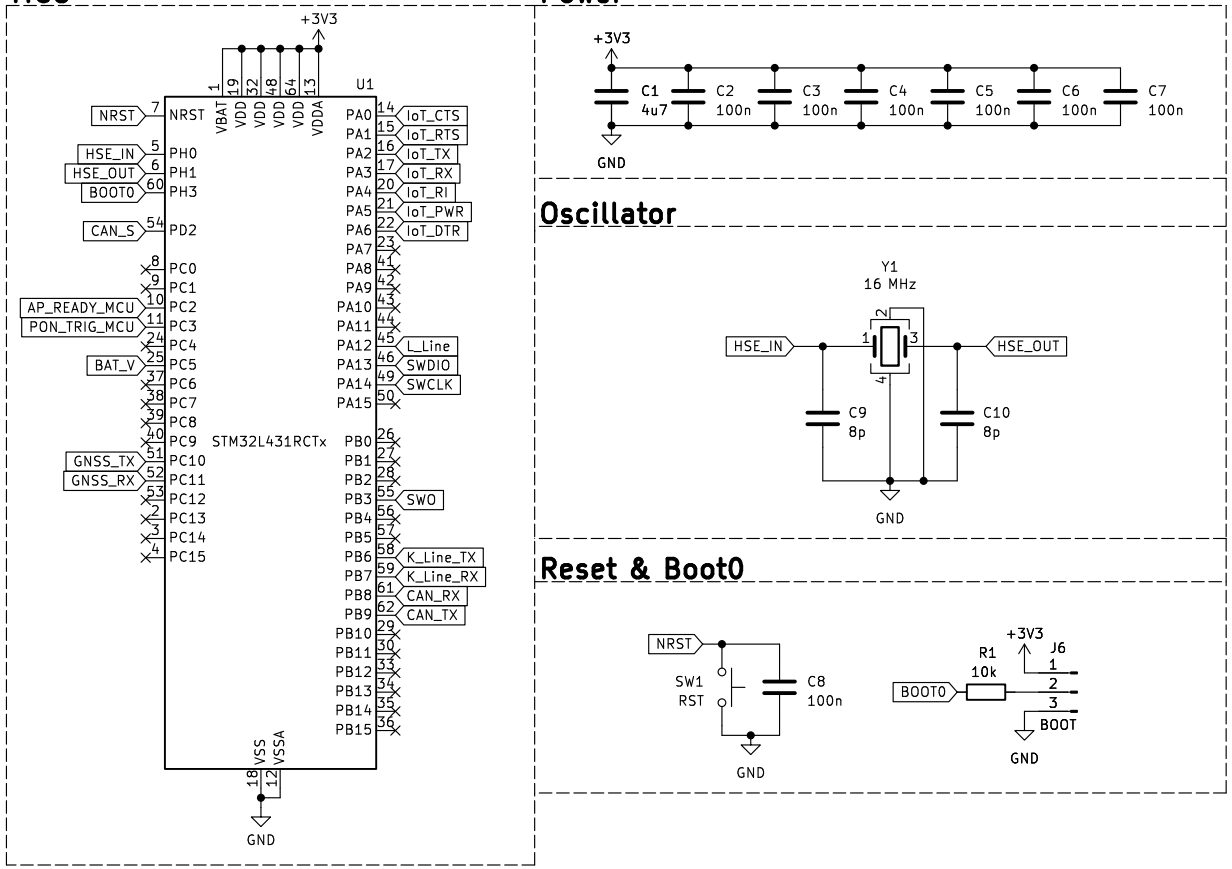
# MCU – STM32L431




power_supply
File: pwr.kicad_sch

iot_module
File: iot.kicad_sch

car_comm
File: car.kicad_sch

connectors
File: connect.kicad_sch

FEKT VUT

Sheet: /

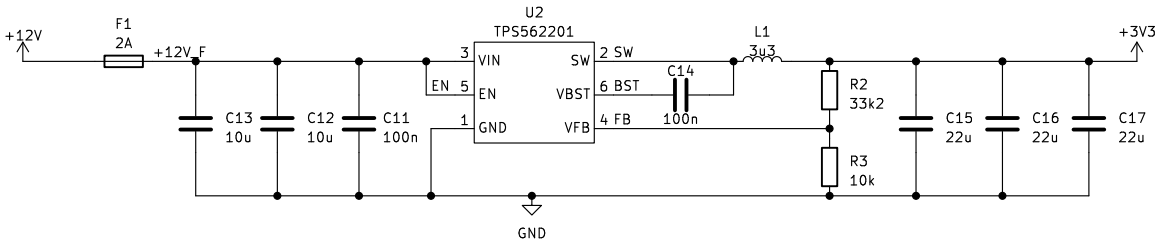
File: iot_diagnostic_tool.kicad_sch

***Title: OBD Monitoring Device***

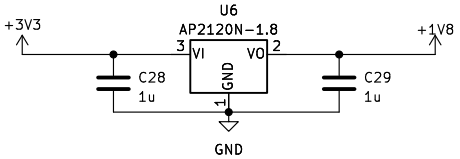
| Size: A4 | Date: 2023-02-27 | **Rev: 1.0** |
|---|---|---|
| KiCad E.D.A. kicad (7.0.0) | | Id: 1/8 |

