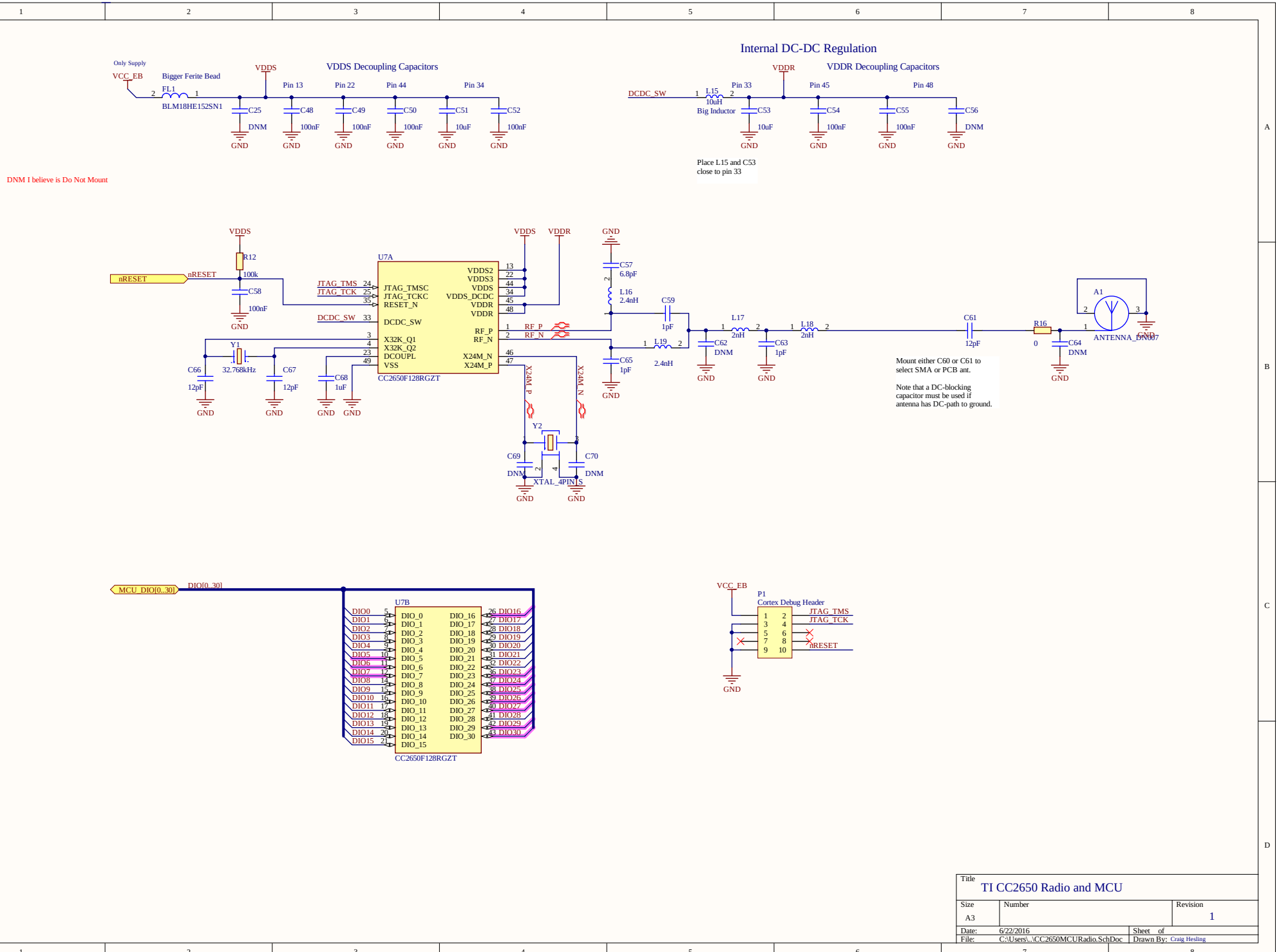


Title	TI CC2650 Radio and MCU	
Size: A3	Number:	Revision: 1
Date: 6/22/2016	Sheet of	
File: C:\Users\...\CC2650MCURadio.SchDoc	Drawn By: Craig Hesling	

