SmartProbe v0.04
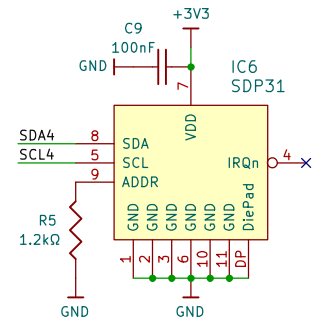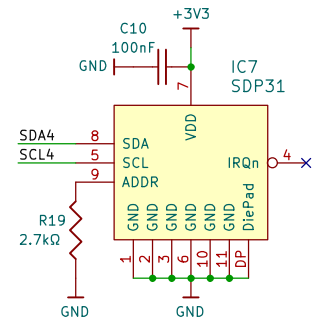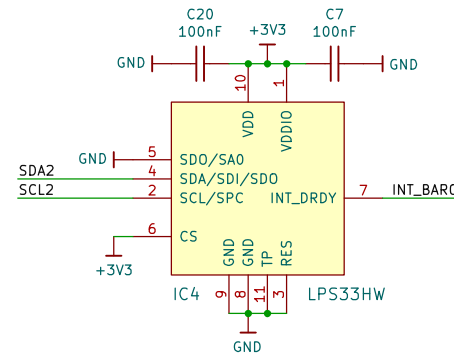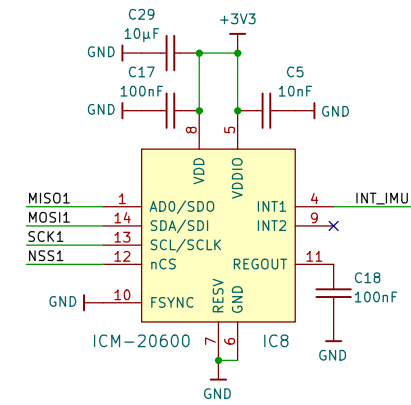
SDP31
I2C Slave Address = 0x21 (7bits, ADDR=0Ω)

