Power Input

Power_Input.sch

POS3P3 Power Supply

POS3P3_Power_Supply.sch

Microcontroller Programming

Microcontroller_Programming.sch

WiFi Module

Wi_Fi_Module.sch

USB UART Isolation

USB_UART_Isolation.sch

USB UART Bridge

USB_UART_Bridge.sch

Panel Data Connectors

Panel_Data_Connectors.sch

LED POS5 Monitoring

LED_POS5_Monitoring.sch

Microcontroller Power

Microcontroller_Power.sch

Microcontroller A

Microcontroller_A.sch

Microcontroller B

Microcontroller_B.sch

External SRAM

External_SRAM.sch

External Flash 1

External_Flash_1.sch

External Flash 2

External_Flash_2.sch

External Flash 3

External_Flash_3.sch

External Flash 4

External_Flash_4.sch

External Flash 5

External_Flash_5.sch

External Flash 6

External_Flash_6.sch

External Flash 7

External_Flash_7.sch

External Flash 8

External_Flash_8.sch

Status LEDs 1

Status_LEDs_1.sch

Panel Data Level Shifters 1

Panel_Data_Level_Shifters_1.sch

Panel Data Level Shifters 2

Panel_Data_Level_Shifters_2.sch

Panel Data Level Shifters 3

Panel_Data_Level_Shifters_3.sch

Test Points

Test_Points.sch

Pushbuttons

Pushbuttons.sch

POS5 Power Supply

POS5_Power_Supply.sch

Mechanical

Mechanical.sch

Internal Rail Monitoring

Internal_Rail_Monitoring.sch

Status LEDs 2

Status_LEDs_2.sch

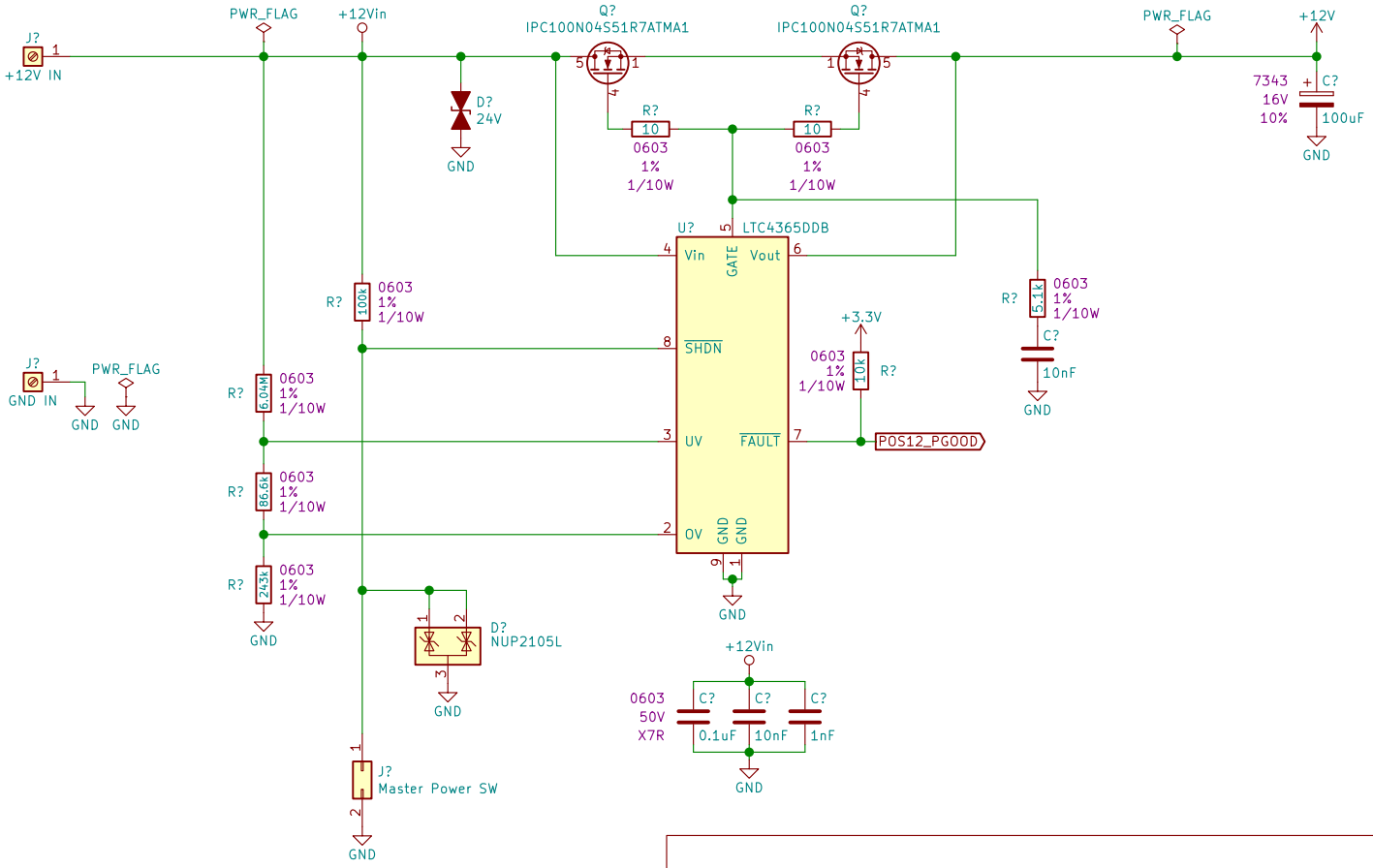
To Do List:
* ESD protection on input and output signals
* Add graphical items to certain sheets (ESD warning, heat, etc)
* Add MU Logo to each sheet
* Add Titles to each sheet
* Add relevant design notes/routing notes to sheets
* Re-order sheets
* Assign Refdes's
* Verify pinouts
* Verify peripheral wiring on micro
* Draw custom footprints
* Assign footprints
* Assign Digi-Key Partnumbers
* Run ERC, resolve errors
* Add COM port settings notes to USB sheet
* Generate netlist
* Generate BOM
* Layout PCB

