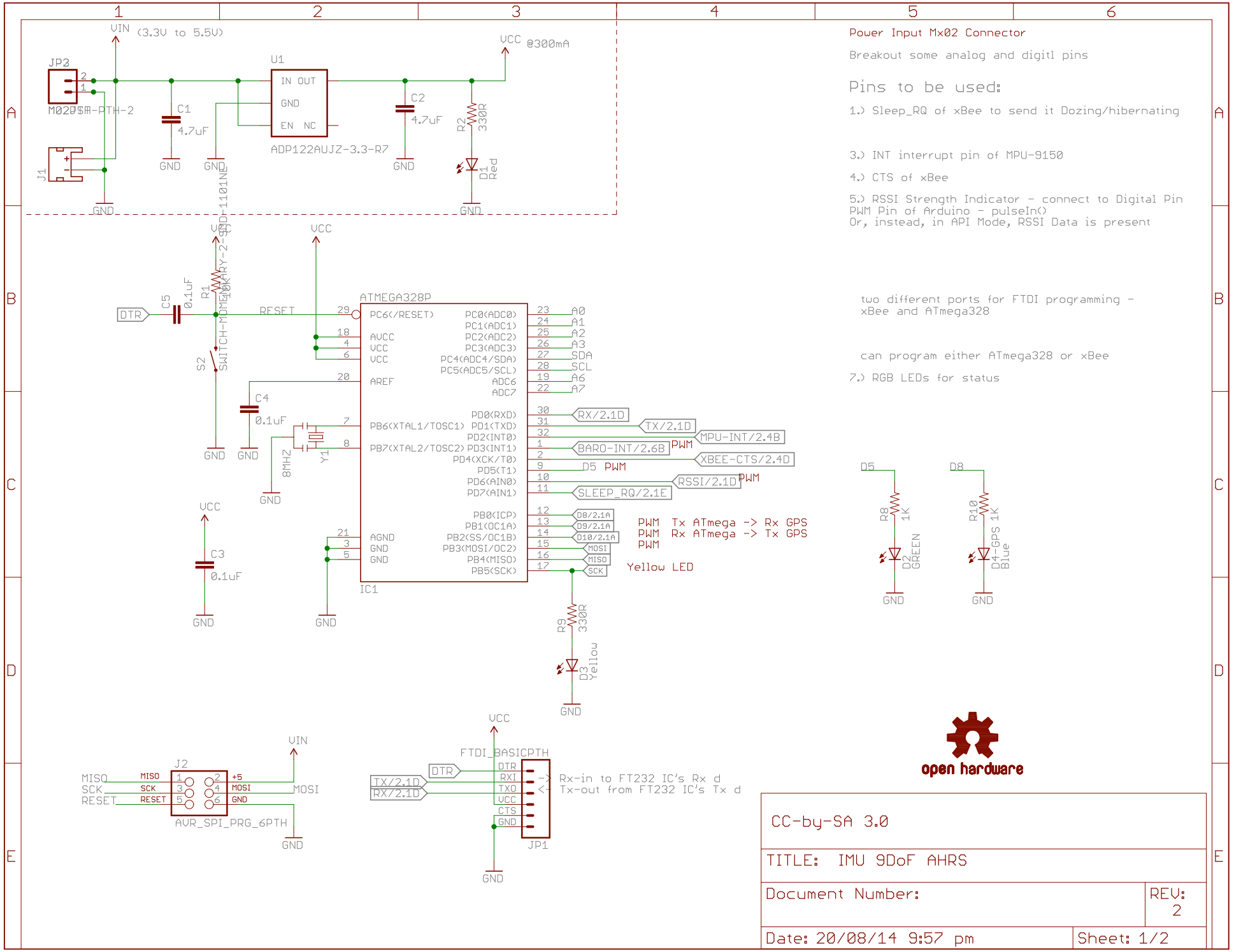
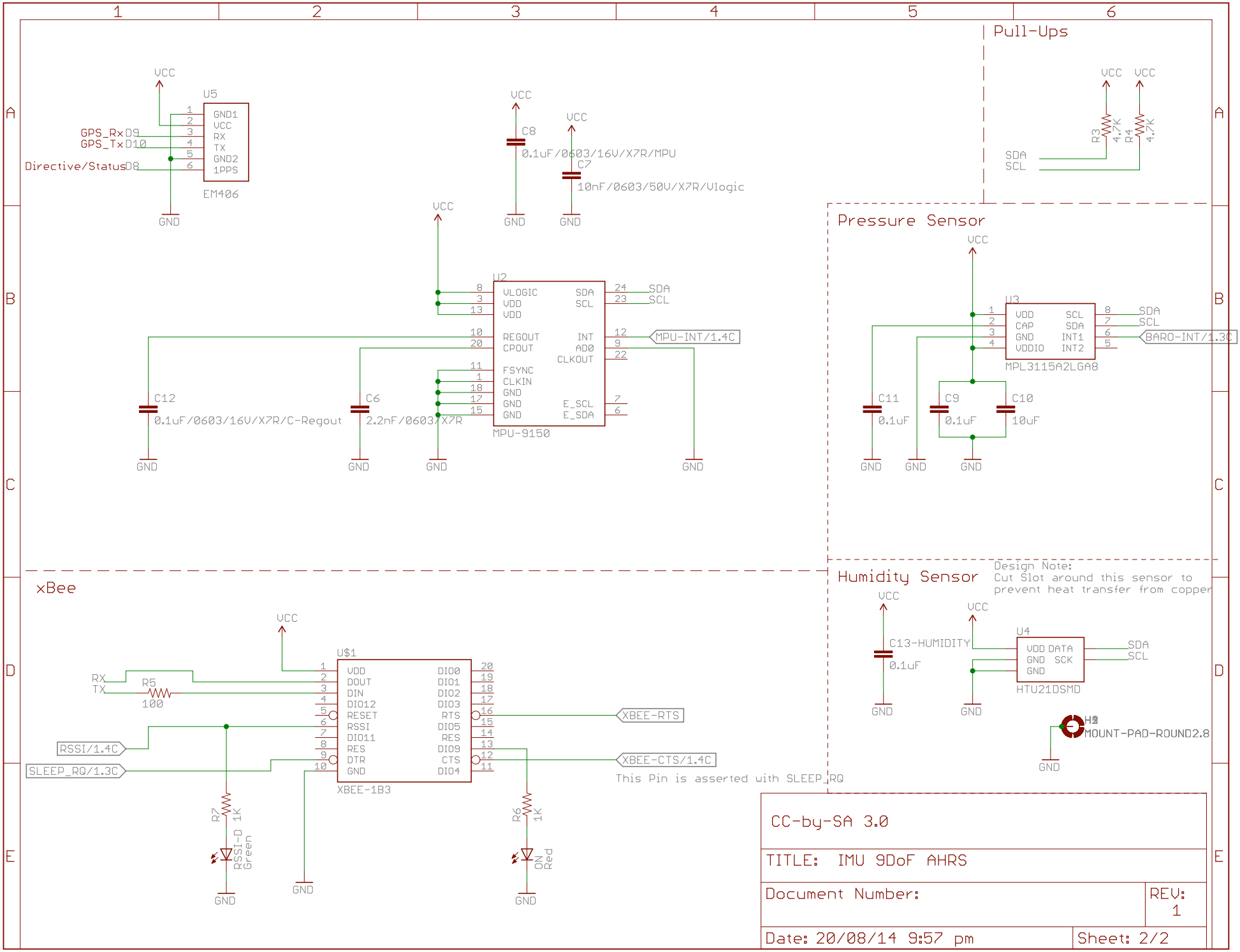

Power Input Mx02 Connector
Breakout some analog and digitl pins
Pins to be used:
1.) Sleep_RQ of xBee to send it Dozing/hibernating
3.) INT interrupt pin of MPU-9150
4.) CTS of xBee
5.) RSSI Strength Indicator - connect to Digital Pin PWM Pin of Arduino - pulseIn()
Or, instead, in API Mode, RSSI Data is present
two different ports for FTDI programming - xBee and ATmega328
can program either ATmega328 or xBee
7.) RGB LEDs for status
VIN (3.3V to 5.5V)
VCC @300mA
JP2
M02DSA-PTH-2
U1
IN OUT
GND
EN NC
ADP122AUJZ-3.3-R7
C1 4.7uF
C2 4.7uF
R2 330R
D1 Red
J1
GND
ATMEGA328P
IC1
PC6(/RESET)
AVCC
VCC
AREF
PC0(ADC0)
PC1(ADC1)
PC2(ADC2)
PC3(ADC3)
PC4(ADC4/SDA)
PC5(ADC5/SCL)
ADC6
ADC7
PD0(RXD)
PD1(TXD)
PD2(INT0)
PD3(INT1)
PD4(XCK/T0)
PD5(T1)
PD6(AIN0)
PD7(AIN1)
PB0(ICP)
PB1(OC1A)
PB2(SS/OC1B)
