


Nordic Semiconductor ASA

nRF52832 Bluetooth Smart/ANT/2.4GHz RF Development Board (PCA10040)

Sheet 1:	Cover
Sheet 2:	nRF Radio
Sheet 3:	Interface MCU
Sheet 4:	Buttons and LEDs
Sheet 5:	Connectors
Sheet 6:	Power Supply

- ✗ The No ERC object is a design directive.
This directive is placed on a node in the circuit to suppress reported warnings and/or error violation conditions that are detected when the schematic project is compiled.
- ⚡ The DIFFPAIR object is a design directive.
This directive is placed on a differential pair so that they are routed accordingly.
- ✖ ✖ These are fiducial marks

Cover			
Size A3	PCB Assembly Number PCA10040	Revision 3.0.0	
Date: 28.09.2021		Sheet 1 of 6	
File: sheet1_cover.SchDoc		Drawn By: KJP/RUBR/GETR/SIGE	

A

B

C

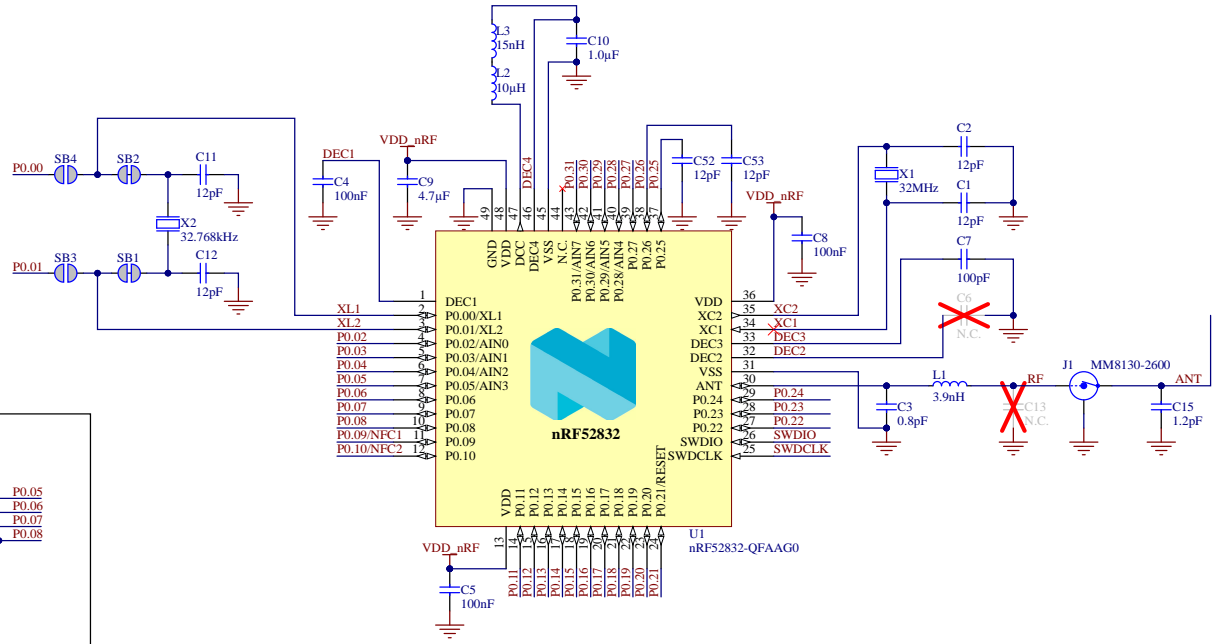
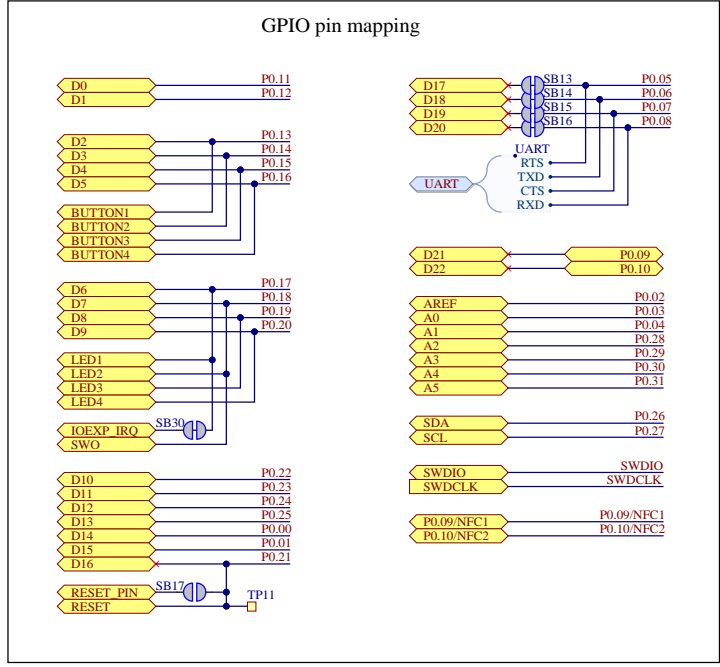
D