Sheet: /
File: LED_Display_Controller.sch

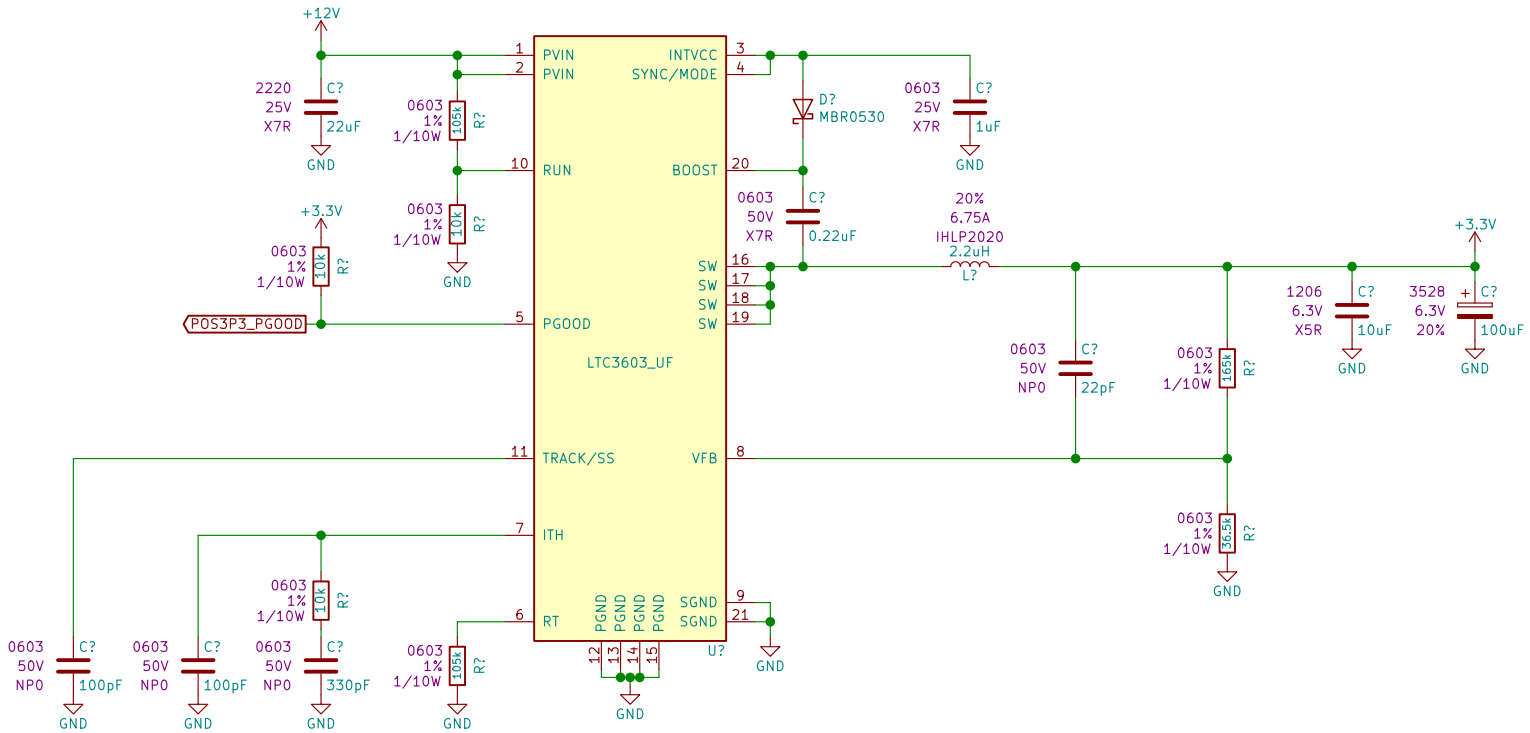
**Title:**

| Size: A | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 1/31 |

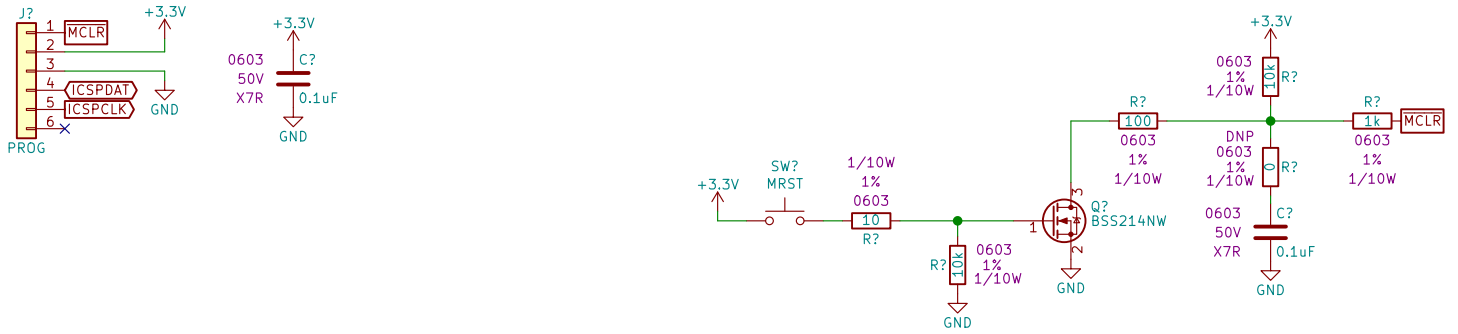
# Power Input



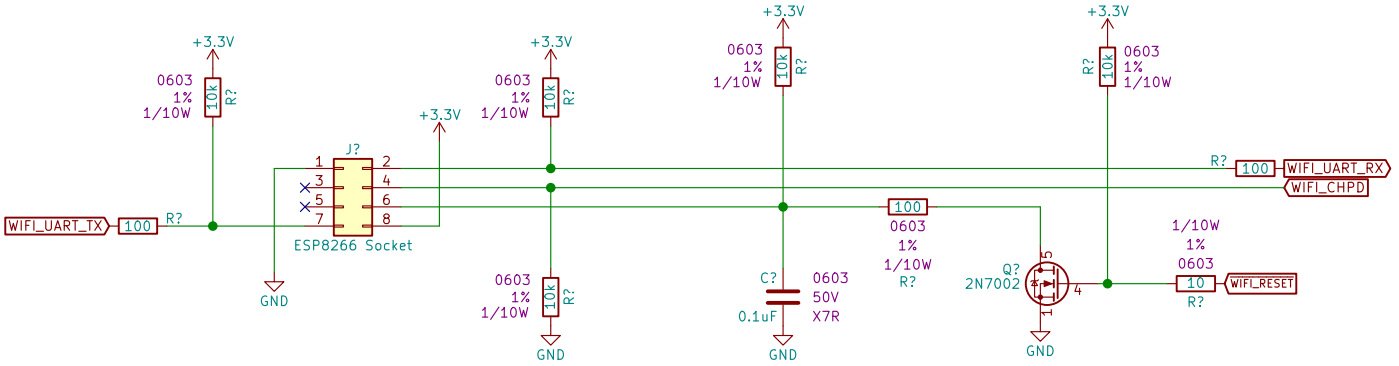

| | | |
|---|---|---|
| Sheet: /Power Input/ | | |
| File: Power_Input.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 2/31 |




| | | |
|---|---|---|
| Sheet: /POS3P3 Power Supply/ | | |
| File: POS3P3_Power_Supply.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 3/31 |

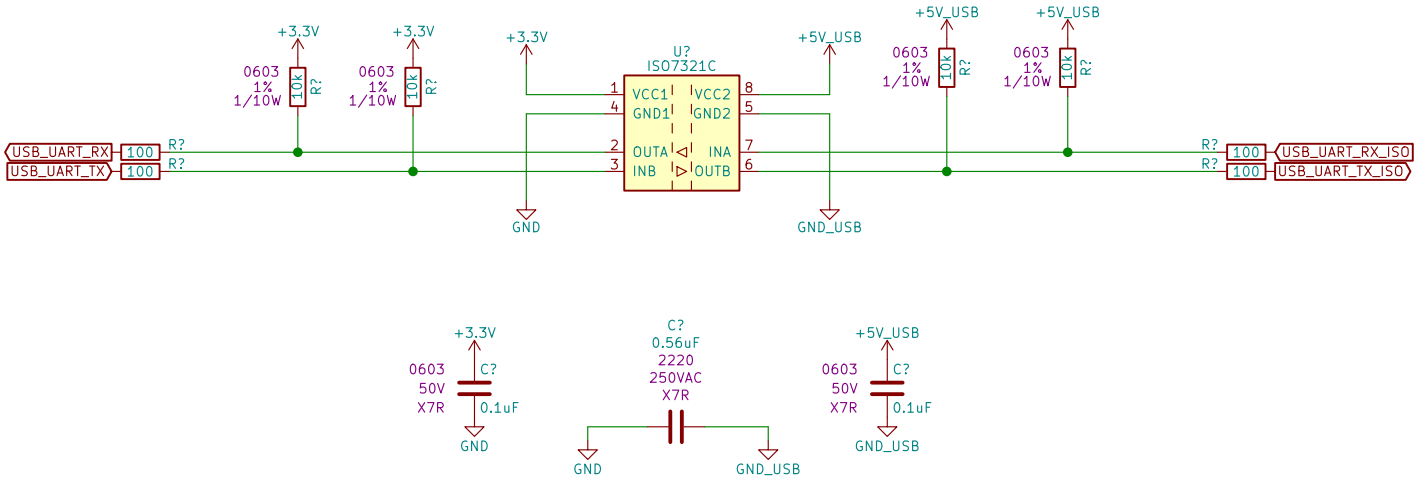



| | | |
|---|---|---|
| Sheet: /Microcontroller Programming/ | | |
| File: Microcontroller_Programming.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 4/31 |




ESP8266 Pinout does not match default KiCad pin socket footprint.
Alter the pin numbers in layout

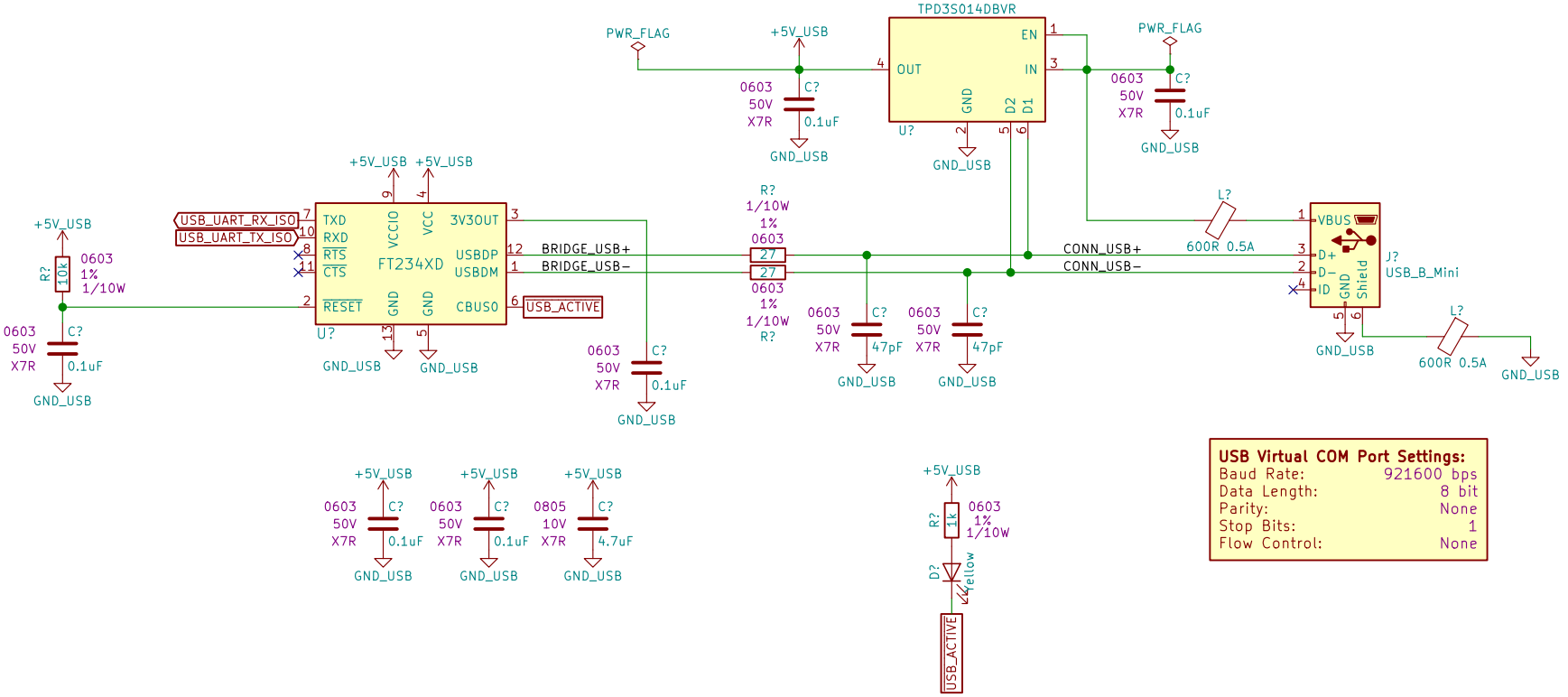
| | | |
|---|---|---|
| Sheet: /WiFi Module/ | | |
| File: Wi_Fi_Module.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 5/31 |







| | | |
|---|---|---|
| Sheet: /USB UART Isolation/ | | |
| File: USB_UART_Isolation.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 6/31 |




