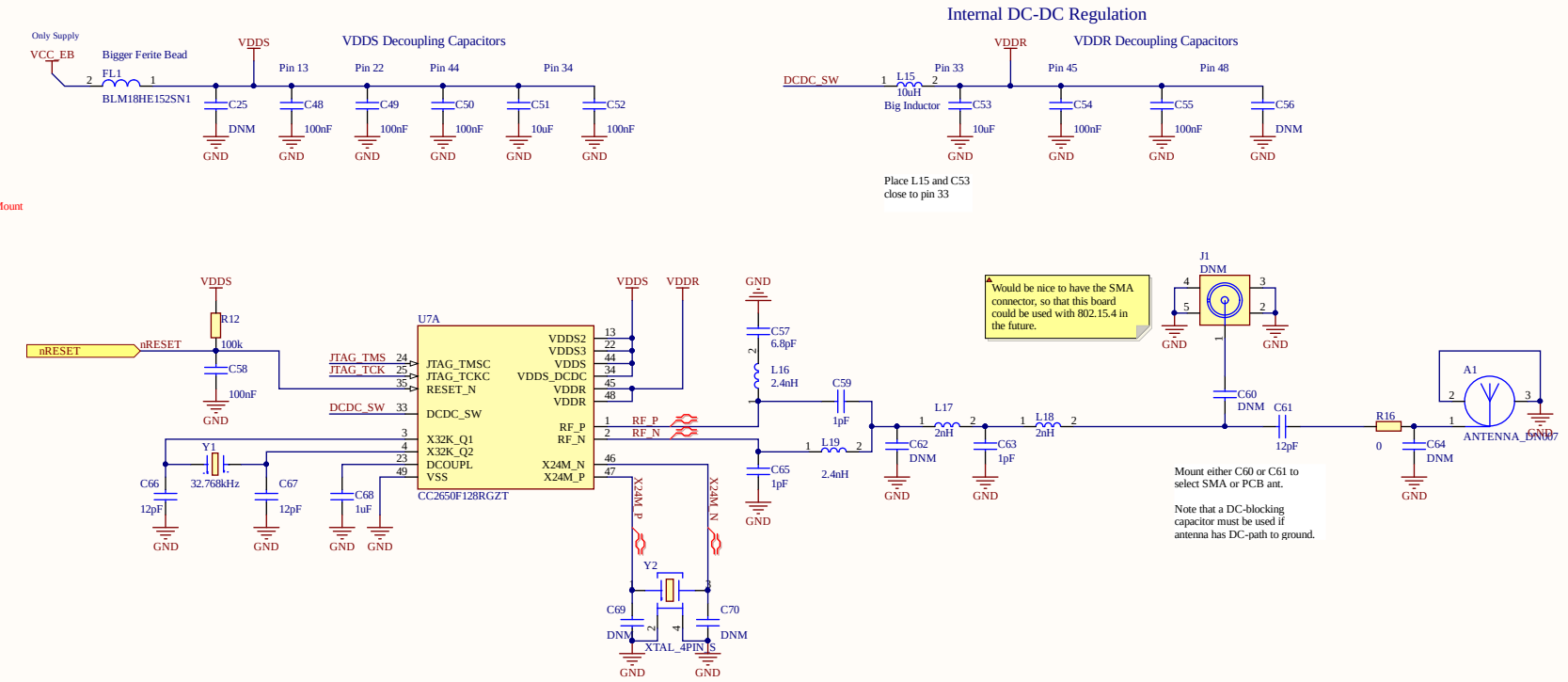
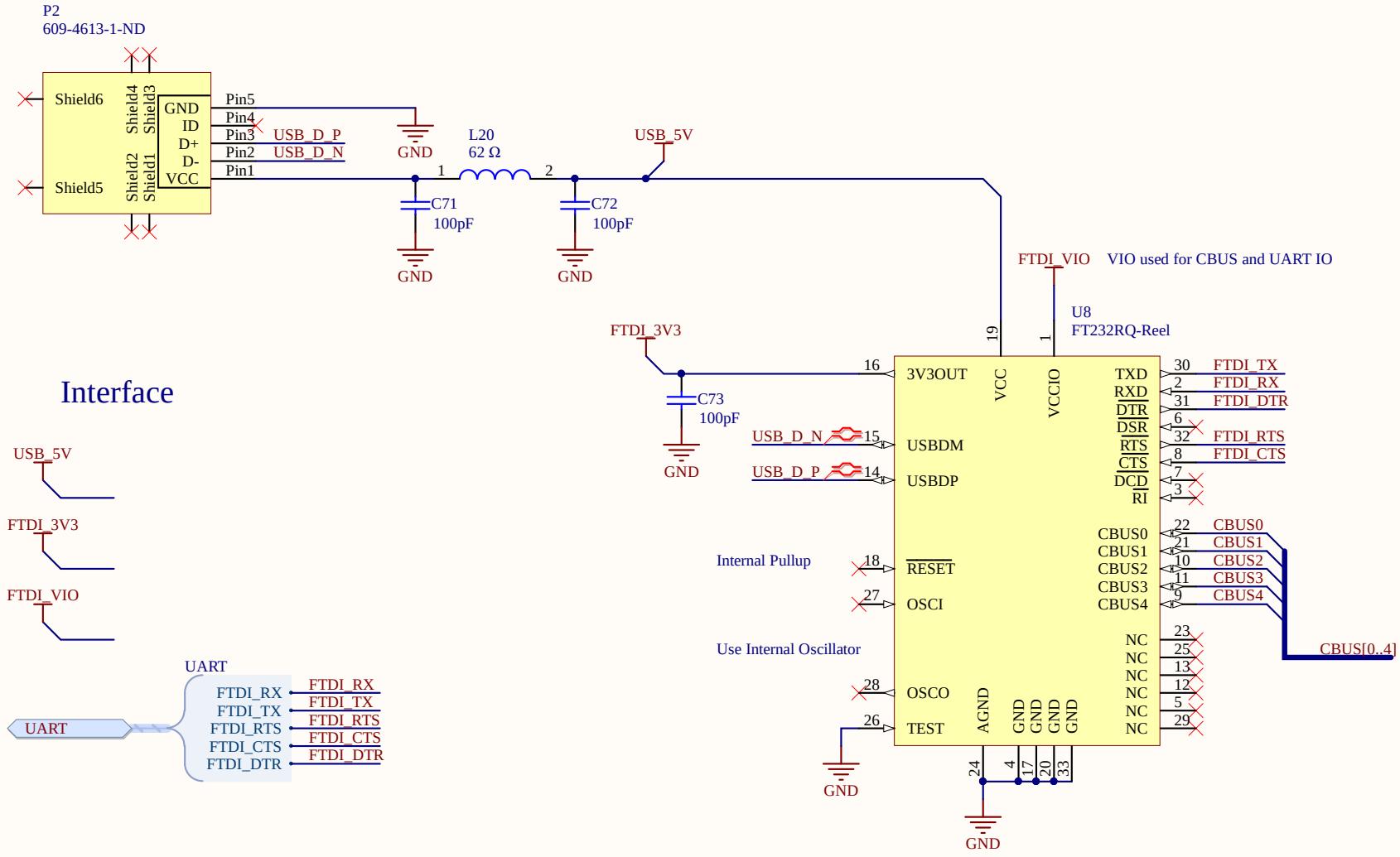
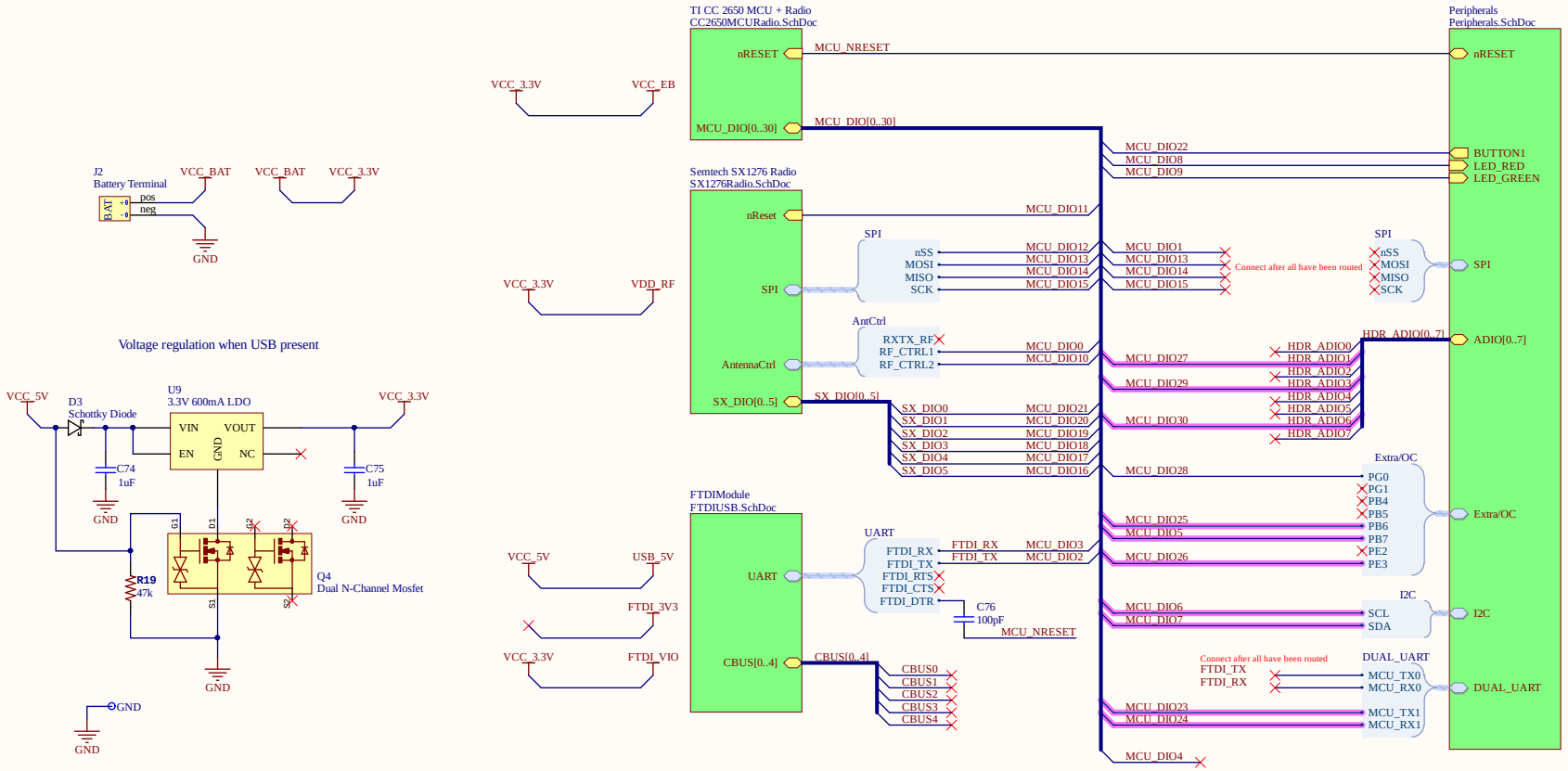


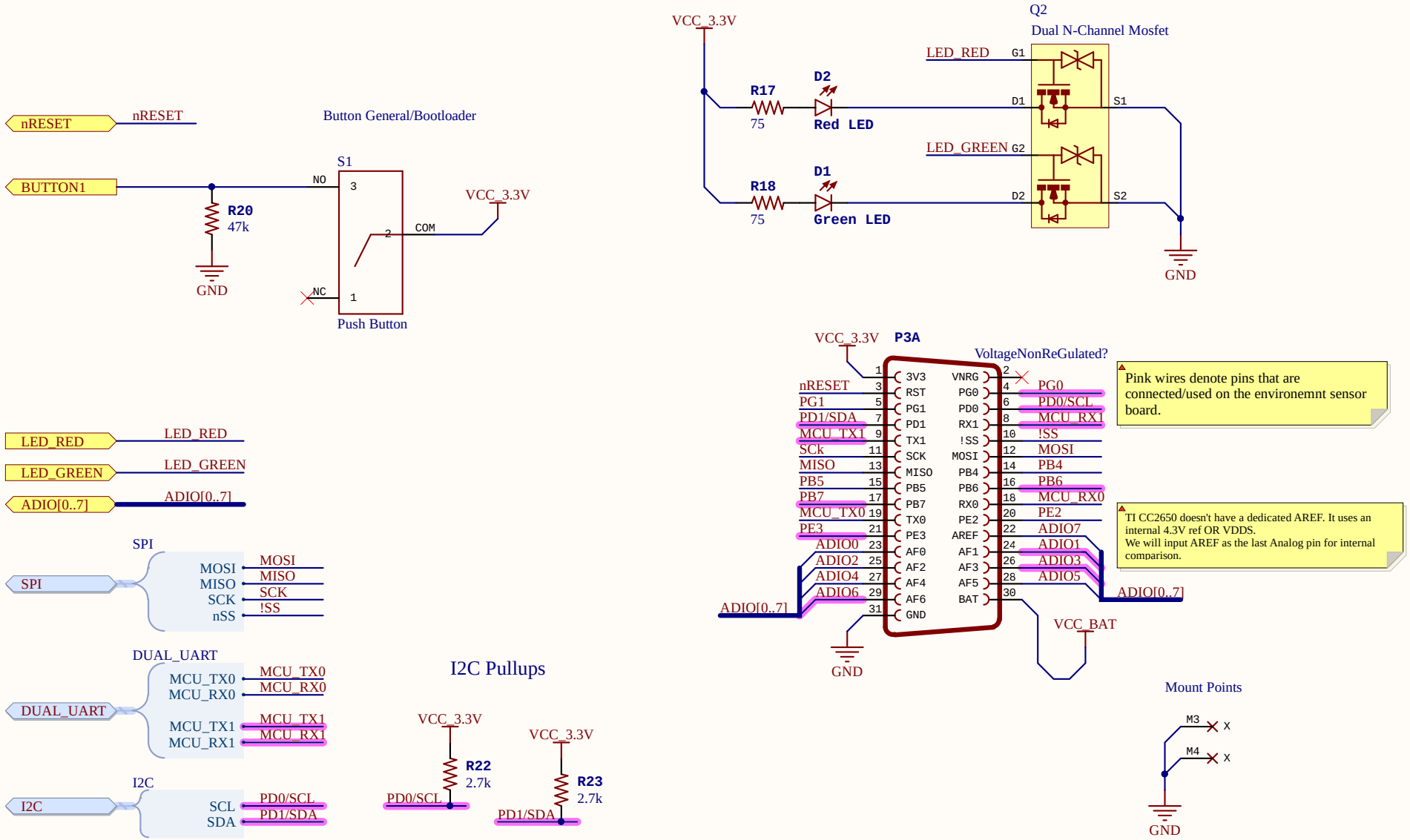
Title	TI CC2650 Radio and MCU	
Size: A3	Number:	Revision: 2
Date: 9/21/2016	Sheet of	
