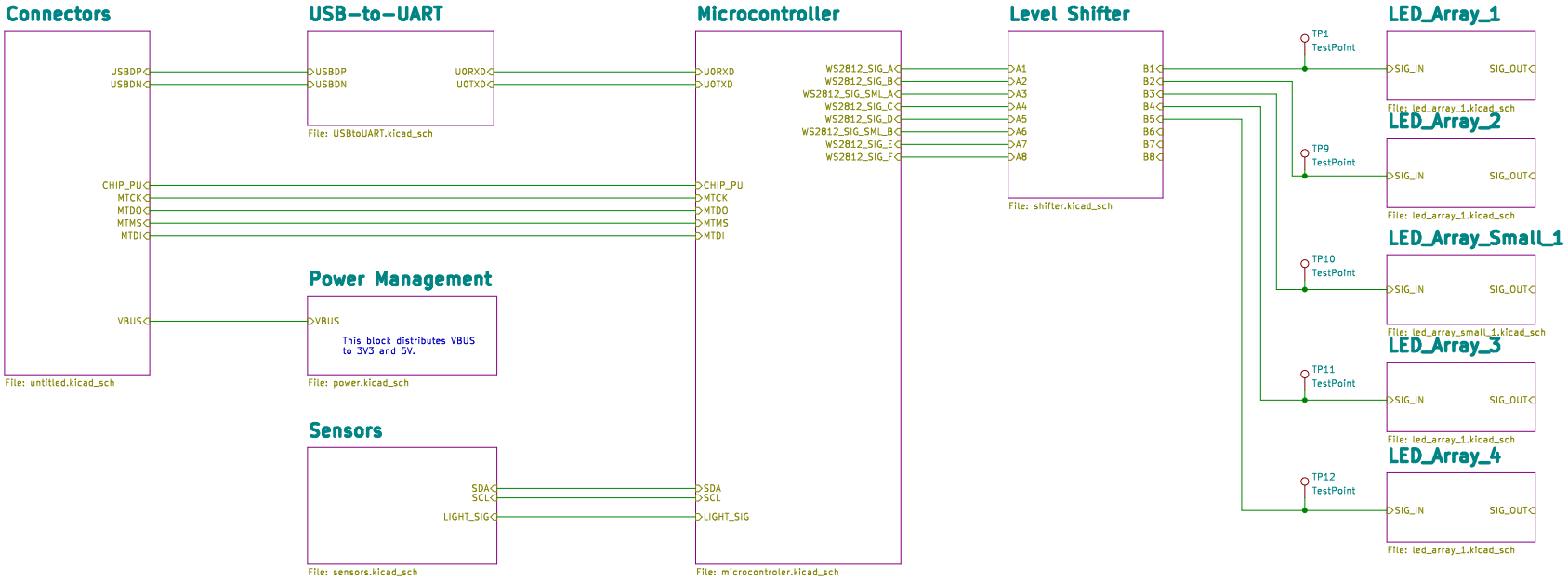

H21 MountingHole
H22 MountingHole
H23 MountingHole
H24 MountingHole

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Sheet: /
File: masa.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 1/12

H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole

Varying pitch in x and y for initial test prototype.

