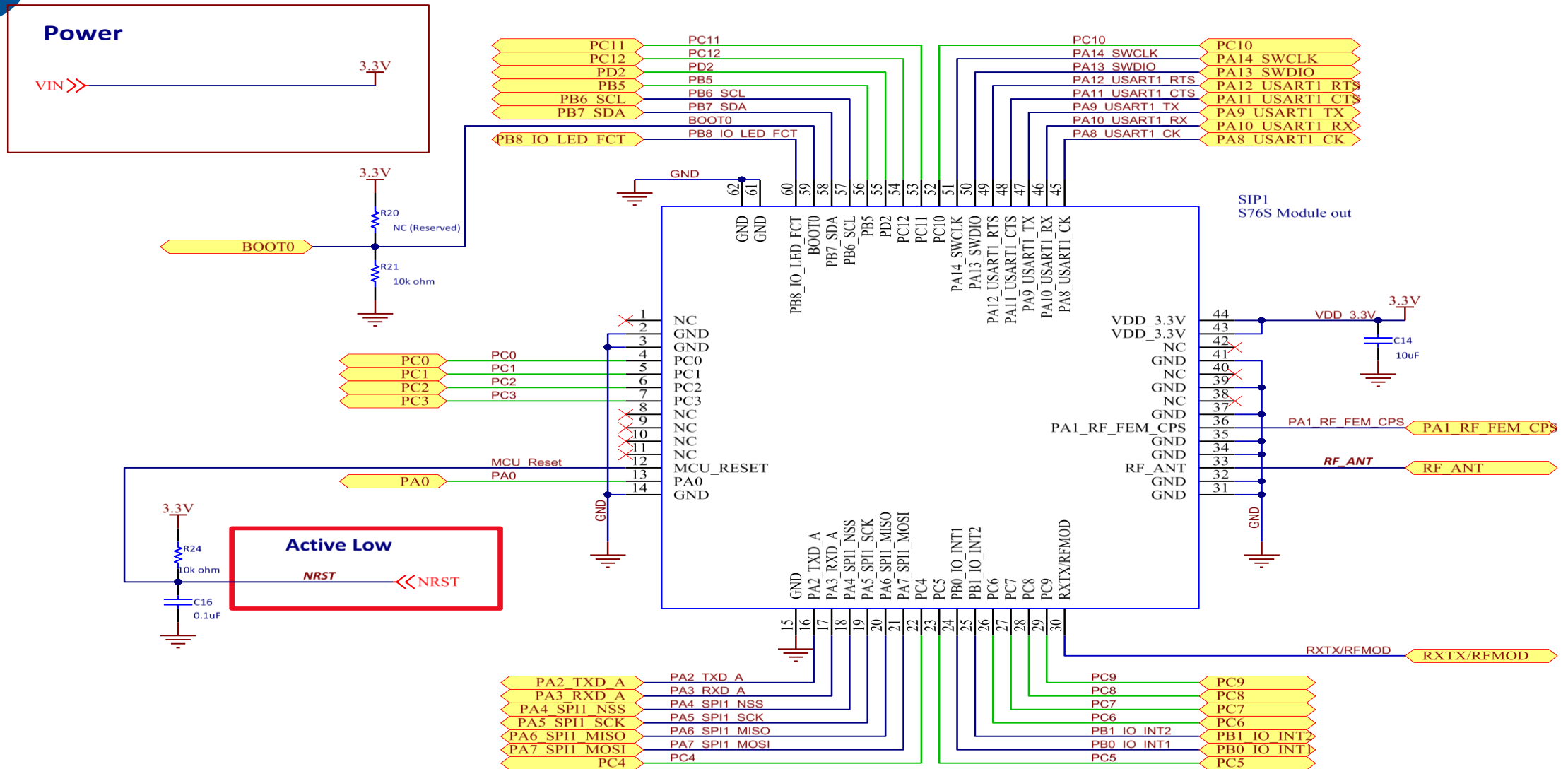


EK-G78SXB User Guide

2016/11/16

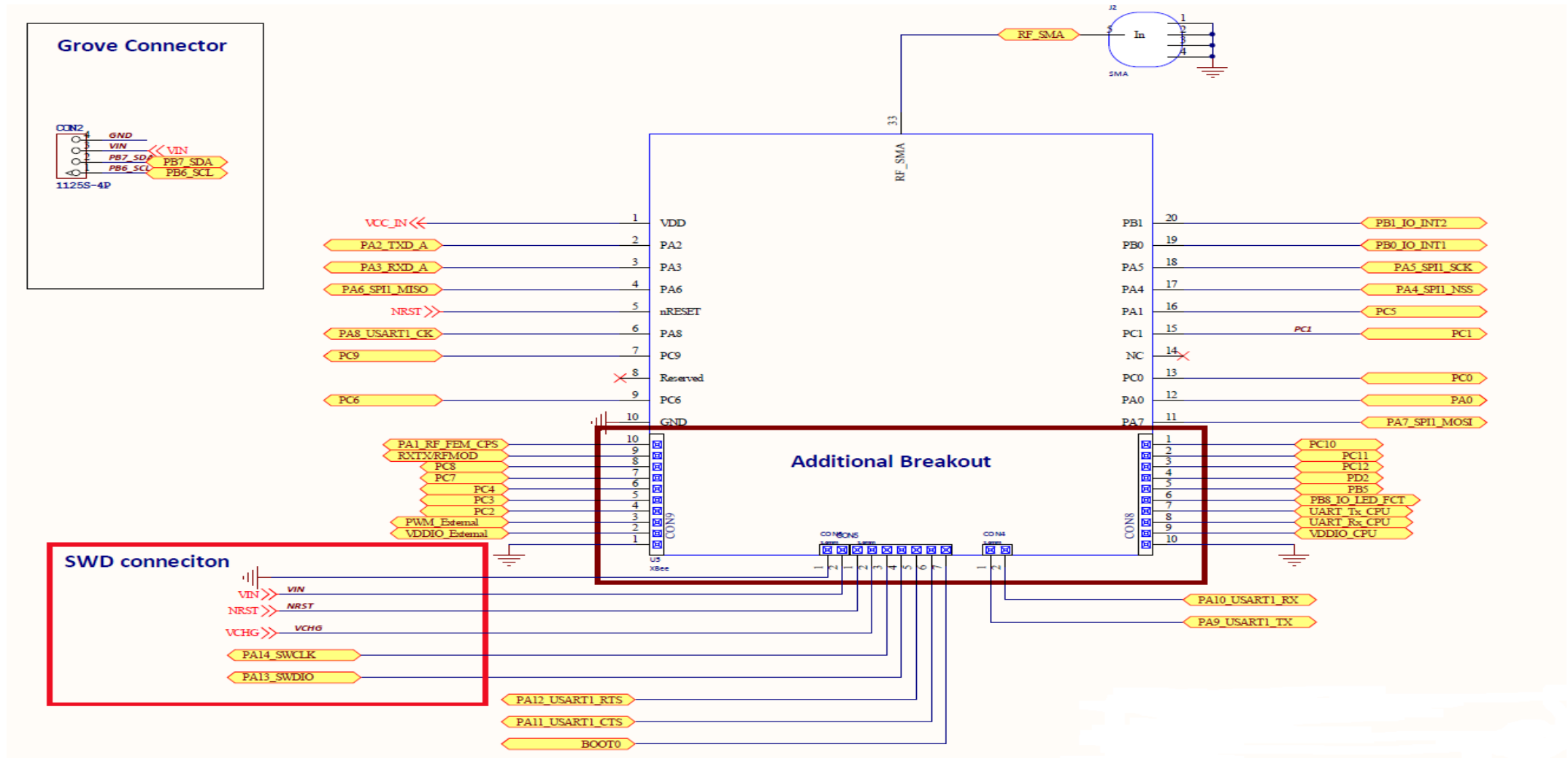


G78S Breakout Schematic



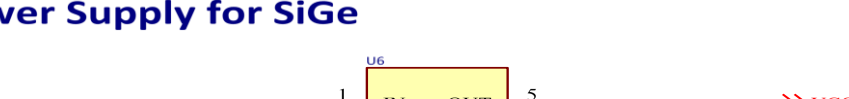


XBee Breakout Schematic





Power Supply for SiGe



The diagram illustrates the power supply for a SiGe device. It features a yellow rectangular component labeled U6, identified as an XC6210B402MR. The component has five pins: Pin 1 (IN) is connected to the VCHG input; Pin 2 (GND) is connected to the common ground; Pin 3 (EN) is connected to the common ground; Pin 4 (BYP) is connected to the common ground; and Pin 5 (OUT) is connected to the VCC_SiGe output. A 4.7uF capacitor, labeled C17, is connected between the input (Pin 1) and the common ground. The common ground is indicated by a red label 'GND' and a red arrow pointing to the ground symbol.

The diagram illustrates a PCB layout for a SiGe PA/FEM module. Key components and connections include:

