# Linux based scout UAV
# Linuxベースのスカウト UAV

Sheetname: osd32mp1-1-power

File: osd32mp1-1-power.kicad_sch

Sheetname: osd32mp1-2

File: osd32mp1-2.kicad_sch

Sheetname: osd32mp1-3

File: osd32mp1-3.kicad_sch

Sheetname: battery-power

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Sheetname: power-section-1

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storage

File: storage.kicad_sch

long-range-radio-1

File: long-range-radio-1.kicad_sch

quectel-m65-1

File: quectel-m65-1.kicad_sch

GNSS

File: gnss.kicad_sch

sensors-1

File: sensors-1.kicad_sch

Sheet: /

File: linux-based-scout-uav.kicad_sch

**Title:**

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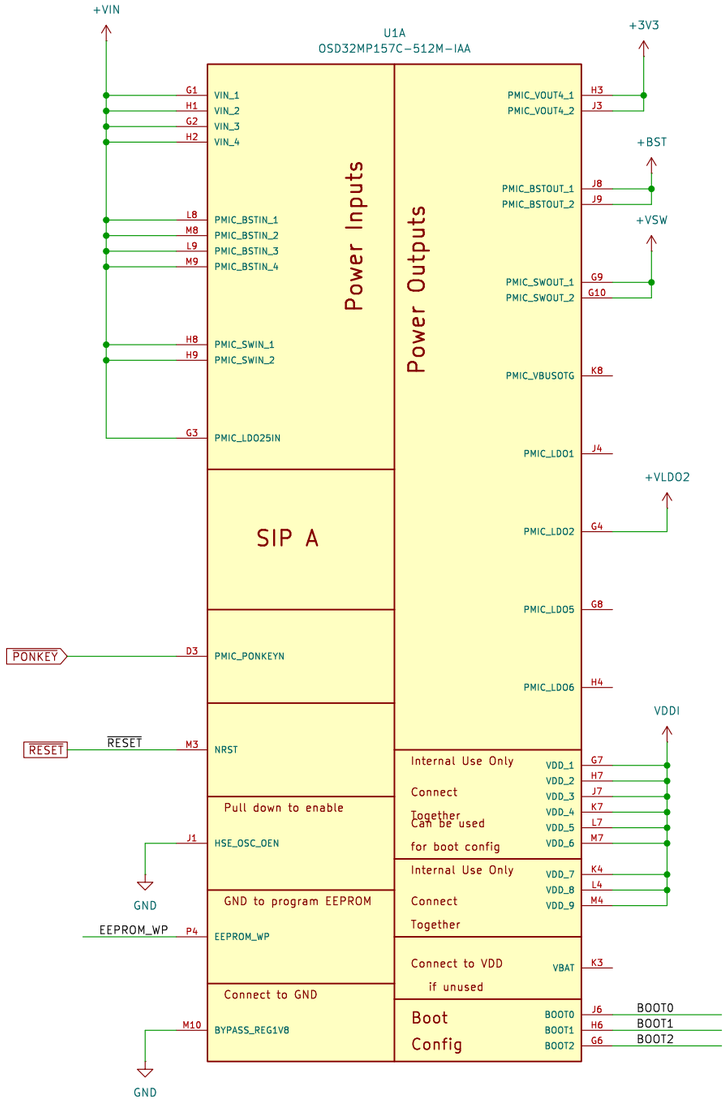
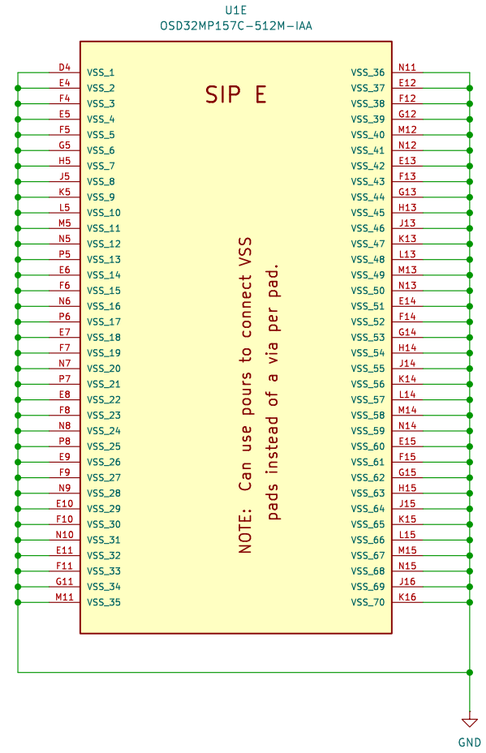
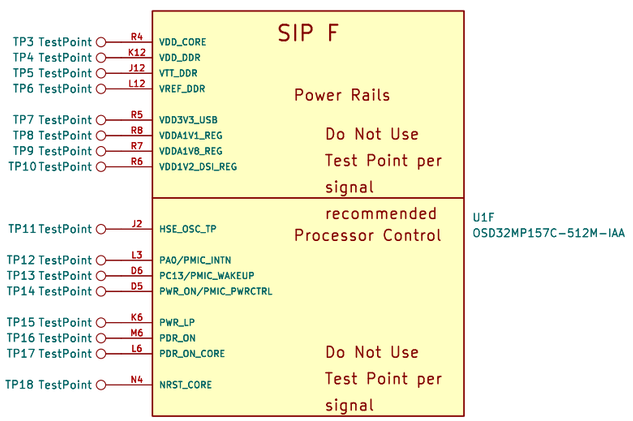
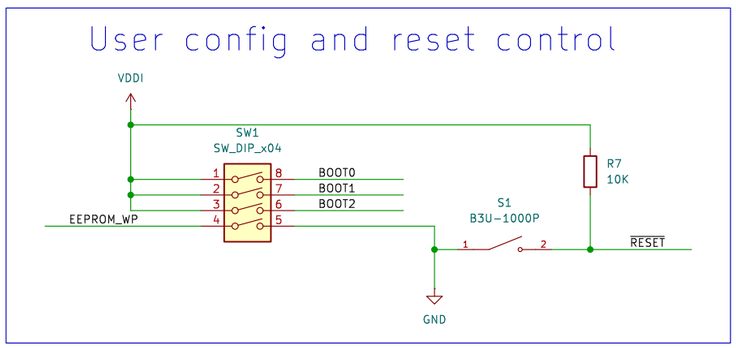
|---|---|---|
| Size: A3 | Date: | **Rev:** |
| KiCad E.D.A. 8.0.6 | | Id: 1/11 |

