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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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3858 Group

Serial I/O 2

1. Abstract

This document describes how to set up and use serial I/O 2 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

Outline:

- 4-byte data is transmitted using the clock synchronous serial I/O.
- Port P04 is used to output a CS signal to the peripheral IC.

Specifications:

- Serial I/O 2 is used.
- Synchronous clock: the internal clock is selected.
The frequency is specified to 125 KHz ($f(XIN) = 4 \text{ MHz}$ divided by 32).
- Transfer direction: LSB first.
- Serial I/O 2 interrupt is not used.
- Port P04 is connected to the CS pin ("L" active) on the peripheral IC for transmission control (the output level of port P04 is controlled by a program).
- CMOS output is selected for the SOUT2 pin and the SCLK2 pin.

Figure 3.1 shows the Connection Diagram, Figure 3.2 shows the Timing Chart, Figure 3.3 shows the Relevant Register Settings, and Figure 3.4 shows the Control Procedure.

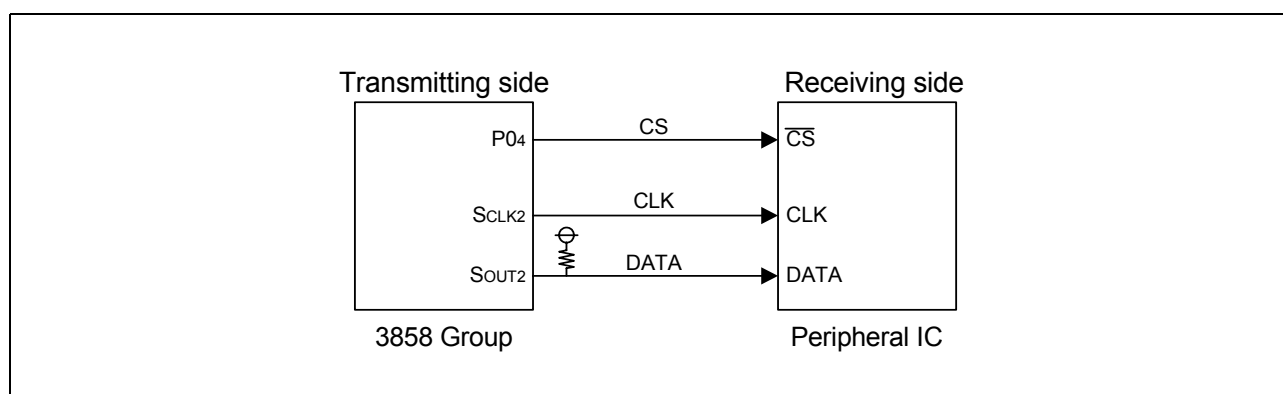


Figure 3.1 Connection Diagram

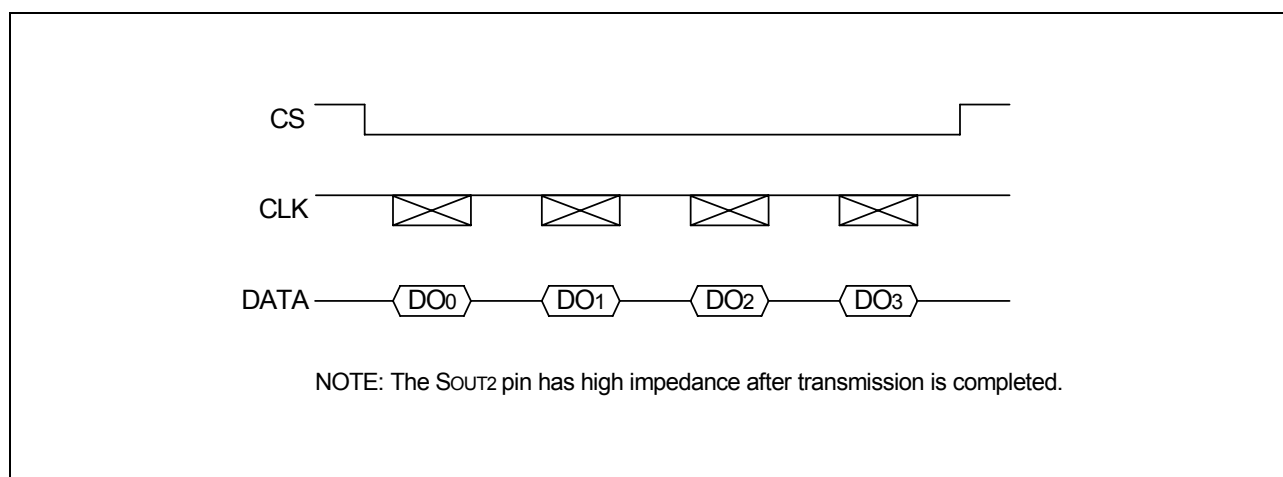


