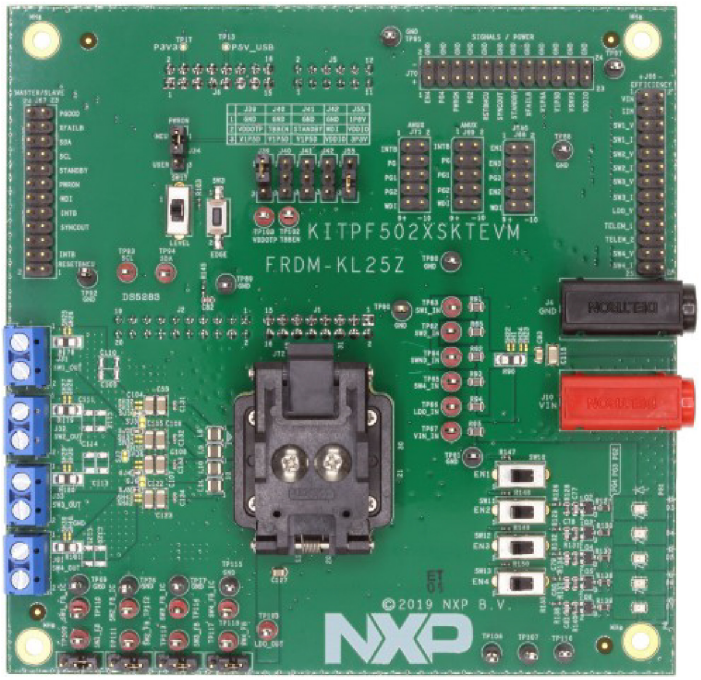
UM11377

KITPF502XSKTEVM evaluation board

Rev. 2 — 1 July 2020 User manual



aaa-037181

Figure 1. KITPF502XSKTEVM

Important Notice

NXP provides the enclosed product(s) under the following conditions:

This evaluation kit is intended for use of ENGINEERING DEVELOPMENT OR EVALUATION PURPOSES ONLY. It is provided as a sample IC pre-soldered to a printed circuit board to make it easier to access inputs, outputs, and supply terminals. This evaluation board may be used with any development system or other source of I/O signals by simply connecting it to the host MCU or computer board via off-the-shelf cables. This evaluation board is not a Reference Design and is not intended to represent a final design recommendation for any particular application. Final device in an application will be heavily dependent on proper printed circuit board layout and heat sinking design as well as attention to supply filtering, transient suppression, and I/O signal quality.

The goods provided may not be complete in terms of required design, marketing, and or manufacturing related protective considerations, including product safety measures typically found in the end product incorporating the goods. Due to the open construction of the product, it is the user's responsibility to take any and all appropriate precautions with regard to electrostatic discharge. In order to minimize risks associated with the customers applications, adequate design and operating safeguards must be provided by the customer to minimize inherent or procedural hazards. For any safety concerns, contact NXP sales and technical support services.

Should this evaluation kit not meet the specifications indicated in the kit, it may be returned within 30 days from the date of delivery and will be replaced by a new kit.

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1 Introduction

This document is the user guide for the KITPF502XSKTEVM evaluation board. This document is intended for the engineers involved in the evaluation, design, implementation, and validation of PF502x family of PMIC products.

The scope of this document is to provide the user with information that covers interfacing with the hardware, installing the GUI software, using other tools, and configuring the board for the application environment.

2 Finding kit resources and information on the NXP web site

NXP Semiconductors provides online resources for this evaluation board and its supported device(s) on http://www.nxp.com.

The information page for KITPF502XSKTEVM evaluation board is at http://www.nxp.com/KITPF502XSKTEVM. The information page provides overview information, documentation, software and tools, parametrics, ordering information and a **Getting Started** tab. The **Getting Started** tab provides quick-reference information applicable to using the KITPF502XSKTEVM evaluation board, including the downloadable assets referenced in this document.

2.1 Collaborate in the NXP community

The NXP community is for sharing ideas and tips, ask and answer technical questions, and receive input on just about any embedded design topic.

The NXP community is at http://community.nxp.com.

3 Getting ready

Working with the KITPF502XSKTEVM requires the kit contents, additional hardware and a Windows PC workstation with installed software.

3.1 Kit contents

- Assembled and tested KITPF502XSKTEVM connected to FRDM-KL25Z in an anti-static bag
- 3.0 ft USB-STD A to USB-B-mini cable

3.2 Additional hardware

In addition to the kit contents, the following hardware is necessary or beneficial when working with this kit.

- Power supply with a range of 2.5 V to 6.0 V and current limit set initially to 100 mA

3.3 Windows PC workstation

This evaluation board requires a Windows PC workstation. Meeting these minimum specifications should produce great results when working with this evaluation board.

- USB-enabled computer with Windows 7 or Windows 10

3.4 Software

Installing software is necessary to work with this evaluation board. All listed software is available on the evaluation board's information page at http://www.nxp.com/KITPF502XSKTEVM.

- **NXP_GUI_ PR_1.0**: software interface GUI, tool to configure OTP, generate TBB and OTP scripts

4 Getting to know the hardware

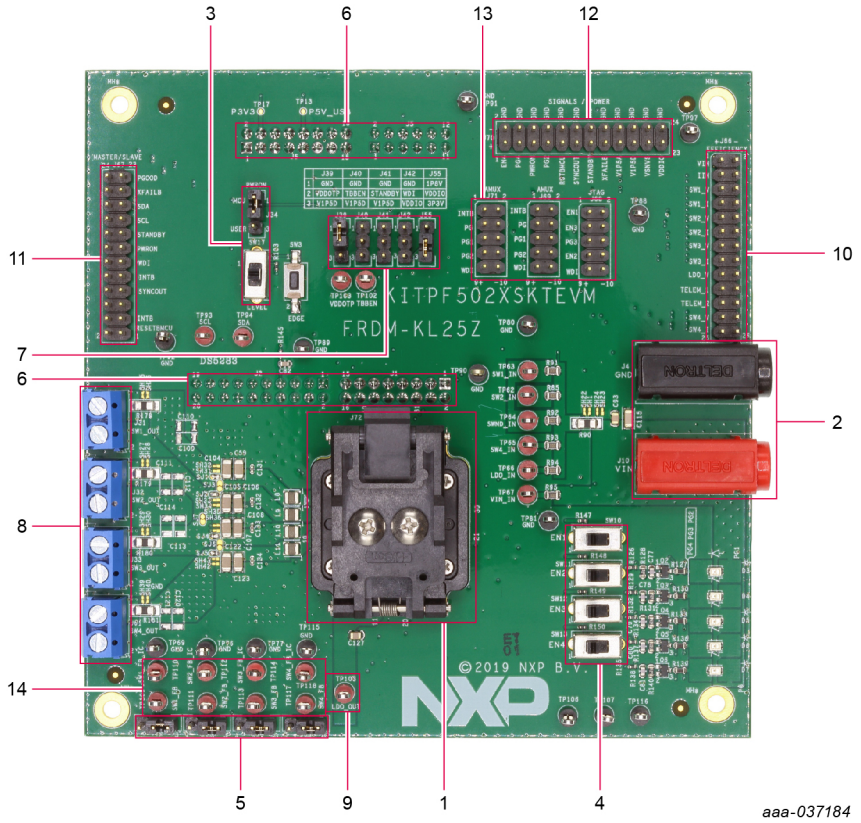
The KITPF502XSKTEVM evaluation board is the socket programming kit of the PF502x family of power management ICs from NXP Semiconductors. This user guide describes the functionality of the evaluation board, explains how to use the PMIC device in an application environment, and gives details about the hardware and software required.

4.1 KITPF502XSKTEVM features

- SWx in single-phase mode (default) or multiphase mode
- LDO1 from 1.5 V to 5.0 V
- PWRON switch for global wake up or enable
- Individual enable control switch for each regulator
- LEDs to indicate individual PGOODx and global PGOOD status
- USB interface through FRDM-KL25Z for register access, TBB mode, and OTP programming
- Multiple signal connectors for easy access
- Terminal blocks and test point for all the regulators for easy testing and evaluation

4.2 Kit featured components

Figure 2 identifies important components on the board.



1. PF502x socket
2. VIN connector
3. PWRON control switch and jumper
4. Enable switches for the regulators
5. Feedback jumpers for the buck regulators
6. FRDM-KL25Z connectors (for SW/GUI interface) – on the bottom side of the board
7. Jumpers for IO control (TBBEN, VDDOTP, STANDBY, WDI, VDDIO)
8. Load terminal for the buck outputs
9. Load / test point for LDO1 output
10. Connector for efficiency measurement
11. Connector for master/slave (multi-PMIC) connection
12. Connector for signals and power measurement
13. Connectors for IO measurement
14. Feedback test points of buck regulators to measure loop stability

Figure 2. Evaluation board featured component locations

4.2.1 PF502x: Power management integrated circuit (PMIC) for high performance applications

4.2.1.1 General description

The PF502X integrates multiple high performance buck regulators. It can operate as a stand-alone point-of-load regulator IC, or as a companion chip to a larger PMIC.

Built-in one-time programmable (OTP) memory stores key startup configurations, drastically reducing external components typically used to set output voltage and sequence of regulators. Regulator parameters are adjustable through high-speed I2C after start up offering flexibility for different system states.