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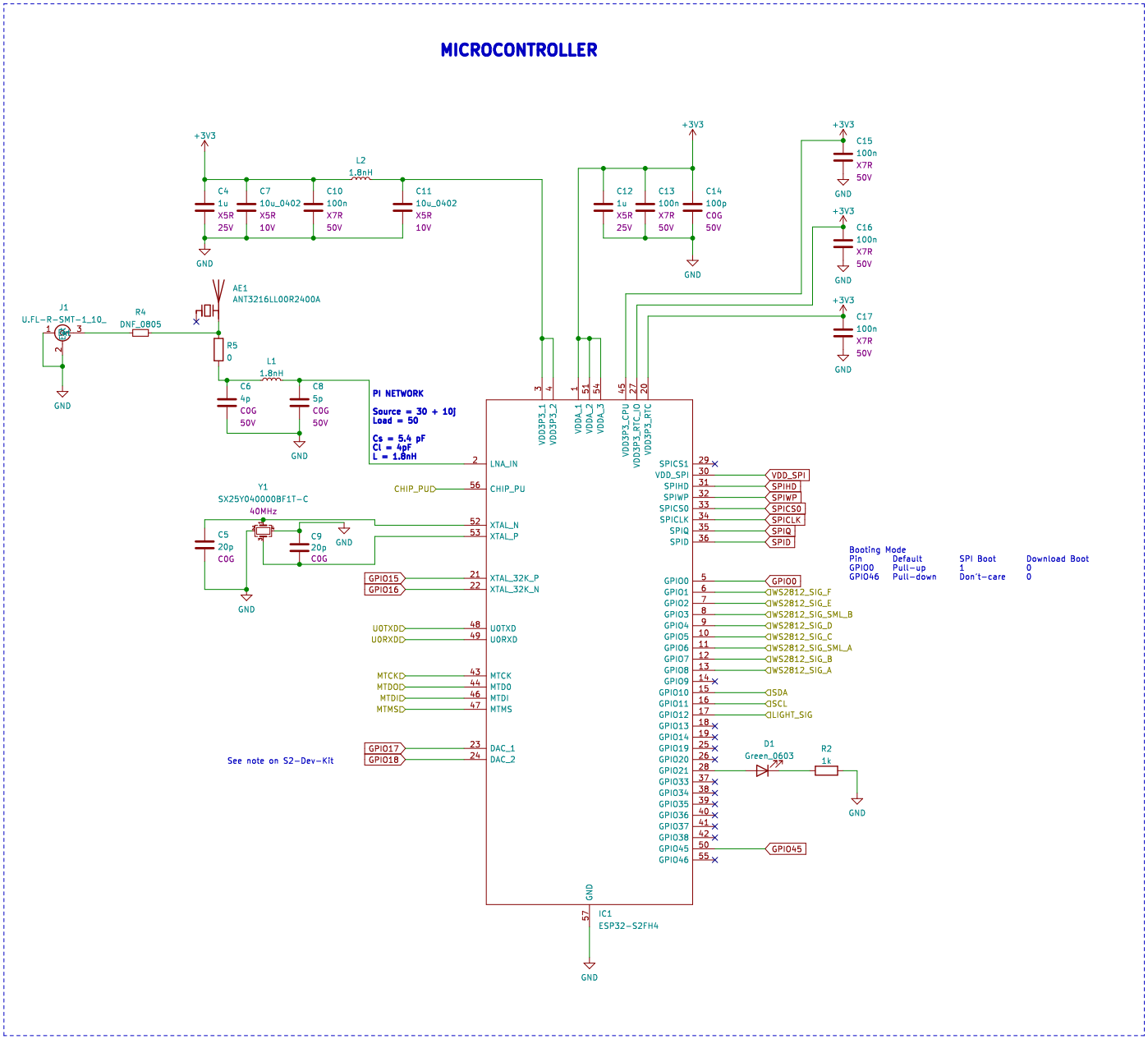
Sheet: /LED_Array_1/
File: led_array_1.kicad_sch

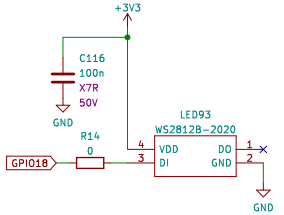
Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 2/12

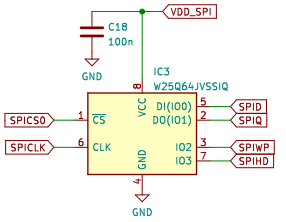
MICROCONTROLLER



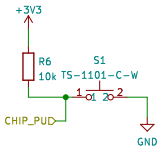
LED



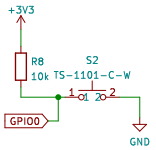
FLASH



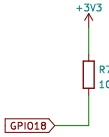
RESET



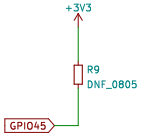
STRAPPING PIN



BOOT STABILITY



PRINT LOG

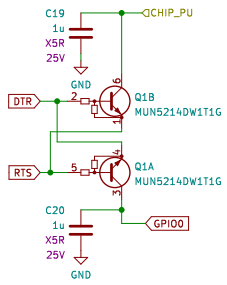


R25 is mounted when U4 PN is ESP32-S2-SOLO or ESP32-S2-SOLO-U;

R25 is NC when U4 PN is ESP32-S2-SOLO-2 or ESP32-S2-SOLO-2U.

