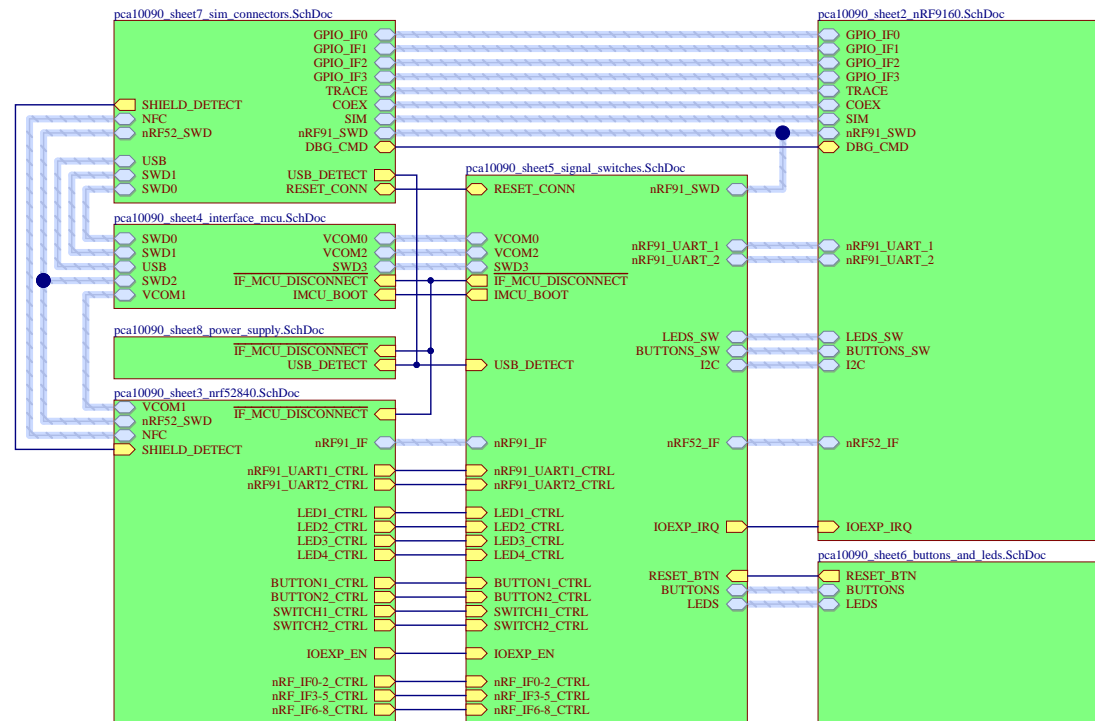


Nordic Semiconductor ASA

nRF9160 Development Kit (PCA10090)

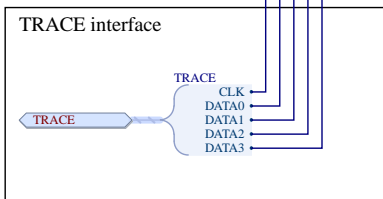
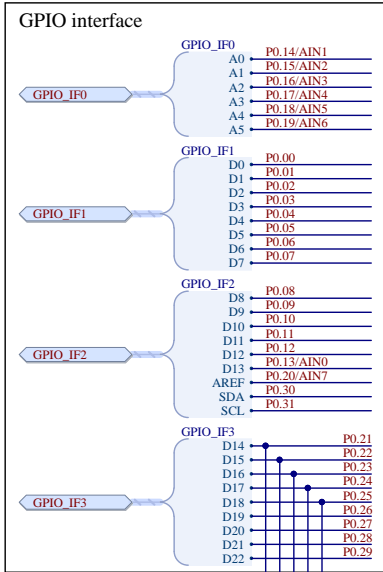
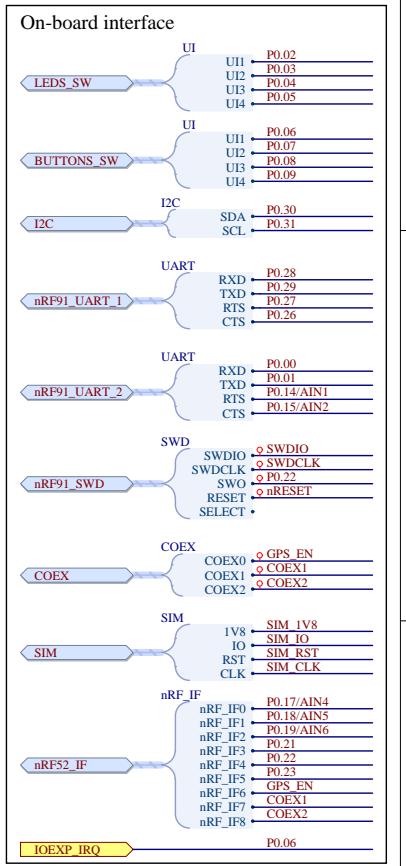
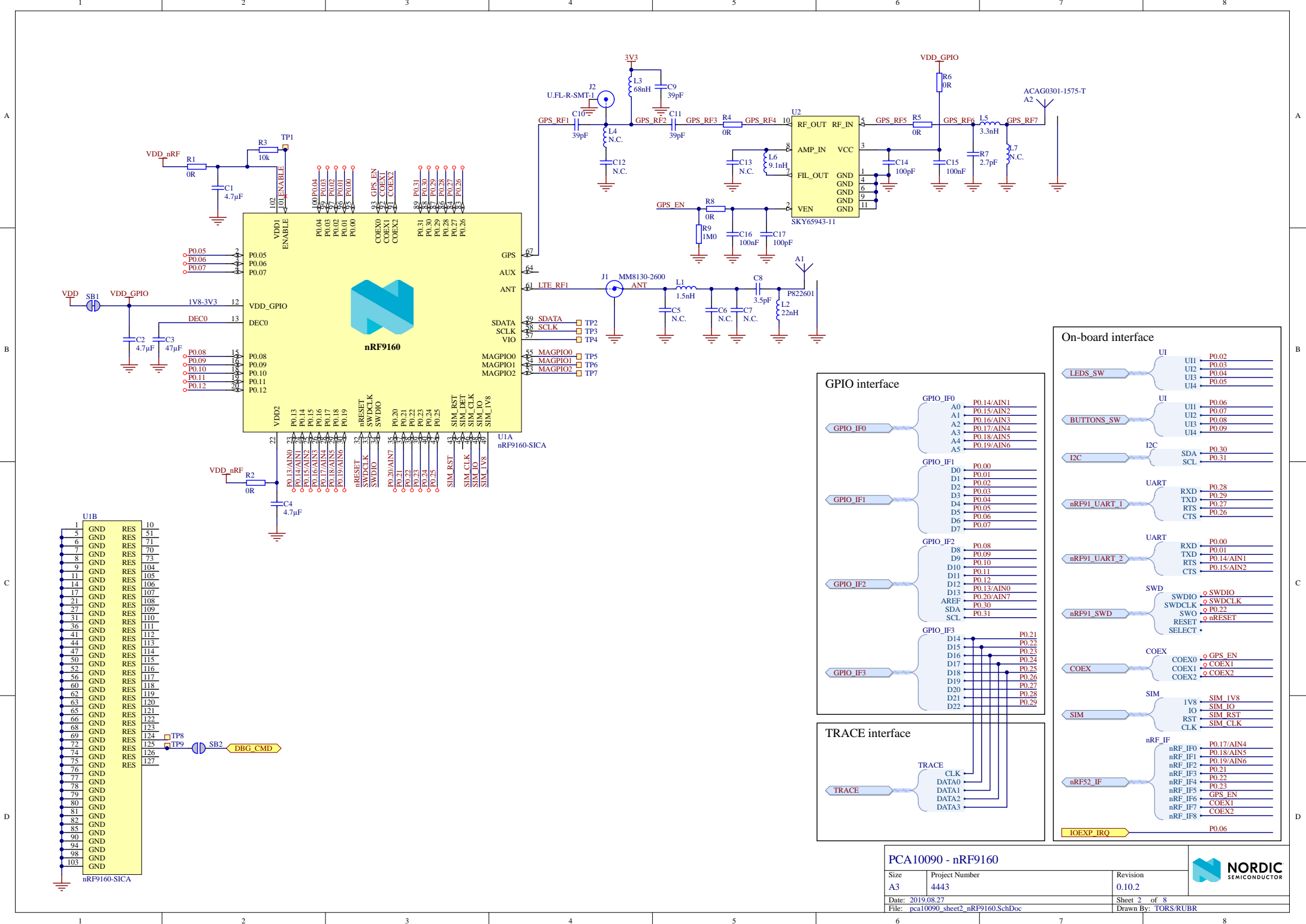
- Sheet 1: Connections
- Sheet 2: nRF9160
- Sheet 3: nRF52840
- Sheet 4: Signal Switches
- Sheet 5: Interface MCU
- Sheet 6: Buttons and LEDs
- Sheet 7: SIM & Connectors
- Sheet 8: Power Supply



