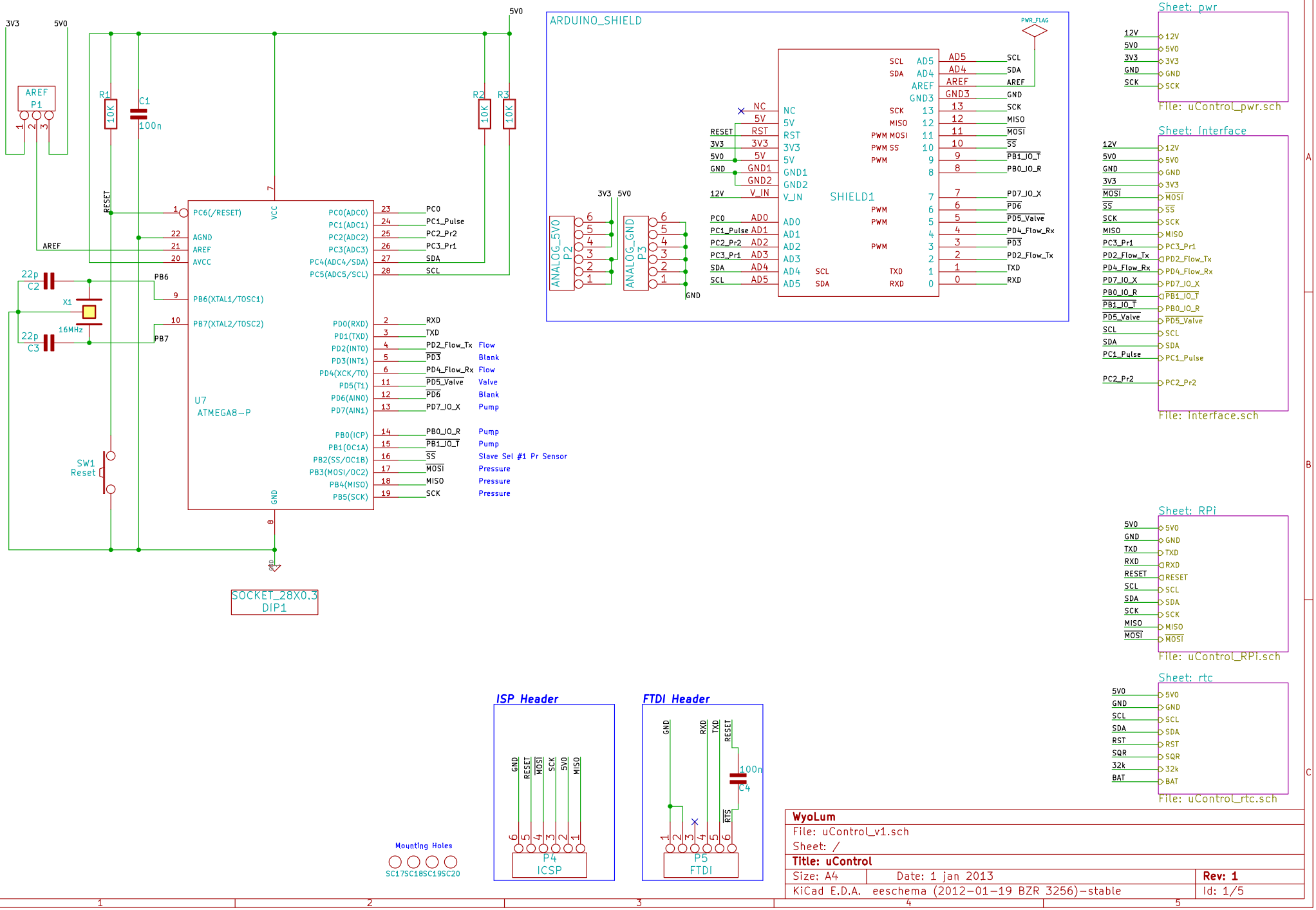
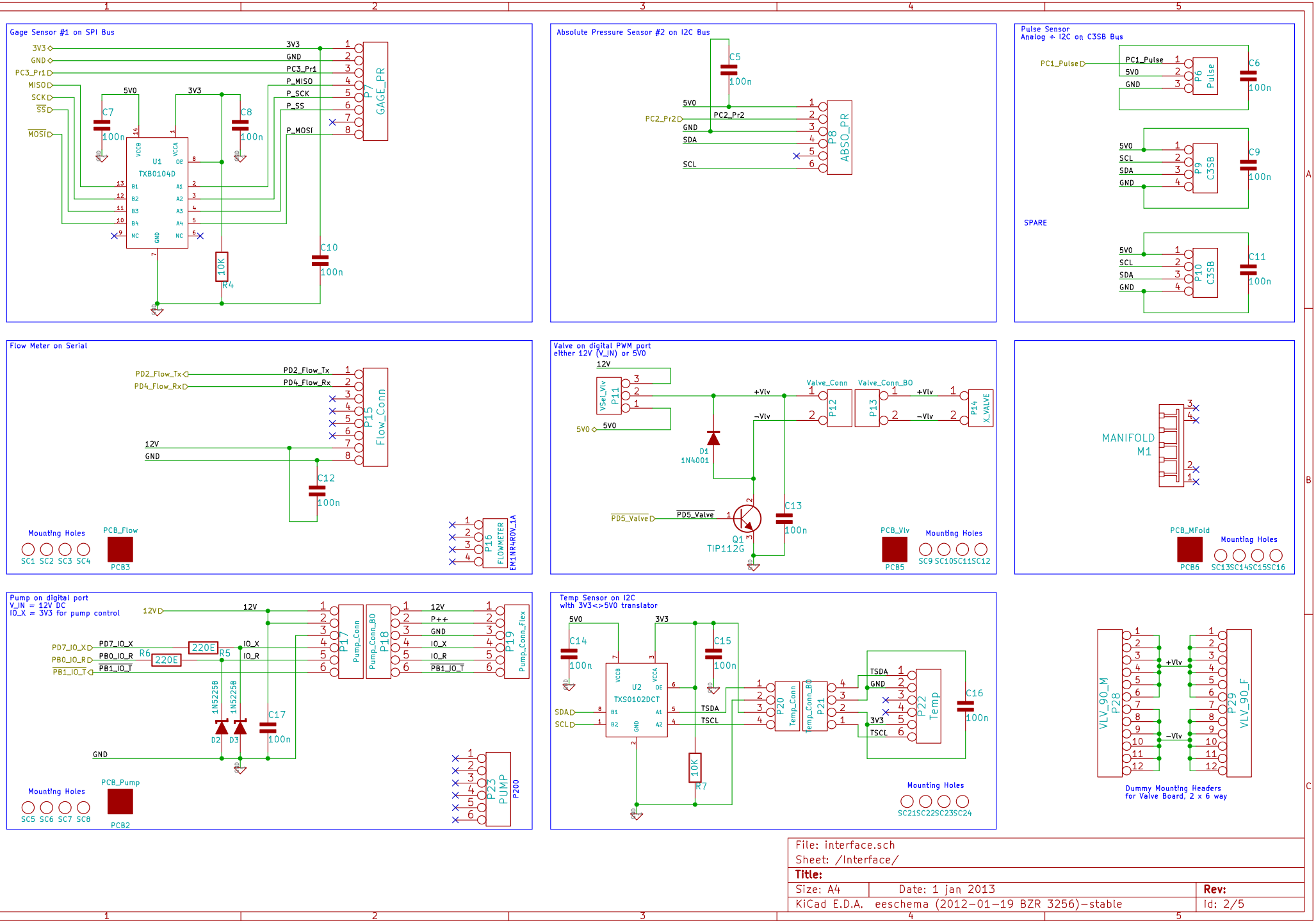
