

1 Introduction

MCUXpresso Config Tools is a set of tools for configuration of NXP Cortex-M processors. In order to showcase some of its abilities, a simplified version of its **Pins** and **Clocks** tools is available online, at <http://mcuxpresso.nxp.com>:

- **Pins** tool allows you to configure pins routing and electrical properties,
- **Clocks** tool allows you to configure system clocks.

You can use the tools to evaluate chip features and capabilities and generate initialization code.

1.1 Minimum System Requirements

The following lists the minimum system requirements to run the software:

- Internet connection for dynamic download from processor database
- JavaScript enabled web browser
- Web Browser versions: Chrome 38
- Display with resolution 1024 x 768

2 Start MCUXpresso Config Tools

You can inspect device configuration in the online version of **Pins** and **Clocks** tools once you have selected a device, board, or a kit.

- Visit mcuxpresso.nxp.com.
- Select **Select Development Board** and log in.
- Select the device of your choice from the **Select a Device, Board, or Kit** dropdown list or filter by name in the **Search by Name** field.
- Once device is selected, select the **Explore selection with Pins tool** to open the device configuration in **Pins** tool, or **Explore selection with Clocks tool** to open it in the **Clocks** tool.

NOTE

You can always switch between the tools

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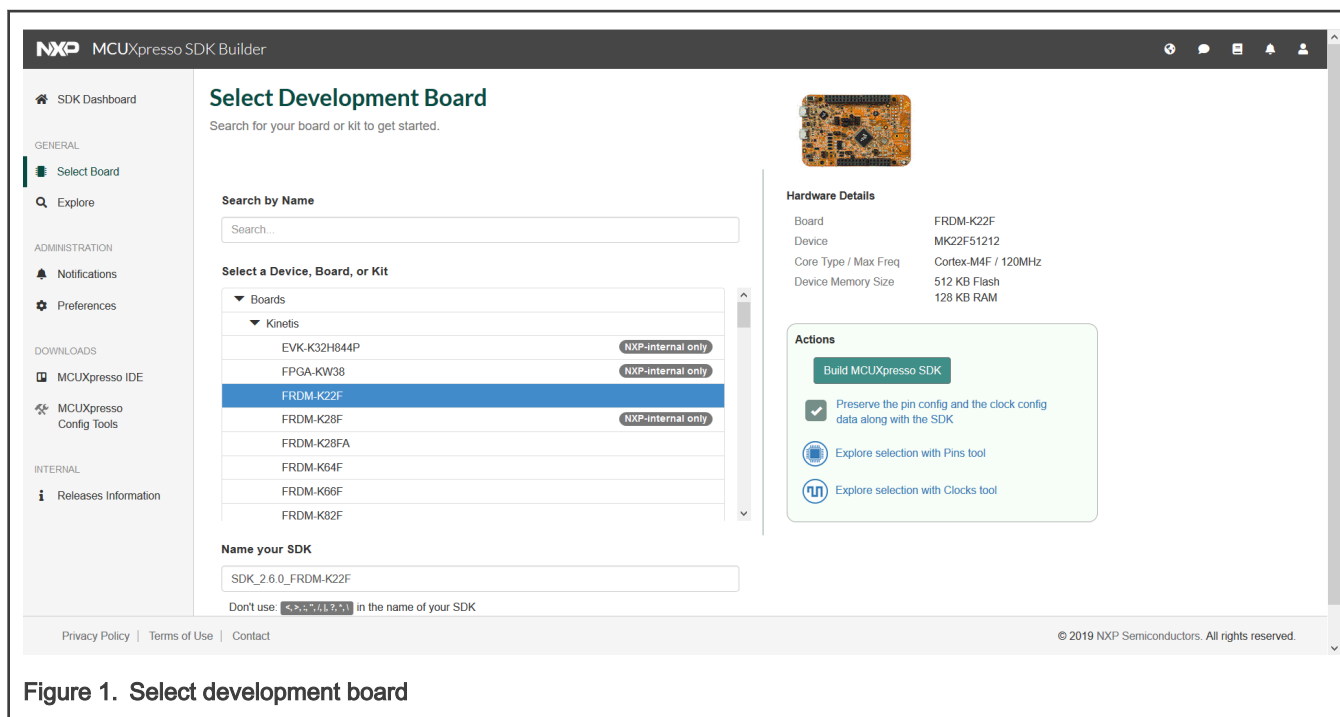


Figure 1. Select development board

NOTE

All the tool settings are stored within the configuration.

