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# e<sup>2</sup> studio 6.0.0

R20UT4092EE0100

Rev.1.00

## Release Note

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August 3<sup>rd</sup>, 2017

### Introduction

This document outlines the device support, new features added in 6.0.0, fixed issues and open issues in e<sup>2</sup> studio 6.0.0.

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## 1. Product Information

### 1.1 Supported Operating Systems

These operating systems are officially supported by e<sup>2</sup> studio:

- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 32-bit
- Windows 8.1 64-bit
- Windows 10 32-bit
- Windows 10 64-bit

### 1.2 Supported Toolchains

The following toolchains are supported in e<sup>2</sup> studio 6.0.0.

|             | Renesas     | Launchpad<br>GCC (*2) | Renesas GCC/<br>KPIT GCC (*3) | IAR (*4) | Green Hills (*5) |
|-------------|-------------|-----------------------|-------------------------------|----------|------------------|
| RL78        | Yes (CC-RL) | No                    | Yes                           | Yes      | No               |
| RX          | Yes (CC-RX) | No                    | Yes                           | Yes      | No               |
| RH850       | No          | No                    | No                            | Yes      | Yes              |
| RZ/ARM      | No          | No (*1)               | Yes                           | Yes      | No               |
| Synergy/ARM | No          | Yes                   | No                            | Yes      | No               |

**Note:**

\*1: Converter is now available to convert RZ ARM-none GCC toolchain to use Launchpad GCC.

\*2: The GNU Launchpad toolchain is distributed via the [www.launchpad.net](http://www.launchpad.net) website and is available here: <https://launchpad.net/gcc-arm-embedded>.

\*3: Legacy KPIT GCC toolchains are now available from [www.renesas-gcc.com](http://www.renesas-gcc.com). In addition, the latest RX and RL Renesas GCC toolchains are available from this website.

\*4: The IAR toolchain plugins are available via the “Help”->”IAR Embedded Workbench plugin manager” menu in e2 studio. These Eclipse plugins are provided by IAR and are not supported by Renesas.

\*5: The Green Hills toolchain plugins are available within the e<sup>2</sup> studio product. These plugins are provided by Green Hills and are not supported by Renesas.

## 2. Device Support

### 2.1 Project Generator Support

Note: The Renesas SH device family is no longer supported in e2 studio.

| CPU   | Family   | Devices  |
|-------|--|--|
| EC-1  | EC-1   | R9A06G043  |
|       | C1H  | R7F701260, R7F701270,(Debug Support Only)  |
|       | C1M  | R7F701263, R7F701271,(Debug Support Only)  |
|       | E1L  | R7F701201, R7F701205,(Debug Support Only)  |
|       | E1M-S  | R7F701202, R7F701204,(Debug Support Only)  |
|       | -  | R7F701205, R7F701206, R7F701207,(Debug Support Only)   |
|       | F1H  | R7F701501, R7F701502, R7F701503, R7F701506, R7F701507,<br>R7F701508, R7F701511, R7F701512, R7F701513,(Debug Support Only)  |
|       | F1H-GW   | R7F701521, R7F701522, R7F701524, R7F701525,(Debug Support Only)  |
|       |  | R7F701542, R7F701543, R7F701546, R7F701547, R7F701557,<br>R7F701560, R7F701561, R7F701562, R7F701563, R7F701566,<br>R7F701567, R7F701577, R7F701580, R7F701581, R7F701582,<br>R7F701583, R7F701586, R7F701587, R7F701597, R7F701602,<br>R7F701603, R7F701610, R7F701611, R7F701612, R7F701613,   |
|       | F1K  | R7F701620, R7F701621, R7F701622, R7F701623,(Debug Support Only)  |
|       |  | R7F701002xAFP, R7F701003xAFP, R7F701006xAFP, R7F701007xAFP,<br>R7F701008xAFP, R7F701009xAFP, R7F701010xAFP, R7F701011xAFP,<br>R7F701012xAFP, R7F701013xAFP, R7F701014xAFP, R7F701015xAFP,<br>R7F701016xAFP, R7F701017xAFP, R7F701018xAFP, R7F701019xAFP,<br>R7F701020xAFP, R7F701021xAFP, R7F701022xAFP, R7F701023xAFP,<br>R7F701024xAFP, R7F701025xAFP, R7F701026xAFP, R7F701027xAFP,<br>R7F701028xAFP, R7F701029xAFP, R7F701030xAFP, R7F701032xAFP,<br>R7F701033xAFP, R7F701034xAFP, R7F701040, R7F701041, R7F701042,<br>R7F701043, R7F701044, R7F701045, R7F701046, R7F701047,<br>R7F701048, R7F701049, R7F701050, R7F701051, R7F701052,<br>R7F701053, R7F701054, R7F701055, R7F701056, R7F701057,(Debug<br>Support Only) |
|       | F1L  | R7F701544, R7F701545, R7F701548, R7F701549, R7F701552,<br>R7F701553, R7F701564, R7F701565, R7F701568, R7F701569,<br>R7F701572, R7F701573,(Debug Support Only)  |
|       | F1M  | R7F701304, R7F701305, R7F701310, R7F701311, R7F701312,<br>R7F701313, R7F701314, R7F701315, R7F701318, R7F701319,<br>R7F701320, R7F701321, R7F701322, R7F701323,(Debug Support Only)  |
|       | P1M  | R7F701375, R7F701376, R7F701377, R7F701378, R7F701379,<br>R7F701380, R7F701381, R7F701382, R7F701383, R7F701384,<br>R7F701385, R7F701386,(Debug Support Only)  |
|       | P1M-E  | R7F701060xAFP, R7F701062xAFP, R7F701064xAFP, R7F701065xAFP,<br>R7F701067xAFP, R7F701069xAFP, R7F701071xAFP,(Debug Support<br>Only)   |
| -     | R5F10CGB, R5F10CGC, R5F10CGD, R5F10CLD, R5F10CMD, R5F10CME,<br>R5F10DGC, R5F10DGD, R5F10DGE, R5F10DLD, R5F10DLE, R5F10DMD,<br>R5F10DME, R5F10DMF, R5F10DMG, R5F10DMJ, R5F10DPE, R5F10DPF,<br>R5F10DPG, R5F10DPJ, R5F10DPK, R5F10DPL, R5F10DSJ, R5F10DSK,<br>R5F10DSL, R5F10TPJ |  |
| RH850 | D1A  | R5F10968, R5F1096A, R5F1096B, R5F1096C, R5F1096D, R5F1096E,<br>R5F109AA, R5F109AB, R5F109AC, R5F109AD, R5F109AE, R5F109BA,<br>R5F109BB, R5F109BC, R5F109BD, R5F109BE, R5F109GA, R5F109GB,<br>R5F109GC, R5F109GD, R5F109GE, R5F109LA, R5F109LB, R5F109LC,<br>R5F109LD, R5F109LE   |
|       | F12  |  |
| RL78  | D1A  | R5F10968, R5F1096A, R5F1096B, R5F1096C, R5F1096D, R5F1096E,<br>R5F109AA, R5F109AB, R5F109AC, R5F109AD, R5F109AE, R5F109BA,<br>R5F109BB, R5F109BC, R5F109BD, R5F109BE, R5F109GA, R5F109GB,<br>R5F109GC, R5F109GD, R5F109GE, R5F109LA, R5F109LB, R5F109LC,<br>R5F109LD, R5F109LE   |
|       | F12  |  |