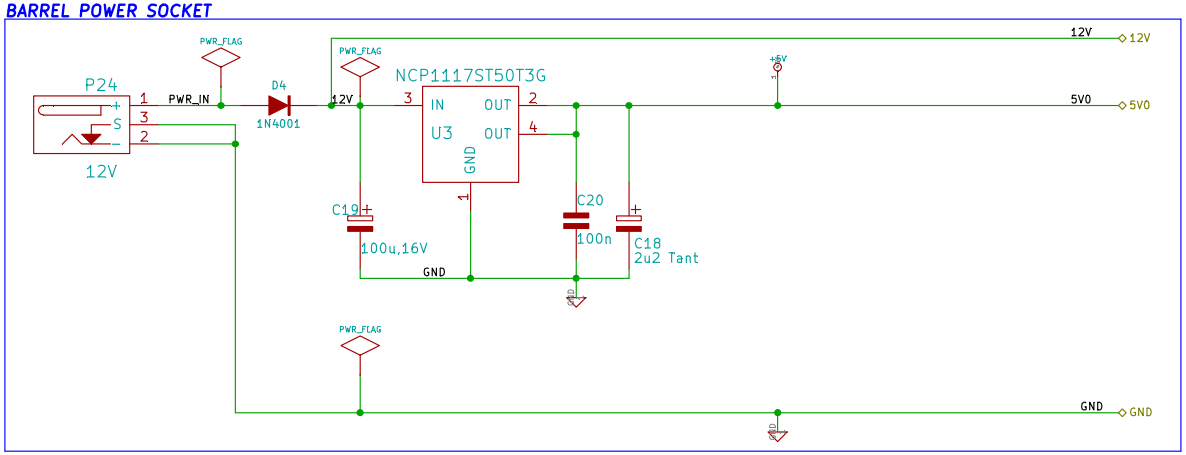
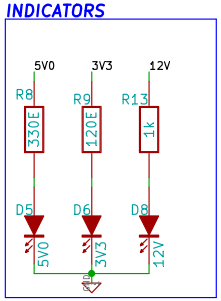