A

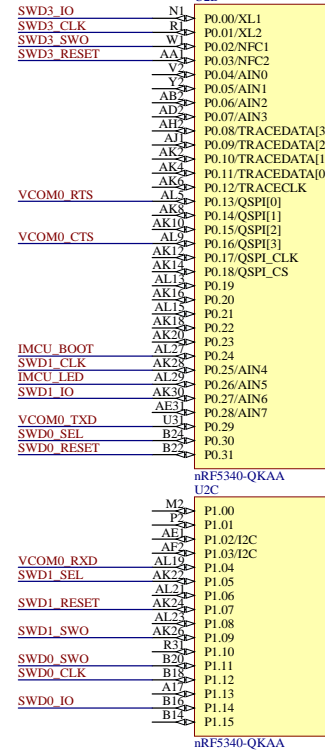
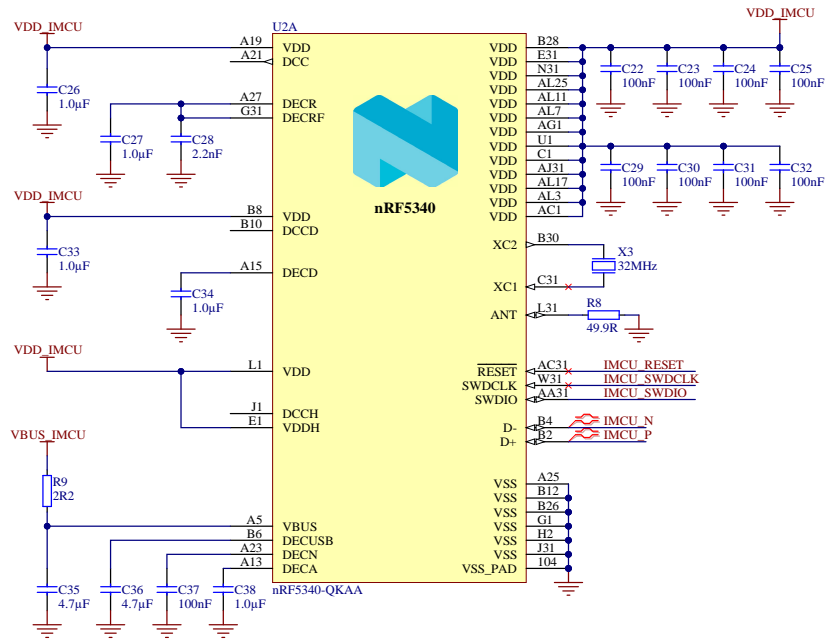
B

