

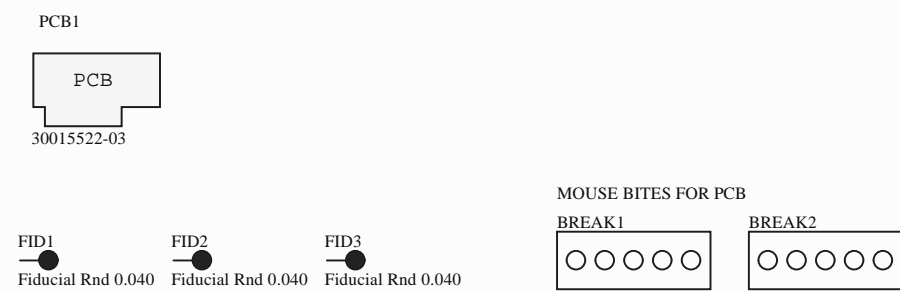
Notes

This board allows the user to test all of the features of the XBee TH modules.

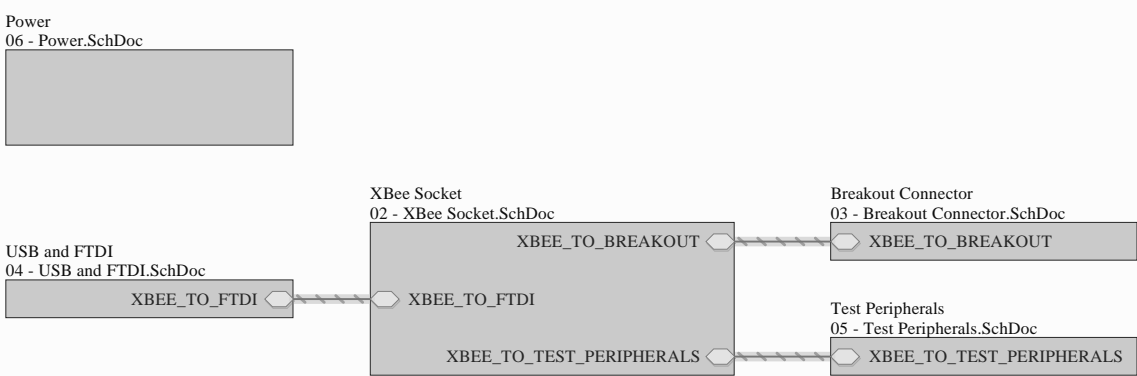
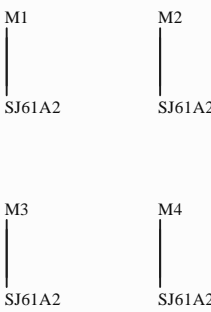
The following peripherals are used on this board to test different features:

- USB-C Connector
 - Powers the whole board with 5V
 - Provides a simple UART communication with the module that is compatible with XCTU
 - Dip switches are provided on each UART line from the USB which allows the user to disconnect any of these lines if he/she wants to test the UART lines with other peripherals
- Battery Connector
 - Can power the whole board with 2V to 5V so long as the USB-C Connector is not plugged in
 - This allows the user to easily power the module in a portable setting
- XBee Current Measurement
 - Allows the user to measure the current draw of the XBee in any mode
 - Easy to use interface: Switch the current measure switch to the "ON" position and place a current meter probe across the current measure header
- LEDs
 - LED indicators for the following lines: UART DOUT, UART DIN, ON/#SLP/DIO9, Conn Status/DIO5, and RSSI/PWM0/DIO10
 - Allows the user to easily test the GPIOs
- Buttons
 - Buttons for the following lines: Reset and Comm/AD0/DIO0
 - Allows the user to easily reset and commission the XBee module
- Grove Connector
 - Grove connector connects to pins 30 and 8 on the XBee module
 - This allows for I2C, ADC, and DIO testing on the Grove.
- Breakout Connector
 - 40-pin external header that connects to power, ground, and each XBee pin
 - This allows the user to connect to any XBee pin easily to test the XBee with other peripherals
 - Daughter boards will be created that can plug into this, which will allow more testing of the XBee functions

