

# NXP IMXQSUG Config Tools for i.MX User Guide

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## NXP IMXQSUG Config Tools for i.MX

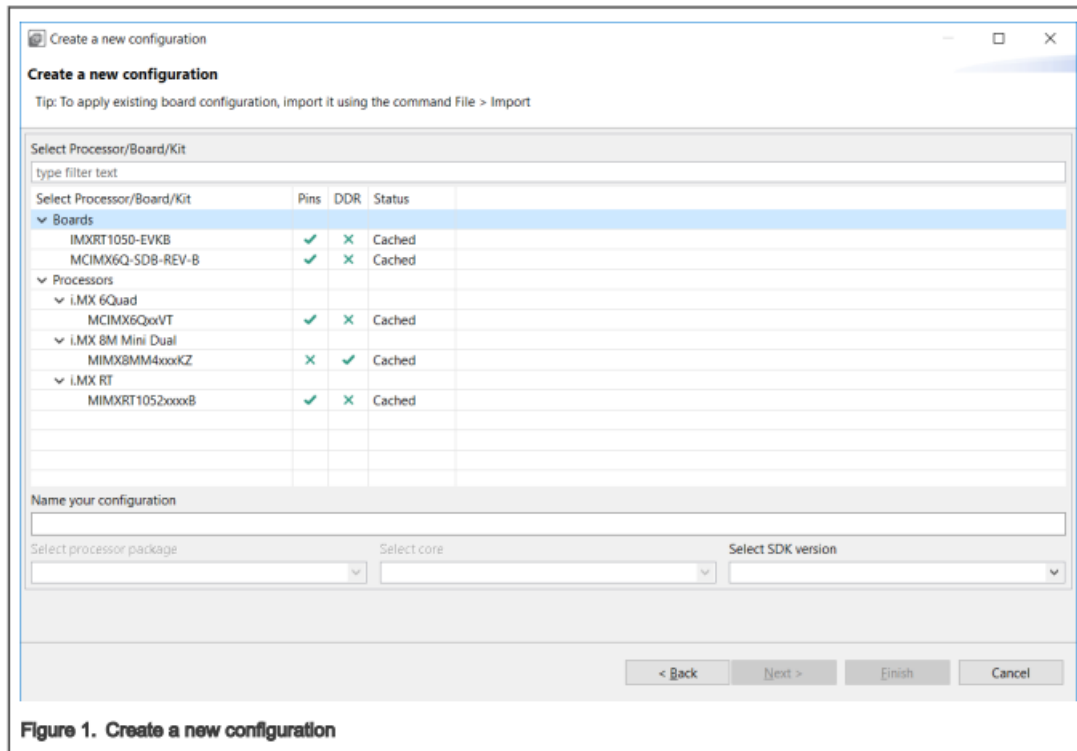
NXP IMXQSUG Config Tools for i.MX-fig1

### Introduction

- Config Tools for i.MX is a suite of tools intended for configuration of NXP i.MX Cortex-A and Cortex-M based processors.
- Use the Pins tool to customize pin routing configuration of the device, including configuration of electrical properties related to all respective pin signals, and to create source codes applicable for a device initialization either as direct initialization of register(s) or code for SDK API and/or device tree code snippet(if supported).
- Use the DDR tool to configure and validate the double data rate RAM configuration.

### Start with a new configuration

On starting Config Tools for i.MX the first time you will be greeted by the Start Development window. You can use this window to create a new configuration or load an existing one.



**To create a new configuration for selected processor, board or kit at any time, do the following:**

1. Start the tool or select File > New.
2. Select option Create new configuration for processor, board or kit.
3. Select Next.
4. Expand the tree and select any processor, board or kit configuration. You can also use the filter field to quickly find desired item.
5. Customize name of the configuration and select Finish.  
Use File > Save to save existing configuration to the disk.

## Import an existing configuration

You can also import an existing configuration using a built-in import wizard for getting pins and DDR configuration either from legacy project formats (IO Mux Tool Design Configuration XML or PEx for i.MX) or an other already existing configuration file (MEX) or Pins tool-generated source files containing YAML configuration details.

**To import an existing configuration:**

1. Select File > Import.
2. Choose the import wizard, select Next and follow the instructions.
3. Select Browse and then the required input file(s).
4. Select Finish to import files.

New configuration is created if the import is finished successfully, then use File > Save to save it to the disk.