C

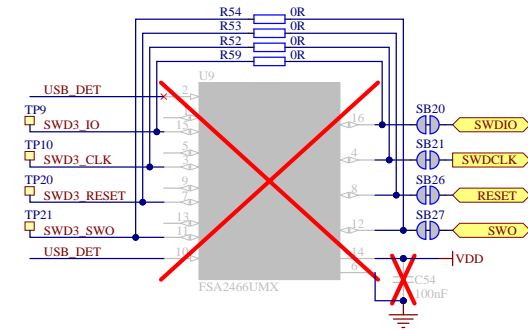
D



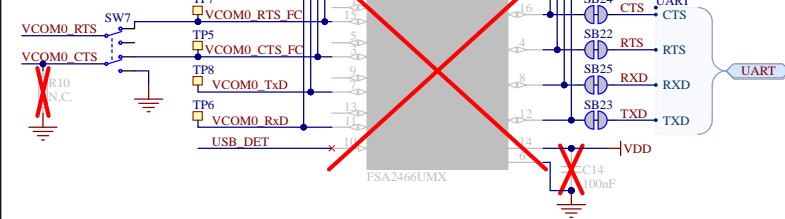
Interface MCU



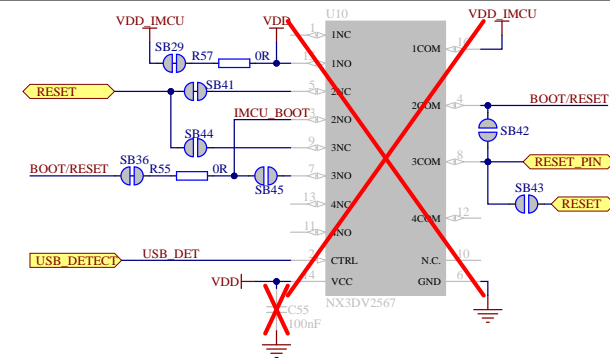
Signal switches



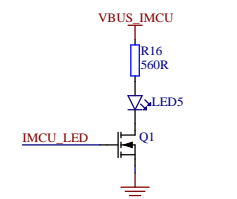
Flow Control



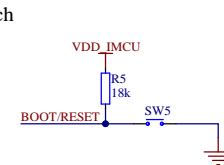
Reset conf.