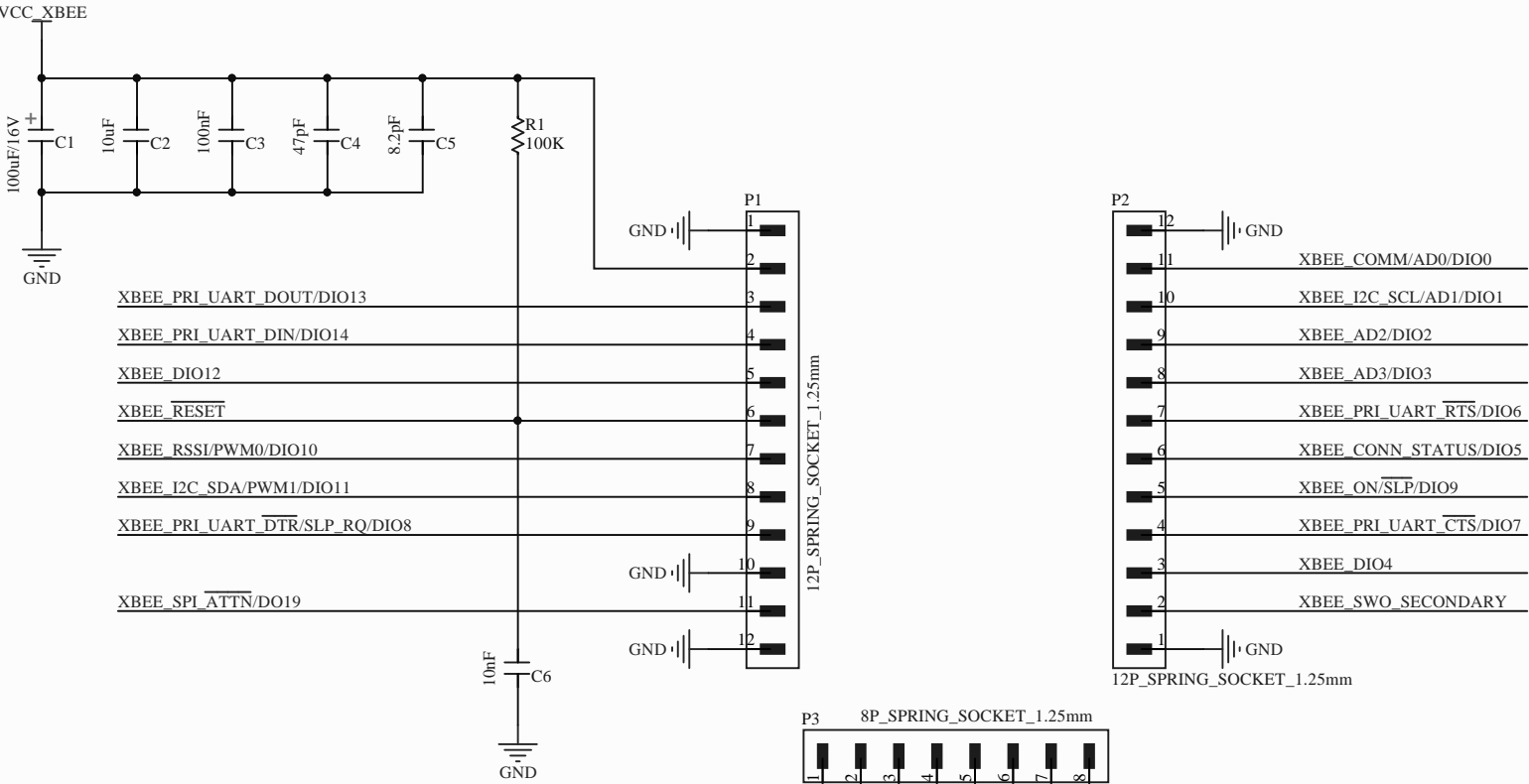
PCB and Stencil



Rubber Feet

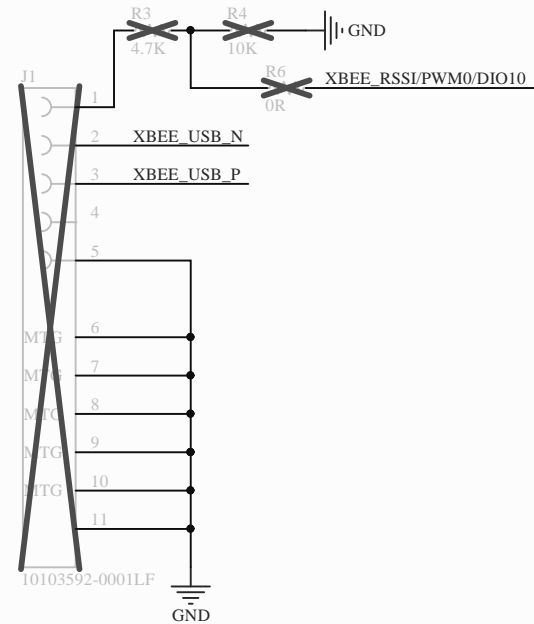


XBee Micro Socket



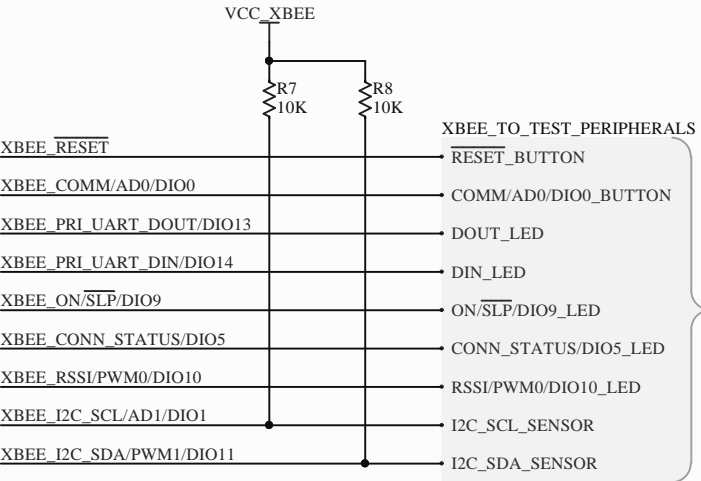
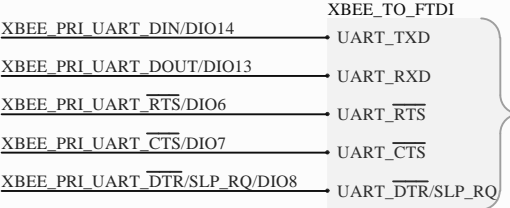