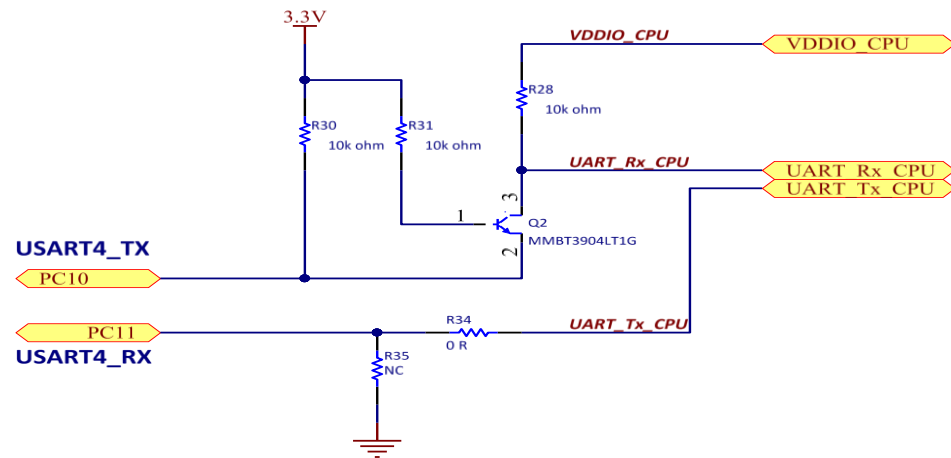
- SiGe IC (XC6210B402MR):** The IN pin is connected to VCC_SiGe, and the EN pin is connected to GND. The OUT pin is connected to the PA_IN pin of the PA/FEM module.
- PA/FEM Module (SE2435L):** The PA_IN pin is connected to the SiGe IC. The PA_OUT pin is connected to the RF ANT. The module also has pins for PA_IN, PA_OUT, PA_FLT, PA_MOD, PA_TST, PA_TST2, PA_TST3, PA_TST4, PA_TST5, PA_TST6, PA_TST7, PA_TST8, PA_TST9, PA_TST10, PA_TST11, PA_TST12, PA_TST13, PA_TST14, PA_TST15, PA_TST16, PA_TST17, PA_TST18, PA_TST19, PA_TST20, PA_TST21, PA_TST22, PA_TST23, PA_TST24, PA_TST25, PA_TST26, PA_TST27, PA_TST28, PA_TST29, PA_TST30, PA_TST31, PA_TST32, PA_TST33, PA_TST34, PA_TST35, PA_TST36, PA_TST37, PA_TST38, PA_TST39, PA_TST40, PA_TST41, PA_TST42, PA_TST43, PA_TST44, PA_TST45, PA_TST46, PA_TST47, PA_TST48, PA_TST49, PA_TST50, PA_TST51, PA_TST52, PA_TST53