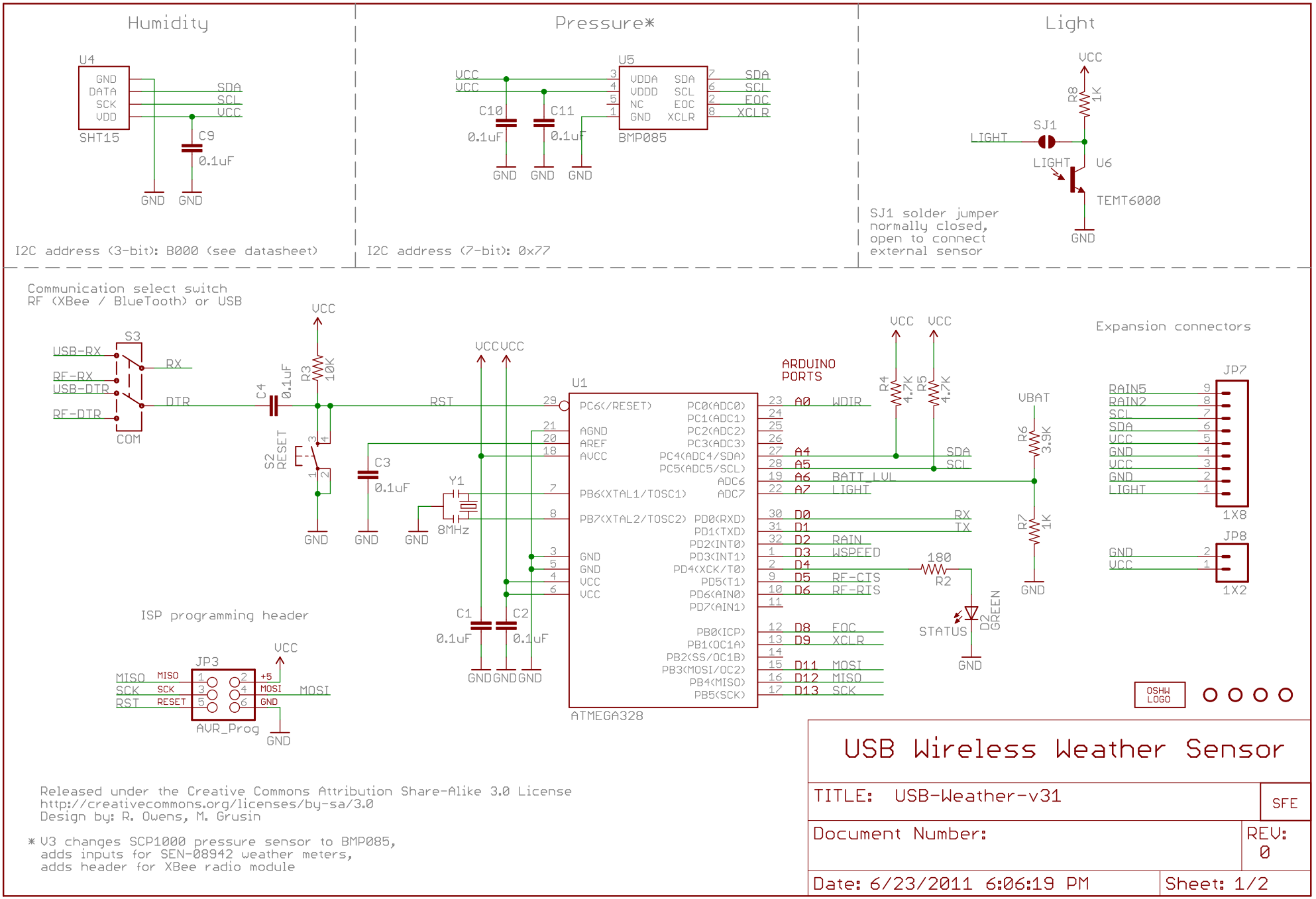
Humidity
U4
GND
DATA
SCK
VDD
SDA
SCL
VCC
SHT15
C9
0.1uF
GND GND
I2C address (3-bit): B000 (see datasheet)
Pressure*
U5
VCC
VCC
VDDA SDA
VDDD SCL
NC EOC
GND XCLR
SDA
SCL
EOC
XCLR
C10
C11
0.1uF
0.1uF
BMP085
GND GND GND
I2C address (7-bit): 0x77
Light
VCC
R8
1K
SJ1
LIGHT
LIGHT
U6
TEMT6000
GND
SJ1 solder jumper
normally closed,
open to connect
external sensor
Communication select switch
RF (XBee / BlueTooth) or USB
S3
USB-RX
RF-RX
USB-DTR
RF-DTR
RX
DTR
COM
VCC
C4
0.1uF
R3
10K
S2
RESET
RST
GND
C3
0.1uF
GND
Y1
8MHz
GND
VCC VCC
U1
PC6(/RESET)
AGND
AREF
AVCC
PB6(XTAL1/TOSC1)
PB7(XTAL2/TOSC2)
