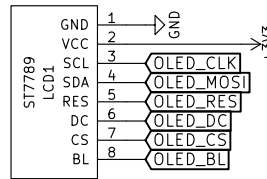
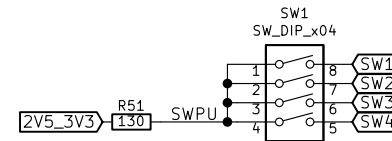
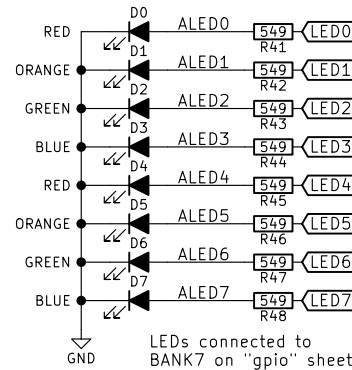
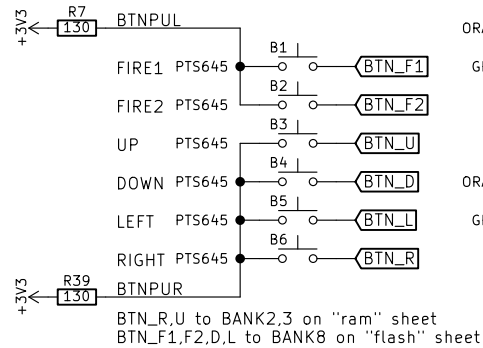
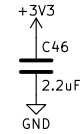


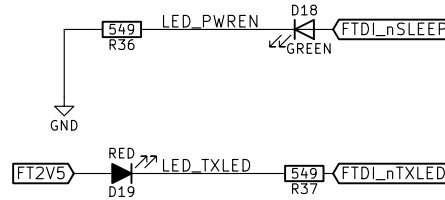
ST7789/SSD1331/SSD1351/SSD1306
compatible LCD/OLED 0.96/1.3/1.54" PCB
14x14 units
1 unit = 2.54 mm



OLED connected to
BANK6 on "usb" sheet



To fix issues with FT231XS rev A,B,C
Short-circuit D18 LED, but then
board cannot keep awake by USB.
chip rev D works properly
See TN140_FT231X Errata



