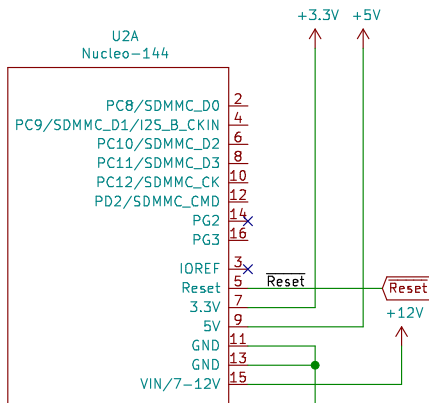
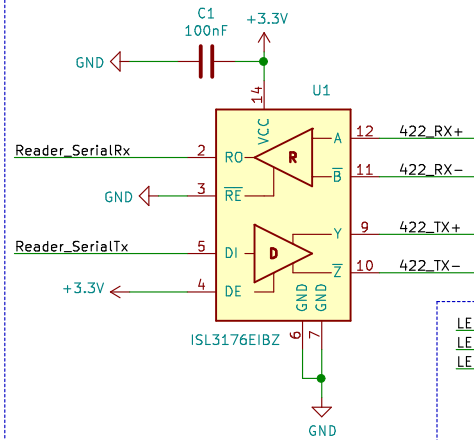