LED



Reset switch



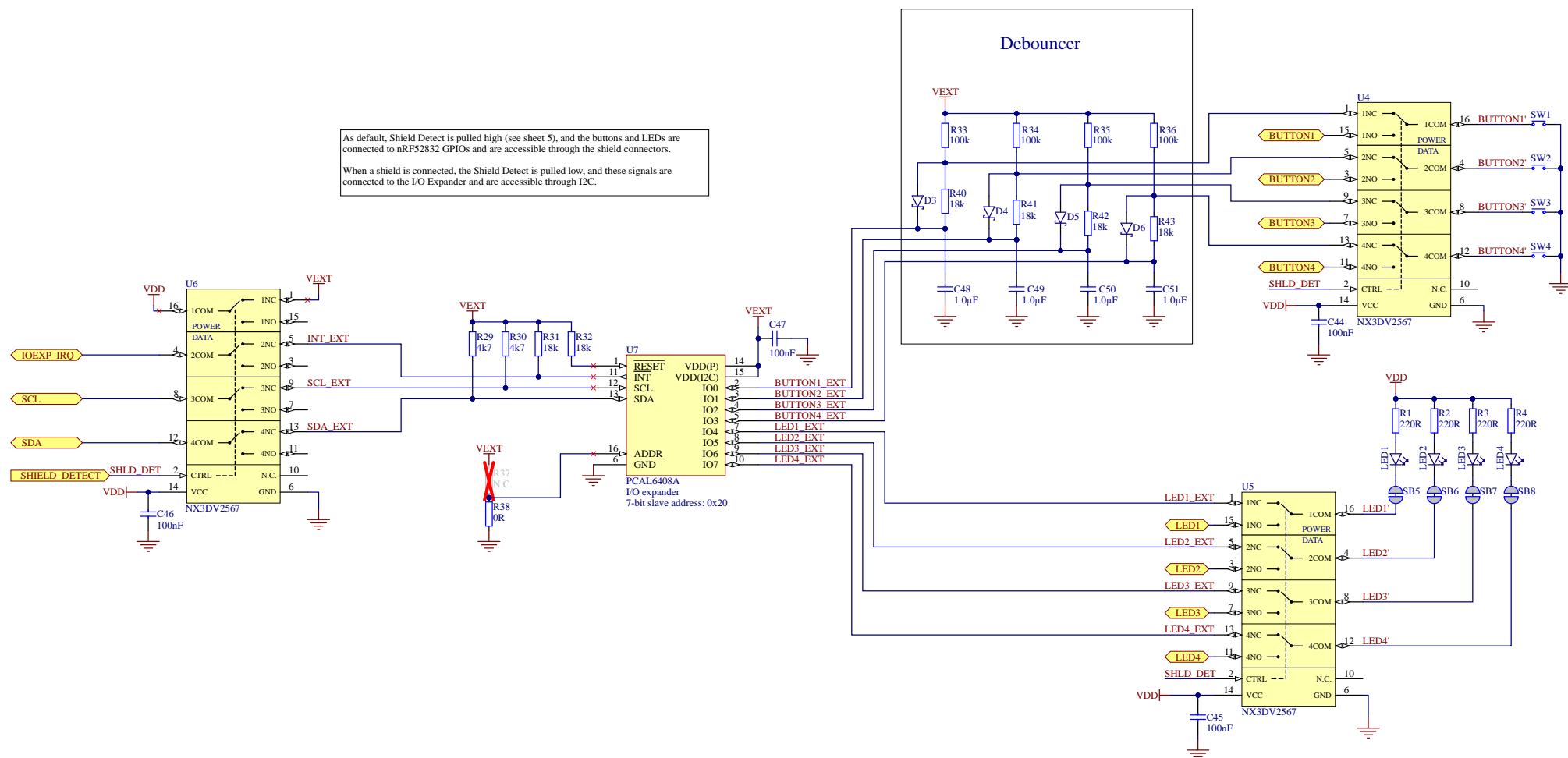
Interface MCU


Size	PCB Assembly Number	Revision	
A3	PCA10040	3.0.0	
Date: 28.09.2021	File: sheet3_interface_mcu.SchDoc	Sheet 3 of 6	
Drawn By: KJP/RUBR/GETR/SIGE			



As default, Shield Detect is pulled high (see sheet 5), and the buttons and LEDs are connected to nRF52832 GPIOs and are accessible through the shield connectors.

When a shield is connected, the Shield Detect is pulled low, and these signals are connected to the I/O Expander and are accessible through I2C.

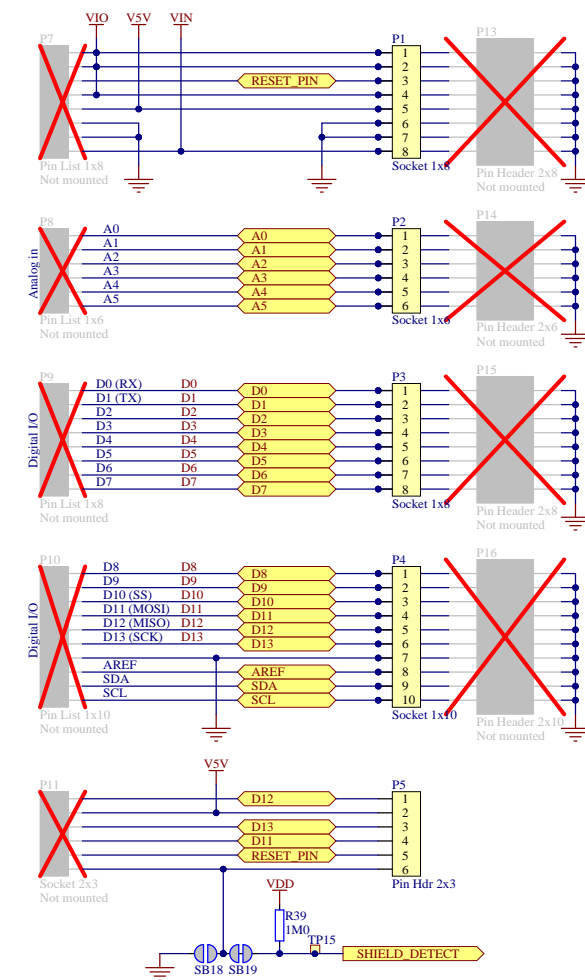


Buttons and LEDs			
Size A3	PCB Assembly Number PCA10040	Revision 3.0.0	
Date: 28.09.2021		Sheet 4 of 6	
File: sheet4_buttons_and_leds.SchDoc		Drawn By: KJP/RUBR/GETR/SIGE	