# OSD32MP1 power

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| File: osd32mp1-1-power.kicad_sch | | |
| **Title:** | | |
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# OSD32MP1

U1C
OSD32MP157C-512M-IAA

SIP D

DSI
P17 DSI_D0P
P18 DSI_D0N
N17 DSI_D1P
N18 DSI_D1N
N16 DSI_CKP
P16 DSI_CKN

Analog Power
M1 VDDA
M2 VREF+
K2 VREF-
K1 VSSA

R8
Jumper
R9
Jumper
TP1
TestPoint
TP2
TestPoint

Analog
L1 ANA0
L2 ANA1

USB
K9 OTG_VBUS
K18 USB_DM1
K17 USB_DP1
J17 USB_DM2
J18 USB_DP2
USB_DM1
USB_DP1
USB_DM2
USB_DP2

JTAG
R14 JTMS-SWDIO
R15 JTCK-SWCLK
R13 JTDI
R12 JTDO-TRACESWO
R11 NJTRST
SWDIO/TMS
SWCLK/TCK
TDI
SWO/TDO
TRST

U1B
OSD32MP157C-512M-IAA

SIP B

C16 PA1
A15 PA2
A5 PA3
B16 PA4
A16 PA5
B17 PA6
A12 PA7
MMC2_D4 T17 PA8
MMC2_D5 U12 PA9
L16 PA10
L17 PA11
L18 PA12
A3 PA13
B3 PA14
T15 PA15