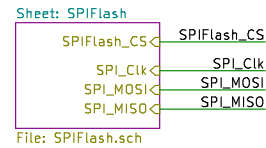
Nucleo-144 Left Side



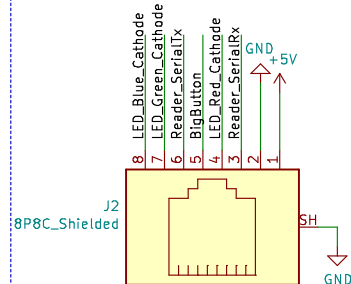
New-Style Reader Connection



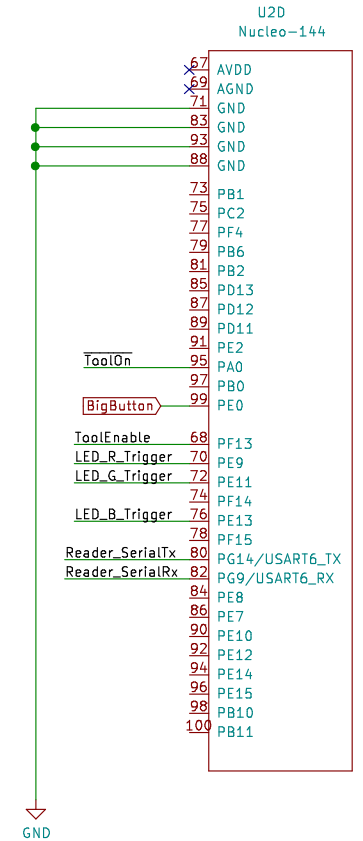
SPI Flash



Legacy 8P8C Connector

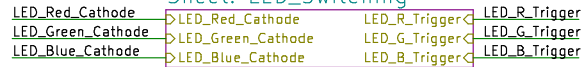


Nucleo-144 Right Side



Other Sheets

Sheet: LED_Switching



File: LED_Switching.sch

Sheet: Power

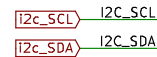


File: Power.sch

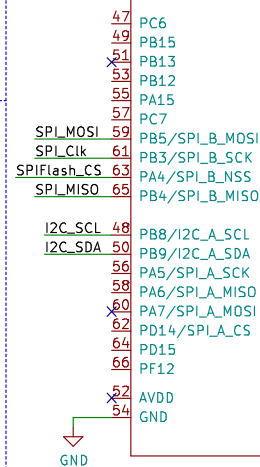
Sheet: UserIO



File: UserIO.sch



U2C Nucleo-144



PA7,PB13,PG2 used by ethernet peripheral
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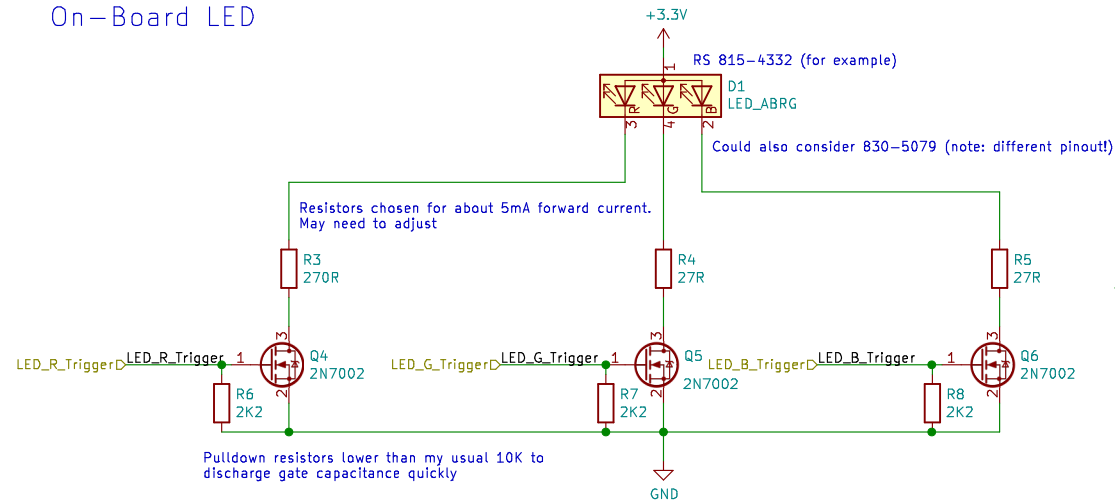
Sheet: /
File: acnode-nucleo144.sch

Title: ACNode Nucleo-144 Overlay

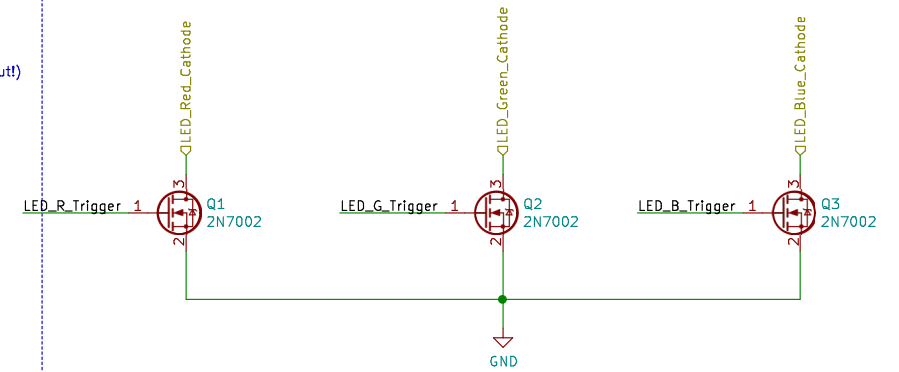
Size: A4
Date: 2020-11-28
KiCad E.D.A. kicad 5.1.6-1.fc32

Rev: 1
Id: 1/5

On-Board LED



Legacy Reader LEDs



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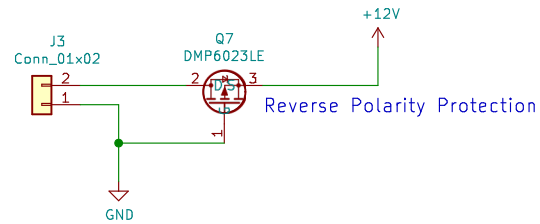
Sheet: /LED_Switching/
File: LED_Switching.sch

Title: ACNode Nucleo-144 Overlay

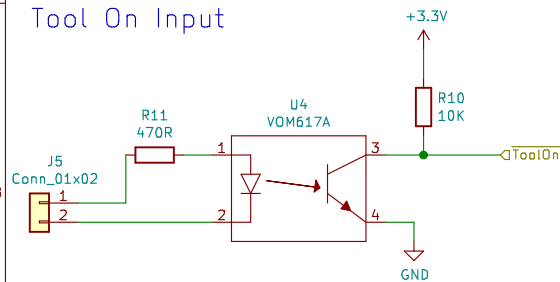
Size: A4 Date: 2020-11-28
KiCad E.D.A. kicad 5.1.6-1.fc32