TODO: Connect USB Shielding

P2
609-4613-1-ND

Shield6
Shield5
Shield4
Shield3
Shield2
Shield1
GND
ID
D+
D-
VCC
Pin5
Pin4
Pin3
Pin2
Pin1
USB_D_P
USB_D_N

GND
L20
62 Ω
1
2
USB_5V

C71
100pF
C72
100pF
GND
GND

FTDI_VIO
VIO used for CBUS and UART IO

FTDI_3V3
C73
100pF
GND

U8
FT232RQ-Tube

16 3V3OUT
VCC 19
VCCIO 1
15 USBDM
14 USBDP
18 RESET
27 OSCI
28 OSCO
26 TEST
AGND 24
GND 4
GND 17
GND 20
GND 33

TXD 30 FTDI_TX
RXD 2 FTDI_RX
DTR 31 FTDI_DTR
DSR 6
RTS 32 FTDI_RTS
CTS 8 FTDI_CTS
DCD 7
RI 3

CBUS0 22 CBUS0
CBUS1 21 CBUS1
CBUS2 10 CBUS2
CBUS3 11 CBUS3
CBUS4 9 CBUS4

NC 23
NC 25
NC 13
NC 12
NC 5
NC 29

Internal Pullup
Use Internal Oscillator

GND
GND

CBUS[0..4]