4.2.1.2 Features

- High efficiency buck converters
- Linear regulator with load switch options
- RTC supply and coin cell charger
- Watchdog timer/monitor
- Monitoring circuit to fit ASIL B safety level
- One-time programmable device configuration
- 3.4 MHz I^2C communication interface
- 40-pin QFN package with wettable flank and exposed pad

4.2.2 Jumper, switch, and shunt configuration

Table 1. Evaluation board jumper, switch, and shunt descriptions

Jumper/switch	Default	Description
J1, J2, J5, J6	—	Freedom KL25Z board interface connectors
J34	2-3 shorted	Control PWRON pull up source 2-3 → PWRON pulled up to VIN Open → full MCU control with no pull up
J39	1-2 shorted	Select PF502x default register configuration 1-2 → OTP mode 2-3 → Hardwire mode
J40	Open	Enable TBB mode on PF502x device 1-2 → TBB mode disabled 2-3 → TBB mode enabled Open → MCU has control of this pin
J41	Open	Select STANDBY pin voltage level 1-2 → STANDBY pin low 2-3 → STANDBY pin high Open → STANDBY pin controlled by MCU
J42	Open	Control WDI pin voltage level 1-2 → WDI pulled down to GND 2-3 → WDI pulled up to VDDIO Open → WDI controlled by the MCU
J55	2-3 shorted	Select the external LDO voltage for VDDIO 1-2 shorted → 1.8 V 2-3 shorted → 3.3 V
J62 (SW1), J63 (SW2) J64 (SW3), J65 (SW4)	2-3 shorted	Select feedback source for SWx output 1-2 → feedback from the load 2-3 → feedback from the capacitor close to the PMIC
J66, J68, J69, J70, J71	—	Miscellaneous connectors for measurement
J67	—	Master/slave connector
SJ1 (SW1)	Short	Short → to always connect the output to load
SJ2 (SW2)	Short	Short → to connect the output to load when used in single phase Open → when used in multiphase with SW1

Jumper/switch	Default	Description
SJ3 (SW12, SW123, or SW1234)	Open	Short → to connect SWx in multiphase configuration Open → when multiphase is not used
SJ4 (SW3)	Short	Short → to always connect the output to load
SJ5 (SW4)	Short	Short → to connect the output to load when used in single phase Open → when used in multiphase with SW1 or SW3
SJ6 (SW34 or SW1234)	Open	Short → to connect SWx in multiphase configuration Open → when multiphase is not used
SJ7 (SW1234 or SW123)	Open	Short → to connect SWx in multiphase configuration Open → when multiphase is not used
SW3	Open	Short → pulls down PWRON pin to ground
SW10,11,12,13 (SPDT)	Position 3	1 → ENx pulled up to VIN 2 → open 3 → short to GND
SW17 (SPDT)	Position 1	1 → PWRON pulled up to VIN 2 → open 3 → short to GND

4.3 Schematic, board layout and bill of materials

The schematic, board layout and bill of materials for the KITPF502XSKTEVM evaluation board are available at http://www.nxp.com/KITPF502XSKTEVM.

