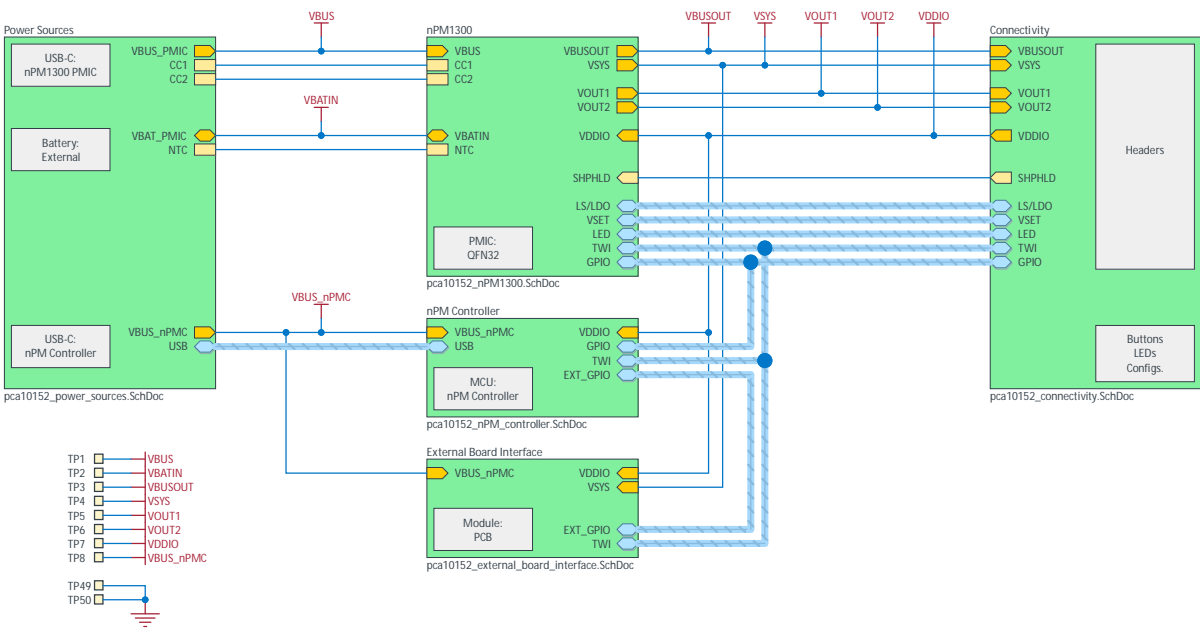


# Nordic Semiconductor ASA

## nPM1300 Evaluation Board (PCA10152)

- Sheet 1: Cover Sheet
- Sheet 2: nPM1300
- Sheet 3: Power Sources
- Sheet 4: Connectivity
- Sheet 5: nPM Controller
- Sheet 6: External Board Interface



The schematics have following net naming hierarchy:  
1) Power ports  
2) Ports  
3) Net labels

The top level sheet has highest priority.  
Net labels are local to sheets.

✗ 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 validated.

Label  
PCA10152  
1.1.0  
<year>, <week>  
<id>

Alignment Fiducials

Port Type Explanation  
POWER  
SIGNAL  
SIGNAL HARNESS

Mechanical holes  
H1 H2  
H3 H4

Bumpers  
MP1 MP2 MP3 MP4

### Testpoint locations

Sheet #	Designator	Function	Location
Sheet 1	TP1-TP8	Production test	Bottom
	TP49-TP50	Production test	Bottom
Sheet 2	TP9-TP28	Production test	Bottom
Sheet 3	N/A	N/A	N/A
Sheet 4	TP29-TP34	Probe loops	Top
Sheet 5	TP35-TP43	Production test	Bottom
Sheet 6	TP44-TP48	Probe point	Top
	TP51-TP55	Probe point	Top