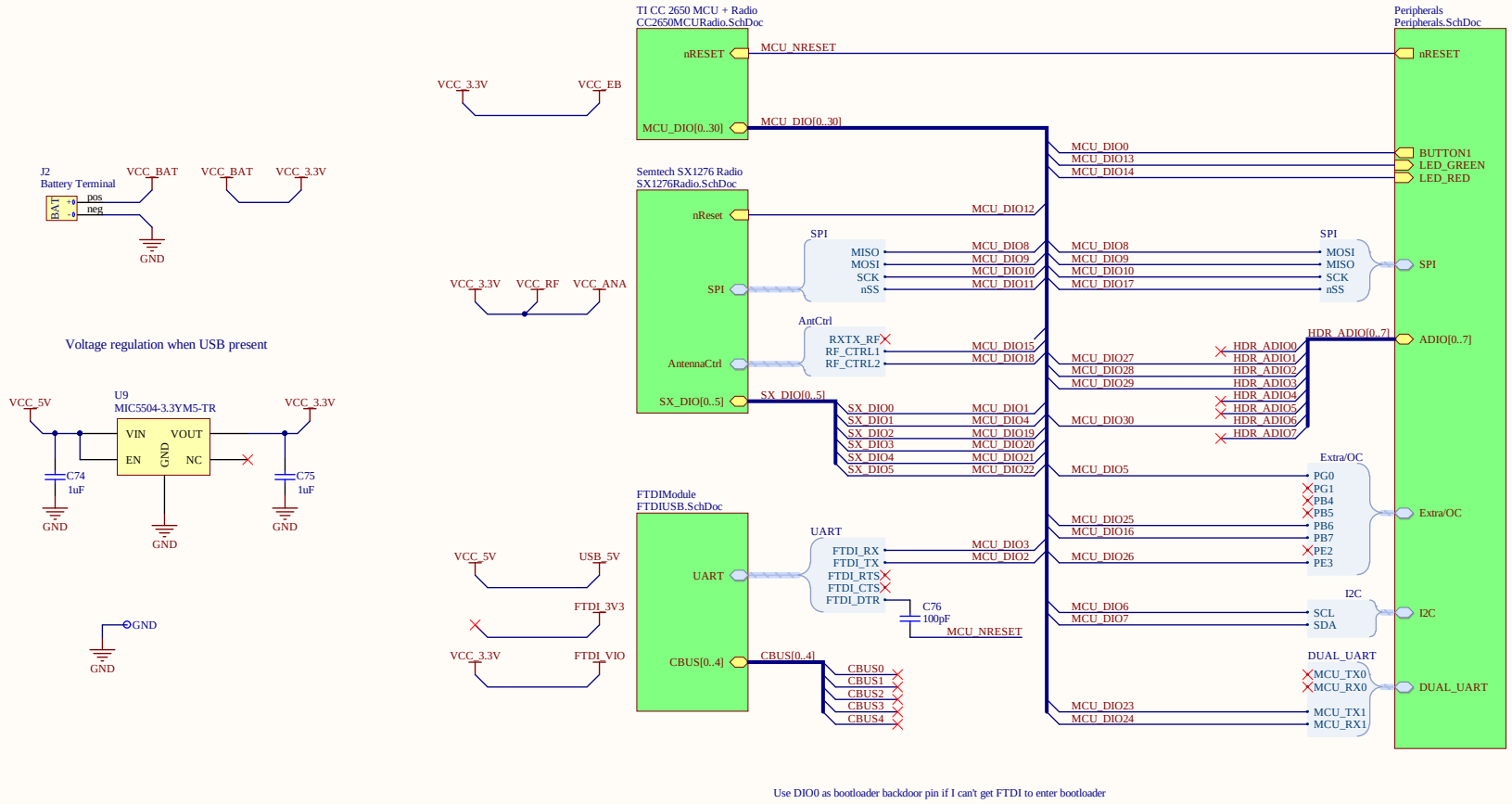
Interface

USB_5V
FTDI_3V3
FTDI_VIO

UART
UART
FTDI_RX