4.3.1 Schematics

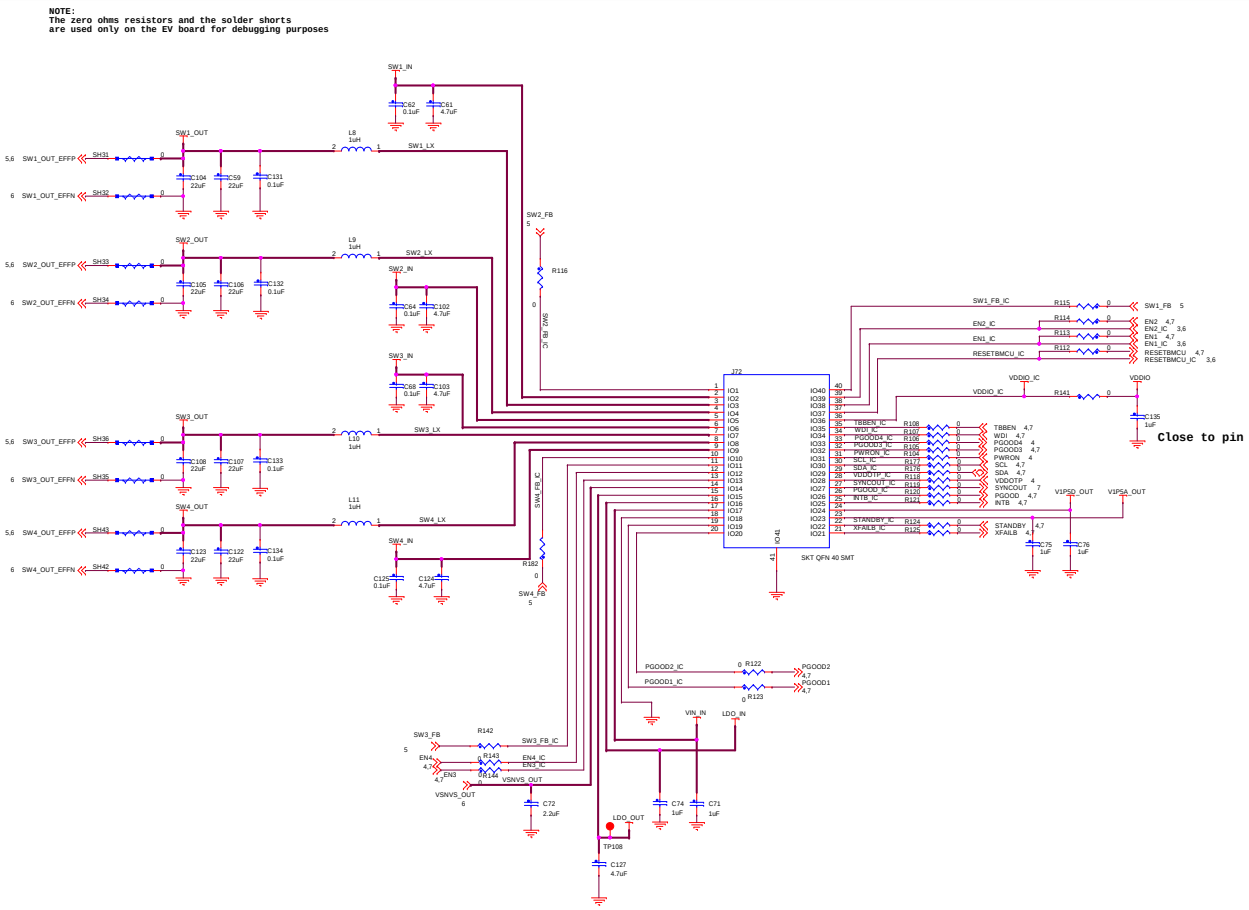


Figure 3. Primary PMIC reference

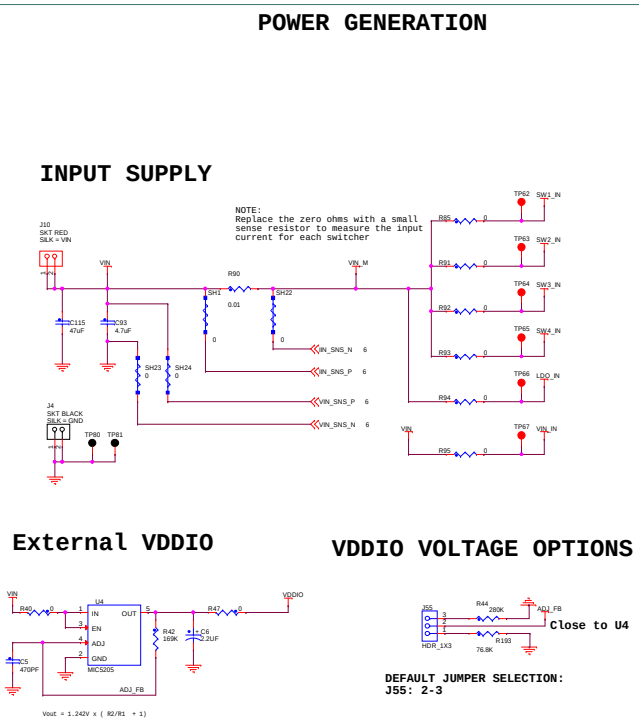


Figure 4. Power generation

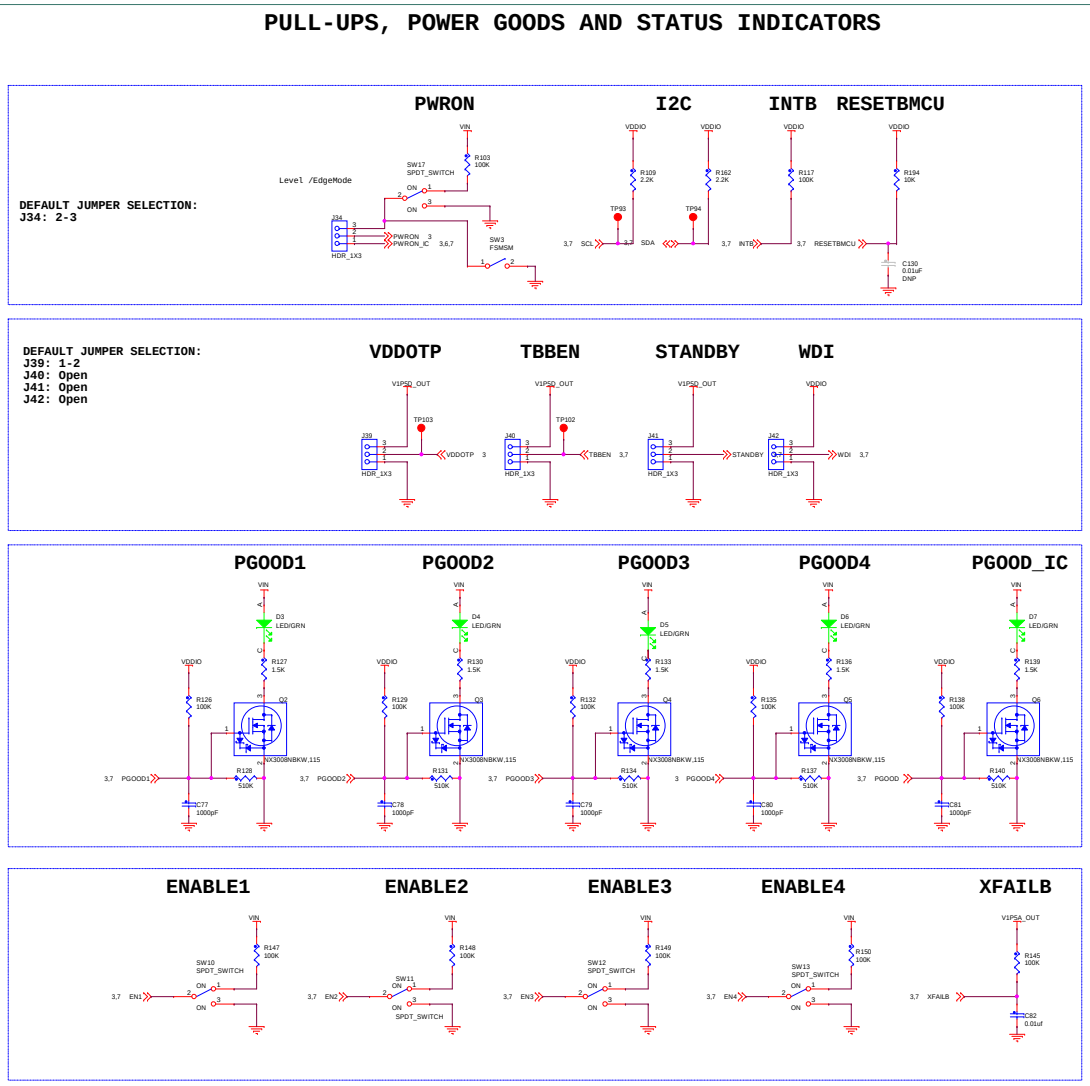


Figure 5. Pull-ups, power goods, and status indicators

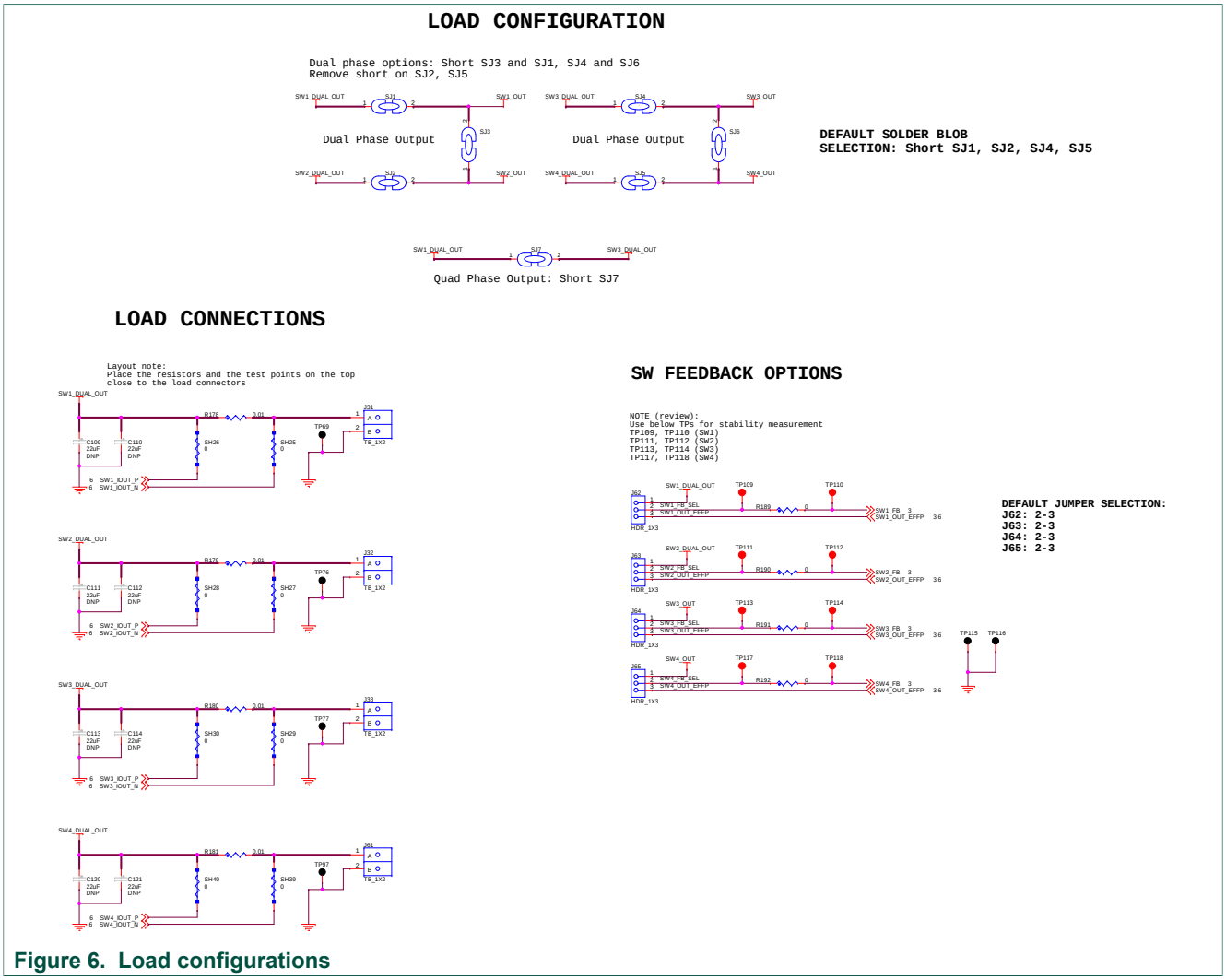


Figure 6. Load configurations

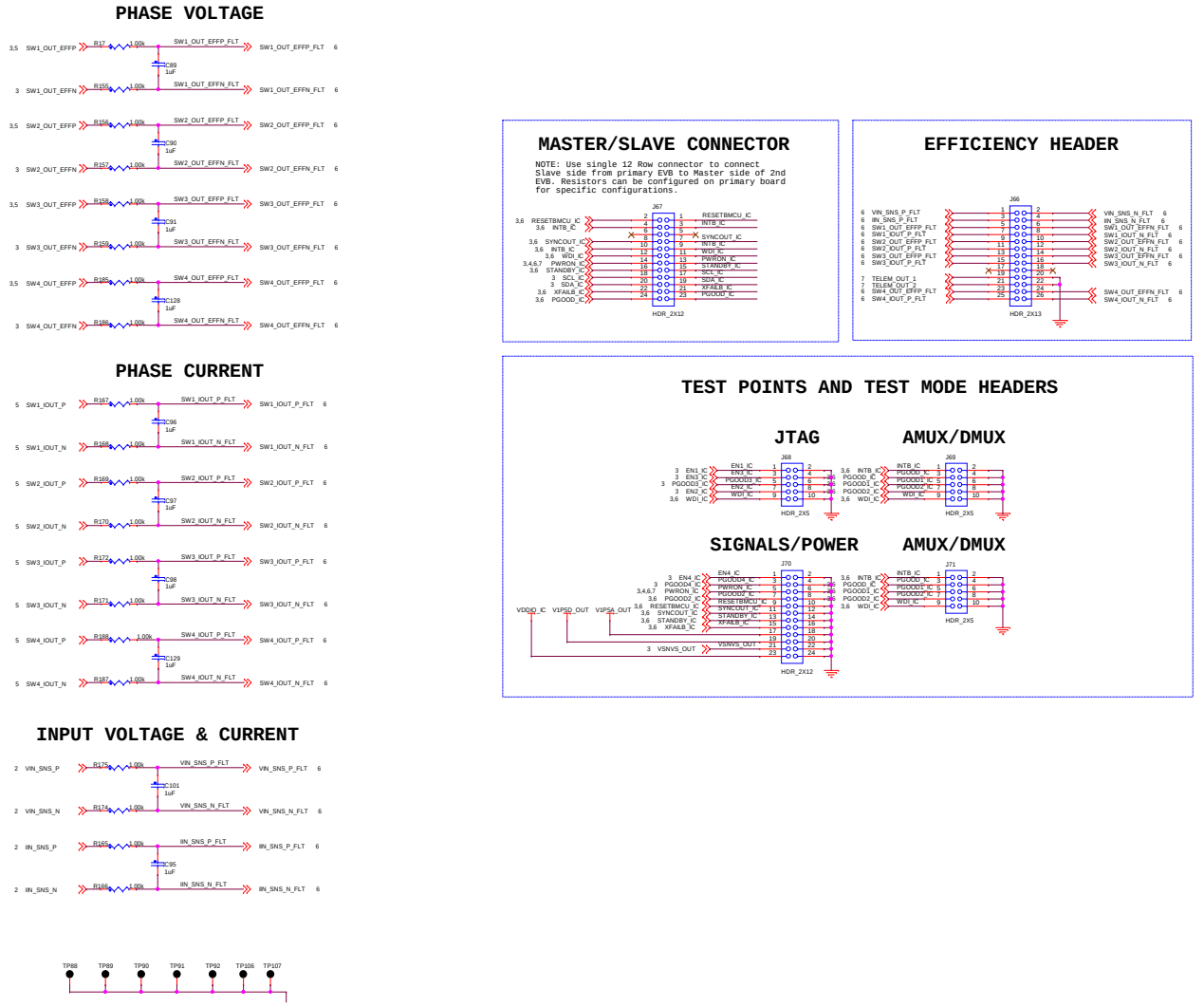


Figure 7. Signal and power measurement

