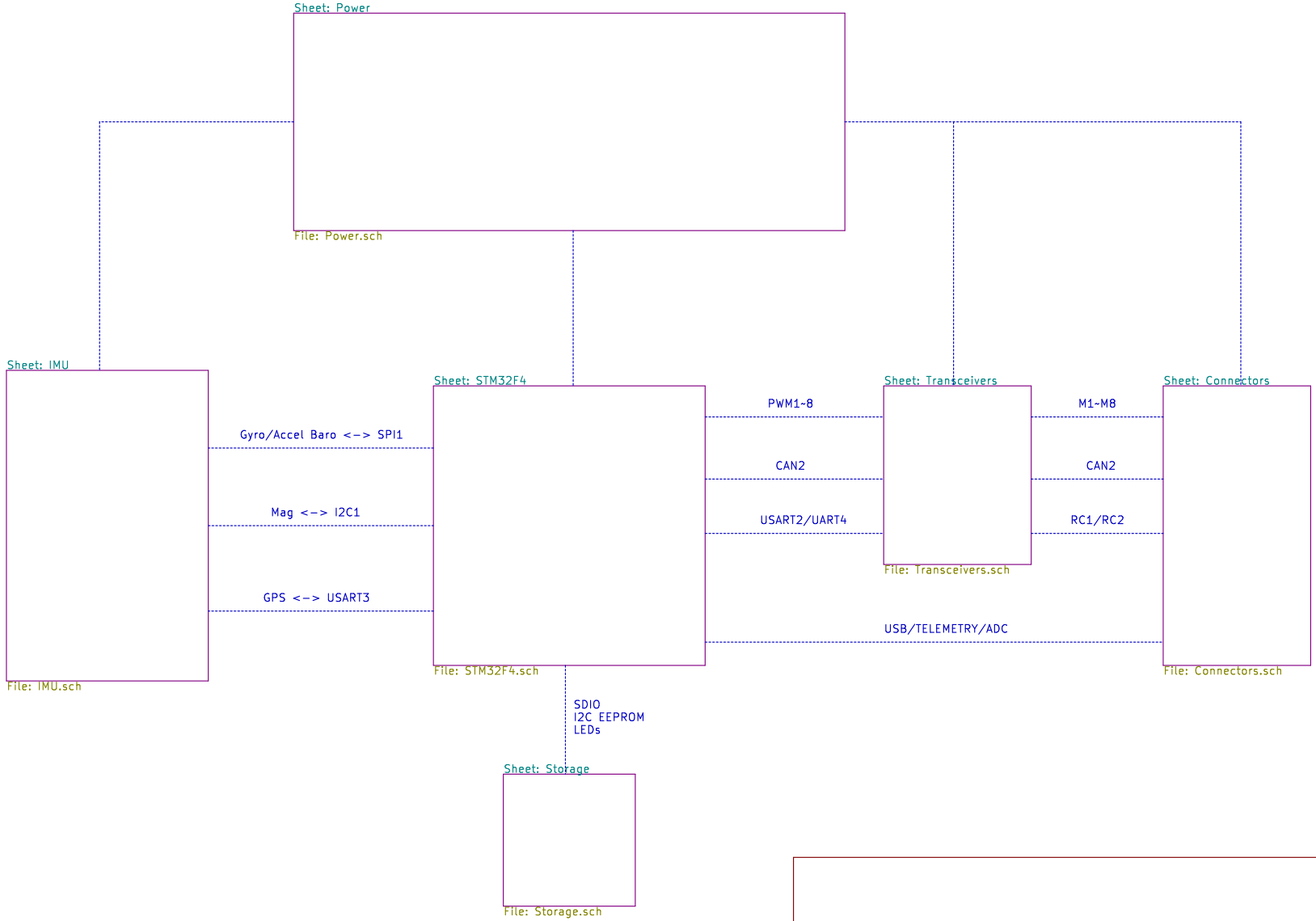

Sheet: /
File: SimpleFC.sch

Title: Index

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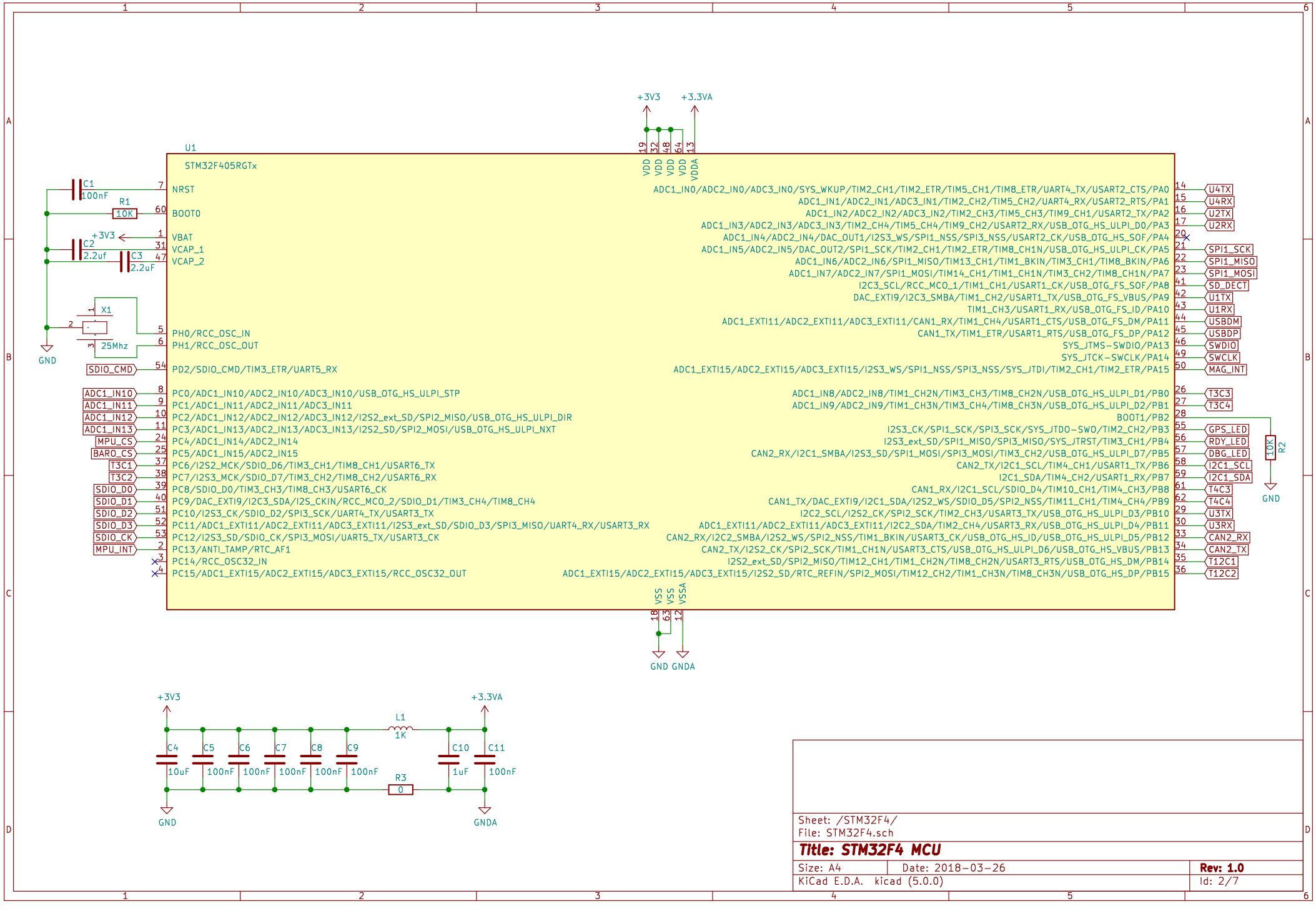
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STM32F405RGTx
+3V3
+3.3VA
VDD
VDD
VDD
VDD
VDDA
VSS
VSS
VSSA
GND
GNDA
C1
100nF
R1
10K
C2
2.2uf
C3
2.2uF
X1
25Mhz
NRST
BOOT0
VBAT
VCAP_1
VCAP_2
PH0/RCC_OSC_IN
PH1/RCC_OSC_OUT
SDIO_CMD
PD2/SDIO_CMD/TIM3_ETR/UART5_RX
ADC1_IN10
ADC1_IN11
ADC1_IN12
ADC1_IN13
MPU_CS
BARO_CS
T3C1
T3C2
SDIO_D0
SDIO_D1
SDIO_D2
SDIO_D3
SDIO_CK
MPU_INT
PC0/ADC1_IN10/ADC2_IN10/ADC3_IN10/USB_OTG_HS_ULPI_STP
PC1/ADC1_IN11/ADC2_IN11/ADC3_IN11
PC2/ADC1_IN12/ADC2_IN12/ADC3_IN12/I2S2_ext_SD/SPI2_MISO/USB_OTG_HS_ULPI_DIR
PC3/ADC1_IN13/ADC2_IN13/ADC3_IN13/I2S2_SD/SPI2_MOSI/USB_OTG_HS_ULPI_NXT
PC4/ADC1_IN14/ADC2_IN14
PC5/ADC1_IN15/ADC2_IN15
PC6/I2S2_MCK/SDIO_D6/TIM3_CH1/TIM8_CH1/USART6_TX
PC7/I2S3_MCK/SDIO_D7/TIM3_CH2/TIM8_CH2/USART6_RX
