

# Nordic Semiconductor ASA

## nRF52840 Bluetooth Smart/ANT/802.15.4/2.4GHz RF Preview Development Board (PCA10056)

- Sheet 1: Cover
- Sheet 2: nRF Radio
- Sheet 3: Pin Map
- Sheet 4: Interface MCU
- Sheet 5: Miscellaneous
- Sheet 6: Connectors
- Sheet 7: Power Supply

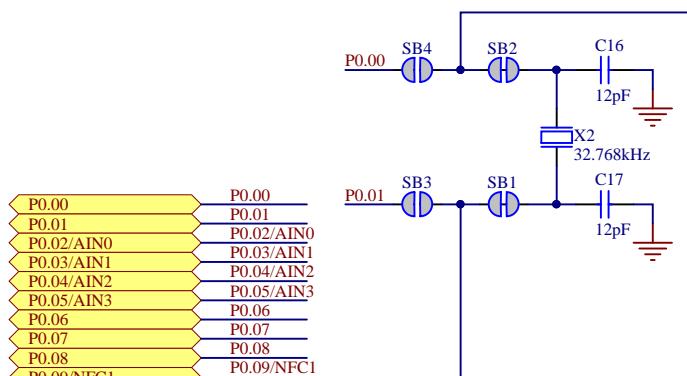
\* The No ERC object is a design directive.  
This directive is placed on a node in the circuit to suppress harmless warnings and/or error violation conditions that are detected when the schematic project is compiled.



Title  
**PCA10056 - Cover**

Size <b>A4</b>	Project Number <b>4440</b>	Revision <b>0.9.0</b>	
Date: <b>14.11.2016</b>		Sheet <b>1</b> of <b>7</b>	
File: <b>pca10056_sheet1_cover.SchDoc</b>		Drawn By: <b>RUBR</b>	

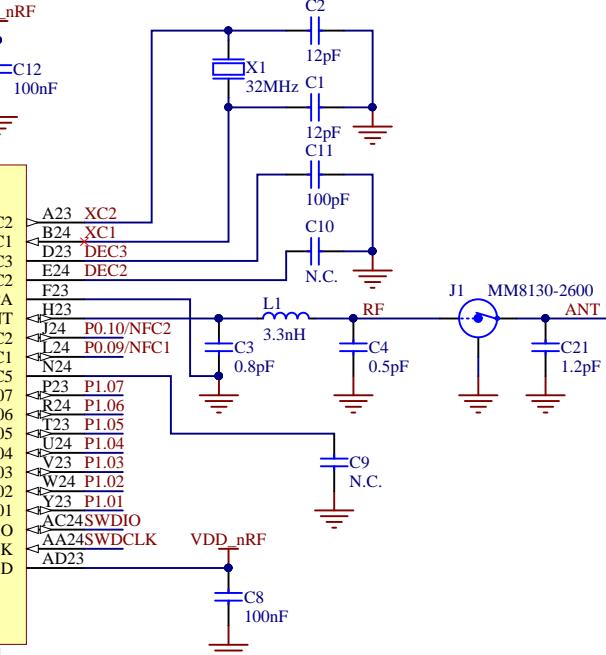
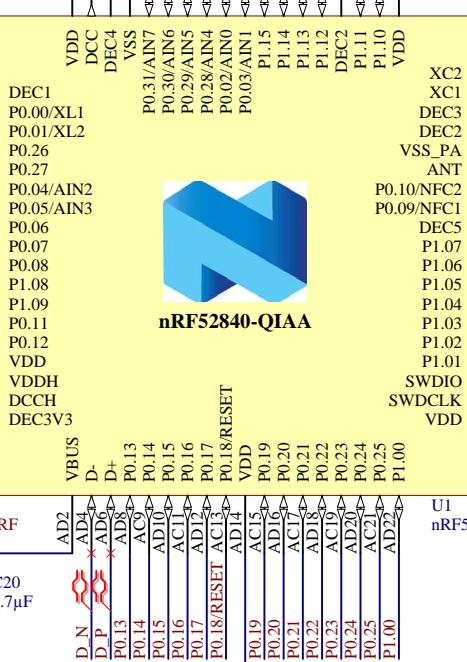
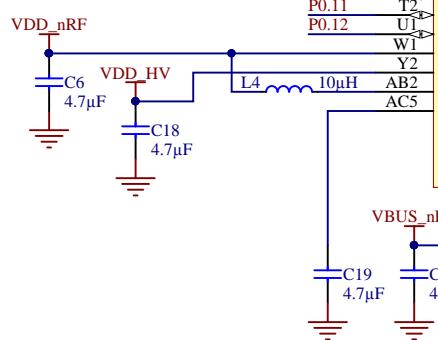
A