**USB Virtual COM Port Settings:**

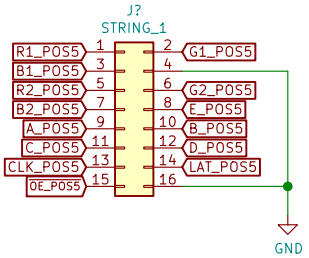
| | |
|---|---|
| Baud Rate: | 921600 bps |
| Data Length: | 8 bit |
| Parity: | None |
| Stop Bits: | 1 |
| Flow Control: | None |

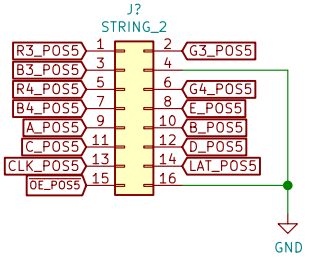
Sheet: /USB UART Bridge/
File: USB_UART_Bridge.sch

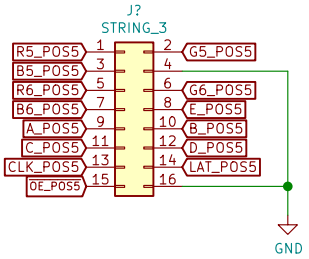
**Title:**

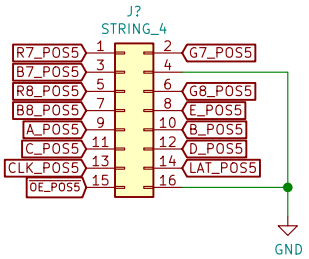
Size: A | Date: | **Rev:**

KiCad E.D.A. kicad (5.0.1)−3 | Id: 7/31



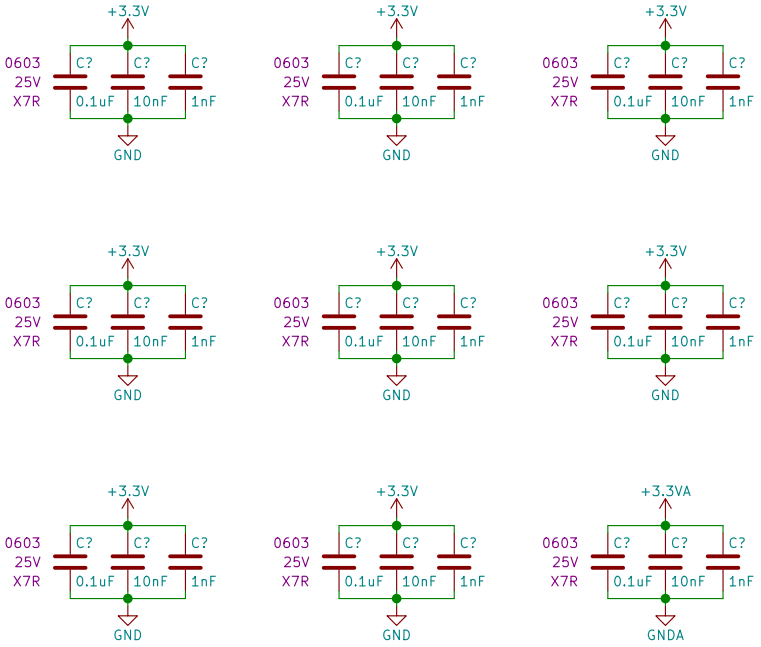



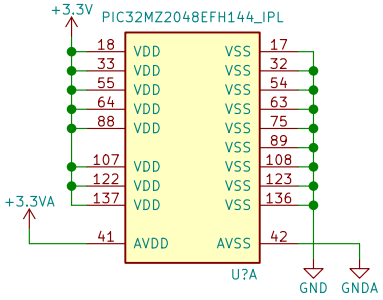



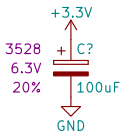

Sheet: /Panel Data Connectors/
File: Panel_Data_Connectors.sch

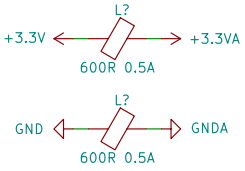
**Title:**

| Size: A | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 8/31 |



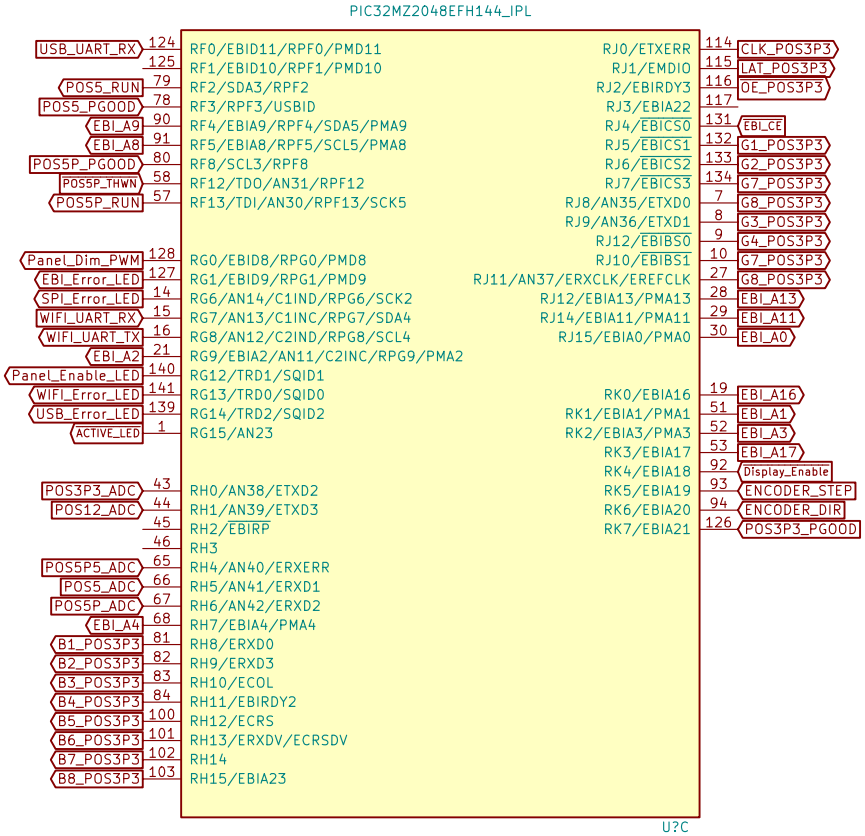




| | | |
|---|---|---|
| Sheet: /Microcontroller Power/<br>File: Microcontroller_Power.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 9/31 |

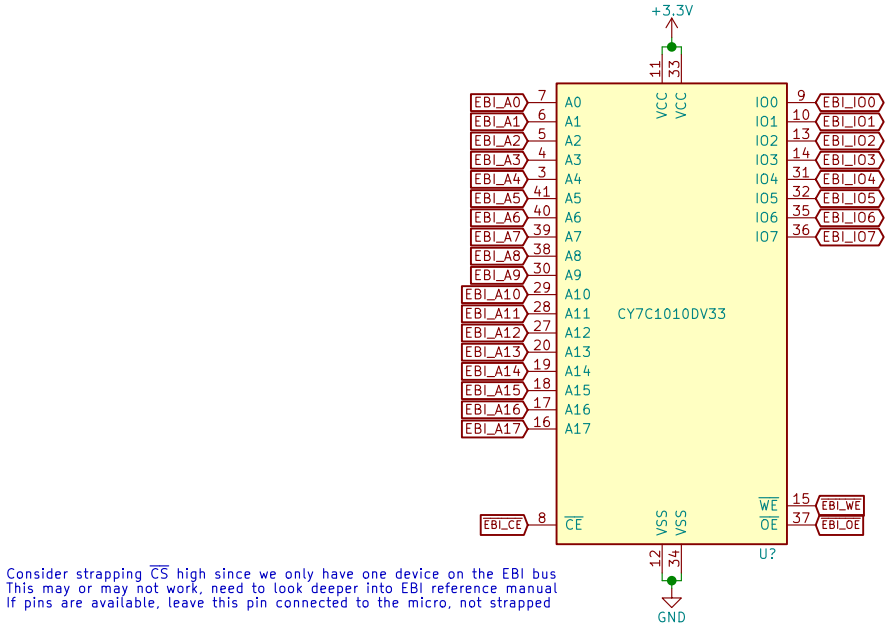
| | | |
|---|---|---|
| Sheet: /Microcontroller A/ | | |
| File: Microcontroller_A.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 10/31 |