3 Pins Tool

In the **Pins** tool, you can display and configure the pins of the processor. Basic configuration can be done in **Pins**, **Peripheral Signals**, or **Package** views.

More advanced settings (pin electrical features) can be adjusted in the **Routed Pins** view.

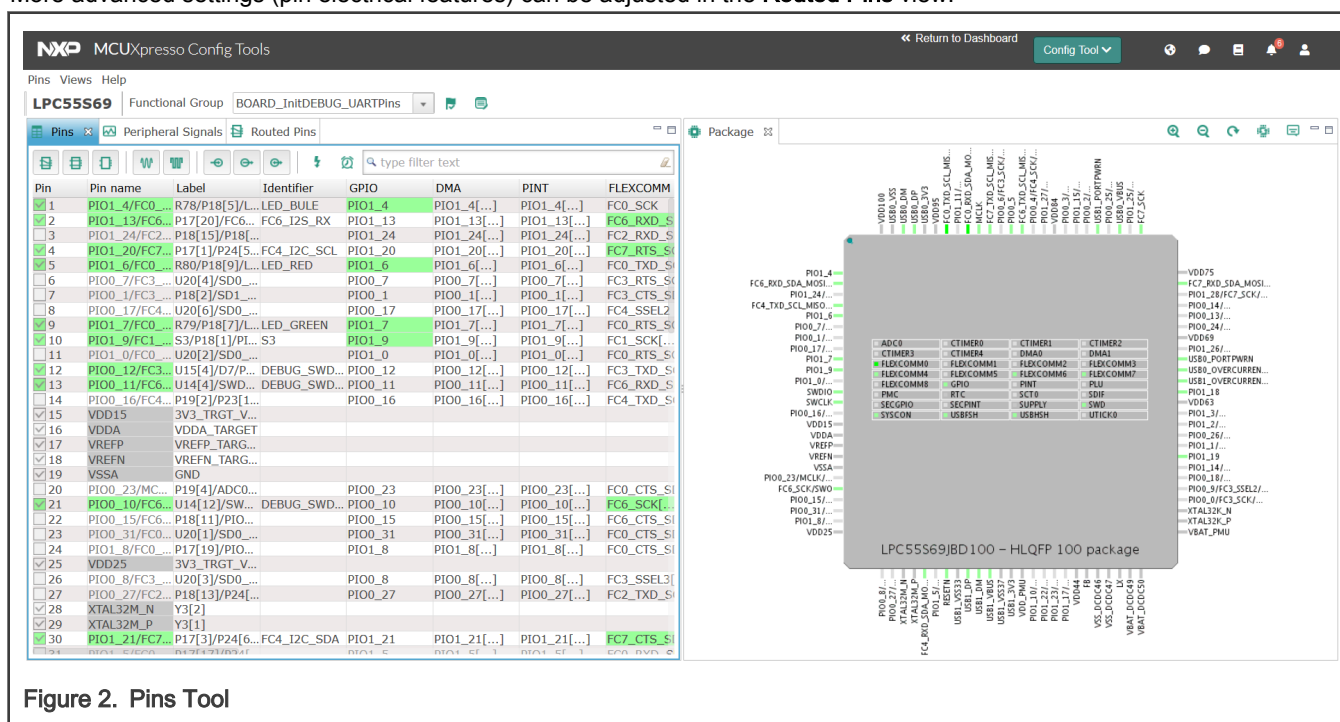


Figure 2. Pins Tool

4 Clocks Tool

In the **Clocks** tool, you can display and modify clock sources and outputs settings in the **Clocks Table** view. Advanced settings can be adjusted in the **Clocks Diagram** and **Details** views. Global settings of the clocking environment such as run modes, MCG modes and SCG modes can be modified in **Clocks Table**, **Clocks Diagram**, and **Details** views..