B

P0.00 P0.00  
P0.01 P0.01  
P0.02/AIN0 P0.02/AIN0  
P0.03/AIN1 P0.03/AIN1  
P0.04/AIN2 P0.04/AIN2  
P0.05/AIN3 P0.05/AIN3  
P0.06 P0.06  
P0.07 P0.07  
P0.08 P0.08  
P0.09/NFC1 P0.09/NFC1  
P0.10/NFC2 P0.10/NFC2  
P0.11 P0.11  
P0.12 P0.12  
P0.13 P0.13  
P0.14 P0.14  
P0.15 P0.15  
P0.16 P0.16  
P0.17 P0.17  
P0.18/RESET P0.18/RESET  
P0.19 P0.19  
P0.20 P0.20  
P0.21 P0.21  
P0.22 P0.22  
P0.23 P0.23  
P0.24 P0.24  
P0.25 P0.25  
P0.26 P0.26  
P0.27 P0.27  
P0.28/AIN4 P0.28/AIN4  
P0.29/AIN5 P0.29/AIN5  
P0.30/AIN6 P0.30/AIN6  
P0.31/AIN7 P0.31/AIN7  
P1.00 P1.00  
P1.01 P1.01  
P1.02 P1.02  
P1.03 P1.03  
P1.04 P1.04  
P1.05 P1.05  
P1.06 P1.06  
P1.07 P1.07  
P1.08 P1.08  
P1.09 P1.09  
P1.10 P1.10  
P1.11 P1.11  
P1.12 P1.12  
P1.13 P1.13  
P1.14 P1.14  
P1.15 P1.15

D- D\_N  
D+ D\_P  
SWDIO SWDIO  
SWDCLK SWDCLK



Title  
PCA10056 - nRF Radio

Size	Project Number	Revision
A4	4440	0.9.0
Date: 14.11.2016		Sheet 2 of 7
File: pca10056_sheet2_radio.SchDoc		Drawn By: RUBR

