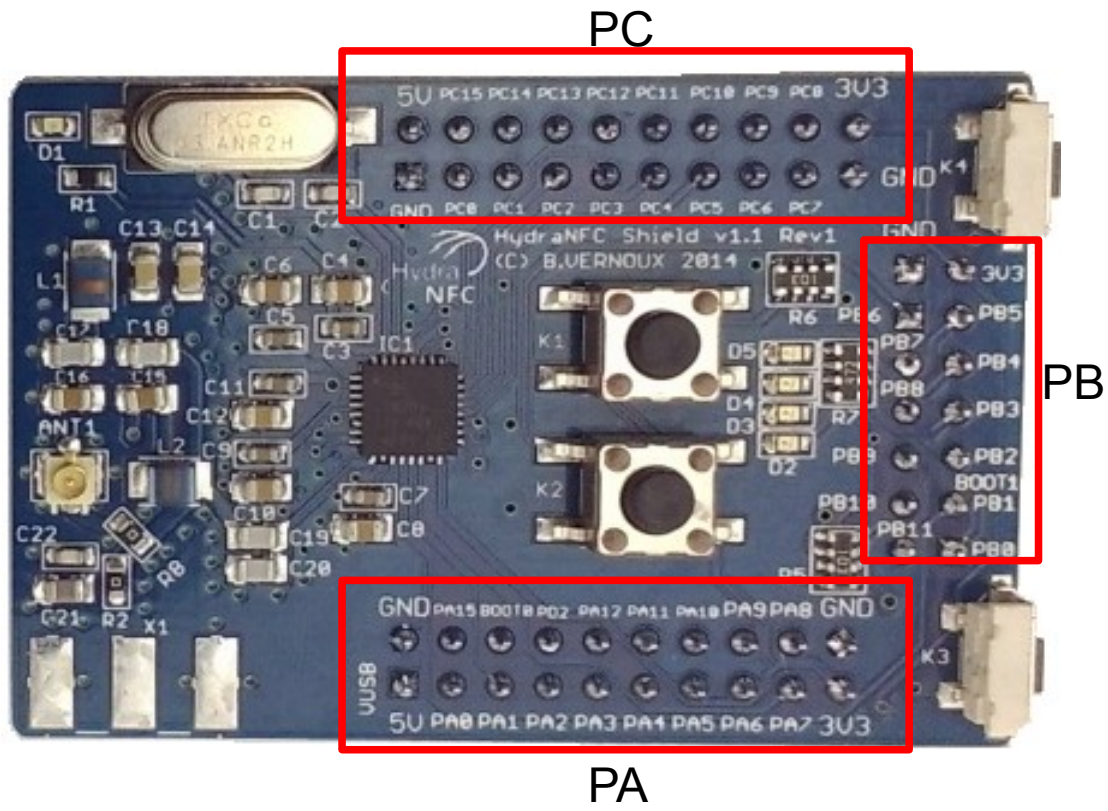
HydraNFC Modes & Pinout



Hydra NFC Pin	TRF7970A Pin	HydraBus Mode SPI With SS
PC0	IO2	+3V3 or TX SDM (Data En) **out**
PC1	IO4_CS	SPI2 CS Master **out**
PC2	IO6_MISO	SPI2 MISO Master or RX DM1 **in**
PC3	IO7_MOSI	SPI2 MOSI Master **out**
PC4	IO5	TX SDM or RX DM1 CLK **in**
PC5	IO3	TX SDM **out**
PB1	ASK_OOK	TX SDM or Direct Mode 0 **out**
PB10	DATA_CLK	SPI2 CLK Master **out**
PB11	EN (Chip En)	+3V3 **out**
PA1	IRQ	IRQ Input **in**
PA2	IO1	+3V3 **out**
PA3	IO0	GND **out**
PA5	SYS_CLK (Out)	SPI1 CLK Slave (sniffer) **in**
PA7	MOD	SPI1 MOSI Slave (sniffer) **in**

IO2: TX SDM Enable (TRF7970A Data Enable input)
IO3: TX SDM Data (TRF7970A Data Bit input)
IO5: TX SDM Clock or RX DM1 Clock (TRF7970A Data Clock output)
IO6: SPI MISO or RX DM1 Data (TRF7970A Data Bit output) or subcarrier signal Direct Mode 0 (output)
ASK/OOK: Selection between ASK and OOK modulation (0 = ASK, 1 = OOK) for Direct Mode 0 or 1. Can be configured as an output to provide the received analog signal output.
SYS_CLK: Options with 13.56-MHz crystal: Off, 3.39 MHz, 6.78 MHz, or 13.56 Mhz

RX DM1 = Receive Direct Mode 1 (TRF7970A receive), TX SDM = Transmit Special Direct Mode (TRF7970A transmit)
TRF7970A Pin 16 is used to supply the I/O interface pins (I/O_0 to I/O_7), IRQ, SYS_CLK, and DATA_CLK pins of the reader.