RENESAS Tool News

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Three Types of Middleware for Controlling Serial Flash Memory and Serial Phase Change Memory for RX Family and RL78 Family Published

We have published the following three types of middleware for controlling serial flash memory and serial phase change memory.

- Middleware for controlling N25Q serial NOR flash memory from Micron Technology, Inc.
- Middleware for controlling P5Q serial phase change memory from Micron Technology, Inc.
- Middleware for controlling S25FLxxxS MirrorBit(R) flash non-volatile memory from Spansion Inc. (see NOTE)

We supply these middleware free of charge.

NOTE:
MirrorBit is a registered trademark of Spansion LLC.

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1. Overview of Middleware

The middleware controls the slave devices in systems that include a Renesas MCU and the slave devices listed below.

- N25Q SPI serial NOR flash memory from Micron Technology, Inc.
- P5Q serial phase change memory from Micron Technology, Inc.
- 128 Mbit S25FL128S and 256 Mbit S25FL256S MirrorBit(R) flash non-volatile memory from Spansion Inc.

Refer to section 2 below for information on the MCUs to be supported.

A device driver control clock-synchronous serial communications by the master device is also required in addition to this middleware.
We also provide these device drivers free of charge for each supported MCU Family or Group.
Refer to section 3 for how to obtain the middleware and driver.

Click on the URL below and refer to the block diagram at the link for the software configuration. This page is to be updated on November 20.

https://www.renesas.com/driver/spi_serial_flash

2. Supported MCUs

RX Family
- RX610 Group
- RX62N Group
- RX63N Group
- RX63T Group
- RX210 Group
- RX21A Group
- RX220 Group

RL78 Family
- RL78/G14 Group

78K Family
- 78K0R/Kx3-L Group

3. Obtaining Control Middleware Programs and Device Drivers

(1) Open the following Web page:
https://www.renesas.com/a_serial_flash_driver_app_notes
You can see the list of titles of Application Notes.

(2) Search for the application note of the product you want in the list.
The names of the products and their application notes are as follows:

- Slave Device Control Middleware Programs
  (to be published on November20)
  (a) Middleware for controlling N25Q SPI serial NOR flash memory
  "RX Family, RL78 Family, 78K0R/Kx3-L Micron Technology N25Q Serial NOR Flash Memory Control Software"

  (b) Middleware for controlling P5Q serial phase change memory
  "RX Family, RL78 Family, 78K0R/Kx3-L Micron Technology P5Q Serial Phase Change Memory Control Software"

  (c) Middleware for controlling 128 Mbit S25FL128S and 256 Mbit S25FL256S MirrorBit(R) flash non-volatile memory
  "RX Family, RL78 Family, 78K0R/Kx3-L Spansion S25FLxxxS MirrorBit(R) Flash Non-Volatile Memory Control Software"

- Clock-Synchronous Single Master Control Software
  (a) Device driver for enabling clock-synchronous serial communication using SCI of RX610 Group
  "RX610 Group Clock Synchronous Single Master Control Software

Using the SCI"

(b) Device driver for enabling clock-synchronous serial communication using SCI of RX62N Group
"RX62N Group Clock Synchronous Single Master Control Software Using the SCI"

(c) Device driver for enabling clock-synchronous serial communication using RSPI of RX62N Group
"RX62N Group Clock Synchronous Single Master Control Software Using the RSPI"

(d) Device driver for enabling clock-synchronous serial communication using SCI of RX210, RX21A, RX220, RX63N and RX63T Group (to be published on November 20)
"RX210, RX21A, RX220, RX63N, RX63T Group Clock Synchronous Single Master Control Software Using the SCI"

(e) Device driver for enabling clock-synchronous serial communication using RSPI of RX210, RX21A, RX220, RX63N and RX63T Group (to be published on November 20)
"RX210, RX21A, RX220, RX63N, RX63T Group Clock Synchronous Single Master Control Software Using the RSPI"

(f) Device driver for enabling clock-synchronous serial communication using SAU of RL78/G14 Group
"RL78/G14 Clock Synchronous Single Master Control Software Using CSI Mode of Serial Array Unit"

(g) Device driver for enabling clock-synchronous serial communication using SAU of 78K0R/Kx3-L Group
"78K0R/Kx3-L Clock Synchronous Single Master Control Software Using CSI Mode of Serial Array Unit"

(3) Click the link to Sample Program in the Project Files column on the right of the above title.
(4) Read through AGREEMENT; then click Agree.
(5) From the Download page, download the sample program.