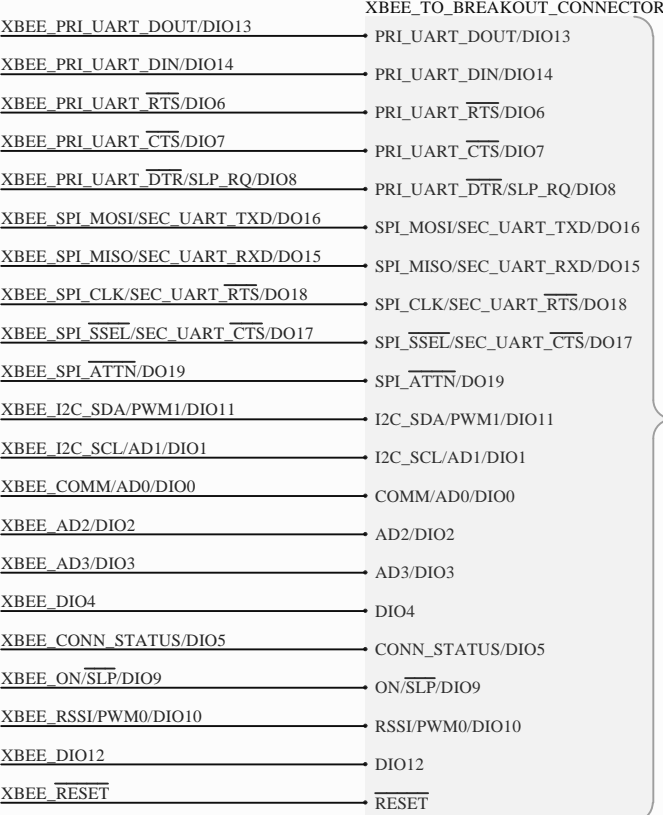
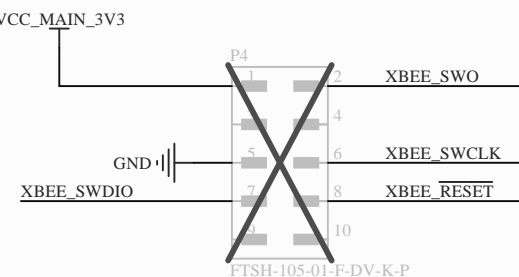
Direct USB

This section is not populated.
This header will never be placed on the customer boards.