PC8/SDIO_D0/TIM3_CH3/TIM8_CH3/USART6_CK
PC9/DAC_EXTI9/I2C3_SDA/I2S_CKIN/RCC_MCO_2/SDIO_D1/TIM3_CH4/TIM8_CH4
PC10/I2S3_CK/SDIO_D2/SPI3_SCK/UART4_TX/USART3_TX
PC11/ADC1_EXTI11/ADC2_EXTI11/ADC3_EXTI11/I2S3_ext_SD/SDIO_D3/SPI3_MISO/UART4_RX/USART3_RX
PC12/I2S3_SD/SDIO_CK/SPI3_MOSI/UART5_TX/USART3_CK
PC13/ANTI_TAMP/RTC_AF1
PC14/RCC_OSC32_IN
PC15/ADC1_EXTI15/ADC2_EXTI15/ADC3_EXTI15/RCC_OSC32_OUT
ADC1_IN0/ADC2_IN0/ADC3_IN0/SYS_WKUP/TIM2_CH1/TIM2_ETR/TIM5_CH1/TIM8_ETR/UART4_TX/USART2_CTS/PA0
ADC1_IN1/ADC2_IN1/ADC3_IN1/TIM2_CH2/TIM5_CH2/UART4_RX/USART2_RTS/PA1
ADC1_IN2/ADC2_IN2/ADC3_IN2/TIM2_CH3/TIM5_CH3/TIM9_CH1/USART2_TX/PA2
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ADC1_IN7/ADC2_IN7/SPI1_MOSI/TIM14_CH1/TIM1_CH1N/TIM3_CH2/TIM8_CH1N/PA7
I2C3_SCL/RCC_MCO_1/TIM1_CH1/USART1_CK/USB_OTG_FS_SOF/PA8
DAC_EXTI9/I2C3_SMBA/TIM1_CH2/USART1_TX/USB_OTG_FS_VBUS/PA9
TIM1_CH3/USART1_RX/USB_OTG_FS_ID/PA10
ADC1_EXTI11/ADC2_EXTI11/ADC3_EXTI11/CAN1_RX/TIM1_CH4/USART1_CTS/USB_OTG_FS_DM/PA11
