

[Notes]

R20TS0757EC0100

Rev.1.00

Oct. 01, 2021

# e<sup>2</sup> studio Smart Configurator Plug-in, Smart Configurator for RL78

## Outline

When using Smart Configurator for RL78, note the following points.

1. Notes on creating LLVM for Renesas RL78 C/C++ Executable Project
2. Notes on using Port Input buffer function

## 1. Notes on creating LLVM for Renesas RL78 C/C++ Executable Project

### 1.1 Applicable Products

e<sup>2</sup> studio 2021-04 (Smart Configurator for RL78 Plug-in V1.0.1) or later

### 1.2 Applicable Devices

RL78 family: RL78/G23 group

- RL78/G23 (30-pin, 32-pin, 36-pin, 40-pin, 44-pin, 48-pin, 52-pin, 64-pin, 80-pin, 100-pin, 128-pin product)

### 1.3 Details

In e<sup>2</sup> studio, when creating [LLVM for Renesas RL78 C/C++ Executable Project] and selecting [C++] language, [Use Smart Configurator] (refer to Figure1-1), the Smart Configurator generated code is not guaranteed to build successfully. The reason is that Smart Configurator generated code is not compatible with C++ language.

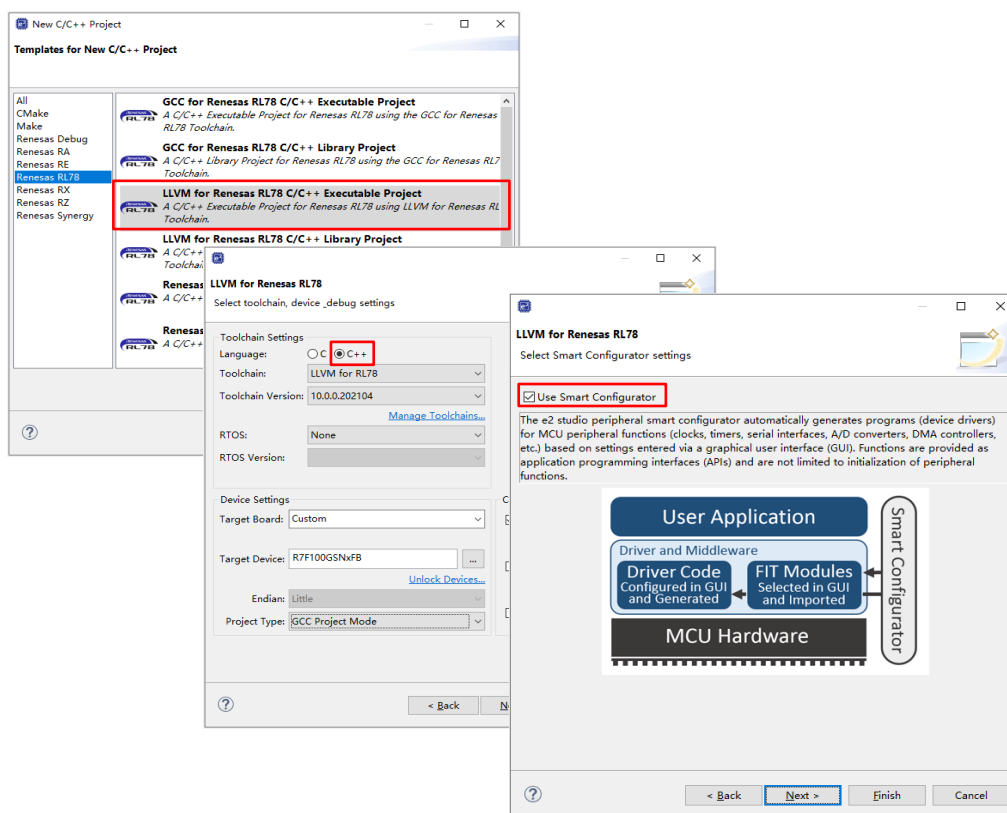


Figure 1-1 Creating [LLVM for Renesas RL78 C/C++ Executable Project]

## 1.4 Workaround

Please avoid selecting [Use Smart Configurator] when selecting C++ language (refer to Figure1-2).