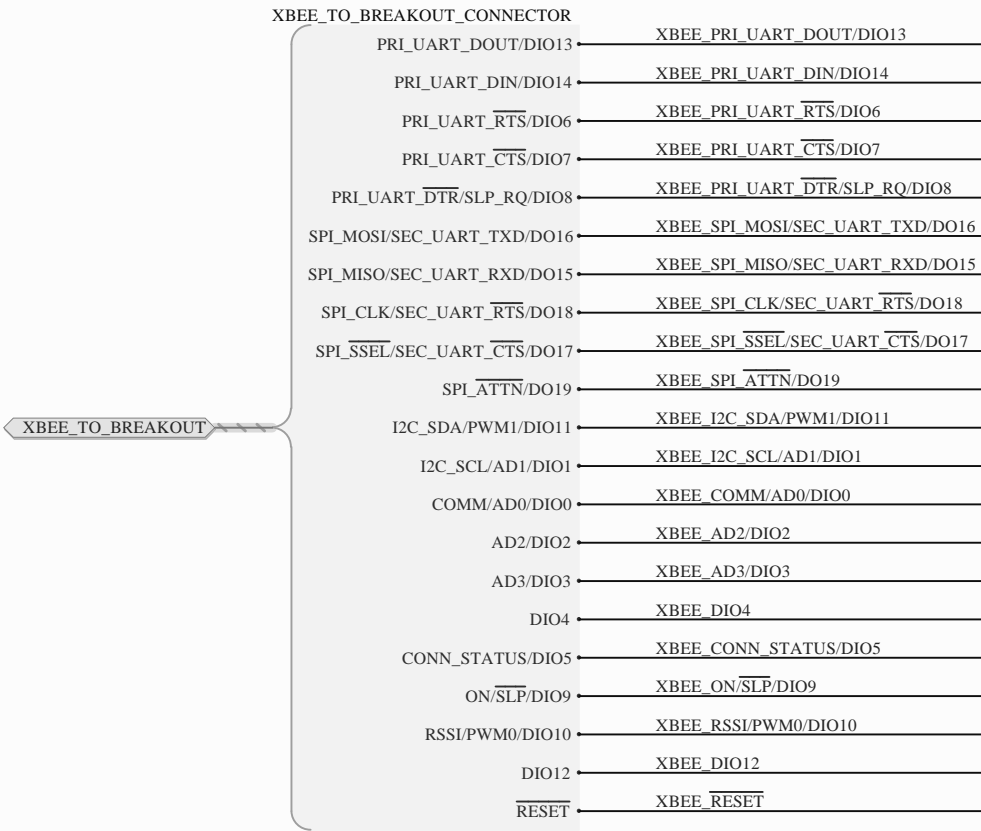
Serial Wire Programming Header

This header will never be placed on the customer boards.



Breakout Connector

The Breakout Connector is connected to every pin on the XBee module and allows the user to test the pins on separate boards.