Enabling/Disabling ROM Messages Print During Booting

AUTO PROGRAM



Reference:
https://www.espressif.com/sites/default/files/documentation/esp32-s2_hardware_design_guidelines_en.pdf
https://www.espressif.com/sites/default/files/documentation/esp32-s2_datasheet_en.pdf
https://www.espressif.com/sites/default/files/documentation/esp32-s2-wroom_esp32-s2-wroom-i_datasheet_en.pdf

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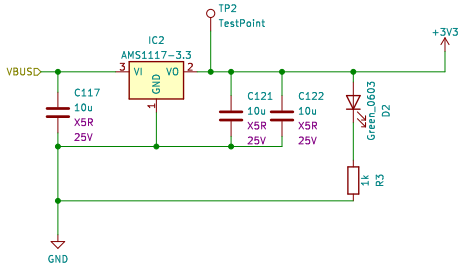
Sheet: /Microcontroller/
File: microcontroler.kicad_sch

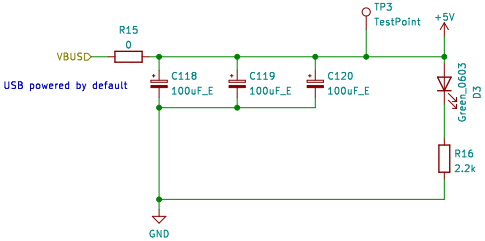
Title: Masa

Size: A3	Date: 2022-12-23	Rev: A
KiCad E.D.A. kicad (6.0.0)		Id: 3/12

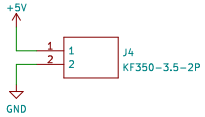
3V3 LDO



5V LED Bulk Capacitance



External 5V



Remove 0 ohm link for USB power
if using external PSU to power LEDs

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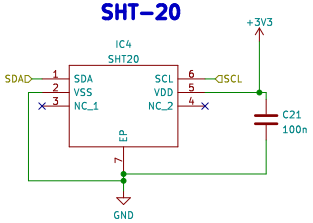
Sheet: /Power Management/
File: power.kicad_sch

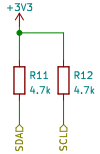
Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 4/12

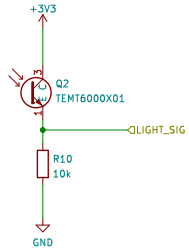
SHT-20



PULL UP RESISTORS



LIGHT SENSOR



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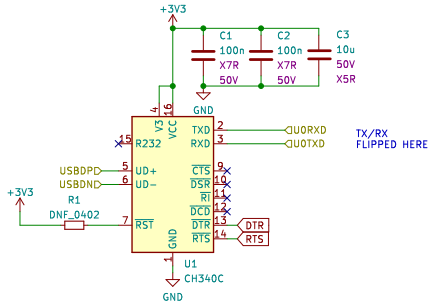
Sheet: /Sensors/
File: sensors.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 5/12

USB-TO-UART



https://pcbartists.com/design/embedded/esp32-ch340-programmer-schematic/

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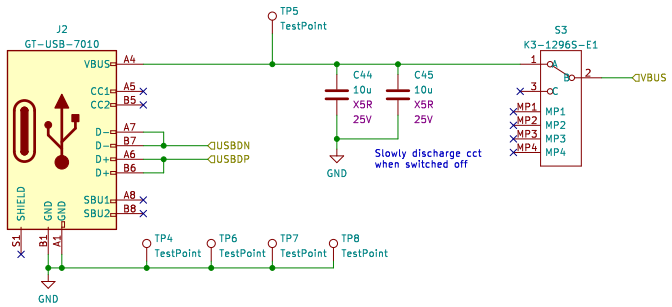
Sheet: /USB-to-UART/
File: USBtoUART.kicad_sch