Rev: 1
Id: 2/5

12V Power Input



Tool On Input



VOM617A has a typical forward voltage of 1.1V
With 470R resistor:

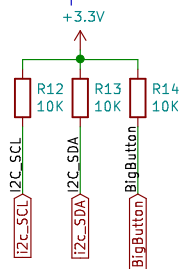
If @ 3.3V = $(3.3 - 1.1) / 470 = 4.68\text{mA}$

If @ 5V = $(5 - 1.1) / 470 = 8.29\text{mA}$

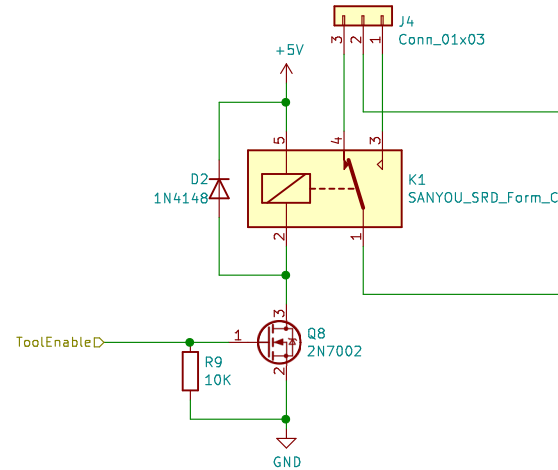
If @ 12V = $(12 - 1.1) / 470 = 23.1\text{mA}$

Max If for VOM617A is 60mA so all are well within this.

Pullups



Tool Switching Relay



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Sheet: /Power/

File: Power.sch

Title: ACNode Nucleo-144 Overlay

Size: A4

Date: 2020-11-28

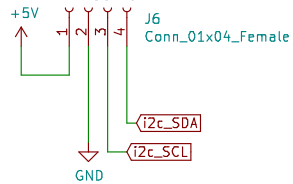
Rev: 1

KiCad E.D.A. kicad 5.1.6-1.fc32

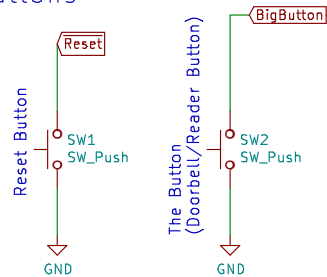
Id: 3/5

Display

0.96" OLED I2C Display
Displays system status, making maintenance
and debugging easier



Buttons



London Hackspace

Sheet: /UserIO/

File: UserIO.sch

Title: ACNode Nucleo-144 Overlay

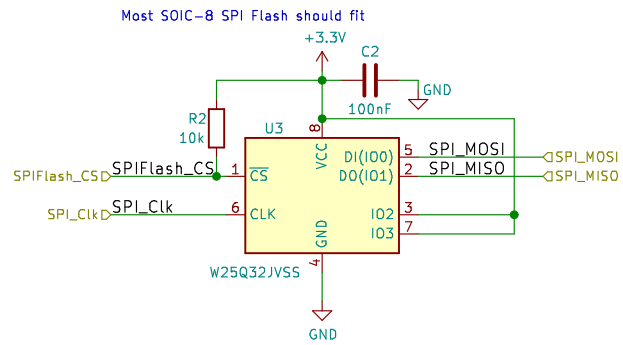
Size: A4 Date: 2020-11-28

KiCad E.D.A. kicad 5.1.6-1.fc32

Rev: 1

Id: 4/5

SPI Flash



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Sheet: /SPIFlash/

File: SPIFlash.sch

Title: ACNode Nucleo-144 Overlay

Size: A4 Date: 2020-11-28

KiCad E.D.A. kicad 5.1.6-1.fc32

Rev: 1

Id: 5/5