, PA_TST54, PA_TST55, PA_TST56, PA_TST57, PA_TST58, PA_TST59, PA_TST60, PA_TST61, PA_TST62, PA_TST63, PA_TST64, PA_TST65, PA_TST66, PA_TST67, PA_TST68, PA_TST69, PA_TST70, PA_TST71, PA_TST72, PA_TST73, PA_TST74, PA_TST75, PA_TST76, PA_TST77, PA_TST78, PA_TST79, PA_TST80, PA_TST81, PA_TST82, PA_TST83, PA_TST84, PA_TST85, PA_TST86, PA_TST87, PA_TST88, PA_TST89, PA_TST90, PA_TST91, PA_TST92, PA_TST93, PA_TST94, PA_TST95, PA_TST96, PA_TST97, PA_TST98, PA_TST99, PA_TST100.
- Matching Networks:** Inductors L1-L7 and capacitors C19-C27 are used for impedance matching and tuning.
- Attenuator:** A 10dB attenuator is implemented using resistors R18, R19, and R22 for PA I/P power tuning.
- Co-Pad:** A Co-Pad is used for the RF path, with one path leading to an RF ANT and another to an RF SMA connector.
- ANT1:** ANT1 is connected to a 50ohm shunt.
- Grounding:** Various ground connections are shown throughout the layout.