× 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.

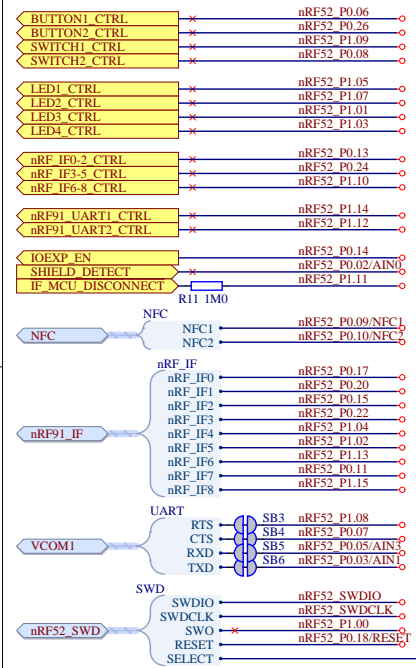
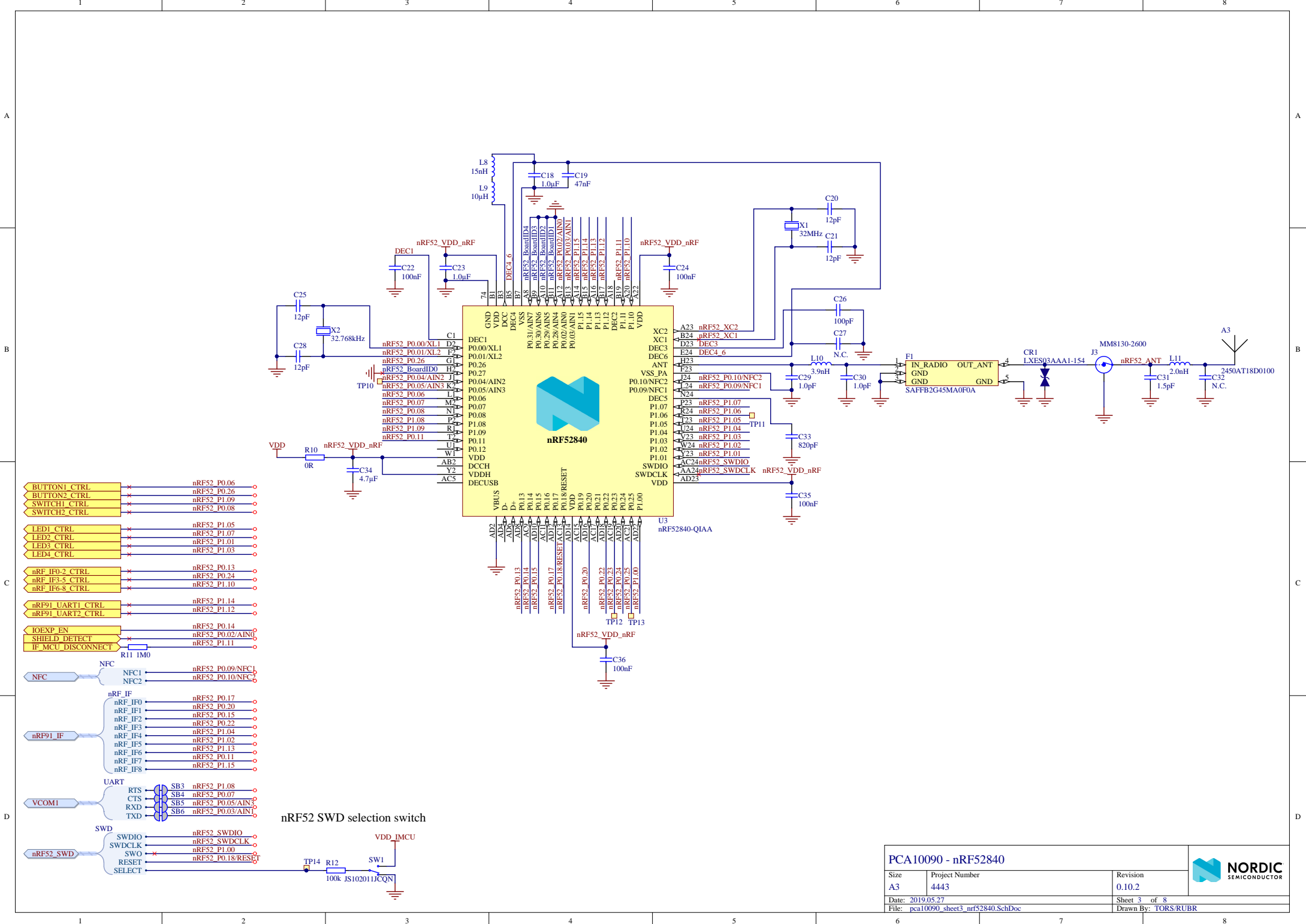
PCA10090 - Connections

Size A3	Project Number 4443	Revision 0.10.2	
Date: 2019.05.27	File: pca10090_sheet1_connections.SchDoc	Sheet 1 of 8 Drawn By: TORS/RUBR	



PCA10090 - nRF9160		Revision	
Size	Project Number	0.10.2	
A3	4443	Sheet 2 of 8	
Date: 2019.08.27	File: pca10090_sheet2_nRF9160.SchDoc	Drawn By: TORS/RUBR	

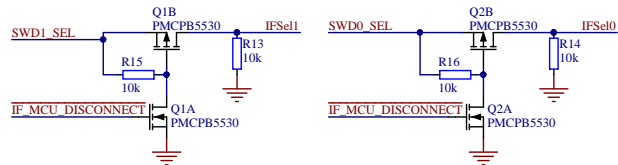




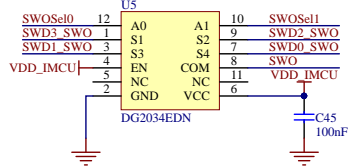
nRF52 SWD selection switch

PCA10090 - nRF52840		NORDIC SEMICONDUCTOR	
Size	Project Number	Revision	
A3	4443	0.10.2	
Date: 2019.05.27	File: pca10090_sheet3_nrf52840.SchDoc	Sheet 3 of 8	Drawn By: TORS/RUBR