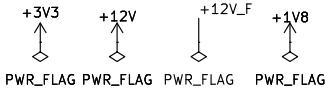
# Power supplies

## 3.3V Regulator




## 1.8V Regulator

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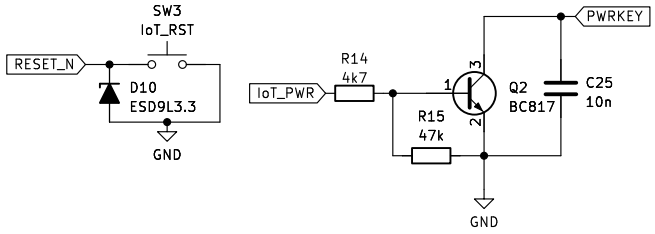
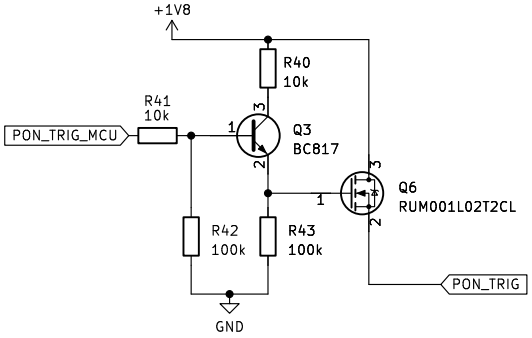
|---|---|---|
| **FEKT VUT** | | |
| Sheet: /power_supply/<br>File: pwr.kicad_sch | | |
| ***Title: OBD Monitoring Device*** | | |
| Size: A4 | Date: 2023-02-27 | **Rev:** |
| KiCad E.D.A. kicad (7.0.0) | | Id: 2/8 |

