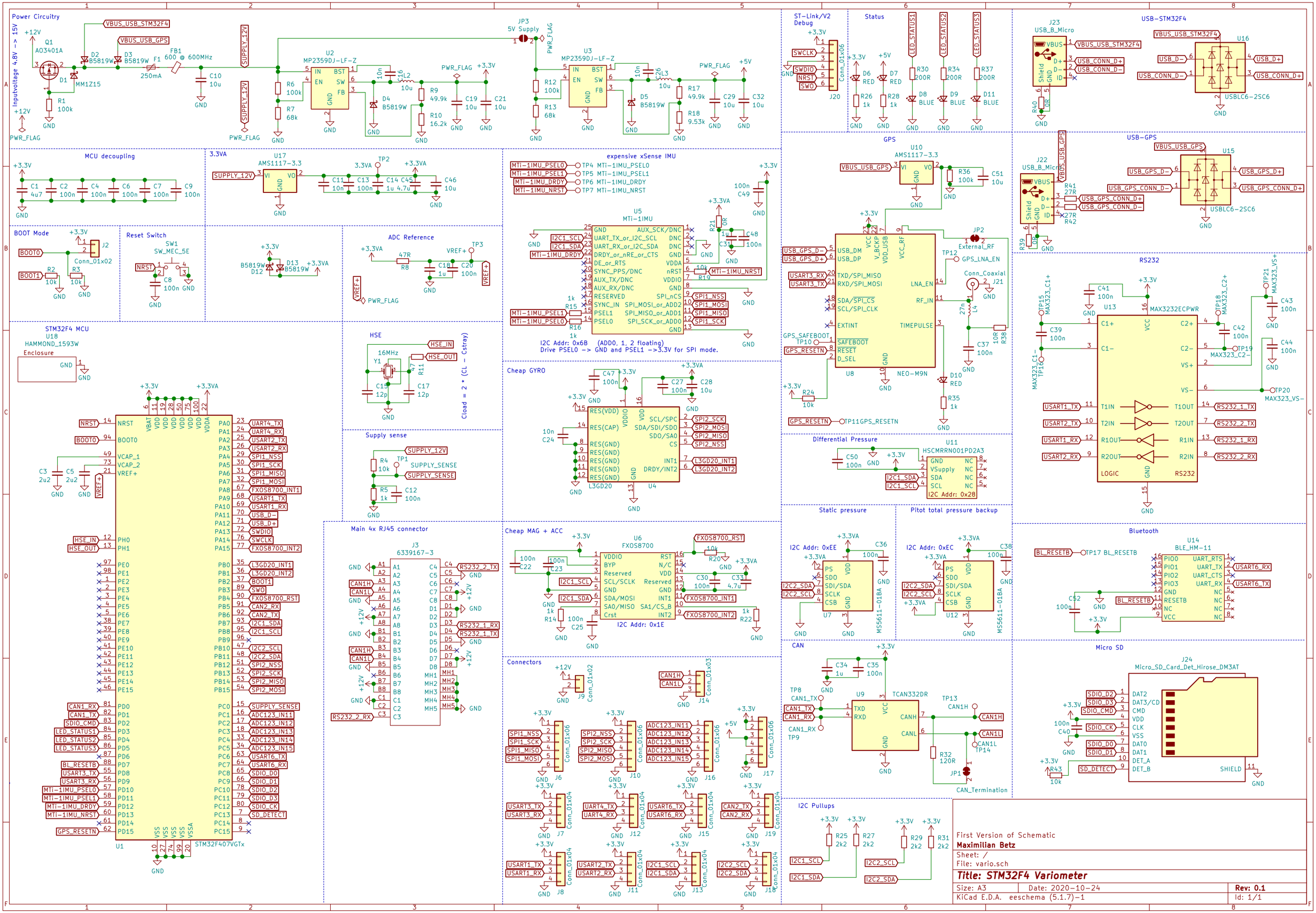
Power Circuitry
Inputvoltage 4.8V -> 15V
Q1 AO3401A
D1 MM1Z15
D2 B5819W
D3 B5819W
F1 250mA
FB1 600 @ 600MHz
U2 MP2359DJ-LF-Z
U3 MP2359DJ-LF-Z
JP3 5V Supply
MCU decoupling
3.3VA
U17 AMS1117-3.3
BOOT Mode
Reset Switch
SW1 SW_MEC_5E
ADC Reference
expensive xSense IMU
U5 MTi-1IMU
I2C Addr: 0x6B (ADD0, 1, 2 floating)
Drive PSEL0 -> GND and PSEL1 ->3.3V for SPI mode.
STM32F4 MCU
U18 HAMMOND_1593W
Enclosure
HSE
16MHz
Y1
Cload = 2 * (CL - Cstray)
Supply sense
Cheap GYRO
L3GD20
U4
Main 4x RJ45 connector
J3 6339167-3
Cheap MAG + ACC
U6 FXOS8700
I2C Addr: 0x1E
Connectors
U1 STM32F407VGTx
ST-Link/V2 Debug
J20 Conn_01x06
Status
GPS
U10 AMS1117-3.3
U8 NEO-M9N
Differential Pressure
U11 HSCMRRN001PD2A3
I2C Addr: 0x28
Static pressure
Pitot total pressure backup
U7 MS5611-01BA
U12 MS5611-01BA
CAN
U9 TCAN332DR
CAN_Termination
I2C Pullups
USB-STM32F4
J23 USB_B_Micro
U16 USBLC6-2SC6
USB-GPS
J22 USB_B_Micro
U15 USBLC6-2SC6
RS232
U13 MAX3232ECPWR
Bluetooth
U14 BLE_HM-11
Micro SD
J24 Micro_SD_Card_Det_Hirose_DM3AT
First Version of Schematic
Maximilian Betz
Sheet: /
File: vario.sch
Title: STM32F4 Variometer
Size: A3
Date: 2020-10-24
Rev: 0.1
KiCad E.D.A. eeschema (5.1.7)-1
Id: 1/1