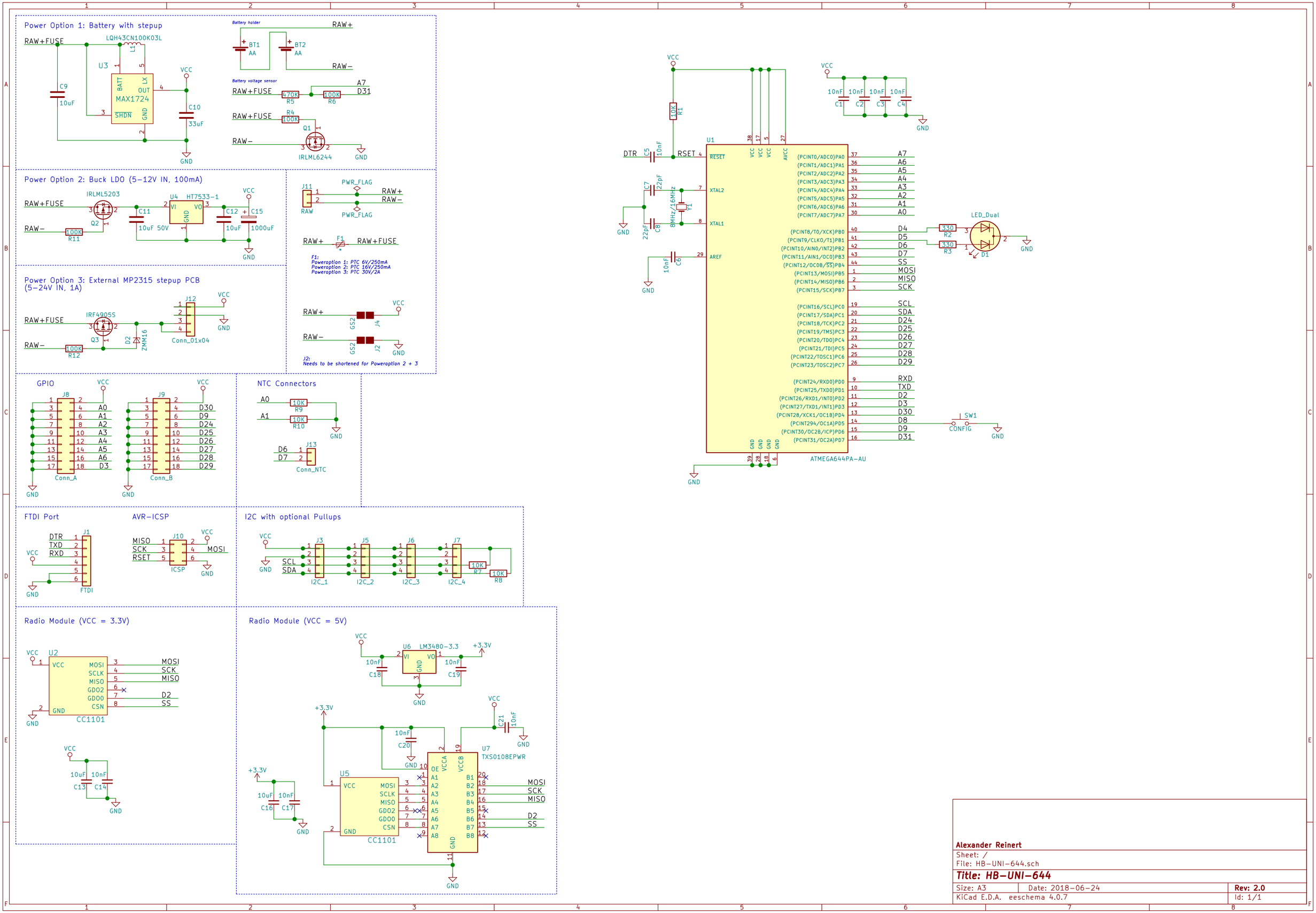
Power Option 1: Battery with stepup
RAW+FUSE
LQH43CN100K03L
L1
U3
MAX1724
BATT
LX
OUT
SHDN
GND
C9
10uF
C10
33uF
VCC
GND
Battery holder
BT1
AA
BT2
AA
RAW+
RAW−
Battery voltage sensor
RAW+FUSE
470K
R5
100K
R6
A7
D31
R4
100K
Q1
IRLML6244
Power Option 2: Buck LDO (5−12V IN, 100mA)
IRLML5203
Q2
U4
HT7533−1
VI
VO
GND
C11
10uF 50V
C12
10uF
C15
1000uF
R11
100K
J11
RAW
PWR_FLAG
F1
F1:
Poweroption 1: PTC 6V/250mA
Poweroption 2: PTC 16V/250mA
Poweroption 3: PTC 30V/2A
Power Option 3: External MP2315 stepup PCB
(5−24V IN, 1A)
IRF4905S
Q3
D2
ZMM16
R12
J12
Conn_01x04
GS2
J4
J2
J2:
Needs to be shortened for Poweroption 2 + 3
GPIO
J8
Conn_A
J9
Conn_B
NTC Connectors
R9
R10
J13
Conn_NTC
FTDI Port
DTR
TXD
RXD
J1
FTDI
AVR−ICSP
MISO
SCK
RSET
J10
ICSP
MOSI
I2C with optional Pullups
J3
J5
J6
J7
SCL
SDA
I2C_1
I2C_2
I2C_3
I2C_4
R7
R8
Radio Module (VCC = 3.3V)
U2
CC1101
C13
C14
Radio Module (VCC = 5V)
U6
LM3480−3.3
+3.3V
C18
C19
C20
C21
U5
C16
C17
U7
TXS0108EPWR
OE
VCCA
VCCB
A1
A2
A3
A4
A5
A6
A7
