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April 1st, 2010
Renesas Electronics Corporation

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7548/7549 Group

Timer 1 Operation (Timer mode: 250 ms Timer)

1. Abstract

The following article introduces and shows an example of how to use the Timer 1 Operation (Timer mode: 250 ms Timer) on the 7548/7549 Group device.

2. Introduction

The application explained in this document applies to the following MCU and parameter(s):

Applicable MCU: 7548/7549 Group

Oscillation frequency: 4.19 MHz

Function set ROM data 0 to 2 are areas used to set peripheral functions by data written to the QzROM and can not be set by program. Data set to these areas are valid after a reset of the MCU is released. Make sure to set values according to the user system regardless of the use of peripheral functions. Set values used in this sample program are as follows.

Function set ROM data 0 FSROM0 (address FFD8h): 10000000b

Function set ROM data 1 FSROM1 (address FFD9h): 10000001b

Function set ROM data 2 FSROM2 (address FFDAh): 00001011b

This sample program may include operations of unused bit functions for the convenience of the SFR bit layout. Set the values according to the operational conditions of the user system.

3. Contents

3.1 Generation of 250 ms

Outline: The clock is divided by the timer so that the clock can count up at approximately 250 ms intervals.

Specifications:

- The clock $f(X_{IN}) = 4.19$ MHz is divided by the prescaler 12 and timer 1.
- The clock is counted up in the timer 1 interrupt routine which occurs at approximately 250 ms intervals.

Figure 3.1 shows the Connection Diagram and Division Ratios of Timers, Figure 3.2 shows the Relevant Register Settings, and Figure 3.3 shows the Control Procedure.

