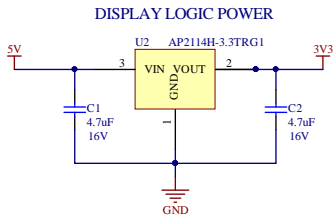
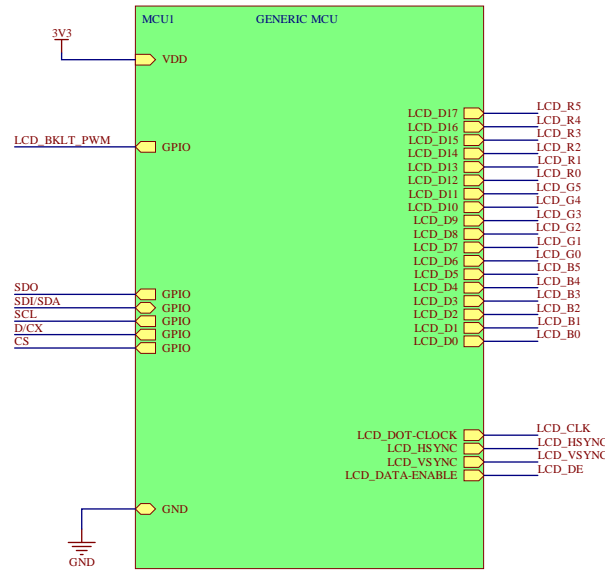


# DT024DTFT RGB Reference Design

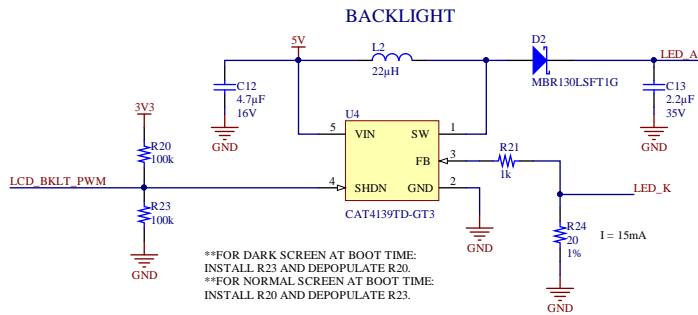
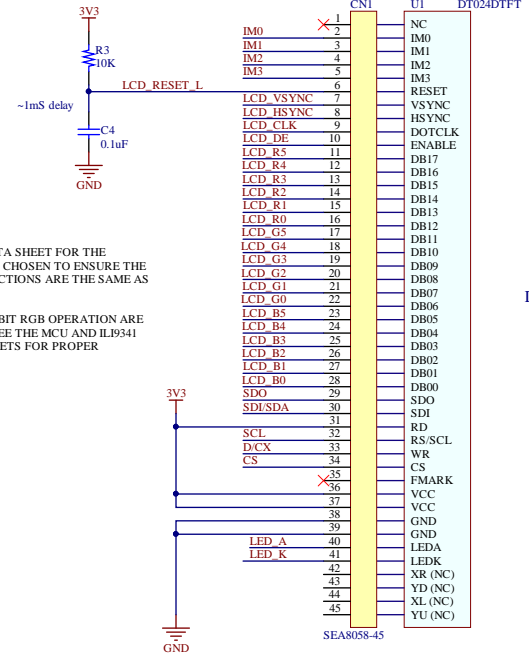
(RGB 18-BIT WITH SERIAL DATA CONFIGURATION)



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.



CONSULT THE DATA SHEET FOR THE PARTICULAR MCU CHOSEN TO ENSURE THE LCD DATA CONNECTIONS ARE THE SAME AS THIS EXAMPLE.  
RGB 16-BIT AND 8-BIT RGB OPERATION ARE ALSO POSSIBLE. SEE THE MCU AND ILI9341 DRIVER DATA SHEETS FOR PROPER CONNECTIONS.



\*\*FOR DARK SCREEN AT BOOT TIME: INSTALL R23 AND DEPOPULATE R20.  
\*\*FOR NORMAL SCREEN AT BOOT TIME: INSTALL R20 AND DEPOPULATE R23.


DT024DTFT Interface Mode Settings (Serial)

IM3	IM2	IM1	IM0	Interface Mode	Pins
0	1	0	1	3-wire, 9-bit bus	SDA(in/out) + SCL
0	1	1	0	4-wire, 8-bit bus	SDA(in/out) + SCL + D/CX
1	1	0	1	3-wire, 9-bit bus	SDI(in) + SDO(out) + SCL
1	1	1	0	4-wire, 8-bit bus	SDI(in) + SDO(out) + SCL + D/CX

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

CHIP SELECT (CS) SIGNAL IS USED IN ALL SERIAL MODES TO INITIATE A DATA TRANSFER SEQUENCE.

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.

Project: DT024DTFT Reference Design			 a seacompany	
Title: DT024DTFT RGB Reference Design				
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SEACOMP Displaytech  
2546 Gateway Road  
Carlsbad, CA 92009 USA