SDP31
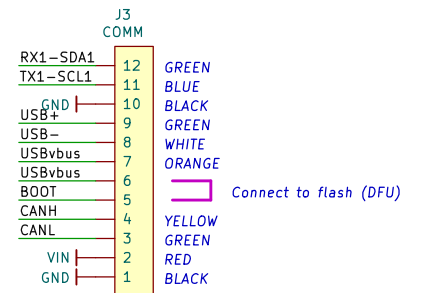I2C Slave Address = 0x22 (7bits, ADDR=1.2kΩ)
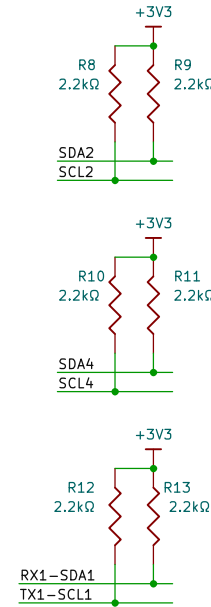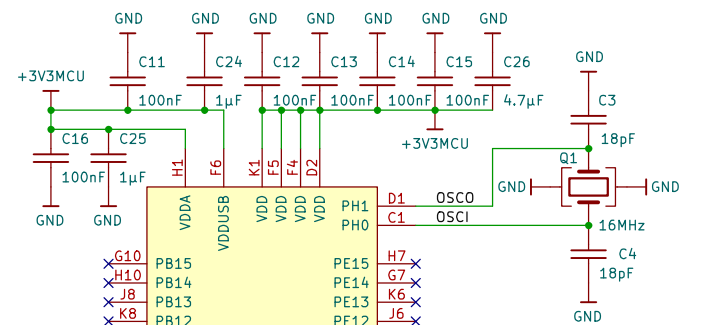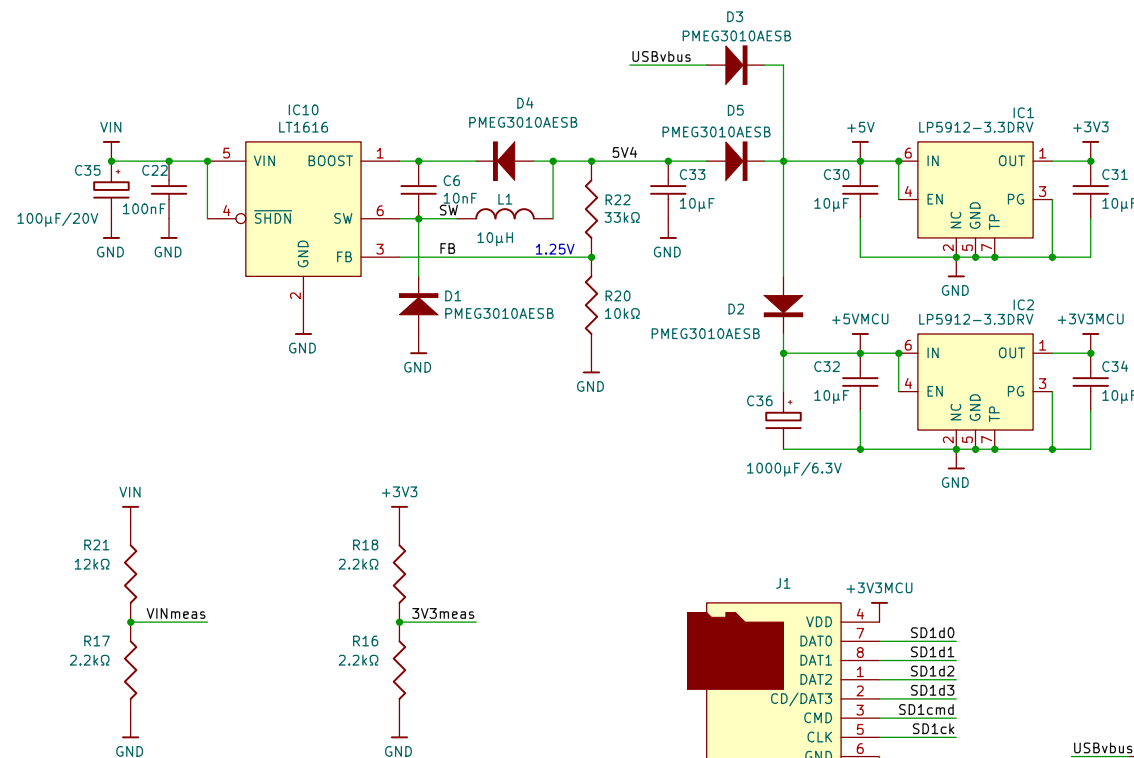
SDP31
I2C Slave Address = 0x23 (7bits, ADDR=2.7kΩ)

LPS33HW
I2C Slave Address = 0x5C (7bits, SA0=0)

IC5 SDP31
IC6 SDP31
IC7 SDP31
IC4 LPS33HW
IC8 ICM-20600

C8 100nF, C9 100nF, C10 100nF, C20 100nF, C7 100nF
C29 10µF, C17 100nF, C5 10nF

SDA4, SCL4, ADDR, SDA, SCL, VDD, IRQn, GND, DiePad, DP
R5 1.2kΩ, R19 2.7kΩ
SDO/SA0, SDA/SDI/SDO, SCL/SPC, CS, INT_DRDY, INT_BARO
MISO1, MOSI1, SCK1, NSS1, AD0/SDO, SDA/SDI, SCL/SCLK, nCS, INT1, INT2, INT_IMU, REGOUT, RESV, FSYNC, GND, C18 100nF

IC10 LT1616
VIN, C35 100µF/20V, C22 100nF, VIN, BOOST, SHDN, SW, GND, FB
D4 PMEG3010AESB, C6 10nF, L1 10µH, R22 33kΩ, R20 10kΩ, 1.25V
D1 PMEG3010AESB, D2 PMEG3010AESB
D3 PMEG3010AESB, USBvbus
D5 PMEG3010AESB, 5V4, +5V
IC1 LP5912-3.3DRV, IN, OUT, EN, NC, GND, TP, PG, C30 10µF, C31 10µF, +3V3
IC2 LP5912-3.3DRV, +5VMCU, C32 10µF, C36 1000µF/6.3V, C33 10µF, C34 10µF, +3V3MCU

