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April 1st, 2010
Renesas Electronics Corporation

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1. Abstract

The following article introduces and shows reset circuit sequences and connection examples using the reset IC on the 3858 Group device.

2. Introduction

The application explained in this document applies to the following MCU:
Applicable MCU: 3858 Group
3. Contents

3.1 Reset Sequence

The MCU enters reset status when the RESET pin is held at “L” level for 20 cycles or more of the XIN input under the circumstance in which the power source voltage is between 2.7 V and 5.5 V, and XIN is stable. Reset status is released after the RESET pin is set to “H” and 8 to 13 cycles of the XIN input has passed and starts sourcing the system clock $\phi$ to the CPU. Then, the program starts from the address whose high-order address is the content of the address FFFD16 and low-order address is the content of the address FFFC16 in divide-by-8 mode and when XCIN is stopped.

Figure 3.1 shows the Reset Sequence.
3.2 Connection Example Using Reset IC

Figure 3.2 shows the Power-on Reset Circuit Example and Figure 3.3 shows RAM Backup System Example. In this system, the MCU detects system power decrease by INT0 interrupt and is switched to RAM backup mode.
3.3 Status of Each Port Immediately After Reset

Table 3.1 lists each pin status when the RESET pin is held to “L”.

<table>
<thead>
<tr>
<th>Pin Name</th>
<th>Pin Status</th>
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<tbody>
<tr>
<td>P0, P1, P30 to P34, P40 to P44</td>
<td>Input mode (High impedance)</td>
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4. **Reference Document**

   Datasheet
   3858 Group Datasheet
   (Use the most recent version of the document on the Renesas Technology Web site.)

   Technical News/Technical Update
   (Use the most recent version of the document on the Renesas Technology Web site.)
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