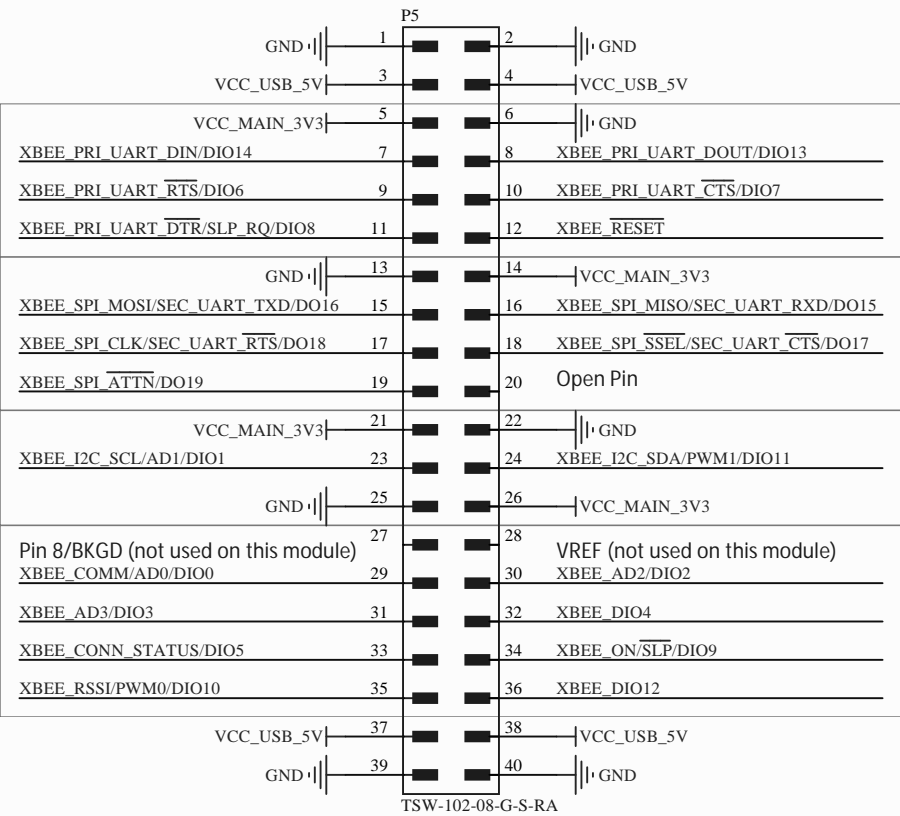



Primary UART

SPI and Secondary UART

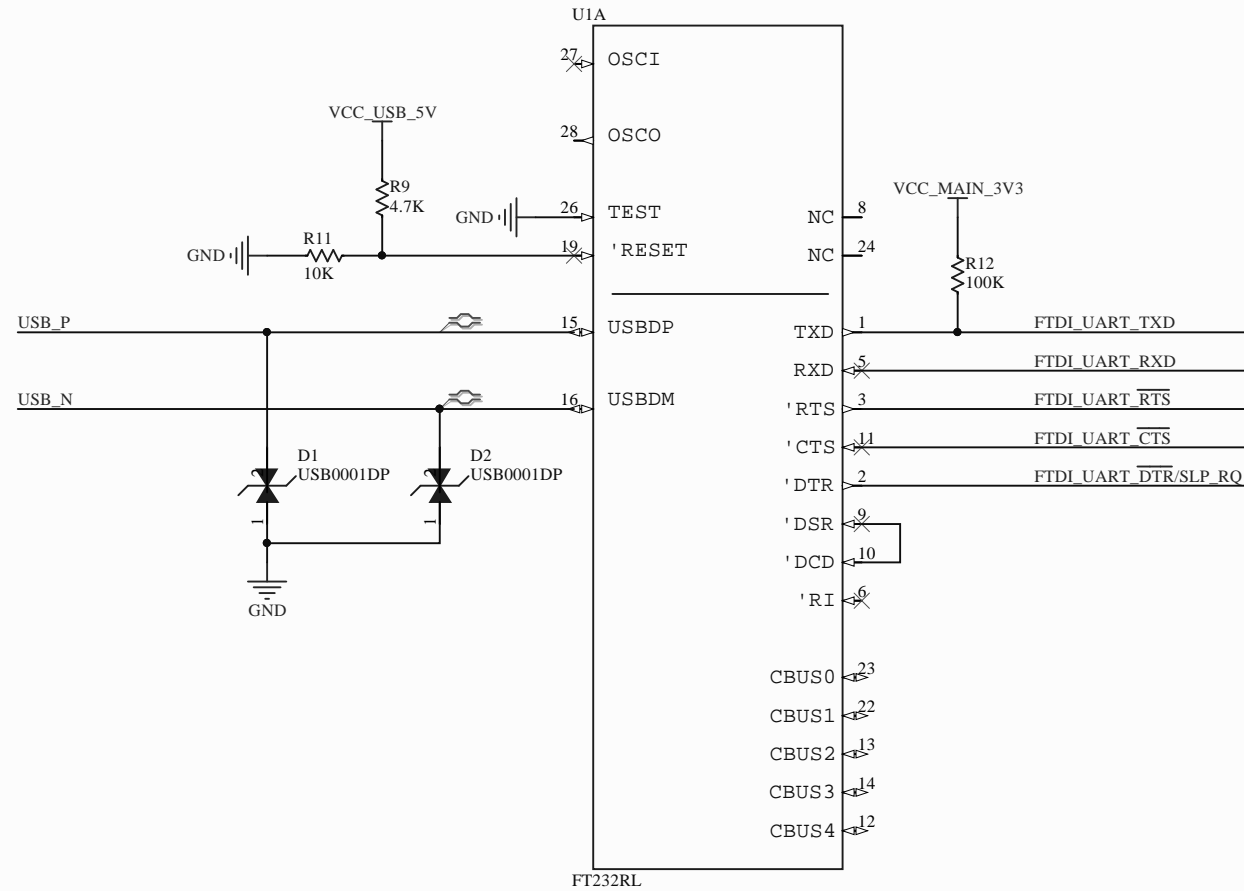
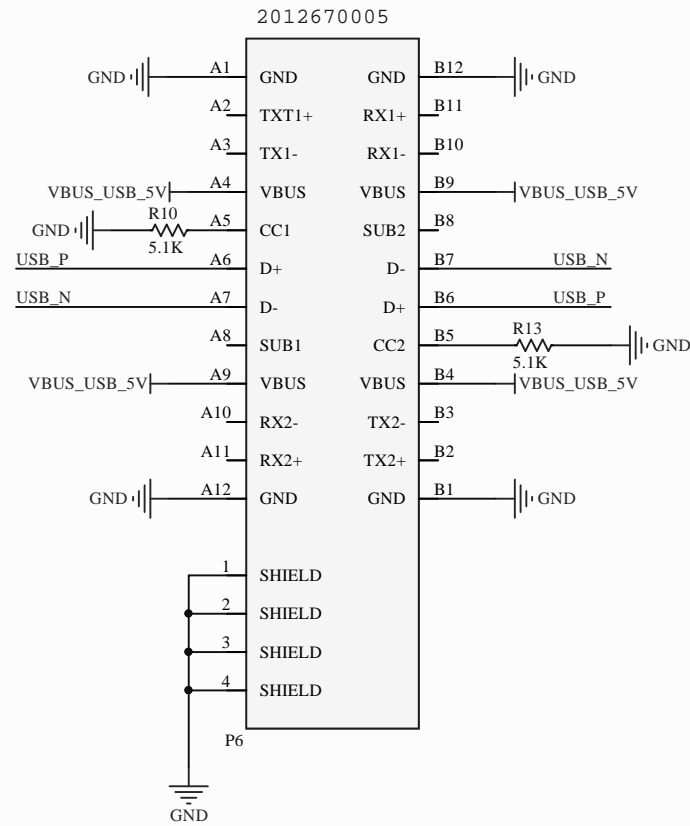
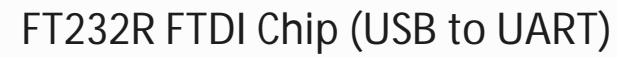
12C