PB3(MOSI/OC2)
PB4(MISO)
PB5(SCK)
PB6(XTAL1/TOSC1)
PB7(XTAL2/TOSC2)
AGND
RESET
DTR
C5 0.1uF
R1 10K
S2 SWITCH-MOMENTARY-2-SMD-1101NE
C4 0.1uF
Y1 8MHZ
C3 0.1uF
A0
A1
A2
A3
SDA
SCL
A6
A7
RX/2.1D
TX/2.1D
MPU-INT/2.4B
BARO-INT/2.6B
XBEE-CTS/2.4D
D5 PWM
RSSI/2.1D
SLEEP_RQ/2.1E
D8/2.1A
D9/2.1A
D10/2.1A
MOSI
MISO
SCK
PWM Tx ATmega -> Rx GPS
PWM Rx ATmega -> Tx GPS
PWM
Yellow LED
R9 330R
D3 Yellow
D5
R8 1K
D2 GREEN
D8
R10 1K
D4-GPS Blue
J2
AVR_SPI_PRG_6PTH
MISO
SCK
RESET
+5
MOSI
GND
FTDI_BASICPTH
JP1
DTR
RXI
TXO
VCC
CTS
GND
Rx-in to FT232 IC's Rx d
Tx-out from FT232 IC's Tx d
open hardware
CC-by-SA 3.0
TITLE: IMU 9DoF AHRS
Document Number:
REV: 2
Date: 20/08/14 9:57 pm
Sheet: 1/2


Pull-Ups
VCC
VCC
VCC
R3
4.7K
R4
4.7K
SDA
SCL
U5
GND1
VCC
RX
TX
GND2
1PPS
EM406
GPS_Rx D9
GPS_Tx D10
Directive/Status D8
GND
VCC
C8
0.1uF/0603/16V/X7R/MPU
C7
10nF/0603/50V/X7R/Vlogic
GND
GND
VCC
U2