File: E:\Documents\..\CC2650MCURadio.SchDoc	Drawn By: Craig Hesling	



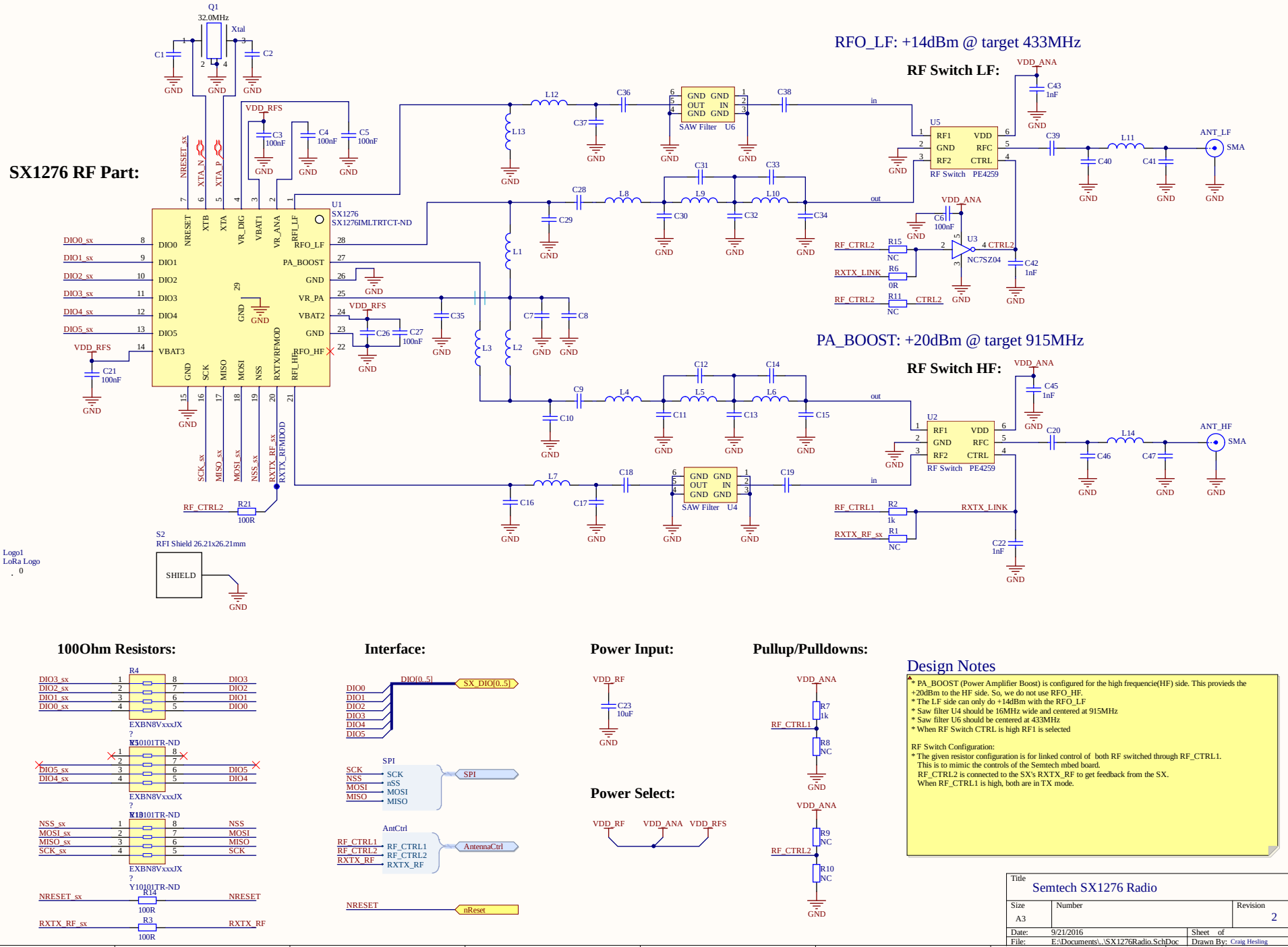
Title: FTDI USB		
Size: A	Number:	Revision: 2
Date: 9/21/2016		Sheet of
File: E:\Documents\..\FTDIUSB.SchDoc		Drawn By: Craig Hesling