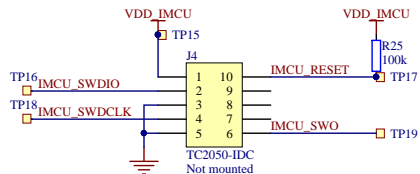
SWD0/1 SEL reverse drive protection



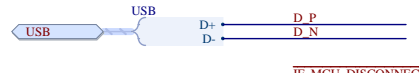
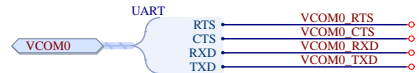
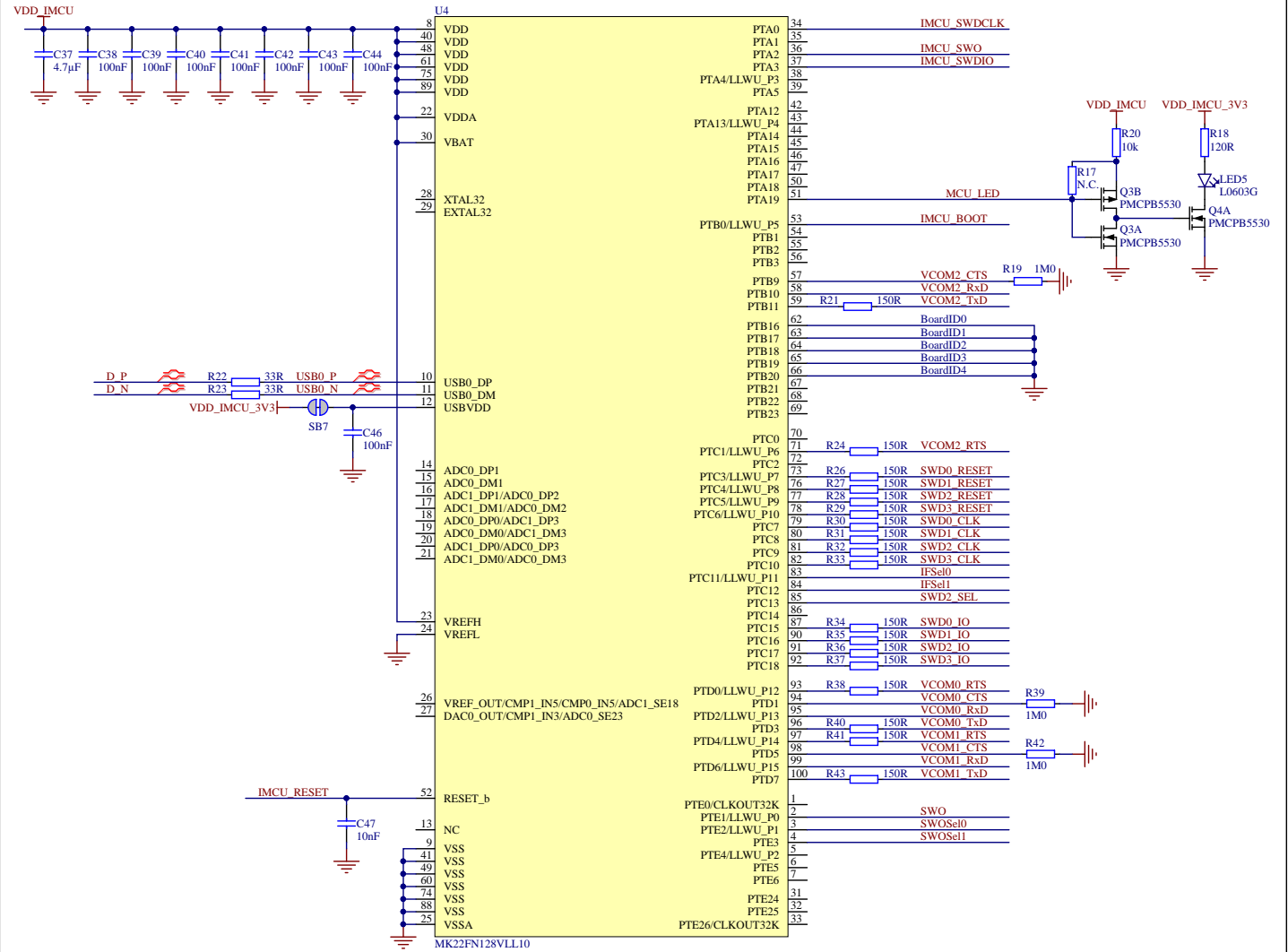
SWO MUX



Interface MCU programming connector



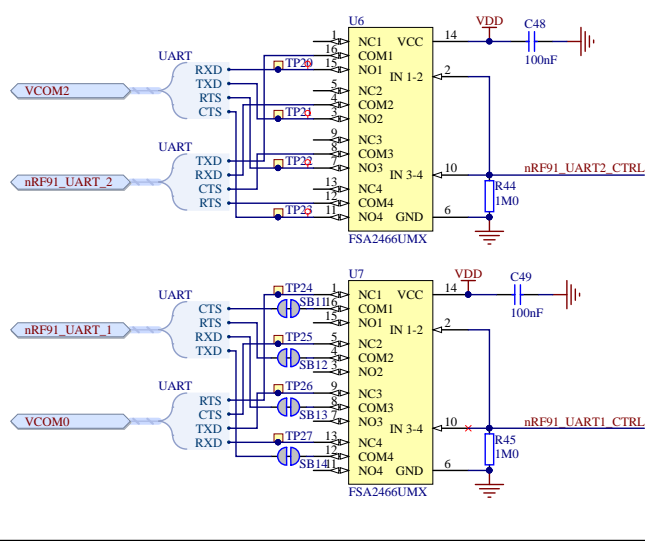
Interface MCU



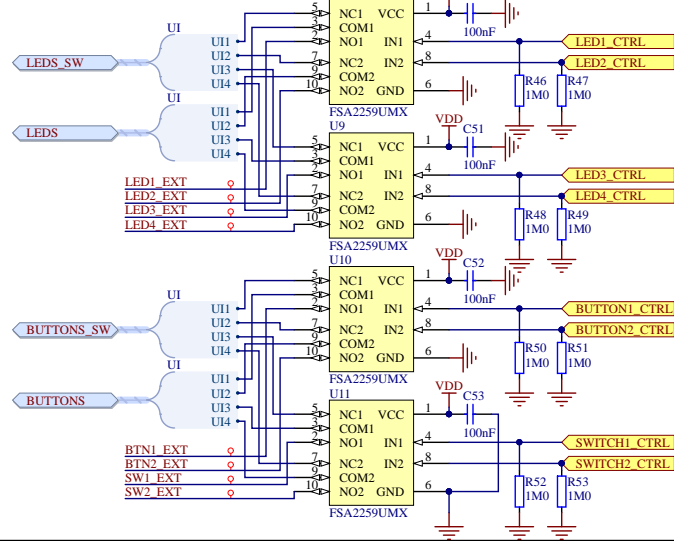
PCA10090 - Interface MCU

Size	Project Number	Revision	
A3	4443	0.10.2	
Date: 2019.05.27	Sheet 4 of 8		
File: pca10090_sheet4_interface_mcu.SchDoc	Drawn By: TORS/RUBR		