A11 PB0
B11 PB1
M18 PB2
MMC2_D2 V14 PB3
MMC2_D3 U14 PB4
C17 PB5
H18 PB6
I2C1_SCL V12 PB7
I2C1_SDA T13 PB8
U13 PB9
A13 PB10
A9 PB11
B14 PB12
A14 PB13
MMC2_D0 T14 PB14
MMC2_D1 V13 PB15

A17 PC0
B15 PC1
C7 PC2
B6 PC3
B12 PC4
C12 PC5
R18 PC6
R16 PC7
MMC2_D7
T16 PC8 SDMMC1_D0
U16 PC9 SDMMC1_D1
V16 PC10 SDMMC1_D2
U17 PC11 SDMMC1_D3
V17 PC12 SDMMC1_CMD

N2 PC14-OSC32_IN
N1 PC15-OSC32_OUT

Y1
ABS05-32.768KHZ-7-T
1
2
C2
12pF
C1
12pF
GND

V11 PD0
U11 PD1
U18 PD2 SDMMC1_CMD
T11 PD3
V10 PD4
U10 PD5
T10 PD6
U9 PD7
B2 PD8
B1 PD9
V6 PD10
E18 PD11
F16 PD12
F17 PD13
C3 PD14
A2 PD15

## JTAG

+3V3
J3
TC2050-IDC-NL
SWDIO/TMS
SWCLK/TCK
RESET
TRST
TDI
SWO/TDO
RESET
GND

## MMC2_D[0..7] Bus

MMC2_D[0..7]
MMC2_D0
MMC2_D1
MMC2_D2
MMC2_D3
MMC2_D4
MMC2_D5
MMC2_D6
MMC2_D7

## Do not connect

SIP G
All pins reserved
for future use
Do Not Connect

D7 RSVD_1
D8 RSVD_2
D9 RSVD_3
P9 RSVD_4
R9 RSVD_5
D10 RSVD_6
P10 RSVD_7
R10 RSVD_8
H12 RSVD_9
M16 RSVD_10

U1G
OSD32MP157C-512M-IAA

Sheet: /osd32mp1-2/
File: osd32mp1-2.kicad_sch
**Title:**
Size: A3 | Date: | **Rev:**
KiCad E.D.A. 8.0.6 | Id: 3/11

# OSD32MP1

U1D
OSD32MP157C-512M-IAA

SIP C

| | | | |
|---|---|---|---|
| U7 | PE0 | PH2 | B13 |
| T7 | PE1 | PH3 | C13 |
| A6 | PE2 | PH4 | U6 |
| T12 | PE3 | PH5 | T6 |
| R17 | PE4 | PH6 | B5 |
| MMC2_D6 — V15 | PE5 | PH7 | C5 |
| T9 | PE6 | PH8 | T4 |
| D17 | PE7 | PH9 | V3 |
| D18 | PE8 | PH10 | U3 |
| E16 | PE9 | PH11 | V2 |
| E17 | PE10 | PH12 | U2 |
| V5 | PE11 | PH13 | U1 |
| U5 | PE12 | PH14 | T1 |
| T5 | PE13 | PH15 | T2 |
| V4 | PE14 | | |
| U4 | PE15 | | |
| U8 | PF0 | PI0 | T3 |
| V8 | PF1 | PI1 | R1 |
| T18 | PF2 | PI2 | R2 |
| C6 | PF3 | PI3 | R3 |
| V7 | PF4 | PI4 | P1 |
| T8 | PF5 | PI5 | P2 |
| F18 | PF6 | PI6 | P3 |
| G16 | PF7 | PI7 | N3 |
| G17 | PF8 | PI8 | C1 |
| G18 | PF9 | PI9 | C2 |
| H16 | PF10 | PI10 | B4 |
| B18 | PF11 | PI11 | C4 |
| C11 | PF12 | | |
| A10 | PF13 | | |
| B10 | PF14 | | |
| C10 | PF15 | | |
| C8 | PG0 | PZ0 | F1 |
| B8 | PG1 | PZ1 | F2 |
| A8 | PG2 | PZ2 | F3 |
| C9 | PG3 | PZ3 | E1 |
| B9 | PG4 | PZ4/PMIC_SCL | E2 |
| C15 | PG5 | PZ5/PMIC_SDA | E3 |
| U15 | PG6 | PZ6 | D1 |
| H17 | PG7 | PZ7 | D2 |
| D16 | PG8 | | |
| M17 | PG9 | | |
| C18 | PG10 | | |
| C14 | PG11 | | |
| A4 | PG12 | | |
| B7 | PG13 | | |
| A7 | PG14 | | |
| V9 | PG15 | | |

