Interfacing the OMAP-L138/C6748 LCDK with an Arduino

Setting Up the Project:

Files to Add

psc.c

C:\ti\OMAPL138_StarterWare_1_10_04_01\drivers\psc.c

interrupt.c

C:\ti\OMAPL138_StarterWare_1_10_04_01\system_config\c674x\interrupt.c

Intvecs.asm

C:\ti\OMAPL138_StarterWare_1_10_04_01\system_config\c674x\intvecs.asm

uart.c

C:\ti\OMAPL138_StarterWare_1_10_04_01\drivers\uart.c

uart.c – must be renamed since 2 files named uart.c are needed

C:\ti\OMAPL138_StarterWare_1_10_04_01\platform\lcdkOMAPL138\uart.c

linker_dsp.cmd

C:\ti\L138_support\linker_dsp.cmd

uart_main.c

uart_lib.c

uart_lib.h

Files to include

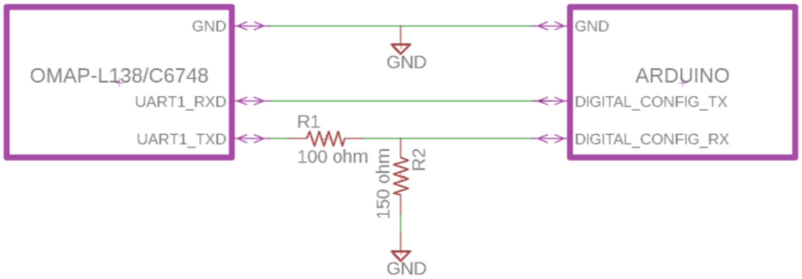
C:\ti\OMAPL138_StarterWare_1_10_04_01\include

C:\ti\OMAPL138_StarterWare_1_10_04_01\include\hw

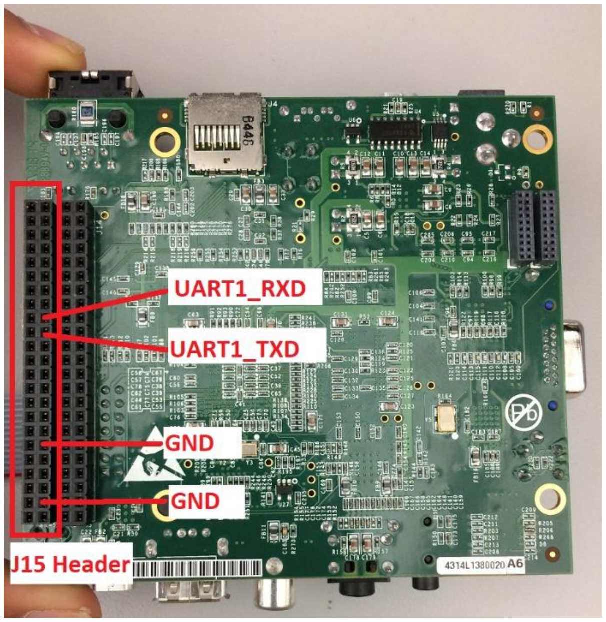
C:\ti\OMAPL138_StarterWare_1_10_04_01\include\c674x\omapl138

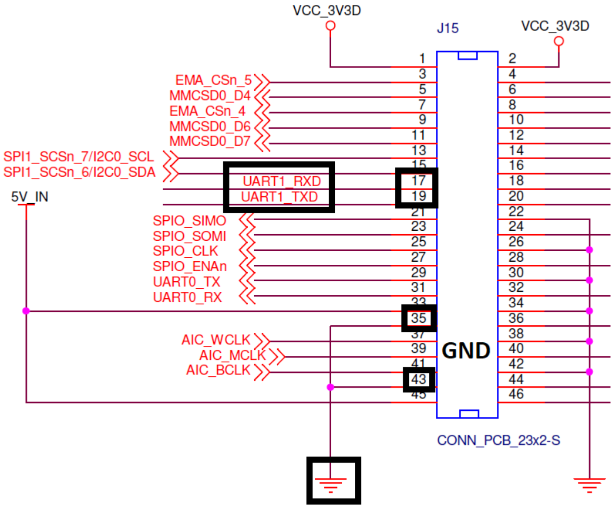
Connecting the Arduino and LCDK

1. Use a jumper cable to connect the GND on the J15 header on the LCDK with the ground on the Arduino
2. Connect the UART1_RXD with the pin configured as TX on the Arduino, a voltage divider must be used here.



3. Connect the UART1_TXD with the pin configured as RX on the Arduino





Tips

- Serial.println() statements in the Arduino code can mess up the timing of the transmission
- Probe both the lines with an oscilloscope to ensure that data is being transferred