GND
GND
VCC
VCC
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)
ATMEGA328
ARDUINO
PORTS
A0 WDIR
A4 SDA
A5 SCL
A6 BATT_LVL
A7 LIGHT
D0 RX
D1 TX
D2 RAIN
D3 WSPEED
D4
D5 RF-CTS
D6 RF-RTS
D8 EOC
D9 XCLR
D11 MOSI
D12 MISO
D13 SCK
VCC VCC
R4
4.7K
R5
4.7K
VBAT
R6
3.9K
R7
1K
GND
180
R2
STATUS
D2
GREEN
GND
C1
C2
0.1uF
0.1uF
GND GND GND
ISP programming header
JP3
MISO
SCK
RST
MISO
SCK
RESET
+5
MOSI
GND
MOSI
VCC
AVR_Prog
GND
Expansion connectors
JP7
RAIN5
RAIN2
SCL
SDA
VCC
GND
VCC
GND
LIGHT
1X8
JP8
GND
VCC
1X2
OSHW LOGO
USB Wireless Weather Sensor
TITLE: USB-Weather-v31
SFE
Document Number:
REV: 0
Date: 6/23/2011 6:06:19 PM
Sheet: 1/2
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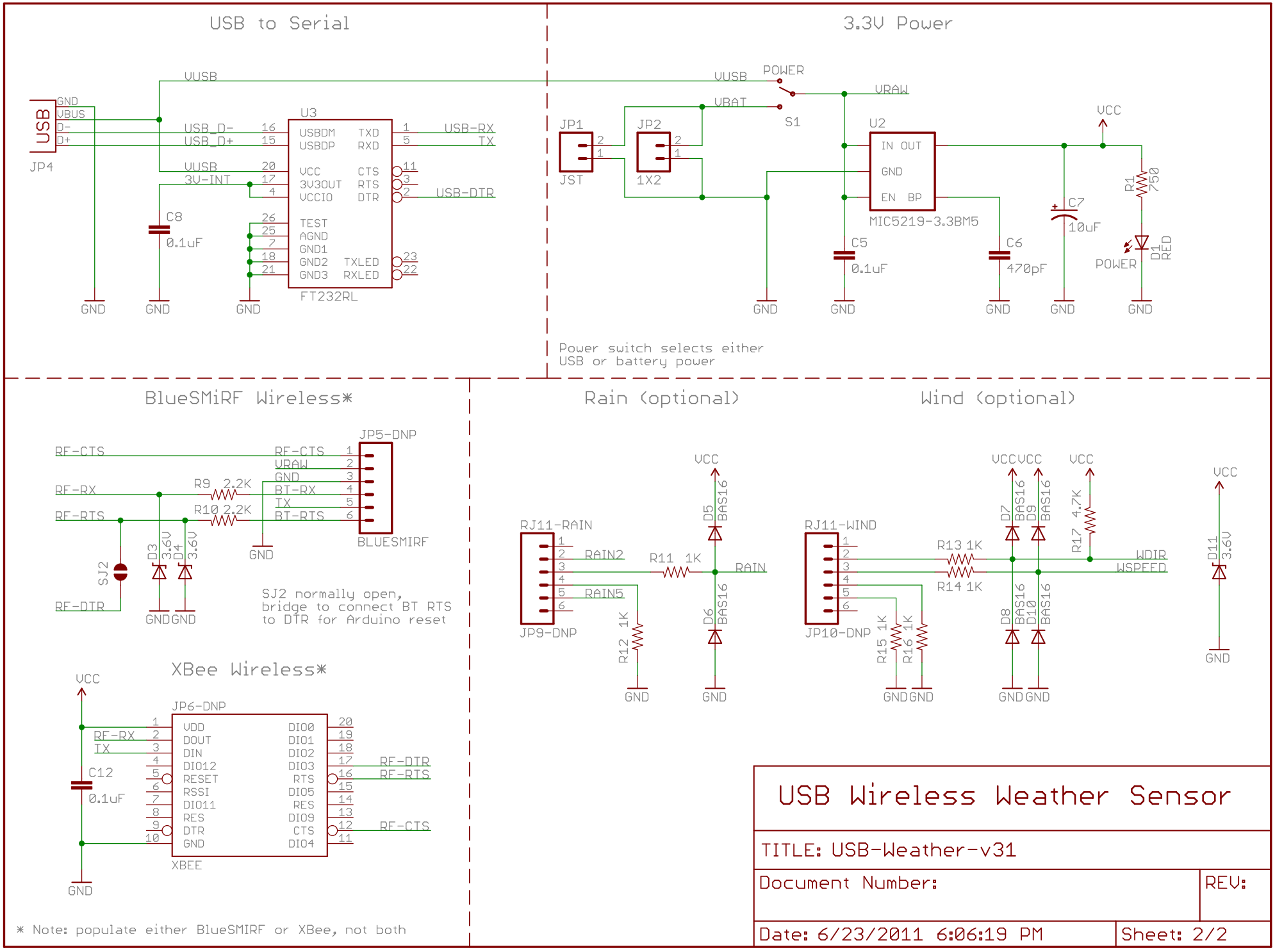
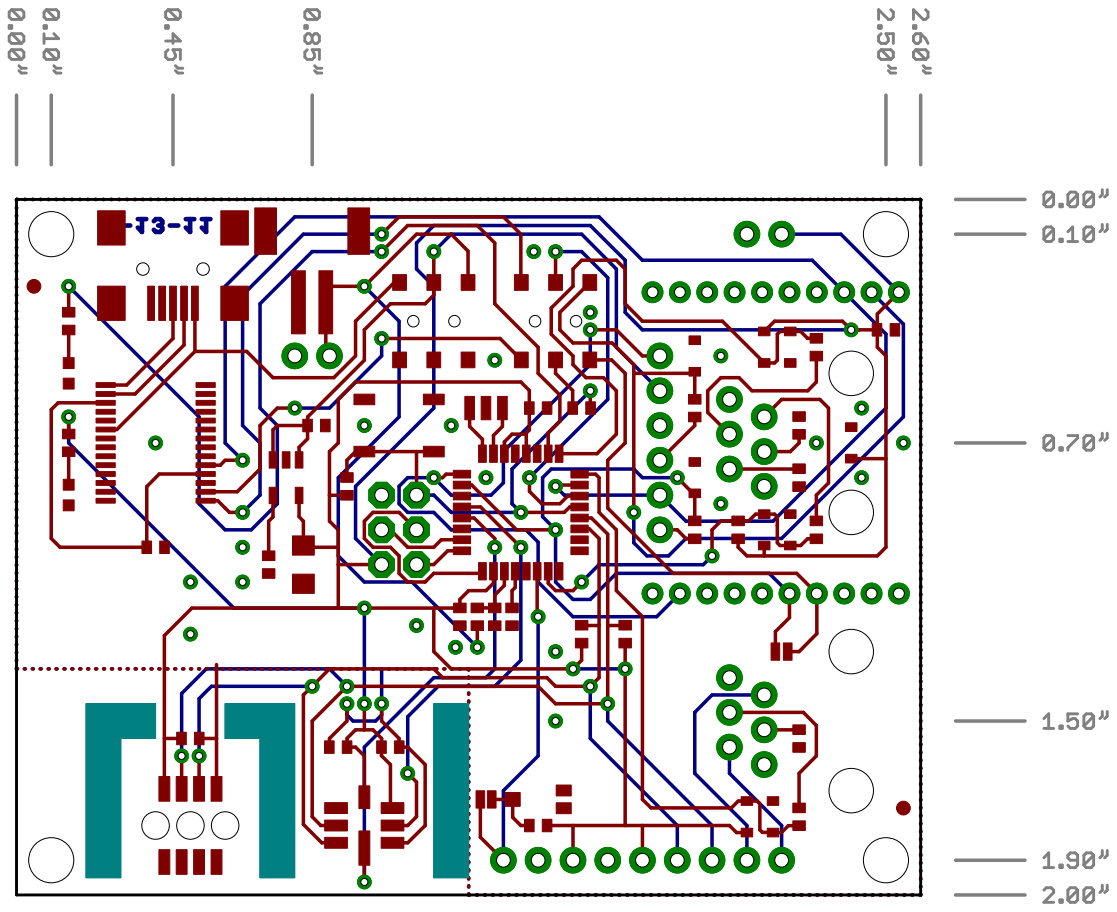
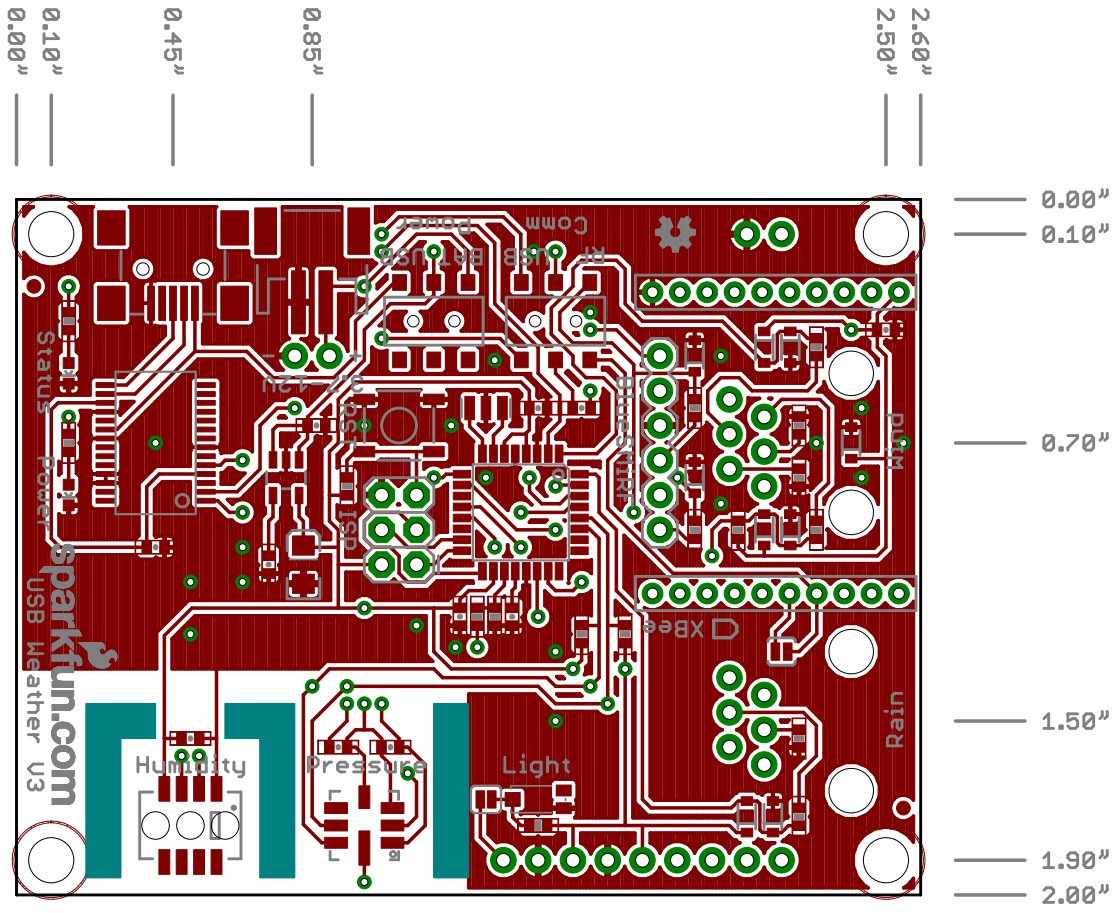
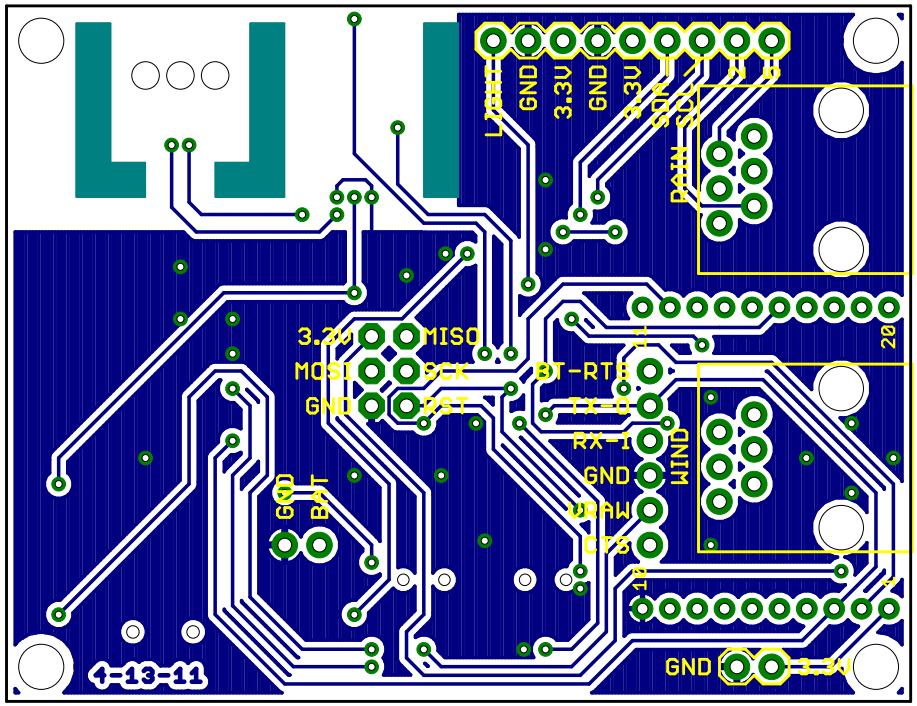
http://creativecommons.org/licenses/by-sa/3.0
Design by: R. Owens, M. Grusin
* V3 changes SCP1000 pressure sensor to BMP085,
adds inputs for SEN-08942 weather meters,
adds header for XBee radio module


USB to Serial
VUSB
USB
GND
VBUS
D-
D+
JP4
USB_D-
USB_D+
VUSB
3V-INT
U3
USBDM
USBDP
VCC
3V3OUT
VCCIO
TEST
AGND
GND1
GND2
GND3
TXD
RXD
CTS
RTS
DTR
TXLED
RXLED
FT232RL
USB-RX
TX
USB-DTR
C8
