PG-FP5 Flash Memory Programmer

Release Note

R20UT0689EJ1300
Rev.13.00
Oct.17.22

Thank you for purchasing the PG-FP5 flash memory programmer.

This document describes specifications that have been added or changed, restrictions, and cautions on using the PG-FP5. Also see the user's manual of the PG-FP5 for terminology and points for caution on using the PG-FP5.

See the following documents for restrictions related to the target device.

- User's manual of target device
- Restriction notification document for target device

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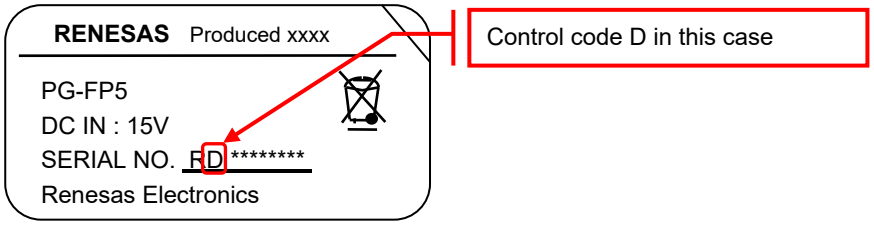
Chapter 1 Product Version

Item No.	Control Code[Note 1]	Firmware	FPGA	Programming GUI	Remark
1	A	V1.00	V1	V1.00	
2		V1.01	V1	V1.00	
3		V2.00	V2	V2.00	
4		V2.01	V2	V2.01	
5		V2.02	V2	V2.02	
6	A, C[Note 2]	V2.03	V2	V2.03	
7		V2.04	V2	V2.03	
8		V2.05	V2	V2.05	
9	A, C, D[Note 2]	V2.06	V4	V2.06	
10		V2.07	V4	V2.07	
11		V2.09	V4	V2.09	
12		V2.10	V4	V2.10	
13		V2.11	V4	V2.11	
14		V2.12	V4	V2.12	
15		V2.13	V4	V2.13	
16		V2.14	V4	V2.14	
17		V2.15	V4	V2.15	
18		V2.16	V4	V2.15	
19		V2.17	V4	V2.17	

To check the version, follow the procedure below.

- Firmware: On the menu bar, click **Programmer**, and then select **Reset**.
- FPGA: On the menu bar, click **Programmer**, and then select **Reset**.
- Programming GUI: On the menu bar, click **Help**, and then select **About FP5...**.

Notes 1. The control code is the second digit from the left in the 10-digit serial number. If the product has been upgraded, a label indicating the new version is attached to the product and the *x* in **V-UP *x*** on this label indicates the control code.



2. Products with control code A, C, and D are functionally equivalent. These products can be used in combination with the relevant version of the firmware, FPGA, and programming GUI.

Chapter 2 Additions and Changes to Specifications

2.1 List of additions and changes to specifications

No.	Additions and Changes to Specifications	Product Version (Item No.)																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Modification of **Cancel** button specification	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2	Addition of FP5 Manager functions	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
3	Addition of communication command functions	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4	Addition of remote connector functions	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
5	Change of location of **Erase memory before download** check box	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
6	Addition of specification related to **Checksum** command display	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
7	Addition of program file size check function	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
8	Addition of [Enable target RESET] function	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
9	Change of specification related to action log window view	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
10	Change of specification related to message display view	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
11	Addition of specification that enables specification of storage destination for ESF and PR5 files	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
12	Addition of program file upload function	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
13	Change of GUI language to Japanese for Japanese version OS <Japanese version only>	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
14	Addition of specification of UART communication at 500 kbps	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
15	Addition of [Wide Voltage mode] function	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
16	Change of layout in **Block protection** area	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
17	Addition of HCUHEX file reading function	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
18	Addition of program file size monitoring function	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
19	Change of power button specification	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
20	Addition of [Disable FSW reprogramming] function	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○
21	Addition of [OCD security ID setting] function and [Option bytes setting] function	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○
22	Support of 14-pin interface	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○
23	Support of RL78 family	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○

–: Not relevant, ×: Specification change not implemented, ○: Specification change implemented

No.	Additions and Changes to Specifications	Product Version (Item No.)																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
24	Support of RX600 series	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○
25	Change of Windows supported	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○
26	Writing to 78K0 microcontrollers by using an external UART clock	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○
27	Change of installer	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○
28	Addition of device image file load function	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○
29	Support of R8C family	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○
30	Support of SuperH family	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○
31	Change of installer	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○
32	Change of file checksum function for RX family	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○
33	Addition of Minimum Programming function of data flash (V850E2/Fx4-L, V850E2/FF4-G, V850E2/FG4-G)	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○
34	Addition of Minimum Programming function of data flash (V850E2/Px4-L, V850E2/PG4-S)	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
35	Addition of unique code embedding function	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
36	Addition of a programming area setting for division into two parts	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
37	Addition of FINE programming function	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
38	Change of the sum calculation method for the file checksum function	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
39	Change of Windows supported	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○
40	Support of RH850 family, RX700 series (Include RX64x group)	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○
41	Change of a communications port name	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○
42	Support of Trusted Memory function	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○
43	Addition of Minimum Programming function of data flash (RX (Except RX700, RX64x), RH850 (Except RH850/F1L)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○
44	Change of Windows supported	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○
45	Addition of Minimum Programming function of data flash (RX700, RX64x, RX65x, RH850/F1L)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○
46	Addition of a function to specify the desired ID code for the sid command	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○
47	Change of Windows supported	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○
48	Support for the RX651 and RX65N groups	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○

–: Not relevant, ×: Specification change not implemented, ○: Specification change implemented

2.2 Details of additions and changes to specifications

No. 1 Modification of **Cancel** button specification

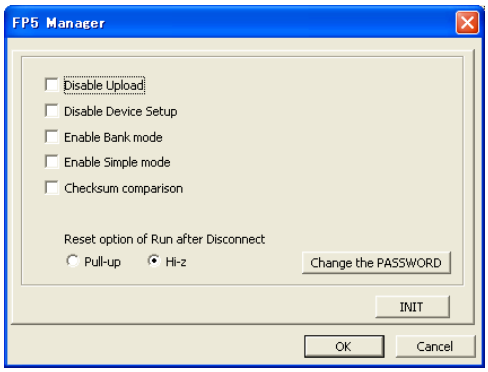
Description: The function of the **Cancel** button on the PG-FP5 main unit has been modified so that cancellation, which was applied to all commands, is only applied to the **Read** command.