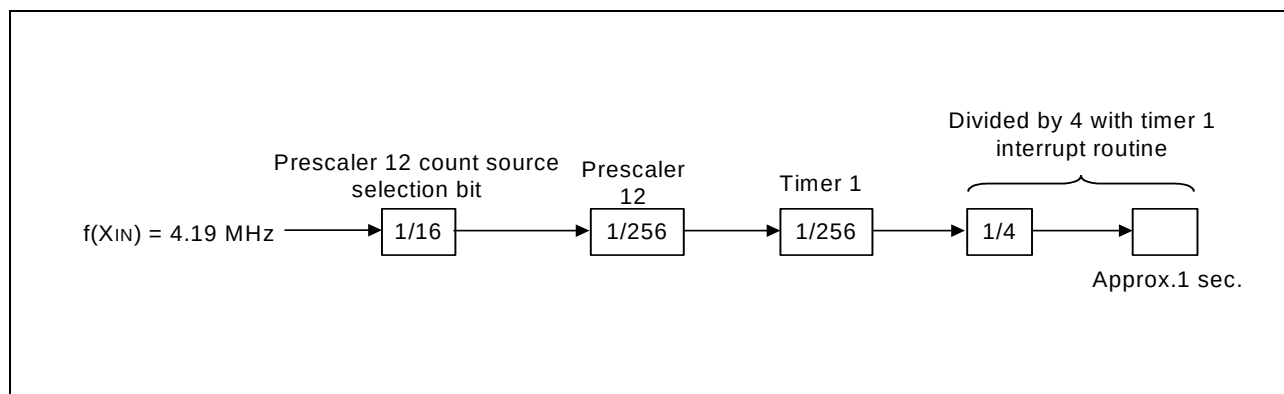


Figure 3.1 Connection Diagram and Division Ratios of Timers

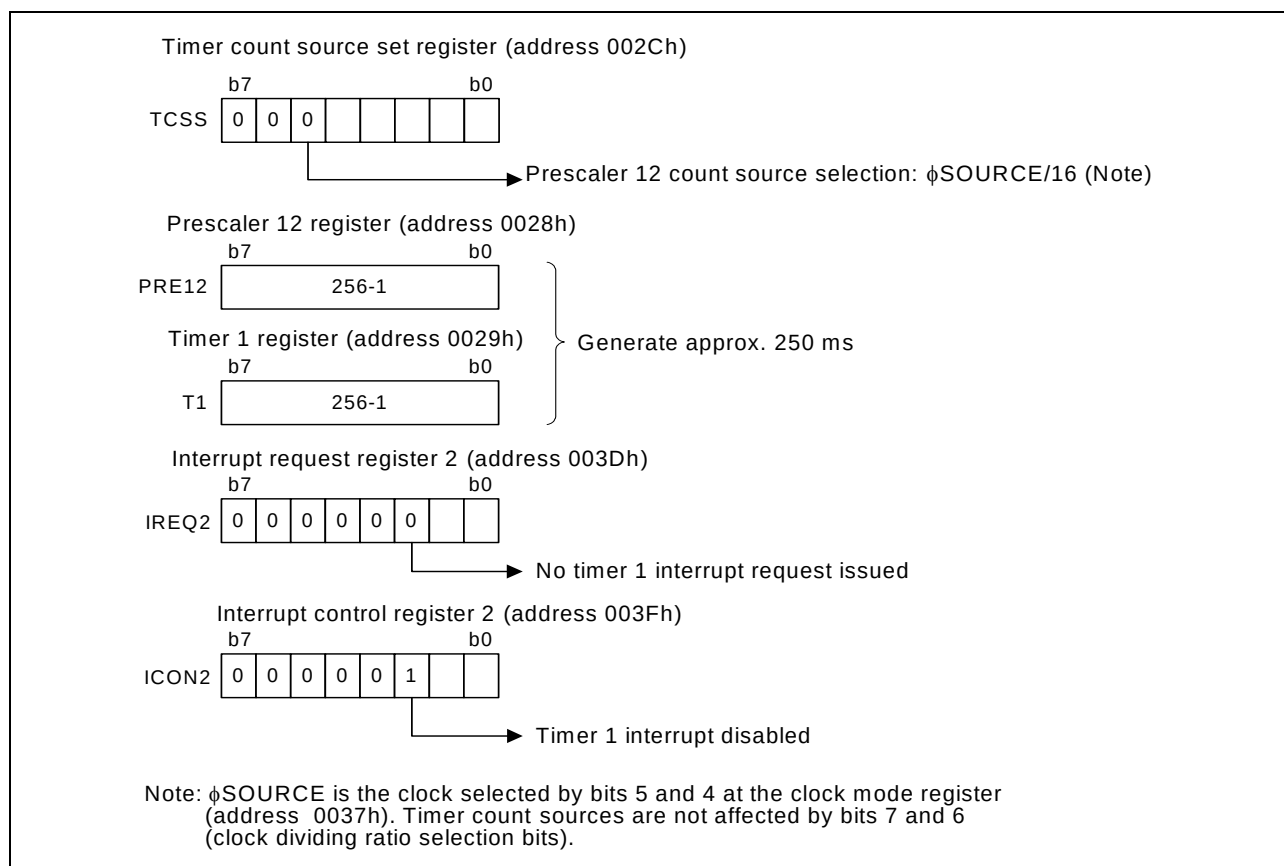


Figure 3.2 Relevant Register Settings

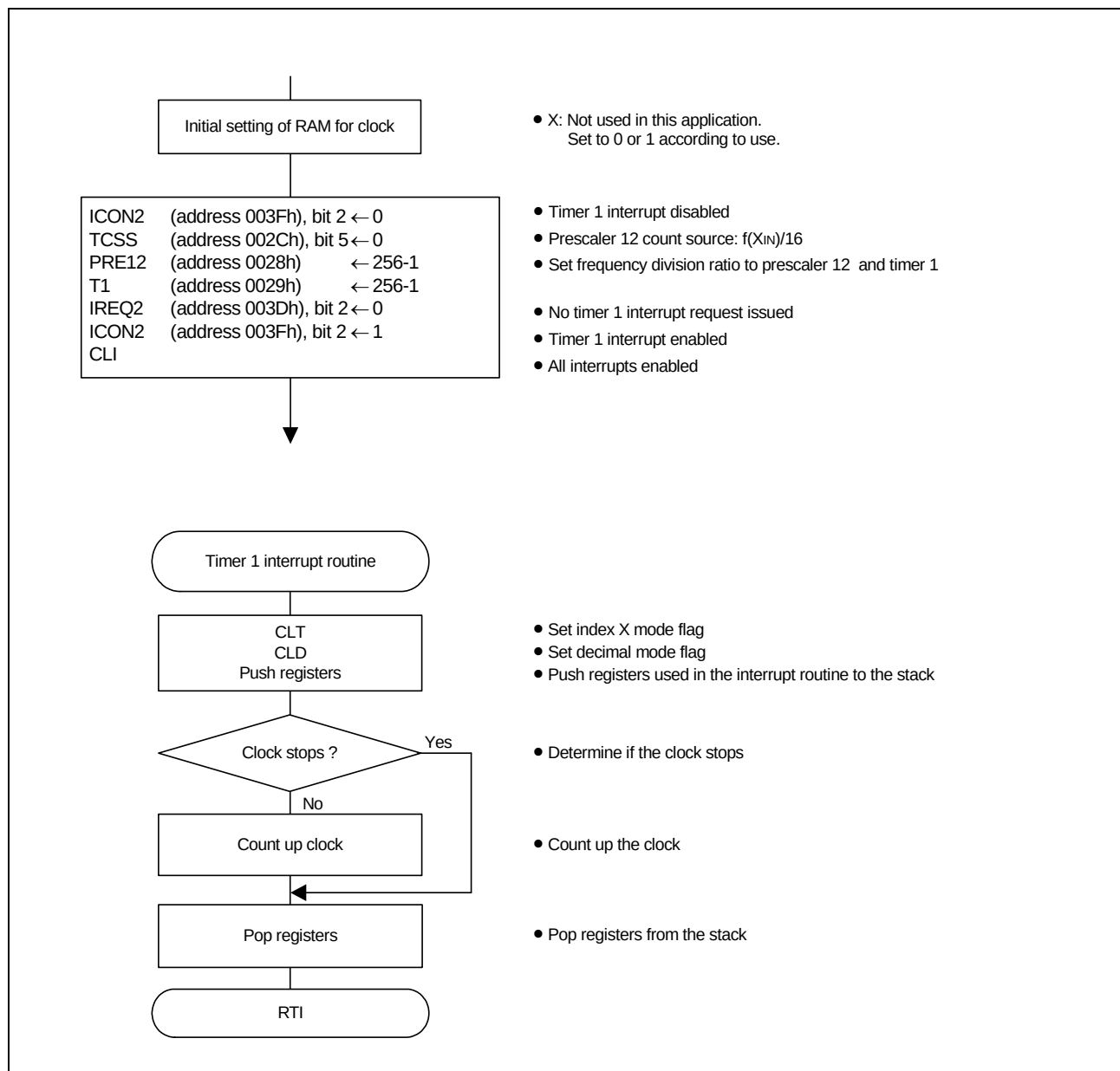


Figure 3.3 Control Procedure

4. Sample Programming Code

Download a sample program from the Renesas Technology website.

To download, click "Application Notes" in the left side menu on the page of the 7548/7549 Group.

5. Reference Document

Datasheet

7548/7549 Group Datasheet

Download the latest version from the Renesas Technology website.

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REVISION HISTORY	7548/7549 Group Timer 1 Operation (Timer mode: 250 ms Timer)
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		Page	Summary
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