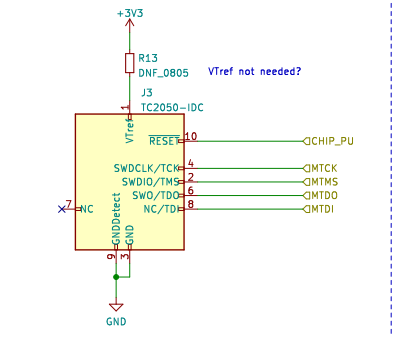
Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 6/12

USB



JTAG



eT

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Sheet: /Connectors/
File: untitled.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 7/12

H9 MountingHole
H10 MountingHole
H11 MountingHole
H12 MountingHole

Varying pitch in x and y for initial test prototype.

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Sheet: /LED_Array_2/
File: led_array_1.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 8/12

Varying pitch in x and y for initial test prototype.

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Sheet: /LED_Array_3/
File: led_array_1.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 9/12

H17 MountingHole
H18 MountingHole
H19 MountingHole
H20 MountingHole

Varying pitch in x and y for initial test prototype.

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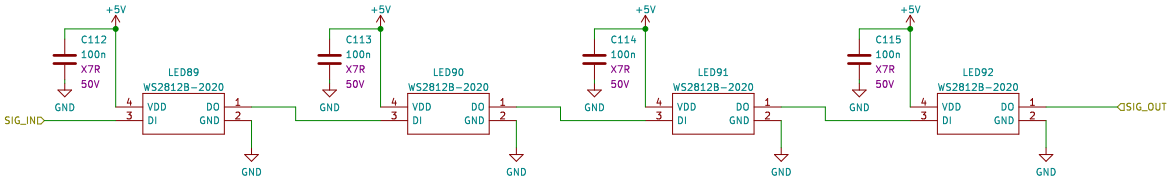
Sheet: /LED_Array_4/
File: led_array_1.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 10/12



H5
MountingHole
H6
MountingHole
H7
MountingHole
H8
MountingHole

Varying pitch in x and y for initial test prototype.

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Sheet: /LED_Array_Small_1/
File: led_array_small_1.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
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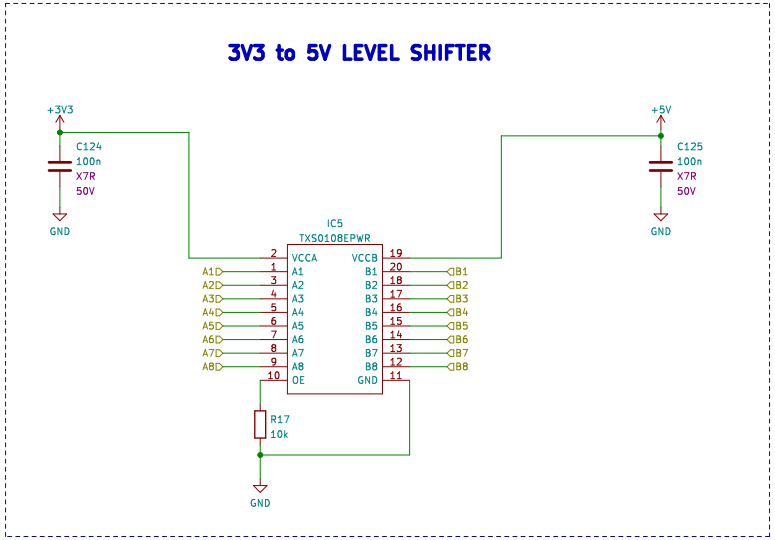

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Sheet: /Level Shifter/
File: shifter.kicad_sch

Title: Masa

Size: A3	Date: 2022-12-23	**Rev: A**
KiCad E.D.A. kicad (6.0.0)		Id: 12/12