Implementation: This item has been implemented in products with control code A (firmware: V1.01, FPGA: V1, GUI: V1.00).

No. 2 Addition of FP5 Manager functions

Description: The following FP5 Manager functions have been added.

- Password function
- Upload disable function
- Device setup disable function
- Bank mode enable function
- Simple mode enable function
- Checksum compare function
- Reset pin characteristics switch function



Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 3 Addition of communication command functions

Description: The PG-FP5 main unit can now be manipulated via communication software by using communication commands, with the PG-FP5 connected to the host machine via the serial connector.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 4 Addition of remote connector functions

Description: The PG-FP5 main unit can now be manipulated from remote locations by connecting an external control unit to the PG-FP5 via the remote connector. Remote operation enables manipulating and checking of programming and PASS/ERROR display from the external control unit.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 5 Change of location of **Erase memory before download** check box

Description: The location of the **Erase memory before download** check box has been moved from the **Download file** dialog box to the **Object HEX file** area on the **Target** tab in the **Setup** dialog box.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 6 Addition of specification related to **Checksum** command display

Description: The checksum result is now displayed in the message display even while the **Checksum** command is being executed, either via the programming GUI or the command option during standalone operation.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 7 Addition of program file size check function

Description: If the addresses of a downloaded program file are out of the address range set in the **Operation mode** area on the **Standard** tab in the **Setup** dialog box, the warning message `WARNING: HEX file exceeds target device flash range.` is now displayed in the action log window when the **Program**, **Verify**, or **Autoprocedure(E.P.)** command is executed.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 8 Addition of [Enable target RESET] function

Description: The [Enable target RESET] function has been added. When this function is enabled, the RESET pin goes into input mode (Hi-Z), and the FP5 detects rising and falling edges input to the RESET pin immediately after executing a command.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 9 Change of specification related to action log window view

Description: The message displayed in the action log window after command execution has been changed from OK to PASS. In addition, the error number is now displayed with the error message, as displayed in the message display.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 10 Change of specification related to message display view

Description: In conjunction with the addition of new functions in control code A (firmware: V2.00, FPGA: V2, GUI: V2.00), the display of all commands has been updated.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 11 Addition of specification that enables specification of storage destination for ESF and PR5 files

Description: In products with control code A (firmware: V1.01, FPGA: V1, GUI: V1.00) or earlier, the ESF and PR5 files can only be stored in the FP5_PRJ folder where the programming GUI is installed, but these files can now be stored in any folder.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 12 Addition of program file upload function

Description: A function to upload program files has been added. Uploading can be disabled by using an FP5 Manager function.

Implementation: This item has been implemented in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 13 Change of GUI language to Japanese for Japanese version OS <Japanese version only>

Description: The GUI language has been changed to Japanese when used in a Japanese OS.

Implementation: This item has been implemented in products with control code A (firmware: V2.01, FPGA: V2, GUI: V2.01).

No. 14 Addition of specification of UART communication at 500 kbps

Description: The specifications have been changed so that 500 kbps can now be selected as the baud rate of UART communication, even if a target device other than a 78K0R microcontroller is selected. However, communication at 500 kbps is not available if this specification is not supported in the target device. For the baud rate supported in each target device, see the user's manual for the device or a supplementary document containing the parameter files. If a 78K0R microcontroller is used as the target device, communication at 500 kbps is available when using Programming GUI V1.00 and later.

Implementation: This item has been implemented in products with control code A (firmware: V2.01, FPGA: V2, GUI: V2.01).

No. 15 Addition of **Wide Voltage mode** function

Description: The **Wide Voltage mode** check box has been added to the **Command options** area.

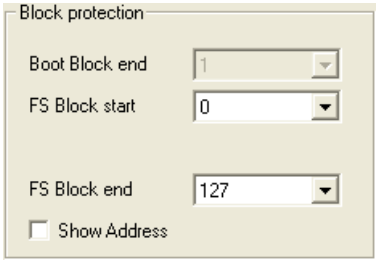
If this check box is selected, commands are executed in the wide voltage mode. If this check box is not selected, commands are executed in the full-speed mode. This check box is available when a device supporting this function is selected. For details about the wide voltage mode and full-speed mode, see the user's manual of each device.

Implementation: This item has been implemented in products with control code A (firmware: V2.02, FPGA: V2, GUI: V2.02).

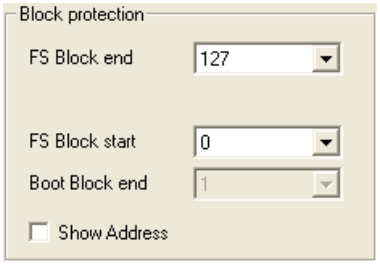
No. 16 Change of layout in **Block protection** area

Description: The layout in the **Block protection** area has been changed.

Before change



After change



Implementation: This item has been implemented in products with control code A (firmware: V2.02, FPGA: V2, GUI: V2.02).

No. 17 Addition of HCUHEX file reading function

Description: The HCUHEX files created using the HEX Consolidation Utility (HCU), which is used for generating ROM code for ordering Renesas Electronics preprogrammed flash memory devices, can now be read.