R21 12kΩ, R17 2.2kΩ, VINmeas, VIN
R18 2.2kΩ, R16 2.2kΩ, 3V3meas, +3V3

C21 100nF, +5V, LED3
SK6812-SIDE-A, Dout, Din, VDD, GND, LED_RGB

KP-1608SURC, LEDR, R3 390Ω, LED1, GND
KP-1608CGCK, LEDG, R4 390Ω, LED2, GND

J1 MicroSD_Connector_500901-0801
VDD, DAT0, DAT1, DAT2, CD/DAT3, CMD, CLK, GND, SHIELD
+3V3MCU, SD1d0, SD1d1, SD1d2, SD1d3, SD1cmd, SD1ck

J2 DEBUG
BLACK, RED, WHITE, BLUE, BROWN, BLUE, GREEN
GND, +3V3MCU, nRST, SWCLK, SWDIO, RX6, TX6

IC3 STM32F777VI
VDDA, VDDUSB, VDD, PH1 OSCO, PH0 OSCI, Q1 16MHz, C3 18pF, C4 18pF
+3V3MCU, C11 100nF, C24 1µF, C12 100nF, C13 100nF, C14 100nF, C15 100nF, C26 4.7µF
C16 100nF, C25 1µF

PB15, PB14, PB13, PB12, PB11, PB10, PB9, PB8, PB7, PB6, PB5, PB4, PB3, PB2, PB1, PB0
SDA2, SCL2, SDA4, SCL4, RX1-SDA1, TX1-SCL1, MOSI1, MISO1, SCK1, VINmeas
PE15, PE14, PE13, PE12, PE11, PE10, PE9, PE8, PE7, PE6, PE5, PE4, PE3, PE2, PE1, PE0
LED_RGB

NSS1, SWCLK, SWDIO, USB+, USB-
PA15, PA14, PA13, PA12, PA11, PA10, PA9, PA8, PA7, PA6, PA5, PA4, PA3, PA2, PA1, PA0
Vbus_L
USBvbus, R6 1.5kΩ, R14 2.2kΩ
INT_BARO
PD15, PD14, PD13, PD12, PD11, PD10, PD9, PD8, PD7, PD6, PD5, PD4, PD3, PD2, PD1, PD0
LEDR, LEDG, INT_IMU, SD1cmd, CAN1TX, CAN1RX

+3V3 VBAT, PDR_ON
PC15, PC14, PC13, PC12, PC11, PC10, PC9, PC8, PC7, PC6, PC5, PC4, PC3, PC2, PC1, PC0
OSC32out, OSC32in, Q2 32.768KHz-9pF, C1 4.7pF, C2 4.7pF
SD1ck, SD1d3, SD1d2, SD1d1, SD1d0, RX6, TX6, 3V3meas

+3V3MCU, BYPASS_REG
C27 4.7µF, C28 4.7µF, VCAP_2, VCAP_1
BOOT, R7 1.5kΩ, BOOT0
nRST, R15 2.2kΩ, NRST, C19 100nF
VSSA, VSS

R8 2.2kΩ, R9 2.2kΩ, SDA2, SCL2, +3V3
R10 2.2kΩ, R11 2.2kΩ, SDA4, SCL4, +3V3
R12 2.2kΩ, R13 2.2kΩ, RX1-SDA1, TX1-SCL1, +3V3

J3 COMM
RX1-SDA1, TX1-SCL1, GND, USB+, USB-, USBvbus, USBvbus, BOOT, CANH, CANL, VIN, GND
GREEN, BLUE, BLACK, GREEN, WHITE, ORANGE, YELLOW, GREEN, RED, BLACK
Connect to flash (DFU)
VIN=7-20V

IC9 MAX3051EKA
CAN1TX, CAN1RX, TXD, RXD, VCC, CANH, SHDN, GND, CANL, RS
R1 0Ω, R2 120Ω, CANH, CANL
C23 100nF, +3V3