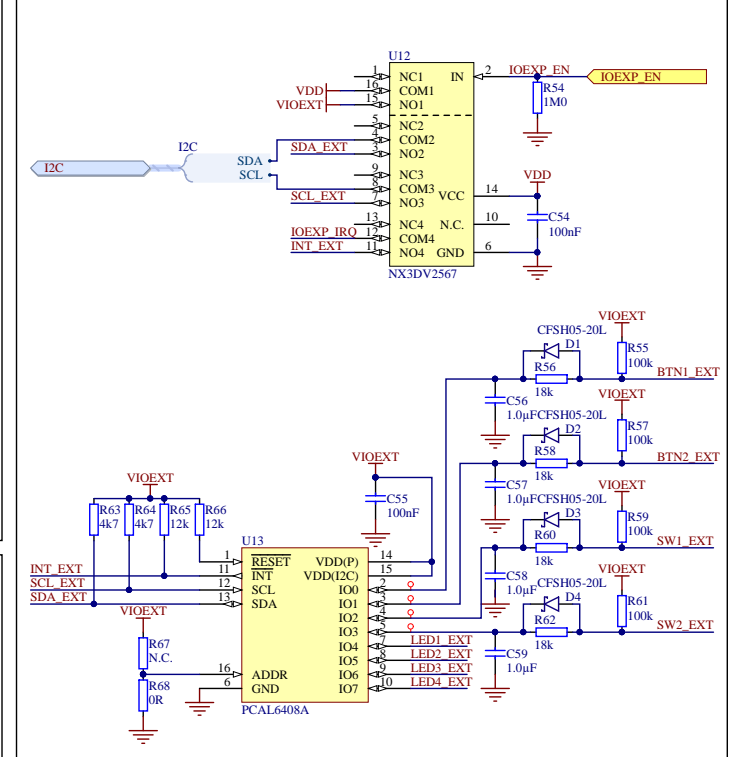
UART control



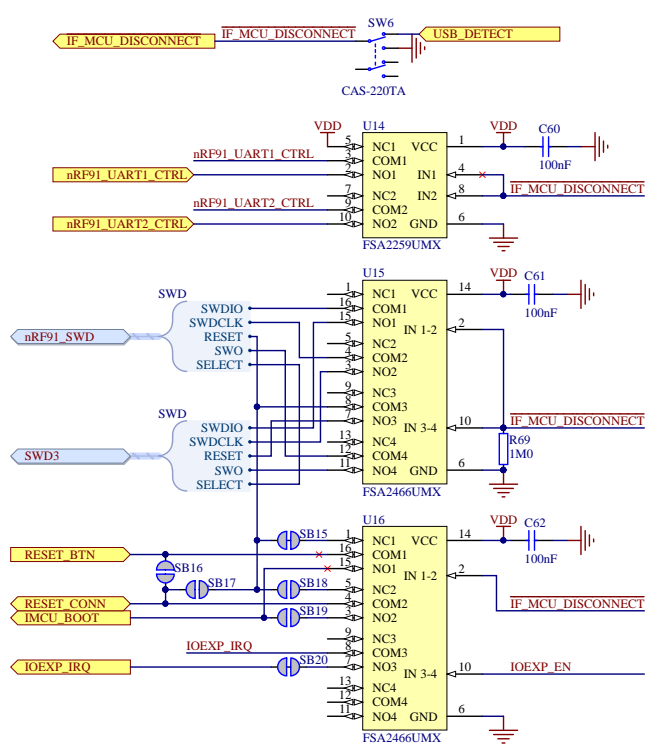
LED, button and switch control



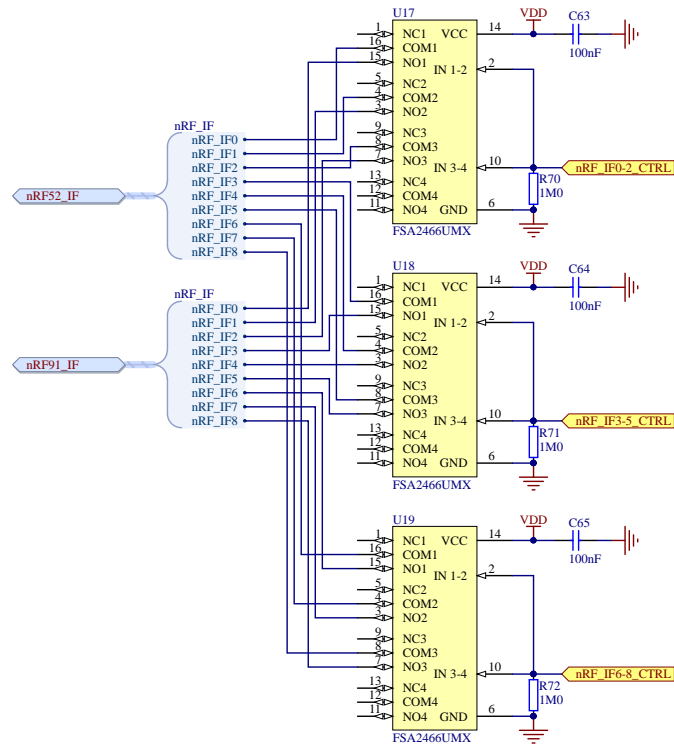
IO expander for LEDs, buttons and switches



Interface MCU disconnect switches

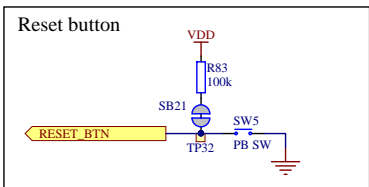
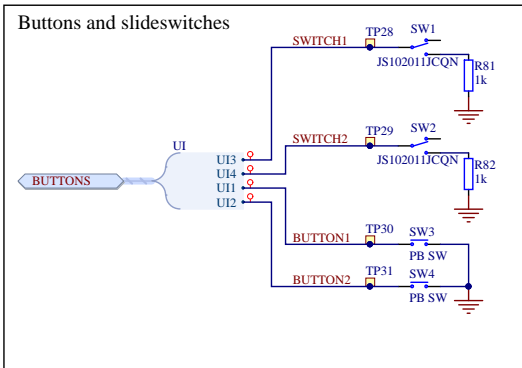
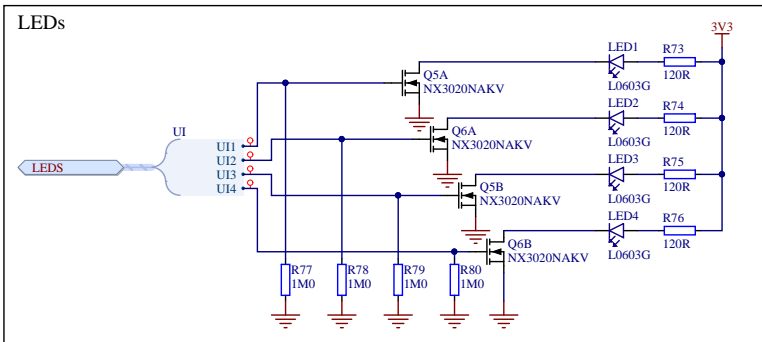