A

B

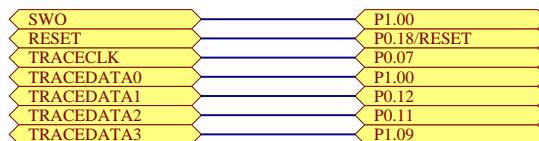
C

D

**NORDIC**  
SEMICONDUCTOR

### GPIO pin mapping

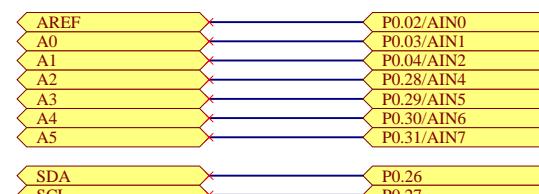
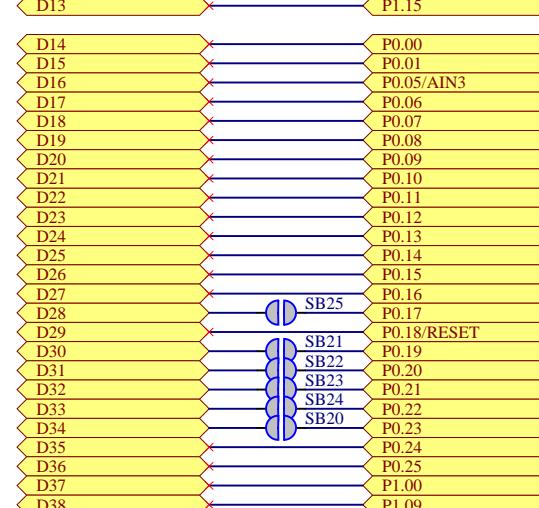
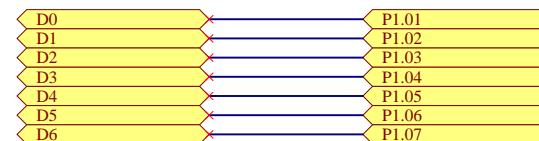
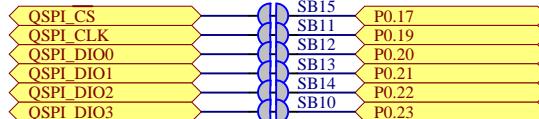
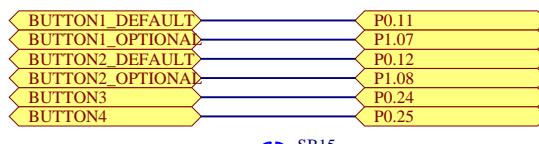
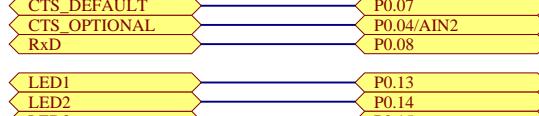
A