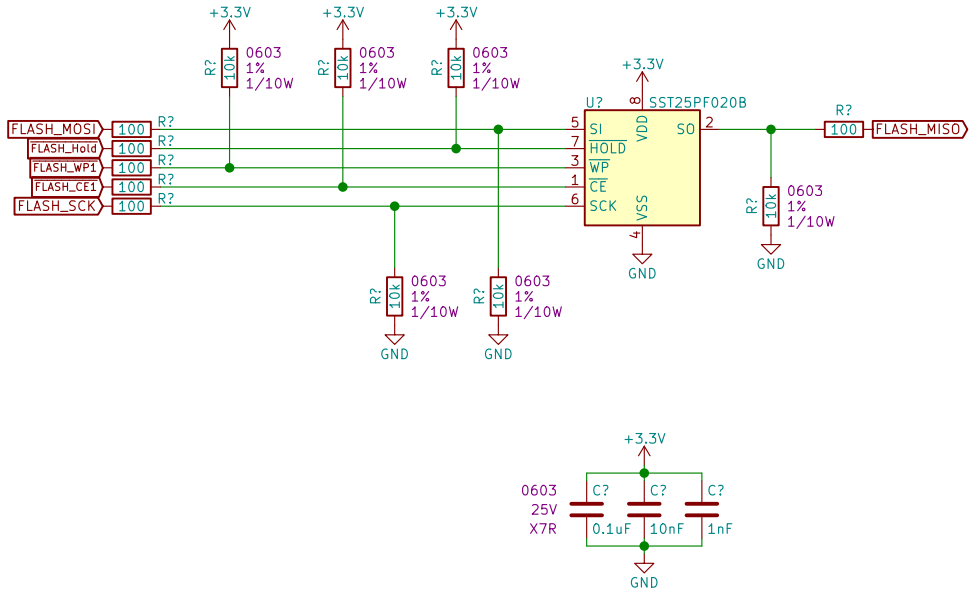

Sheet: /Microcontroller B/
File: Microcontroller_B.sch

**Title:**

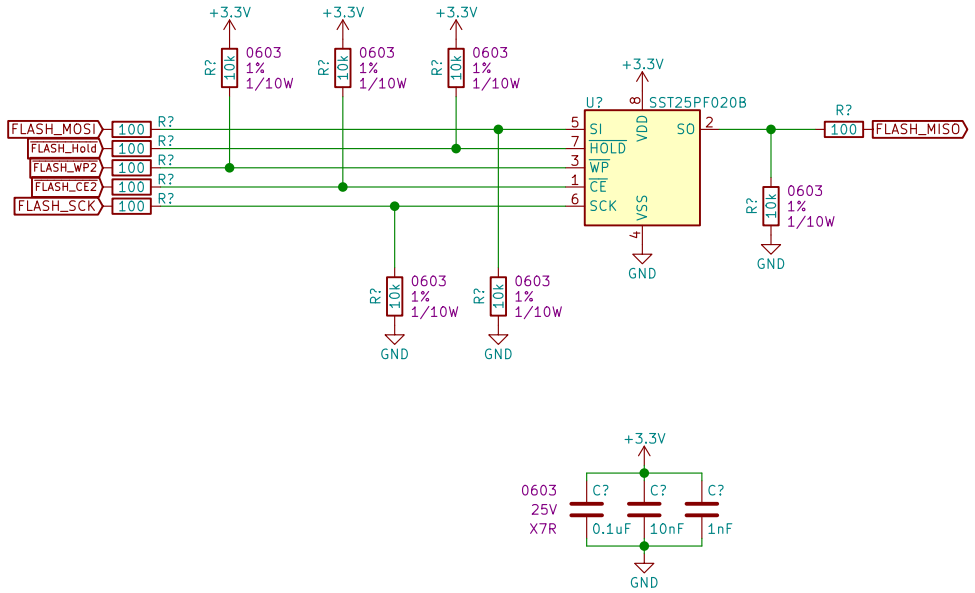
| Size: A | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 11/31 |



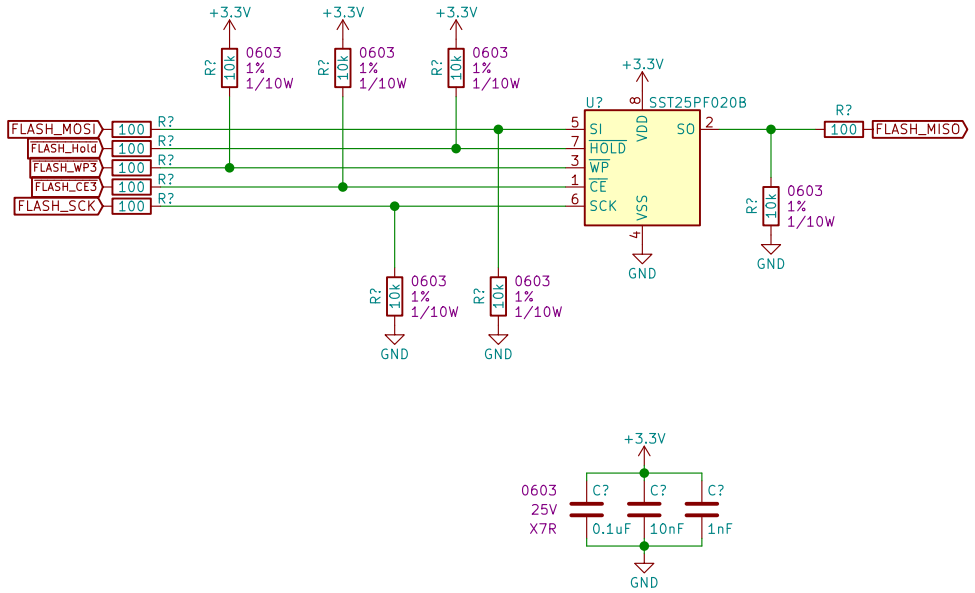

| | | |
|---|---|---|
| Sheet: /External SRAM/ | | |
| File: External_SRAM.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 12/31 |



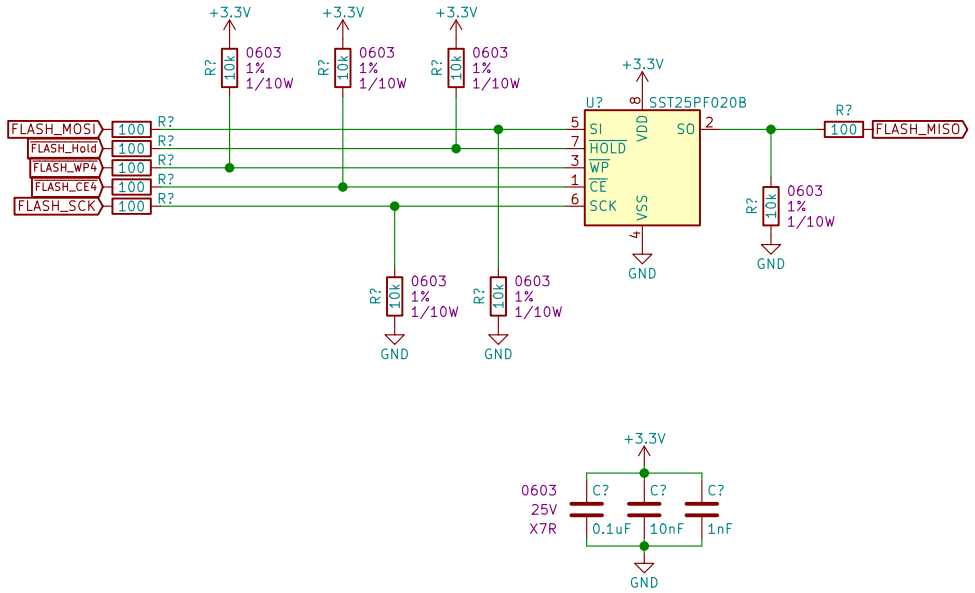

| | | |
|---|---|---|
| Sheet: /External Flash 1/ | | |
| File: External_Flash_1.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 13/31 |



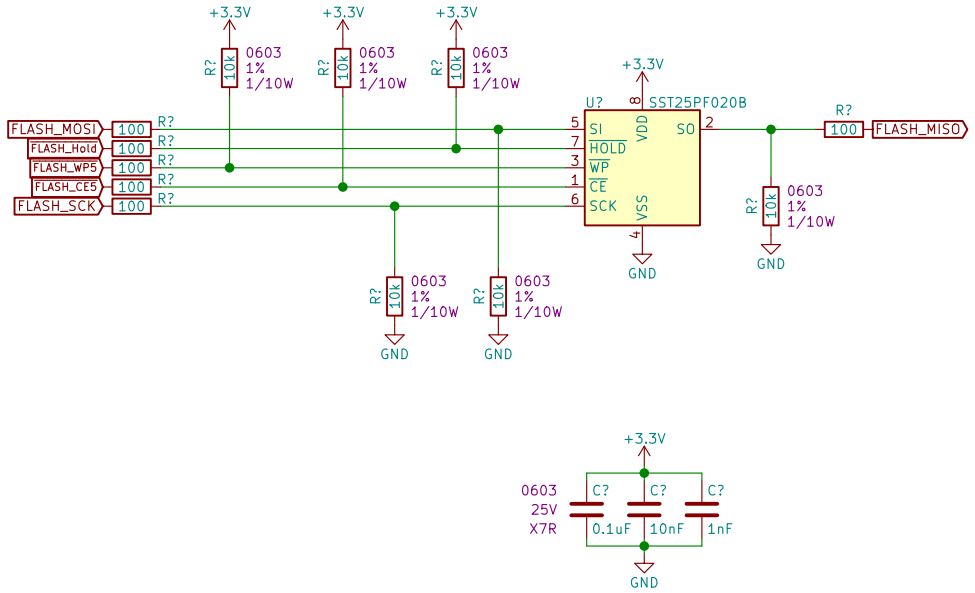

| | | |
|---|---|---|
| Sheet: /External Flash 2/ | | |
| File: External_Flash_2.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 14/31 |