nRF interface and COEX control



PCA10090 - Signal switches

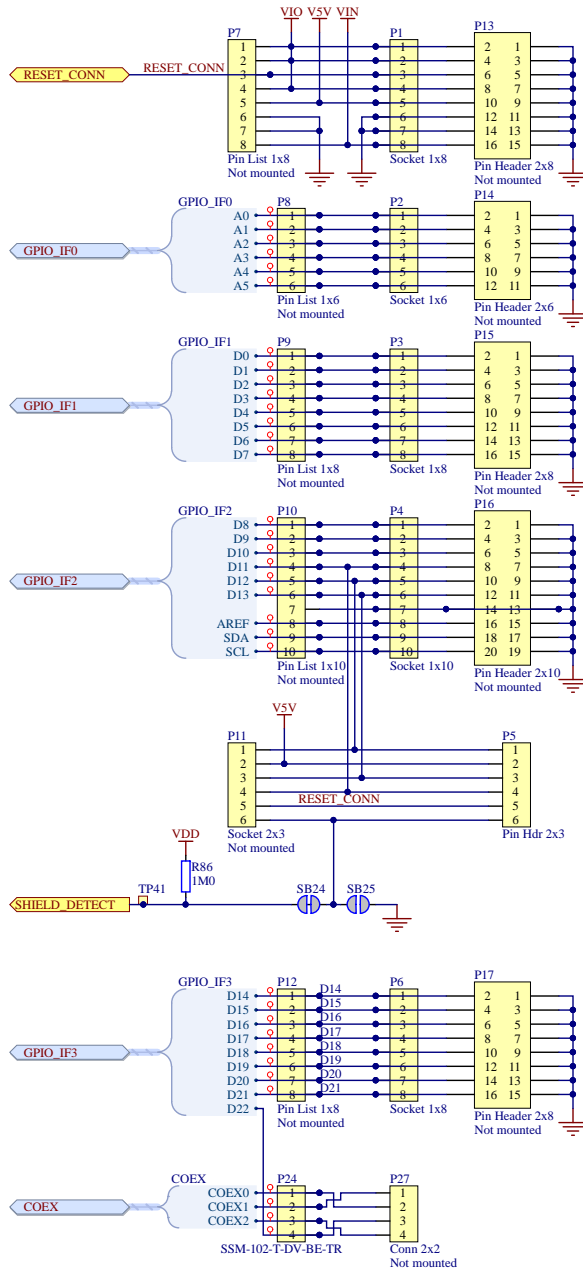
Size A3	Project Number 4443	Revision 0.10.2	
Date: 2019.06.26	Sheet 5 of 8		
File: pca10090_sheet5_signal_switches.SchDoc	Drawn By: TORS/RUBR		



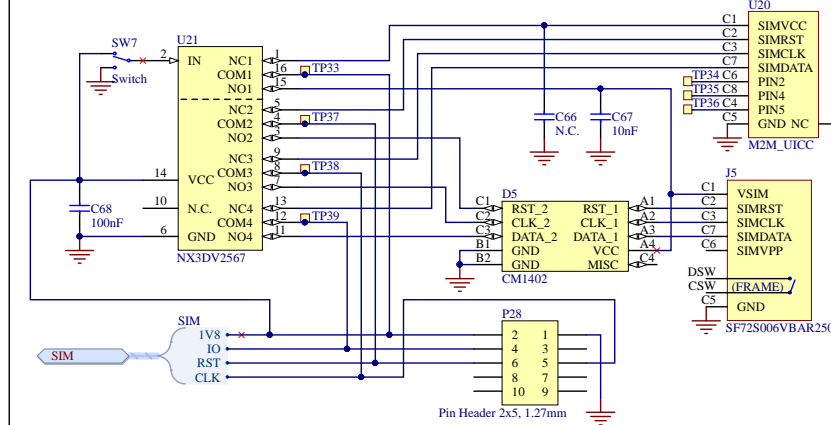
PCA10090 - Buttons and LEDs

Size A3	Project Number 4443	Revision 0.10.2	
Date: 2019.06.26	Sheet 6 of 8		
File: pca10090_sheet6_buttons_and_leds.SchDoc	Drawn By: TORS/RUBR		

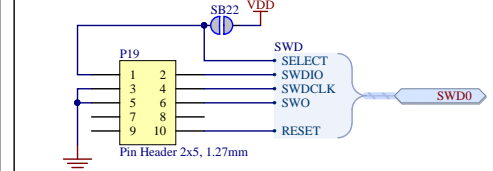
Interface connectors



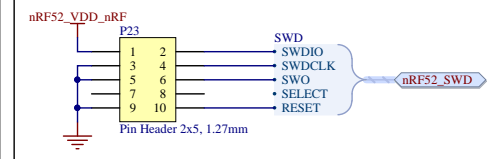
SIM card connector, eSIM and selection switch



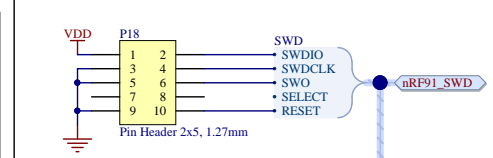
Debug OUT connector



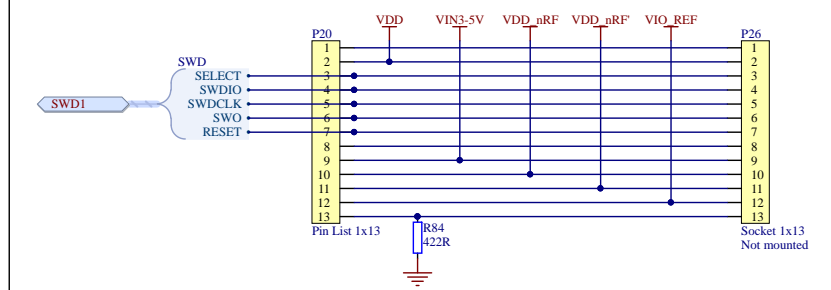
nRF52 debug IN connector



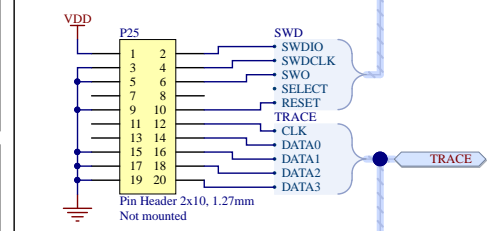
nRF91 debug IN connector



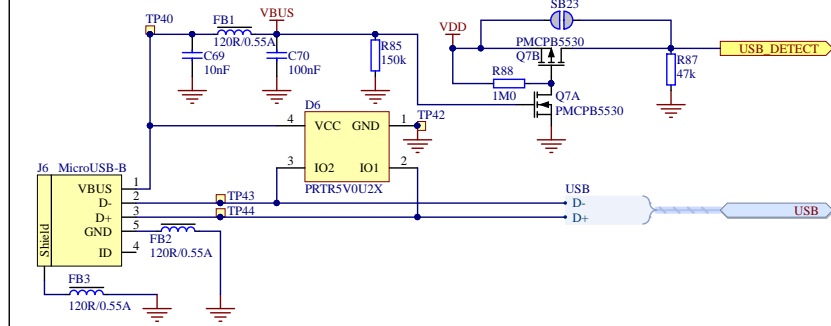
Shield debug and current measurement connector