RF bypass to SMA connector

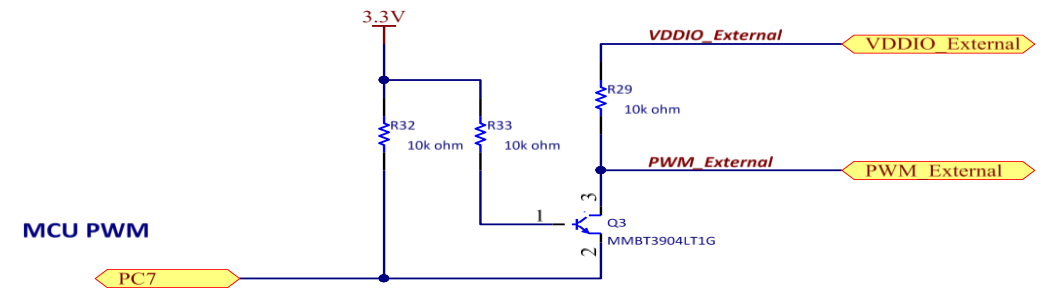


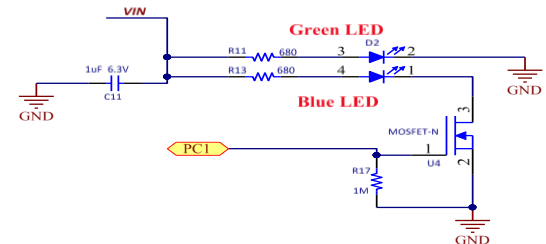
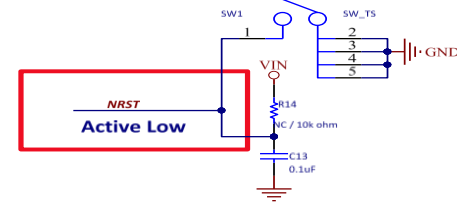
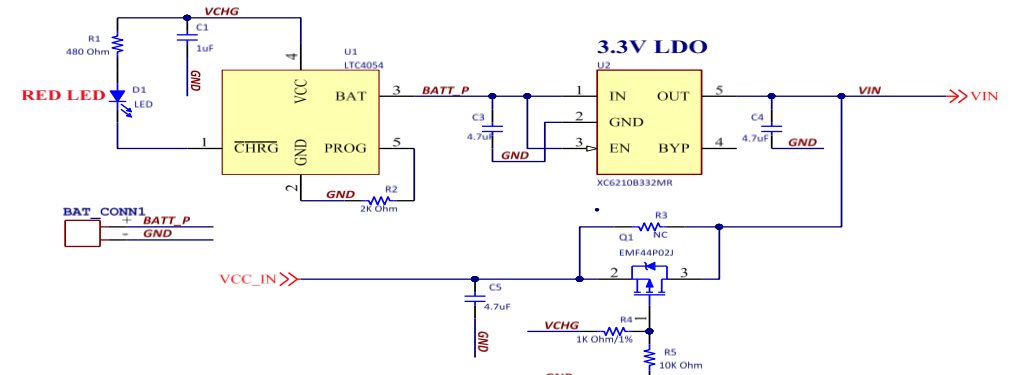
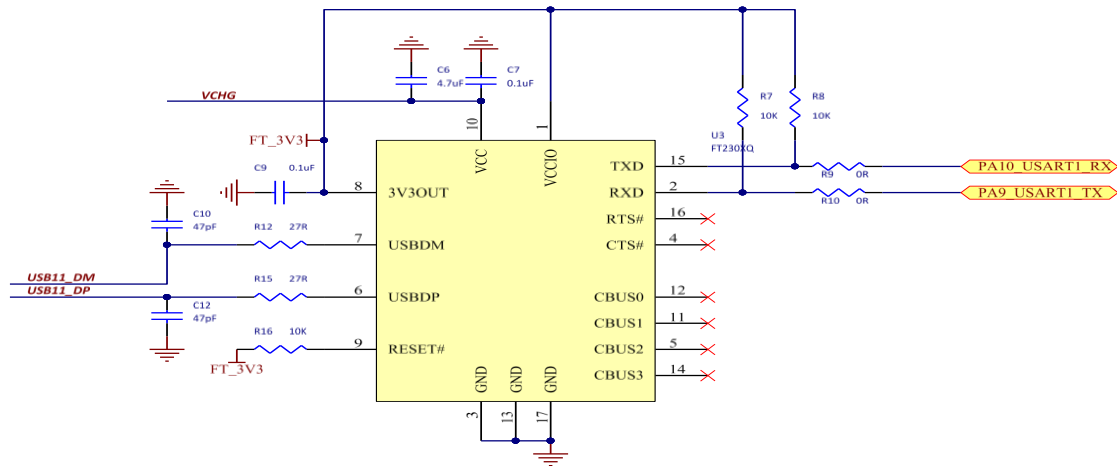
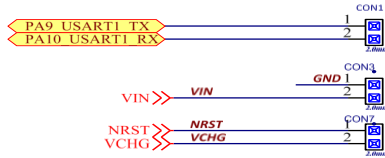
Level Shifter Schematic