# IoT Module Quectel BG77

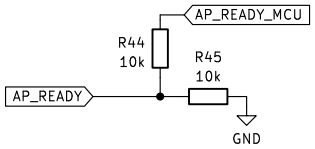
## PWRKEY & RESET



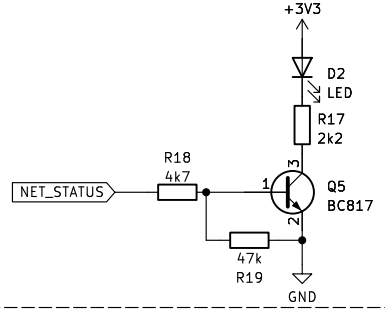

## PON Trigger



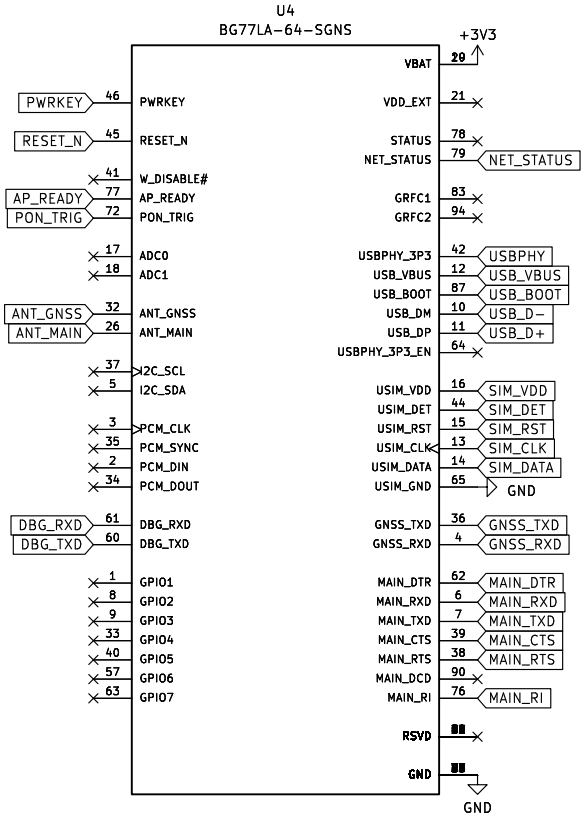

## AP READY



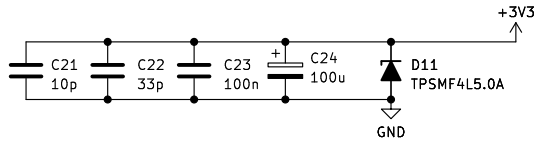

## STATUS INDICATOR



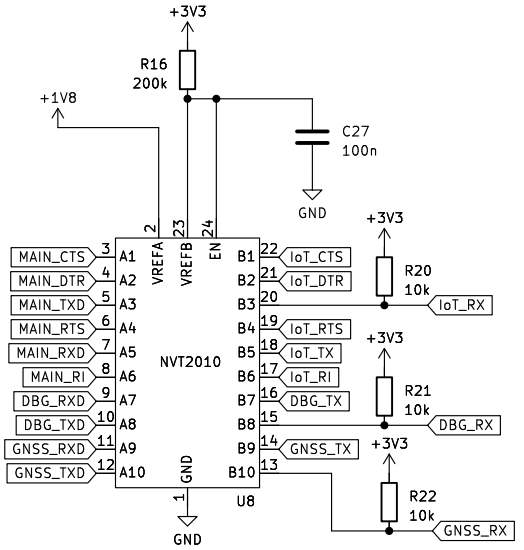

## Main module




## Power




## UART Level Shifter




antenna — File: ant.kicad_sch

sim — File: sim.kicad_sch

usb — File: usb.kicad_sch

FEKT VUT

Sheet: /iot_module/

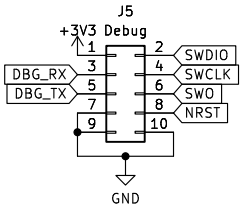
File: iot.kicad_sch

**Title: OBD Monitoring Device**

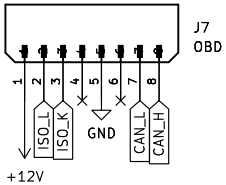
| Size: A4 | Date: 2023-02-27 | Rev: |
|---|---|---|
| KiCad E.D.A. kicad (7.0.0) | | Id: 3/8 |

