
CubeSuite+ Simulator for RL78

supporting OS Timer V3.05.00

Release Note

R20UT2915EJ0100
Rev.1.00
February 13, 2014

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Chapter 1. Target Devices

"CubeSuite+ Simulator for RL78 supporting OS Timer" supports both simulation of RL78 CPU core and simulation of timer "CH0-CH3 in Unit 0" for real time operating systems.

Below is a list of devices supported by this simulator.

Nickname	Device name
RL78/G12	R5F10266, R5F10267, R5F10268, R5F10269, R5F1026A, R5F10366, R5F10367, R5F10368, R5F10369, R5F1036A, R5F10277, R5F10278, R5F10279, R5F1027A, R5F10377, R5F10378, R5F10379, R5F1037A, R5F102A7, R5F102A8, R5F102A9, R5F102AA, R5F103A7, R5F103A8, R5F103A9, R5F103AA
RL78/G13	R5F100SL, R5F100SK, R5F100SJ, R5F100SH, R5F101SL, R5F101SK, R5F101SJ, R5F101SH, R5F100PL, R5F100PK, R5F100PJ, R5F100PH, R5F100PG, R5F100PF, R5F101PL, R5F101PK, R5F101PJ, R5F101PH, R5F101PG, R5F101PF, R5F100ML, R5F100MK, R5F100MJ, R5F100MH, R5F100MG, R5F100MF, R5F101ML, R5F101MK, R5F101MJ, R5F101MH, R5F101MG, R5F101MF, R5F100LL, R5F100LK, R5F100LJ, R5F100LH, R5F100LG, R5F100LF, R5F100LE, R5F100LD, R5F100LC, R5F101LL, R5F101LK, R5F101LJ, R5F101LH, R5F101LG, R5F101LF, R5F101LE, R5F101LD, R5F101LC, R5F100JL, R5F100JK, R5F100JJ, R5F100JH, R5F100JG, R5F100JF, R5F100JE, R5F100JD, R5F100JC, R5F101JL, R5F101JK, R5F101JJ, R5F101JH, R5F101JG, R5F101JF, R5F101JE, R5F101JD, R5F101JC, R5F100GL, R5F100GK, R5F100GJ, R5F100GH, R5F100GG, R5F100GF, R5F100GE, R5F100GD, R5F100GC, R5F100GA, R5F101GL, R5F101GK, R5F101GJ, R5F101GH, R5F101GG, R5F101GF, R5F101GE, R5F101GD, R5F101GC, R5F101GA, R5F100FL, R5F100FK, R5F100FJ, R5F100FH, R5F100FG, R5F100FF, R5F100FE, R5F100FD, R5F100FC, R5F100FA, R5F101FL, R5F101FK, R5F101FJ, R5F101FH, R5F101FG, R5F101FF, R5F101FE, R5F101FD, R5F101FC, R5F101FA, R5F100EH, R5F100EG, R5F100EF, R5F100EE, R5F100ED, R5F100EC, R5F100EA, R5F101EH, R5F101EG, R5F101EF, R5F101EE, R5F101ED, R5F101EC, R5F101EA, R5F100CG, R5F100CF, R5F100CE, R5F100CD, R5F100CC, R5F100CA, R5F101CG, R5F101CF, R5F101CE, R5F101CD, R5F101CC, R5F101CA, R5F100BG, R5F100BF, R5F100BE, R5F100BD, R5F100BC, R5F100BA, R5F101BG, R5F101BF, R5F101BE, R5F101BD, R5F101BC, R5F101BA, R5F100AG, R5F100AF, R5F100AE, R5F100AD, R5F100AC, R5F100AA, R5F101AG, R5F101AF, R5F101AE, R5F101AD, R5F101AC, R5F101AA, R5F1008E, R5F1008D, R5F1008C, R5F1008A, R5F1018E, R5F1018D, R5F1018C, R5F1018A, R5F1007E, R5F1007D, R5F1007C, R5F1007A, R5F1017E, R5F1017D, R5F1017C, R5F1017A, R5F1006E, R5F1006D, R5F1006C, R5F1006A, R5F1016E, R5F1016D, R5F1016C, R5F1016A
RL78/G14	R5F104AA, R5F104AC, R5F104AD, R5F104AE, R5F104BA, R5F104BC, R5F104BD, R5F104BE, R5F104CA, R5F104CC, R5F104CD, R5F104CE, R5F104EA, R5F104EC, R5F104ED, R5F104EE, R5F104FA, R5F104FC, R5F104FD, R5F104FE, R5F104GA, R5F104GC, R5F104GD, R5F104GE, R5F104JC, R5F104JD, R5F104JE, R5F104LC, R5F104LD, R5F104LE

Chapter 2. User's Manuals

Please read the following user's manuals together with this document.