UART Level Shifter



PWM Level Shifter





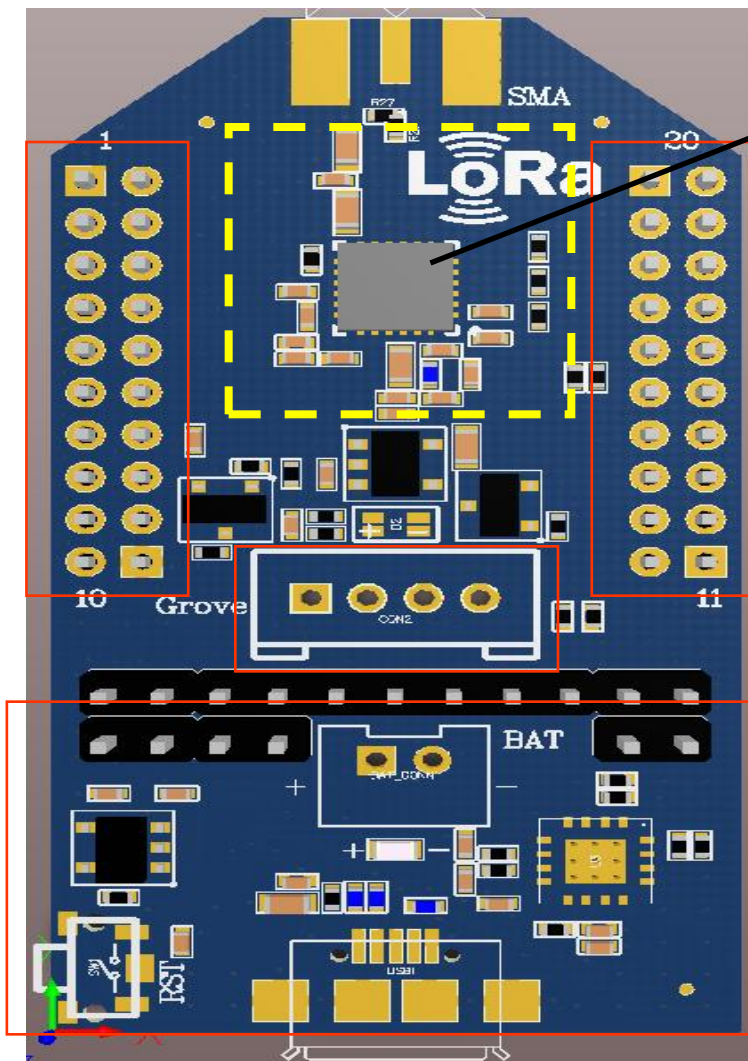


Breakout Pin Definition

VCC_IN		PA1_RF_FEM_CPS
PA2_TXD_A		RXTX/RFMOD
PA3_RXD_A		PC8
PA6_SPI1_MISO		PC7
NRST		PC4
PA8_USART1_CK		PC3
PA9		PC2
NC		PWM_External
PC6		VDDIO_External
GND		GND



GND
VCC
PB7_SDA