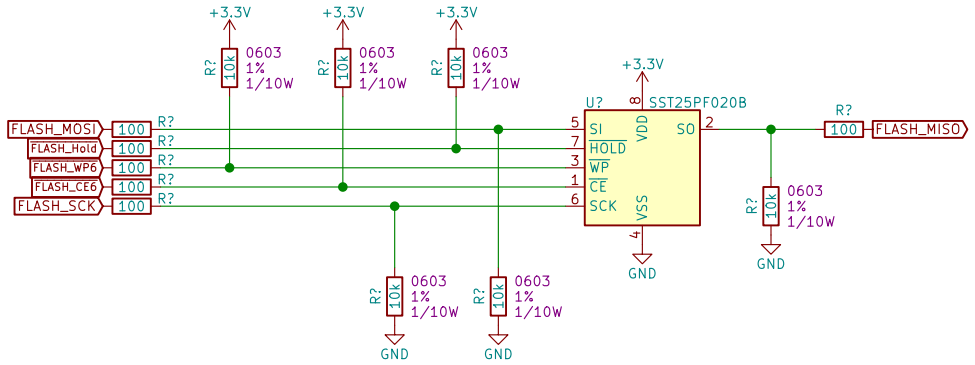

| | | |
|---|---|---|
| Sheet: /External Flash 3/ | | |
| File: External_Flash_3.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 15/31 |

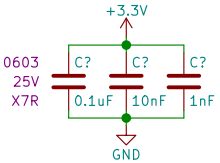



| | | |
|---|---|---|
| Sheet: /External Flash 4/ | | |
| File: External_Flash_4.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 16/31 |




| | | |
|---|---|---|
| Sheet: /External Flash 5/ | | |
| File: External_Flash_5.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 17/31 |

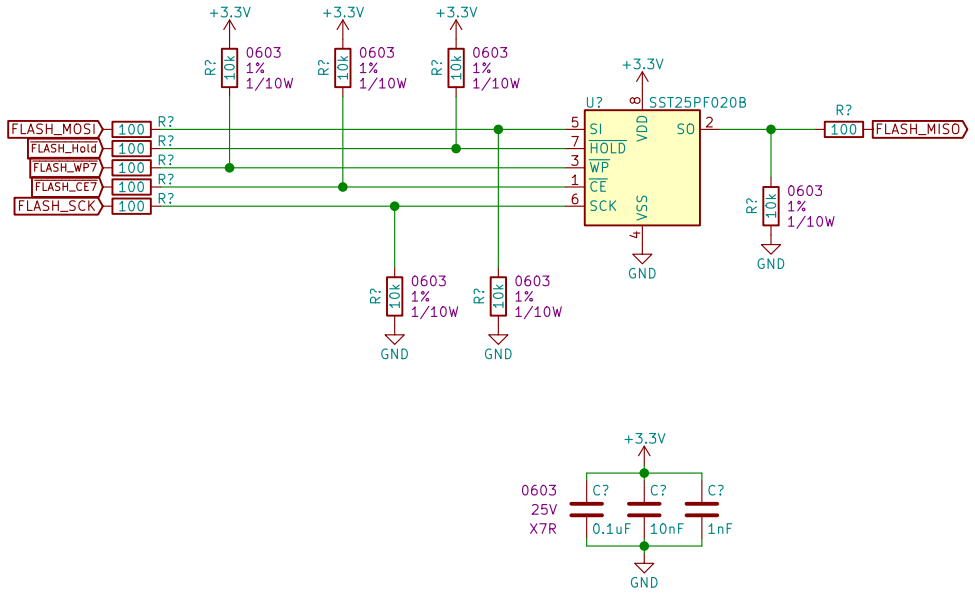



Sheet: /External Flash 6/
File: External_Flash_6.sch

**Title:**

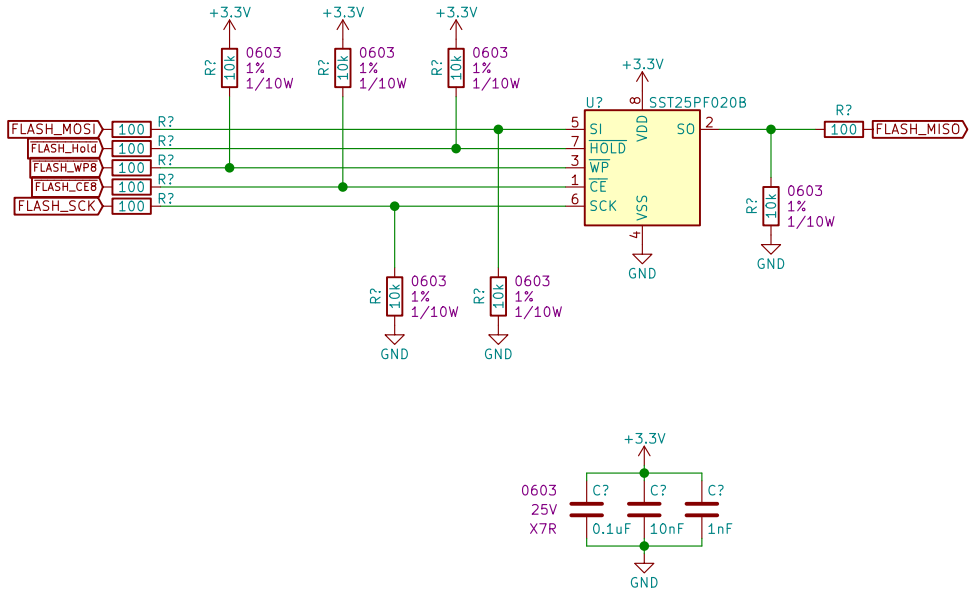
| Size: A | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 18/31 |