0.1uF
3.3V Power
VUSB
VBAT
POWER
S1
VRAW
JP1
JST
JP2
1X2
U2
IN OUT
GND
EN BP
MIC5219-3.3BM5
VCC
C5
0.1uF
C6
470pF
C7
10uF
R1
750
POWER
D1
RED
Power switch selects either
USB or battery power
BlueSMiRF Wireless*
JP5-DNP
RF-CTS
VRAW
GND
BT-RX
TX
BT-RTS
RF-RX
RF-RTS
R9 2.2K
R10 2.2K
BLUESMIRF
SJ2
RF-DTR
D3 3.6V
D4 3.6V
SJ2 normally open,
bridge to connect BT RTS
to DTR for Arduino reset
XBee Wireless*
JP6-DNP
VDD
DOUT
DIN
DIO12
RESET
RSSI
DIO11
RES
DTR
DIO0
DIO1
DIO2
DIO3
RTS
DIO5
RES
DIO9
CTS
DIO4
XBEE
C12
0.1uF
Rain (optional)
RJ11-RAIN
JP9-DNP
RAIN2
RAIN5
R11 1K
R12 1K
RAIN
D5 BAS16
D6 BAS16
Wind (optional)
RJ11-WIND
JP10-DNP
R13 1K
R14 1K
R15 1K
R16 1K
R17 4.7K
WDIR
WSPEED
D7 BAS16
D9 BAS16
D8 BAS16
D10 BAS16
D11 3.6V
* Note: populate either BlueSMIRF or XBee, not both
USB Wireless Weather Sensor
TITLE: USB-Weather-v31
Document Number:
REV:
Date: 6/23/2011 6:06:19 PM
Sheet: 2/2


0.00"
0.10"
0.45"
0.85"
2.50"
2.60"
0.00"
0.10"
0.70"
1.50"
1.90"
2.00"


0.00"
0.10"
0.45"
0.85"
2.50"
2.60"
0.00"
0.10"
0.70"
1.50"
1.90"
2.00"
Comm
Power
Status
Power
USB Weather V3
sparkfun.com
Humidity
Pressure
Light
Rain
Wind
XBee


LIGHT
GND
3.3V
GND
3.3V
SDA
SCL
RAIN
WIND
3.3V
MISO
MOSI
SCK
GND
RST
BT-RTS
TX-O
RX-I
GND
VBAT
CTS
GND
BAT
4-13-11
GND
3.3V