Implementation: This item has been implemented in products with control code A, C (firmware: V2.03, FPGA: V2, GUI: V2.03).

No. 18 Addition of program file size monitoring function

Description: The **Program file size monitor function** check box has been added to the **FP5 Manager** dialog box.

If this check box is selected, execution of the **Program** command is suspended if the program file is larger than the area to be written to.

Implementation: This item has been implemented in products with control code A, C (firmware: V2.03, FPGA: V2, GUI: V2.03).

No. 19 Change of power button specification

Description: The power of the PG-FP5 can now be turned on by pressing the POWER button for about 1 second.

Implementation: This item has been implemented in products with control code A, C (firmware: V2.03, FPGA: V2, GUI: V2.03).

No. 20 Addition of [Disable FSW reprogramming] function

Description: The [Disable FSW reprogramming] function has been added.

Implementation: This item has been implemented in products with control code A, C (firmware: V2.05, FPGA: V2, GUI: V2.05).

No. 21 [OCD security ID setting] function and [Option bytes setting] function

Description: The [OCD security ID setting] function and [Option bytes setting] function have been added.

Implementation: This item has been implemented in products with control code A, C (firmware: V2.05, FPGA: V2, GUI: V2.05).

No. 22 Support of 14-pin interface

Description: A target cable (14pin type) compatible with the 14-pin interface of the E1 emulator will be provided in addition to the existing target cable (16pin type), starting from July 2011.

Implementation: This item will be implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

No. 23 Support of RL78 family

Description: The RL78 family is now supported. In addition, a correspondence version may change with microcontrollers. Please refer to the release note of a parameter file.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

No. 24 Support of RX600 series

Description: The RX600 series is now supported. In addition, a correspondence version may change with microcontrollers. Please refer to the release note of a parameter file.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

No. 25 Change of supported Windows Versions

Description: The 32-bit and 64-bit editions of Windows 7 and the 64-bit edition of Windows Vista are now supported. Windows 2000 is no longer supported.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

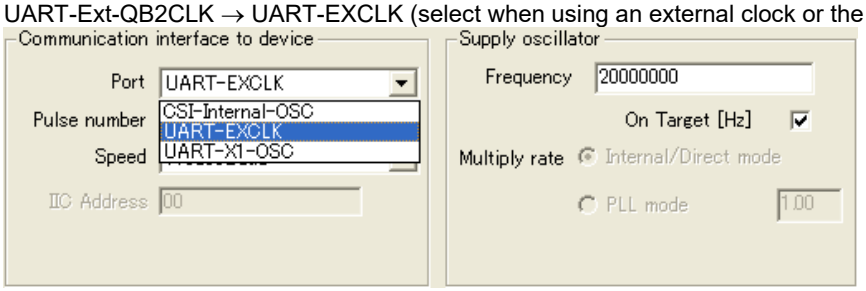
No. 26 Writing to 78K0 microcontrollers by using an external UART clock

Description: When writing to 78K0 microcontrollers by using UART communication, the PG-FP5 can now perform writing to a target system in which an external clock is input to the microcontroller's EXCLK pin. To enable this feature, select **UART-EXCLK** in the **Port** list box, select the **On Target** check box, and input the relevant frequency to the **Frequency** box.

Along with the addition of this feature, the options in the **Port** list box have been changed as follows:

UART-Ext-OSC → UART-X1-OSC (select when using an external resonator clock)

UART-Ext-QB2CLK → UART-EXCLK (select when using an external clock or the FP5 clock)



Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

No. 27 Change of installer

Description: The installer has been changed to an installer for CS+.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

No. 28 Addition of device image file load function

Description: A function to enable loading of device image files (DDI files) supported by the Flash Development Toolkit has been added. Note that this function does not include a file-save capability. Note also that DDI files cannot be read by a hexadecimal editor.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.06, FPGA: V4, GUI: V2.06).

No. 29 Support of R8C family

Description: The R8C family is now supported. In addition, a correspondence version may change with microcontrollers. Please refer to the release note of a parameter file.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.07, FPGA: V4, GUI: V2.07).

No. 30 Support of SuperH family

Description: The SuperH family is now supported. In addition, a correspondence version may change with microcontrollers. Please refer to the release note of a parameter file.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.07, FPGA: V4, GUI: V2.07).

No. 31 Change of installer

Description: The installer has been changed to a new installer.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.09, FPGA: V4, GUI: V2.09).

No. 32 Change of file checksum function for RX family

Description: The file checksum function is changed in accordance with the checksum command specification for RX family. With the checksum command specification for RX family, when ROM size is less than 8Kx2^n byte, a space area is complemented with FFh to an 8Kx2^n byte, and the range of an 8Kx2^n byte is calculated.

Ex.1) When ROM size is 384 K bytes, a space area is complemented with FFh to a 512K byte, and the range of a 512K byte is calculated.

Ex.2) When ROM size is 256 K bytes, a space area is complemented with FFh to 256 K bytes, and 256 K bytes of range is calculated.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.10, FPGA: V4, GUI: V2.10).

No. 33 Addition of minimum unit programming function of data flash

Microcontroller: V850E2/Fx4-L, V850E2/FF4-G, V850E2/FG4-G

Description: A minimum unit programming function for the data flash has been added. With minimum unit programming, Programming, verification, and reading of the area of the data flash that holds data proceeds in the minimum unit. It is effective if the [Enable minimum unit programming] check box is checked in the command option area of the device setup dialog [advance] tabbed page. While the minimum unit of programming was formerly the block, the PG-FP5 now supports all minimum units that an MCU handles in boot mode. For details on the minimum unit that an MCU handles in boot mode, refer to the corresponding hardware manual.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.10, FPGA: V4, GUI: V2.10).

