

Nucleo-64 Display Expansion Board

MB1642

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Legend

- General comment such as function title, configuration, ...
- Text to be added to silkscreen.
- Warning text.

A

Notes to generate the board layout.

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Top.SchDoc



Title: Project overview		
Project: Nucleo-64 Display Expansion Board		
Variant: DT022CTFT		
Revision: B-01		Reference: MB1642
Size: A4	Date: 20-NOV-19	Sheet: 1 of 2



SPI Flash Memory

U1: MX25L6433FM2I-08G

Connections:

- Pin 1 (CS#) to 3V3 via R12 (10K)
- Pin 2 (SO/SIO1) to 3V3
- Pin 3 (WP#/SIO2) to 3V3
- Pin 4 (GND) to GND
- Pin 8 (VCC) to 3V3
- Pin 7 (HOLD#/SIO3) to 3V3
- Pin 6 (SCLK) to 3V3
- Pin 5 (SI/SIO0) to 3V3
- Capacitor C6 (100nF) connected between Pin 7 and GND

The schematic diagram illustrates the electrical connections between the LCD1 module and the DT022CTFT display. The LCD1 module is represented by a yellow box on the left with pins 1 through 45. The DT022CTFT display is represented by a yellow box on the right with pins 1 through 45. The wiring is as follows:

- Power Supply:** A 3V3 supply is connected to LCD1 pin 1 and DT022CTFT pin 1. A 3V3 supply is also connected to LCD1 pin 31 and DT022CTFT pin 31.
- Resistors:**
 - R8 (6.2R) is connected between LCD1 pin 1 and DT022CTFT pin 1.
 - R7 (10K) is connected between LCD1 pin 1 and ground.
 - R6 (10K) is connected between LCD1 pin 31 and DT022CTFT pin 31.
 - R9 (6.2R) is connected between LCD1 pin 39 and DT022CTFT pin 39.
 - R10 (6.2R) is connected between LCD1 pin 40 and DT022CTFT pin 40.
 - R11 (6.2R) is connected between LCD1 pin 41 and DT022CTFT pin 41.
- Control Signals:**
 - DISP_NRESET_PA1 is connected between LCD1 pin 6 and DT022CTFT pin 6.
 - DISP_TE_PA0 is connected between LCD1 pin 35 and DT022CTFT pin 35.
- Other Connections:**
 - C7 (100nF) is connected between LCD1 pin 31 and ground.
 - MT1 is connected between LCD1 pin 44 and DT022CTFT pin 44.
 - MT2 is connected between LCD1 pin 45 and DT022CTFT pin 45.

The components are labeled with their values: 3V3, 6.2R, 10K, 100nF, and the component names R8, R7, R6, R9, R10, R11, C7, MT1, and MT2.