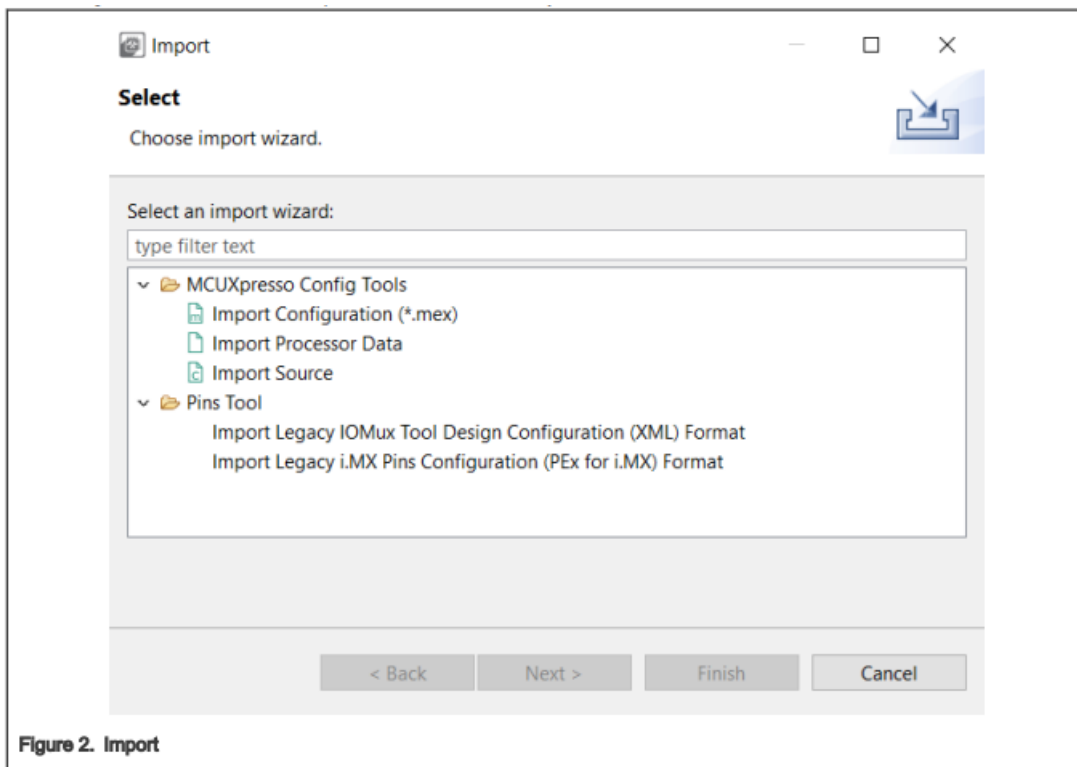


Figure 2. Import

## Pins Tool

- In the Pins tool, you can display and configure the pins of selected processor. Basic configuration can be done in the Pins, Peripheral Signals or Package views.
- More advanced settings (pin electrical properties and features) can be viewed and configured in the Routed Pins view.
- Moreover, Config Tools for i.MX allows you to verify possible voltage level issues on HW level within given functional group for pins configuration from different power rails (if specified for given processor). Individual voltage level for supported power groups can be configured globally per current configuration in Power Groups view.