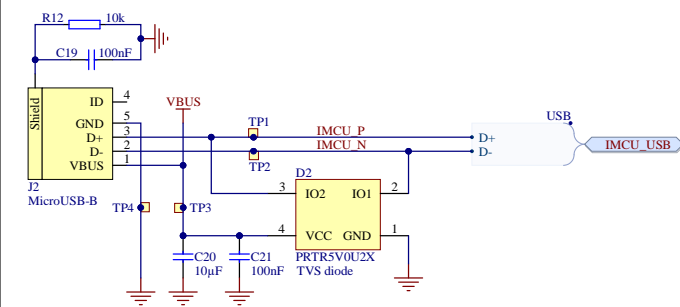
Arduino Interface Connectors

Bottom Connectors

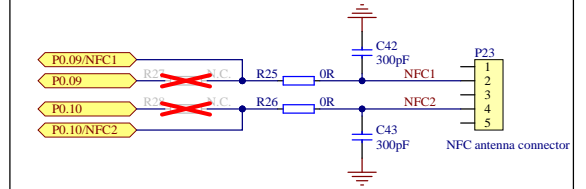
Top connectors



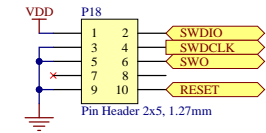
Interface MCU USB Connector