CAN1_TX/TIM1_ETR/USART1_RTS/USB_OTG_FS_DP/PA12
SYS_JTMS-SWDIO/PA13
SYS_JTCK-SWCLK/PA14
ADC1_EXTI15/ADC2_EXTI15/ADC3_EXTI15/I2S3_WS/SPI1_NSS/SPI3_NSS/SYS_JTDI/TIM2_CH1/TIM2_ETR/PA15
ADC1_IN8/ADC2_IN8/TIM1_CH2N/TIM3_CH3/TIM8_CH2N/USB_OTG_HS_ULPI_D1/PB0
ADC1_IN9/ADC2_IN9/TIM1_CH3N/TIM3_CH4/TIM8_CH3N/USB_OTG_HS_ULPI_D2/PB1
BOOT1/PB2
I2S3_CK/SPI1_SCK/SPI3_SCK/SYS_JTDO-SWO/TIM2_CH2/PB3
I2S3_ext_SD/SPI1_MISO/SPI3_MISO/SYS_JTRST/TIM3_CH1/PB4
CAN2_RX/I2C1_SMBA/I2S3_SD/SPI1_MOSI/SPI3_MOSI/TIM3_CH2/USB_OTG_HS_ULPI_D7/PB5
CAN2_TX/I2C1_SCL/TIM4_CH1/USART1_TX/PB6
I2C1_SDA/TIM4_CH2/USART1_RX/PB7
CAN1_RX/I2C1_SCL/SDIO_D4/TIM10_CH1/TIM4_CH3/PB8
CAN1_TX/DAC_EXTI9/I2C1_SDA/I2S2_WS/SDIO_D5/SPI2_NSS/TIM11_CH1/TIM4_CH4/PB9
I2C2_SCL/I2S2_CK/SPI2_SCK/TIM2_CH3/USART3_TX/USB_OTG_HS_ULPI_D3/PB10
ADC1_EXTI11/ADC2_EXTI11/ADC3_EXTI11/I2C2_SDA/TIM2_CH4/USART3_RX/USB_OTG_HS_ULPI_D4/PB11
CAN2_RX/I2C2_SMBA/I2S2_WS/SPI2_NSS/TIM1_BKIN/USART3_CK/USB_OTG_HS_ID/USB_OTG_HS_ULPI_D5/PB12