B

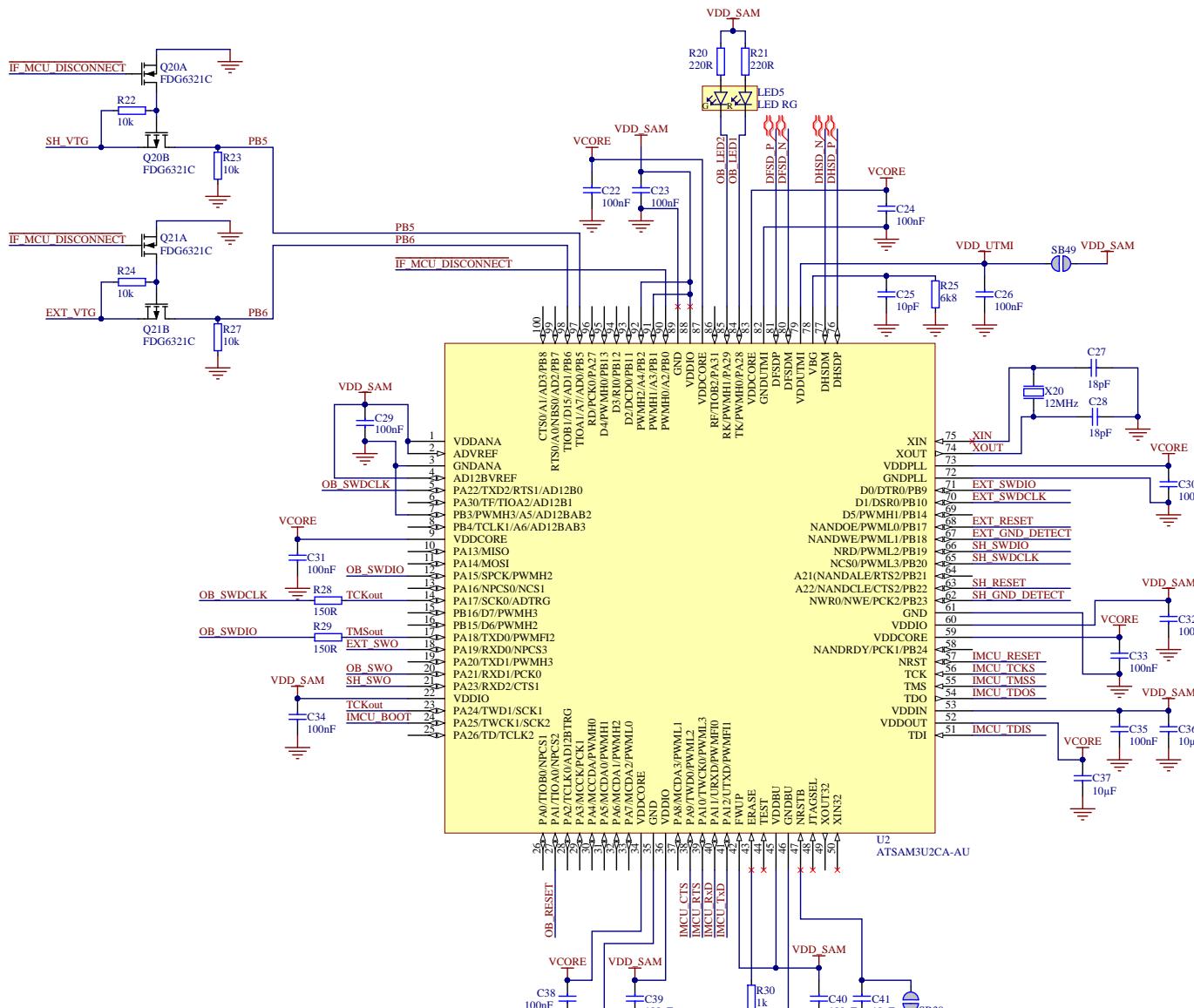


C



Title  
**PCA10056 - Pin Map**

Size	Project Number	Revision	
A4	4440	0.9.0	
Date: 14.11.2016		Sheet 3 of 7	
File: pca10056_sheet3_pin_map.SchDoc		Drawn By: RUBR	



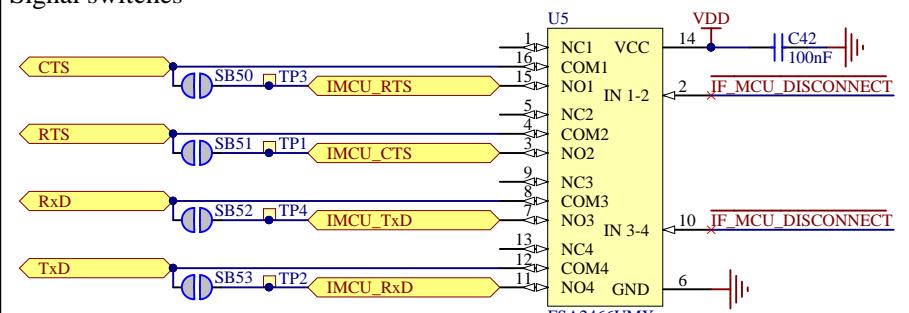
PCA10056 - Interface MCU

**PCA10056 - Interface MCU**  

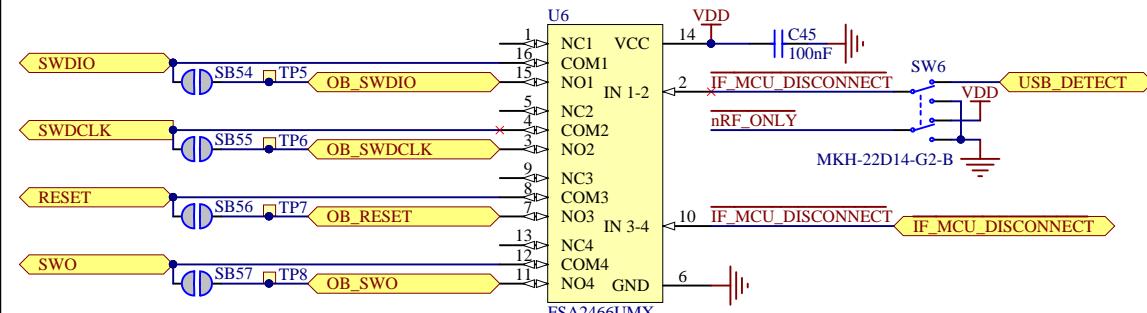
  
 Size Project Number Revision  
**A3** **4440** **0.9.0**  
 Date: **14.11.2016** Sheet **4** of **7**  
 File:  **pca10056\_sHEET4\_interface\_mcu\_SchDoc** Drawn By: **PUBP**