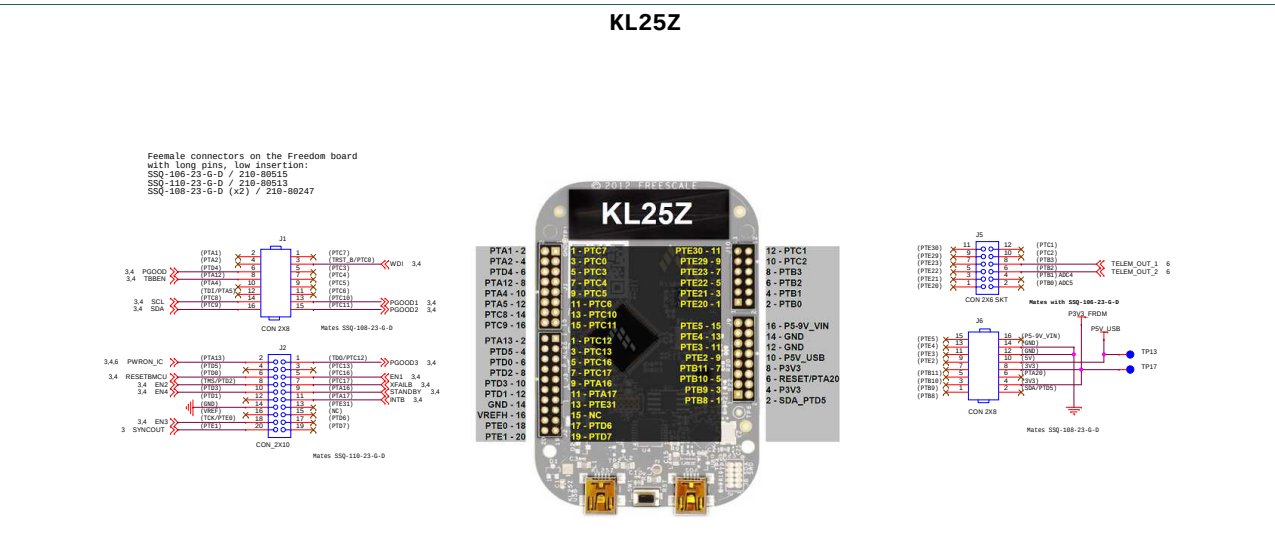


Figure 8. FRDM-KL25Z interface

4.3.2 Board layout

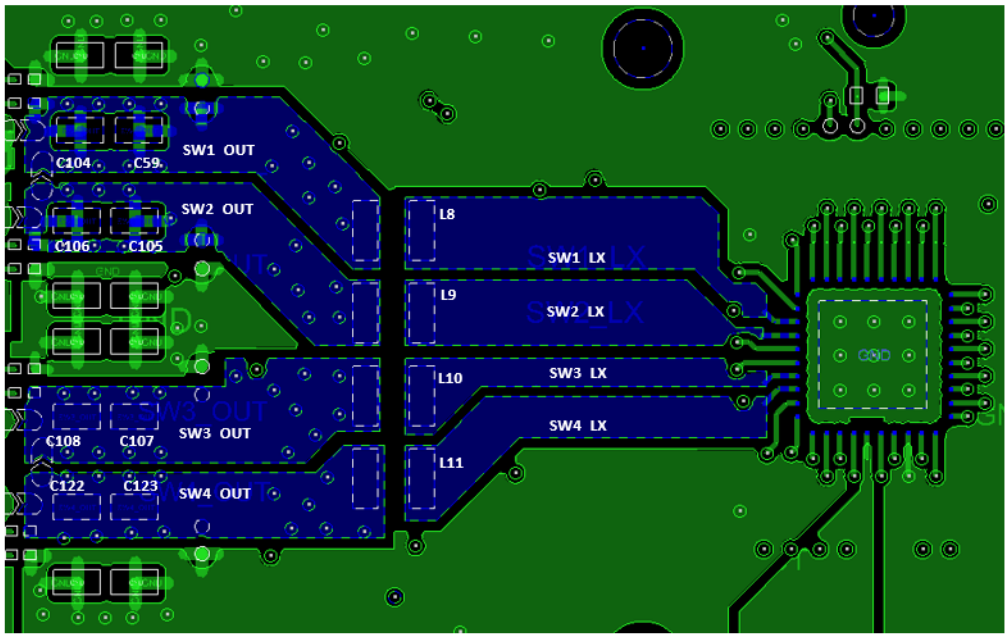


Figure 9. Top

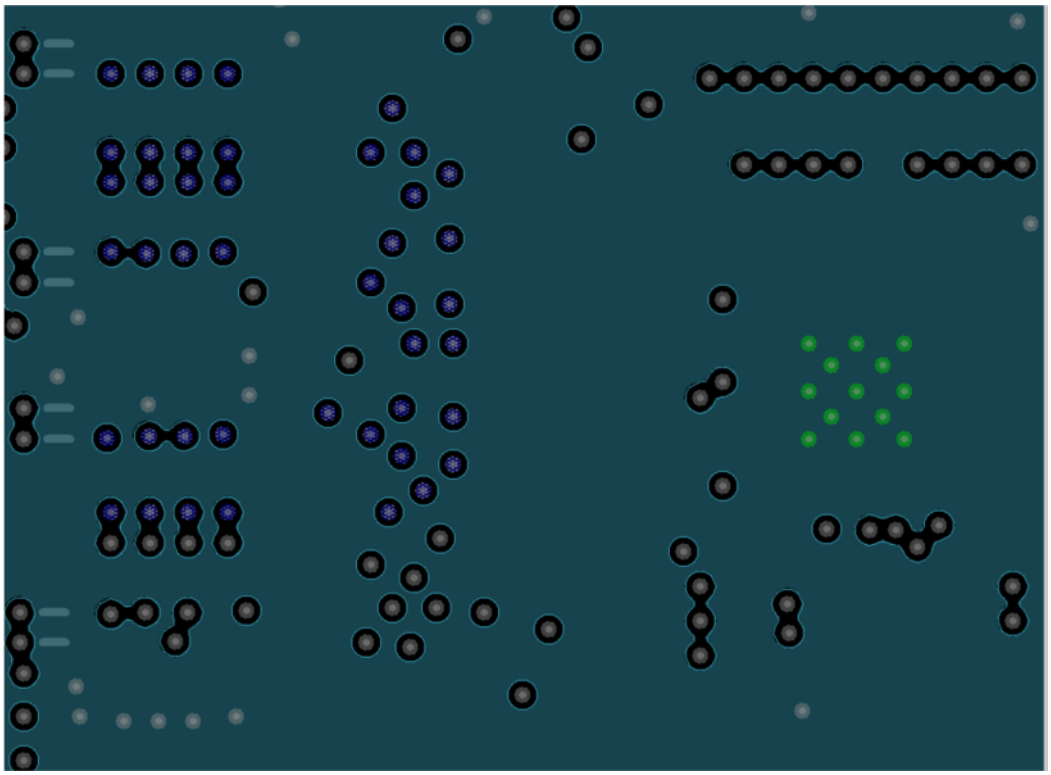


Figure 10. Layer 2

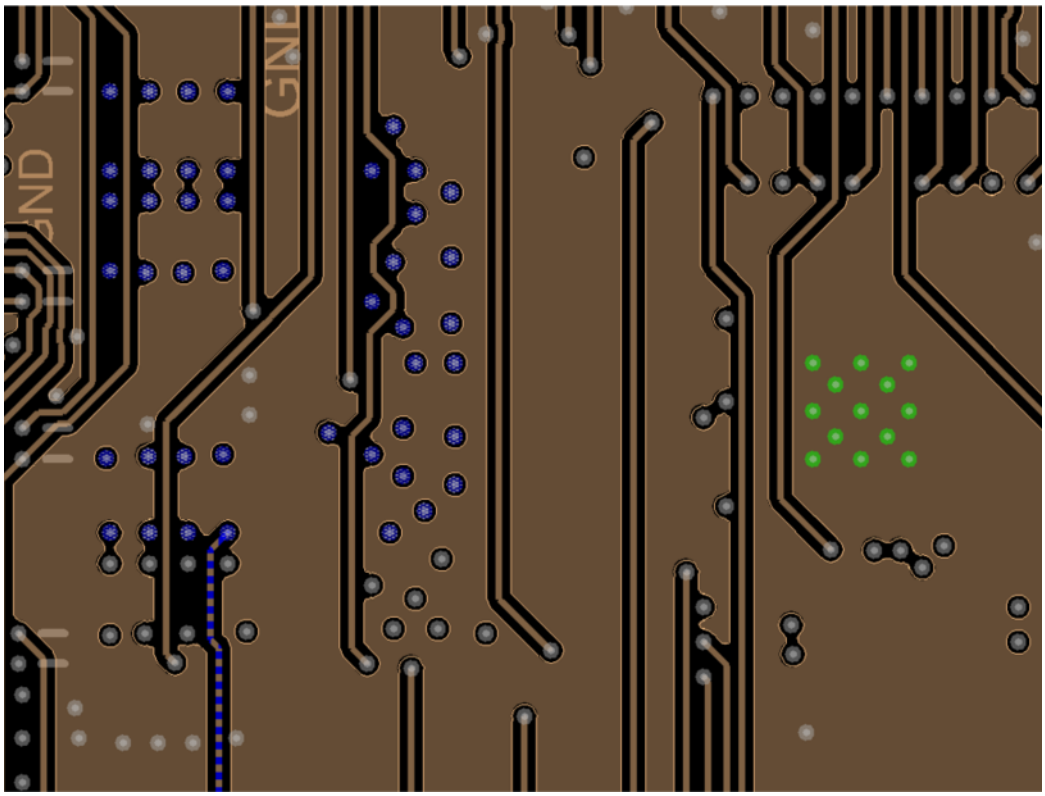


Figure 11. Layer 3

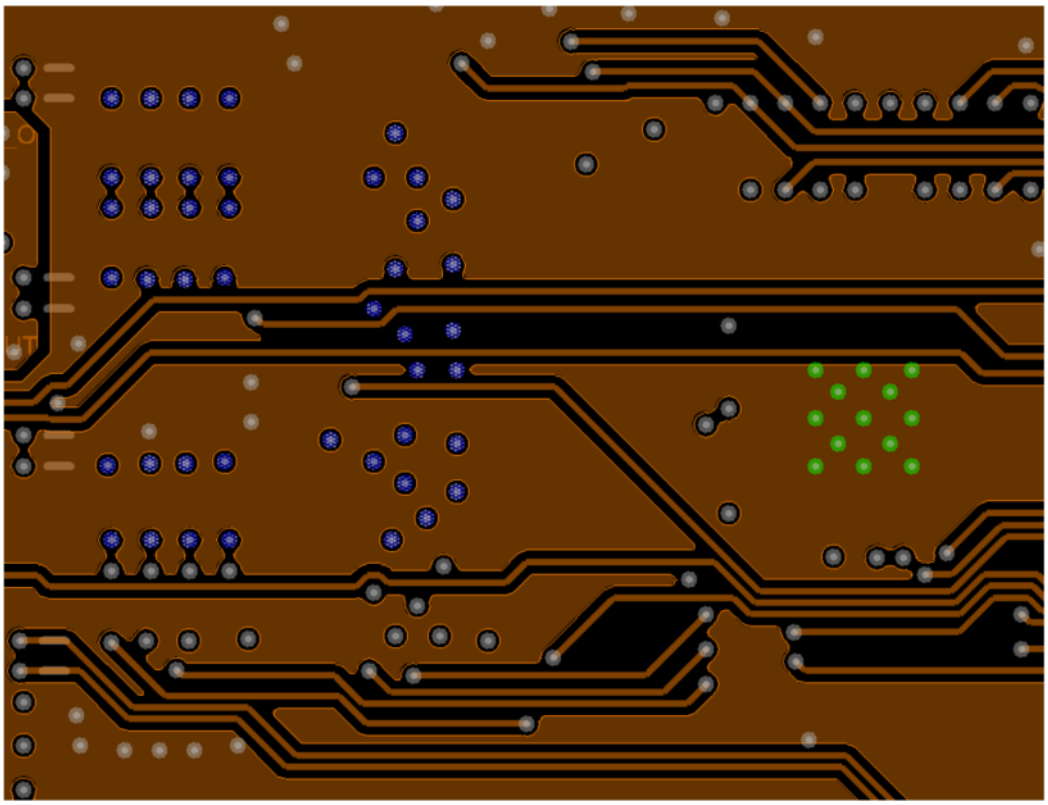


Figure 12. Layer 4

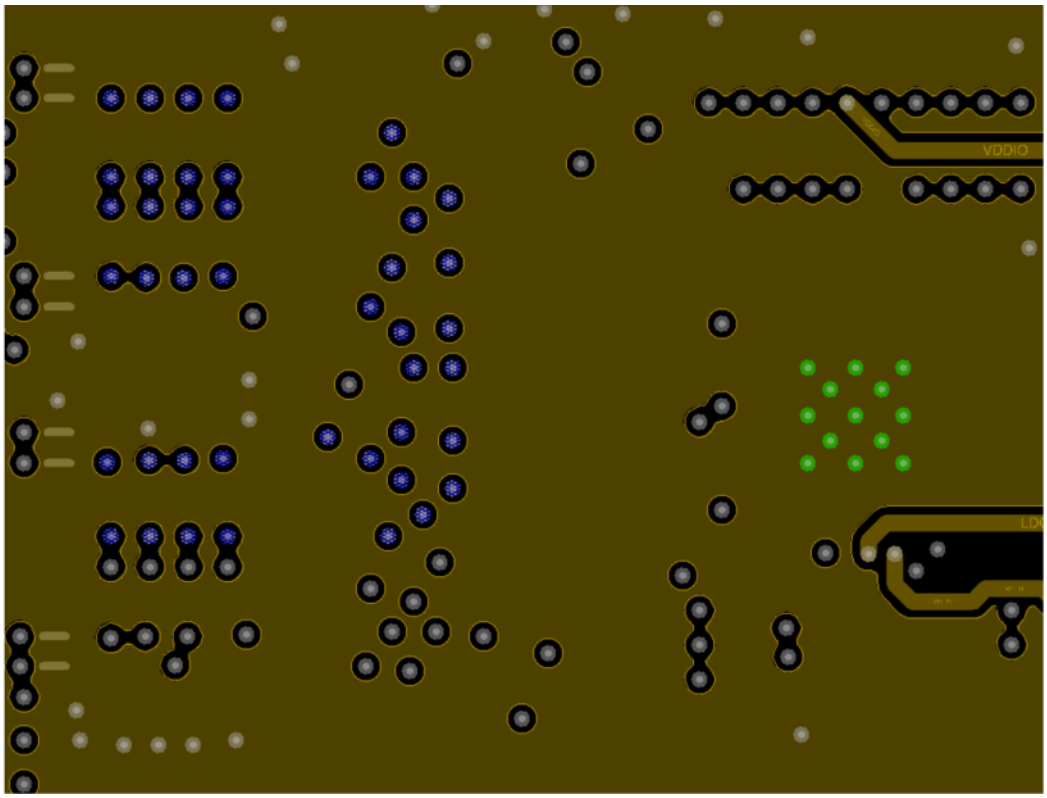