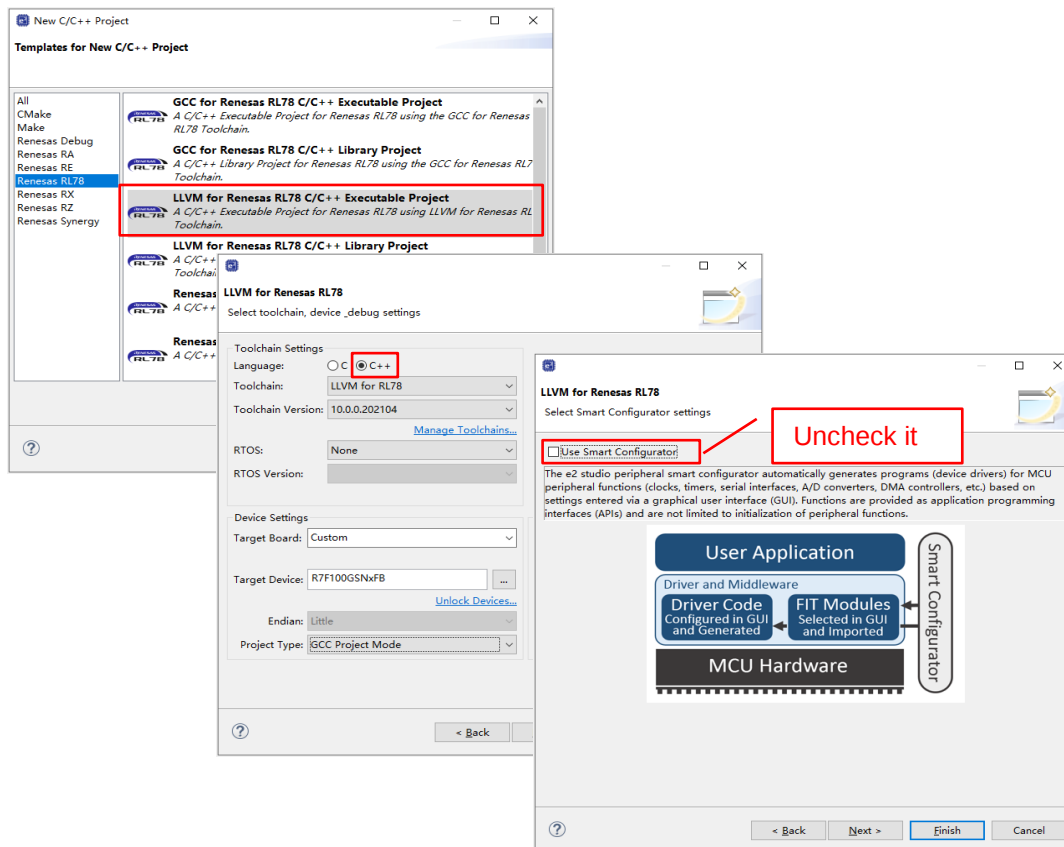


Figure 1-2 Example for not use Smart Configurator

## 1.5 Schedule for Fixing the Problem

This problem will be fixed in the next version. (Scheduled to be released in Jan 2022.)

## 2. Notes on using Port Input buffer function

### 2.1 Applicable Products

- e2 studio 2021-04 (Smart Configurator for RL78 Plug-in V1.0.1) or later
- Smart Configurator for RL78 V1.0.1 or later version

### 2.2 Applicable Devices

RL78 family: RL78/G23 group

- RL78/G23 (30-pin, 32-pin, 36-pin, 40-pin, 44-pin, 48-pin, 52-pin, 64-pin, 80-pin, 100-pin, 128-pin product)

### 2.3 Details

When using Port component, and configure the following *Pmn*, if “Unused” is selected and “Input buffer” is unselected (refer to figure 2-1), the other alternative input function on this pin cannot work correctly.

- RL78/G23: 30-pin, 32-pin, 36-pin, 40-pin, 44-pin, 48-pin, 52-pin, 64-pin products
  - PORT0 (P00, P02, P03, P04)
  - PORT1 (P10, P11, P12, P13, P14, P15, P17)
  - PORT4 (P42)

PORT5 (P50, P55)

PORT7 (P71, P72, P74)

PORT12 (P120)

PORT13 (P137)

➤ RL78/G23: 80-pin, 100-pin, 128-pin products

PORT0 (P00, P02, P03, P04)

PORT1 (P10, P11, P12, P13, P14, P15, P17)

PORT3 (P34)

PORT4 (P42, P43, P44, P45)

PORT5 (P50, P52, P53, P54, P55)

PORT7 (P71, P72, P74)

PORT8 (P80, P81, P82, P83)

PORT9 (P96)

PORT12 (P120)

PORT13 (P137)

PORT14 (P142, P143, P144)

Port selection PORT0

☐ Apply to all

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☐ Input buffer ☐ N-ch ☐ Output 1

P00

☐ Unused ☒ In ☐ Out ☐ Pull-up ☐ Input buffer ☐ N-ch ☐ Output 1

P01

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☐ Output 1

P02

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ Input buffer ☐ N-ch ☐ Output 1

P03

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☐ Input buffer ☐ N-ch ☐ Output 1

P04

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☐ Input buffer ☐ N-ch ☐ Output 1

Figure 2-1 Pmn “Unused” and “Input buffer” setting

## 2.4 Workaround

Please set “Input buffer” by the following steps (refer to figure 2-2):

- 1) After open [PORTn] page, select “Apply to all” and “Input buffer” in the top group. By this step, all “Input buffer” functions on this page are selected.
- 2) Change each *Pmn* setting to the proper function which user want to use except “Input buffer” setting. “Input buffer” should all be kept as checked state always.

**Step 1)**

Port selection: PORT0

☒ Apply to all

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer ☐ N-ch ☐ Output 1

P00: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☒ Input buffer

P01: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer

P02: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☒ Input buffer

P03: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer

P04: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer

P05: ☒ Unused ☐ In ☐ Out ☐ Pull-up

**Step 2)**

Port selection: PORT0

☐ Apply to all

☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer ☐ N-ch ☐ Output 1

P00: ☐ Unused ☒ In ☐ Out ☐ Pull-up ☒ Input buffer ☐ N-ch ☐ Output 1

P01: ☐ Unused ☒ In ☐ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer

P02: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☒ Input buffer ☐ N-ch ☐ Output 1

P03: ☐ Unused ☐ In ☒ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer ☐ N-ch ☐ Output 1

P04: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ TTL buffer ☒ Input buffer ☐ N-ch ☐ Output 1

P05: ☒ Unused ☐ In ☐ Out ☐ Pull-up ☐ Output 1

Keep these setting checked always

Figure 2-2 Example for “Input buffer” setting steps

## 2.5 Schedule for Fixing the Problem

This problem will be fixed in the next version. (Scheduled to be released in Jan 2022.)

## Revision History

| Rev. | Date      | Description |                      |
|------|-----------|-------------|----------------------|
|      |           | Page        | Summary              |
| 1.00 | Oct.01.21 | -           | First edition issued |

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