|     |   |
|-----|---|
| F13 | R5F10A6A, R5F10A6C, R5F10A6D, R5F10A6E, R5F10AAA, R5F10AAC, R5F10AAD, R5F10AAE, R5F10ABA, R5F10ABC, R5F10ABD, R5F10ABE, R5F10AGA, R5F10AGC, R5F10AGD, R5F10AGE, R5F10AGF, R5F10AGG, R5F10ALC, R5F10ALD, R5F10ALE, R5F10ALF, R5F10ALG, R5F10AME, R5F10AMF, R5F10AMG, R5F10BAC, R5F10BAD, R5F10BAE, R5F10BAF, R5F10BAG, R5F10BBC, R5F10BBD, R5F10BBE, R5F10BBF, R5F10BBG, R5F10BGC, R5F10BGD, R5F10BGE, R5F10BGF, R5F10BGG, R5F10BLC, R5F10BLD, R5F10BLE, R5F10BLF, R5F10BLG, R5F10BME, R5F10BMF, R5F10BMG  |
| F14 | R5F10PAD, R5F10PAE, R5F10PBD, R5F10PBE, R5F10PGD, R5F10PGE, R5F10PGF, R5F10PGG, R5F10PGH, R5F10PGJ, R5F10PLE, R5F10PLF, R5F10PLG, R5F10PLH, R5F10PLJ, R5F10PME, R5F10PMF, R5F10PMG, R5F10PMH, R5F10PMJ, R5F10PPE, R5F10PPF, R5F10PPG, R5F10PPH, R5F10PPJ  |
| F15 | R5F113GK, R5F113GL, R5F113LK, R5F113LL, R5F113MK, R5F113ML, R5F113PG, R5F113PH, R5F113PJ, R5F113PK, R5F113PL, R5F113TG, R5F113TH, R5F113TJ, R5F113TK, R5F113TL  |
| F1A | R5F114GC, R5F114GD, R5F114GE, R5F114GF, R5F114GG  |
| G10 | R5F10Y14, R5F10Y16, R5F10Y17, R5F10Y44, R5F10Y46, R5F10Y47<br>R5F1056A, R5F1057A, R5F1058A  |
| G11 | R5F1051A, R5F1054A,(Debug Support Only)   |
| G12 | R5F10266, R5F10267, R5F10268, R5F10269, R5F1026A, R5F10277, R5F10278, R5F10279, R5F1027A, R5F102A7, R5F102A8, R5F102A9, R5F102AA, R5F10366, R5F10367, R5F10368, R5F10369, R5F1036A, R5F10377, R5F10378, R5F10379, R5F1037A, R5F103A7, R5F103A8, R5F103A9, R5F103AA  |
| G13 | R5F1006A, R5F1006C, R5F1006D, R5F1006E, R5F1007A, R5F1007C, R5F1007D, R5F1007E, R5F1008A, R5F1008C, R5F1008D, R5F1008E, R5F100AA, R5F100AC, R5F100AD, R5F100AE, R5F100AF, R5F100AG, R5F100BA, R5F100BC, R5F100BD, R5F100BE, R5F100BF, R5F100BG, R5F100CA, R5F100CC, R5F100CD, R5F100CE, R5F100CF, R5F100CG, R5F100EA, R5F100EC, R5F100ED, R5F100EE, R5F100EF, R5F100EG, R5F100EH, R5F100FA, R5F100FC, R5F100FD, R5F100FE, R5F100FF, R5F100FG, R5F100FH, R5F100FJ, R5F100FK, R5F100FL, R5F100GA, R5F100GC, R5F100GD, R5F100GE, R5F100GF, R5F100GG, R5F100GH, R5F100GJ, R5F100GK, R5F100GL, R5F100JC, R5F100JD, R5F100JE, R5F100JF, R5F100JG, R5F100JH, R5F100JJ, R5F100JK, R5F100JL, R5F100LC, R5F100LD, R5F100LE, R5F100LF, R5F100LG, R5F100LH, R5F100LJ, R5F100LK, R5F100LL, R5F100MF, R5F100MG, R5F100MH, R5F100MJ, R5F100MK, R5F100ML, R5F100PF, R5F100PG, R5F100PH, R5F100PJ, R5F100PK, R5F100PL, R5F100SH, R5F100SJ, R5F100SK, R5F100SL, R5F1016A, R5F1016C, R5F1016D, R5F1016E, R5F1017A, R5F1017C, R5F1017D, R5F1017E, R5F1018A, R5F1018C, R5F1018D, R5F1018E, R5F101AA, R5F101AC, R5F101AD, R5F101AE, R5F101AF, R5F101AG, R5F101BA, R5F101BC, R5F101BD, R5F101BE, R5F101BF, R5F101BG, R5F101CA, R5F101CC, R5F101CD, R5F101CE, R5F101CF, R5F101CG, R5F101EA, R5F101EC, R5F101ED, R5F101EE, R5F101EF, R5F101EG, R5F101EH, R5F101FA, R5F101FC, R5F101FD, R5F101FE, R5F101FF, R5F101FG, R5F101FH, R5F101FJ, R5F101FK, R5F101FL, R5F101GA, R5F101GC, R5F101GD, R5F101GE, R5F101GF, R5F101GG, R5F101GH, R5F101GJ, R5F101GK, R5F101GL, R5F101JC, R5F101JD, R5F101JE, R5F101JF, R5F101JG, R5F101JH, R5F101JJ, R5F101JK, R5F101JL, R5F101LC, R5F101LD, R5F101LE, R5F101LF, R5F101LG, R5F101LH, R5F101LJ, R5F101LK, R5F101LL, R5F101MF, R5F101MG, R5F101MH, R5F101MJ, R5F101MK, R5F101ML, R5F101PF, R5F101PG, |

|     |  |
|-----|--|
|     | R5F101PH, R5F101PJ, R5F101PK, R5F101PL, R5F101SH, R5F101SJ, R5F101SK, R5F101SL   |
| G14 | R5F104AA, R5F104AC, R5F104AD, R5F104AE, R5F104AF, R5F104AG, R5F104BA, R5F104BC, R5F104BD, R5F104BE, R5F104BF, R5F104BG, R5F104CA, R5F104CC, R5F104CD, R5F104CE, R5F104CF, R5F104CG, R5F104EA, R5F104EC, R5F104ED, R5F104EE, R5F104EF, R5F104EG, R5F104EH, R5F104FA, R5F104FC, R5F104FD, R5F104FE, R5F104FF, R5F104FG, R5F104FH, R5F104FJ, R5F104GA, R5F104GC, R5F104GD, R5F104GE, R5F104GF, R5F104GG, R5F104GH, R5F104GJ, R5F104GK, R5F104GL, R5F104JC, R5F104JD, R5F104JE, R5F104JF, R5F104JG, R5F104JH, R5F104JJ, R5F104LC, R5F104LD, R5F104LE, R5F104LF, R5F104LG, R5F104LH, R5F104LJ, R5F104LK, R5F104LL, R5F104MF, R5F104MG, R5F104MH, R5F104MJ, R5F104MK, R5F104ML, R5F104PF, R5F104PG, R5F104PH, R5F104PJ, R5F104PK, R5F104PL |
| G1A | R5F10E8A, R5F10E8C, R5F10E8D, R5F10E8E, R5F10E8A, R5F10E8C, R5F10EBD, R5F10EBE, R5F10EGA, R5F10EGC, R5F10EGD, R5F10EGE, R5F10ELC, R5F10ELD, R5F10ELE   |
| G1C | R5F10JBC, R5F10JGC, R5F10KBC, R5F10KGC   |
| G1D | R5F11AGG, R5F11AGH, R5F11AGJ   |
| G1E | R5F10FLC, R5F10FLD, R5F10FLE, R5F10FMC, R5F10FMD, R5F10FME   |
| G1F | R5F11B7C, R5F11B7E, R5F11BBC, R5F11BBE, R5F11BCC, R5F11BCE, R5F11BGC, R5F11BGE, R5F11BLC, R5F11BLE   |
| G1G | R5F11EA8, R5F11EAA, R5F11EB8, R5F11EBA, R5F11EF8, R5F11EFA   |
| G1H | R5F11FLJ, R5F11FLK, R5F11FLL   |
| I1A | R5F1076C, R5F107AC, R5F107AE, R5F107DE   |
| I1B | R5F10MME, R5F10MMG, R5F10MPE, R5F10MPG   |
| I1C | R5F10NLE, R5F10NLG, R5F10NME, R5F10NMG, R5F10NMJ, R5F10NPG, R5F10NPJ   |
| I1D | R5F11768, R5F1176A, R5F11778, R5F1177A, R5F117A8, R5F117AA, R5F117AC, R5F117BA, R5F117BC, R5F117GA, R5F117GC   |
| I1E | R5F11CBC, R5F11CCC   |
| L12 | R5F10RB8, R5F10RBA, R5F10RBC, R5F10RF8, R5F10RFA, R5F10RFC, R5F10RG8, R5F10RGA, R5F10RGC, R5F10RJ8, R5F10RJA, R5F10RJC, R5F10RLA, R5F10RLC   |
| L13 | R5F10WLA, R5F10WLC, R5F10WLD, R5F10WLE, R5F10WLF, R5F10WLG, R5F10WMA, R5F10WMC, R5F10WMD, R5F10WME, R5F10WMF, R5F10WMG   |
| L1A | R5F11MMD, R5F11MME, R5F11MMF, R5F11MPE, R5F11MPF, R5F11MPG   |
| L1C | R5F110ME, R5F110MF, R5F110MG, R5F110MH, R5F110MJ, R5F110NE, R5F110NF, R5F110NG, R5F110NH, R5F110NJ, R5F110PE, R5F110PF, R5F110PG, R5F110PH, R5F110PJ, R5F111ME, R5F111MF, R5F111MG, R5F111MH, R5F111MJ, R5F111NE, R5F111NF, R5F111NG, R5F111NH, R5F111NJ, R5F111PE, R5F111PF, R5F111PG, R5F111PH, R5F111PJ   |
| 110 | R5F51101, R5F51103, R5F51104, R5F51105, R5F5110H, R5F5110J   |
| 111 | R5F51111, R5F51113, R5F51114, R5F51115, R5F51116, R5F51117, R5F51118, R5F5111J   |
| 113 | R5F51135, R5F51136, R5F51137, R5F51138   |
| 130 | R5F51303, R5F51305, R5F51306, R5F51307, R5F51308   |
| 210 | R5F52103, R5F52104, R5F52105, R5F52106, R5F52107, R5F52108, R5F5210A, R5F5210B   |
| 21A | R5F521A6, R5F521A7, R5F521A8   |
| 220 | R5F52201, R5F52203, R5F52205, R5F52206   |