Figure 13. Layer 5

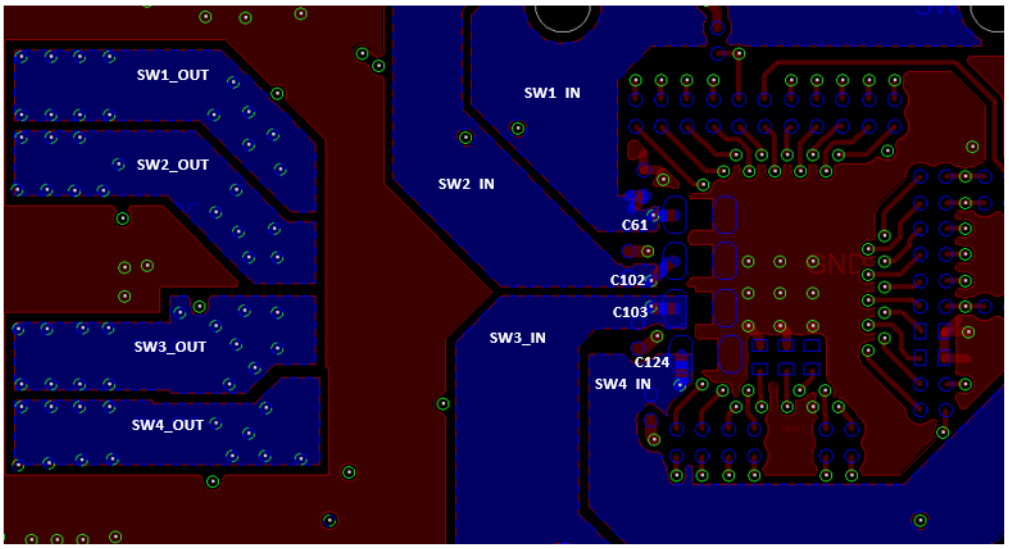


Figure 14. Bottom

4.3.3 Bill of Materials

Table 2. Bill of Materials

NXP does not assume liability, endorse, or warrant components from external manufacturers are referenced in circuit drawings or tables. While NXP offers component recommendations in this configuration, it is the customer's responsibility to validate their application.