PB6_SCL



Only available on G76S

PC10		PB1_IO_INT2
PC11		PB0_IO_INT1
PC12		PA5_SPI1_SCK
PD2		PA4_SPI1_NSS
PB5		PC5
PB8_IO_LED_FCT		PC1
UART_TX_CPU		NC
UART_RX_CPU		PC0
VDDIO_CPU		PA0
GND		PA7_SPI_MOSI

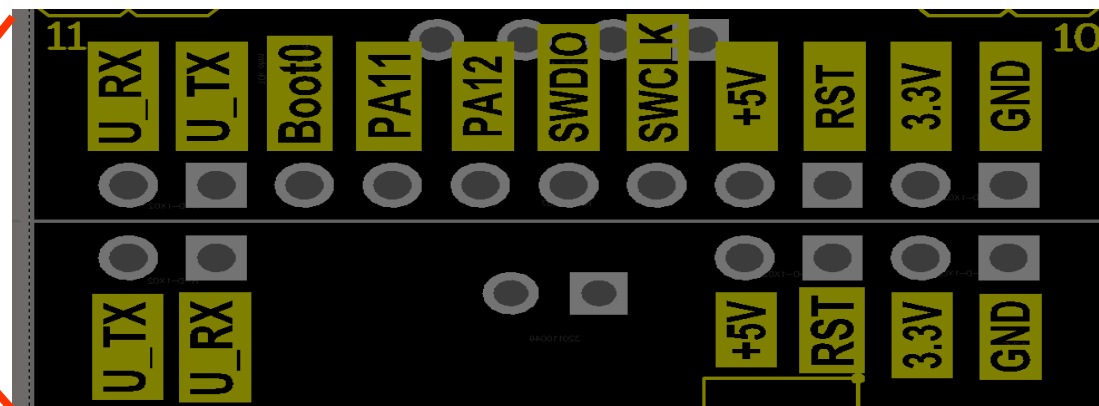
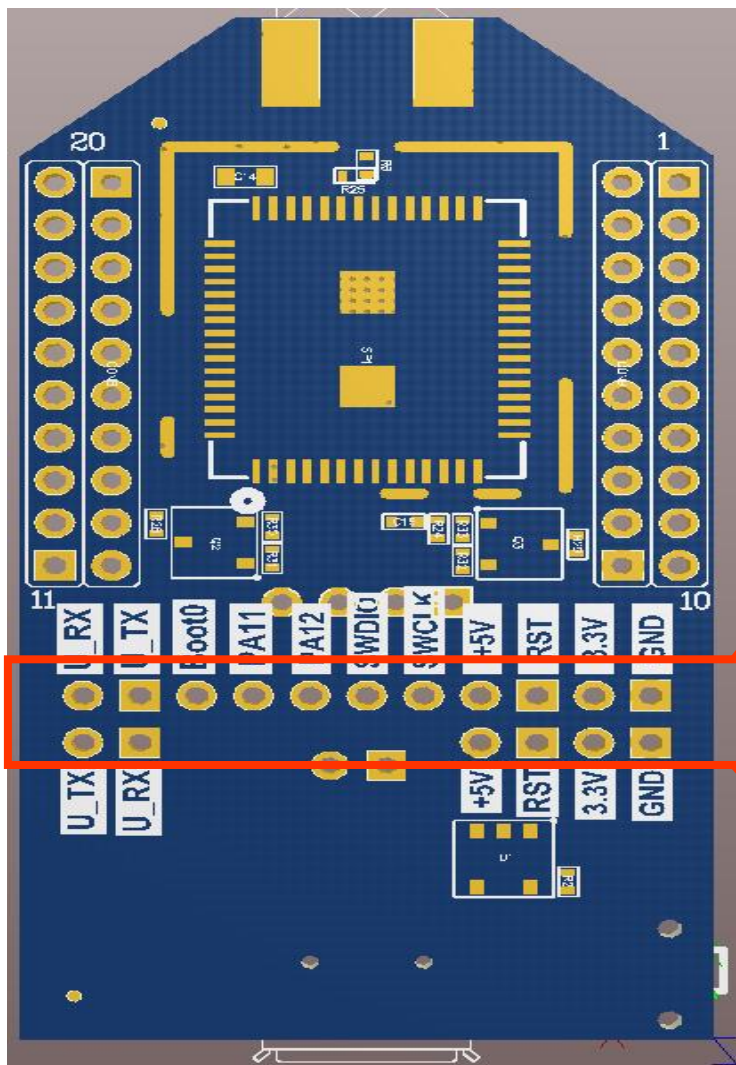
USB TO TTL