MMC2_D[0..7] Bus

MMC2_D[0..7] — MMC2_D0, MMC2_D1, MMC2_D2, MMC2_D3, MMC2_D4, MMC2_D5, MMC2_D6, MMC2_D7

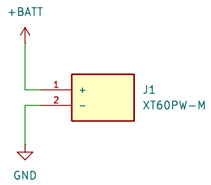
Sheet: /osd32mp1-3/
File: osd32mp1-3.kicad_sch

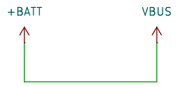
**Title:**

Size: A3 | Date: | **Rev:**
KiCad E.D.A. 8.0.6 | Id: 4/11

# Battery Power
# バッテリー電源

2S–6S LiPo battery

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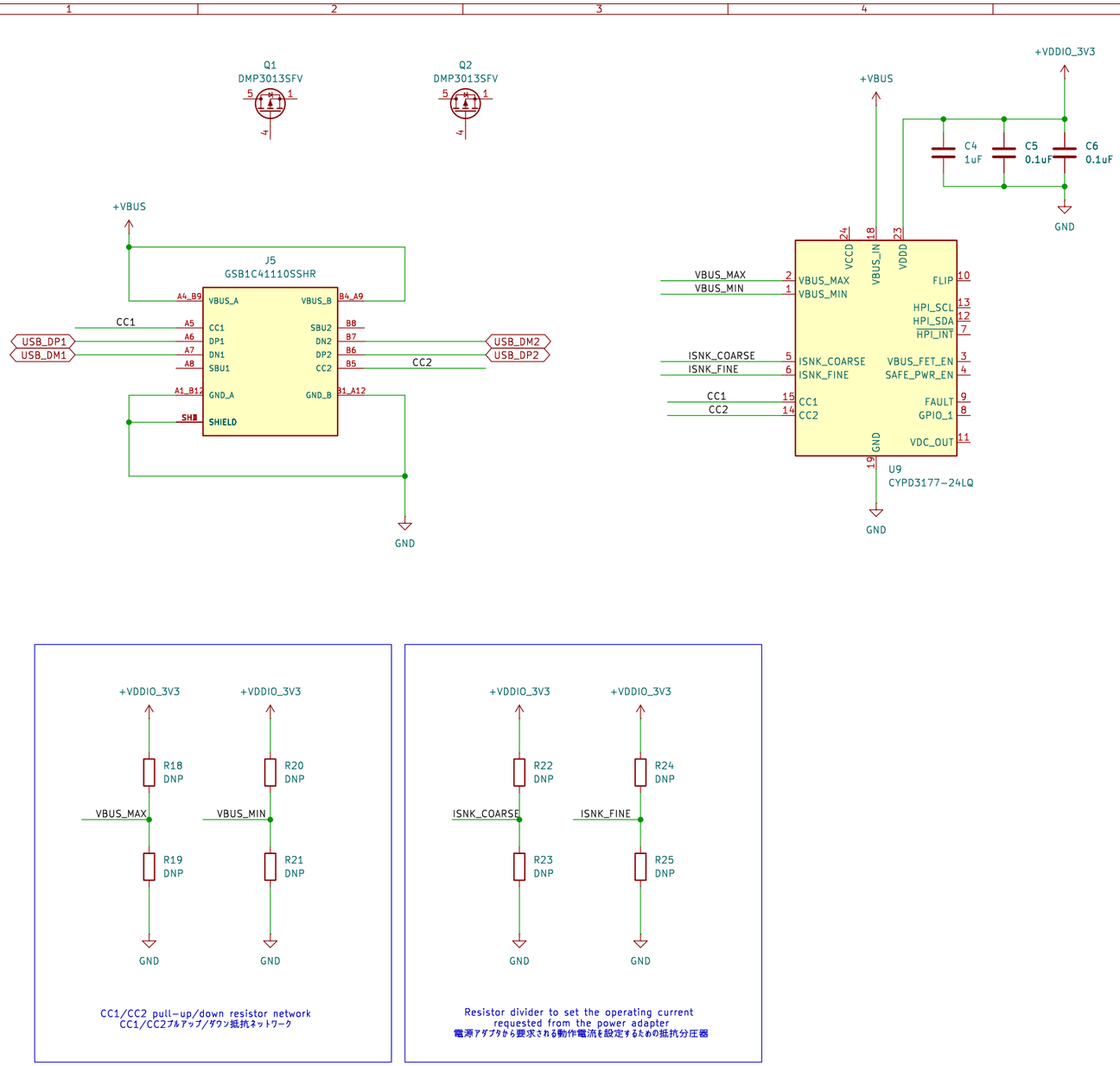
**Title:**