RX

|            |      |   |
|------------|------|---|
|            | 230  | R5F52305, R5F52306  |
|            | 231  | R5F52315, R5F52316, R5F52317, R5F52318  |
|            | 23T  | R5F523T3, R5F523T5  |
|            | 24T  | R5F524T8, R5F524TA, R5F524TB, R5F524TC, R5F524TE  |
|            | 24U  | R5F524UB, R5F524UC, R5F524UE  |
|            | 610  | R5F56104, R5F56106, R5F56107, R5F56108  |
|            | 621  | R5F56216, R5F56217, R5F56218  |
|            | 62G  | R5F562G7, R5F562GA  |
|            | 62N  | R5F562N7, R5F562N8  |
|            | 62T  | R5F562T6, R5F562T7, R5F562TA  |
|            | 630  | R5F56307, R5F56308, R5F5630A, R5F5630B, R5F5630D, R5F5630E<br>R5F56316, R5F56317, R5F56318, R5F5631A, R5F5631B, R5F5631D,<br>R5F5631E, R5F5631F, R5F5631G, R5F5631J, R5F5631K, R5F5631M,<br>R5F5631MF, R5F5631N, R5F5631P, R5F5631PF, R5F5631W, R5F5631Y,<br>R5S56310   |
|            | 631  | R5F5634B, R5F5634B_5V, R5F5634D, R5F5634D_5V, R5F5634E,<br>R5F5634E_5V  |
|            | 634  | R5F563NA, R5F563NB, R5F563ND, R5F563NE, R5F563NF, R5F563NK,<br>R5F563NW, R5F563NY   |
|            | 63N  | R5F563T4, R5F563T5, R5F563T6, R5F563TB, R5F563TB_5V, R5F563TC,<br>R5F563TC_5V, R5F563TE, R5F563TE_5V  |
|            | 63T  | R5F563T4, R5F563T5, R5F563T6, R5F563TB, R5F563TB_5V, R5F563TC,<br>R5F563TC_5V, R5F563TE, R5F563TE_5V  |
|            | 64M  | R5F564MF, R5F564MG, R5F564MJ, R5F564ML  |
|            | 651  | R5F56514, R5F56517, R5F56519, R5F5651C, R5F5651C_DUAL,<br>R5F5651E, R5F5651E_DUAL   |
|            | 65N  | R5F565N4, R5F565N7, R5F565N9, R5F565NC, R5F565NC_DUAL,<br>R5F565NE, R5F565NE_DUAL   |
|            | 71M  | R5F571MF, R5F571MG, R5F571MJ, R5F571ML  |
|            | A1   | R7S721000, R7S721000_DualSPI, R7S721001, R7S721001_DualSPI,<br>R7S721010, R7S721010_DualSPI, R7S721011, R7S721011_DualSPI,<br>R7S721020, R7S721020_DualSPI, R7S721021, R7S721021_DualSPI,<br>R7S721030, R7S721030_DualSPI, R7S721031, R7S721031_DualSPI,<br>R7S721034, R7S721034_DualSPI  |
| RZ         | T1   | R7S910001, R7S910002, R7S910006, R7S910007, R7S910011,<br>R7S910013, R7S910015, R7S910015_M3, R7S910016, R7S910016_M3,<br>R7S910017, R7S910017_M3, R7S910018, R7S910018_M3, R7S910025,<br>R7S910026, R7S910027, R7S910028, R7S910035, R7S910036,<br>R7S910101, R7S910102, R7S910106, R7S910107, R7S910111,<br>R7S910113, R7S910115, R7S910115_M3, R7S910116, R7S910116_M3,<br>R7S910117, R7S910117_M3, R7S910118, R7S910118_M3, R7S910125,<br>R7S910126, R7S910127, R7S910128, R7S910135, R7S910136 |
|            | S124 | R7FS124762A01CLM, R7FS124763A01CFL,<br>R7FS124763A01CFM, R7FS124772A01CLM,<br>R7FS124773A01CFL, R7FS124773A01CFM,<br>R7FS124773A01CNB, R7FS124773A01CNE,<br>R7FS124773A01CNF  |
| Synergy *1 | S3A7 | R7FS3A77C2A01CLK, R7FS3A77C3A01CFB,<br>R7FS3A77C2A01CBJ, R7FS3A77C3A01CFP,<br>R7FS3A77C2A01CLJ, R7FS3A77C3A01CFM,<br>R7FS3A77C3A01CNB   |
|            | S5D9 | R7FS5D97C2A01CBG, R7FS5D97C2A01CLK,<br>R7FS5D97C3A01CFB, R7FS5D97C3A01CFC,<br>R7FS5D97C3A01CFP, R7FS5D97E2A01CBG,<br>R7FS5D97E2A01CLK, R7FS5D97E3A01CFB,<br>R7FS5D97E3A01CFC, R7FS5D97E3A01CFP  |

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|      |   |
|------|---|
| S7G2 | R7FS7G27G2A01CBD, R7FS7G27G2A01CBG,<br>R7FS7G27G2A01CLK, R7FS7G27G3A01CFB,<br>R7FS7G27G3A01CFC, R7FS7G27G3A01CFP,<br>R7FS7G27H2A01CBD, R7FS7G27H2A01CBG,<br>R7FS7G27H2A01CLK, R7FS7G27H3A01CFB,<br>R7FS7G27H3A01CFC |
|------|---|

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Note: \*1: The Synergy Software Package (SSP) can supply additional Synergy device support. Please check the release note for the SSP version you are using for additional device support.

