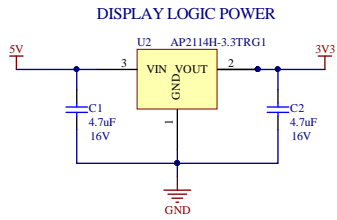


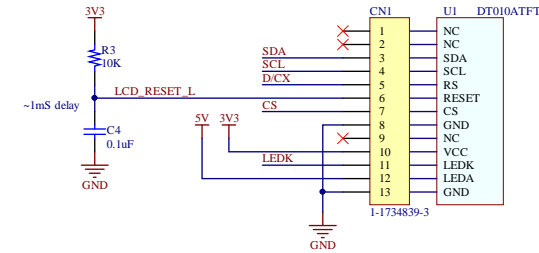
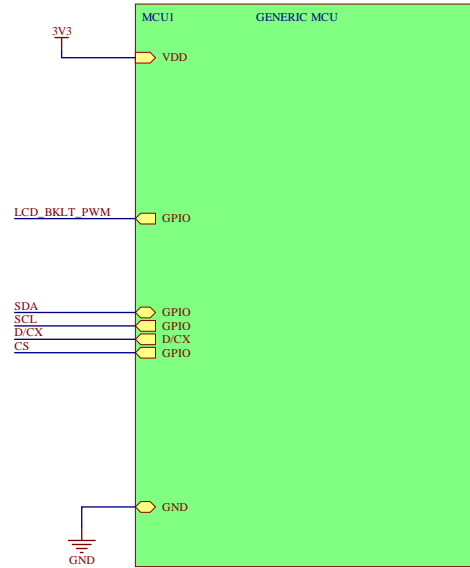
# DT010ATFT Serial Data Reference Design

(SERIAL CONFIGURATION AND IMAGE DATA)



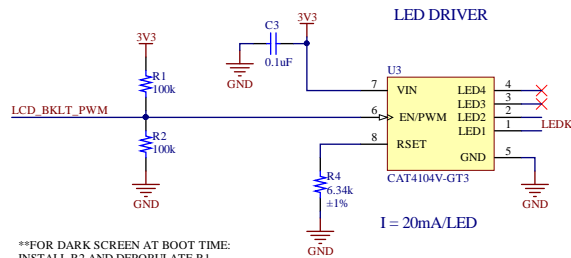
THESE SERIAL DATA SIGNALS ARE NOT FULLY COMPATIBLE WITH STANDARD SPI DATA PROTOCOLS. CUSTOM DRIVERS ARE NEEDED TO USE SPI HARDWARE PORTS.

A BIT-BANGED IMPLEMENTATION IS AVAILABLE IN THE SAMPLE DRIVER CODE.



THE DISPLAY DRIVER (ST7735S) MUST BE CONFIGURED TO GENERATE FRAME RATE SIGNALS INTERNALLY. SIMILAR TO MCU MODE.

DISPLAY IMAGE DATA IS WRITTEN THROUGH THE SERIAL INTERFACE TO THE DISPLAY DRIVER GRAPHICS RAM (GRAM) MEMORY.




\*\*FOR DARK SCREEN AT BOOT TIME: INSTALL R2 AND DEPOPULATE R1.  
\*\*FOR NORMAL SCREEN AT BOOT TIME: INSTALL R1 AND DEPOPULATE R2.

DT010ATFT IS 4-WIRE 8-BIT SERIAL ONLY. RS PIN SERVES AS D/CX SIGNAL. CHIP SELECT (CS) SIGNAL IS USED TO INITIATE A DATA TRANSFER SEQUENCE.

LOGIC 1 = VDD (3.3V)  
LOGIC 0 = GND

THE DIFFERENCE BETWEEN 3-WIRE AND 4-WIRE SERIAL IS THE HANDLING OF THE DATA/COMMAND SIGNAL (D/CX). 3-WIRE SERIAL SENDS THE D/CX SIGNAL IN A 9TH DATA BIT. 4-WIRE SERIAL USES A SEPARATE WIRE FOR THE D/CX SIGNAL. THERE IS NO RELATIONSHIP WITH THE PHYSICAL NUMBER OF WIRES USED.

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