General GPIO



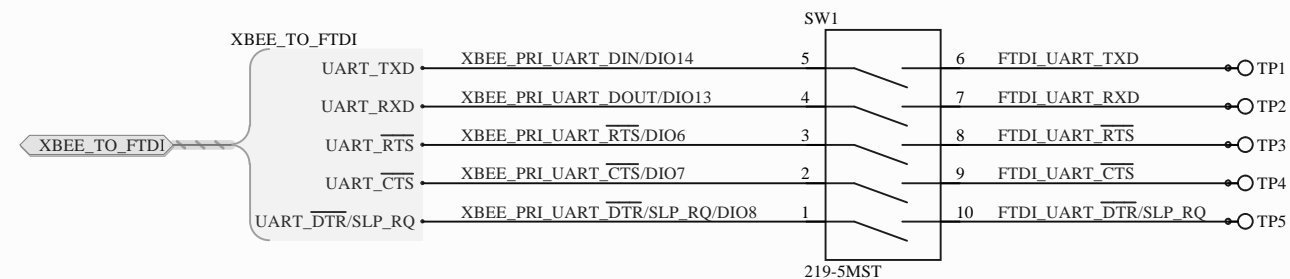
Title: Breakout Connector		Digi International 11001 Bren Road East Minnetonka, MN 55343 USA 
Variation: 55002006-01	Revision: B	
Engineer: Eric Smith	Sheet 3 of 6	
Description: PCA, XBIB USB-C Micro Base		