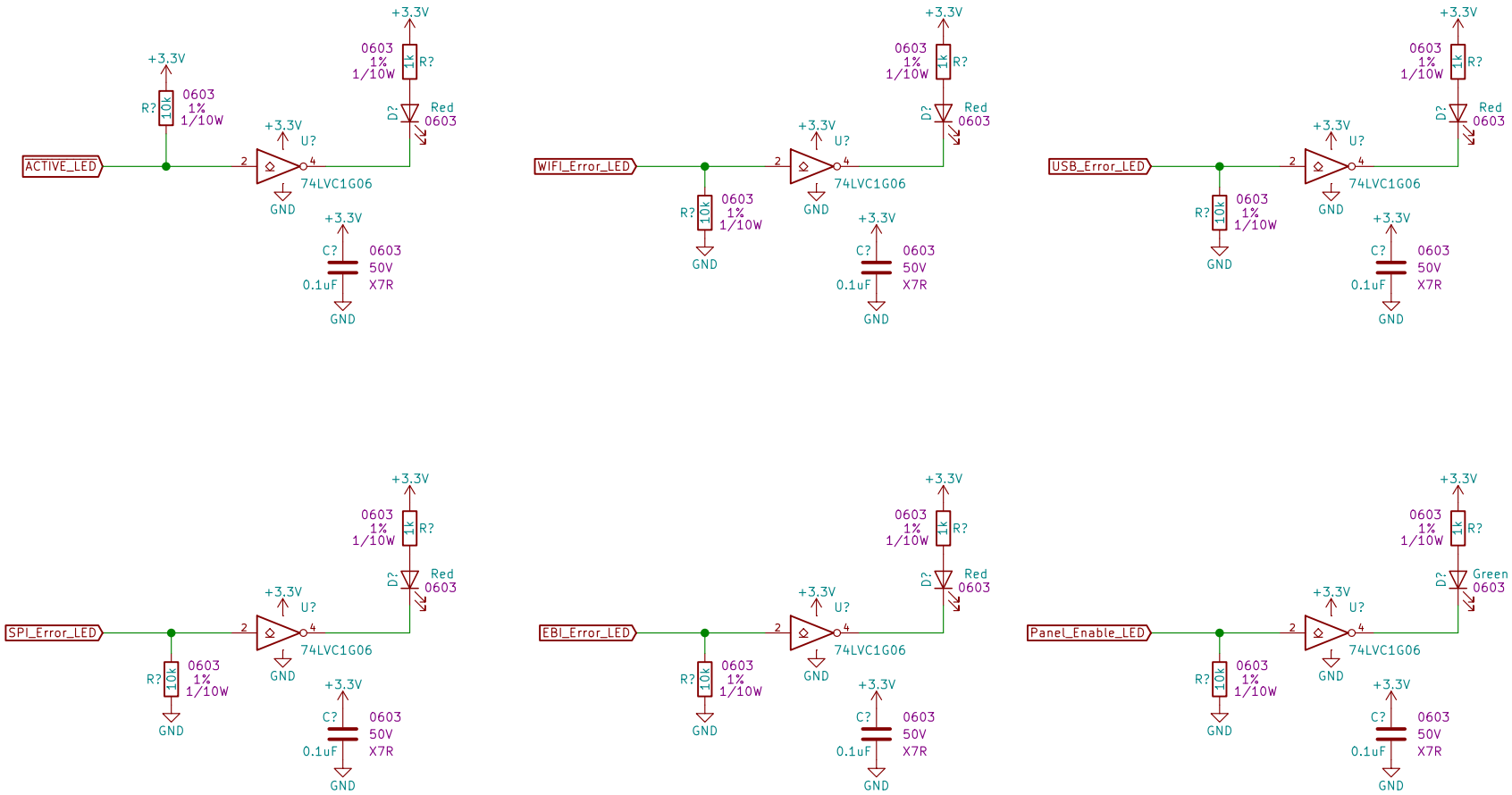




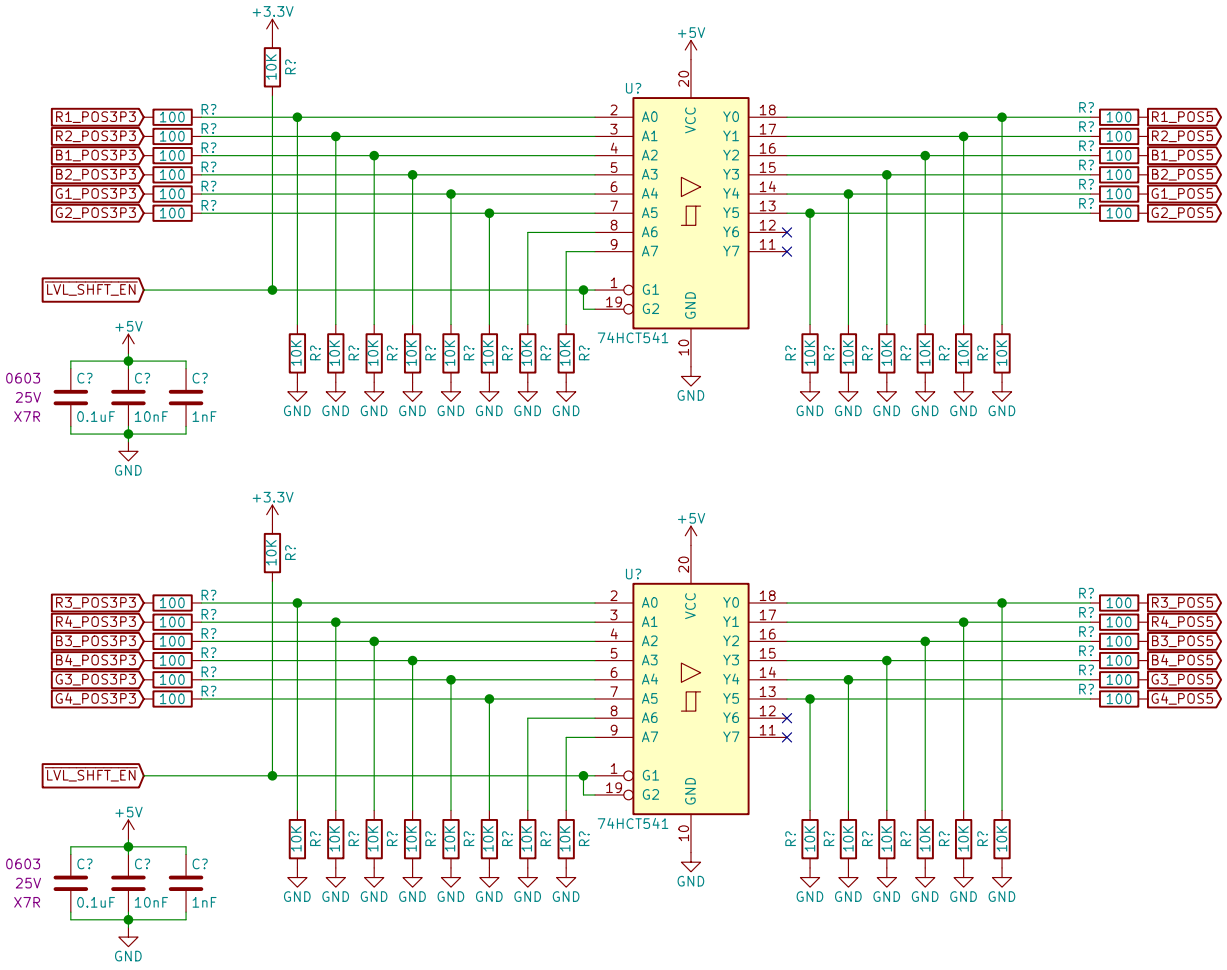
| | | |
|---|---|---|
| Sheet: /External Flash 7/ | | |
| File: External_Flash_7.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 19/31 |




| | | |
|---|---|---|
| Sheet: /External Flash 8/ | | |
| File: External_Flash_8.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 20/31 |




| | | |
|---|---|---|
| Sheet: /Status LEDs 1/ | | |
| File: Status_LEDs_1.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 21/31 |