| Size: A3 | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. 8.0.6 | | Id: 5/11 |

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|---|---|---|
| Sheet: /power-section-1/ | | |
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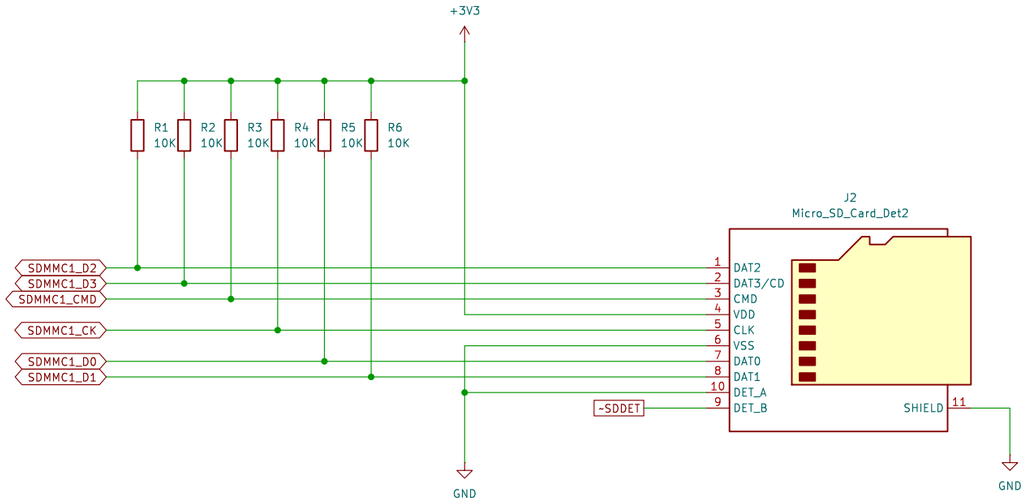
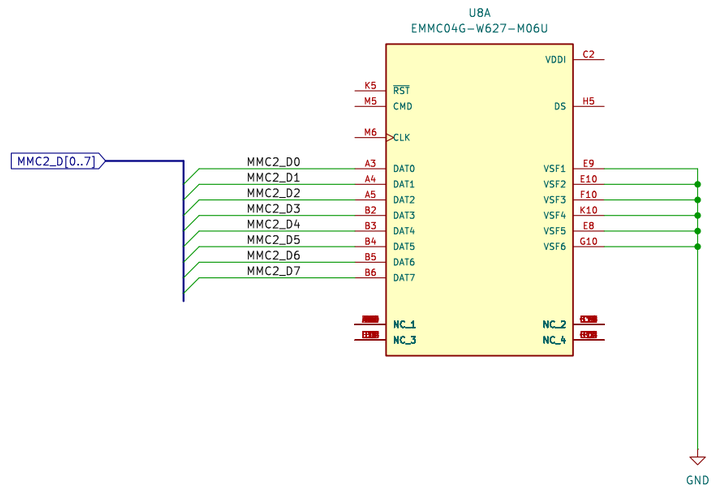
| **Title:** | | |
| Size: A3 | Date: | **Rev:** |
| KiCad E.D.A. 8.0.6 | | Id: 6/11 |