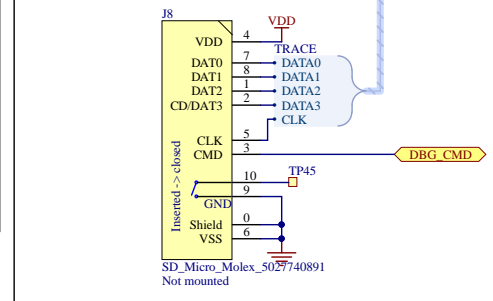
Trace connector



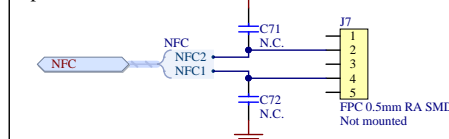
USB connector and USB detect



Nordic internal debugging interface



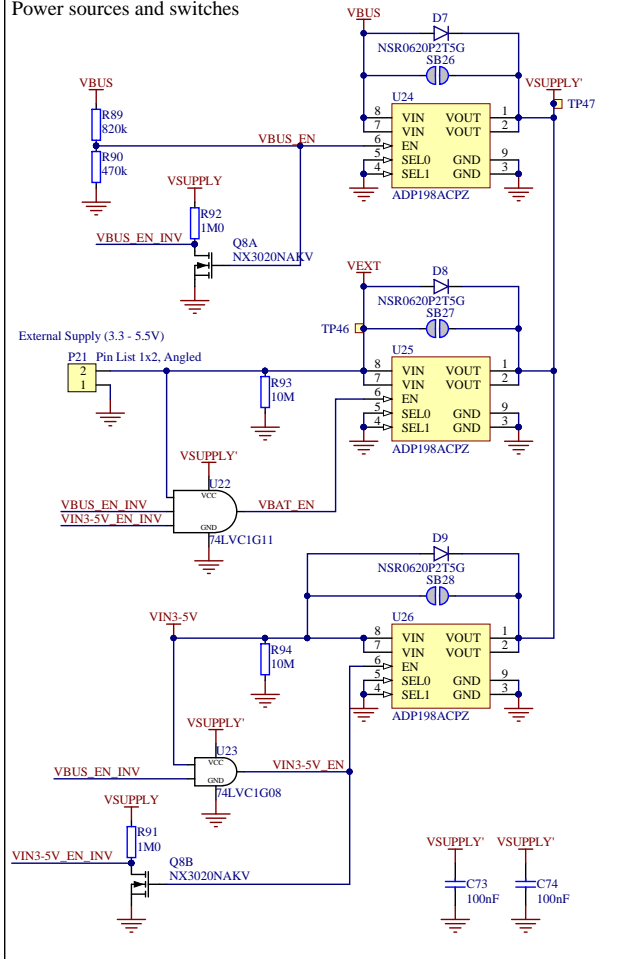
Optional NFC connector



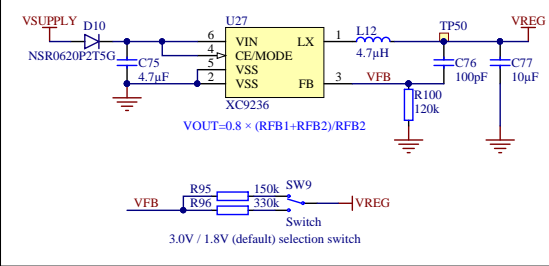
PCA10090 - SIM & Connectors

Size A3	Project Number 4443	Revision 0.10.2	
Date: 2019.05.28	Sheet 7 of 8	Drawn By: TORS/RUBR	
File: pca10090_sheet7_sim_connectors.SchDoc			