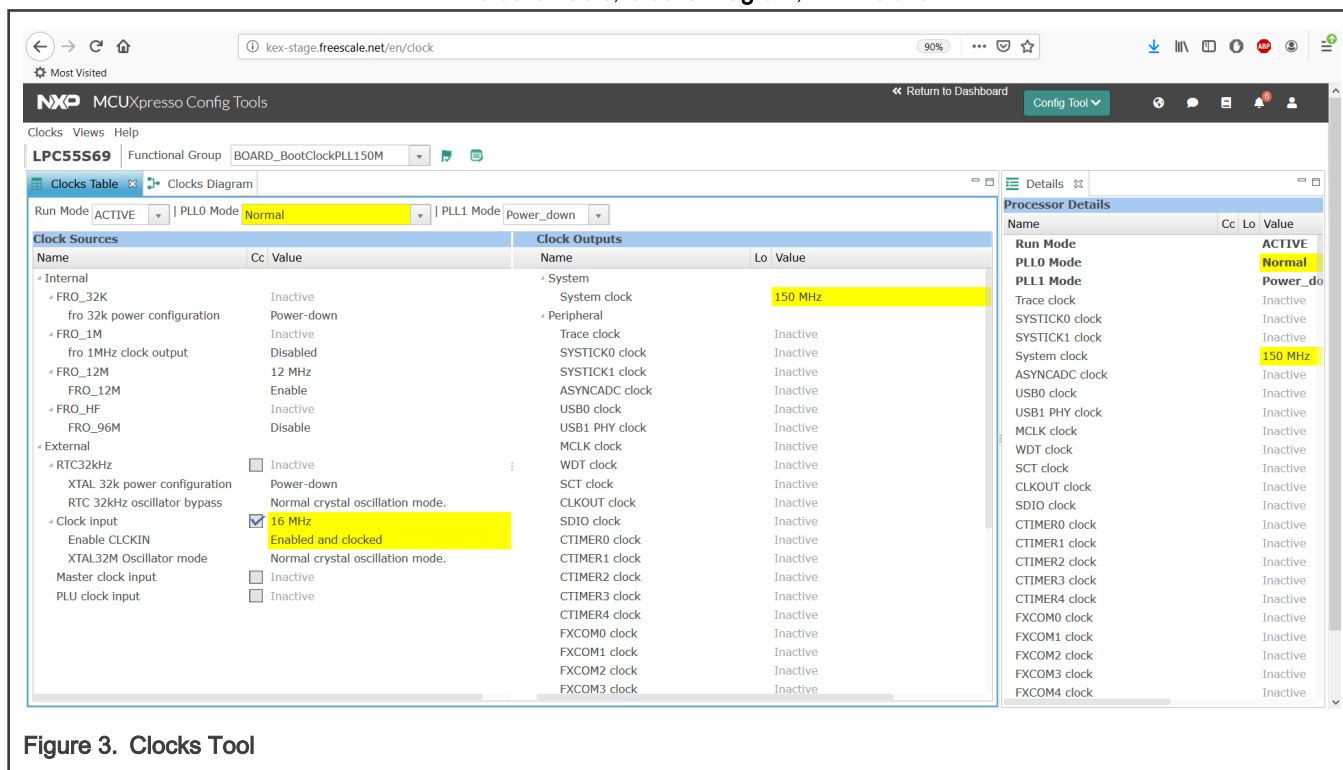
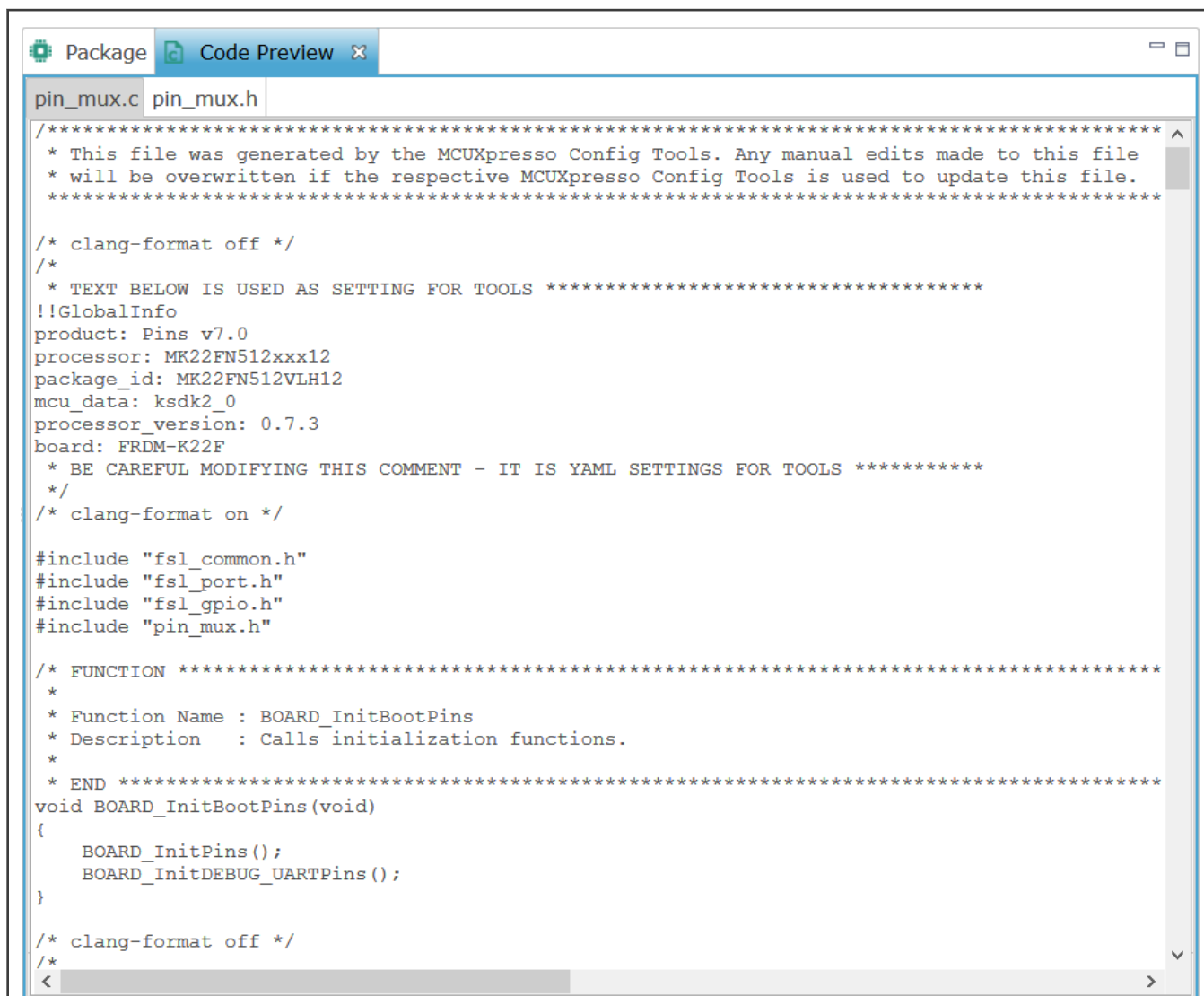