Title  
nPM1300 Evaluation Board

Size  
A3

Date: 2023-10-24

File: pca10152.SchDoc  
Classification: PUBLIC

PCB Assembly Number  
PCA10152

Revision  
1.1.0

Sheet 1 of 6  
Drawn By: EISK



A

B

C

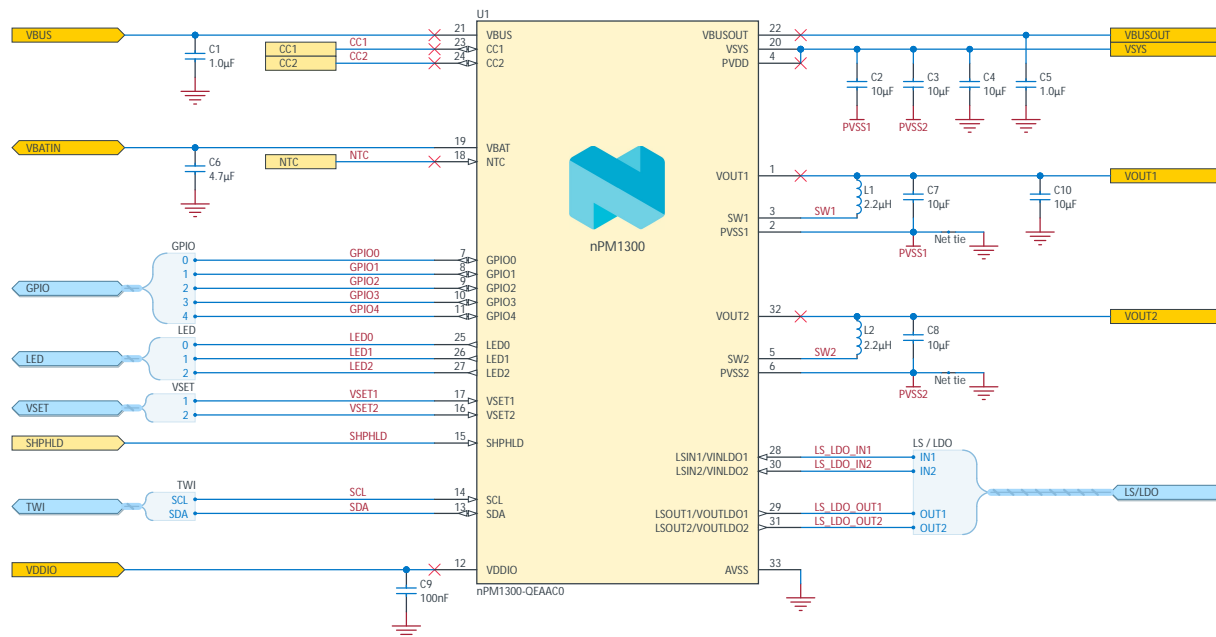
D

A


B

C

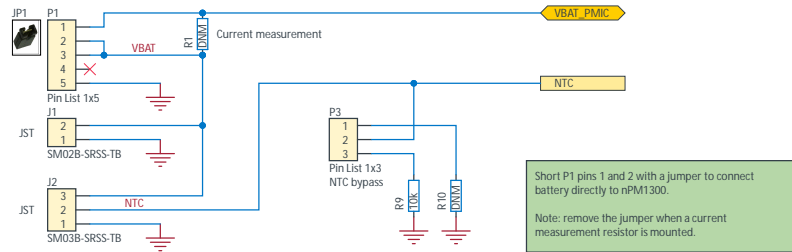
D



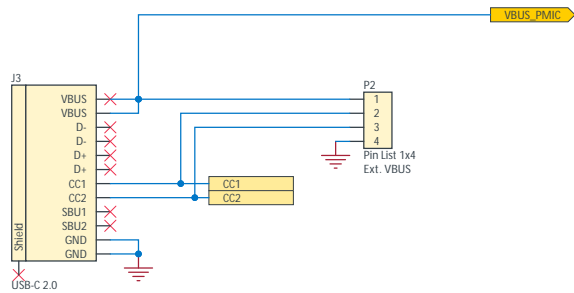
- TP9 ☐ VSET1
- TP10 ☐ VSET2
- TP11 ☐ SHPHLD
- TP12 ☐ NTC
- TP13 ☐ SCL
- TP14 ☐ SDA
- TP15 ☐ LS\_LDO\_IN1
- TP16 ☐ LS\_LDO\_OUT1
- TP17 ☐ LS\_LDO\_IN2
- TP18 ☐ LS\_LDO\_OUT2
- TP19 ☐ GPIO0
- TP20 ☐ GPIO1
- TP21 ☐ GPIO2
- TP22 ☐ GPIO3
- TP23 ☐ GPIO4
- TP24 ☐ LED0
- TP25 ☐ LED1
- TP26 ☐ LED2
- TP27 ☐ CC1
- TP28 ☐ CC2