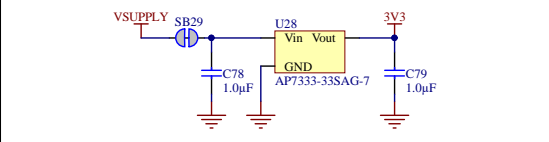
Power sources and switches



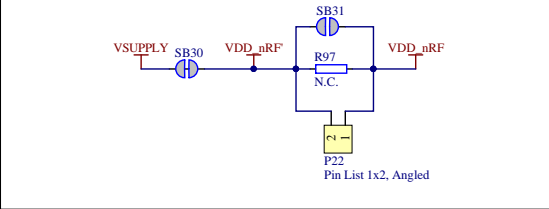
Buck regulator for VDD



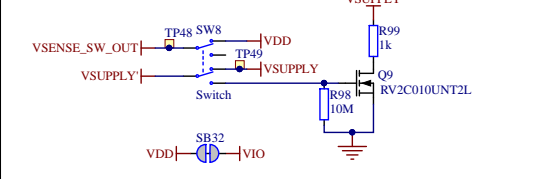
3V3 supply



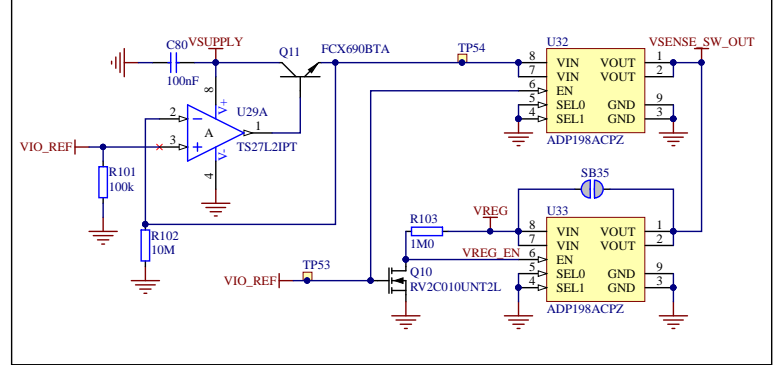
nRF91 current measurement



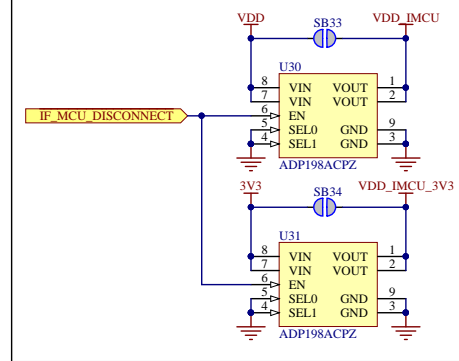
Power switch



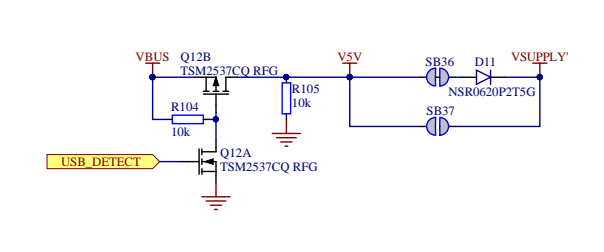
VIO_REF sense buffer and switch



Interface MCU power switch



VSUPPLY & V5V interface



Instrument ground

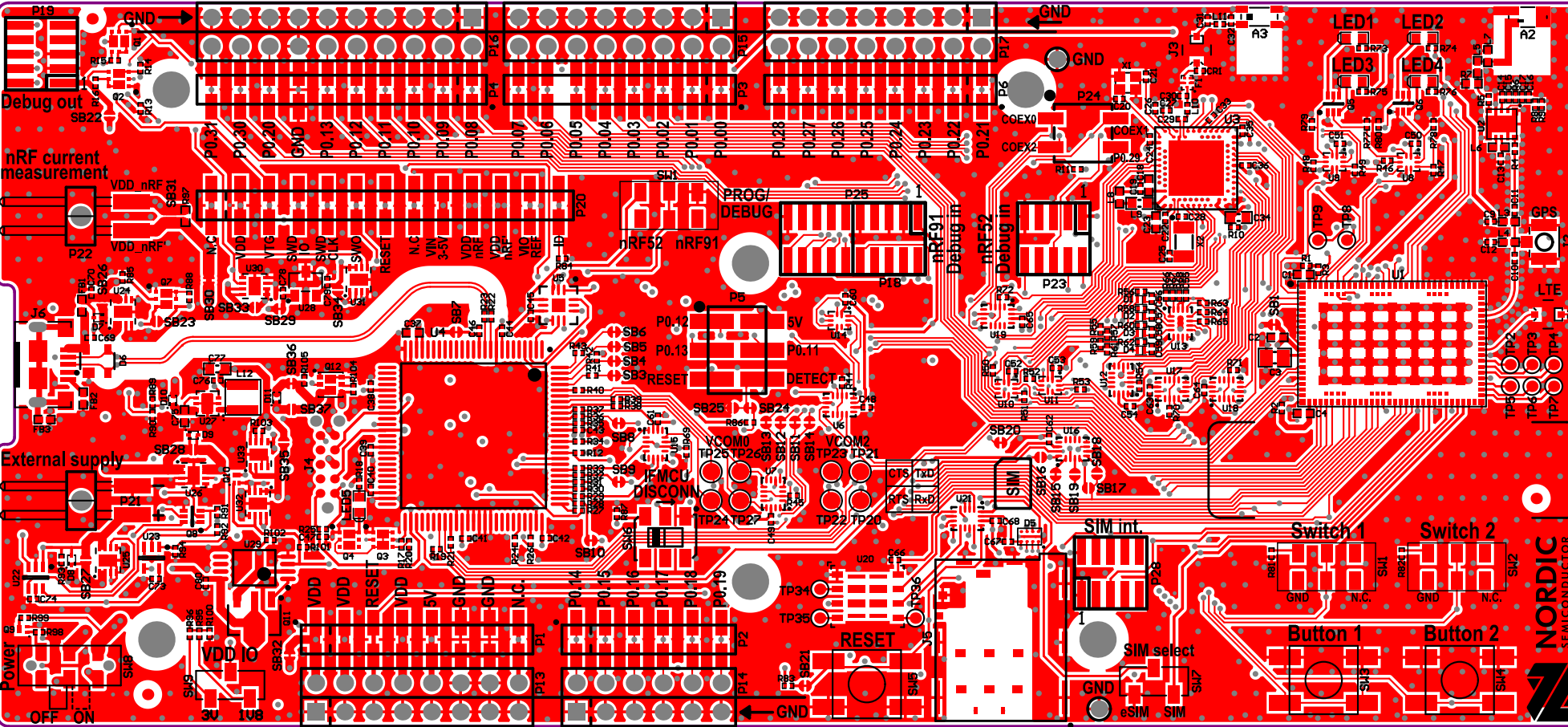


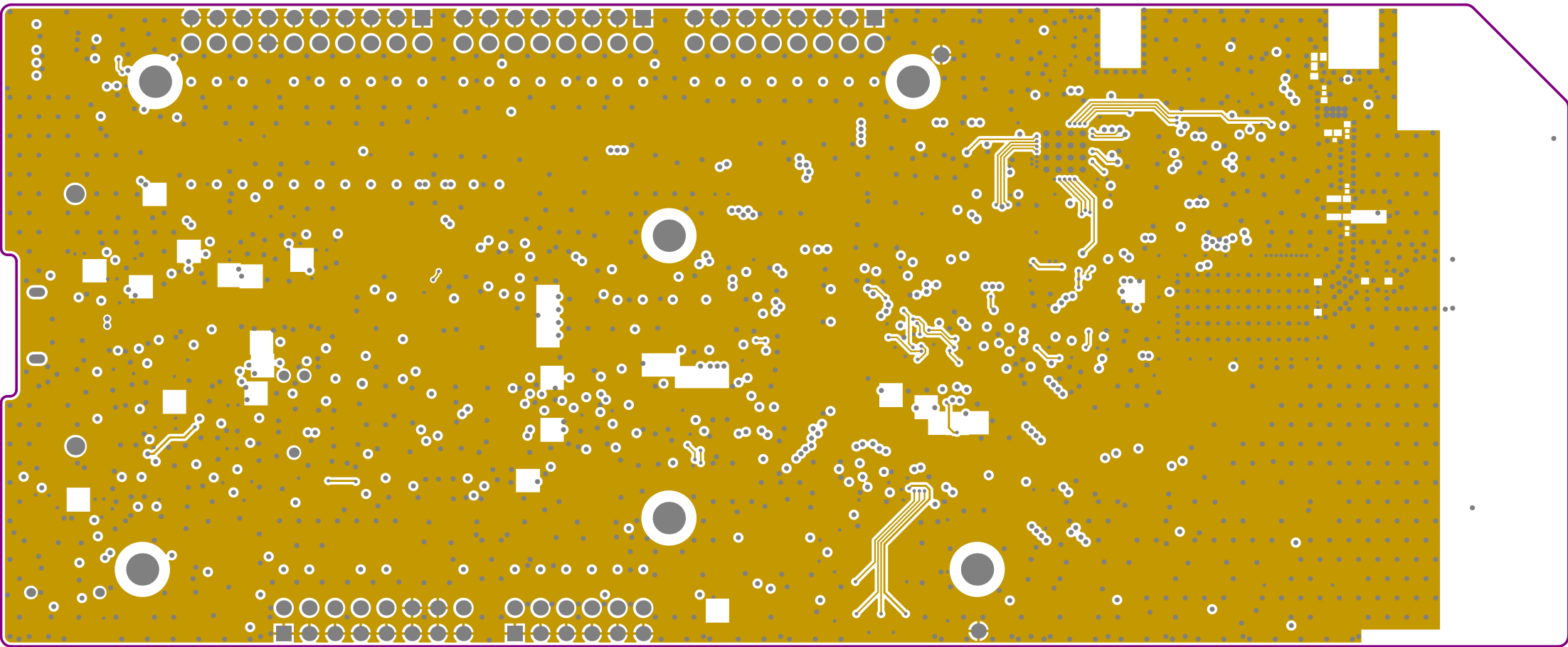
PCA10090 - Power Supply

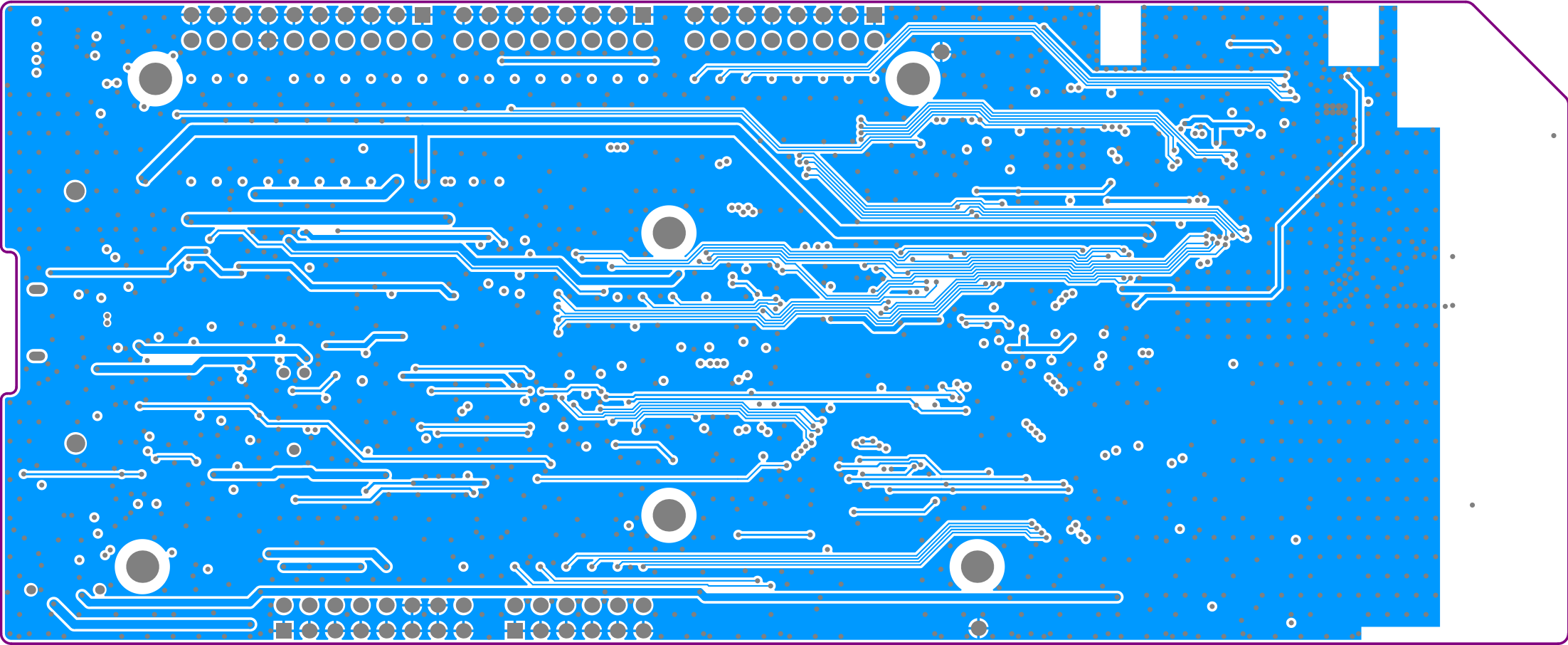
Size A3	Project Number 4443	Revision 0.10.2	
Date: 2019.05.27	Sheet 8 of 8		
File: pca10090_sheet8_power_supply.SchDoc	Drawn By: TORS/RUBR		

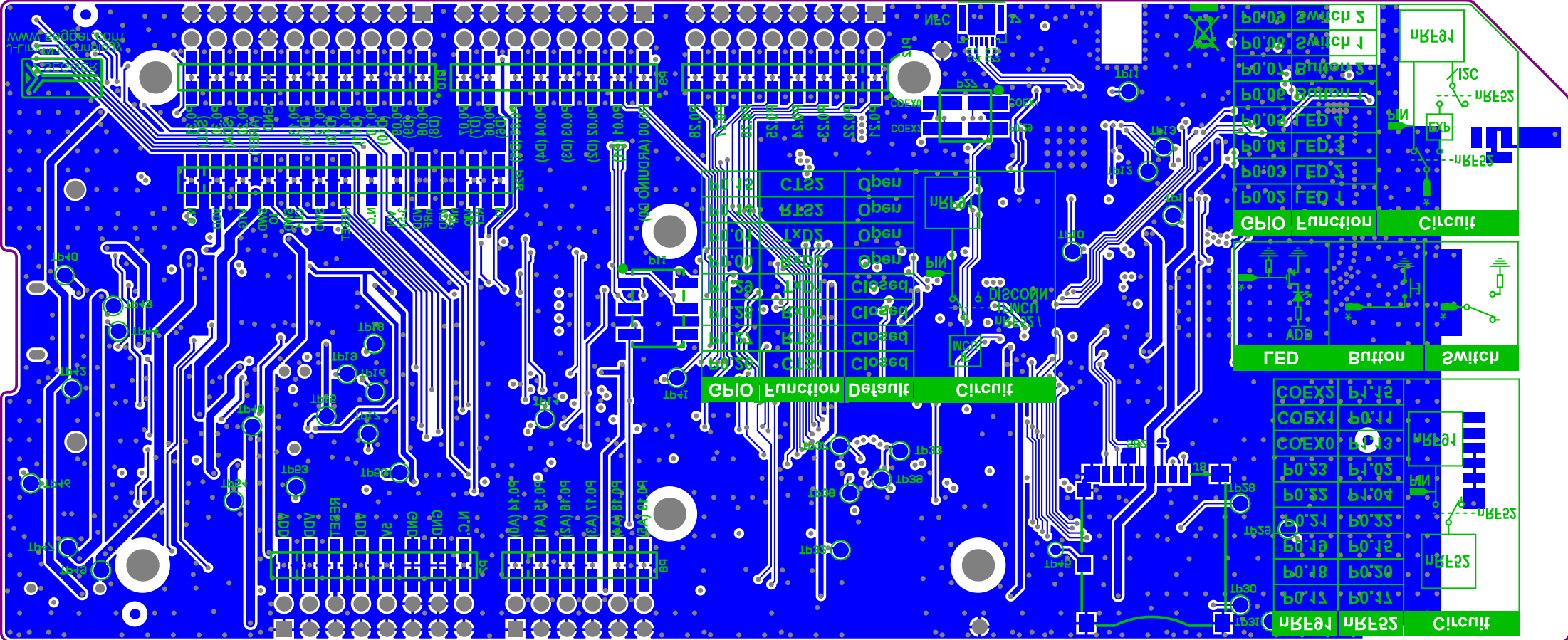