USB TO TTL Driver ([FTDI](#)
[FT230XQ](#))

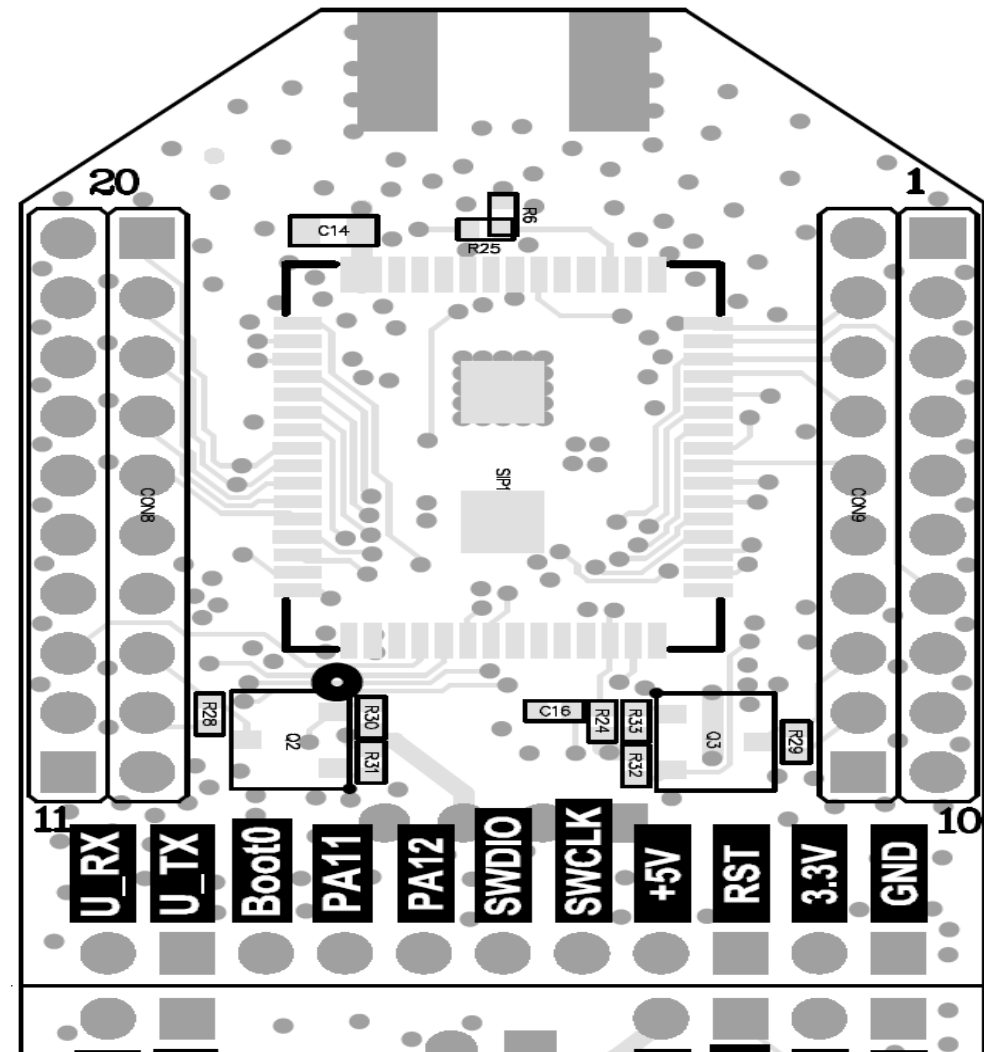
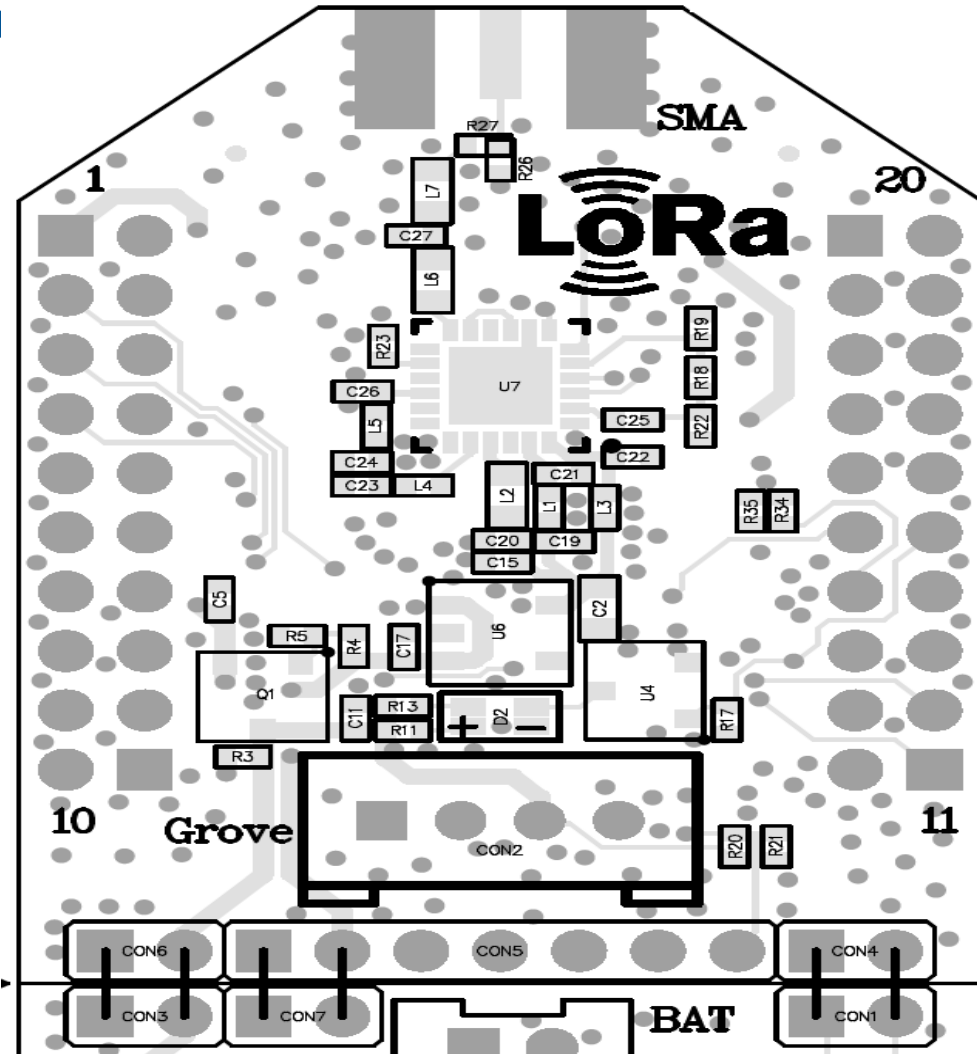
Top view



Breakout Pin Definition



Bottom view



The background features a series of concentric circles in a lighter shade of blue, centered on the right side of the image. These circles overlap and create a sense of depth and movement.

GIỎT
Thank You!