

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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## 38D2 Group

### Timer 1 and Timer 2 Operation (250 ms Timer)

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#### 1. Abstract

The following article introduces and shows an example of how to use the Timer 1 and Timer 2 Operation (250 ms Timer) on the 38D2 Group device.

#### 2. Introduction

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

Applicable MCU: 38D2 Group

Oscillation frequency: 4.19 MHz

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  $f(XIN) = 4.19$  MHz is divided by timer 1 and timer 2.
- The clock is counted up in the timer 2 interrupt routine which occurs at approximately 250 ms intervals.

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

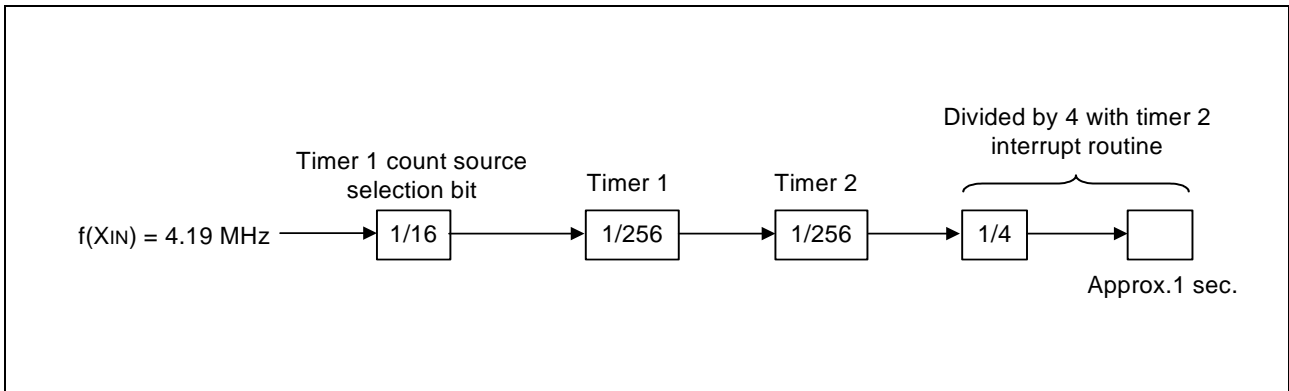