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ADC1_EXTI15/ADC2_EXTI15/ADC3_EXTI15/I2S2_SD/RTC_REFIN/SPI2_MOSI/TIM12_CH2/TIM1_CH3N/TIM8_CH3N/USB_OTG_HS_DP/PB15
U4TX
U4RX
U2TX
U2RX
SPI1_SCK
SPI1_MISO
SPI1_MOSI
SD_DECT
U1TX
U1RX
USBDM
USBDP
SWDIO
SWCLK
MAG_INT
T3C3
T3C4
R2
10K
GPS_LED
RDY_LED
DBG_LED
I2C1_SCL
I2C1_SDA
T4C3
T4C4
U3TX
U3RX
CAN2_RX
CAN2_TX
T12C1
T12C2
L1
1K
C4
10uF
C5
100nF
C6
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C7
100nF
C8
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C9
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C10
1uF
C11
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R3
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File: STM32F4.sch
Title: STM32F4 MCU
Size: A4
Date: 2018-03-26
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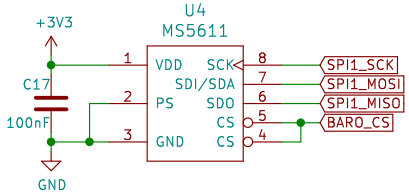
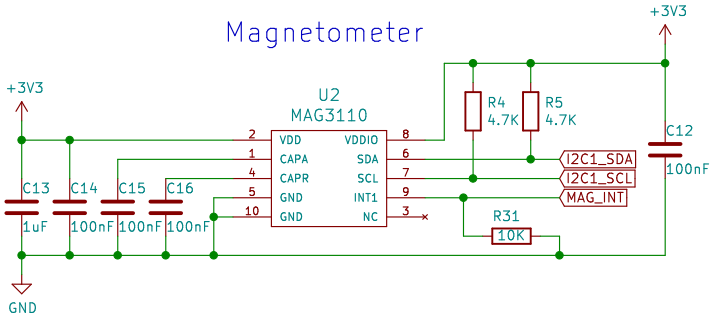
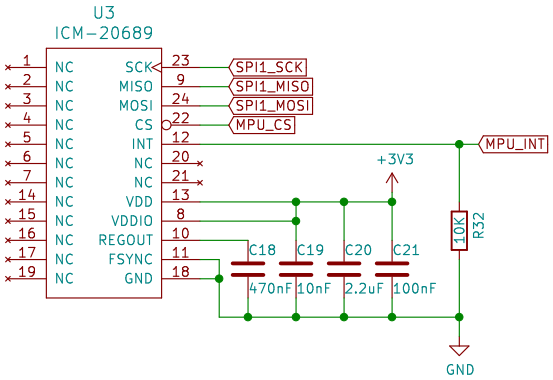
Barometer