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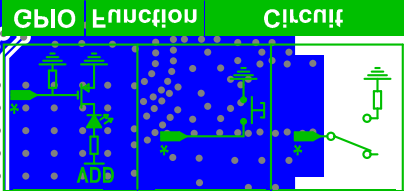








60'03	2W1C1 J
60'02	2W1C1 J
60'01	60'0100
60'04	FE0 1
60'03	FE0 2
60'03	FE0 3
60'03	FE0 4



60'01	COEX0
60'02	COEX1
60'03	COEX2
60'04	COEX3
60'05	COEX4
60'06	COEX5
60'07	COEX6
60'08	COEX7
60'09	COEX8
60'10	COEX9
60'11	COEX10
60'12	COEX11
60'13	COEX12
60'14	COEX13
60'15	COEX14
60'16	COEX15
60'17	COEX16
60'18	COEX17
60'19	COEX18
60'20	COEX19
60'21	COEX20
60'22	COEX21
60'23	COEX22
60'24	COEX23
60'25	COEX24
60'26	COEX25
60'27	COEX26
60'28	COEX27
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60'94	COEX93
60'95	COEX94
60'96	COEX95
60'97	COEX96
60'98	COEX97
60'99	COEX98
60'00	COEX99

COEX3	61'12
COEX4	60'14
COEX0	60'13
60'33	61'05
60'33	61'04
60'34	60'35
60'38	60'12
60'38	60'30
60'41	60'11

