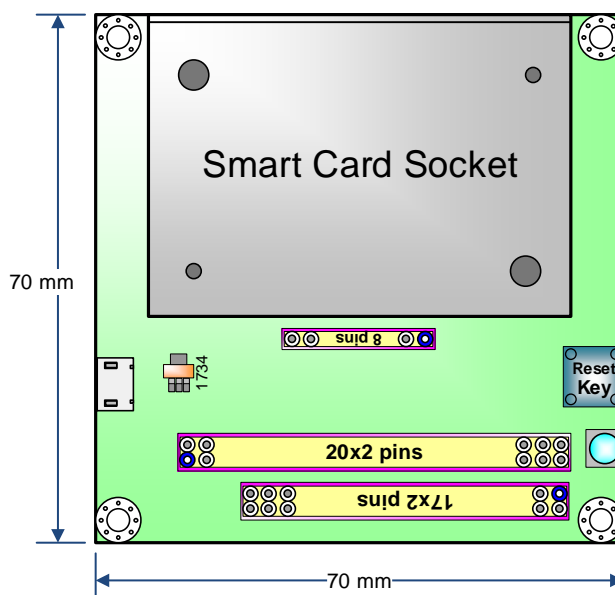
Pin-1,2 short : +5V

Pin-2,3 short : +LCD_LDO (1117 LDO power regulator)

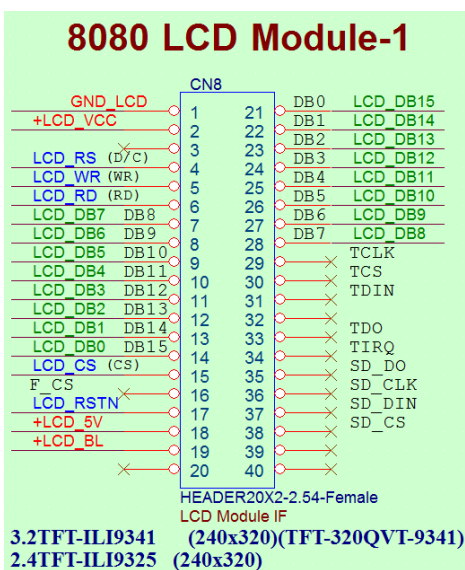## Module Board and Components

1. MG32F02U128 : 32-Bit CM0 MCU with USB/UART/SPI/I2C/8080-LCD interfaces

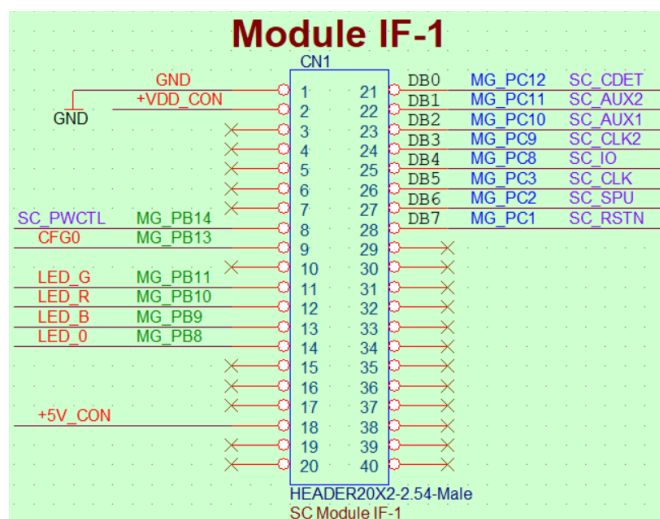Smart Card Module : DB01-06(SMART_CARD)