# Connectors

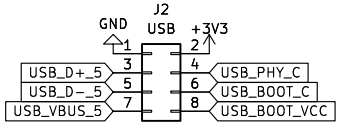
## Debug




## OBD




## USB

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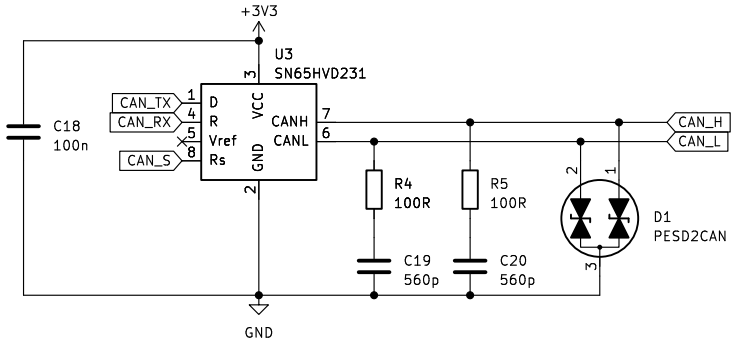
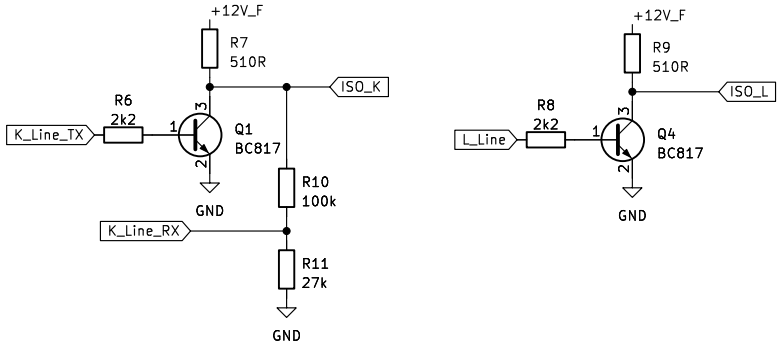
| **FEKT VUT** | | |
| Sheet: /connectors/<br>File: connect.kicad_sch | | |
| ***Title: OBD Monitoring Device*** | | |
| Size: A4 | Date: 2023-02-27 | **Rev:** |
| KiCad E.D.A. kicad (7.0.0) | | Id: 4/8 |

# Car communication circuitry

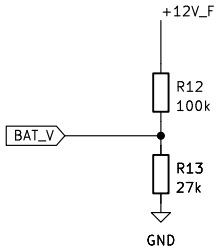
## CAN BUS Transceiver




## ISO 9141 / ISO 14230 Transceiver




## Battery Voltage Monitoring

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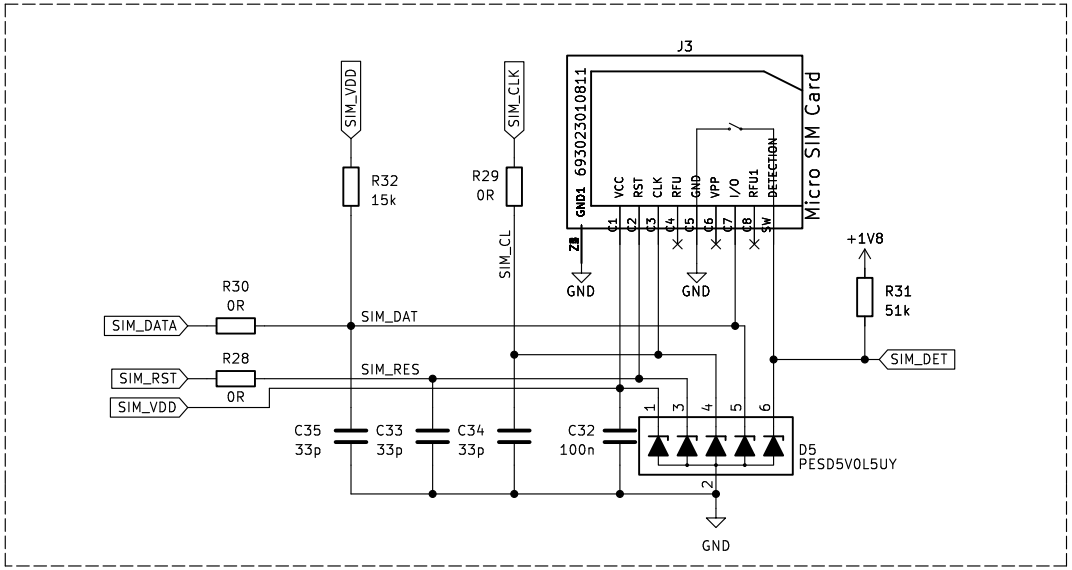
|---|---|---|
| **FEKT VUT** | | |
| Sheet: /car_comm/<br>File: car.kicad_sch | | |
| ***Title: OBD Monitoring Device*** | | |
| Size: A4 | Date: 2023-02-27 | **Rev:** |
| KiCad E.D.A. kicad (7.0.0) | | Id: 5/8 |