Joystick

Morpho Connectors

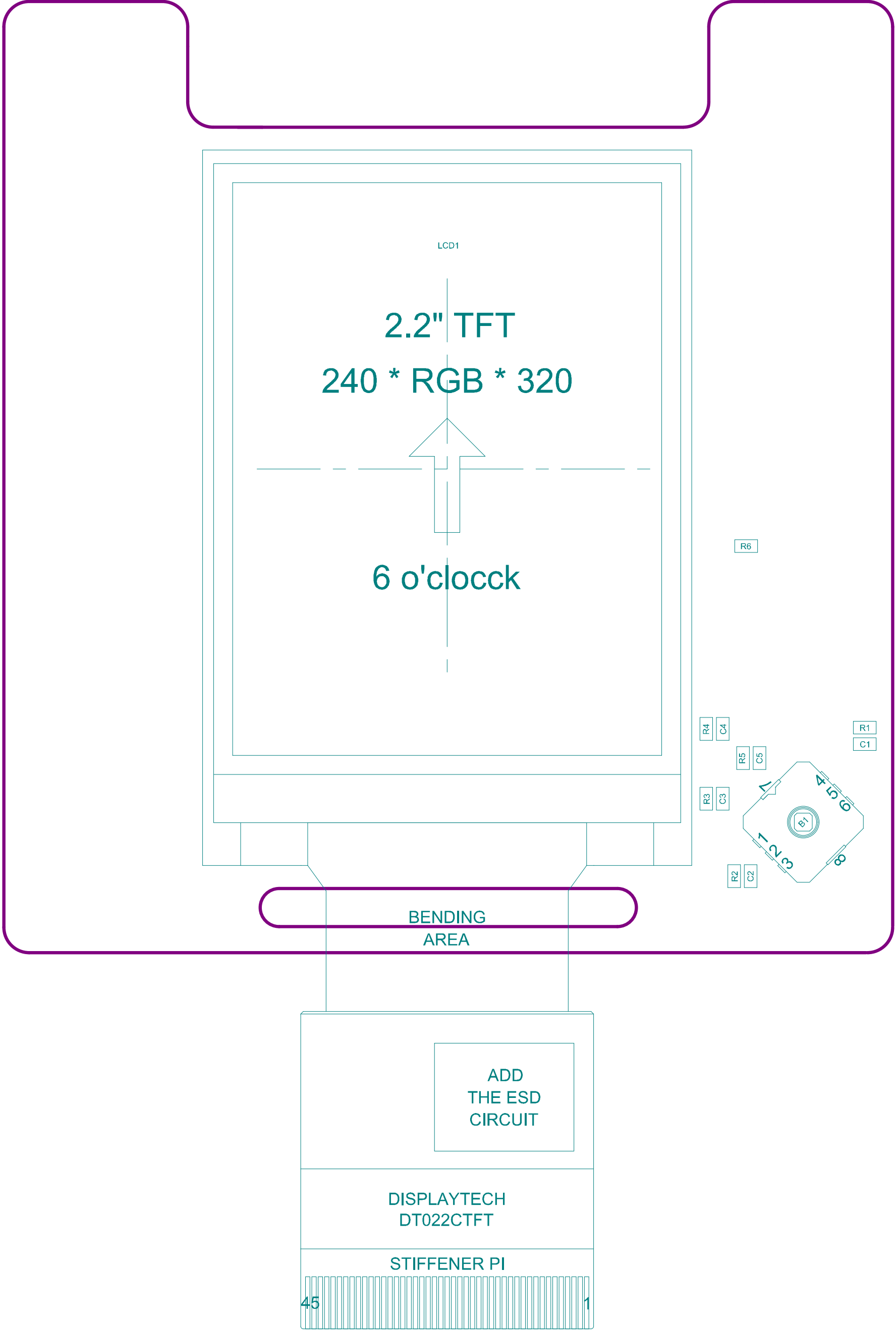
The diagram illustrates the wiring for two Morpho connectors, CN2 and CN3, to a Socket 19x2. The connectors are shown with their pin numbers (1 to 38) and the corresponding signals connected to them. The signals are color-coded: blue for power and ground, red for SPI signals, and green for other signals. The connectors are connected to a 3V3 power source and ground.

Connector CN2 (Socket 19x2):