USB Type C Connector

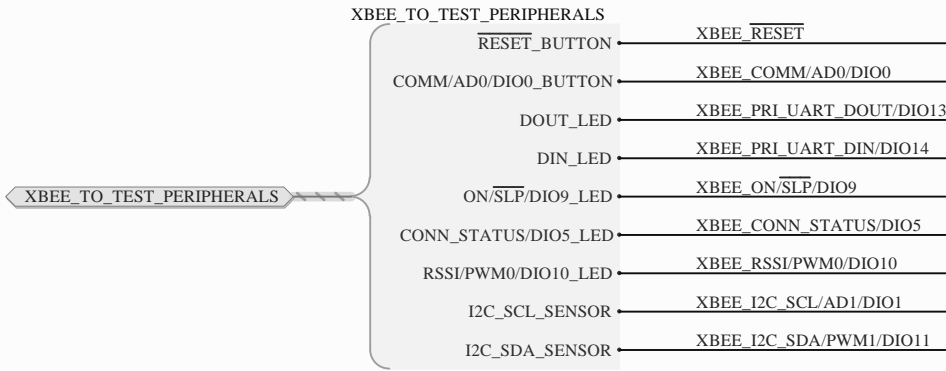


FTDI Dip Switch

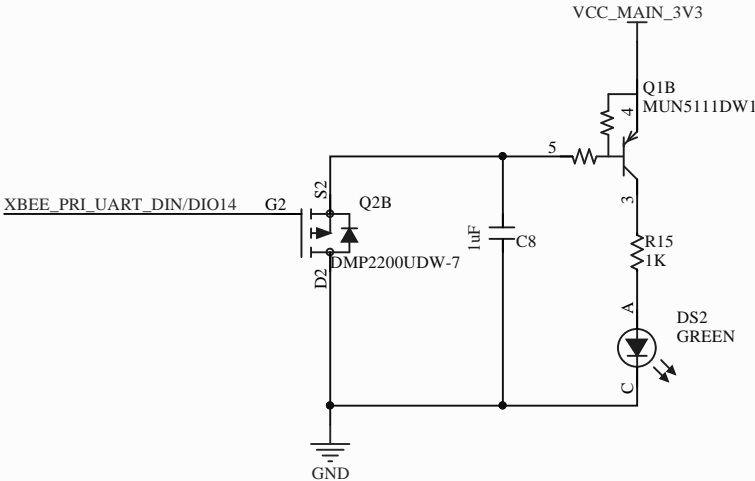
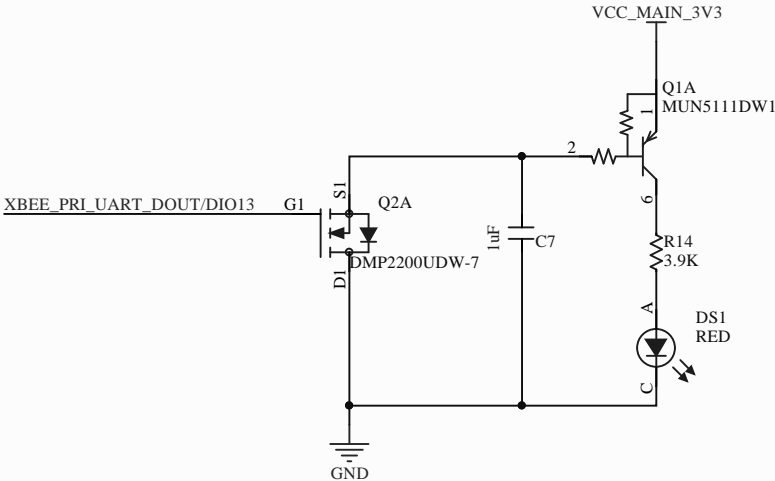
This dip switch allows the user to disconnect any of the primary UART lines on the XBee from the FTDI chip. This allows for any testing on the primary UART lines without the FTDI chip interfering.



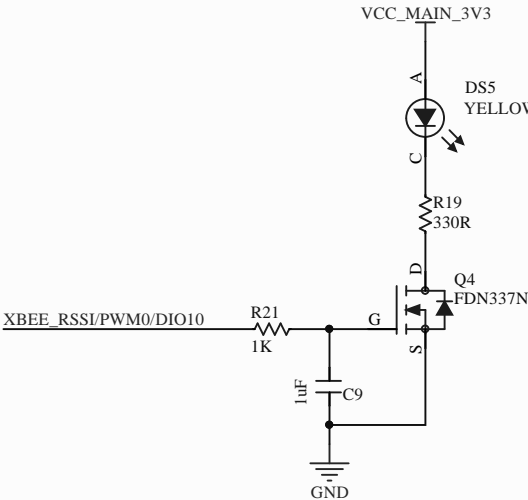
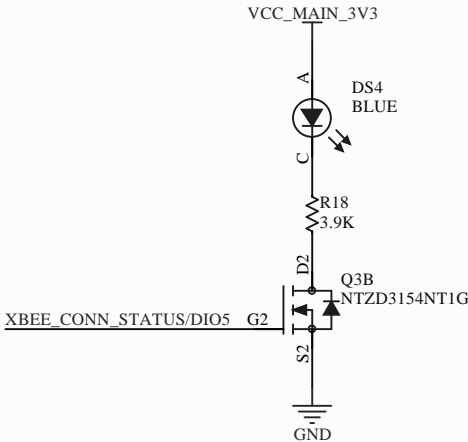
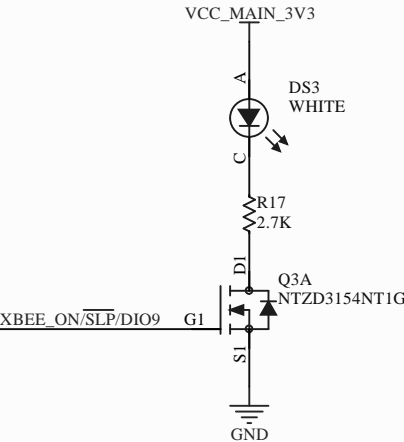
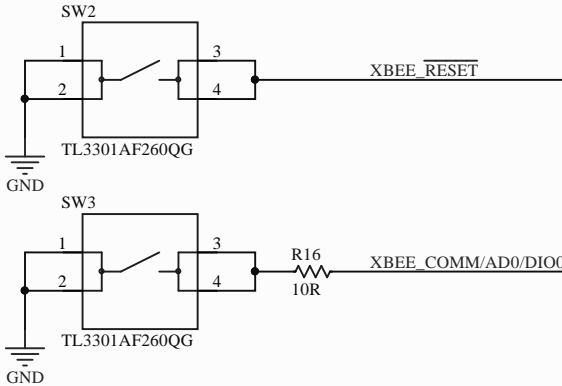
Title: <i>USB and FTDI</i>		Digi International 11001 Bren Road East Minnetonka, MN 55343 USA 
Variation: 55002006-01	Revision: B	
Engineer: Eric Smith	Sheet 4 of 6	
Description: PCA, XBIB USB-C Micro Base		