Smart Card Module

Dock the DB01-06 board CN1on the CN8 connector (Display LCD with 8080 interface) of MG04-04A board
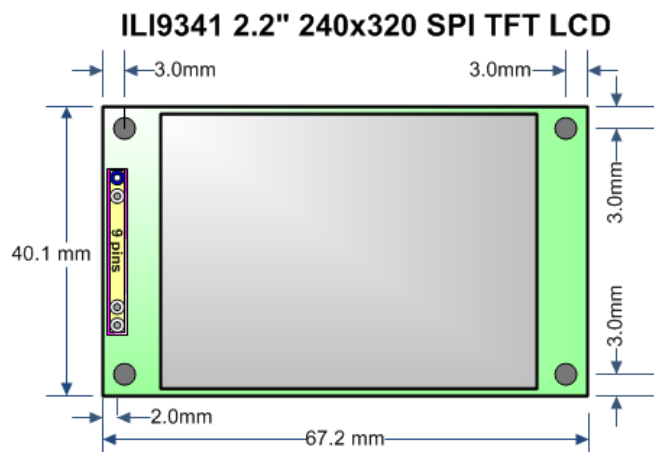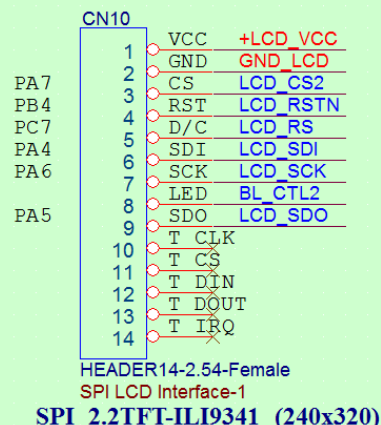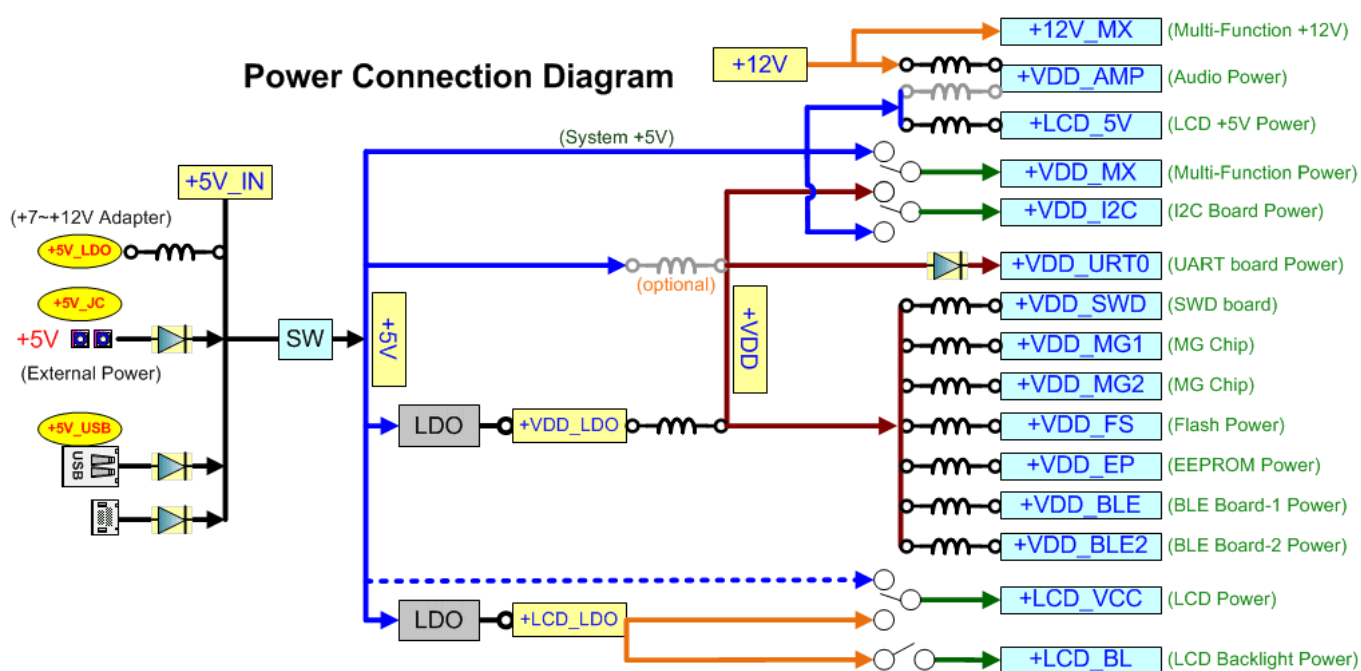