## 2.2 Code Generator Support

| CPU  | Family | Devices   |
|------|--------|---|
| RL78 | D1A    | R5F10CGB, R5F10CGC, R5F10CGD, R5F10CLD, R5F10CMD, R5F10CME, R5F10DGC, R5F10DGD, R5F10DGE, R5F10DLD, R5F10DLE, R5F10DMD, R5F10DME, R5F10DMF, R5F10DMG, R5F10DMJ, R5F10DPE, R5F10DPF, R5F10DPG, R5F10DPJ, R5F10DPK, R5F10DPL, R5F10DSJ, R5F10DSK, R5F10DSL, R5F10TPJ  |
|      | F12    | R5F10968, R5F1096A, R5F1096B, R5F1096C, R5F1096D, R5F1096E, R5F109AA, R5F109AB, R5F109AC, R5F109AD, R5F109AE, R5F109BA, R5F109BB, R5F109BC, R5F109BD, R5F109BE, R5F109GA, R5F109GB, R5F109GC, R5F109GD, R5F109GE, R5F109LA, R5F109LB, R5F109LC, R5F109LD, R5F109LE  |
|      | F13    | R5F10A6A, R5F10A6C, R5F10A6D, R5F10A6E, R5F10AAA, R5F10AAC, R5F10AAD, R5F10AAE, R5F10ABA, R5F10ABC, R5F10ABD, R5F10ABE, R5F10AGA, R5F10AGC, R5F10AGD, R5F10AGE, R5F10AGF, R5F10AGG, R5F10ALC, R5F10ALD, R5F10ALE, R5F10ALF, R5F10ALG, R5F10AME, R5F10AMF, R5F10AMG, R5F10BAC, R5F10BAD, R5F10BAE, R5F10BAF, R5F10BAG, R5F10BBC, R5F10BBD, R5F10BBE, R5F10BBF, R5F10BBG, R5F10BGC, R5F10BGD, R5F10BGE, R5F10BGF, R5F10BGG, R5F10BLC, R5F10BLD, R5F10BLE, R5F10BLF, R5F10BLG, R5F10BME, R5F10BMF, R5F10BMG  |
|      | F14    | R5F10PAD, R5F10PAE, R5F10PBD, R5F10PBE, R5F10PGD, R5F10PGE, R5F10PGF, R5F10PGG, R5F10PGH, R5F10PGJ, R5F10PLE, R5F10PLF, R5F10PLG, R5F10PLH, R5F10PLJ, R5F10PME, R5F10PMF, R5F10PMG, R5F10PMH, R5F10PMJ, R5F10PPE, R5F10PPF, R5F10PPG, R5F10PPH, R5F10PPJ  |
|      | F15    | R5F113GK, R5F113GL, R5F113LK, R5F113LL, R5F113MK, R5F113ML, R5F113PG, R5F113PH, R5F113PJ, R5F113PK, R5F113PL, R5F113TG, R5F113TH, R5F113TJ, R5F113TK, R5F113TL  |
|      | F1A    | R5F114GC, R5F114GD, R5F114GE, R5F114GF, R5F114GG  |
|      | G10    | R5F10Y14, R5F10Y16, R5F10Y17, R5F10Y44, R5F10Y46, R5F10Y47  |
|      | G11    | R5F1051A, R5F1054A, R5F1056A, R5F1057A, R5F1058A  |
|      | G12    | R5F10266, R5F10267, R5F10268, R5F10269, R5F1026A, R5F10277, R5F10278, R5F10279, R5F1027A, R5F102A7, R5F102A8, R5F102A9, R5F102AA, R5F10366, R5F10367, R5F10368, R5F10369, R5F1036A, R5F10377, R5F10378, R5F10379, R5F1037A, R5F103A7, R5F103A8, R5F103A9, R5F103AA  |
|      | G13    | R5F1006A, R5F1006C, R5F1006D, R5F1006E, R5F1007A, R5F1007C, R5F1007D, R5F1007E, R5F1008A, R5F1008C, R5F1008D, R5F1008E, R5F100AA, R5F100AC, R5F100AD, R5F100AE, R5F100AF, R5F100AG, R5F100BA, R5F100BC, R5F100BD, R5F100BE, R5F100BF, R5F100BG, R5F100CA, R5F100CC, R5F100CD, R5F100CE, R5F100CF, R5F100CG, R5F100EA, R5F100EC, R5F100ED, R5F100EE, R5F100EF, R5F100EG, R5F100EH, R5F100FA, R5F100FC, R5F100FD, R5F100FE, R5F100FF, R5F100FG, R5F100FH, R5F100FJ, R5F100FK, R5F100FL, R5F100GA, R5F100GC, R5F100GD, R5F100GE, R5F100GF, R5F100GG, R5F100GH, R5F100GJ, R5F100GK, R5F100GL, R5F100JC, R5F100JD, R5F100JE, R5F100JF, R5F100JG, R5F100JH, R5F100JJ, R5F100JK, |

|     |  |
|-----|--|
|     | R5F100JL, R5F100LC, R5F100LD, R5F100LE, R5F100LF, R5F100LG, R5F100LH, R5F100LJ, R5F100LK, R5F100LL, R5F100MF, R5F100MG, R5F100MH, R5F100MJ, R5F100MK, R5F100ML, R5F100PF, R5F100PG, R5F100PH, R5F100PJ, R5F100PK, R5F100PL, R5F100SH, R5F100SJ, R5F100SK, R5F100SL, R5F1016A, R5F1016C, R5F1016D, R5F1016E, R5F1017A, R5F1017C, R5F1017D, R5F1017E, R5F1018A, R5F1018C, R5F1018D, R5F1018E, R5F101AA, R5F101AC, R5F101AD, R5F101AE, R5F101AF, R5F101AG, R5F101BA, R5F101BC, R5F101BD, R5F101BE, R5F101BF, R5F101BG, R5F101CA, R5F101CC, R5F101CD, R5F101CE, R5F101CF, R5F101CG, R5F101EA, R5F101EC, R5F101ED, R5F101EE, R5F101EF, R5F101EG, R5F101EH, R5F101FA, R5F101FC, R5F101FD, R5F101FE, R5F101FF, R5F101FG, R5F101FH, R5F101FJ, R5F101FK, R5F101FL, R5F101GA, R5F101GC, R5F101GD, R5F101GE, R5F101GF, R5F101GG, R5F101GH, R5F101GJ, R5F101GK, R5F101GL, R5F101JC, R5F101JD, R5F101JE, R5F101JF, R5F101JG, R5F101JH, R5F101JJ, R5F101JK, R5F101JL, R5F101LC, R5F101LD, R5F101LE, R5F101LF, R5F101LG, R5F101LH, R5F101LJ, R5F101LK, R5F101LL, R5F101MF, R5F101MG, R5F101MH, R5F101MJ, R5F101MK, R5F101ML, R5F101PF, R5F101PG, R5F101PH, R5F101PJ, R5F101PK, R5F101PL, R5F101SH, R5F101SJ, R5F101SK, R5F101SL |
|     | R5F104AA, R5F104AC, R5F104AD, R5F104AE, R5F104AF, R5F104AG, R5F104BA, R5F104BC, R5F104BD, R5F104BE, R5F104BF, R5F104BG, R5F104CA, R5F104CC, R5F104CD, R5F104CE, R5F104CF, R5F104CG, R5F104EA, R5F104EC, R5F104ED, R5F104EE, R5F104EF, R5F104EG, R5F104EH, R5F104FA, R5F104FC, R5F104FD, R5F104FE, R5F104FF, R5F104FG, R5F104FH, R5F104FJ, R5F104GA, R5F104GC, R5F104GD, R5F104GE, R5F104GF, R5F104GG, R5F104GH, R5F104GJ, R5F104GK, R5F104GL, R5F104JC, R5F104JD, R5F104JE, R5F104JF, R5F104JG, R5F104JH, R5F104JJ, R5F104LC, R5F104LD, R5F104LE, R5F104LF, R5F104LG, R5F104LH, R5F104LJ, R5F104LK, R5F104LL, R5F104MF, R5F104MG, R5F104MH, R5F104MJ, R5F104MK, R5F104ML, R5F104PF, R5F104PG, R5F104PH, R5F104PJ, R5F104PK, R5F104PL   |
| G14 | R5F10E8A, R5F10E8C, R5F10E8D, R5F10E8E, R5F10E8A, R5F10EBC, R5F10EBD, R5F10EBE, R5F10EGA, R5F10EGC, R5F10EGD, R5F10EGE, R5F10ELC, R5F10ELD, R5F10ELE   |
| G1A | R5F10JBC, R5F10JGC, R5F10KBC, R5F10KGC   |
| G1C | R5F11AGG, R5F11AGH, R5F11AGJ   |
| G1D | R5F10FLC, R5F10FLD, R5F10FLE, R5F10FMC, R5F10FMD, R5F10FME   |
| G1E | R5F11B7C, R5F11B7E, R5F11BBC, R5F11BBE, R5F11BCC, R5F11BCE, R5F11BGC, R5F11BGE, R5F11BLC, R5F11BLE   |
| G1F | R5F11EA8, R5F11EAA, R5F11EB8, R5F11EBA, R5F11EF8, R5F11EFA   |
| G1G | R5F11FLJ, R5F11FLK, R5F11FLL   |
| G1H | R5F1076C, R5F107AC, R5F107AE, R5F107DE   |
| I1A | R5F10MME, R5F10MMG, R5F10MPE, R5F10MPG   |
| I1B | R5F10NLE, R5F10NLG, R5F10NME, R5F10NMG, R5F10NMJ, R5F10NPG, R5F10NPJ   |
| I1C | R5F11768, R5F1176A, R5F11778, R5F1177A, R5F117A8, R5F117AA, R5F117AC, R5F117BA, R5F117BC, R5F117GA, R5F117GC   |
| I1D |  |