DNP: do not populate

For critical components, it is vital to use the manufacturer listed.

Item number	Quantity	Schematic label	Value	Description	Part number	Manufacturer name	Assy Opt
Active components							
1	1	U4	MIC5205	IC LIN VREG LDO 1.5 V to 15 V 150 mA 2.5 V to 16 V SOT23-5	MIC5205YM5	MICREL	
Capacitors							
2	1	C5	470 pF	CAP CER 470 pF 50 V 5 % COG 0603	06035A471JAT2A	AVX	
3	1	C6	2.2 µF	CAP TANT ESR = 1.800 Ω 2.2 µF 10 V 10 % 3216-18	TPSA225K010R1800	AVX	
4	16	C59, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C114, C120, C121, C122, C123	22 µF	CAP CER 22 µF 10 V 10 % X7R AEC-Q200 1206	LMJ316BB7226KLHT	Taiyo Yuden	
5	6	C61, C93, C102, C103, C124, C127	4.7 µF	CAP CER 4.7 µF 16 V 10 % X7R AEC-Q200 0805	CGA4J3X7R1C475K125AB	TDK	
6	8	C62, C64, C68, C125, C131, C132, C133, C134	0.1 µF	CAP CER 0.1 µF 16 V 10 % X7R AEC-Q200 0402	GCM155R71C104KA55D	MURATA	
7	15	C71, C74, C75, C76, C89, C90, C91, C95, C96, C97, C98, C101, C128, C129, C135	1.0 µF	CAP CER 1 µF 10 V 10 % X7S AEC-Q200 0402	GCM155C71A105KE38D	MURATA	
8	1	C72	2.2 µF	CAP CER 2.2 µF 10 V 10 % X7S AEC-Q200 0402	GRT155C71A225KE13	MURATA	
9	5	C77, C78, C79, C80, C81	1000 pF	CAP CER 1000 pF 50 V 5 % C0G AEC-Q200 0603	CGA3E2C0G1H102J080AA	TDK	
10	1	C82	0.01 µF	CAP CER 0.01 µF 50 V 10 % X7R AEC-Q200 0603	CGA3E2X7R1H103K080AA	TDK	
11	1	C115	47 µF	CAP CER 47 µF 10 V 20 % X5R AEC-Q200 1206	GRT31CR61A476ME13L	MURATA	
12	1	C130	0.01 µF	CAP CER 0.01 µF 50 V 10 % X7R AEC-Q200 0402	GCM155R71H103KA55D	MURATA	DNP
Diodes							
13	5	D3, D4, D5, D6, D7	LED/GRN	LED GRN SGL 20 mA SMT NRND	LP M67K-E2G1-25	OSRAM	
Resistors							
14	20	R17, R155, R156, R157, R158, R159, R165, R166, R167, R168, R169, R170, R171, R172, R174, R175, R185, R186, R187, R188	1.00 kΩ	RES MF 1.00 kΩ 1/16 W 1 % AEC-Q200 0402	RK73H1ETTP1001F	KOA SPEER	
15	31	R40, R47, R104, R105, R106, R107, R108, R112, R113, R114, R115, R116, R118, R119, R120, R121, R122, R123, R124, R125, R141, R142, R143, R144, R176, R177, R182, R189, R190, R191, R192	0 Ω	RES MF ZERO Ω 1/16 W -- AEC-Q200 0402	CRCW04020000Z0ED	VISHAY INTERTECHNOLOGY	
16	1	R42	169 kΩ	RES MF 169 kΩ 1/10 W 1 % AEC-Q200 0603	RK73H1JTTD1693F	KOA SPEER	
17	1	R44	280 kΩ	RES MF 280 kΩ 1/10 W 1 % AEC-Q200 0402	RK73H1ETTP2803F	KOA SPEER	
18	6	R85, R91, R92, R93, R94, R95	0 Ω	RES MF ZERO 1/8 W AEC-Q200 0805	MCR10EZPJ000	ROHM	
19	5	R90, R178, R179, R180, R181	0.01 Ω	RES TF 0.01 Ω 1 W 1 % AEC-Q200 1206	ERJ-8CWFR010V	PANASONIC	
20	12	R103, R117, R126, R129, R132, R135, R138, R145, R147, R148, R149, R150	100 kΩ	RES MF 100 kΩ 1 % 1/10 W AEC-Q200 0402	ERJ-2RKF1003X	PANASONIC	
21	2	R109, R162	2.2 kΩ	RES MF 2.2 kΩ 1/16 W 0.1 % AEC-Q200 0402	ERA-2AEB222X	PANASONIC	
22	5	R127, R130, R133, R136, R139	1.5 kΩ	RES MF 1.5 kΩ 1/10 W 5 % AEC-Q200 0603	ERJ3GEYJ152V	PANASONIC	
23	5	R128, R131, R134, R137, R140	510 kΩ	RES MF 510 kΩ 1/10 W 5 % 0603	RC0603JR-07510KL	YAGEO AMERICA	
24	1	R193	76.8 kΩ	RES MF 76.8 kΩ 1/10 W 1 % AEC-Q200 0402	RK73H1ETTP7682F	KOA SPEER	
25	1	R194	10 kΩ	RES MF 10 kΩ 5 % 1/10 W AEC-Q200 0402	ERJ-2GEJ103X	PANASONIC	
Switches, Connectors, Jumpers, and Test Points							
26	2	J1, J6	CON 2X8	CON 2X8 SKT TH 100 MIL SP 335H AU 104L	SSW-108-01-S-D	SAMTEC	
27	1	J2	CON_2X10	CON 2X10 SKT TH 100 MIL CTR 340H AU 104L	SSW-110-01-G-D	SAMTEC	
28	1	J4	SKT BLACK	CON 1X2 BANANA BLACK RA TH 15.3 MM SP 492H AG 197L	571-0100	DELTRON EMCON LTD	
29	1	J5	CON 2X6 SKT	CON 2X6 SKT TH 100 MIL CTR 340H AU 104L	SSW-106-01-G-D	SAMTEC	
30	1	J10	SKT RED	CON 1X2 BANANA RED RA TH 15.3MM SP 488H AG 197L	571-0500	DELTRON EMCON LTD	
31	4	J31, J32, J33, J61	TB_1X2	CON 1X2 TB TH 5 MM SP 398H SN 138L	691102710002	WURTH ELEKTRONIK EISOS GMBH & CO. KG	
32	10	J34, J39, J40, J41, J42, J55, J62, J63, J64, J65	HDR_1X3	HDR 1X3 TH 100MIL SP 330H AU 98L	HTSW-103-07-S-S	SAMTEC	
33	1	J66	HDR_2X13	HDR 2X13 TH 100 MIL CTR 330H AU	TSW-113-07-S-D	SAMTEC	
34	2	J67, J70	HDR_2X12	HDR 2X12 TH 100 MIL CTR 337H AU 100L	TSW-112-07-G-D	SAMTEC	
35	3	J68, J69, J71	HDR_2X5	HDR 2X5 TH 100MIL CTR 330H AU	TSW-105-08-G-D	SAMTEC	

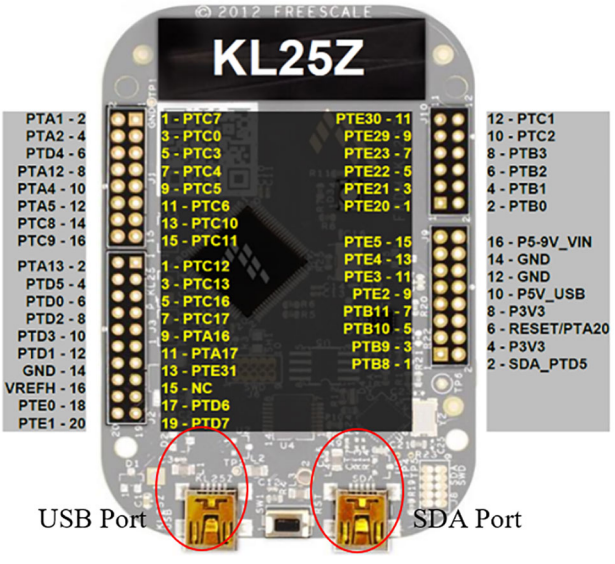
Item number	Quantity	Schematic label	Value	Description	Part number	Manufacturer name	Assy Opt
36	1	J72	SKT QFN 40 SMT	SKT QFN 40 SMT 0.5MM 1658H	HQN4024-05A1-U	HICON CO., LTD	
37	4	L8, L9, L10, L11	1.0 µH	IND PWR 1.0 µH@1 MHZ 4.7A 20 % AEC-Q200 SMD	TFM252012ALMA1R0MTAA	TDK	
38	5	Q2, Q3, Q4, Q5, Q6	NX3008NBKW,115	TRAN NMOS SW 30 V 350 mA AEC-Q101 SC-70	NX3008NBKW,115	NEXPERIA	
39	20	SH1, SH22, SH23, SH24, SH25, SH26, SH27, SH28, SH29, SH30, SH31, SH32, SH33, SH34, SH35, SH36, SH39, SH40, SH42, SH43	0	ZERO Ω CUT TRACE 0201 PADS; NO PART TO ORDER	LAYOUT ELEMENT ONLY	LAYOUT ELEMENT ONLY	
40	7	SJ1, SJ2, SJ3, SJ4, SJ5, SJ6, SJ7	0402 JUMPER	SOLDER BLOB JUMPER 0402 OPEN NO PART TO ORDER	NA	NA	
41	1	SW3	FSMSM	SW SPST PB 12 V 50 mA SMT	1437566-4	Tyco Electronics	
42	5	SW10, SW11, SW12, SW13, SW17	SPDT_SWITCH	SW SPDT SLIDE 0.1 A 12 V TH	OS102011MS2QN1	C&K Components	
43	2	TP13, TP17	TPAD_030	TEST POINT PAD 30 MIL DIA SMT, NO PART TO ORDER	NOT A COMPONENT	NOT A COMPONENT	
44	19	TP62, TP63, TP64, TP65, TP66, TP67, TP93, TP94, TP102, TP103, TP108, TP109, TP110, TP111, TP112, TP113, TP114, TP117, TP118	TESTLOOP_RED	TEST POINT PC MULTI PURPOSE RED TH	5010	KEYSTONE ELECTRONICS	
45	15	TP69, TP76, TP77, TP80, TP81, TP88, TP89, TP90, TP91, TP92, TP97, TP106, TP107, TP115, TP116	TESTLOOP_BLACK	TEST POINT PC MULTI PURPOSE BLK TH	5011	KEYSTONE ELECTRONICS	