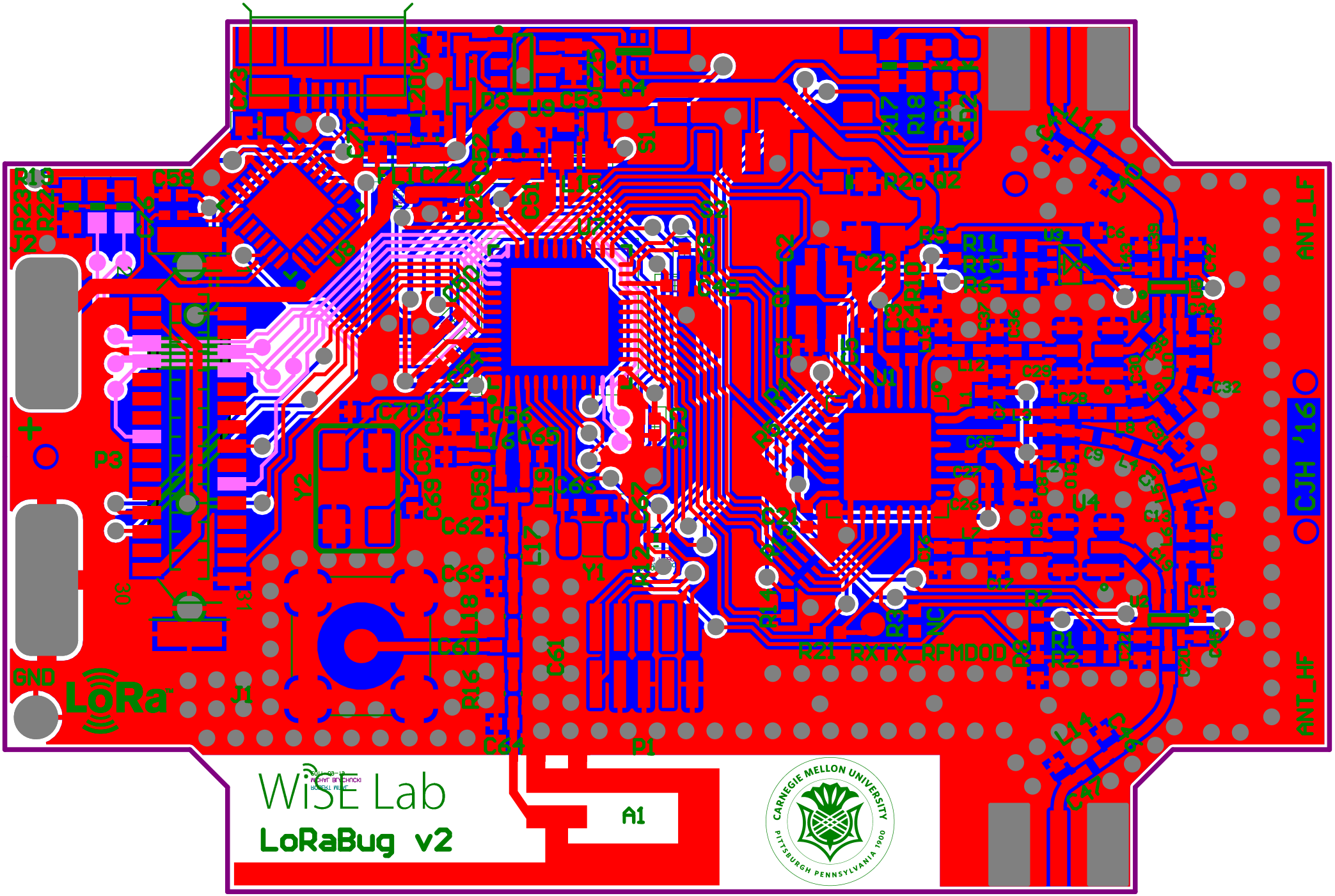


Title	LoRaBug Main	
Size: A3	Number:	Revision: 2
Date: 9/21/2016	Sheet of	
File: E:\Documents\LoRaBugBoard\Main.SchDoc	Drawn By: Craig Hesling	



Title: Peripherals		
Size: A	Number:	Revision: 2
Date: 9/21/2016		Sheet of
File: E:\Documents\..\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:
Q1
32.0MHz
Xtal
U1
SX1276
SX1276IMLTRTCT-ND
U5
RF Switch PE4259
U2
RF Switch PE4259
U3
NC7SZ04
SAW Filter U6
SAW Filter U4
ANT_LF
ANT_HF
SMA
VDD_ANA
VDD_RFS
VDD_RF
GND
S2
RFI Shield 26.21x26.21mm
SHIELD
Logo1
LoRa Logo
100Ohm Resistors:
Interface:
Power Input:
Pullup/Pulldowns:
Power Select:
EXBN8VxxxJX
Y10101TR-ND
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
2
Date:
9/21/2016
Sheet of
File:
E:\Documents\..\SX1276Radio.SchDoc
Drawn By:
Craig Hesling


WiSE Lab
LoRaBug v2
A1
CARNEGIE MELLON UNIVERSITY
PITTSBURGH PENNSYLVANIA 1900
LoRa
GND
P1
P3
J1
J2
Y1
Y2
ANT_HF
ANT_LF
RXTX_RFMOD