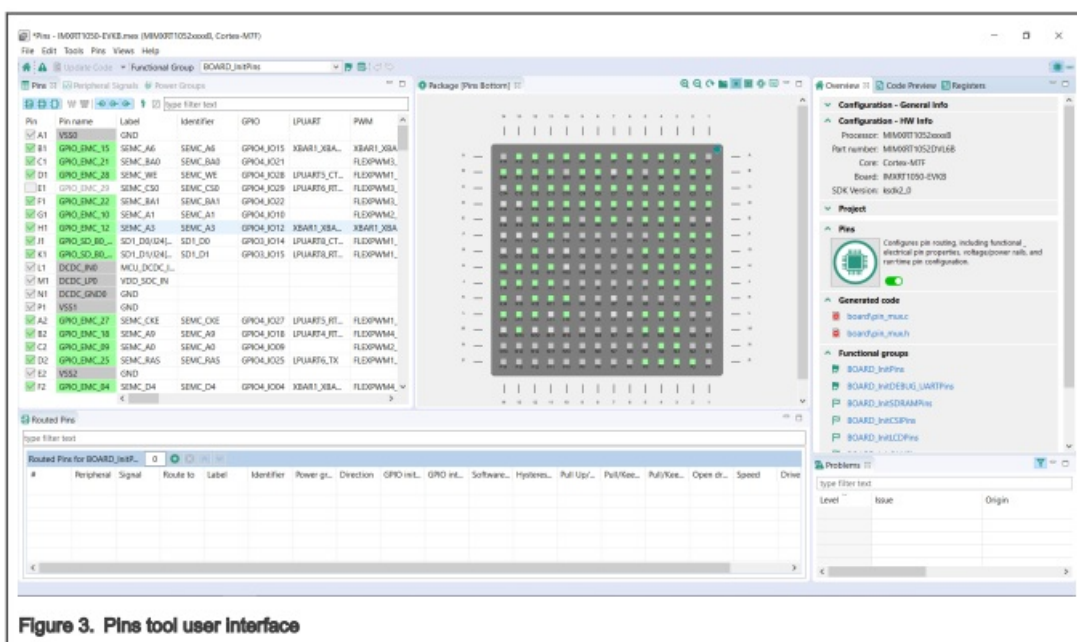


Figure 3. Pins tool user interface

## DDR Tool

- In the DDR view you can view and configure basic DDR attributes, such as memory type, frequency, number of channels and others.
- In the Validation view, you can submit the DDR configuration to a variety of tests. After you've specified the connection type, you can choose scenarios, tests to run in these scenarios, and view the test results, logs, and summary.