5 Installing and configuring software and tools

Download and unzip the *NXP_GUI_ PR_1.0* file into any desired location. The package should contain a GUI folder and MCU folder.

5.1 Freedom board BOOTLOADER refresh in a Windows 7 or 10 system (optional - only when the Freedom board is not preprogrammed)

1. Press the RST push button on the Freedom board and connect the USB cable into the SDA port on the Freedom board. A new BOOTLOADER device should appear on the left pane of the File explorer.



aaa-036717

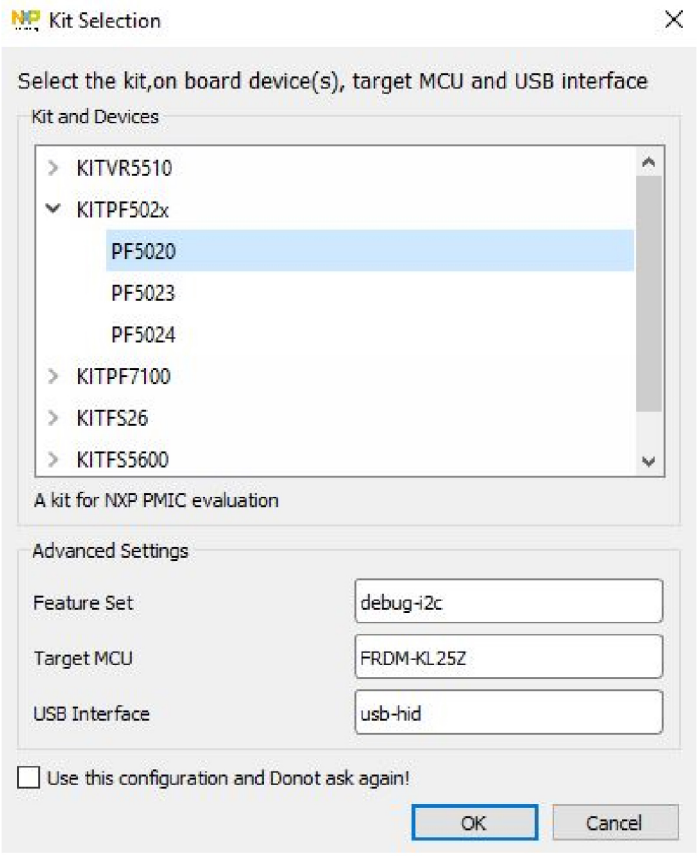
2. Drag and drop the file **MSD-DEBUG-FRDM-KL25Z_Pemicro_v118.SDA** from the MCU folder into the BOOTLOADER drive.
   Note: Make sure to allow enough time for the firmware to be saved in the Bootloader.

3. Disconnect and reconnect the USB cable into the SDA port (this time without pressing the RST push button). The PC installs a new device called **FRDM_KL25Z**.
4. Locate the file **nxp-gui-fw-frdmkl25z-usb_hid-pf502x_v0.1.6.bin** from the MCU folder and drag and drop the file into the FRDM_KL25Z device.
5. Freedom board firmware is successfully loaded.
6. Open and run the **NXP_GUI-1.0-Setup.exe** file from the GUI folder inside the unzipped package. This installs the NXPGUI software in the system. Install it in a local destination folder.

6 Configuring the hardware for startup

To configure the hardware and workstation, complete the following procedure:

1. With the USB cable connected to the PC and the USB port in the freedom board, apply VIN to the evaluation board.
   a. Provide external VIN between 2.5 V to 5.5 V on J10 (VIN) and J4 (GND). Make sure that the supply is current limited to 100 mA.
2. Press **Reset** on the Freedom board, to ensure board is properly recognized.
3. If the NXPGUI application was not installed before, perform step 6 of Section 5.1 "Freedom board BOOTLOADER refresh in a Windows 7 or 10 system (optional - only when the Freedom board is not preprogrammed)" to install it for the first time. Open the NXPGUI application from the installation folder or from the Start menu.
4. A configuration window is displayed. Select one of the devices to load the predefined configurations, and then click **OK**.



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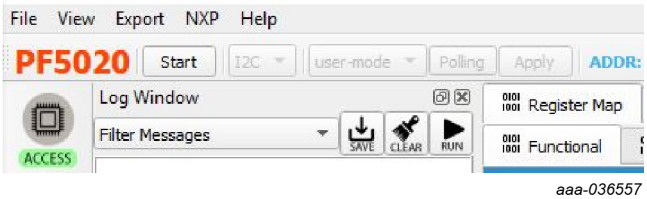
5. The NXPGUI interface should open and load the main framework. Make sure to confirm if the GUI can identify the USB device properly. This is displayed by the active **Start** button on the top-left corner of the GUI.
   Note: The USB cable should be connected for the GUI to recognize and be able to connect to the device.
6. Click **Start** to enable the connection to the device. The device status can be read from the bottom-left corner of the GUI.



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7. Once the device is connected, the system is ready for Hardwire, TBB or OTP operation as desired.

7 Using the KITPF502XSKTEVM evaluation board

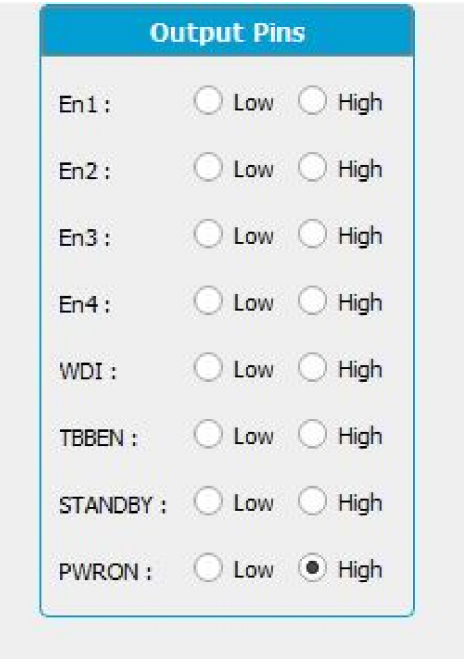
This section summarizes the overall setup. Detailed description is provided in the following sections.

7.1 Operating in Hardwire mode

To operate the board with the default hardwire configuration, complete the following procedure:

1. Short J34 in position 2-3 and SW17 in position 1 (PWRON = high) or leave J34 open to let the MCU on the board control the pin.
2. Short J39 in position 2-3 (VDDOTP = V1P5D).
3. Short J40 in position 1-2 (TBBEN = Low).

In Hardwire mode, applying power to the board turns On the device by default. However, when the GUI is started, and the device is connected, the PMIC turn On/Off can be controlled via the PWRON control in the **IO Pins** tab of the main window.



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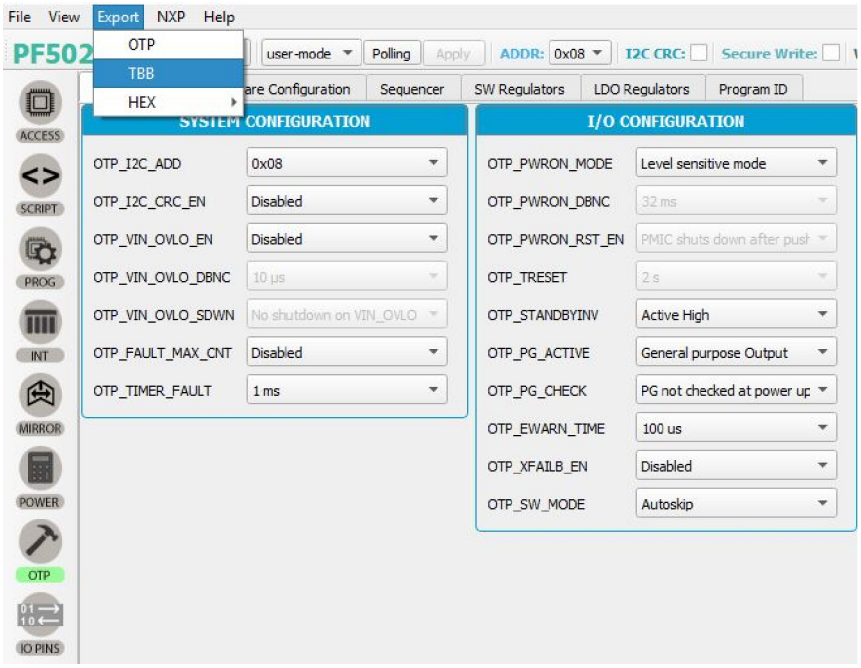
7.2 Operating in TBB mode

To operate the device in TBB mode, an TBB script can be created using the OTP section of the NXPGUI (installed in the previous steps).