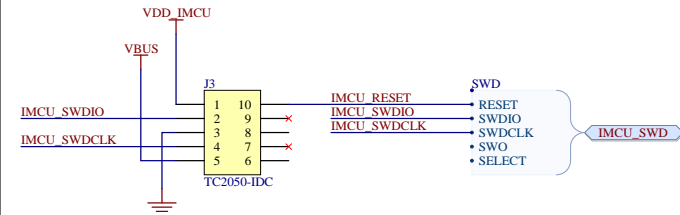
NFC pin configuration



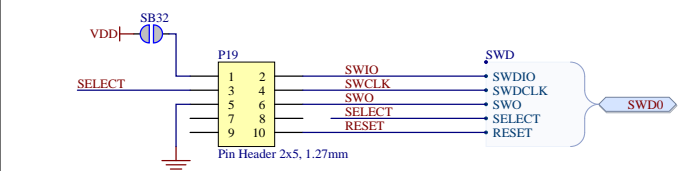
Debug IN Connector



Interface MCU Programming Connector



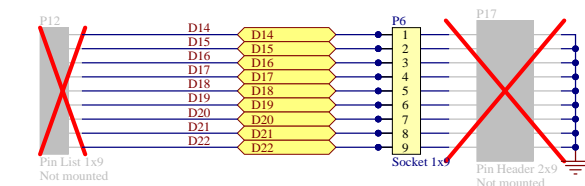
Debug OUT Connector