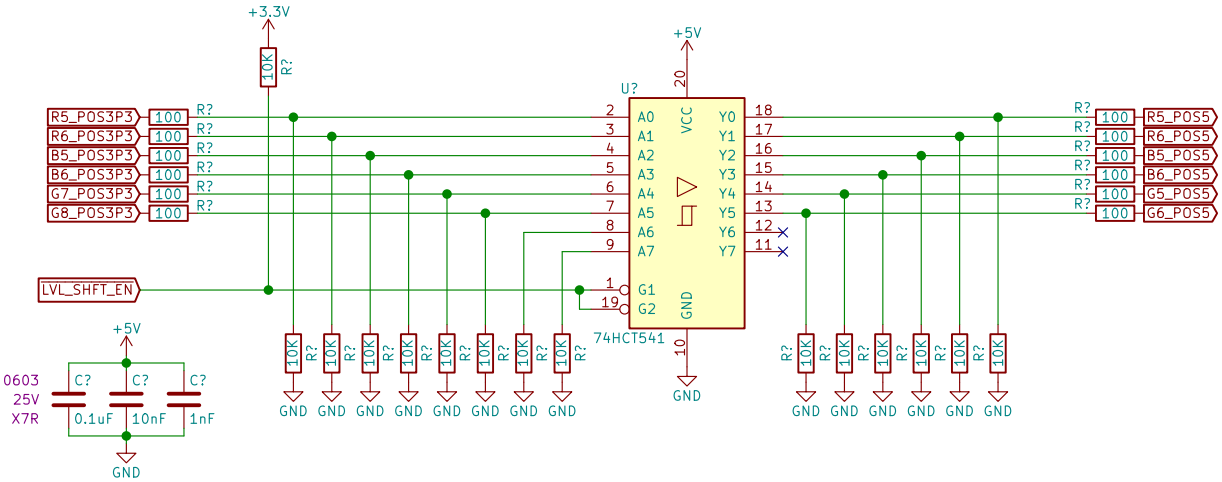


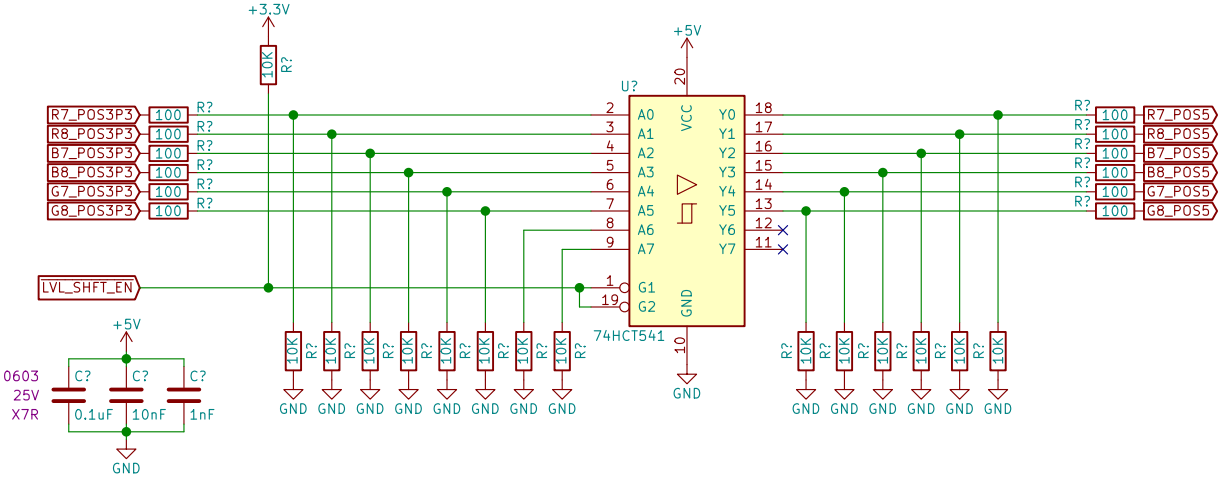


Sheet: /Panel Data Level Shifters 1/
File: Panel_Data_Level_Shifters_1.sch

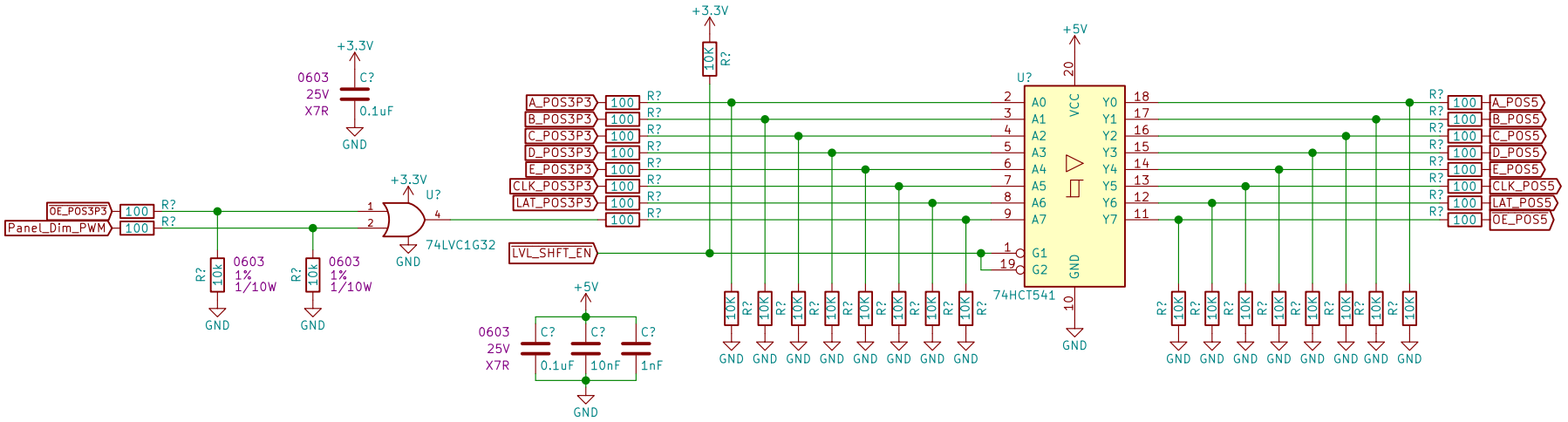
**Title:**

| Size: A | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 22/31 |

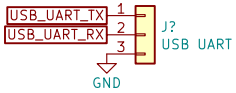


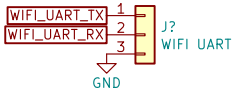



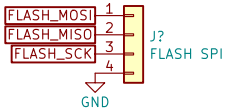

| | | |
|---|---|---|
| Sheet: /Panel Data Level Shifters 2/ | | |
| File: Panel_Data_Level_Shifters_2.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 23/31 |

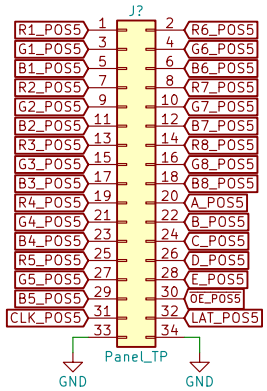


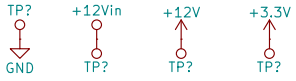

| | | |
|---|---|---|
| Sheet: /Panel Data Level Shifters 3/ | | |
| File: Panel_Data_Level_Shifters_3.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 24/31 |