No. 34 Addition of minimum unit programming function of data flash

Microcontroller: V850E2/Px4-L, V850E2/PG4-S

Description: A minimum unit programming function for the data flash has been added. With minimum unit programming, Programming, verification, and reading of the area of the data flash that holds data proceeds in the minimum unit. It is effective if the [Enable minimum unit programming] check box is checked in the command option area of the device setup dialog [advance] tabbed page. While the minimum unit of programming was formerly the block, the PG-FP5 now supports all minimum units that an MCU handles in boot mode. For details on the minimum unit that an MCU handles in boot mode, refer to the corresponding hardware manual.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 35 Addition of unique code embedding function

Description: A function for embedding unique codes in the specified area in a read program file has been added.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 36 Addition of a programming area setting for division into two parts

Description: The ability to specify division into two parts (Area 0: 10 MB and Area 1: 6 MB) has been added to division patterns for programming area settings.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 37 Addition of FINE programming function

Microcontroller: RX100 and RX200

Description: Support for programming of RX100 and RX200 series MCUs via the FINE pin has been added.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 38 Change of the sum calculation method for the file checksum function

Microcontroller: The RX, SuperH and R8C of MCUs with data flash

Description: The sum calculation method for the file checksum function was modified.

Previous method:

The sum is calculated for the code and data flash areas together at one time.

New method:

After the sum is calculated separately for the code flash area and data flash area, the results are added.

NOTE:

When the 32-bit arithmetic mode is selected, the checksum calculation results are the same between the previous and new methods, but when the 32-bit CRC mode is selected, the results will differ.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 39 Change of Windows supported

Description: The 32-bit and 64-bit editions of Windows 8.1 are now supported. Windows XP is no longer supported.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 40 Support of RH850 family, RX700 series (Include RX64x group)

Microcontroller: RH850, RX700 (Include RX64x)

Description: The RH850 family and RX700 series (Include RX64x group) are now supported. In addition, a correspondence version may change with microcontrollers. Please refer to the available microcontroller list.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 41 Change of a communications port name

Microcontroller: RX (Except RX700, RX64x), SuperH

Description: The item UART-ch0 in the [Port] list box under the [Standard] tab in the Device Setup dialog box has been changed to UART.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 42 Support of Trusted Memory function

Microcontroller: RX700 (Include RX64x)

Description: Support for Trusted Memory has been added.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.13, FPGA: V4, GUI: V2.13).

No. 43 Addition of minimum unit programming function of data flash

Microcontroller: RX (Except RX700, RX64x), RH850 (Except RH850/F1L)

Description: A minimum unit programming function for the data flash has been added. With minimum unit programming, Programming, verification, and reading of the area of the data flash that holds data proceeds in the minimum unit. It is effective if the [Enable minimum unit programming] check box is checked in the device setup dialog [advance] tabbed page. While the minimum unit of programming was formerly the block, the PG-FP5 now supports all minimum units that an MCU handles in boot mode. For details on the minimum unit that an MCU handles in boot mode, refer to the corresponding hardware manual.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.13, FPGA: V4, GUI: V2.13).

No. 44 Change of Windows supported

Description: The 32-bit and 64-bit editions of Windows 10 are now supported.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.14, FPGA: V4, GUI: V2.14).

No. 45 Addition of minimum unit programming function of data flash

Microcontroller: RX700, RX64x, RX65x, RH850/F1L

Description: A minimum unit programming function for the data flash has been added. With minimum unit programming, Programming, and verification of the area of the data flash that holds data proceeds in the minimum unit. It is effective if the [Enable minimum unit programming] check box is checked in the command option area of the device setup dialog [advance] tabbed page. While the minimum unit of programming was formerly the block, the PG-FP5 now supports all minimum units that an MCU handles in boot mode. For details on the minimum unit that an MCU handles in boot mode, refer to the corresponding hardware manual.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.15, FPGA: V4, GUI: V2.15).

No. 46 Addition of a function to specify the desired ID code for the sid command

Microcontroller: RH850

Description: A function to specify desired ID codes for the sid communications command was added. When the sid command is specified, the specified ID code is set for the target device instead of the ID code stored in the ESF file.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.15, FPGA: V4, GUI: V2.15).

No. 47 Change of Windows supported

Description: The 32-bit and 64-bit editions of Windows Vista and Windows 8 are no longer supported.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.15, FPGA: V4, GUI: V2.15).

No. 48 Support for the RX651 and RX65N groups

Description: The software has been revised in response to the addition of the RX651 and RX65N groups to the support line.

Implementation: This item has been implemented in products with control code A, C, D (firmware: V2.16, FPGA: V4, GUI: V2.15).

Chapter 3 Restrictions

3.1 Restriction List

No.	Restrictions	Product Version (Item No.)																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Restriction whereby Invalid Device Port is displayed	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2	Restriction whereby standalone operation can no longer be performed under specific conditions	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
3	Restriction whereby erase is performed even if **Erase memory before download** is not selected	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4	Restriction whereby status bar is displayed incorrectly	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
5	Restriction whereby RESET pin is always pulled up to 5 V when **Run after Disconnect** is set	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
6	Restriction whereby no clock is supplied when **FP5CLK** is selected for pseudo 3-wire communication or I^2C communication	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
7	Restriction whereby Motorola S type program file is not displayed in the list box	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
8	Restriction whereby FLMD0 pin outputs low level when 78K0S (single-wire UART) is used	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
9	Restriction whereby lowercase letters are illegally converted to uppercase letters when **upprm** or **upset** command is executed	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
10	Restriction whereby an invalid checksum result is obtained if a program file is downloaded in Simple mode	–	–	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
11	Restriction whereby bank switching for the program file cannot be specified in bank mode	–	–	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
12	Restriction on reading a Motorola S1-record hex format program file	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
13	Restriction related to installation of USB driver	–	–	–	–	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
14	Restriction whereby the error NAND flash - Mapping Error is displayed	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○
15	Restriction whereby the message display is not updated	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○
16	Restriction which cannot get the flash options of RL78	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○
17	Restriction on reading out data from R8C	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○