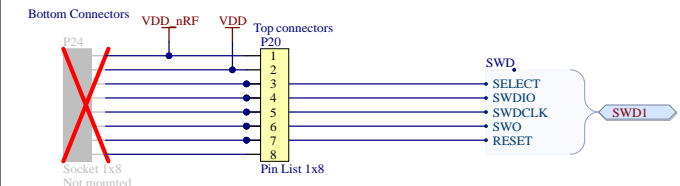
Auxiliary Connectors

Bottom Connectors

Top connectors

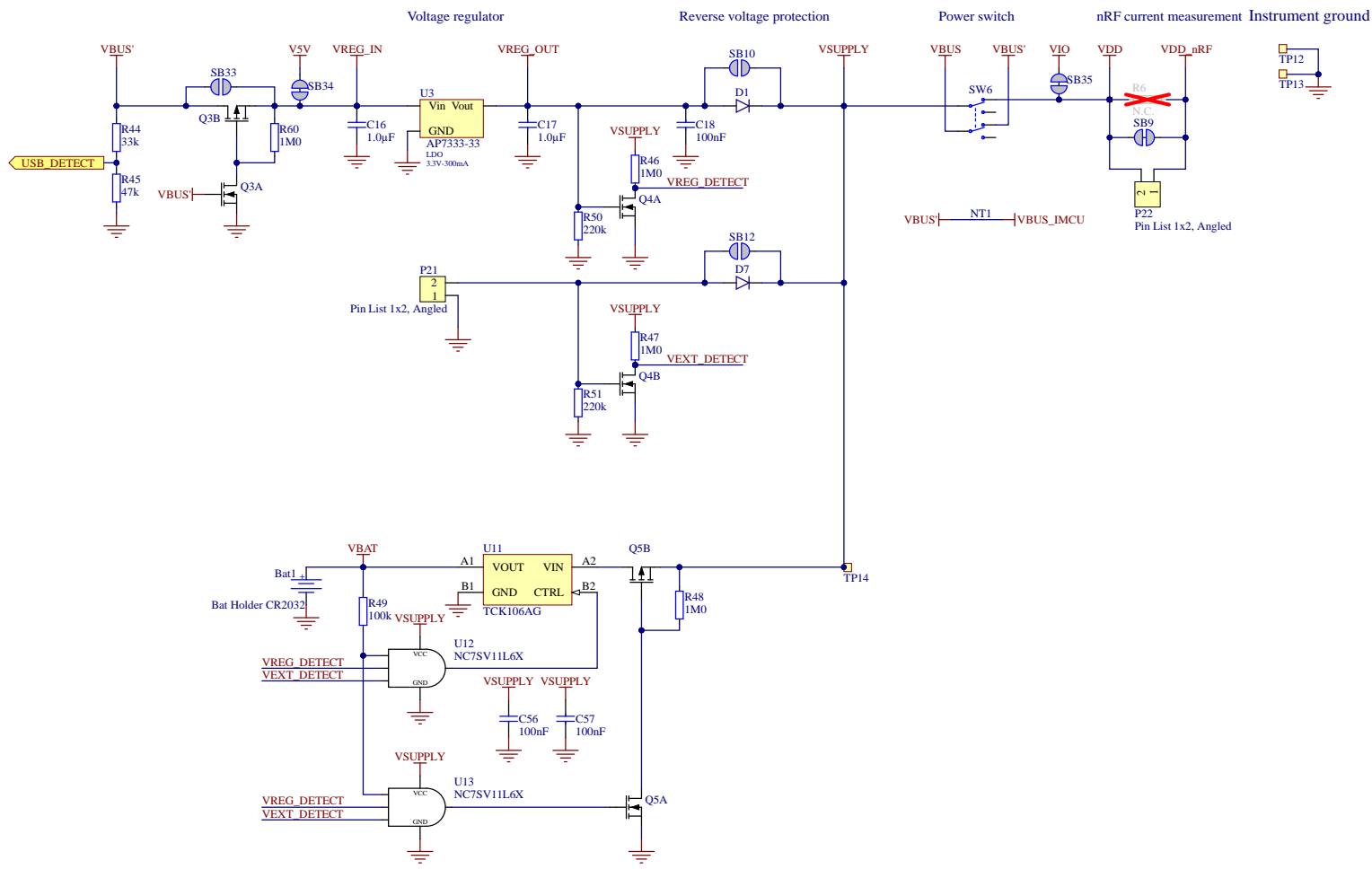


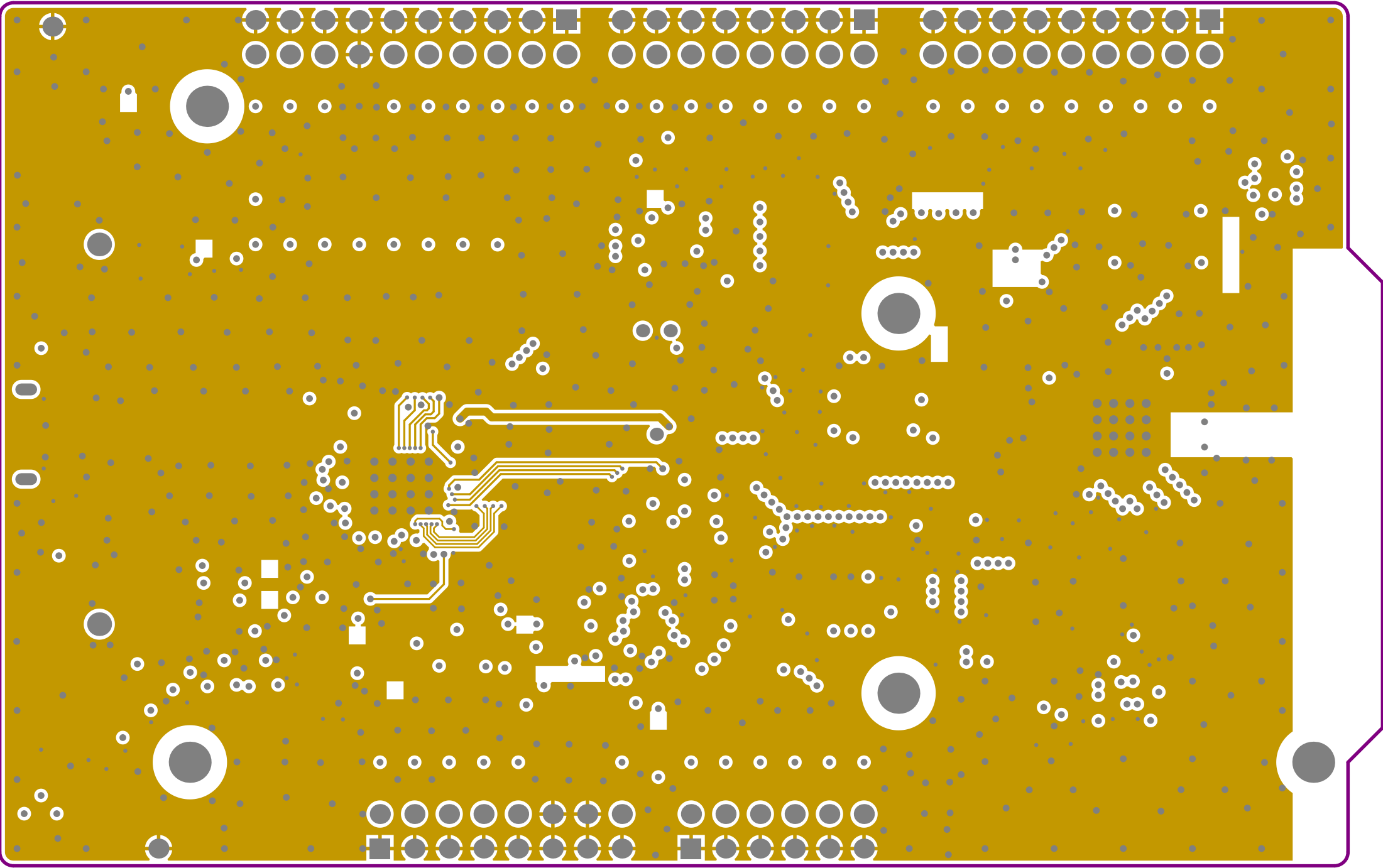
Shield Debug and Current measurement Connector