|    |     |   |
|----|-----|---|
|    | I1E | R5F11CBC, R5F11CCC  |
|    | L12 | R5F10RB8, R5F10RBA, R5F10RBC, R5F10RF8, R5F10RFA,<br>R5F10RFC, R5F10RG8, R5F10RGA, R5F10RGC, R5F10RJ8,<br>R5F10RJA, R5F10RJC, R5F10RLA, R5F10RLC  |
|    | L13 | R5F10WLA, R5F10WLC, R5F10WLD, R5F10WLE, R5F10WLF,<br>R5F10WLG, R5F10WMA, R5F10WMC, R5F10WMD, R5F10WME,<br>R5F10WMF, R5F10WVG  |
|    | L1A | R5F11MMD, R5F11MME, R5F11MMF, R5F11MPE, R5F11MPF,<br>R5F11MPG   |
|    | L1C | R5F110ME, R5F110MF, R5F110MG, R5F110MH, R5F110MJ,<br>R5F110NE, R5F110NF, R5F110NG, R5F110NH, R5F110NJ,<br>R5F110PE, R5F110PF, R5F110PG, R5F110PH, R5F110PJ,<br>R5F111ME, R5F111MF, R5F111MG, R5F111MH, R5F111MJ,<br>R5F111NE, R5F111NF, R5F111NG, R5F111NH, R5F111NJ,<br>R5F111PE, R5F111PF, R5F111PG, R5F111PH, R5F111PJ |
|    | 110 | R5F51101, R5F51103, R5F51104, R5F51105, R5F5110H,<br>R5F5110J   |
|    | 111 | R5F51111, R5F51113, R5F51114, R5F51115, R5F51116,<br>R5F51117, R5F51118, R5F5111J   |
|    | 113 | R5F51135, R5F51136, R5F51137, R5F51138  |
|    | 130 | R5F51303, R5F51305, R5F51306, R5F51307, R5F51308  |
|    | 210 | R5F52103, R5F52104, R5F52105, R5F52106, R5F52107,<br>R5F52108, R5F5210A, R5F5210B   |
|    | 21A | R5F521A6, R5F521A7, R5F521A8  |
|    | 220 | R5F52201, R5F52203, R5F52205, R5F52206  |
|    | 230 | R5F52305, R5F52306  |
|    | 231 | R5F52315, R5F52316, R5F52317, R5F52318  |
|    | 23T | R5F523T3, R5F523T5  |
|    | 24T | R5F524T8, R5F524TA, R5F524TB, R5F524TC, R5F524TE  |
|    | 24U | R5F524UB, R5F524UC, R5F524UE  |
|    | 610 | R5F56104, R5F56106, R5F56107, R5F56108  |
|    | 621 | R5F56216, R5F56217, R5F56218  |
| RX | 62G | R5F562G7, R5F562GA  |
|    | 62N | R5F562N7, R5F562N8  |
|    | 62T | R5F562T6, R5F562T7, R5F562TA  |
|    | 630 | R5F56307, R5F56308, R5F5630A, R5F5630B, R5F5630D,<br>R5F5630E   |
|    | 631 | R5F56316, R5F56317, R5F56318, R5F5631A, R5F5631B,<br>R5F5631D, R5F5631E, R5F5631F, R5F5631G, R5F5631J,<br>R5F5631K, R5F5631M, R5F5631MF, R5F5631N, R5F5631P,<br>R5F5631PF, R5F5631W, R5F5631Y, R5S56310   |
|    | 634 | R5F5634B, R5F5634B_5V, R5F5634D, R5F5634D_5V, R5F5634E,<br>R5F5634E_5V  |
|    | 63N | R5F563NA, R5F563NB, R5F563ND, R5F563NE, R5F563NF,<br>R5F563NK, R5F563NW, R5F563NY   |
|    | 63T | R5F563T4, R5F563T5, R5F563T6, R5F563TB, R5F563TB_5V,<br>R5F563TC, R5F563TC_5V, R5F563TE, R5F563TE_5V  |
|    | 64M | R5F564MF, R5F564MG, R5F564MJ, R5F564ML  |
|    | 651 | R5F56514, R5F56517, R5F56519, R5F5651C, R5F5651C_DUAL,<br>R5F5651E, R5F5651E_DUAL   |
|    | 65N | R5F565N4, R5F565N7, R5F565N9, R5F565NC,<br>R5F565NC_DUAL, R5F565NE, R5F565NE_DUAL   |
|    | 71M | R5F571MF, R5F571MG, R5F571MJ, R5F571ML  |

|    |    |  |
|----|----|--|
|    |    | R7S721000, R7S721000_DualSPI, R7S721001,<br>R7S721001_DualSPI, R7S721010, R7S721010_DualSPI,<br>R7S721011, R7S721011_DualSPI, R7S721020,<br>R7S721020_DualSPI, R7S721021, R7S721021_DualSPI,<br>R7S721030, R7S721030_DualSPI, R7S721031,<br>R7S721031_DualSPI, R7S721034, R7S721034_DualSPI  |
|    | A1 |  |
| RZ |    | R7S910001, R7S910002, R7S910006, R7S910007, R7S910011,<br>R7S910013, R7S910015, R7S910015_M3, R7S910016,<br>R7S910016_M3, R7S910017, R7S910017_M3, R7S910018,<br>R7S910018_M3, R7S910025, R7S910026, R7S910027,<br>R7S910028, R7S910035, R7S910036, R7S910101, R7S910102,<br>R7S910106, R7S910107, R7S910111, R7S910113, R7S910115,<br>R7S910115_M3, R7S910116, R7S910116_M3, R7S910117,<br>R7S910117_M3, R7S910118, R7S910118_M3, R7S910125,<br>R7S910126, R7S910127, R7S910128, R7S910135, R7S910136 |
|    | T1 |  |

### 3. Smart Manual Support

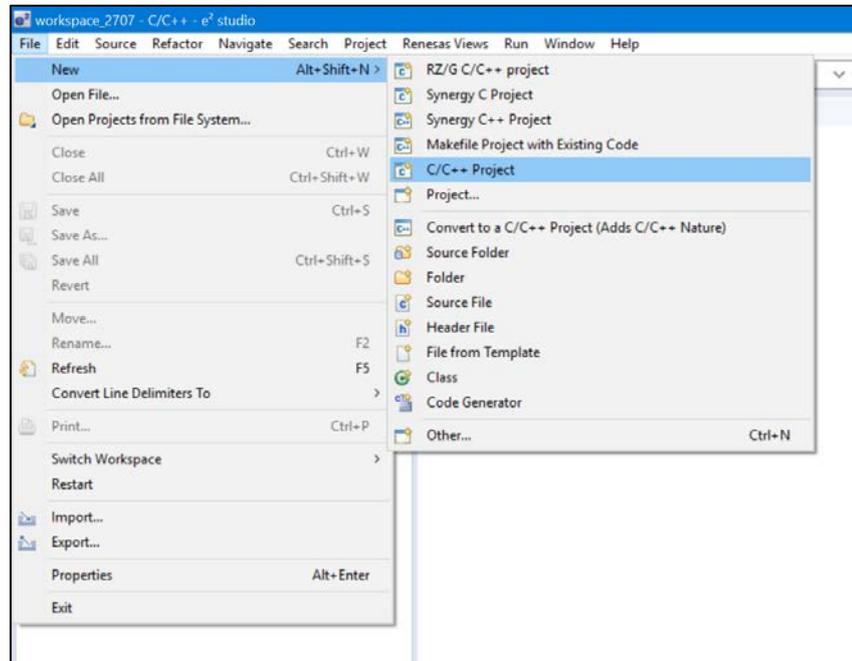
Smart manual support is delivered independently of e<sup>2</sup> studio releases when available. The following devices are available as of the 27<sup>th</sup> of July, 2017.

- RX62G
- RX62T
- RX63N
- RX63T
- RX64M
- RX71M
- RX110
- RX111
- RX113
- RX210
- RX220
- RX631
- RX651
- RX65N
- RX24U
- RX24T
- RL78/L12
- RL78/L13
- RL78/G14
- RL78/G13
- RL78/G12
- RL78/G11
- RL78/G10
- RL78/G1F

#### 4. What is new in 6.0.0?

| Component          | Device | Description   |
|--------------------|--------|---|
| Project Generation | All    | The project generation tools in 6.0 have been revised and the look and feel improved. |

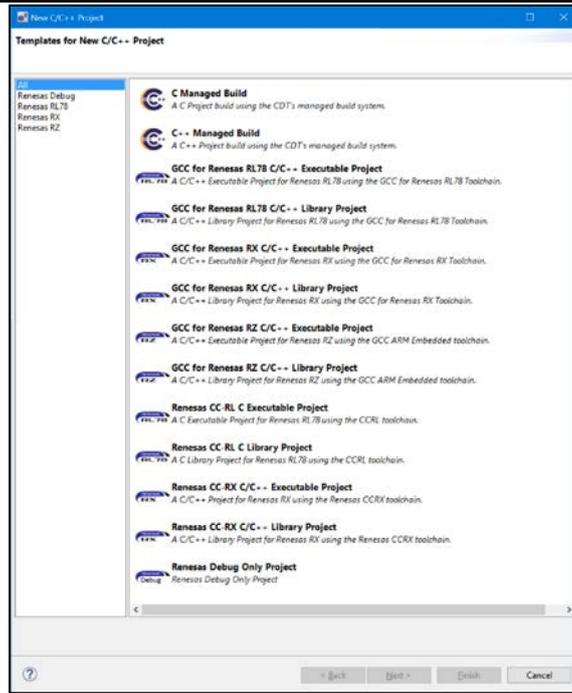
The new generator is accessed via the C/C++ Project.