To generate a TBB script, complete the following procedure:

1. Select the configuration settings in the OTP tool as required.
2. Generate a TBB script using the Export section on the OTP tool (make sure to fill all required fields marked with a * next to them). Save the generated TBB file in a known location.



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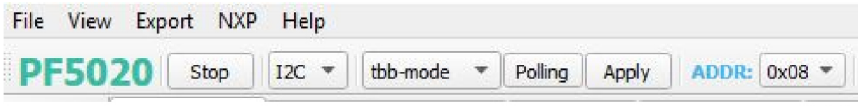
To operate the board in TBB mode, complete the following procedure:

1. Set SW17 to position to 3 (PWRON to GND).
2. Short J40 in position 2-3 (TBB = V1P5D).
   Or
3. Use the NXPGUI to select the TBB mode, when the KL25Z interface board is connected to the EVB. Disconnect jumpers J40, J41 and J42 from the board as explained in Section 4.2.2 "Jumper, switch, and shunt configuration".



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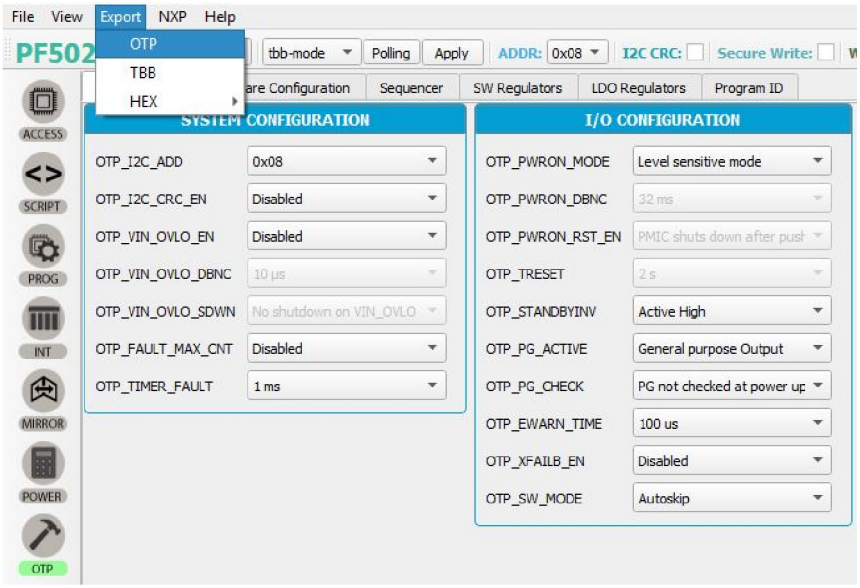
4. In the Script section of the GUI, use the command window to load the TBB script created, and click **Run** to start programming the PF502X.
5. After Script is done programming, the device is automatically enabled with the selected TBB configuration.

7.3 Programming/burning OTP in TBB mode

To program the OTP, the device must be operated in TBB mode. An OTP script can be created using the NXPGUI OTP section.

1. Start the NXPGUI from the installation folder or from the Start menu. Follow the steps in Section 6 "Configuring the hardware for startup" to start the GUI and connect to the board.
2. Generate the desired OTP configuration using the OTP request form.

3. Select OTP from the **Export** tab in the menu and save the generated OTP file(.txt) in a known location with a desired filename.



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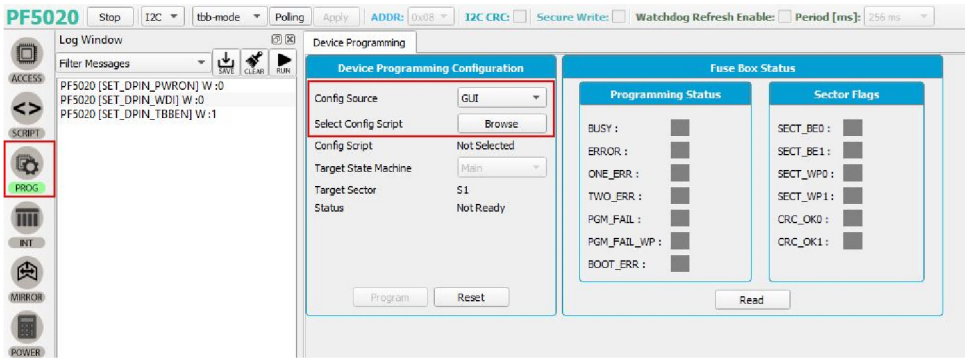
4. To operate the board in TBB mode:
   a. Follow step 3 in Section 7.2 "Operating in TBB mode".
   b. Other jumpers must be in the configuration as explained in Section 4.2.2 "Jumper, switch, and shunt configuration".
5. Remove jumper on J39 and connect an external supply of 8.0 V on the VDDOTP pin at **J39, pin2 or TP103**.
6. In the PROG section, use the **Config Source** button to select "script", and then click the **Browse** button to load the config (*.cfg) file saved before. Click **Program** to start programming the PF502x device.



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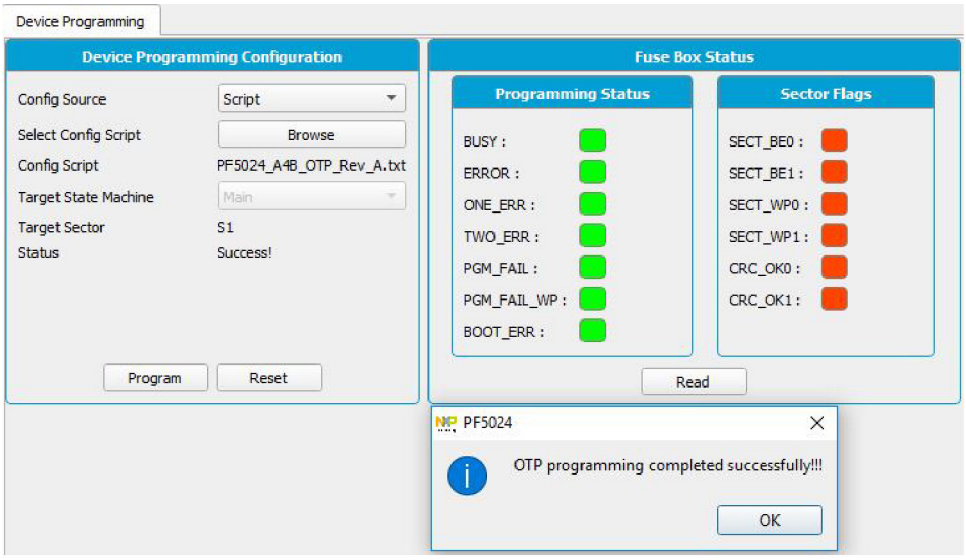
7. After the script completes the programming, the device is automatically enabled with the selected OTP configuration. Remove the voltage on the VDDOTP pin (J39-2).



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8. Put the jumper on J39 (1-2). Select user-mode in the GUI and click **Apply** to turn On the board with new settings.
   Or
9. Turn Off the power supply and turn back-on to reconnect the device.
10. Using the **IO Pins** tab in the main window of the GUI, set the PWRON pin high to enable the device with the programmed configuration. Ensure that the enable switches SW10, SW11, SW12, SW13 are set high for the regulators to turn On.

8 References

[1] **KITPF502XSKTEVM** — detailed information on this board, including documentation, downloads, and software and tools
http://www.nxp.com/KITPF502XSKTEVM

[2] **PF502X** — product information on PF502X, Power management integrated circuit (PMIC) for high performance applications
http://www.nxp.com/PF5020
http://www.nxp.com/PF5023
http://www.nxp.com/PF5024

[3] **FRDM-KL25Z** — detailed information on this board, including documentation, downloads, and software and tools
http://www.nxp.com/FRDM-KL25Z

9 Revision history

Revision history

Rev	Date	Description
v.2	20200701	• Global: replaced "FLEXGUI by "NXPGUI", updated GUI screens, and deleted section 5.2 • Section 3.4: updated GUI filename • Section 5: replaced "NXP_GUI_PF502x_RFP_1.0.1" by "NXP_GUI_ PR_1.0" • Section 5.1: updated step 4 and step 6 • Section 6: updated step 5 • Section 7.2: updated procedure • Section 7.3: updated procedure
v.1	20200409	Initial version

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Date of release: 1 July 2020
Document identifier: UM11377