3V3
5V0
AREF
P1
R1
10K
C1
100n
R2
10K
R3
10K
RESET
AREF
22p
C2
X1
16MHz
22p
C3
PB6
PB7
SW1
Reset
U7
ATMEGA8-P
PC6(/RESET)
AGND
AREF
AVCC
PB6(XTAL1/TOSC1)
PB7(XTAL2/TOSC2)
VCC
GND
PC0(ADC0)
PC1(ADC1)
PC2(ADC2)
PC3(ADC3)
PC4(ADC4/SDA)
PC5(ADC5/SCL)
PD0(RXD)
PD1(TXD)
PD2(INT0)
PD3(INT1)
PD4(XCK/T0)
PD5(T1)
PD6(AIN0)
PD7(AIN1)
PB0(ICP)
PB1(OC1A)
PB2(SS/OC1B)
PB3(MOSI/OC2)
PB4(MISO)
PB5(SCK)
PC0
PC1_Pulse
PC2_Pr2
PC3_Pr1
SDA
SCL
RXD
TXD
PD2_Flow_Tx
PD3
PD4_Flow_Rx
PD5_Valve
PD6
PD7_IO_X
PB0_IO_R
PB1_IO_T
SS
MOSI
MISO
SCK
Flow
Blank
Flow
Valve
Blank
Pump
Pump
Pump
Slave Sel #1 Pr Sensor
Pressure
Pressure
Pressure
SOCKET_28X0.3
DIP1
ARDUINO_SHIELD
PWR_FLAG
ANALOG_5V0
P2
ANALOG_GND
P3
SHIELD1
NC
5V
RST
3V3
GND1
GND2
V_IN
AD0
AD1
AD2
AD3
AD4
AD5
SCL
SDA
AREF
GND3
SCK
MISO
PWM MOSI
PWM SS
PWM
TXD
RXD
PD7_IO_X
PD6
PD5_Valve
PD4_Flow_Rx
PD3
PD2_Flow_Tx
TXD
RXD
Sheet: pwr
12V
5V0
3V3
GND
SCK
File: uControl_pwr.sch
Sheet: Interface
MOSI
SS
PC3_Pr1
PD2_Flow_Tx
PD4_Flow_Rx
PD7_IO_X
PB0_IO_R
PB1_IO_T
PD5_Valve
PC1_Pulse
PC2_Pr2
File: interface.sch
Sheet: RPi
RESET
File: uControl_RPi.sch
Sheet: rtc
RST
SQR
32k
BAT
File: uControl_rtc.sch
ISP Header
P4
ICSP
FTDI Header
100n
C4
RTS
P5
FTDI
Mounting Holes
SC17SC18SC19SC20
WyoLum
File: uControl_v1.sch
Sheet: /
Title: uControl
Size: A4
Date: 1 jan 2013
Rev: 1
KiCad E.D.A. eeschema (2012-01-19 BZR 3256)-stable
Id: 1/5