### Signal switches

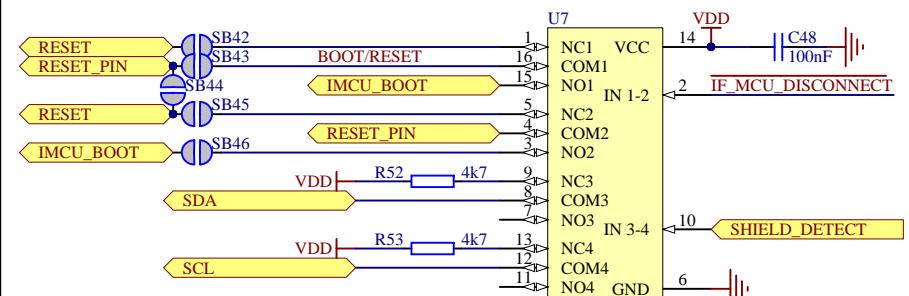
A



B

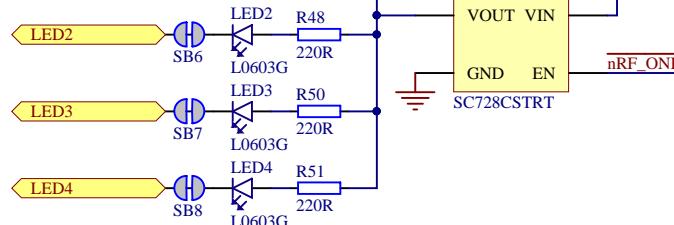


C

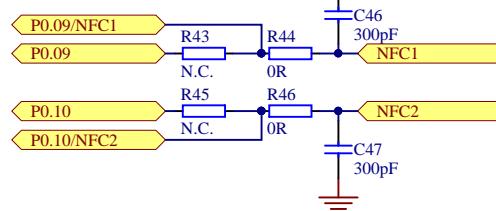


D

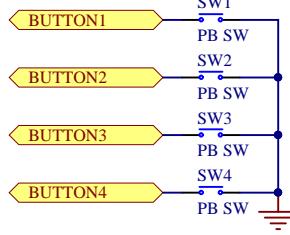
### LEDs



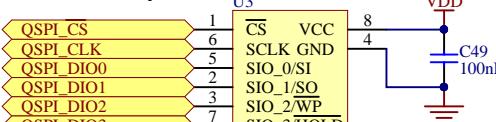
### NFC pin configuration



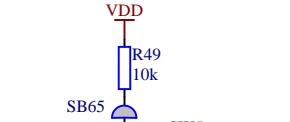
### Buttons



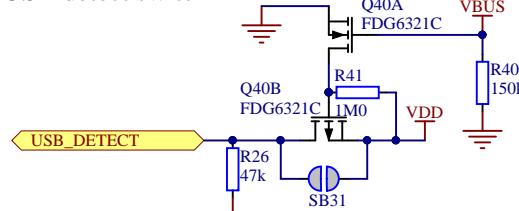
### Flash memory



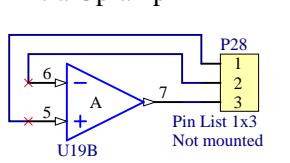
### Boot/Reset button



### USB detect switch



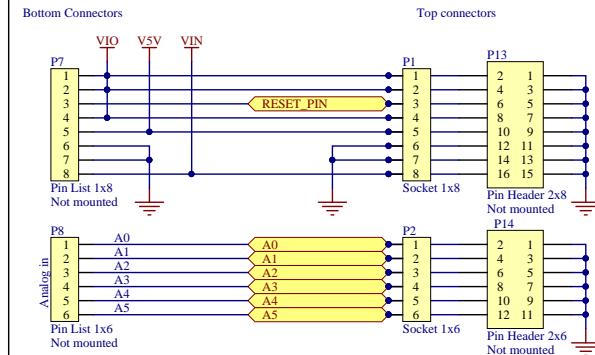
### Extra Op-amp



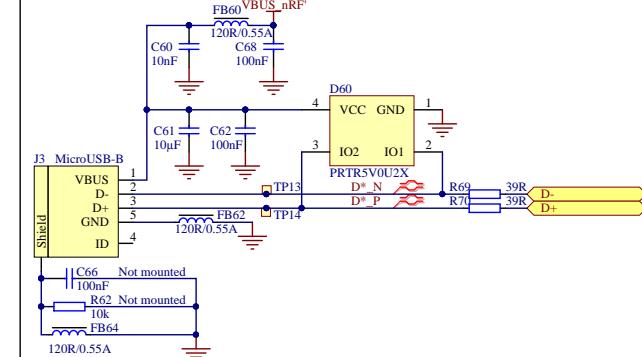
Title  
PCA10056 - Miscellaneous

Size A4	Project Number 4440	Revision 0.9.0	
Date: 14.11.2016		Sheet 5 of 7	
File: pca10056_sheet5_misc.SchDoc		Drawn By: RUBR	

