
R8C/54E Group

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Rev.1.00

Pin assignment using PMC function (Pin assignment figure)

Mar 15, 2012

Introduction

This application note describes Pin Assignment using the peripheral mapping controller (referred to as PMC after here).

Target Device

R8C/54E group: 48-pin product

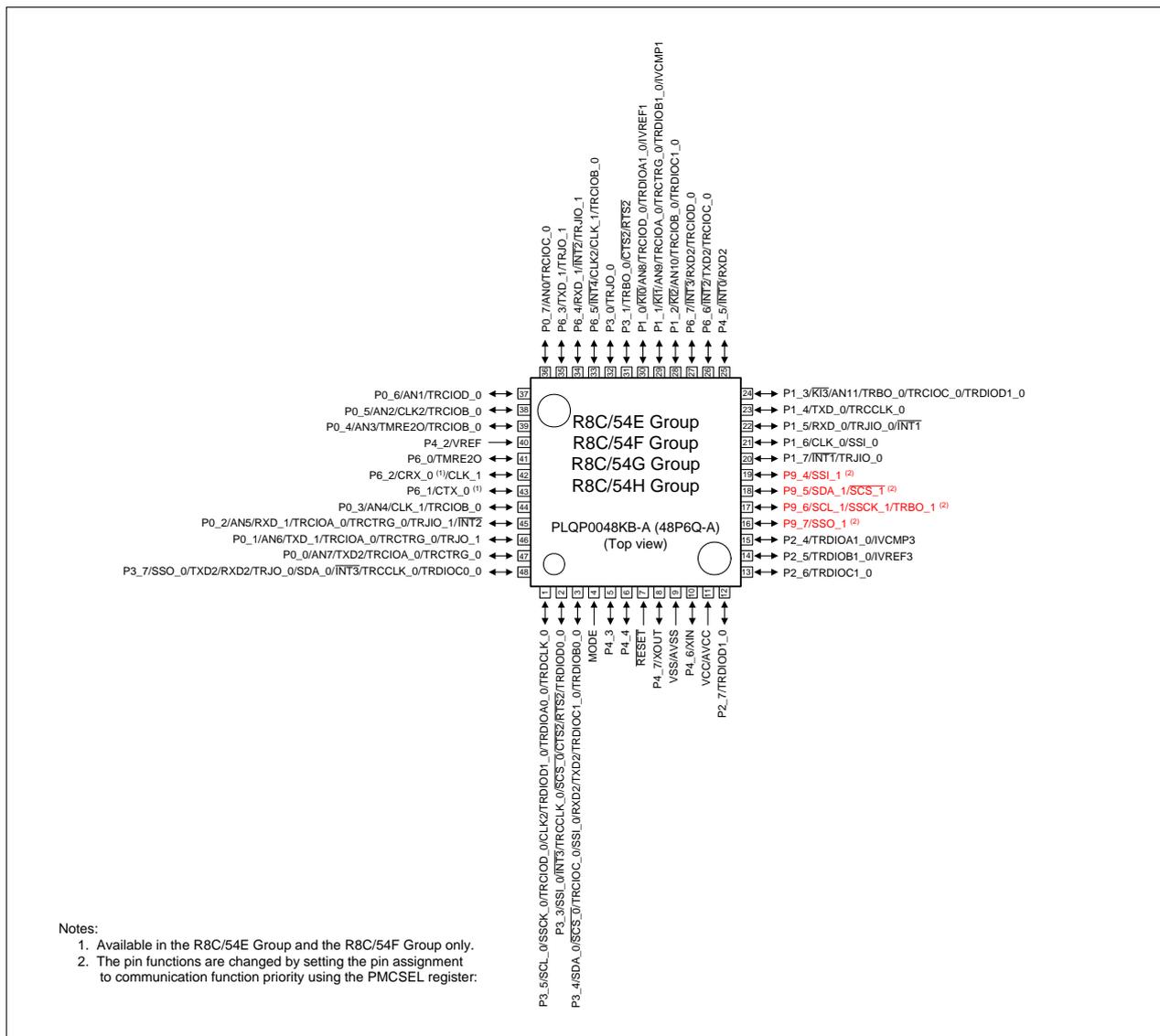


Figure 1.2 Communication Function Priority Pin Assignment (PMCSEL2 to PMCSEL0 = 100b)

1.1 Restriction on Using Full-Spec Emulator (E100)

In the actual MCU of the R8C/5x group and the full-spec emulator (E100), the set value of the pin assignment select bits differs when selecting 48-pin products.

	E100	Actual MCU of R8C/5x Group
Standard pin assignment for 48-pin product:	PMCSEL=000b	PMCSEL=011b
Communication function priority pin assignment for 48-pin product:	PMCSEL=001b	PMCSEL=100b

Reference Documents

R8C/54E Group User's Manual: Hardware Rev.1.00

The latest version can be downloaded from the Renesas Electronics website.

Technical Update/Technical News

The latest information can be downloaded from the Renesas Electronics website.

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REVISION HISTORY	R8C/54E Group Application Note Pin assignment using PMC function (Pin assignment figure)
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Rev.	Date	Description	
		Page	Point
1.00	Mar 15, 12	-	First Edition issued

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General Precautions in the Handling of MPU/MCU Products

The following usage notes are applicable to all MPU/MCU products from Renesas. For detailed usage notes on the products covered by this manual, refer to the relevant sections of the manual. If the descriptions under General Precautions in the Handling of MPU/MCU Products and in the body of the manual differ from each other, the description in the body of the manual takes precedence.

1. Handling of Unused Pins

Handle unused pins in accord with the directions given under Handling of Unused Pins in the manual.

- The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible. Unused pins should be handled as described under Handling of Unused Pins in the manual.

2. Processing at Power-on

The state of the product is undefined at the moment when power is supplied.

- The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the moment when power is supplied.

In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the moment when power is supplied until the reset process is completed.

In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the moment when power is supplied until the power reaches the level at which resetting has been specified.

3. Prohibition of Access to Reserved Addresses

Access to reserved addresses is prohibited.

- The reserved addresses are provided for the possible future expansion of functions. Do not access these addresses; the correct operation of LSI is not guaranteed if they are accessed.

4. Clock Signals

After applying a reset, only release the reset line after the operating clock signal has become stable. When switching the clock signal during program execution, wait until the target clock signal has stabilized.

- When the clock signal is generated with an external resonator (or from an external oscillator) during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Moreover, when switching to a clock signal produced with an external resonator (or by an external oscillator) while program execution is in progress, wait until the target clock signal is stable.

5. Differences between Products

Before changing from one product to another, i.e. to one with a different part number, confirm that the change will not lead to problems.

- The characteristics of MPU/MCU in the same group but having different part numbers may differ because of the differences in internal memory capacity and layout pattern. When changing to products of different part numbers, implement a system-evaluation test for each of the products.

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