Gage Sensor #1 on SPI Bus
3V3
GND
PC3_Pr1
MISO
SCK
SS
MOSI
5V0
3V3
C7
100n
C8
100n
U1
TXB0104D
VCCB
VCCA
OE
B1
B2
B3
B4
A1
A2
A3
A4
NC
GND
10K
R4
C10
100n
P7
GAGE_PR
3V3
GND
PC3_Pr1
P_MISO
P_SCK
P_SS
P_MOSI
Absolute Pressure Sensor #2 on I2C Bus
C5
100n
5V0
PC2_Pr2
GND
SDA
SCL
P8
ABSO_PR
Pulse Sensor
Analog + I2C on C3SB Bus
PC1_Pulse
5V0
GND
P6
Pulse
C6
100n
5V0
SCL
SDA
GND
P9
C3SB
C9
100n
SPARE
5V0
SCL
SDA
GND
P10
C3SB
C11
100n
Flow Meter on Serial
PD2_Flow_Tx
PD4_Flow_Rx
12V
GND
P15
Flow_Conn
C12
100n
Mounting Holes
SC1 SC2 SC3 SC4
PCB_Flow
PCB3
P16
FLOWMETER
EM1NR4ROV_1A
Valve on digital PWM port
either 12V (V_IN) or 5V0
12V
VSel_Vlv
P11
5V0
5V0
+Vlv
-Vlv
Valve_Conn
Valve_Conn_BO
P12
P13
P14
X_VALVE
D1
1N4001
PD5_Valve
PD5_Valve
Q1
TIP112G
C13
100n
PCB_Vlv
PCB5
Mounting Holes
SC9 SC10SC11SC12
MANIFOLD
M1
PCB_MFold
PCB6
Mounting Holes
SC13SC14SC15SC16
Pump on digital port
V_IN = 12V DC
IO_X = 3V3 for pump control
12V
12V
PD7_IO_X
PB0_IO_R
PB1_IO_T
R6
220E
R5
220E
IO_X
IO_R
P17
Pump_Conn
Pump_Conn_BO
P18
12V
P++
GND
IO_X
IO_R
PB1_IO_T
P19
Pump_Conn_Flex
1N5225B
1N5225B
D2
D3
C17
100n
GND
Mounting Holes
SC5 SC6 SC7 SC8
PCB_Pump
PCB2
P23
PUMP
P200
Temp Sensor on I2C
with 3V3<>5V0 translator
5V0
3V3
C14
100n
C15
100n
U2
TXS0102DCT
VCCB
VCCA
OE
B1
B2
A1
A2
GND
SDA
SCL
TSDA
TSCL
10K
R7
P20
Temp_Conn
Temp_Conn_BO
P21
P22
Temp
TSDA
GND
3V3
TSCL
C16
100n
Mounting Holes
SC21SC22SC23SC24
VLV_90_M
P28
+Vlv
-Vlv
P29
VLV_90_F
Dummy Mounting Headers
for Valve Board, 2 x 6 way
File: interface.sch
Sheet: /Interface/
Title:
Size: A4
Date: 1 jan 2013
Rev:
KiCad E.D.A. eeschema (2012-01-19 BZR 3256)-stable
Id: 2/5