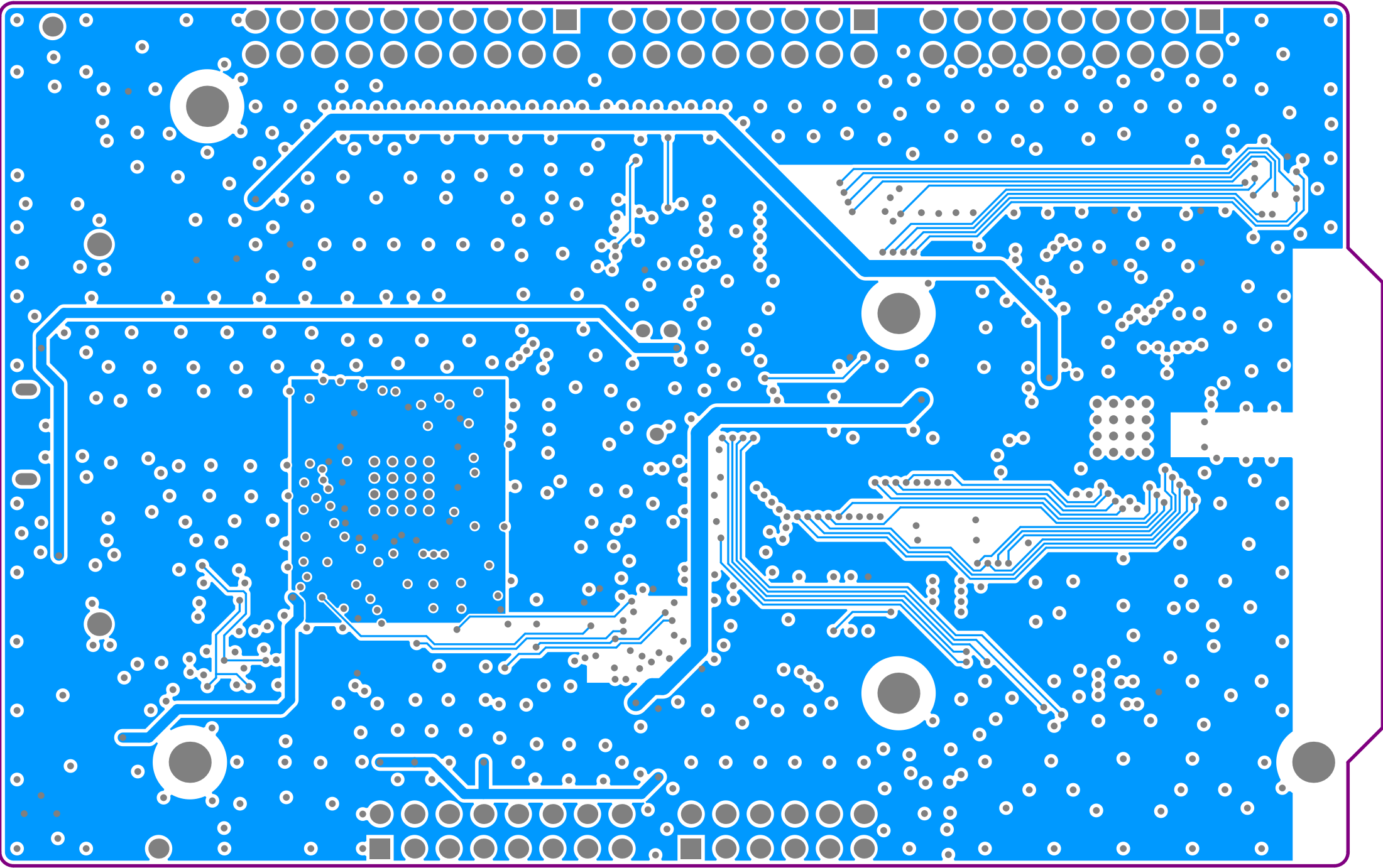


Connectors

Size	PCB Assembly Number	Revision	
A3	PCA10040	3.0.0	
Date: 28.09.2021	File: sheet5_connectors.SchDoc	Sheet 5 of 6	
Drawn By: KJP/RUBR/GETR/SIGE			

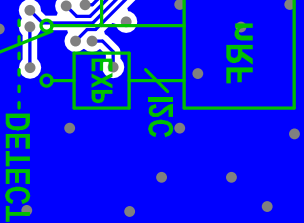






GPIO	Function	2Pin	HW	NO EXPANDER
P0.51	RESET	2B1A	GPIO	B1M
P0.50	FED 4	2B8		
P0.19	FED 3	2P3		
P0.18	FED 5	2E9		
P0.15	FED 1	2B6		
P0.19	BUTTON 4			
P0.19	BUTTON 3			
P0.19	BUTTON 5			
P0.13	BUTTON 1			

(+V) (-V) (-I)



GPIO Function 2Pin HW NO EXPANDER

P0.10	WFS			
P0.08	RXD	2B10A\52	GPIO	B1M
P0.03	C12	2B12\54		
P0.06	LXD	2B14\53		
P0.09	R12	2B13\55		
P0.01	X13	2B2		
P0.00	X11	2B4		
		2B6		
		2B8		
		2B10		
		2B12		
		2B14		
		2B16		
		2B18		
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