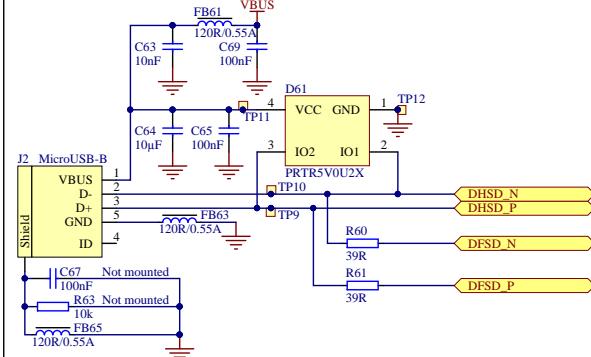
### Arduino Interface Connectors



### nRF USB Connector



### Interface MCU USB Connector



A

A

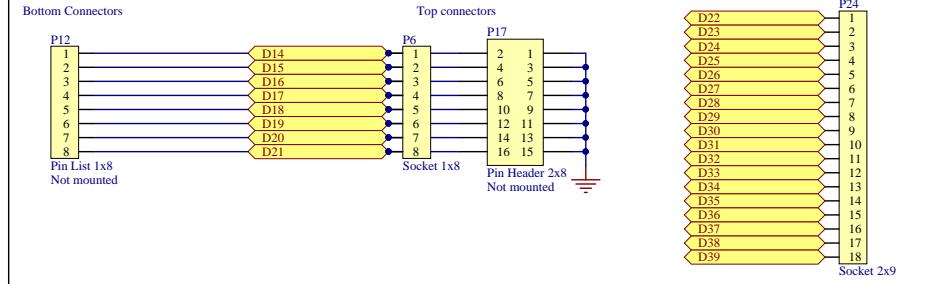
B

B

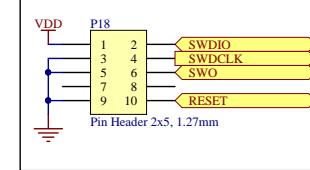
C

C

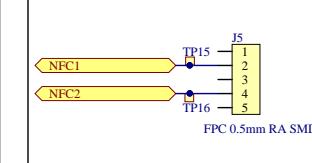
### Auxiliary Connectors



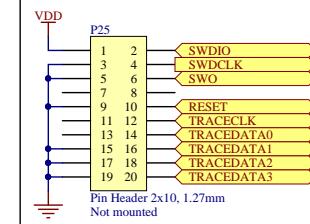
### Debug IN Connector



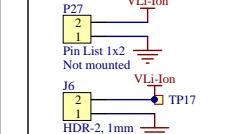
### NFC Antenna Connector



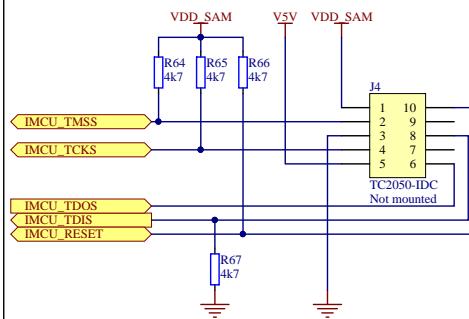
### Trace connector



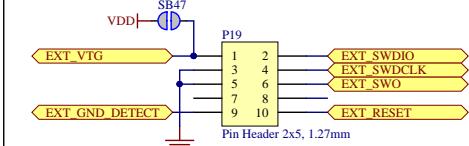
### Li-ion connector



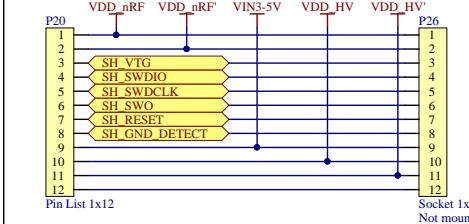
### Interface MCU Programming Connector



### Debug OUT Connector



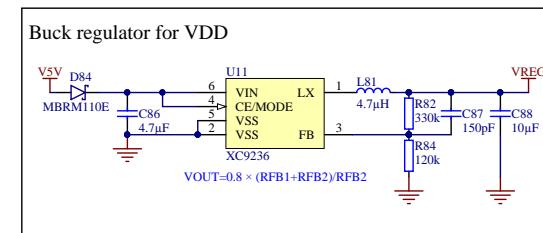