–: Not relevant, ×: Applicable, ○: Corrected

No.	Restrictions	Product Version (Item No.)																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
18	Restriction which cannot download the parameter file in simple mode	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	○
19	Restriction of Checksum comparison function	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○
20	Restriction of file checksum function	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
21	Restriction on errors in the downloading of program files	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○	○
22	Restriction on display in response to the file checksum command	–	–	–	–	–	–	–	–	×	×	×	×	○	○	○	○	○	○	○
23	Restriction on the read (display) command	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○	○	○
24	Restriction on the unique code	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
25	Restriction on the specified address of the unique code	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
26	Restriction of Minimum Programming function of data flash	–	–	–	–	–	–	–	–	–	–	–	×	×	○	○	○	○	○	○
27	Restriction on IO signal settings when FINE communications are selected	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
28	Restriction on command for acquiring flash options (RX200 Series, RX600 Series)	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
29	Restriction on acquisition command of flash options (SuperH Family)	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
30	Restriction with Option Bytes and OCD Security ID Settings	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
31	Restriction with Downloading Program Files in Code Flash Area	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
32	Restriction with Downloading Program Files in Data Flash Area	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○	○
33	Restriction related to program files that include data for the option setting memory	–	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○	○
34	Restriction on changing settings related to ESF files	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	○	○	○
35	Restriction on Downloading Program Files	–	–	–	–	–	–	–	–	–	–	–	–	–	–	×	○	○	○	○
36	Restriction on Downloading Program Files	–	–	–	–	–	–	–	–	–	–	–	–	×	×	×	○	○	○	○
37	Restriction on enabling of the intelligent cryptographic unit slave E (ICUSE) of the RH850/C1M-A, RH850/F1K, RH850/F1KM-S1, RH850/P1L-C, and RH850/P1M-E groups	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	×	×	×	○
38	Restriction on minimum unit for programming of the data flash memory (RX130, RX230, RX231, RX24T, RX24U)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	×	×	×	×	×

–: Not relevant, ×: Applicable, ○: Corrected

3.2 Restriction Details

No. 1 Restriction whereby Invalid Device Port is displayed

Description: When a PR5 file is downloaded, the message Invalid Device Port might be displayed in the action log window. After that, PR5 files can no longer be downloaded correctly.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 2 Restriction whereby standalone operation can no longer be performed under specific conditions

Description: If command execution is continued by using control buttons on the PG-FP5 main unit while the Programming GUI is not running, the message `ERROR: 800 Res. by Watchdog` is displayed in the message display on the PG-FP5 main unit and the subsequent operations might no longer be able to be performed.

Workaround: There is no workaround. When this situation occurs, control of the **POWER** button is also unavailable. Therefore, disconnect the AC adapter and connect it again to restart the PG-FP5.

Action: This issue has been corrected in products with control code A (firmware: V1.01, FPGA: V1, GUI: V1.00).

No. 3 Restriction whereby erase is performed even if **Erase memory before download** is not selected

Description: Erase is performed even if the **Erase memory before download** check box is not selected in the **Download file** dialog box, which is opened via the **Object HEX file** area on the **Target** tab in the **Setup** dialog box.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 4 Restriction whereby status bar is displayed incorrectly

Description: The status bar is displayed incorrectly in the following cases:

(1) An error is displayed erroneously if it takes five or more seconds for SUM data to be returned during **Checksum** command execution.

(2) PASS is displayed erroneously if the code flash is verified to be OK but the data flash is reported as having an error.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 5 Restriction whereby RESET pin is always pulled up to 5 V when **Run after Disconnect** is set

Description: The RESET pin of the PG-FP5 must go into the Hi-Z state when **Run after Disconnect** is set, but it is pulled up to 5 V.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 6 Restriction whereby no clock is supplied when **FP5CLK** is selected for pseudo 3-wire communication or I^2C communication

Description: No clock is supplied when **FP5CLK** is selected for pseudo 3-wire communication or I^2C communication.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 7 Restriction whereby Motorola S type program file is not displayed in the list box

Description: When a program file of Motorola S type (except for `*.hex` and `*.rec`) is selected in the **Download file** dialog box which is opened via the **Object HEX file** area on the **Target** tab in the **Setup** dialog box, the file is not displayed in the list box in the **Object HEX file** area.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 8 Restriction whereby FLMD0 pin outputs low level when 78K0S (single-wire UART) is used

Description: If the CLK and FLMD0 pins are shorted in the target system when 78K0S (single-wire UART) is used, the FLMD0 pin that should output Hi-Z incorrectly outputs a low level, which disturbs programming. (This restriction is applicable only when a microcontroller that uses the FLMD0 pin was used before using 78K0S (single-wire UART).)

Workaround: Execute the **Reset** command of the PG-FP5 or turn off and then on the PG-FP5 power before using 78K0S (single-wire UART); the FLMD0 pin afterward outputs Hi-Z.

Action: This issue has been corrected in products with control code A (firmware: V2.00, FPGA: V2, GUI: V2.00).

No. 9 Restriction whereby lowercase letters are illegally converted to uppercase letters when **upprm** or **upset** command is executed

Description: The letter “a” in the format version is illegally converted to “A” when the **upprm** command is executed. The extensions of parameter files are illegally converted to uppercase letters when the **upset** command is executed. Use of the files created by these commands does not cause any problems.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.01, FPGA: V2, GUI: V2.01).