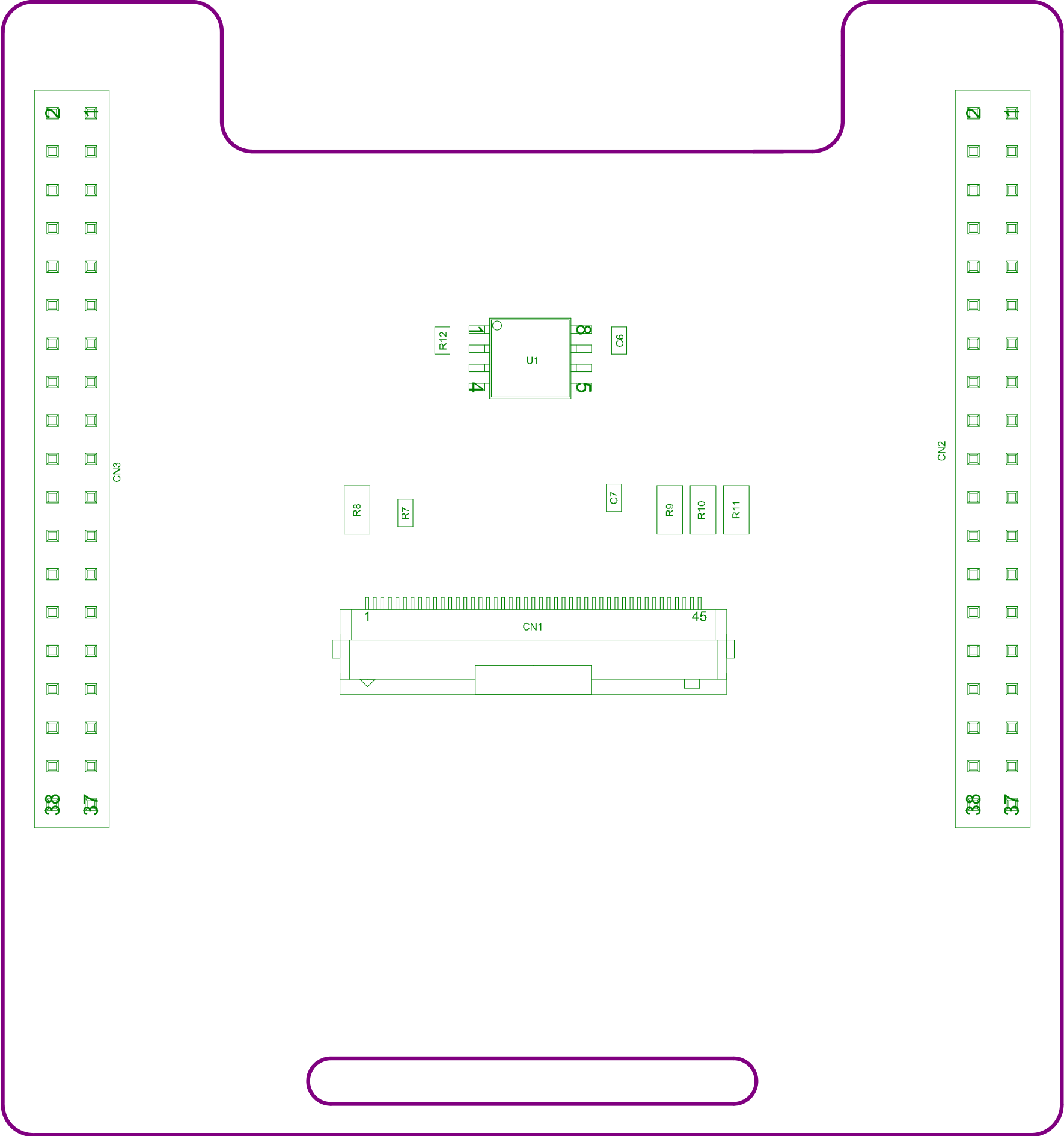
- KEY_DOWN_PC10 (Pin 1)
- KEY_UP_PC12 (Pin 2)
- KEY_RIGHT_PC11 (Pin 3)
- KEY_LEFT_PC9 (Pin 4)
- KEY_CENTER_PC8 (Pin 5)
- SPIB_MISO_PC2_PA6 (Pin 6)
- SPIB_MOSI_PC3_PA12 (Pin 7)
- DISP_TE_PA0 (Pin 8)
- DISP_NRESET_PA1 (Pin 9)

Connector CN3 (Socket 19x2):

- KEY_LEFT_PC9 (Pin 1)
- KEY_CENTER_PC8 (Pin 2)
- SPIB_NCS_PB9_PB7 (Pin 3)
- SPIA_SCK_PA5_PB13 (Pin 4)
- SPIA_MISO_PA6_PB14 (Pin 5)
- SPIA_MOSI_PA7_PB15 (Pin 6)
- SPIA_NCS_PB5_PB5 (Pin 7)
- SPIA_DCX_PB3_PB3 (Pin 8)
- SPIB_MOSI_PC3_PA12 (Pin 9)
- SPIB_MISO_PC2_PA6 (Pin 10)
- SPIB_SCK_PB13_PA5 (Pin 11)
- SPIB_SCK_PB13_PA5 (Pin 12)



Project: Nucleo-64 Display Expansion Board		
Layer: M14-Top Assembly	Gerber: .GM14	
Variant: DT022CTFT	Ref: MB1642	
Date: 20-NOV-19	Rev: B	



Project: Nucleo-64 Display Expansion Board

Layer: M15-Bottom Assembly

Gerber: .GM15

Variant: DT022CTFT

Ref: MB1642

Date: 20-NOV-19

Rev: B