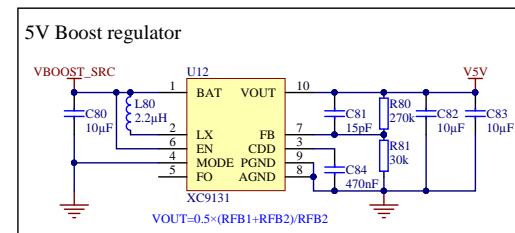
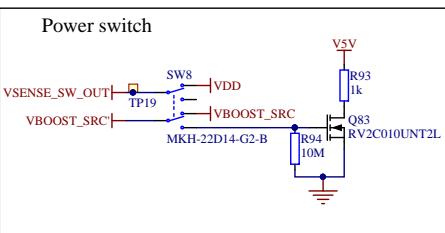
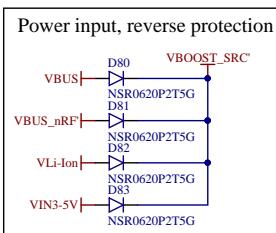
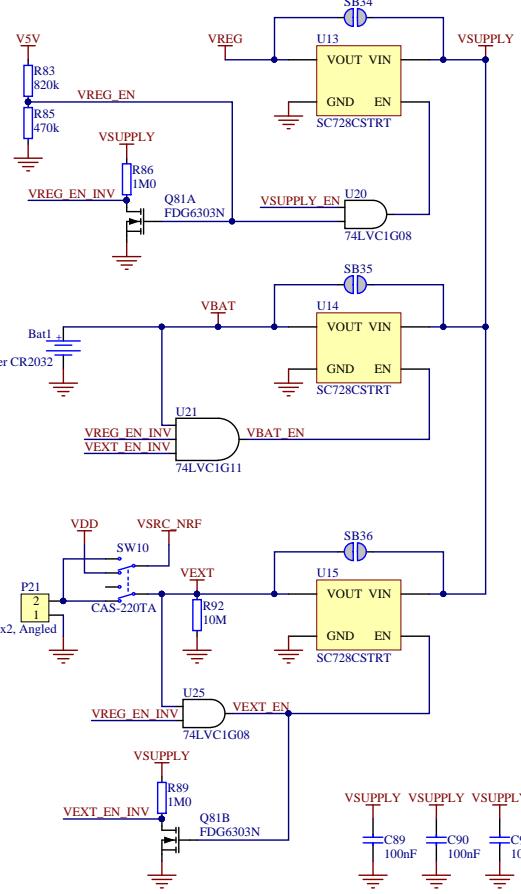
### Shield Debug and Current measurement Connector



### PCA10056 - Connectors

Size	Project Number	Revision
A3	4440	0.9.0
Date: 14.11.2016		Sheet 6 of 7
File: pca10056_sheet6_connectors.SchDoc		Drawn By: RUBR



**Power sources and switches****VDD\_nRF sense buffer and switch**

**nRF power source select and current measurement**

**Interface MCU power switch**

**VBUS\_nRF switch**

**Instrument ground**

**PCA10056 - Power Supply**

Size	Project Number	Revision
A3	4440	0.9.0
Date:	14.11.2016	Sheet 7 of 7
File:	peca10056_sheet7_power_supply.SchDoc	Drawn By: RUBR

