New on v3:
  Change to ATmega32U4
  Switch to microUSB
  Change to 8MHz Xtal
  Add battery voltage detect
  Add Charge Status to ATmega
  Update reset switch
  Removed FTDI Connection
  Re-arranged and re-named SPI pins
  Re-ordered Analog pins
  Changed PWM pin designator to ~
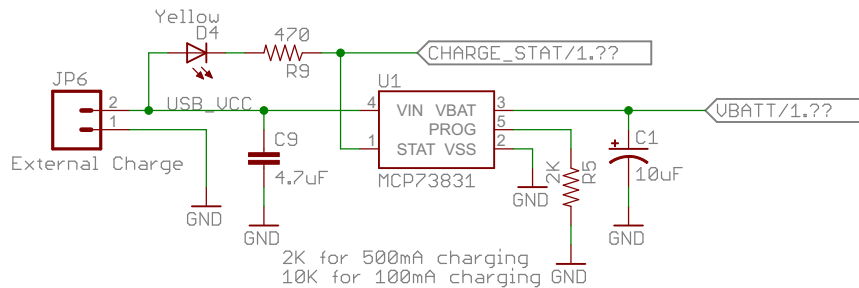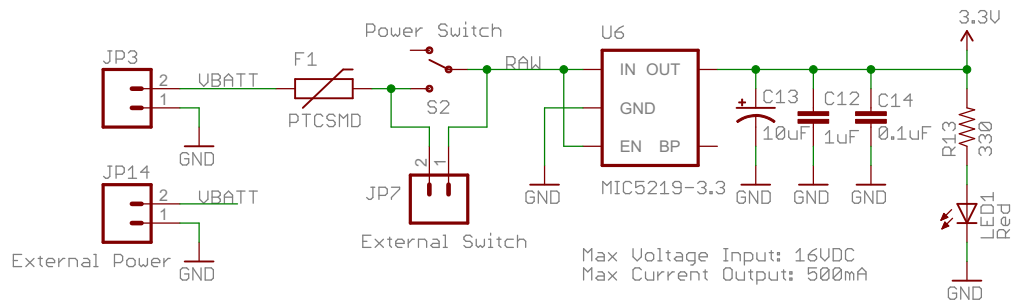 Changed VCC to 3.3V

New on v31:

CHARGE_STAT/2.??

3.3V

U4
XBEE

1	VDD	DIO0	20
2	DOUT	DIO1	19
3	DIN	DIO2	18
4	DIO12	DIO3	17
5	RESET	RTS	16
6	RSSI	DIO5	15
7	DIO11	RES	14
8	RES	DIO9	13
9	DTR	CTS	12
10	GND	DIO4	11

RXI
TXO
R8 100

VBATT/2.??
VBATT_LVL
TP1
RSSI

SLEEP_RQ

R14 1k
R15 1k

R2 330

D2 Green

GND

GND

SOLDERJUMPERNC
SJ1
DTR

ASSOCIATE
TP2
ON

R3 330
R1 330

D3 Red
D1 Yellow

GND GND

CTS
JP8

SLEEP_RQ
JP9

3.3V

R6 10K
RST
S3 Reset
GND

3.3V

U5
ATMEGA32U4

13	RESET	PF7(ADC7)	36	A0
14	VCC	PF6(ADC6)	37	A1
34	VCC	PF5(ADC5)	38	A2
24	AVCC	PF4(ADC4)	39	A3
44	AVCC	PF1(ADC1)	40	A4
42	AREF	PF0(ADC0)	41	A5

7	VBUS	PD2(RX)	20	D0
2	UVCC	PD3(TX)	21	D1
6	UCAP	PD1(SDA)	19	D2
		PD0(SCL)	18	D3#
4	D+	PD4(ADC8)	25	D4/A6
3	D-	PC6	31	D5#
		PD7(ADC10)	27	D6#/A7
		PE6	1	D7
17	XTAL1	PB4(ADC11)	28	D8
16	XTAL2	PB5(ADC12)	29	D9#/A8
		PB6(ADC13)	30	D10#
		PB7	12	D11#
33	PE2/HWB	PD6(ADC9)	26	D12/A10
		PC7	32	D13#/2.??
5	UGND	PB0(SS)	8	D14/RX LED
15	GND	PB1(SCK)	9	D15
23	GND	PB2(MOSI)	10	D16
35	GND	PB3(MISO)	11	D17
43	GND	PD5	22	TXLED

USB_VCC

C11 1uF
C4 0.1uF
USB_VCC

C8 1uF

GND

C5 22pF
Y2 8MHz
C7 22pF

AREF

GND GND

GND

VBATT
CHARGE_STAT/2.??

SCK
MOSI
MISO

TX LED

D5 Yellow
D6 Blue

R7 330
R10 330

GND GND

X2
USB_MICROB_PLUGCONN-11752

| VBUS |
| D- |
| D+ |
| ID |
| GND |
| D-1 |
| D+1 |
| ID1 |
| GND1 |

USB_VCC/2.??
R12 22
R11 22

D-
D+

GND

M14   M14

JP1

1	
2	GND/2.??
3	D2
4	D3
5	D4
6	D5
7	D6
8	D7
9	D8
10	D9
11	D10
12	D11
13	D14
14	SCK

3.3V

JP2

2	AREF
3	3.3V/2.??
4	RXI
5	TXO
6	RST
7	A5
8	A4
9	A3
10	A2
11	A1
12	A0
13	MISO
14	MOSI
1	GND/2.??

JP4
AVR_SPI

MISO	MISO	1	2	+5
SCK	SCK	3	4	MOSI	MOSI
RST	RESET	5	6	GND

3.3V

GND

open hardware

FIO_LOGO

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TITLE: Arduino-Fio_v31   SFE

Design by: Shigeru Kobayashi
N. Seidle Revision By: Klopfenstein

REV: v31

Date: 2/5/2014 12:32:56 PM   Sheet: 1/2

SJ2
USB Power

RAW ─────◖◗───── USB_VCC/1.??

Cut this jumper if powering the board with more than 5.5V

Power Switch

JP3
2 VBATT
1
GND

F1
PTCSMD

S2

JP7
2
1

External Switch

RAW

U6
IN OUT
GND
EN BP

MIC5219-3.3

GND

3.3V

C13   C12   C14
10uF   1uF   0.1uF

GND   GND   GND

R13
330

LED1
Red

GND

Max Voltage Input: 16VDC
Max Current Output: 500mA

JP14
2 VBATT
1
GND

External Power

Yellow
D4   470
            R9

CHARGE_STAT/1.??

JP6
2 USB_VCC
1

External Charge

C9
4.7uF

GND

GND

U1
4 VIN VBAT 3
   PROG
1 STAT VSS   5
          2

MCP73831

GND

2K
R5

VBATT/1.??

C1
10uF

GND

GND

2K for 500mA charging
10K for 100mA charging

TITLE: Arduino-Fio_v31

Design by:

REV:

Date: 2/5/2014 12:32:56 PM

Sheet: 2/2