A8
B1
B2
B3
B4
B5
B6
B7
B8
U1
ATMEGA644PA−AU
RESET
XTAL2
XTAL1
AREF
RSET
DTR
C5
10nF
R1
10K
C7
22pF
C8
22pF
8MHz/16MHz
Y1
C6
10nF
C1
C2
C3
C4
LED_Dual
D1
R2
330
R3
330
SW1
CONFIG
D4
D5
D6
D7
SS
MOSI
MISO
SCK
SCL
SDA
D24
D25
D26
D27
D28
D29
RXD
TXD
D2
D3
D30
D8
D9
D31
A0
A1
A2
A3
A4
A5
A6
A7
(PCINT0/ADC0)PA0
(PCINT1/ADC1)PA1
(PCINT2/ADC2)PA2
(PCINT3/ADC3)PA3
(PCINT4/ADC4)PA4
(PCINT5/ADC5)PA5
(PCINT6/ADC6)PA6
(PCINT7/ADC7)PA7
(PCINT8/T0/XCK)PB0
(PCINT9/CLKO/T1)PB1
(PCINT10/AIN0/INT2)PB2
(PCINT11/AIN1/OC0)PB3
(PCINT12/OC0B/SS)PB4
(PCINT13/MOSI)PB5
(PCINT14/MISO)PB6
(PCINT15/SCK)PB7
(PCINT16/SCL)PC0
(PCINT17/SDA)PC1
(PCINT18/TCK)PC2
(PCINT19/TMS)PC3
(PCINT20/TDO)PC4
(PCINT21/TDI)PC5
(PCINT22/TOSC1)PC6
(PCINT23/TOSC2)PC7
(PCINT24/RXD0)PD0
(PCINT25/TXD0)PD1
(PCINT26/RXD1/INT0)PD2
(PCINT27/TXD1/INT1)PD3
(PCINT28/XCK1/OC1B)PD4
(PCINT294/OC1A)PD5
(PCINT30/OC2B/ICP)PD6
(PCINT31/OC2A)PD7
Alexander Reinert
Sheet: /
File: HB−UNI−644.sch
Title: HB−UNI−644
Size: A3
Date: 2018−06−24
Rev: 2.0
KiCad E.D.A. eeschema 4.0.7
Id: 1/1