# Storage
# 貯蔵

## SD card

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|---|---|---|
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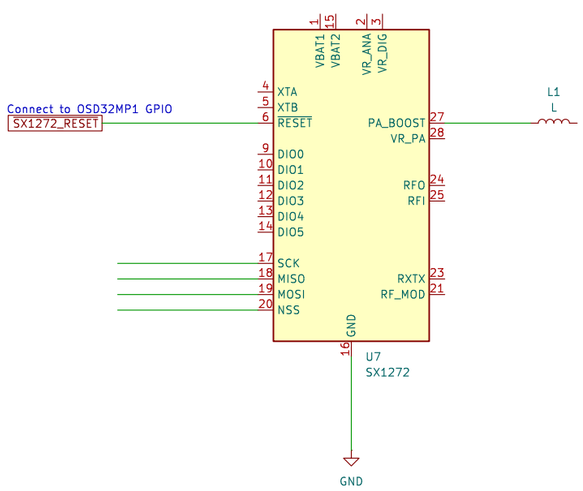
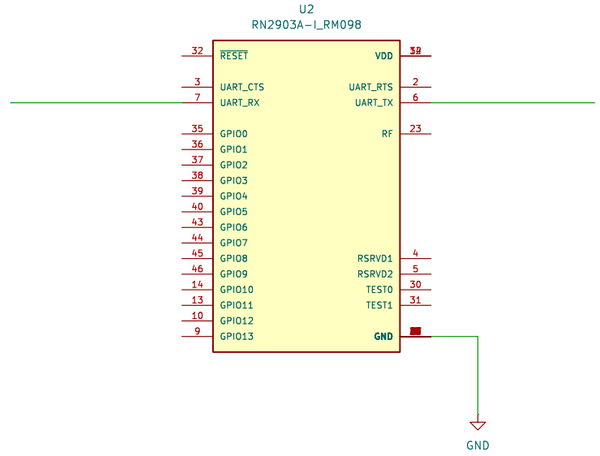
| File: storage.kicad_sch | | |
| **Title:** | | |
| Size: A3 | Date: | **Rev:** |
| KiCad E.D.A. 8.0.6 | | Id: 7/11 |