FTDI_TX
FTDI_RTS
FTDI_CTS
FTDI_DTR

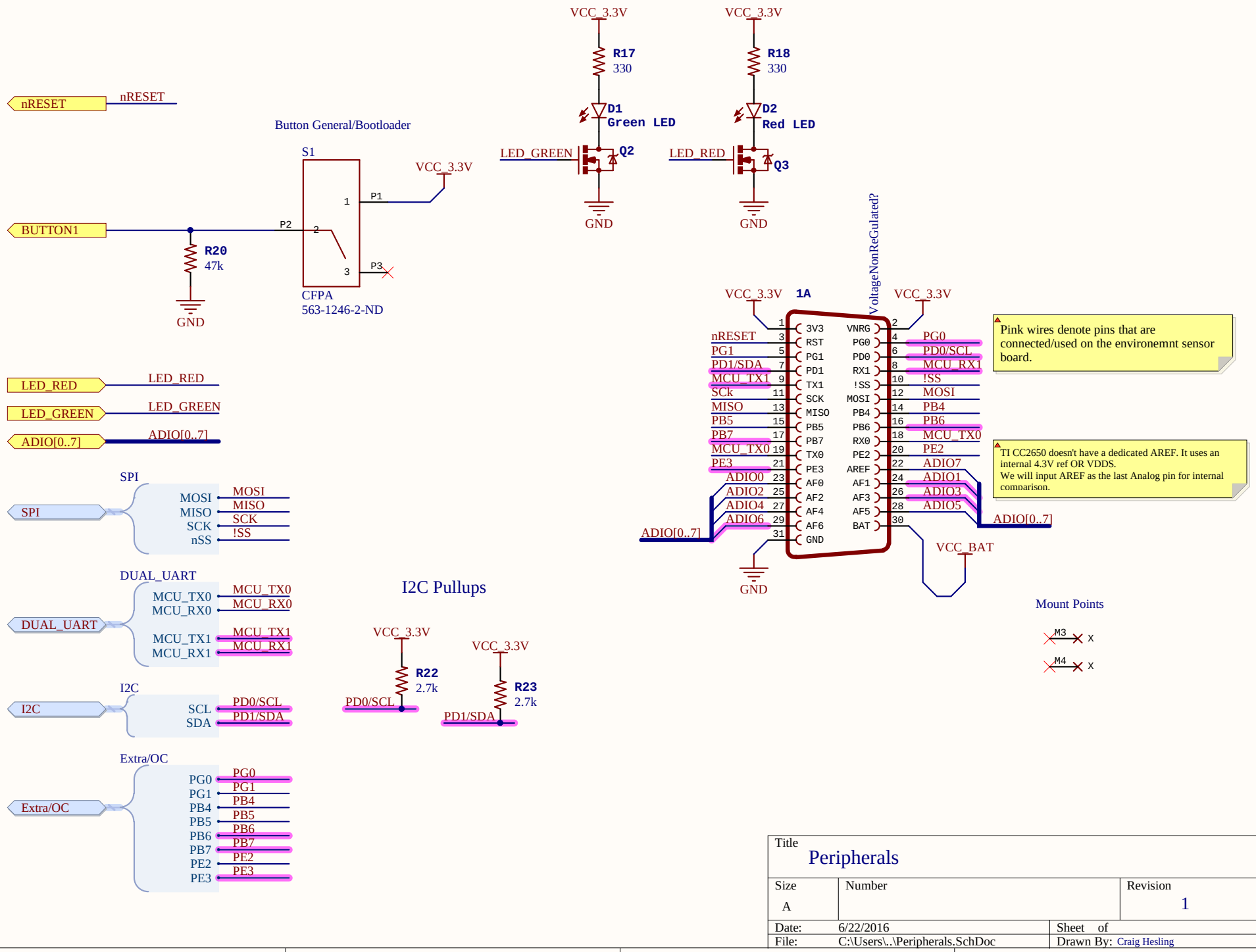
CBUS[0..4]
CBUS[0..4]