Manual Name	Document Number
CubeSuite+ V2.02.00 RL78 Debug	R20UT2687EJ0100
CubeSuite+ V2.02.00 Message	R20UT2871EJ0100

Chapter 3. Key Word for Uninstallation

To uninstall this product, use the integrated uninstaller (uninstalls CubeSuite+).

Chapter 4. Changes

This chapter describes change from V3.00.01 to V3.05.00 of Simulator for RL78 support OS Timer.

4.1 Changes of Simulator for RL78 support Timer

4.1.1 Support for DataFlash

- A DtaFlash domain can only be read. It is equivalent to the usual ROM access.
It was changed by V3.05.00.

Chapter 5. Cautions

This section describes cautions for using the RL78 supporting OS Timer simulator. The following two types of caution are described.

- Cautions for CPU function
- Cautions for peripheral functions (Timer, etc.)

5.1 Cautions for CPU function

5.1.1 Caution for CPU operation clock

The CPU operation clock operates by the specification of RL78/G13.

5.1.2 Caution for Multiplier and Divider/Multiply-Accumulator

When simulating RL78 by instruction mode, cautions of Multiplier and Divider/Multiply-Accumulator are following.

- When using it by division mode, the division processing will be finished in by 1 clock.

5.1.3 Support for *PMC* register

The value of the PMC register in the actual device is fixed to 0 or variable between 0 and 1 depending on the specifications of the device.

5.2 Cautions for Peripheral functions

5.2.1 Caution for Clock Setting

It is not allowed to set Clock frequency ($f_{clk}/2^n$) below 233Hz.

Note:

You can select clock frequency by Timer Clock Select Register (TPSm), when setting Clock frequency below 233Hz, when clock is not provided correctly and a value of 'Run-Break Timer' becomes invalid.

5.2.2 Caution for Clock Generating Circuit

The following control register of clock generating circuit is not supported.

- Oscillation Stabilization Time Counter Status Register (OSTC)
- Internal high-speed oscillator trimming register (HIOTRM)

Following clock operation mode control register is not supported.

- X1 control of clock oscillation frequency (AMPH)
- XT1 oscillator oscillation mode selection (AMPHS, AMPHSO)

5.2.3 Caution for Noise Filter Function

Noise filter function is not supported

5.2.4 Caution on Use of the RL78/G14 Device

When the frequency of the high-speed on-chip oscillator clock (fHOCO) for the RL78/G14 is 48 MHz or higher, fIH will be 1/2 of fHOCO. When the frequency of fHOCO is 32 MHz or lower, on the other hand, fIH will be the same as fHOCO.

If you are using the simulator, however, the frequency of fIH is the same as that of fHOCO (i.e., not divided) whether the frequency selected for fHOCO is 64 or 48 MHz.

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Renesas Electronics America Inc.

2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.
Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited

1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K
Tel: +44-1628-651-700, Fax: +44-1628-651-804

Renesas Electronics Europe GmbH

Arcadiastrasse 10, 40472 Düsseldorf, Germany
Tel: +49-211-65030, Fax: +49-211-6503-1327

Renesas Electronics (China) Co., Ltd.

7th Floor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.

Unit 301, Tower A, Central Towers, 555 LanGao Rd., Putuo District, Shanghai, China
Tel: +86-21-2226-0888, Fax: +86-21-2226-0999

Renesas Electronics Hong Kong Limited

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2886-9318, Fax: +852-2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.

13F, No. 363, Fu Shing North Road, Taipei, Taiwan
Tel: +886-2-8175-9600, Fax: +886-2-8175-9670

Renesas Electronics Singapore Pte. Ltd.

80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre Singapore 339949
Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.

12F., 234 Teheran-ro, Gangnam-Gu, Seoul, 135-080, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141