# SIM Card

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|---|---|---|
| **FEKT VUT** | | |
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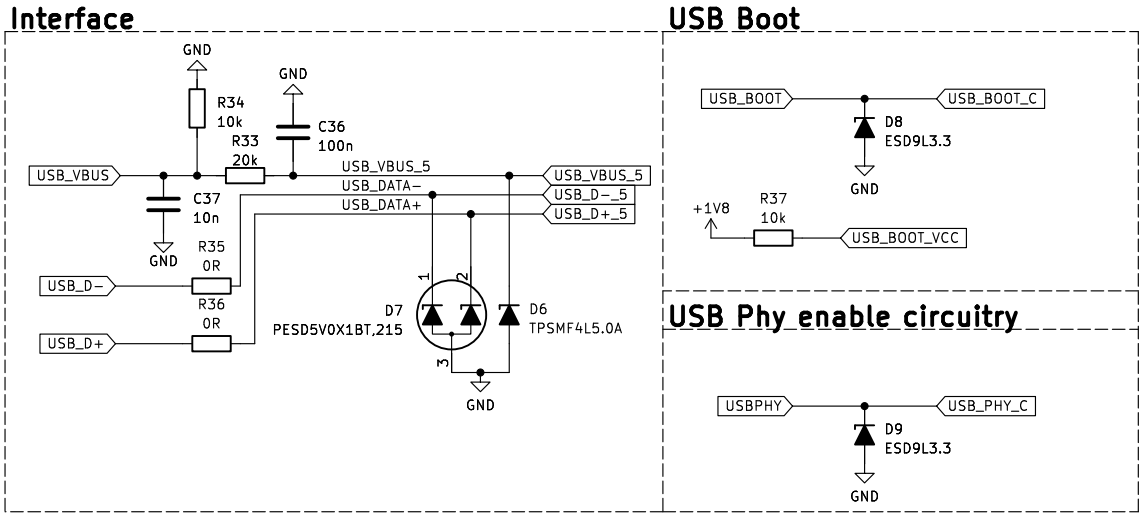
| ***Title: OBD Monitoring Device*** | | |
| Size: A4 | Date: 2023-02-27 | **Rev:** |
| KiCad E.D.A. kicad (7.0.0) | | Id: 6/8 |

# USB

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|---|---|---|
| **FEKT VUT** | | |
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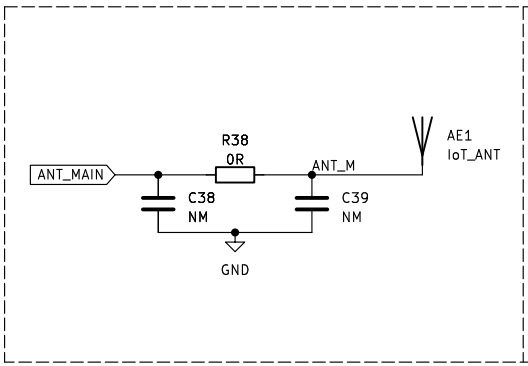
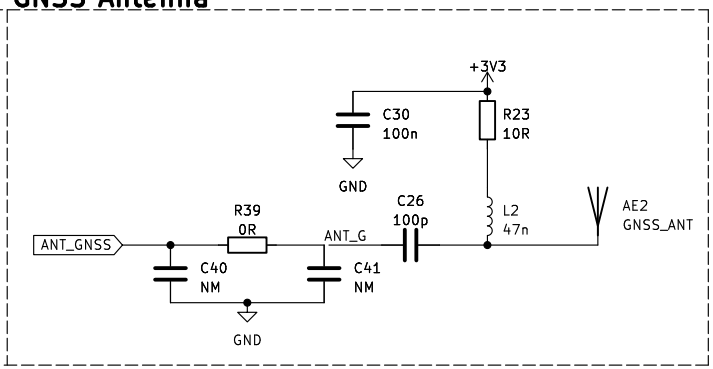
| ***Title: OBD Monitoring Device*** | | |
| Size: A4 | Date: 2023−02−27 | **Rev:** |
| KiCad E.D.A. kicad (7.0.0) | | Id: 7/8 |

# Antennas

## IoT Antenna




## GNSS Antenna




| | | |
|---|---|---|
| **FEKT VUT** | | |
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| ***Title: OBD Monitoring Device*** | | |
| Size: A4 | Date: 2023-02-27 | **Rev:** |
| KiCad E.D.A. kicad (7.0.0) | | Id: 8/8 |