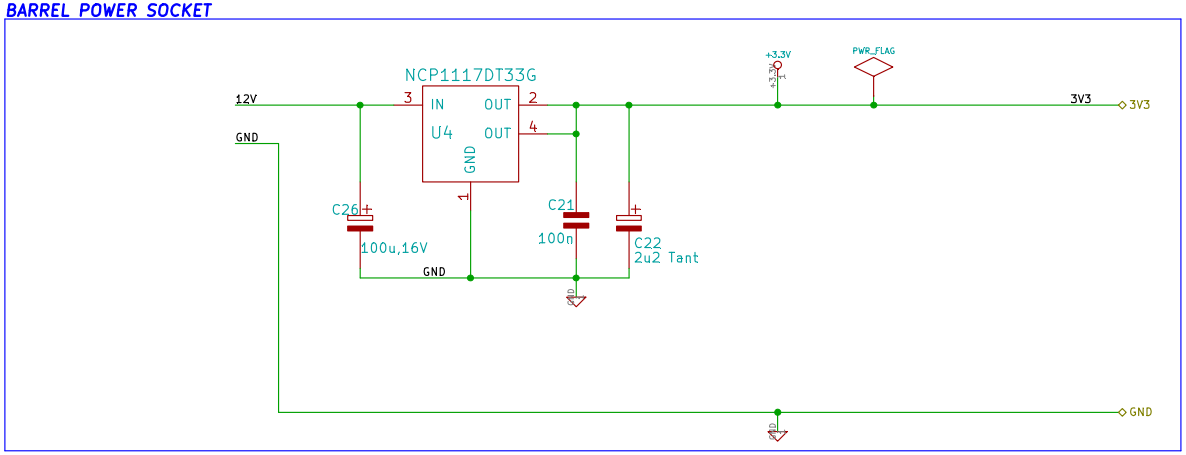
BARREL POWER SOCKET



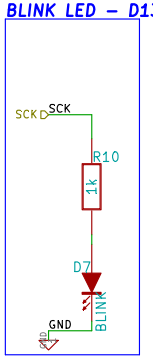
INDICATORS



BARREL POWER SOCKET



BLINK LED – D13



Logo_Wyolum

G1
Logo_Wyolum

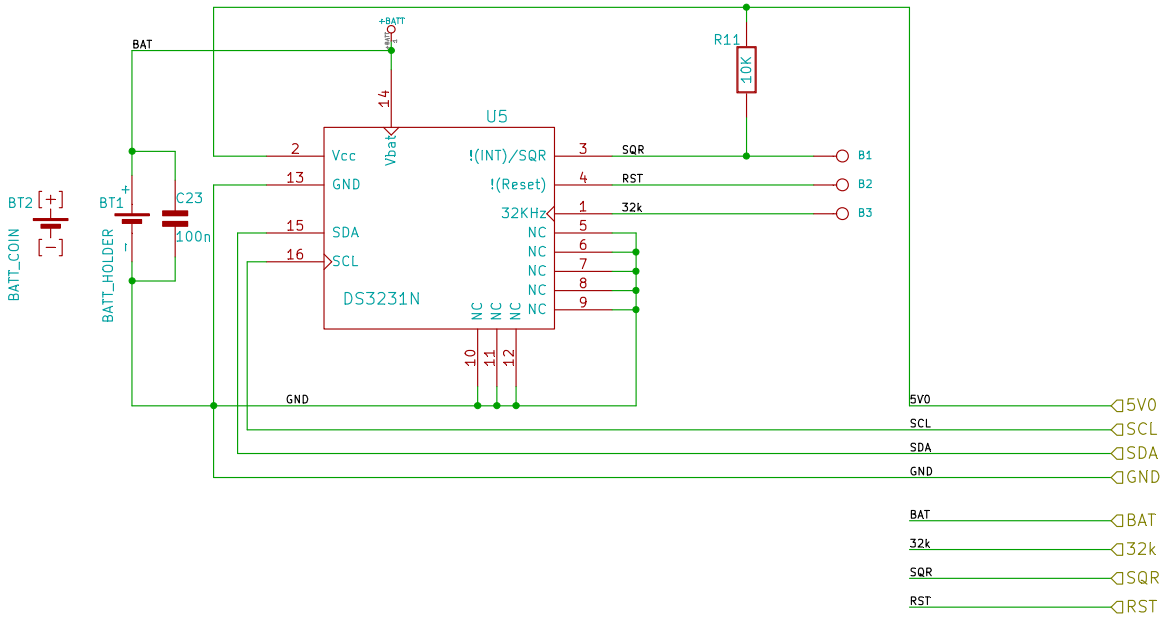
G2
Logo_OH

G3
Logo_OH

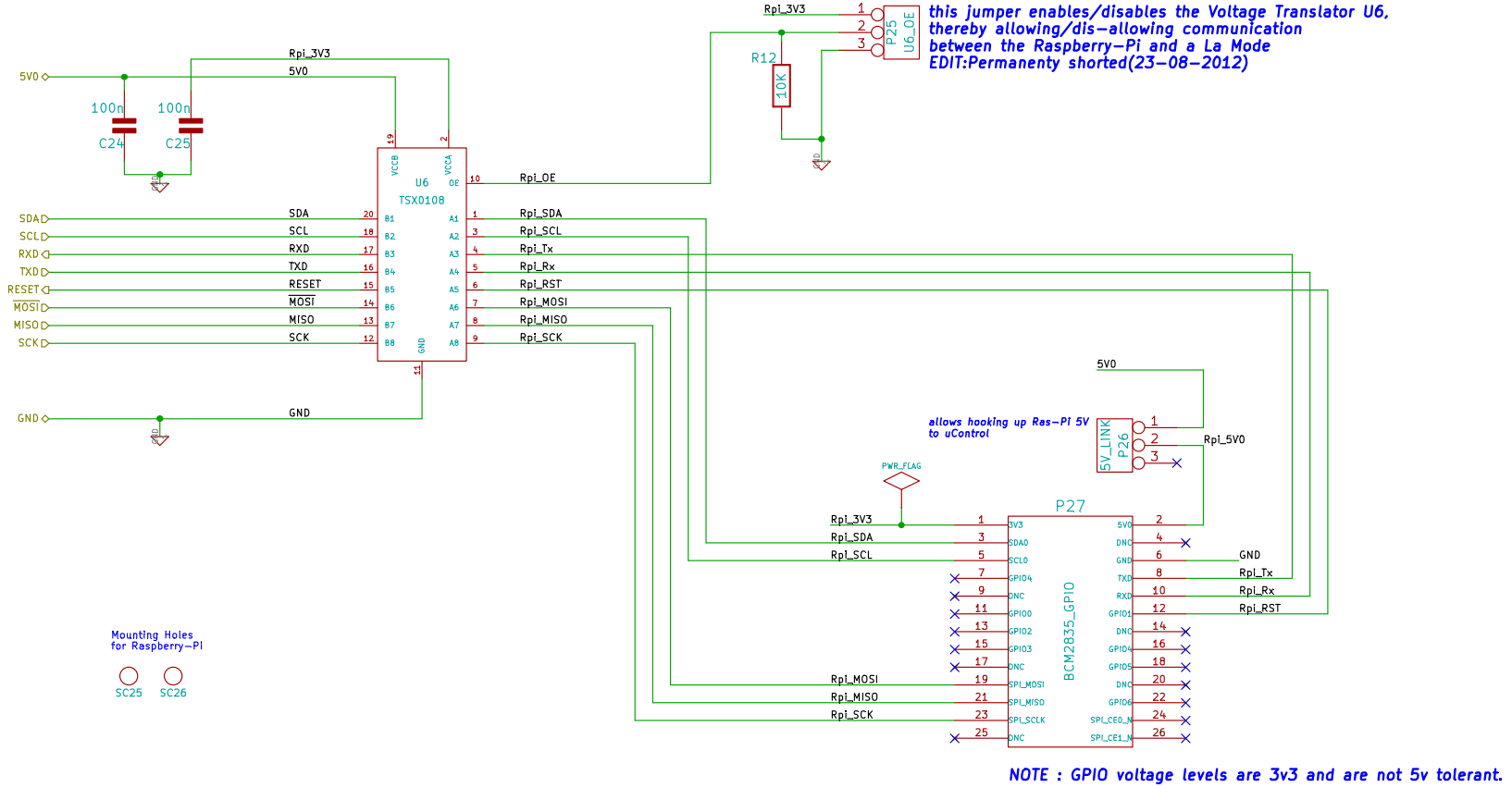
G4
PCB

PCB1

WyoLum		
File: uControl_pwr.sch		
Sheet: /pwr/		
Title: uControl		
Size: A4	Date: 1 jan 2013	**Rev: 1**
KiCad E.D.A. eeschema (2012-01-19 BZR 3256)-stable		Id: 3/5



WyoLum		
File: uControl_rtc.sch		
Sheet: /rtc/		
Title: uControl		
Size: A4	Date: 1 jan 2013	**Rev: 1**
KiCad E.D.A. eeschema (2012-01-19 BZR 3256)-stable		Id: 4/5



WyoLum		
File: uControl_RPi.sch		
Sheet: /RPi/		
Title: uControl		
Size: A4	Date: 1 jan 2013	**Rev: 1**
KiCad E.D.A. eeschema (2012-01-19 BZR 3256)-stable		Id: 5/5