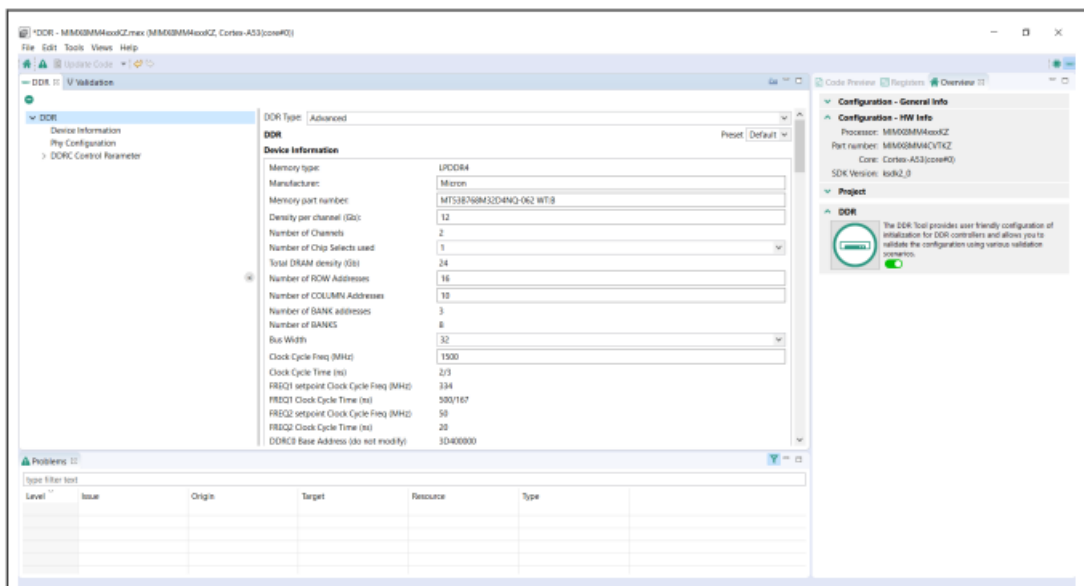


Figure 4. DDR View

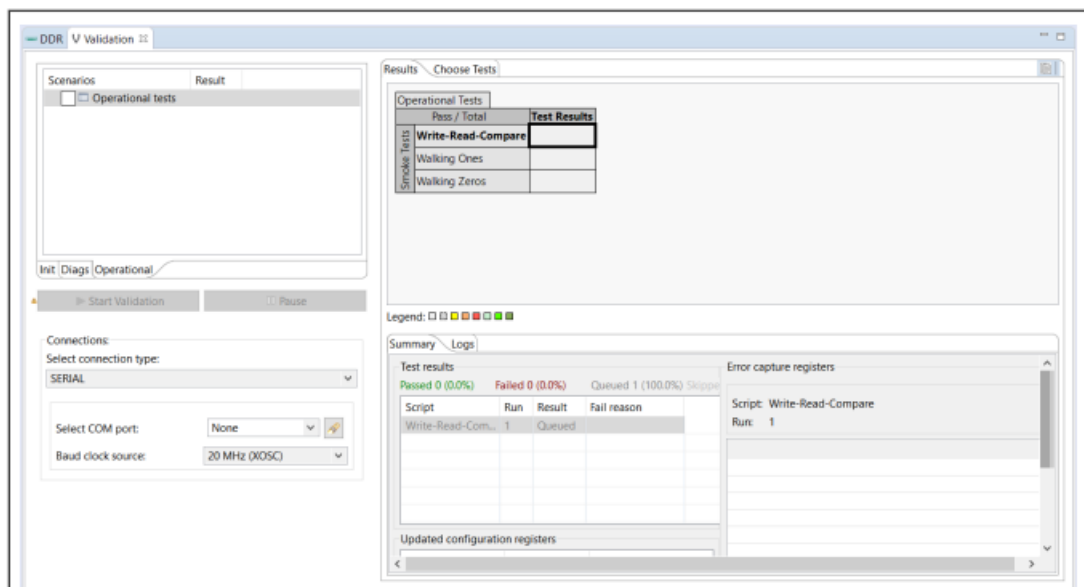
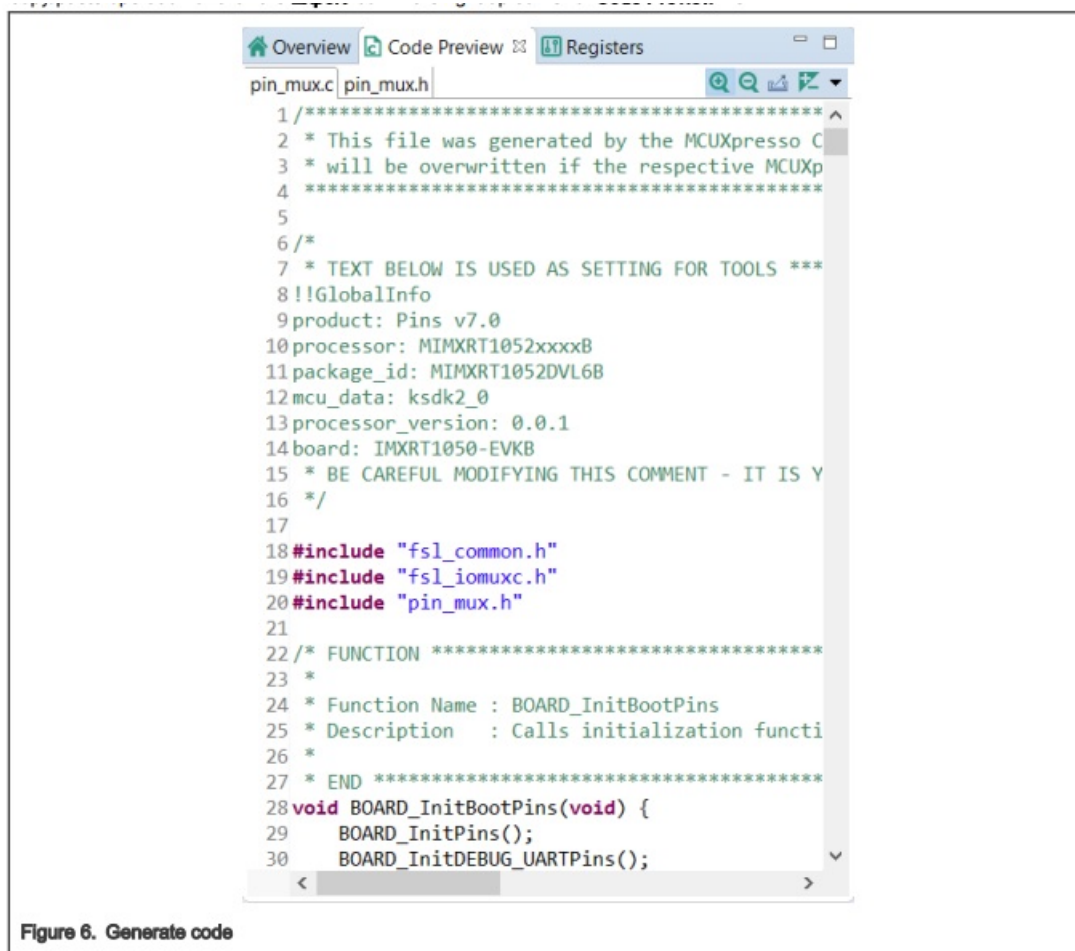


Figure 5. Validation View

## Generate code

Pins tool generates the output code for current configuration automatically. You can also select Pins. Refresh from the Main Menu to update the code manually. All output code files are displayed in the Code Preview view. To copy the code, perform the copy/paste operation or click the Export icon in the right top corner of Code Preview view.



Alternatively, you can also export generated output in various types of output like source files, plain pins configuration data in CSV, modified registers content or as pins configuration report in HTML format per specific export wizard selectable from File > Export from the Main Menu.

## Revision history

Table 1. Revision history

Revision number	Date	Substantive changes
0	23 June 2021	Initial release
1	22 December 2021	Minor updates

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## **Documents / Resources**

	<p><a href="#">NXP IMXQSUG Config Tools for i.MX</a> [pdf] User Guide</p> <p>IMXQSUG, Config Tools for i.MX, IMXQSUG Config Tools for i.MX</p>
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