1

2

3

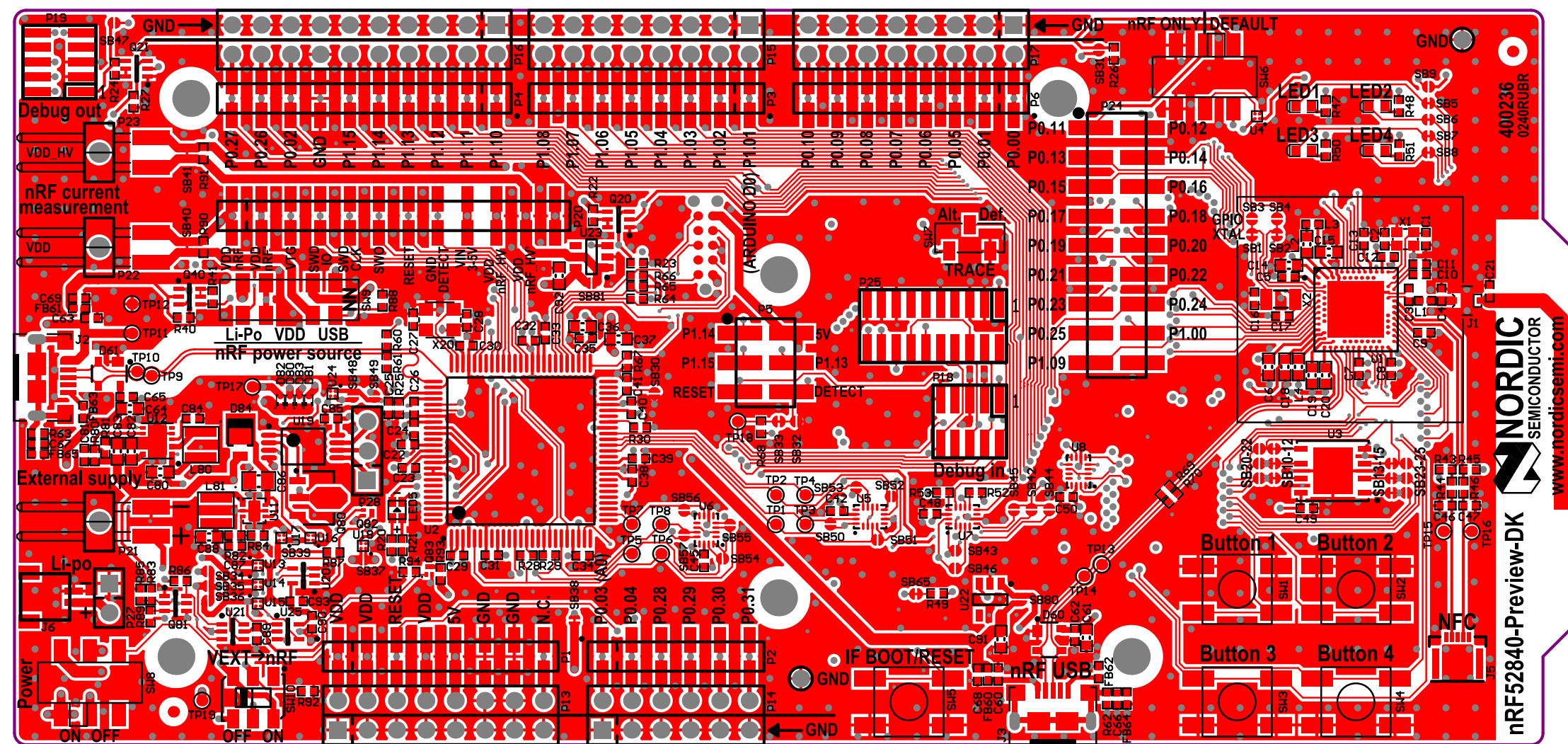
4

5

6

7

8



nRF52840-Preview-DK

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