Title: FTDI USB		
Size: A	Number:	Revision: 1
Date: 6/22/2016		Sheet of
File: C:\Users\..\FTDIUSB.SchDoc		Drawn By: Craig Hesling

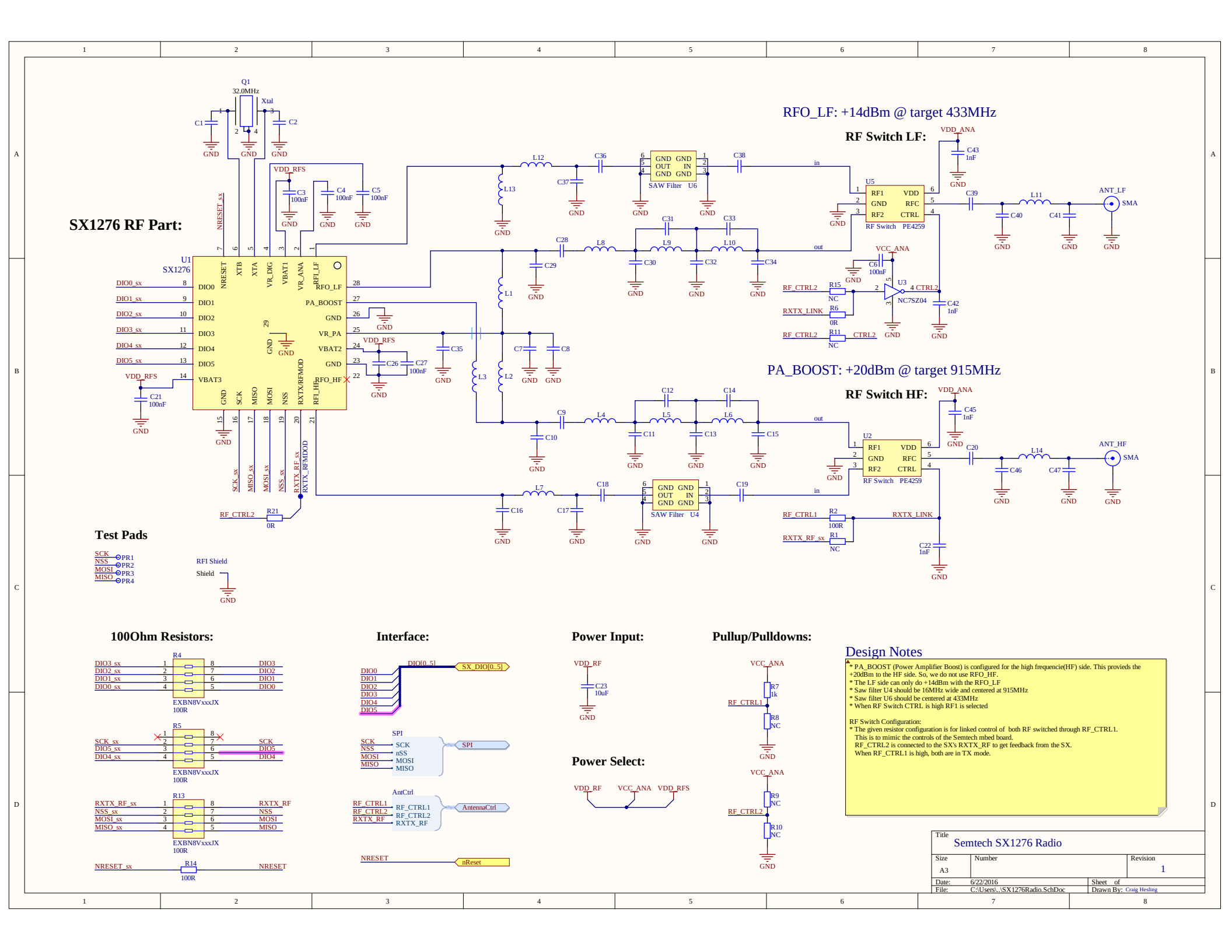


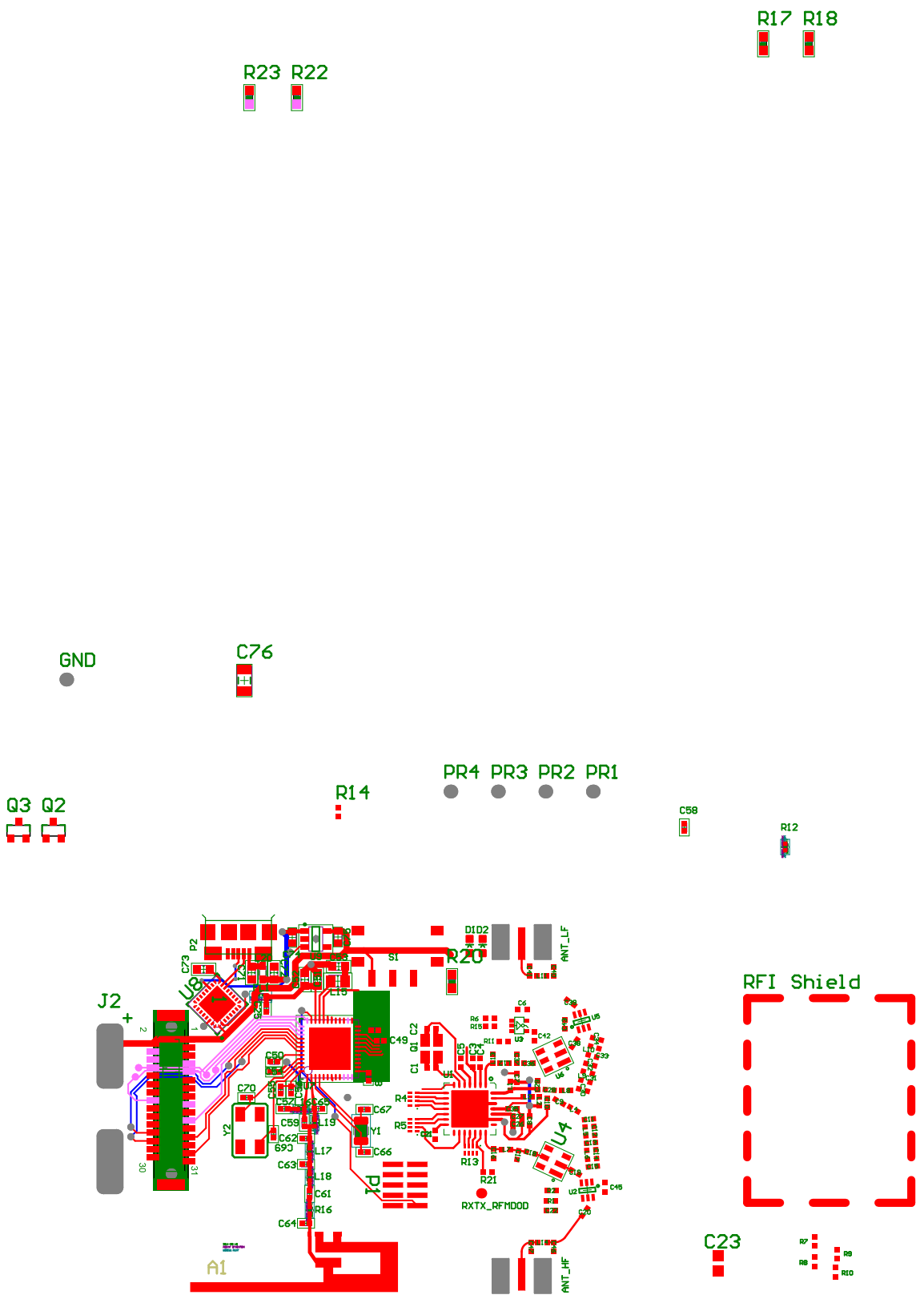
Use DIO0 as bootloader backdoor pin if I can't get FTDI to enter bootloader

Title: LoRaBug Main		
Size: A3	Number:	Revision: 1
Date: 6/22/2016		Sheet of
File: C:\Users\..\Main.SchDoc		Drawn By: Craig Hesling



Title: Peripherals		
Size: A	Number:	Revision: 1
Date: 6/22/2016		Sheet of
File: C:\Users\..\Peripherals.SchDoc		Drawn By: Craig Hesling


SX1276 RF Part:
RFO_LF: +14dBm @ target 433MHz
RF Switch LF:
PA_BOOST: +20dBm @ target 915MHz
RF Switch HF:
Test Pads
100Ohm Resistors:
Interface:
Power Input:
Pullup/Pulldowns:
Power Select:
Design Notes
* PA_BOOST (Power Amplifier Boost) is configured for the high frequencie(HF) side. This provieds the +20dBm to the HF side. So, we do not use RFO_HF.
* The LF side can only do +14dBm with the RFO_LF
* Saw filter U4 should be 16MHz wide and centered at 915MHz
* Saw filter U6 should be centered at 433MHz
* When RF Switch CTRL is high RF1 is selected
RF Switch Configuration:
* The given resistor configuration is for linked control of both RF switched through RF_CTRL1. This is to mimic the controls of the Semtech mbed board. RF_CTRL2 is connected to the SX's RXTX_RF to get feedback from the SX. When RF_CTRL1 is high, both are in TX mode.
Title
Semtech SX1276 Radio
Size
A3
Number
Revision
1
Date: 6/22/2016
Sheet of
File: C:\Users\..\SX1276Radio.SchDoc
Drawn By: Craig Hesling


R17 R18
R23 R22
GND
C76
PR4 PR3 PR2 PR1
Q3 Q2
R14
C58
R12
J2
U8
DIO2
ANT_LF
R20
S1
RFI Shield
C23
RXTX_RFMDOD
ANT_HF
A1