VLOGIC
VDD
VDD
REGOUT
CPOUT
FSYNC
CLKIN
GND
GND
GND
SDA
SCL
INT
AD0
CLKOUT
E_SCL
E_SDA
MPU-INT/1.4C
MPU-9150
C12
0.1uF/0603/16V/X7R/C-Regout
C6
2.2nF/0603/X7R
GND
GND
GND
GND
Pressure Sensor
VCC
U3
VDD
CAP
GND
VDDIO
SCL
SDA
INT1
INT2
SDA
SCL
BARO-INT/1.3C
MPL3115A2LGA8
C11
0.1uF
C9
0.1uF
C10
10uF
GND
GND
GND
Humidity Sensor
Design Note:
Cut Slot around this sensor to
prevent heat transfer from copper
VCC
VCC
C13-HUMIDITY
0.1uF
U4
VDD DATA
GND SCK
GND
SDA
SCL
HTU21DSMD
GND
GND
H2
MOUNT-PAD-ROUND2.8
GND
xBee
VCC
U$1
VDD
DOUT
DIN
DIO12
RESET
RSSI
DIO11
RES
DTR
GND
DIO0
DIO1
DIO2
DIO3
RTS
DIO5
RES
DIO9
CTS
DIO4
XBEE-1B3
RX
TX
R5
100
RSSI/1.4C
SLEEP_RQ/1.3C
XBEE-RTS
XBEE-CTS/1.4C
This Pin is asserted with SLEEP_RQ
R7
1K
RSSI-D
Green
GND
GND
R6
1K
ON
Red
GND
CC-by-SA 3.0
TITLE: IMU 9DoF AHRS
Document Number:
REV: 1
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