Title nPM1300 Evaluation Board: nPM1300 PMIC			
Size A3	PCB Assembly Number PCA10152	Revision 1.1.0	
Date: 2023-10-18		Sheet 2 of 6	
File: pca10152_nPM1300.SchDoc		Drawn By: EISK	
Classification: PUBLIC			

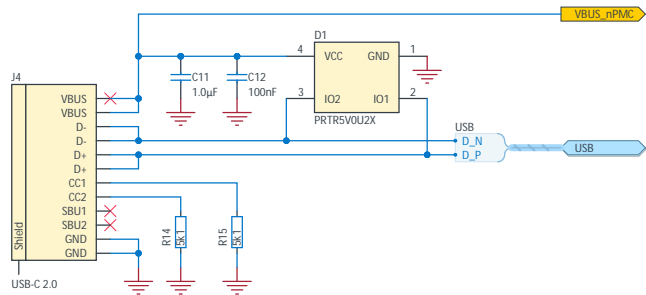
### Battery Connectors



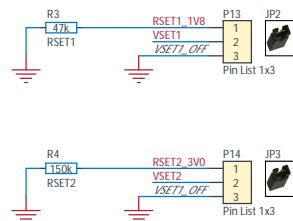
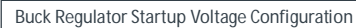
### USB-C to nPM1300 Power Management IC



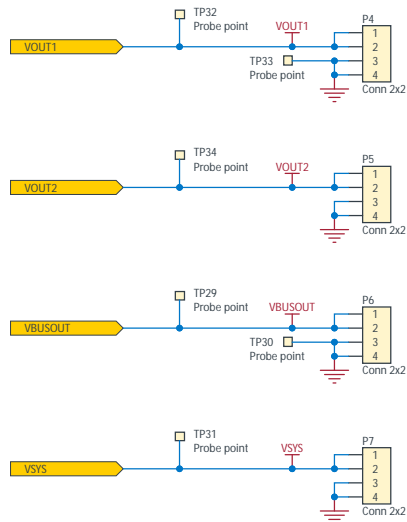
### USB-C to nPM Controller (nPMC)



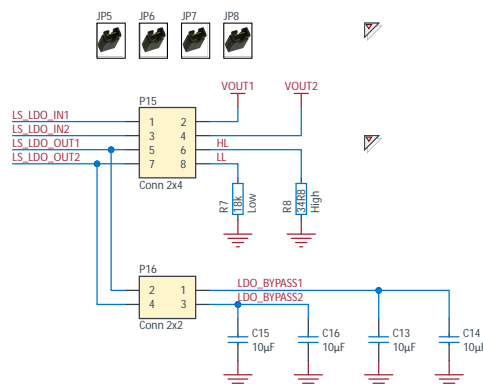
Title nPM1300 Evaluation Board: Power Sources			
Size A3	PCB Assembly Number PCA10152	Revision 1.1.0	
Date: 2023-10-18		Sheet 3 of 6	
File: pca10152_power_sources.SchDoc		Drawn By: EISK	
Classification: PUBLIC			



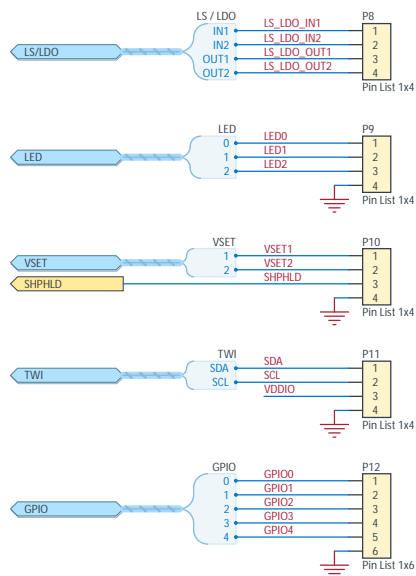
### Output Voltages



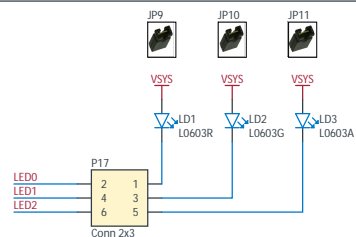
### Load Switch Configuration / LDO Bypass Capacitors



## I/O Pins



LEDs



## TWI and GPIO Voltage Selection

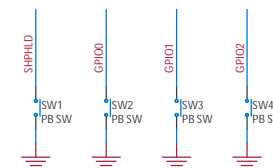


I/O reference level selection:  
Connect VDD\_IO to regulator output VOUT1 or VOUT2 (recommended).  
An external host voltage on VDDIO pin can also provide a reference level.