Figure 3. Clocks Tool

5 Generate code

To see generated code, open **Code Preview** view by selecting **Views > Code Preview** from the **Main Menu**. The source code is updated automatically after every change. You can copy-paste the generated code or download a ZIP file by selecting **Pins > Export** from the **Main Menu**.



```

Package Code Preview
pin_mux.c pin_mux.h

/*****
 * This file was generated by the MCUXpresso Config Tools. Any manual edits made to this file
 * will be overwritten if the respective MCUXpresso Config Tools is used to update this file.
 *****/

/* clang-format off */
/*
 * TEXT BELOW IS USED AS SETTING FOR TOOLS *****/
!!GlobalInfo
product: Pins v7.0
processor: MK22FN512xxx12
package_id: MK22FN512VLH12
mcu_data: kSDK2_0
processor_version: 0.7.3
board: FRDM-K22F
 * BE CAREFUL MODIFYING THIS COMMENT - IT IS YAML SETTINGS FOR TOOLS *****
 */
/* clang-format on */

#include "fsl_common.h"
#include "fsl_port.h"
#include "fsl_gpio.h"
#include "pin_mux.h"

/* FUNCTION *****/
 *
 * Function Name : BOARD_InitBootPins
 * Description   : Calls initialization functions.
 *
 * END *****/
void BOARD_InitBootPins(void)
{
    BOARD_InitPins();
    BOARD_InitDEBUG_UARTPins();
}

/* clang-format off */
/*

```

Figure 4. Code Preview

The generated code uses MCUXpresso SDK for peripheral initialization, so it is necessary to download device specific SDK package to build it. Supported toolchains are:

- MCUXpresso IDE
- IAR Embedded Workbench
- Keil µVision
- Arm GCC
- Kinetis Design Studio

6 Revision history

Table 1. Revision history

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

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