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April 1st, 2010
Renesas Electronics Corporation

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3858 Group

Watchdog Timer

1. Abstract

This document describes how to set up and use the watchdog timer on the 3858 Group device.

2. Introduction

The application example described in this document is applied to the following:

MCU: 3858 Group

Oscillation frequency: 4 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 operating conditions of the user system.

3. Contents

3.1 Watchdog Timer

Outline: If a program runaway occurs, the MCU resets using the internal runaway detecting watchdog timer.

Specifications:

- XIN is selected for the system clock ϕ .
- Before the watchdog timer underflows, writing to the watchdog timer control register is performed at every cycle in the main routine.
- Stop mode is not used.

Figure 3.1 shows the Watchdog Timer Connection and Division Ratio Settings, Figure 3.2 shows the Relevant Register Settings, and Figure 3.3 shows the Control Procedure.

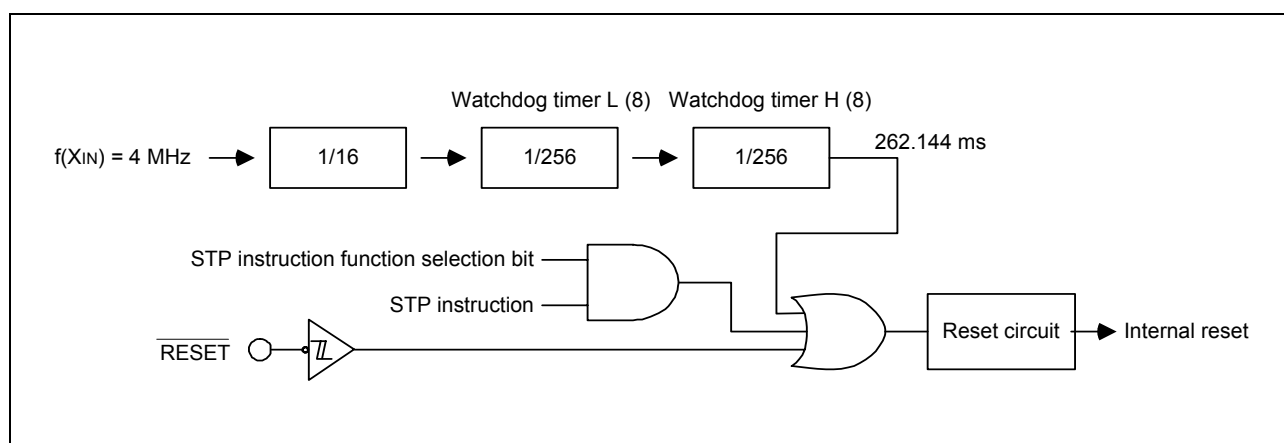


Figure 3.1 Watchdog Timer Connection and Division Ratio Settings

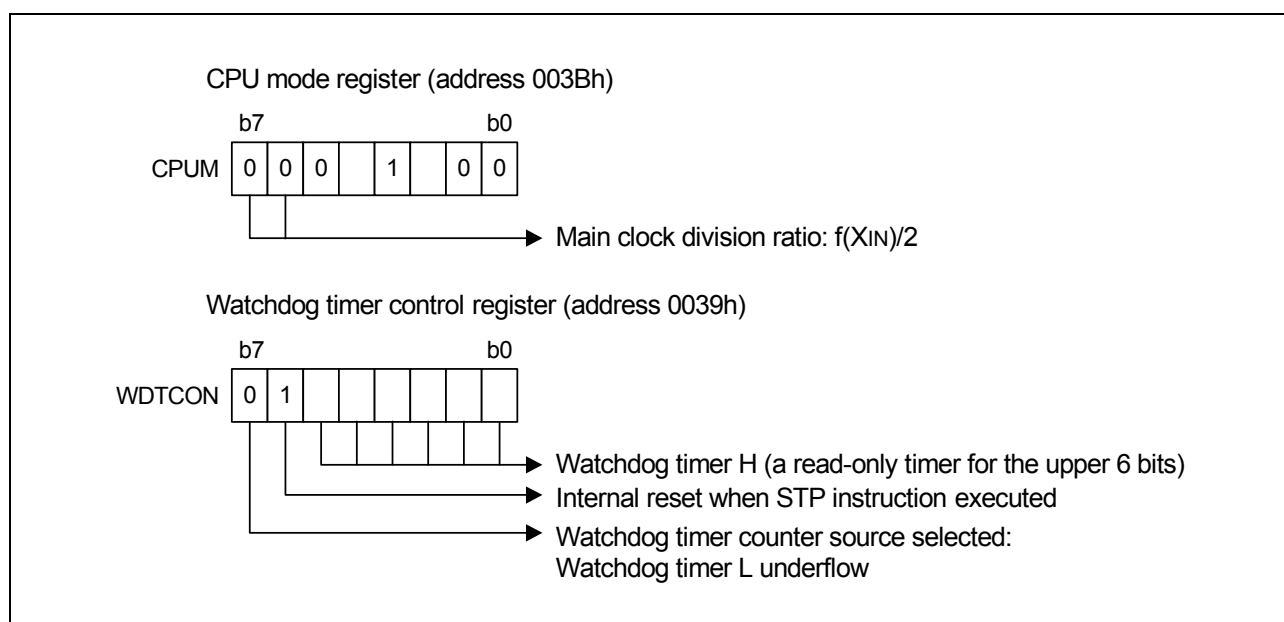


Figure 3.2 Relevant Register Settings

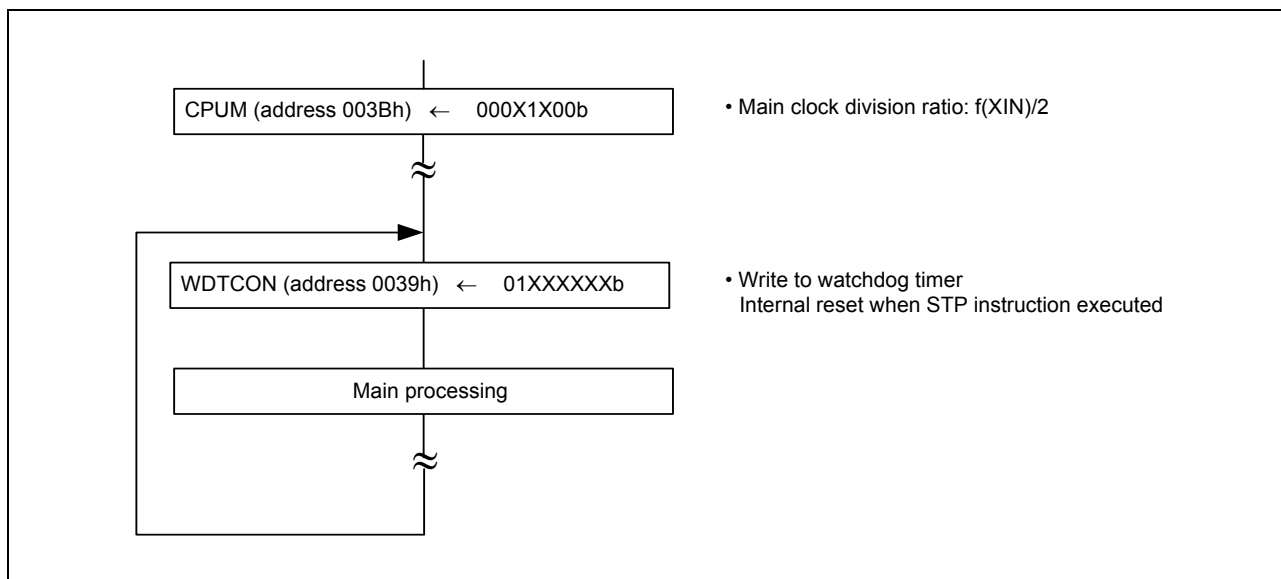


Figure 3.3 Control Procedure

4. Sample Programming Code

Download a sample program from the Renesas Technology website.

To download, click “Application Notes” in the left-hand side menu on the page of the 7545 Group.

5. Reference Document

Datasheet

7545 Group Datasheet

Download the latest version from the Renesas Technology website.

Technical News/Technical Update

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REVISION HISTORY	3858 Group Watchdog Timer Application Note
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Rev.	Date	Description	
		Page	Summary
1.00	Aug 10, 2006	–	First Edition issued

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