Figure 3.2 Timing Chart

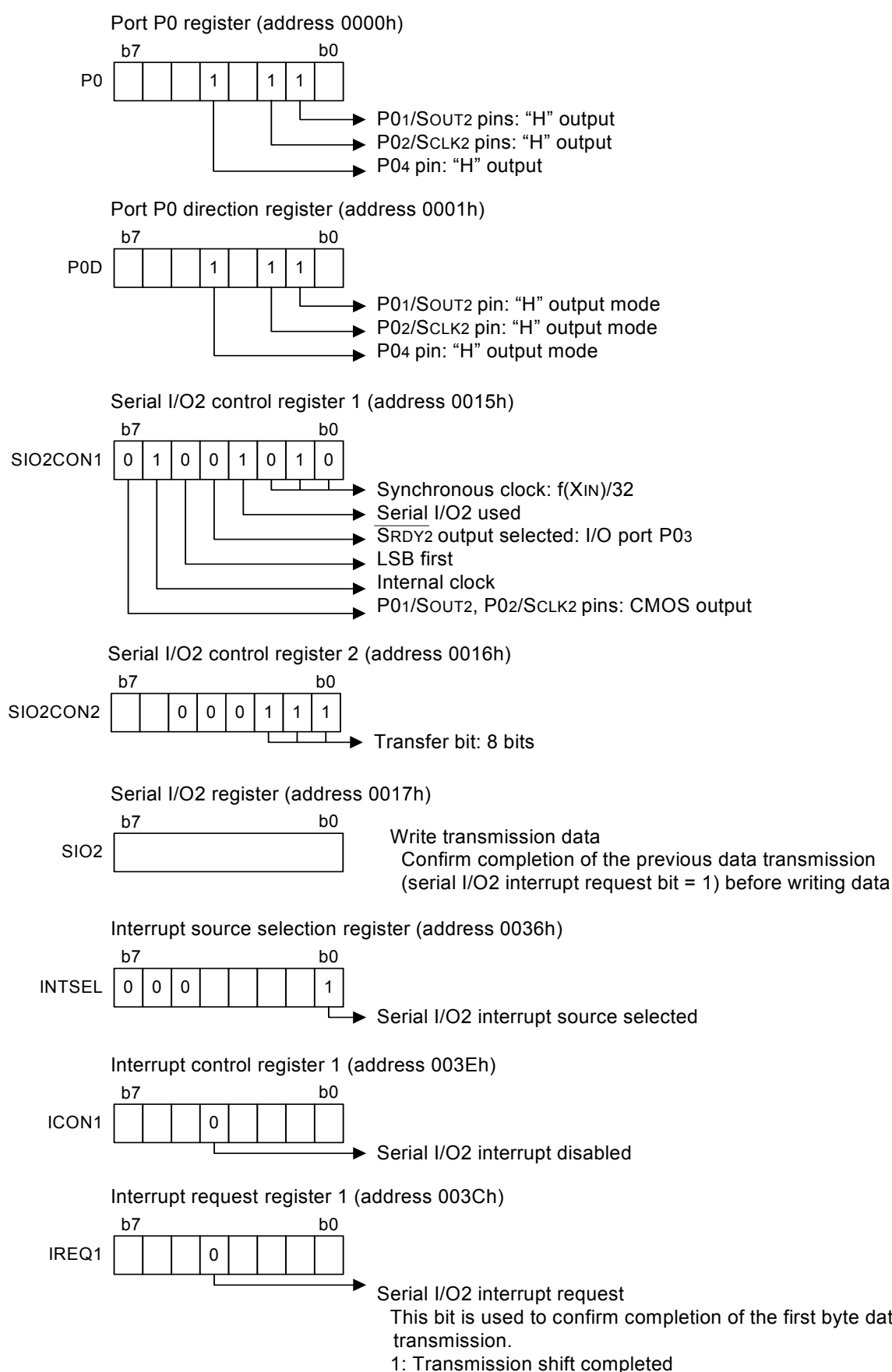


Figure 3.3 Relevant Register Settings

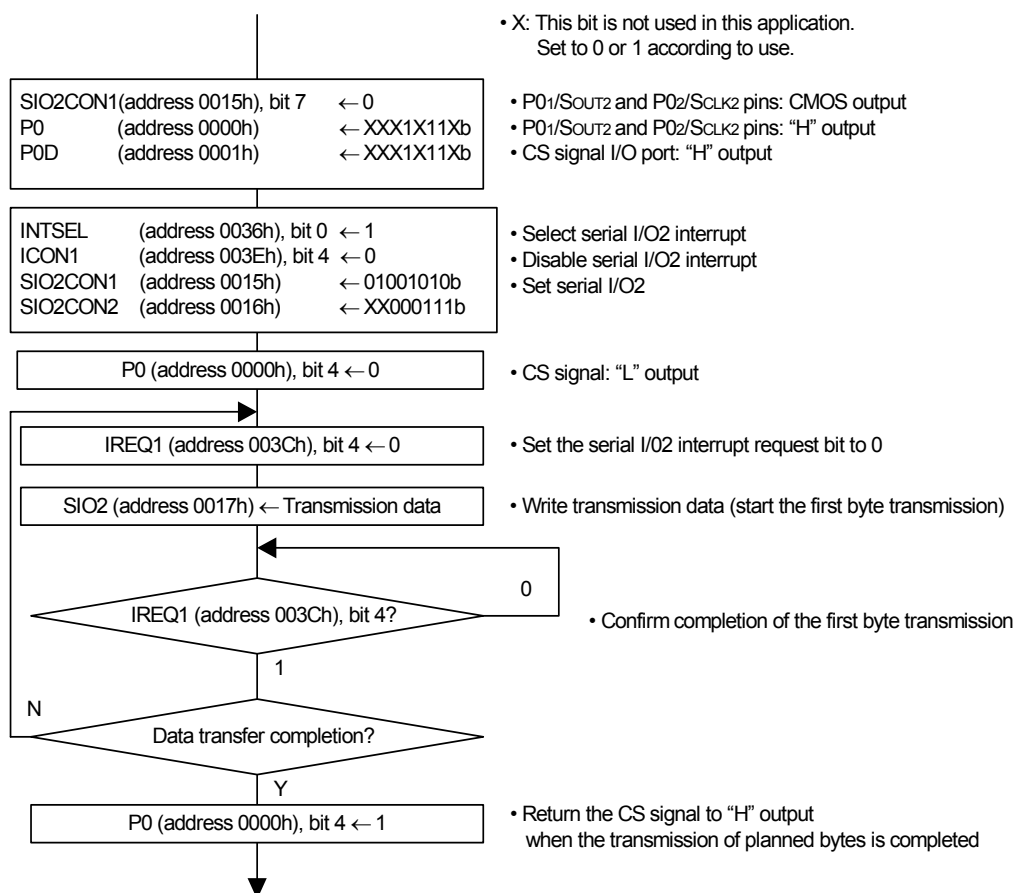


Figure 3.4 Control Procedure

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 3858 Group.

5. Reference Document

Datasheet

3858 Group Datasheet

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REVISION HISTORY	3858 Group Serial I/O 2 Application Note
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Rev.	Date	Description	
		Page	Summary
1.00	Aug 10, 2006	–	First Edition issued

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