No. 10 Restriction whereby an invalid checksum result is obtained if a program file is downloaded in Simple mode

Description: If a program file that includes data flash is downloaded in Simple mode, the checksum result to be displayed in the message display on the PG-FP5 main unit, which should indicate the checksum of the code flash and data flash areas, indicates the checksum of the code flash area only.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.01, FPGA: V2, GUI: V2.01).

No. 11 Restriction whereby bank switching for the program file cannot be specified in bank mode

Description: When the PG-FP5 runs in bank mode and if a programming area is selected via a bank signal from the remote connector, the programming area selected via the bank signal should usually be selected, but the program file in the programming area selected by the Programming GUI is selected. The settings selected via the bank signal are then applied to PR5 and ESF files.

Example: Programming area number selected by Programming GUI: 0
Programming area number selected via bank signal: 1
In this case, PR5 and ESF files in programming area 1 and the program file in programming area 0 are specified.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A (firmware: V2.01, FPGA: V2, GUI: V2.01).

No. 12 Restriction on reading a Motorola S1-record hex format program file

Description: If a program file in the Motorola S1-record hex format is read to the FP5, program files saved in the specified programming area become invalid.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A or C (firmware: V2.03, FPGA: V2, GUI: V2.03).

No. 13 Restriction related to installation of USB driver

Description: If a PG-FP5 unit is connected to a USB port to which another FP5 unit with a different serial number was connected on the same host, the USB driver is not automatically recognized and installation of the USB driver is requested.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A or C (firmware: V2.03, FPGA: V2, GUI: V2.03).

No. 14 Restriction whereby the error NAND flash - Mapping Error is displayed

Description: If the PG-FP5 is used continuously while conditions (1) and (2) below are satisfied, the error below might be displayed in the action log window when a program file is downloaded or a writing command is executed.

(1) A program file that has a cluster of FFh data that is 16 KB or longer is used.

(2) The program file described in (1) is frequently downloaded.

Displayed error:

```
*** System Error(s), Warning(s):
    Warning: NAND flash - Mapping Error
```

Even if the above error is displayed, downloading the program or executing the **Program** command is performed correctly.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A or C (firmware: V2.04, FPGA: V2, GUI: V2.03).

No. 15 Restriction whereby the message display is not updated

Description: The writing status shown in the message display on the PG-FP5 unit might freeze and no longer be updated. (Even if this problem occurs, a command that downloads or writes a program runs normally.)

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A or C (firmware: V2.04, FPGA: V2, GUI: V2.03).

No. 16 Restriction which cannot get the flash options of RL78

Description: If the PG-FP5 executes **Get Flash options** command to RL78 valid of security setting, `E1601 Protect error.` is displayed, the PG-FP5 cannot get the flash options.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.07, FPGA: V4, GUI: V2.07).

No. 17 Restriction on reading out data from R8C

Description: When you read out data from flash memory in R8C, the address mapping of the data flash area is saved incorrectly if you click the Read and then the Write Intel HEX file command. Note that even if this problem arises, no error message is displayed, so do not use the data saved in the Intel format.

Workaround: To read out data from flash memory, do not click the Write Intel HEX file command, but the Write Motorola SREC file.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.09, FPGA: V4, GUI: V2.09).

No. 18 Restriction which cannot download the parameter file in simple mode

Description: When a parameter file is downloaded by simple mode, "ERROR (E009): HEX file contains invalid data!! " may occur and may be unable to download.

Workaround: Push the clear button in a device setup dialog [target] tab, and make programming area a clear.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.09, FPGA: V4, GUI: V2.09).

No. 19 Restriction of Checksum comparison function

Microcontroller: V850E2/Fx4-L, V850E2/FF4-G, V850E2/FG4-G, V850E2/Px4-L, V850E2/PG4-S

Description: If a checksum comparison function is enabled and a checksum command is executed, a checksum value will be displayed correctly, but in Checksum compare, the address range of a data flash is mistaken and Checksum compare becomes an error.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.10, FPGA: V4, GUI: V2.10).

No. 20 Restriction of file checksum function

Microcontroller: V850E2/Px4-L

Description: The value of start/end address of a data flash is not right at [Device Area] selection of a checksum dialog.

Workaround: Please select a [User Defined]. The right address is set up as an initial value.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 21 Restriction on errors in the downloading of program files

Description: Downloading of a program file satisfying the condition below may lead to defective communications between the programming GUI and the PG-FP5 body. In such cases, [Error] is displayed in the status bar of the programing GUI.

Condition: Program file having a data record length of 250 bytes or more

Workaround: Make compiler settings such that the length of the data records is less than 250 bytes..

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 22 Restriction on display in response to the file checksum command

Microcontroller: RX, SuperH, and R8C

Description: When the file checksum command is executed, the display in the [File checksum] area of the programming parameter window is not correct.

Workaround: Refer to the action log window for the results of the file checksum operation.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.11, FPGA: V4, GUI: V2.11).

No. 23 Restriction on the read (display) command

Microcontroller: V850 products equipped with data flash memory and ID tags

Description: When the [Read (display)] command is executed after an operation mode that excludes block 0 of the data flash memory has been set, reading proceeds at a different address from that displayed in the action log window.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 24 Restriction on the unique code

Microcontroller: V850 products equipped with data flash memory and ID tags

Description: When the unique code embedding function is executed after an operation mode that excludes block 0 of the data flash memory has been set, the code is embedded at an illegal address.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 25 Restriction on the specified address of the unique code

Description: When the unique code embedding function is used and the address where the unique code is embedded is within the range from FFFFFF00h to FFFFFFFFh, the unique code is not embedded in the address range from FFFFFF00h to FFFFFFFFh.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 26 Restriction of Minimum Programming function of data flash

Microcontroller: V850E2/Fx4-L, V850E2/FF4-G, V850E2/FG4-G, V850E2/Px4-L, V850E2/PG4-S

Description: When a program file extending beyond the address range of the flash memory is selected and the minimum programming function is enabled, the programming GUI does not operate normally.