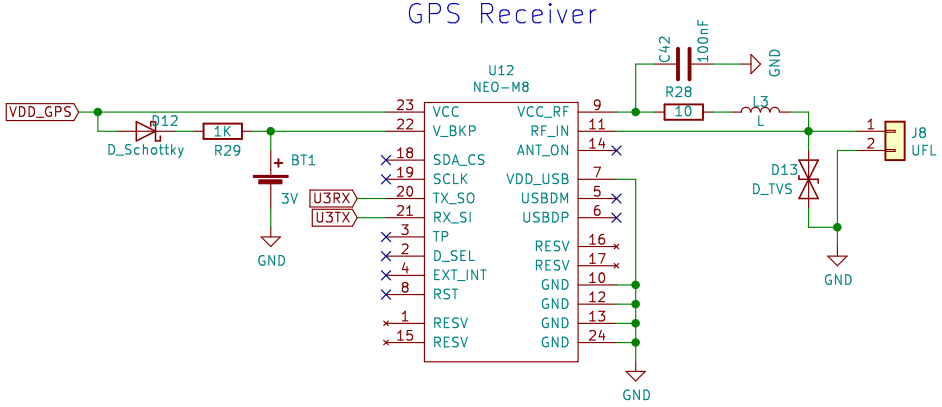
Magnetometer



Gyroscope and Accelerometer



GPS Receiver



Sheet: /IMU/
File: IMU.sch

Title: IMU Sensors

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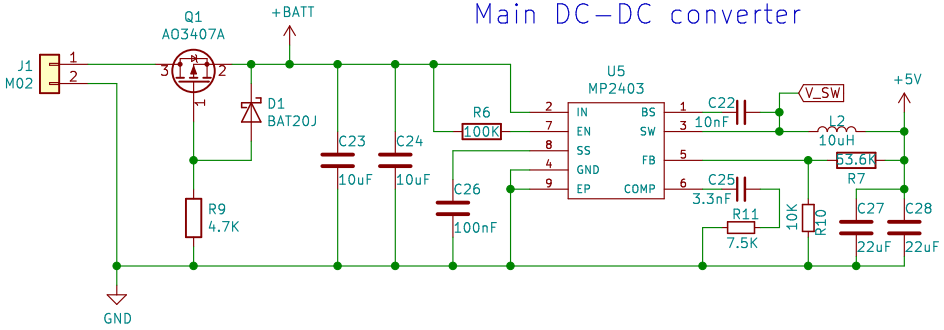
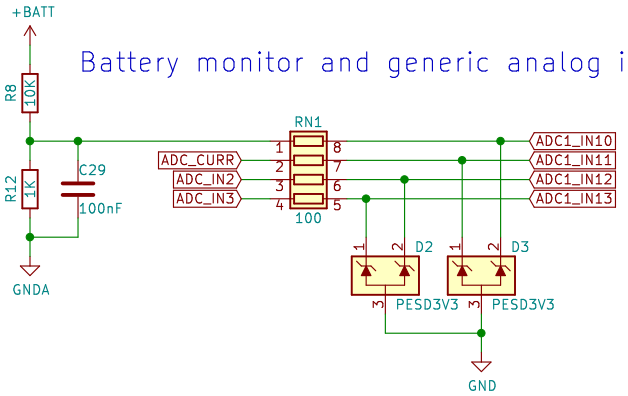
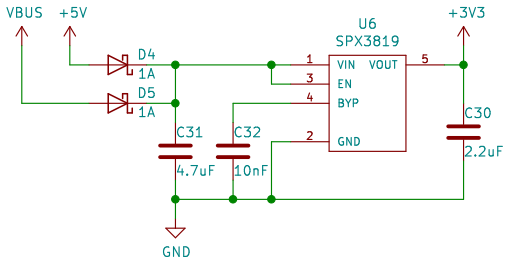
Main DC-DC converter



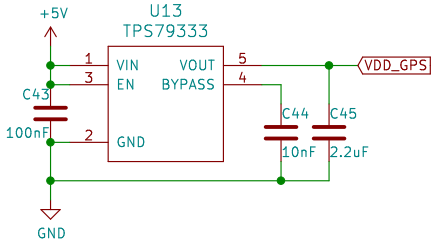
Battery monitor and generic analog inputs



Power for MCU and sensors, etc.



Power for GPS receiver.



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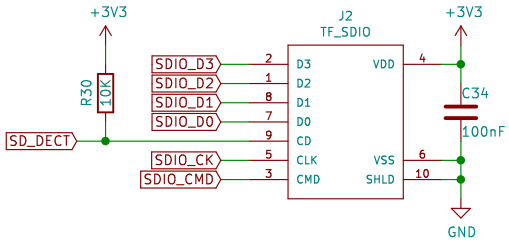

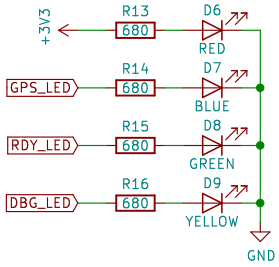

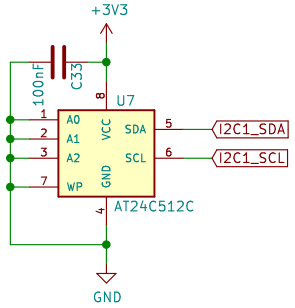

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File: Storage.sch		
Title: SD Card and EEPROM		
Size: A4	Date: 2018-03-26	**Rev: 1.0**
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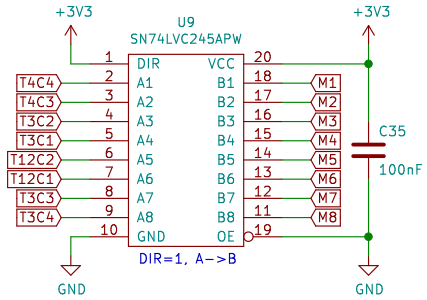