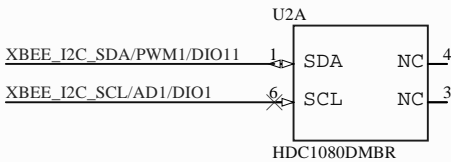
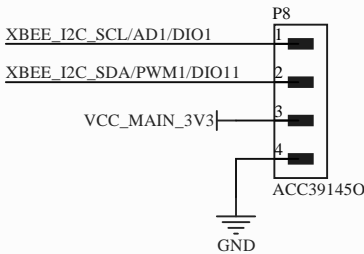
LEDs



Buttons

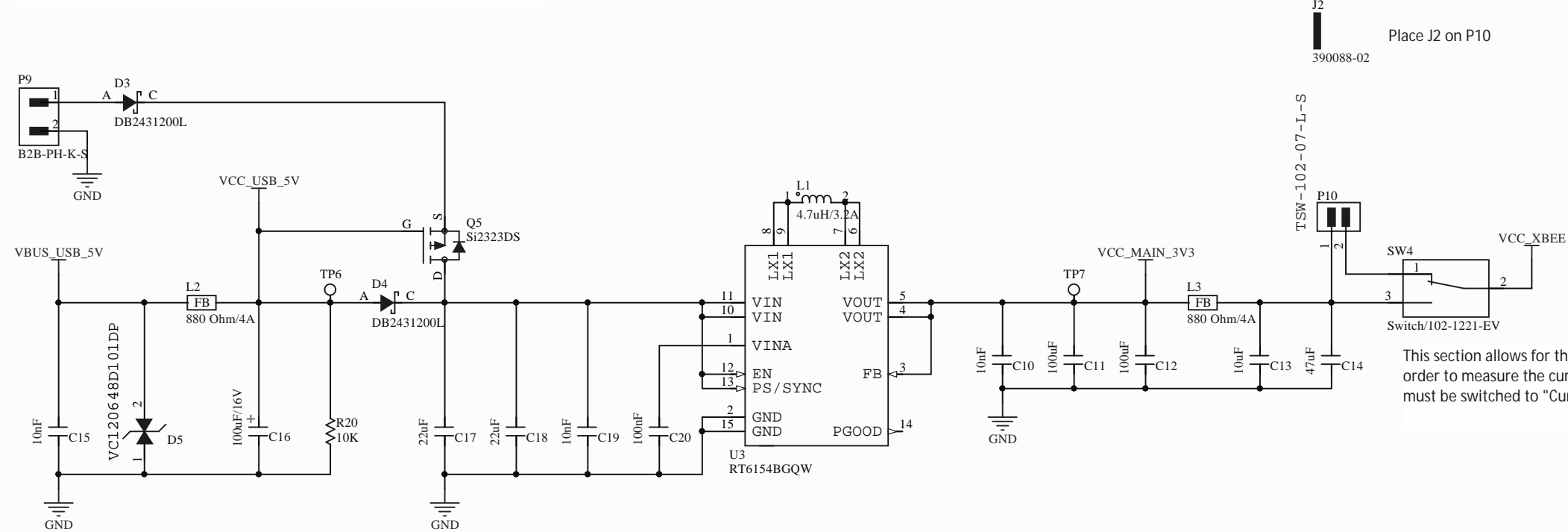


I2C Grove Connector and Sensor



3.3V Supply

The supply on the development board will either come from the USB connection or from a battery connection
If both are plugged in, the USB will power the board
The battery will plug into the P3 header and can range from 2V to 5V



This section allows for the user to measure the current draw on the Xbee. In order to measure the current, a current probe must be placed on P10 and SW4 must be switched to "Current Measure" setting.

IC Power