Workaround: There is no workaround. If programming has proceeded with the above settings, restart the programming GUI. Then, the program is restarted with the setting for the minimum programming function disabled.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 27 Restriction on IO signal settings when FINE communications are selected

Microcontroller: RX200

Description: When FINE communications are selected, the display indicates that the [IO signal setting] area is editable. Note that IO 0, 1, 2, 4, and 5 pins are always high impedance and the IO3 pin is used to communicate with the FINE pin regardless of the settings, so the settings have no effect on operation.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 28 Restriction on command for acquiring flash options

Microcontroller: RX200, RX600

Description: The flash option acquisition command cannot correctly obtain the lock bit settings.

Workaround: Use the glb communication command to handle acquisition.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 29 Restriction on acquisition command of flash options

Microcontroller: SuperH

Description: When an MCU that does not include the lock bit function is in use, the [Flash option acquisition] command and glb communication command are executable. However, executing either leads to an error.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 30 Restriction with Option Bytes and OCD Security ID Settings

Microcontroller: V850E2/Fx4-L, V850E2/FF4-G, V850E2/FG4-G, V850E2/Px4-L, V850E2/PG4-S

Description: If the conditions described in below are met, changed values are not saved in ESF files. The values of the option bytes and OCD security ID previously saved are, therefore, downloaded to the PG-FP5.

Conditions: The problem occurs when all of the following conditions are met:

(1) The minimum unit programming function for the data flash memory is enabled.

(2) Downloading to the PG-FP5 proceeds after the values of the option bytes and OCD security ID are changed.

Workaround: To ensure that changed values of the option bytes and OCD security ID are saved, change the values while the minimum unit programming function for the data flash memory is disabled. Enable the minimum unit programming function after that.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 31 Restriction with Downloading Program Files in Code Flash Area

Microcontroller: V850E2/Fx4-L, V850E2/FF4-G, V850E2/FG4-G

Description: If a program file is downloaded to the PG-FP5 under the conditions described in below, incorrect data is downloaded in the code flash area. Even if incorrect data is downloaded, however, no error messages appear.

Conditions: The problem occurs when all of the following conditions are met:

(1) The minimum unit programming function for the data flash memory is enabled.

(2) The program file for downloading is the one in Intel HEX format.

(3) The program file for downloading includes data for both the code flash and data flash memory.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 32 Restriction with Downloading Program Files in Data Flash Area

Microcontroller: V850E2/Px4-L, V850E2/PG4-S

Description: If a program file is downloaded to the PG-FP5 under the conditions described in below, incorrect data may be downloaded in the data flash area. Even if incorrect data is downloaded, however, error messages do not necessarily appear.

Conditions: The problem occurs when all of the following conditions are met:

(1) The minimum unit programming function for the data flash memory is enabled.

(2) The program file for downloading includes data for both the code flash and data flash memory.

Workaround: Only download a program file to the PG-FP5 after disabling the minimum unit programming function for the data flash memory. When downloading a program file that includes data for both the code flash and data flash memory to the PG-FP5, the minimum unit programming function cannot be used.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.12, FPGA: V4, GUI: V2.12).

No. 33 Restriction related to program files that include data for the option setting memory

Microcontroller: RX700 (Include RX64x)

Description: The PG-FP5 does not read data in the option setting memory even when it reads a program file that includes data for the option setting memory.

Workaround: Use the [Standard] tab in Device Setup dialog box to set the option setting memory.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.13, FPGA: V4, GUI: V2.13). The earlier menu item for making such settings by using dialog boxes has been deleted. Be sure that program files to be read contain data for the option setting memory area.

No. 34 Restriction on changing settings related to ESF files

Description: When any setting in the Setup dialog box is changed to select a state in which modification of ESF files is disabled, ESF files are not modified, but no error occurs. Modification of ESF files is disabled, for example, in the following cases.

E.g. (1) A user who does not have the privilege to modify files due to the security setting for the folder where ESF files are saved attempts to do so through the programming GUI.

E.g. 2) Read-only is selected as the property of ESF files.

Workaround: In case 1, copy the ESF files to any folder where modification is allowed.

In case 2, deselect the read-only checkbox.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.14, FPGA: V4, GUI: V2.14).

No. 35 Restriction on Downloading Program Files

Microcontroller: RH850, RX, SuperH, R8C

Description: When downloading a program file containing data records with a size of 249 bytes or more, an error occurs and causes the operation to end before downloading is complete.

Error message:

E1803 Format error in program file!

Workaround: Change the compiler setting so that the maximum size of the data records for the program file is no greater than 248 bytes.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.14, FPGA: V4, GUI: V2.14).

No. 36 Restriction on Downloading Program Files

Description: The following error messages appear and downloading becomes impossible when a program file is downloaded under the conditions listed under “Conditions” below.

Error message:

Invalid character.

Invalid argument.

Conditions: The problem occurs when all of the following conditions are met:

(1) The program file was last updated around 0 hours (12 a.m., i.e. midnight).

(2) The programming GUI is used to download the program files during the Daylight Saving Time (DST) period.

Example: A file created at Auckland, New Zealand, (UTC+12:00) on August 1, 2016 at 2:06 a.m. is downloaded at Tokyo (UTC+9:00), and the date and time of the file at Tokyo is July 31, 2016 at 11:06 p.m.

>lod fname="sample.mot" ftime="2016-08-01 -1:06"

Invalid character.

Invalid argument.

Workaround: There is no workaround.

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.14, FPGA: V4, GUI: V2.14).