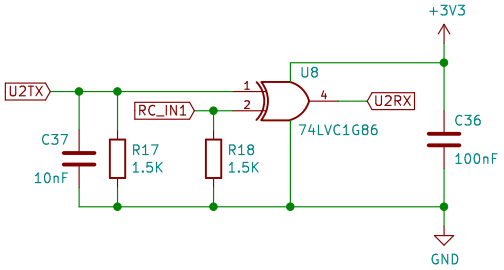

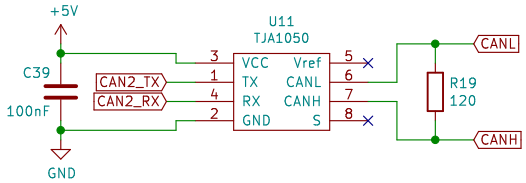

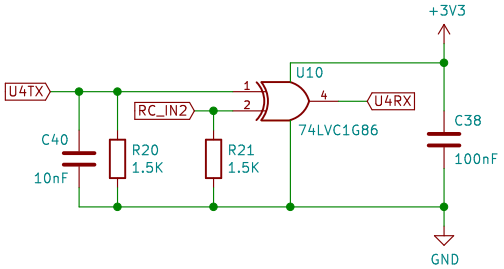

Sheet: /Transceivers/
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Title: Transceivers

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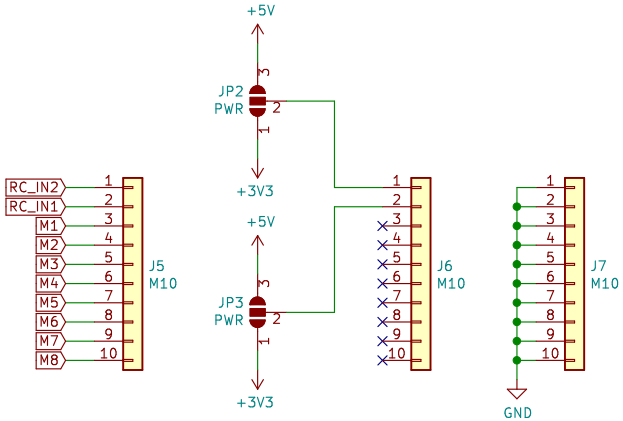
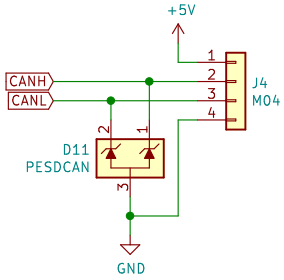
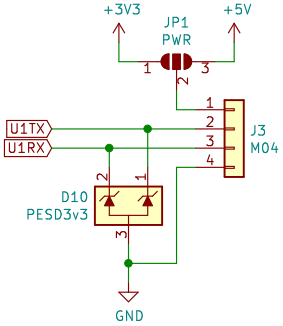


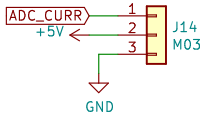
PWM Outputs and RC Inputs



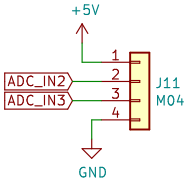
CAN Bus



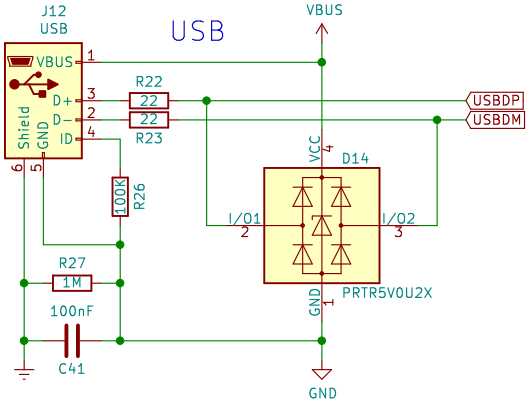
Telemetry

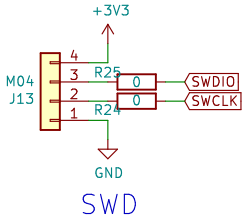


Current Monitor



Generic Analog Inputs





SWD

Sheet: /Connectors/
File: Connectors.sch

Title: IO Connectors

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