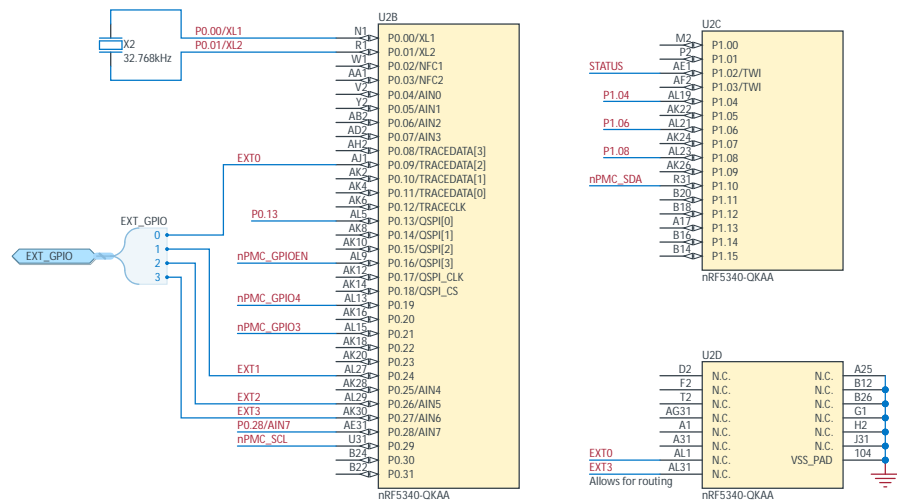
## Buttons

Single button reset:  
Long press SW1.

Two-button reset (if configured):  
Long press both SW1 and SW2.





[illegible]

The image contains two pin connection diagrams. The top diagram is for the TC2050-IDC Tag connect (J5). It shows a 10-pin connector with pins 1 through 5 on the left and pins 10 through 6 on the right. Pin 1 is connected to VBUS, pin 2 to VDD, pin 3 to SWDIO, pin 4 to SWDCLK, and pin 5 to ground. Pins 6 through 10 are marked with red 'X's, indicating they are not connected. The bottom diagram is for the P19 Pin Header 2x5, 1.27mm. It shows a 10-pin connector with pins 1 through 5 on the left and pins 2 through 10 on the right. Pin 1 is connected to VDD, pin 2 to SWDIO, pin 3 to SWDCLK, pin 4 to ground, pin 5 to ground, pin 6 to ground, pin 7 to ground, pin 8 to ground, pin 9 to ground, and pin 10 to ground. Pins 2 through 10 are marked with red 'X's, indicating they are not connected.

Schematic diagram of the status pin circuit for the RV2C010UNT2L. The circuit includes a pull-up resistor R6 connected to VBUS, a status LED LD4 (L0603G) connected to the pin, and a MOSFET Q2 (RV2C010UNT2L) connected to ground. The status pin is labeled STATUS.

TP35 ☐ VDD  
 TP36 ☐ VIO\_REF

TP37 ☐ RESET\_N  
 TP38 ☐ SWDCLK  
 TP39 ☐ SWDIO  
 TP40 ☐ D\_N  
 TP41 ☐ D\_P

TP42 ☐ EXT1  
 TP43 ☐ EXT2  
 TP44 ☐ EXT0  
 TP45 ☐ EXT3

TP46 ☐ nPMC\_GPIODN  
 TP47 ☐ P0.13  
 TP48 ☐ P0.28/AIN7  
 TP51 ☐ P1.04  
 TP52 ☐ P1.06  
 TP53 ☐ P1.08  
 TP54 ☐ VBUS  
 TP55 ☐ VIO\_REF