The RZ/G project generator is accessed from the RZ/G C/C++ Project menu item in the same manner as 5.x.

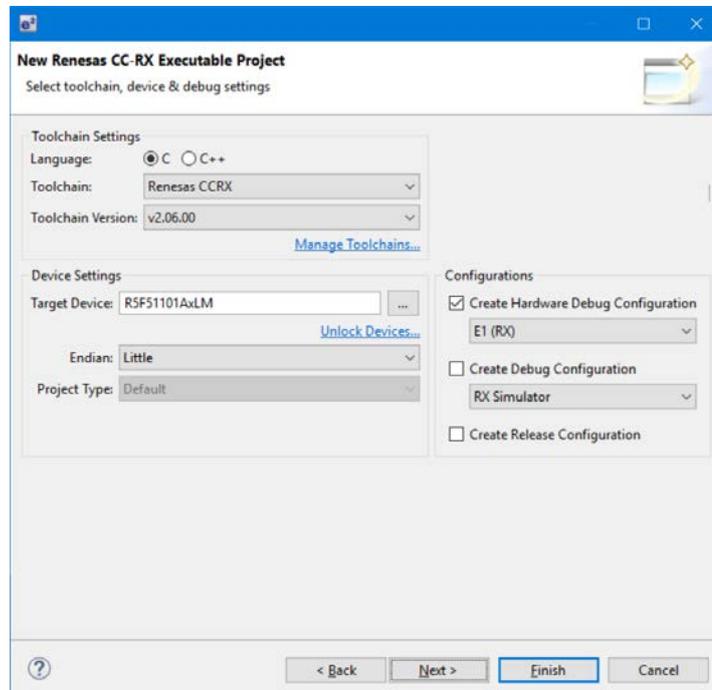
The Synergy project generators are accessed from Synergy C Project or Synergy C++ Project in the same manner as 5.x.

When selecting the C/C++ Project wizard the following dialog is shown



Note the C Managed Build and C++ Managed Build types are default CDT projects. Please use the Renesas project types for the device you wish to use. There are separate entries for each device, toolchain and project type (Executable or Library) combination.

The actual wizard to create the projects also has an updated look and feel. The functionality provided is very similar to 5.x.



When the project is created all generated files are stored within the project in the "generate" folder. This is to make it clearer which files within the project were provided by the project generator.

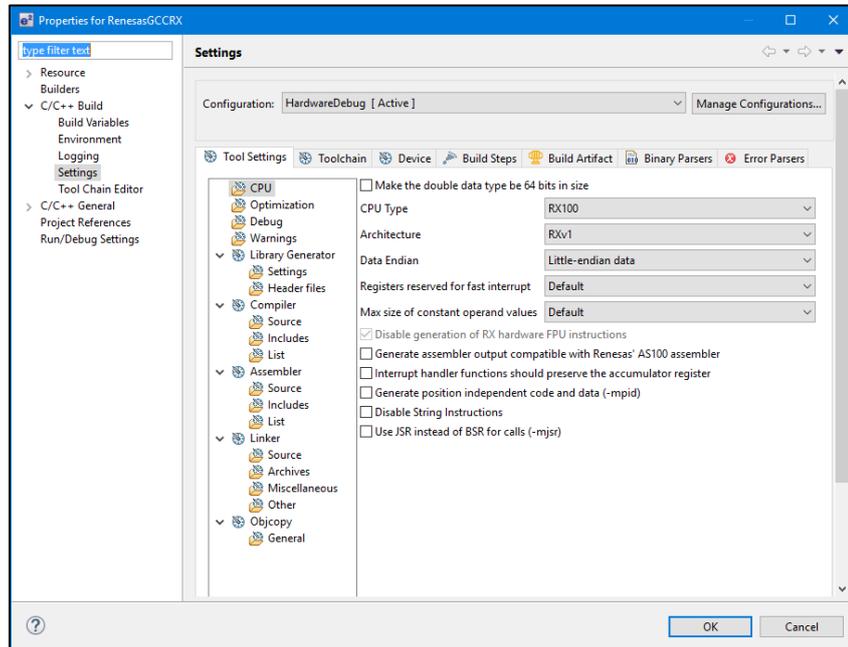
Revised  
Builder  
components

The builder components within e2 studio 6.0 have been overhauled and updated to work well with the latest CDT.

The affected toolchains are CCRX, CCRL, GCC RX and GCC RL. For information on migration of old projects please see the useful information and workarounds section.

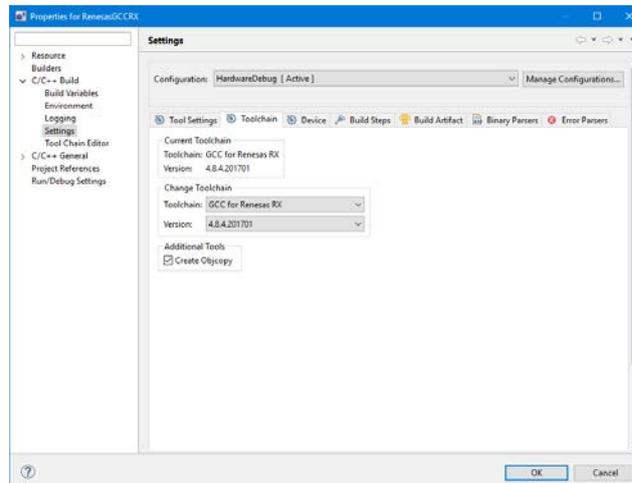
In addition the GCC ARM toolchain being used for RZ development has been migrated to now use the gnuarmeclipse open source plugins that are already in use for Synergy.

The new settings dialog are available from the C/C++ Build, Settings page within the project properties. See below:



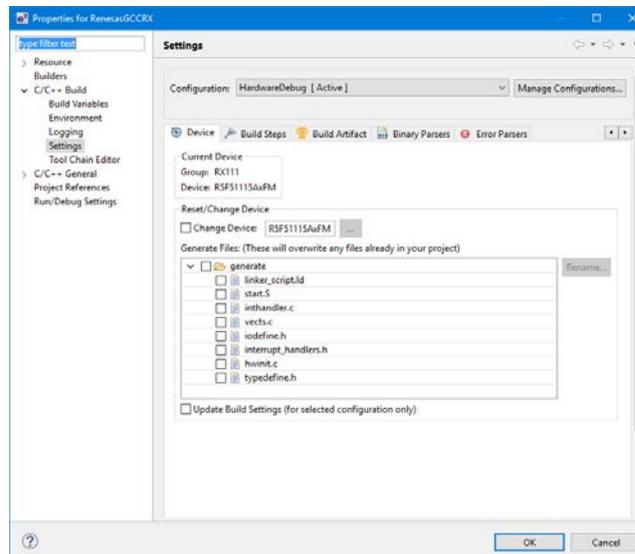
The look and feel for each toolchain is similar to before but there are some considerations worth noting:

1. The Toolchain tab
  - This tab controls the selected toolchain and version. The “Change toolchain version” functionality present previous e2 studio versions has been removed and replaced with this.
  - In addition extra tools such as “Objcopy” or “Libgen” can be enabled on this tab. When enabling the checkbox for the tools they will only then appear in the builder settings.



## 2. The Device tab

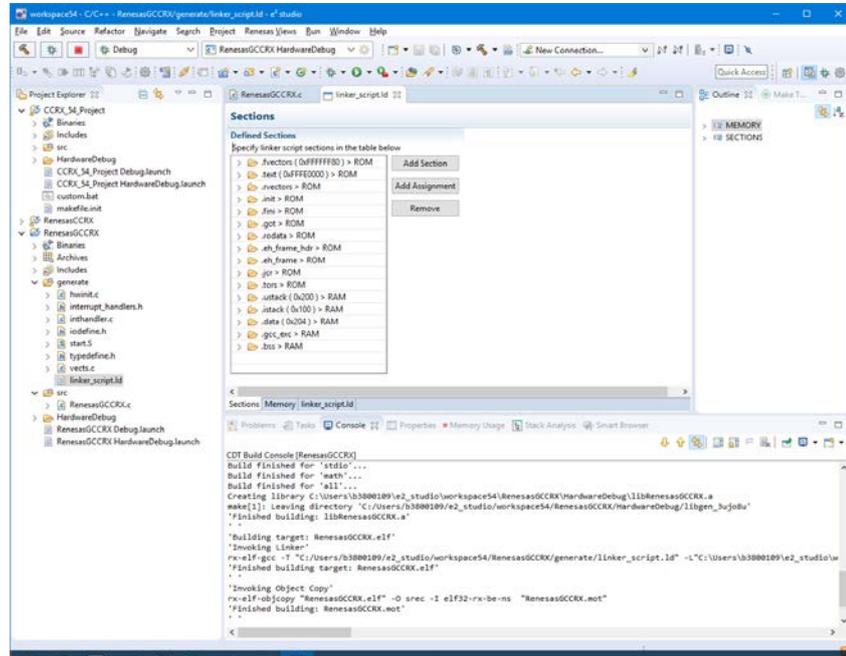
- Previous versions of e2 studio had a special preference page for the currently selected device. This has been removed and an additional tab named “Device” has been added to the build settings.
- Here it is possible to change the device, re-generate project generation files and update the build settings accordingly.