MG04-04A CN8

DB01-06 CN1
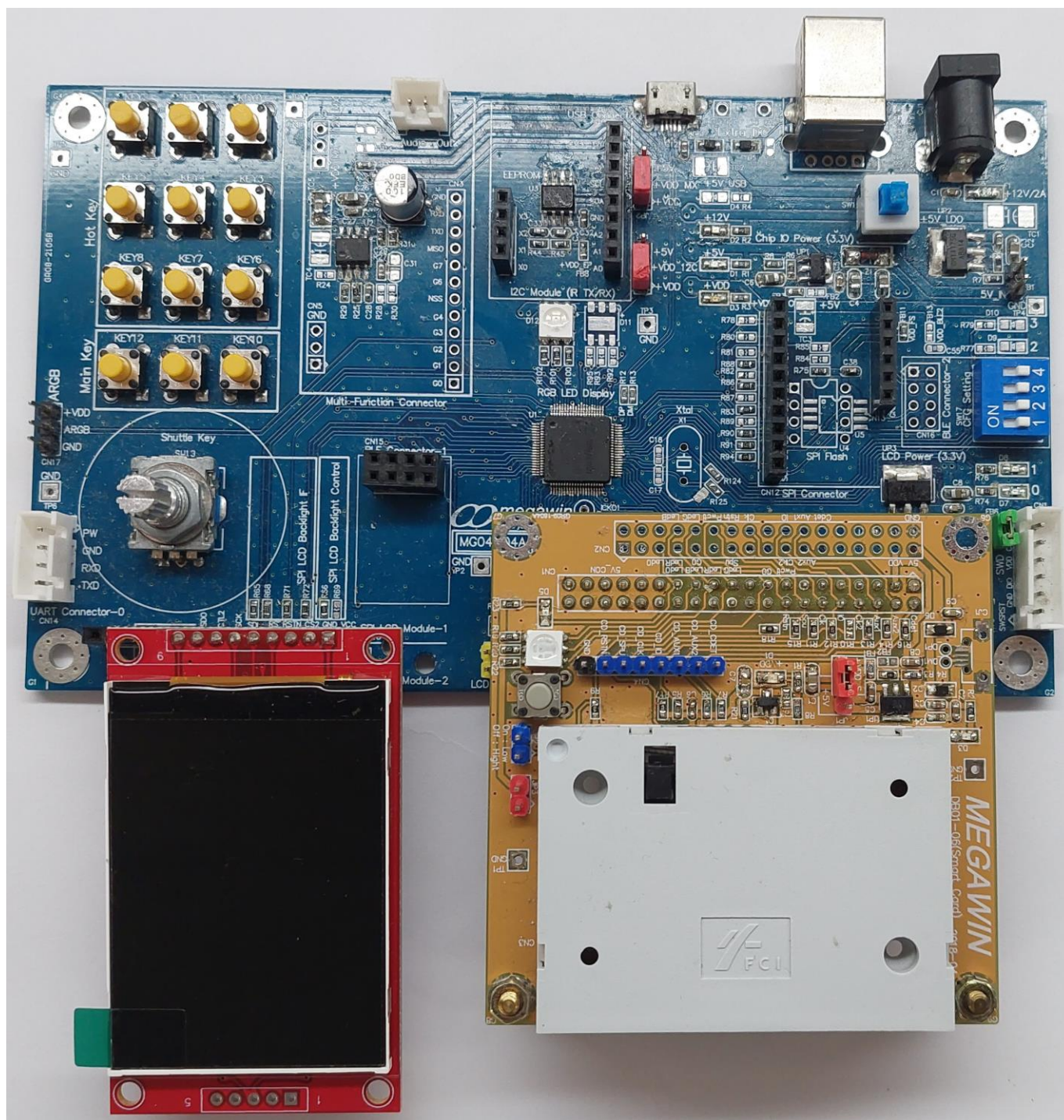
2. SPI TFT LCD Module : Display LCD with SPI interface

ILI9341 2.2" 240x320 SPI TFT LCD

SPI LCD Module-1

CN10		
1	VCC	+LCD_VCC
2	GND	GND_LCD
3	CS	LCD_CS2
4	RST	LCD_RSTN
5	D/C	LCD_RS
6	SDI	LCD_SDI
7	SCK	LCD_SCK
8	LED	BL_CTL2
9	SDO	LCD_SDO
10	T_CLK	
11	T_CS	
12	T_DIN	
13	T_DOUT	
14	T_IRQ	

PA7
PB4
PC7
PA4
PA6

PA5

HEADER14-2.54-Female
SPI LCD Interface-1
SPI 2.2TFT-ILI9341 (240x320)

PCB Power Connection

Power Connection Diagram

PCB Assembly

3. Revision History

Revision V1.0 (2024_0614)	Chapter
1 Initial version	