Figure 3.1 Connection Diagram and Division Ratios of Timers

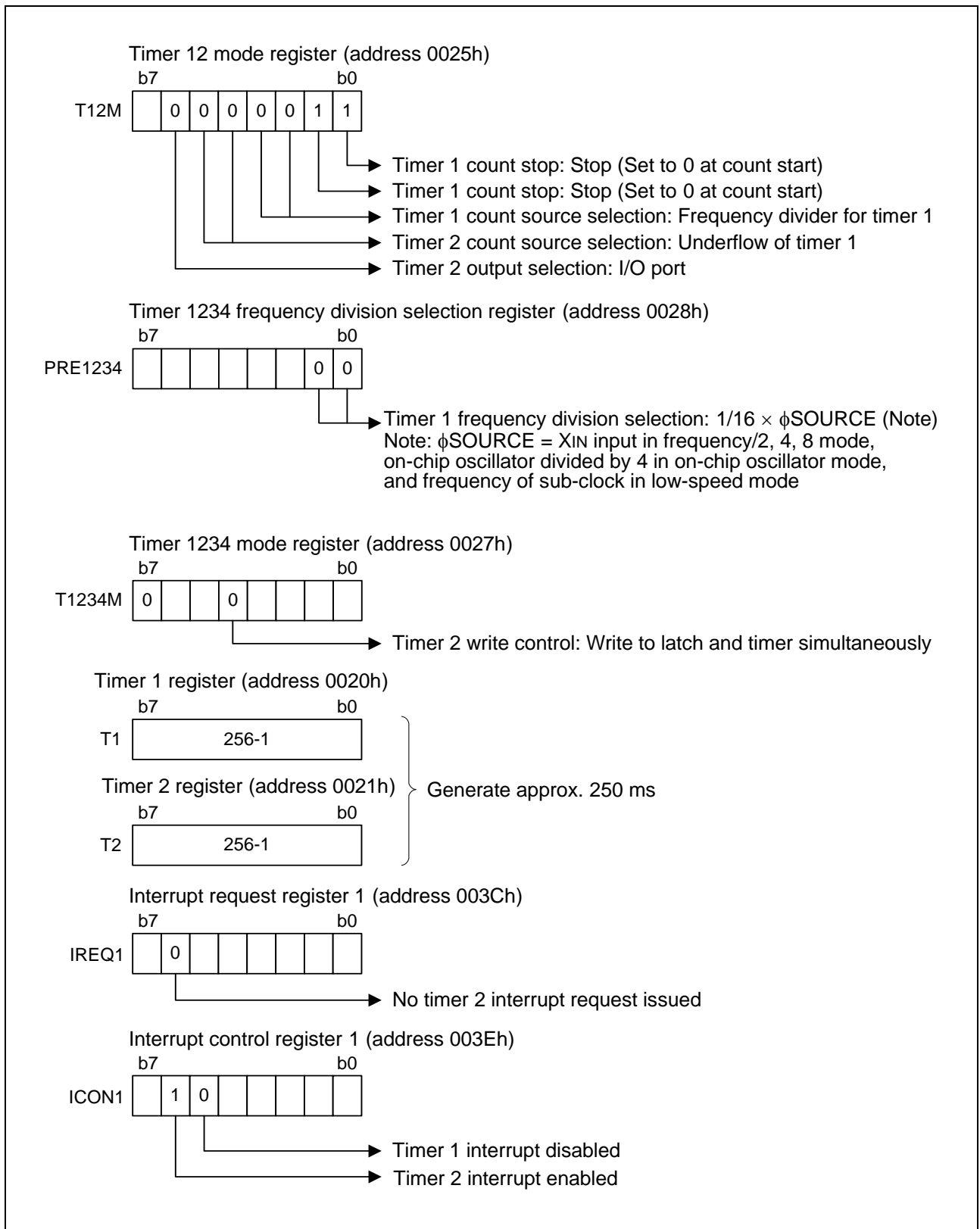


Figure 3.2 Relevant Register Settings

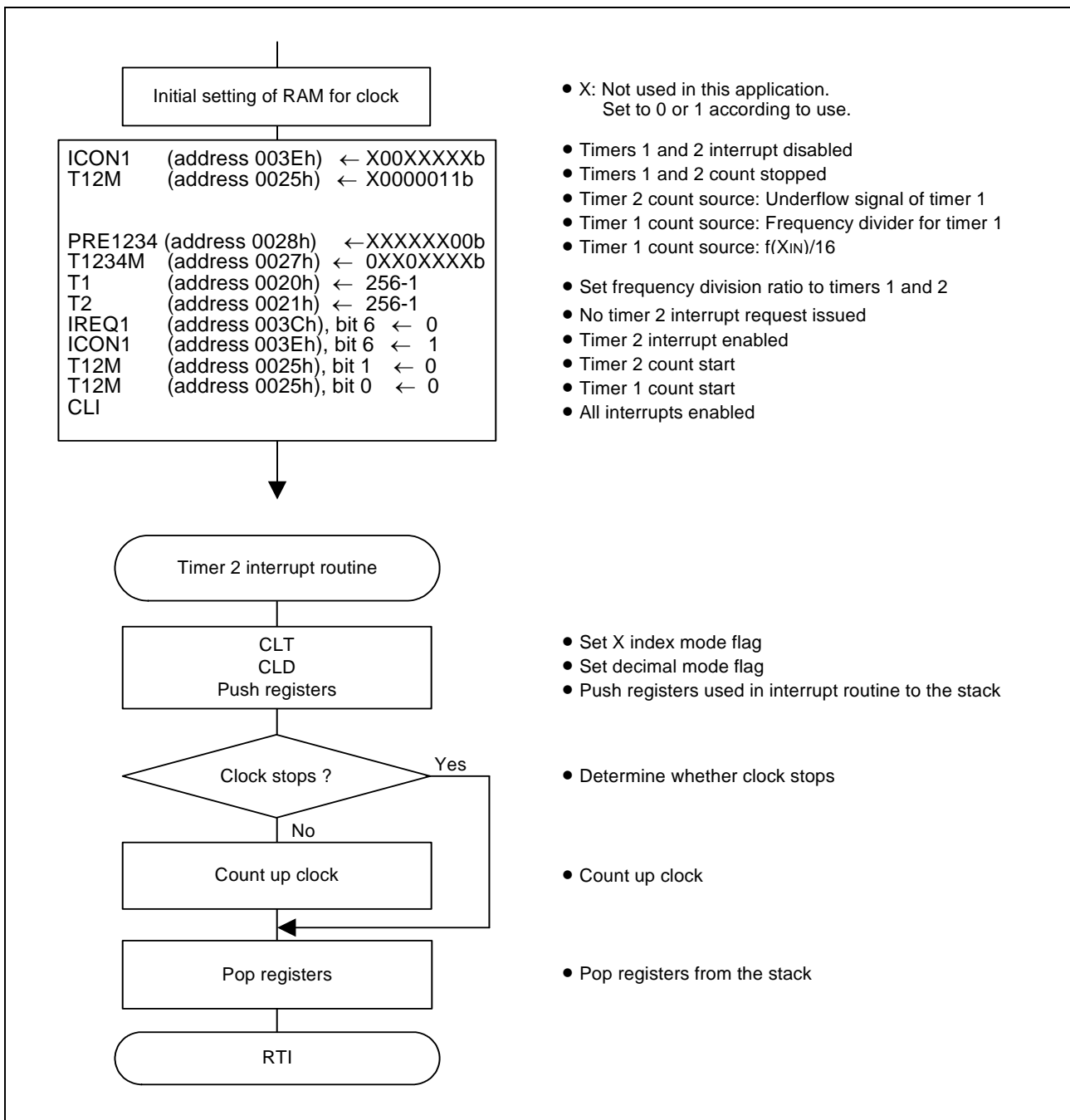


Figure 3.3 Control Procedure

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#### 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 38D2 Group.

#### 5. Reference Document

Datasheet  
38D2 Group Datasheet  
Download the latest version from the Renesas Technology website.

Technical News/Technical Update  
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REVISION HISTORY	38D2 Group Timer 1 and Timer 2 Operation (250 ms Timer)
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Rev.	Date	Description	
		Page	Summary
1.00	Feb 9, 2007	-	First Edition issued



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