## 3. Linker section changes

- For CCRX and CCRL the linker sections are represented as a single string. The section editor is not shown on the settings page. To access the graphical section editor press the “...” button.
- For all GCC tools there is no longer a graphical section editor integrated into the settings user interface for the GCC build plugins.

- Instead it uses the .ld linker script directly. A special graphical editor of .ld files has been integrated within the e2 studio. Simply double click the .ld file in the project and you can again edit the sections graphically.



4. Renesas Quick Settings menu item

- In previous versions of e2 studio there has been a menu named “Renesas Quick Settings”.
- This menu item used to take you directly to the build settings for the selected project.
- This functionality cannot be implemented in e2 studio 6.0 so the menu item has been removed.

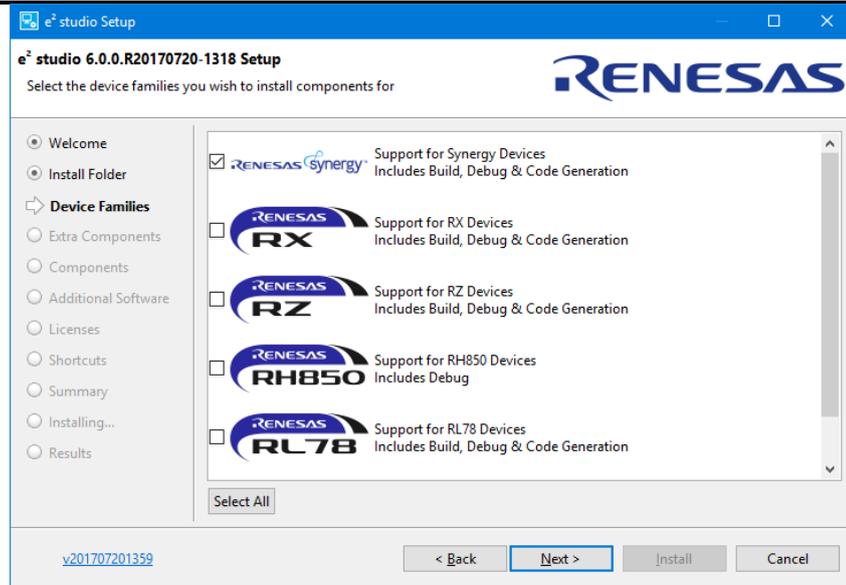
Installer

All

The e2 studio product structure has been enhanced so that each device can be installed in its own independent way.

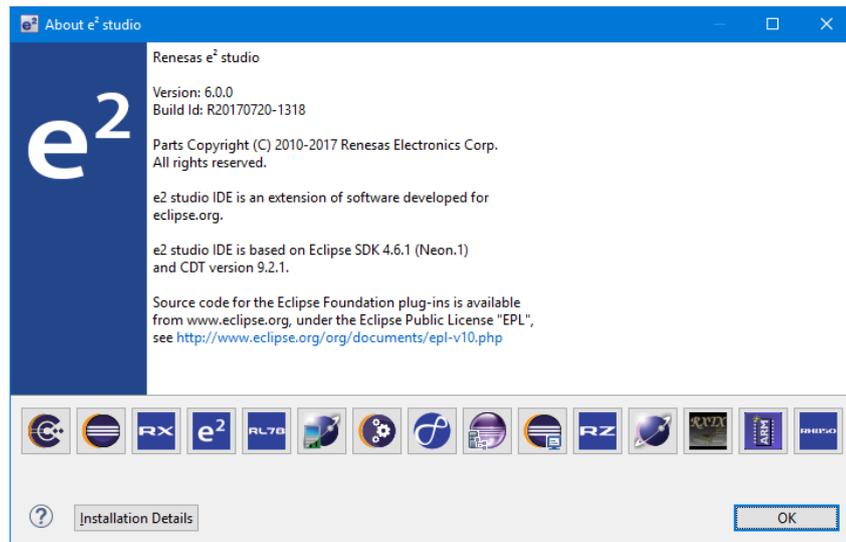
Each device’s support is versioned independently from the main 6.0 product. It means that updates to one device will not affect the other devices.

The installer allows you to select this at installation time.

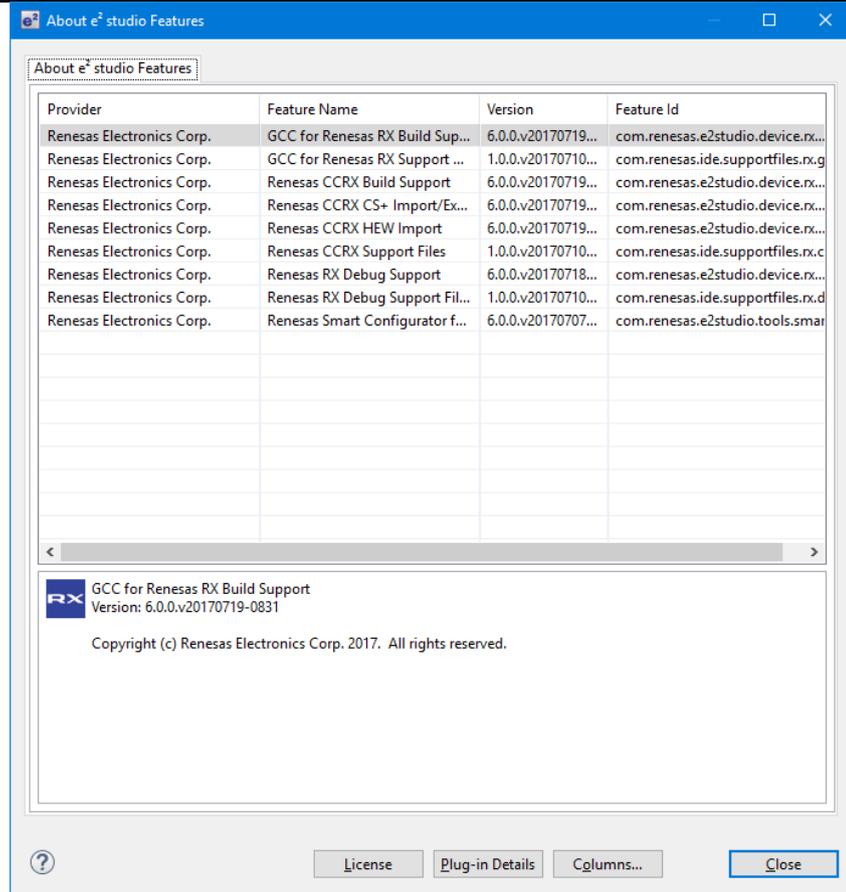


The above example shows a user only installing the Synergy device family. Subsequent updates of other device families will not affect this installation unless the main core of the product is also updated.

To see the version of your installed device feature you can visit the About Box.



Clicking on the device will give the installed versions of components for this device. e.g. In the example below RX was clicked:



This version information will be valuable if you need to discuss problems you encounter with Renesas technical support contacts.

|                        |     |   |
|------------------------|-----|---|
| Updated user interface | All | Some changes have been made to the e2 studio 6.0 user interface to improve the usability of the user interface. |
|------------------------|-----|---|

The most major improvement is the introduction of the Launch Bar.



This launch bar allows you to very clearly understand what will happen when the build and debug buttons are pressed. The selected project and debug configuration in the drop list will provide the context for the operation.

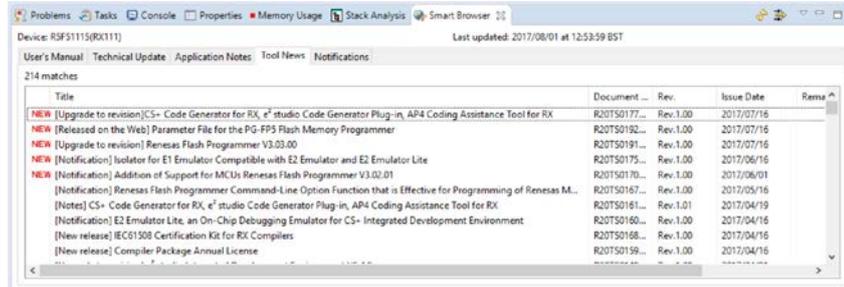
In addition the debug toolbar buttons have been switched off from the debug view and added to the main debug toolbar.

|                |    |  |
|----------------|----|--|
| RZ Semihosting | RZ | When using the RZ debugger in previous e2 studio semihosting was supported but did not fully support the SYS mode. This mode of operation is now supported in the e2 studio 6.0 RZ debugger when using the Segger J-link emulator. |
|----------------|----|--|

Smart  
Browser

All

The Smart Browser has been enhanced to show when updates are available for items shown within the user interface.