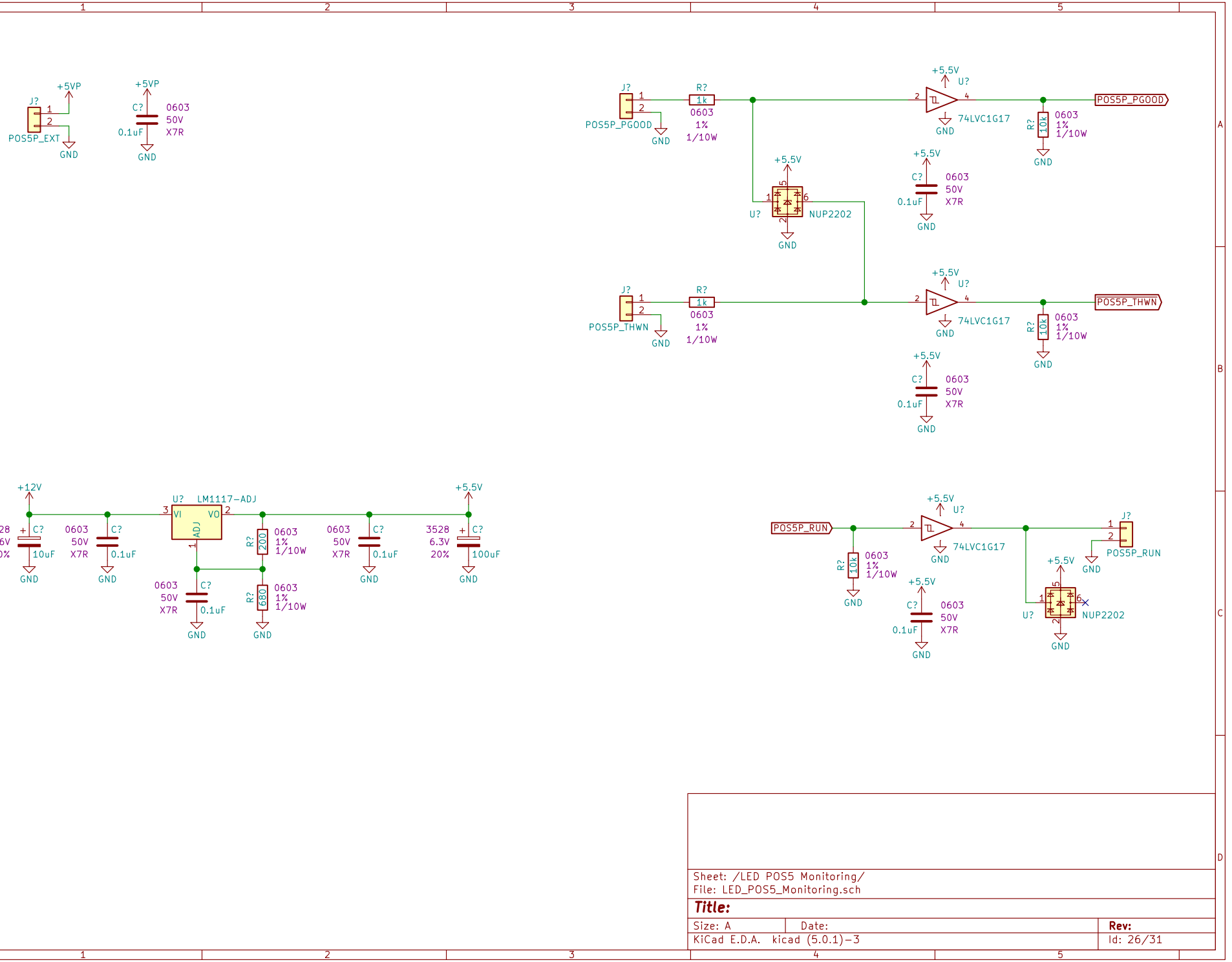



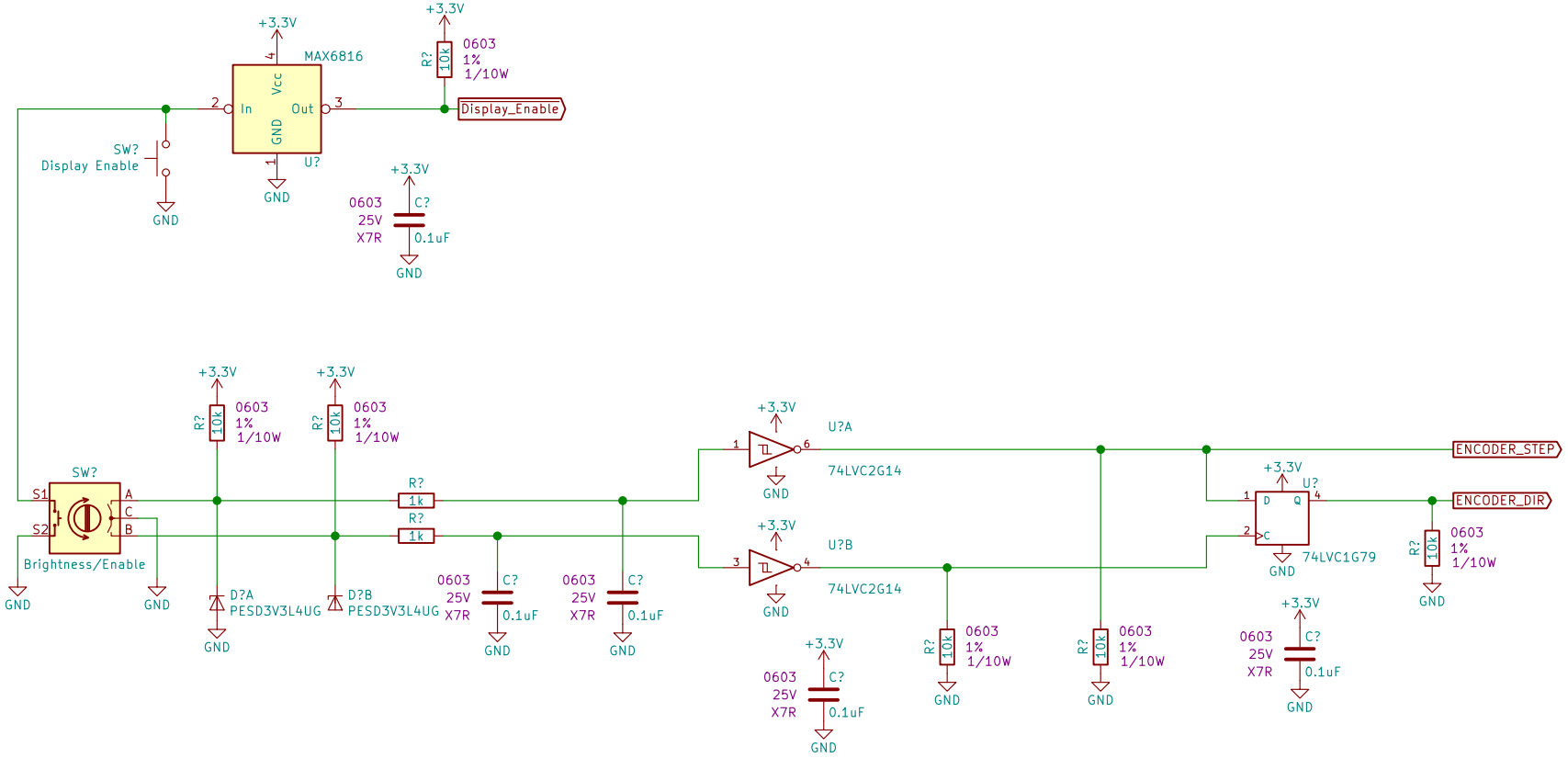



| | | |
|---|---|---|
| Sheet: /Test Points/<br>File: Test_Points.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 25/31 |




| | |
|---|---|
| Sheet: /LED POS5 Monitoring/ | |
| File: LED_POS5_Monitoring.sch | |
| **Title:** | |
| Size: A | Date: |
| KiCad E.D.A. kicad (5.0.1)-3 | Id: 26/31 |

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| Sheet: /Pushbuttons/ | | |
| File: Pushbuttons.sch | | |
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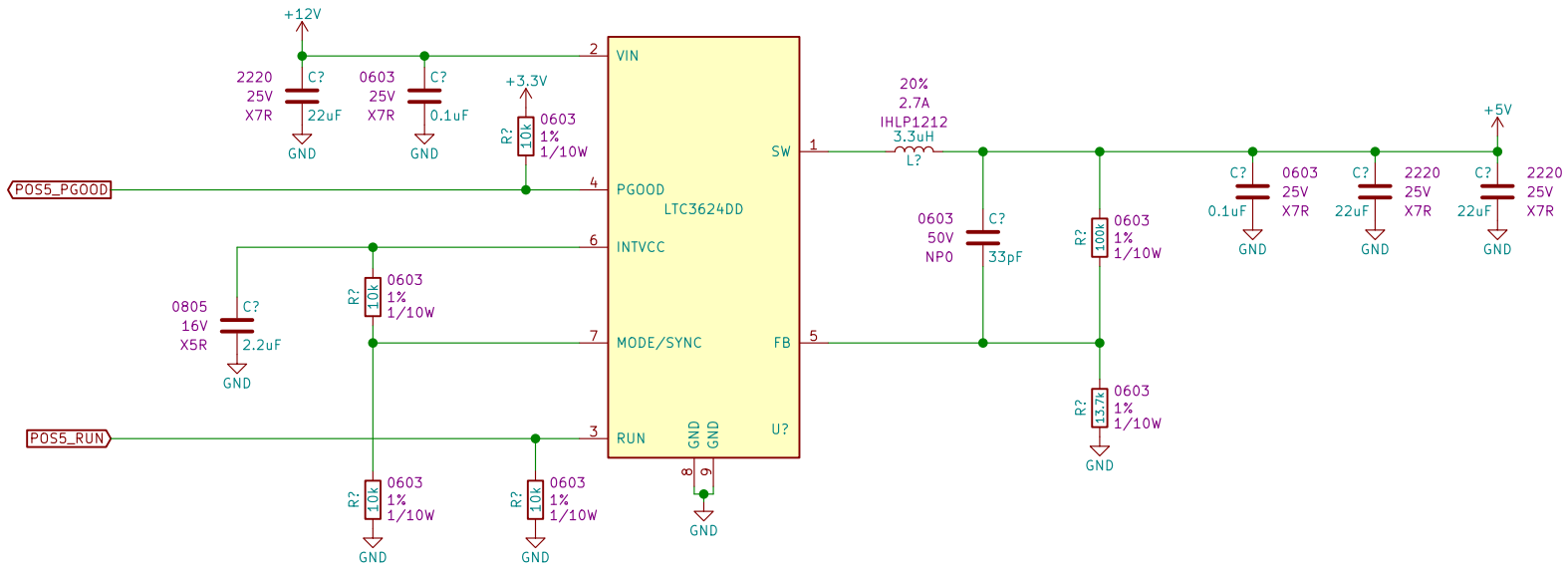
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 27/31 |

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| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 28/31 |

4-40 Standoff
MK?

4-40 Standoff
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Screw
MK?

H?
3mm Mounting Hole

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3mm Mounting Hole

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3mm Mounting Hole

Sheet: /Mechanical/
File: Mechanical.sch

**Title:**

| Size: A | Date: | **Rev:** |
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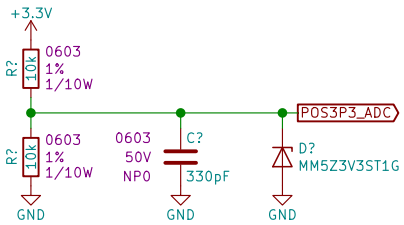
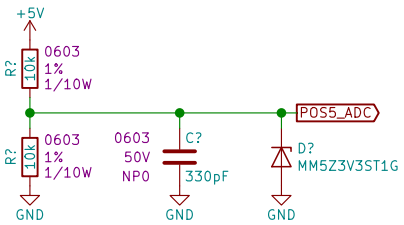
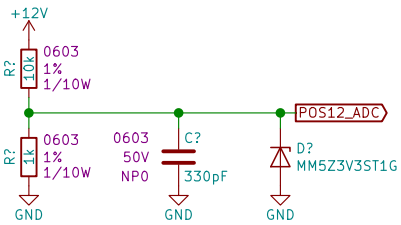
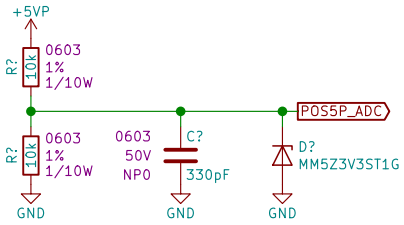
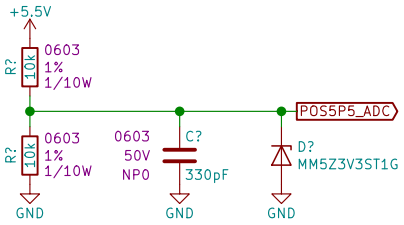
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 29/31 |




Sheet: /Internal Rail Monitoring/
File: Internal_Rail_Monitoring.sch

**Title:**

| Size: A | Date: | **Rev:** |
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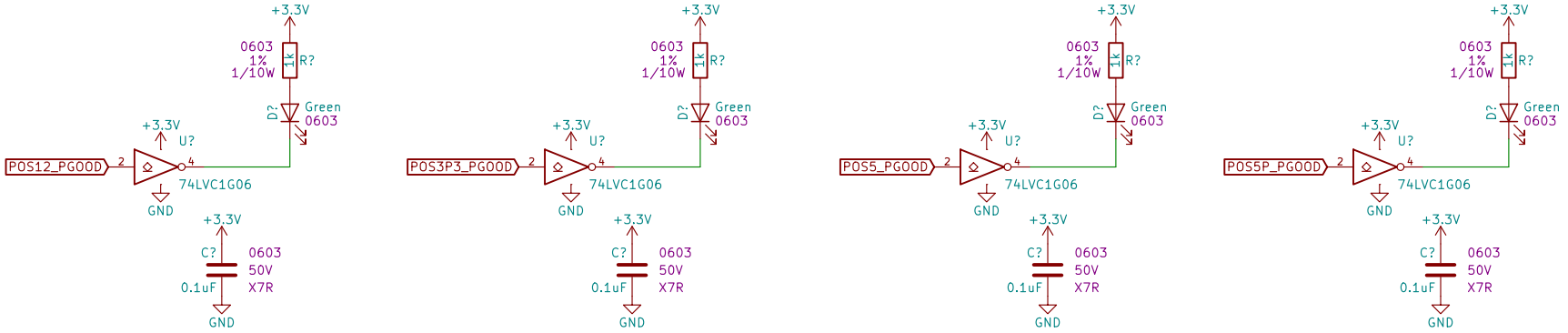


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| Sheet: /Status LEDs 2/ | | |
| File: Status_LEDs_2.sch | | |
| **Title:** | | |
| Size: A | Date: | **Rev:** |
| KiCad E.D.A. kicad (5.0.1)-3 | | Id: 31/31 |