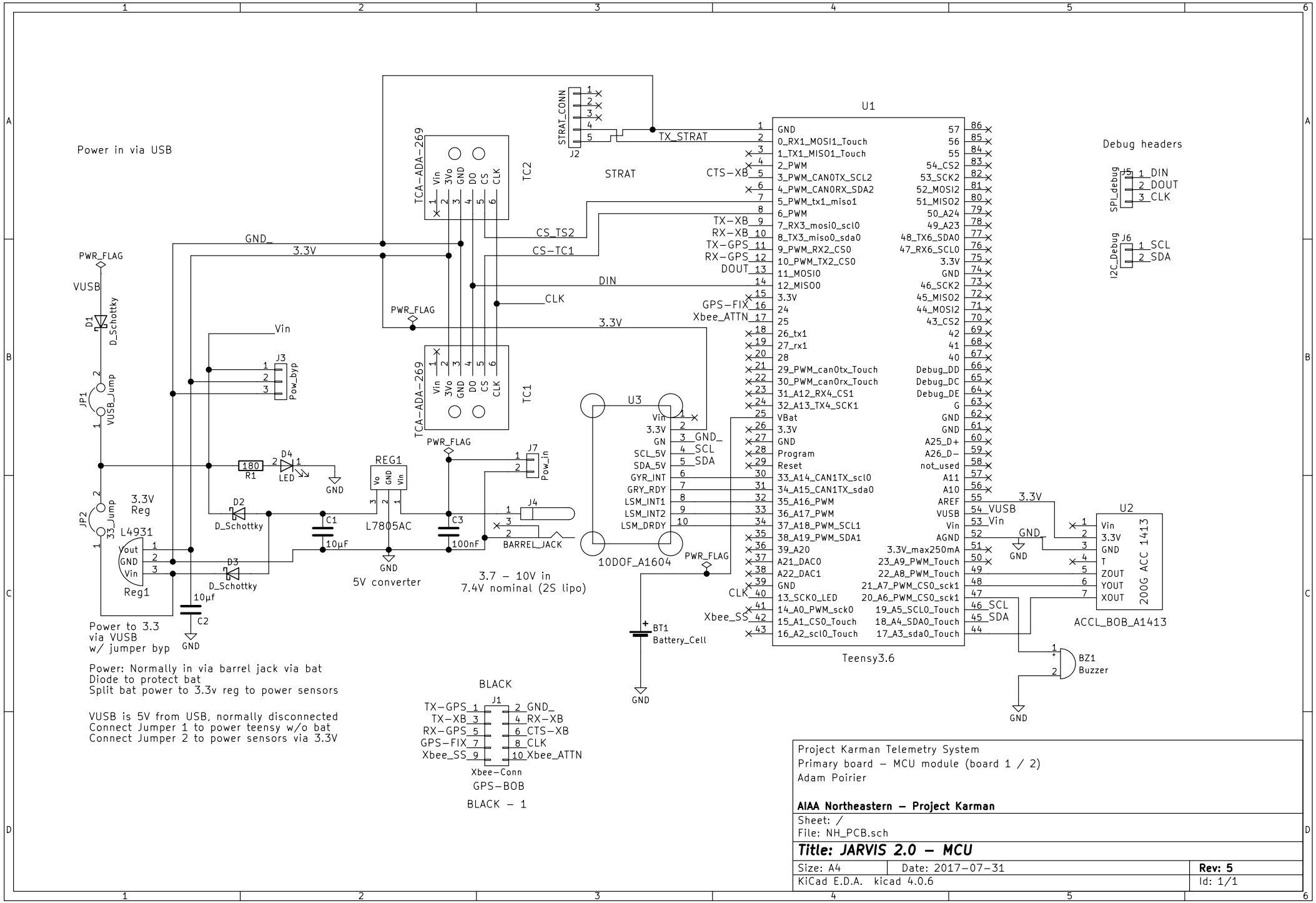
Power in via USB
PWR_FLAG
VUSB
D1
D_Schottky
JP1
VUSB_Jump
JP2
33_Jump
3.3V
Reg
L4931
Vout
GND
Vin
Reg1
Power to 3.3
via VUSB
w/ jumper byp
D2
D_Schottky
D3
D_Schottky
C1
10µF
C2
10µf
GND
180
R1
D4
LED
REG1
L7805AC
Vo
GND
Vin
5V converter
C3
100nF
J4
BARREL_JACK
3.7 – 10V in
7.4V nominal (2S lipo)
J7
Pow_in
J3
Pow_byp
Vin
GND_
3.3V
TCA-ADA-269
Vin
3Vo
GND
DO
CS
CLK
TC1
TC2
STRAT_CONN
J2
STRAT
TX_STRAT
CS_TS2
CS-TC1
DIN
CLK
U1
Teensy3.6
GND
0_RX1_MISO1_Touch
1_TX1_MISO1_Touch
2_PWM
3_PWM_CAN0TX_SCL2
4_PWM_CAN0RX_SDA2
5_PWM_tx1_miso1
6_PWM
7_RX3_mosi0_scl0
8_TX3_miso0_sda0
9_PWM_RX2_CS0
10_PWM_TX2_CS0
11_MOSI0
12_MISO0
3.3V
24
25
26_tx1
27_rx1
28
29_PWM_can0tx_Touch
30_PWM_can0rx_Touch
31_A12_RX4_CS1
32_A13_TX4_SCK1
VBat
3.3V
GND
Program
Reset
33_A14_CAN1TX_scl0
34_A15_CAN1TX_sda0
35_A16_PWM
36_A17_PWM
37_A18_PWM_SCL1
38_A19_PWM_SDA1
39_A20
A21_DAC0
A22_DAC1
GND
13_SCK0_LED
14_A0_PWM_sck0
15_A1_CS0_Touch
16_A2_scl0_Touch
CTS-XB
TX-XB
RX-XB
TX-GPS
RX-GPS
DOUT
GPS-FIX
Xbee_ATTN
CLK
Xbee_SS
57
56
55
54_CS2
53_SCK2
52_MOSI2
51_MISO2
50_A24
49_A23
48_TX6_SDA0
47_RX6_SCL0