# Long range radio

## SX1272 LoRaWAN IC option




## RN2903 LoRa module option

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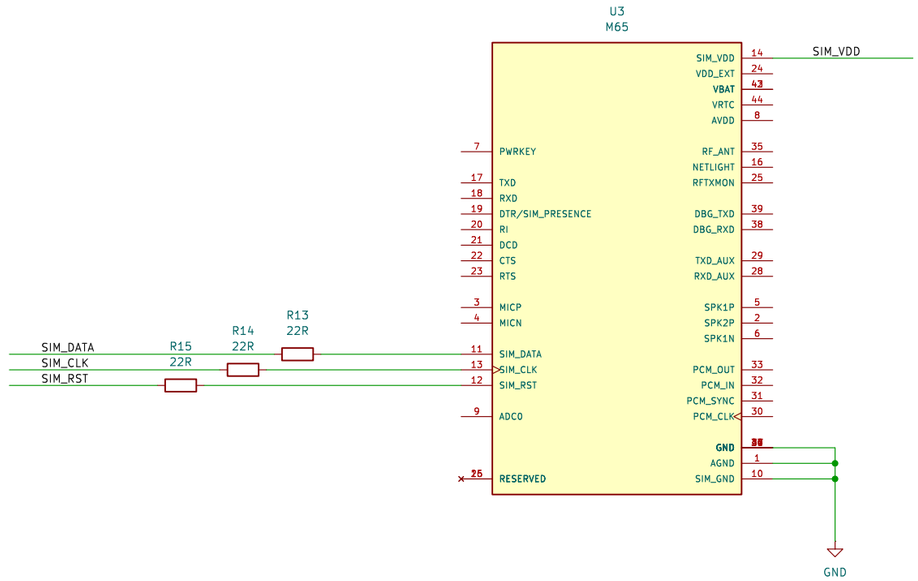
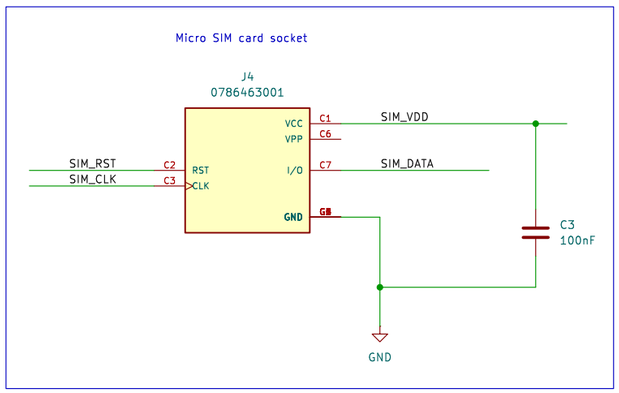
File: long-range-radio-1.kicad_sch

**Title:**

| Size: A3 | Date: | **Rev:** |
|---|---|---|
| KiCad E.D.A. 8.0.6 | | Id: 8/11 |

# GSM/GPRS 2G Comms

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| Sheet: /quectel-m65-1/ | | |
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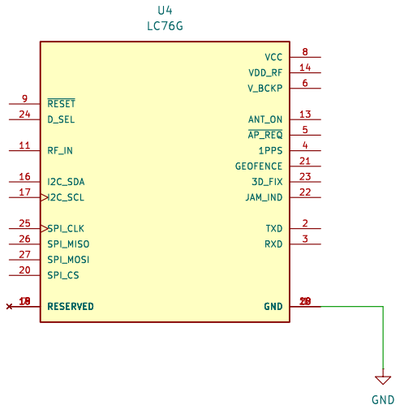
| Size: A3 | Date: | **Rev:** |
| KiCad E.D.A. 8.0.6 | | Id: 9/11 |

# GNSS

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| **Title:** | | |
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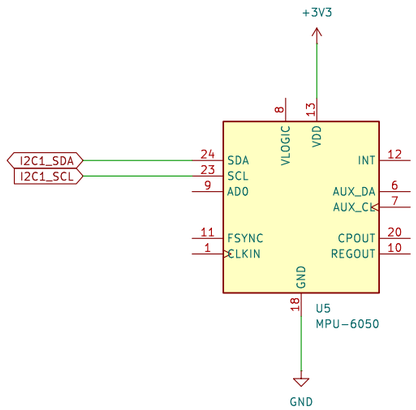
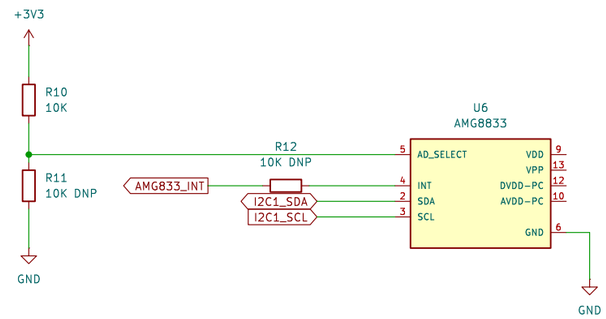
| KiCad E.D.A. 8.0.6 | | Id: 10/11 |

# Sensors
# センサー

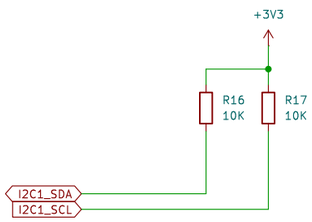
## MPU-6050




## AMG8833




## I2C1 Pull-up resistor

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