No. 37 Restriction on enabling of the intelligent cryptographic unit slave E (ICUSE) of the RH850/C1M-A, RH850/F1K, RH850/F1KM-S1, RH850/P1L-C, and RH850/P1M-E groups

Microcontroller: RH850/C1M-A, RH850/F1K, RH850/F1KM-S1, RH850/P1L-C, RH850/P1M-E

Description: For details on this problem, refer to the issue of RENESAS TOOL NEWS (document no.: R20TS0399EJ0100) found by entering the following URL.

https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0399

Action: This issue has been corrected in products with control code A, C or D (firmware: V2.17, FPGA: V4, GUI: V2.17).

No. 38 Restriction on minimum unit for programming of the data flash memory

Microcontroller: RX130, RX230, RX231, RX24T, RX24U

Description: If programmed data are verified when all conditions 1 to 3 below are met, the verification processing will not end. The action log window of the GUI, including the responses from the communications commands, repeatedly displays “xx%” and the display of an address in the data flash memory such as “Addr: 0x00100000” is retained on the LCD. The address that is displayed depends on the target device and settings.

If this problem occurs, input through the buttons of the FP5 main unit and communications commands are not accepted. Remove the AC adapter of the FP5 from the power-supply connector and turn the power of the FP5 off.

1. A program file for which not even one byte of data is assigned for the address in data flash memory of the target device has been downloaded to the PG-FP5.
2. For the **Operation mode** area, [Chip] has been selected. Alternatively, [Block] has been selected and the [Data mat] checkbox has been selected.
3. The [Enable minimum unit programming] checkbox has been selected.

Workaround: If you will be using a program file for which not even one byte of data is assigned for the address in data flash memory, use one of the following settings.

1. For the **Operation mode** area, select [Block] and deselect the [Data mat] checkbox.
2. Deselect the [Enable minimum unit programming] checkbox.

*The [Enable minimum unit programming] function is only enabled when [Data mat] has been selected. Thus, when you will not be using the data flash memory, disabling this function does not affect the operation.

Action: We have no plans to eliminate this restriction because the PG-FP5 is a discontinued product.

For reference: You can confirm whether data have been included for the address in data flash memory by consulting the log when a program file is downloaded to the FP5. At this time, if the log does not include the “Address range data:” line as shown below, the downloaded file will not include data for the address in data flash memory.

```
>lod  fname="Sample.mot" ftime="2022-09-14 11:20"
Preparing storage... PASS
Now loading.....
Address range code: 0xFFFC0000 to 0xFFFFFFFF, CRC32: 0x43A82888
Address range data: 0x00100000 to 0x00107FFF, CRC32: 0x0CA407F9
PASS
```

Revision History	PG-FP5 Flash Memory Programmer Release Note

Rev.	Date	Description	
		Page	Summary
13.00	Oct.17.22	16, 27	No. 38, Restriction on minimum unit for programming of the data flash memory (RX130, RX230, RX231, RX24T, RX24U), was added.

General Precautions in the Handling of Microprocessing Unit and Microcontroller Unit Products

The following usage notes are applicable to all Microprocessing unit and Microcontroller unit products from Renesas. For detailed usage notes on the products covered by this document, refer to the relevant sections of the document as well as any technical updates that have been issued for the products.

1. Precaution against Electrostatic Discharge (ESD)
   A strong electrical field, when exposed to a CMOS device, can cause destruction of the gate oxide and ultimately degrade the device operation. Steps must be taken to stop the generation of static electricity as much as possible, and quickly dissipate it when it occurs. Environmental control must be adequate. When it is dry, a humidifier should be used. This is recommended to avoid using insulators that can easily build up static electricity. Semiconductor devices must be stored and transported in an anti-static container, static shielding bag or conductive material. All test and measurement tools including work benches and floors must be grounded. The operator must also be grounded using a wrist strap. Semiconductor devices must not be touched with bare hands. Similar precautions must be taken for printed circuit boards with mounted semiconductor devices.
2. Processing at power-on
   The state of the product is undefined at the time when power is supplied. The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the time when power is supplied. In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the time when power is supplied until the reset process is completed. In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the time when power is supplied until the power reaches the level at which resetting is specified.
3. Input of signal during power-off state
   Do not input signals or an I/O pull-up power supply while the device is powered off. The current injection that results from input of such a signal or I/O pull-up power supply may cause malfunction and the abnormal current that passes in the device at this time may cause degradation of internal elements. Follow the guideline for input signal during power-off state as described in your product documentation.
4. Handling of unused pins
   Handle unused pins in accordance with the directions given under handling of unused pins in the manual. The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of the LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible.
5. Clock signals
   After applying a reset, only release the reset line after the operating clock signal becomes stable. When switching the clock signal during program execution, wait until the target clock signal is stabilized. When the clock signal is generated with an external resonator or from an external oscillator during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Additionally, when switching to a clock signal produced with an external resonator or by an external oscillator while program execution is in progress, wait until the target clock signal is stable.
6. Voltage application waveform at input pin
   Waveform distortion due to input noise or a reflected wave may cause malfunction. If the input of the CMOS device stays in the area between V_{IL} (Max.) and V_{IH} (Min.) due to noise, for example, the device may malfunction. Take care to prevent chattering noise from entering the device when the input level is fixed, and also in the transition period when the input level passes through the area between V_{IL} (Max.) and V_{IH} (Min.).
7. Prohibition of access to reserved addresses
   Access to reserved addresses is prohibited. The reserved addresses are provided for possible future expansion of functions. Do not access these addresses as the correct operation of the LSI is not guaranteed.
8. Differences between products
   Before changing from one product to another, for example to a product with a different part number, confirm that the change will not lead to problems. The characteristics of a microprocessing unit or microcontroller unit products in the same group but having a different part number might differ in terms of internal memory capacity, layout pattern, and other factors, which can affect the ranges of electrical characteristics, such as characteristic values, operating margins, immunity to noise, and amount of radiated noise. When changing to a product with a different part number, implement a system-evaluation test for the given product.

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