3.3V
GND
46_SCK2
45_MISO2
44_MOSI2
43_CS2
42
41
40
Debug_DD
Debug_DC
Debug_DE
G
GND
GND
A25_D+
A26_D-
not_used
A11
A10
AREF
VUSB
Vin
AGND
3.3V_max250mA
23_A9_PWM_Touch
22_A8_PWM_Touch
21_A7_PWM_CS0_sck1
20_A6_PWM_CS0_sck1
19_A5_SCL0_Touch
18_A4_SDA0_Touch
17_A3_sda0_Touch
VUSB
Vin
SCL
SDA
U3
10DOF_A1604
Vin
3.3V
GN
SCL_5V
SDA_5V
GYR_INT
GRY_RDY
LSM_INT1
LSM_INT2
LSM_DRDY
GND_
SCL
SDA
BT1
Battery_Cell
Debug headers
J5
SPI_debug
DIN
DOUT
CLK
J6
I2C_Debug
SCL
SDA
U2
ACCL_BOB_A1413
200G ACC 1413
Vin
3.3V
GND
T
ZOUT
YOUT
XOUT
BZ1
Buzzer
BLACK
J1
Xbee-Conn
GPS-BOB
TX-GPS
TX-XB
RX-GPS
GPS-FIX
Xbee_SS
GND_
RX-XB
CTS-XB
CLK
Xbee_ATTN
BLACK – 1
Power: Normally in via barrel jack via bat
Diode to protect bat
Split bat power to 3.3v reg to power sensors
VUSB is 5V from USB, normally disconnected
Connect Jumper 1 to power teensy w/o bat
Connect Jumper 2 to power sensors via 3.3V
Project Karman Telemetry System
Primary board – MCU module (board 1 / 2)
Adam Poirier
AIAA Northeastern – Project Karman
Sheet: /
File: NH_PCB.sch
Title: JARVIS 2.0 – MCU
Size: A4
Date: 2017-07-31
Rev: 5
KiCad E.D.A. kicad 4.0.6
Id: 1/1