Buttons, LEDs, OLED display

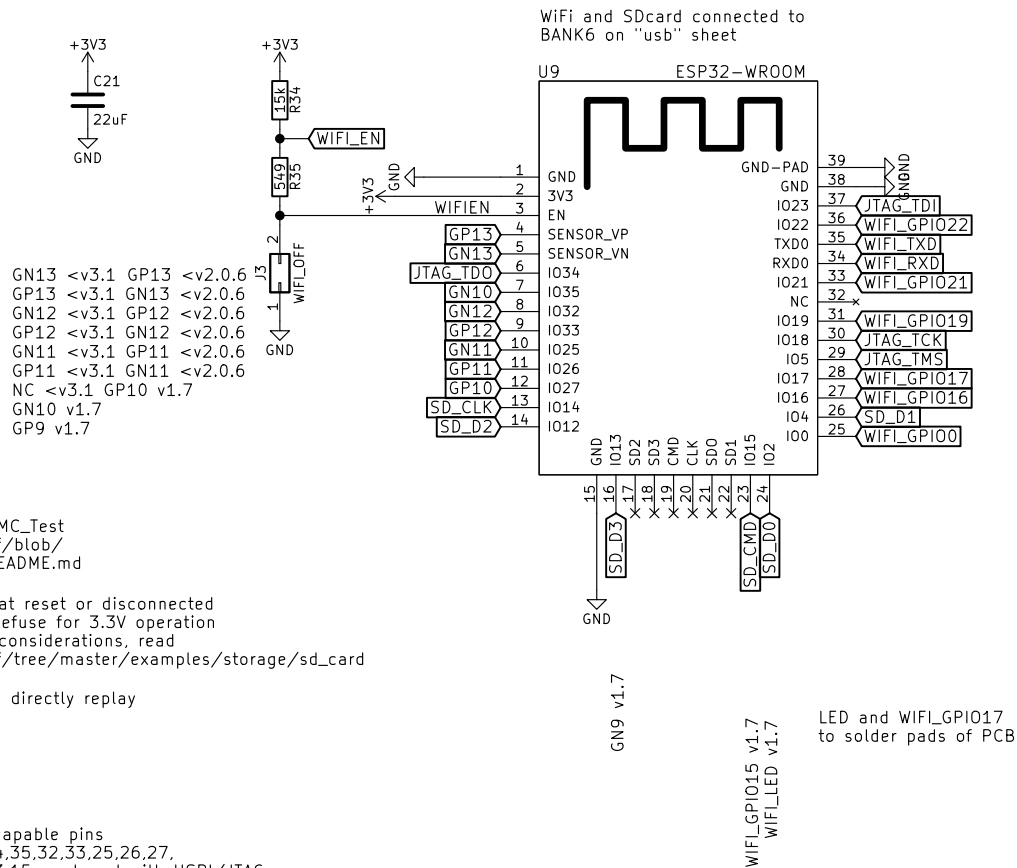
EMARD

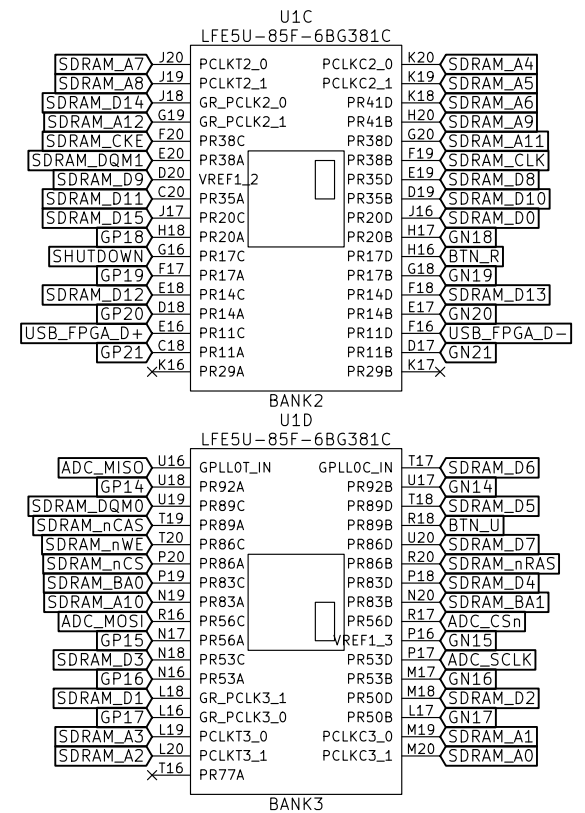
Sheet: /blinky/
File: blinky.sch

Title: ULX3S

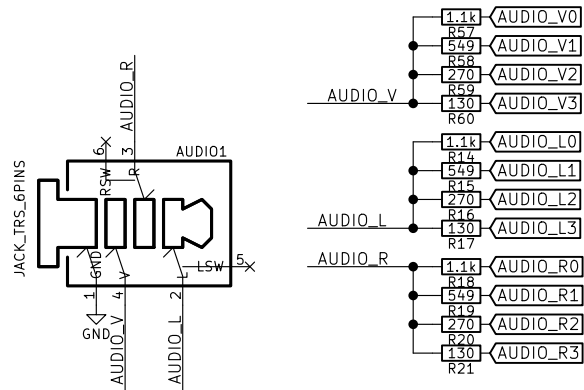
Size: A4 Date:
KiCad E.D.A. kicad 5.1.6+dfsg1-1

Rev: 1.0.3
Id: 4/11





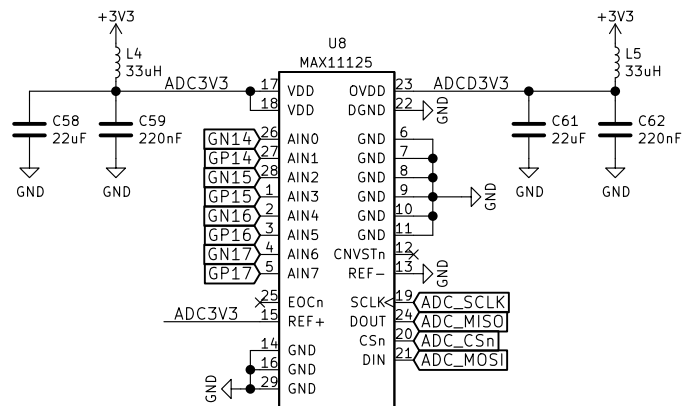
Id: 8/11



JACK pinout for SJ-43516-SMT-TR
<http://www.cui.com/product/resource/sj-4351x-smt-series.pdf>
 pin 1 - sleeve (GND)
 pin 2 - tip (left channel)
 pin 3 - ring1 (right channel)
 pin 4 - ring2 (video)
 pin 5 - tip switch
 pin 6 - ring1 switch

Audio connected to
 BANK7 on "gpio" sheet

Output resistance: 75 ohm
 Internal resistance of FPGA pin: 10 ohm
 $1/(1/(130+10)+1/(270+10)+1/(549+10)+1/(1100+10))=74.6$



ADC SPI connected to
 BANK3 of "ram" sheet

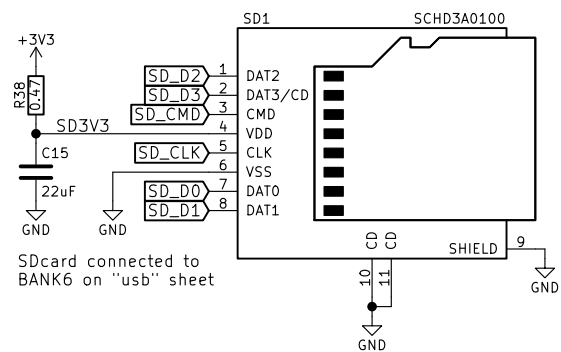
Analog audio and video
EMARD

Sheet: /analog/
 File: analog.sch

Title: ULX3S

Size: A4 Date:
 KiCad E.D.A. kicad 5.1.6+dfsg1-1

Rev: 1.0.4
 Id: 9/11



minimum pins for compatible mode
SD_CLK, SD_CMD, SD_D0, SD_D3

SD card
EMARD

Sheet: /sdcard/
File: sdcard.sch

Title: ULX3S

Size: A4 Date:
KiCad E.D.A. kicad 5.1.6+dfsg1-1

Rev: 1.0.0
Id: 10/11