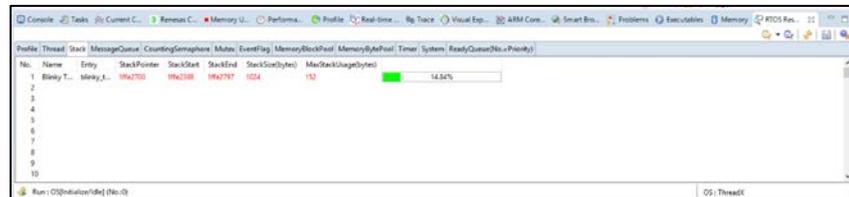
When items such as updates to documents or new tool news information are available a notification bubble will be displayed informing you that new items are available.



RTOS  
Graphical  
Stack Usage

Synergy

Stack usage is now shown in a graphical way when using the Partner OS plugin and ThreadX.

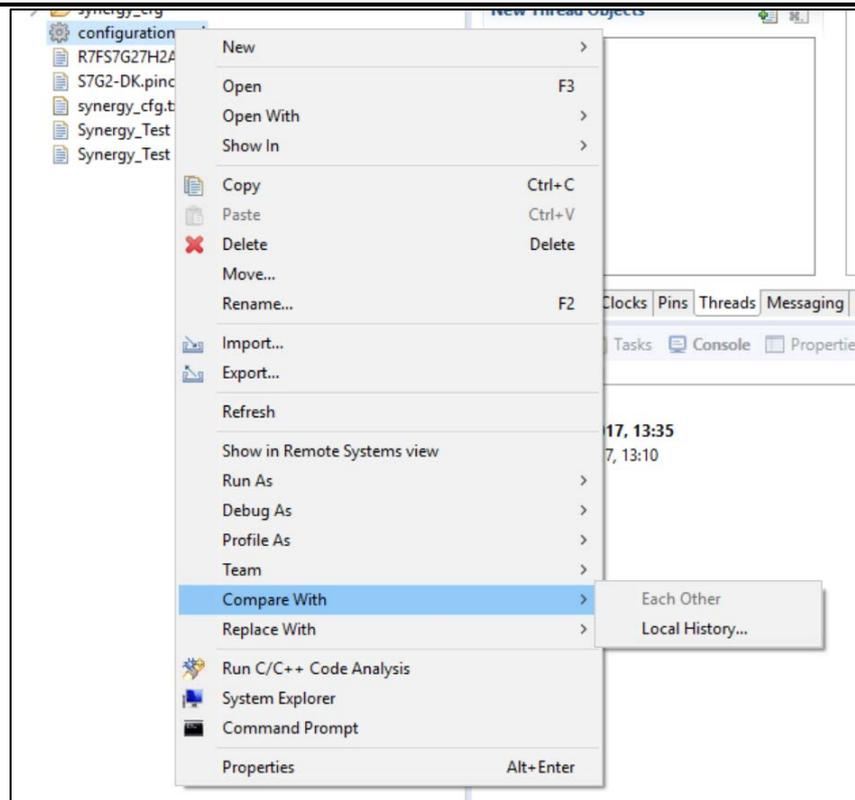


XML  
Comparison

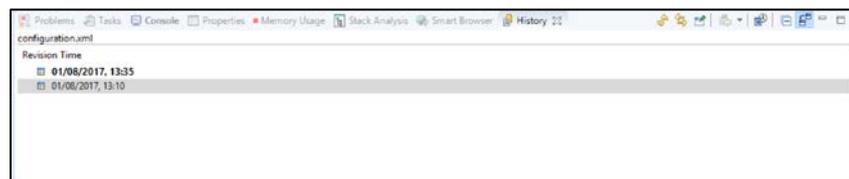
Synergy  
and RX,  
RZ

e<sup>2</sup> studio now has a XML file comparison tool built into the UI. This can be used for the configuration.xml files in the Synergy editor and the Smart Configurator.

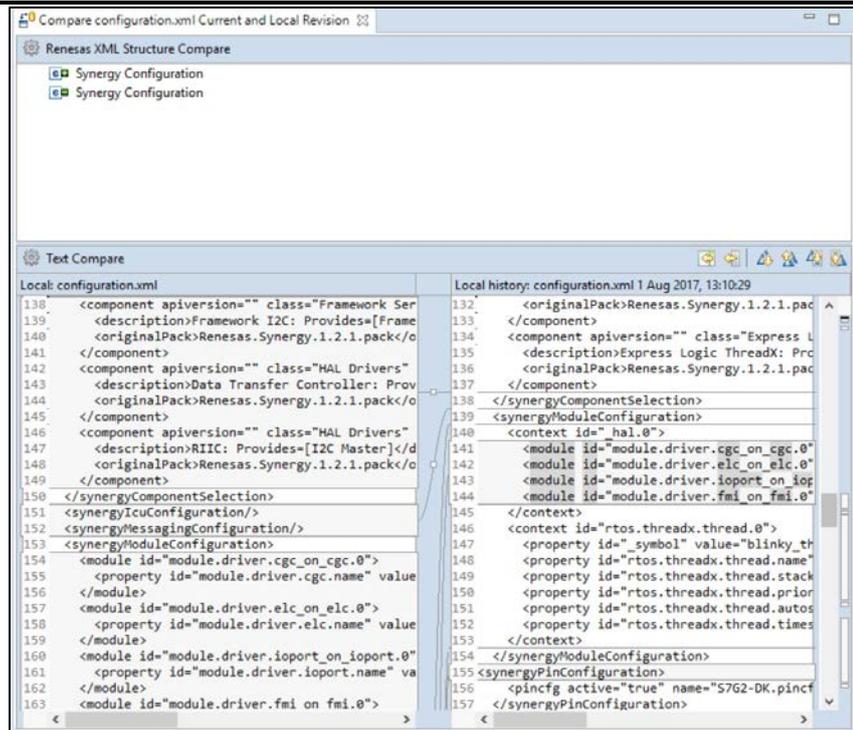
Right click on the file in the project tree that needs comparison and select "Compare With->Local History..."



The following dialog is then displayed:



These are the list of revisions of the file that was selected in the project tree. Double clicking an instance of the file will then compare with the current version on disk. A difference window is shown showing the differences:

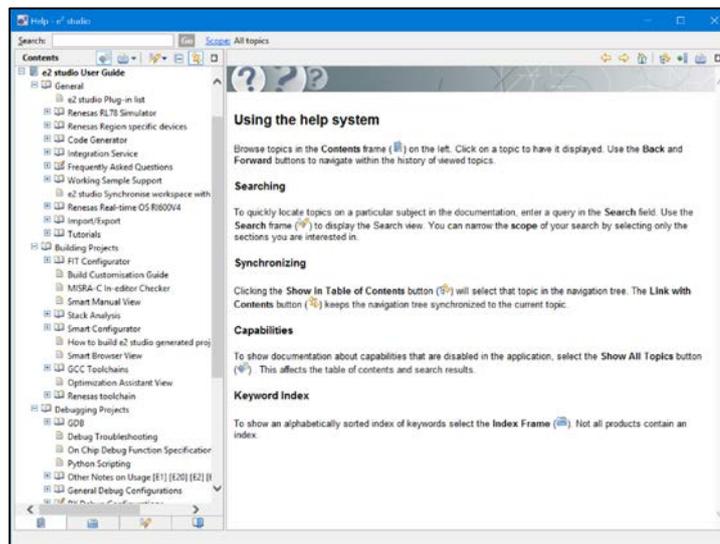


Help System

All

The help system in previous versions of e2 studio was not well organised which meant finding topics was not easy.

In e2 studio 6.0 the help has been re-structured to make it easier to find what you are looking for. See below:



Smart Configurator

RX, RZ

The main feature improvements for Smart Configurator in e2 studio 6.0 include:

- Code Generator driver support for RX64M [37 components]
- CG driver support for RX65N/1 (+2MB devices) [37 components]

- CG driver support for RX130 (+512KB devices) [35 components]

E2 Emulator RL78

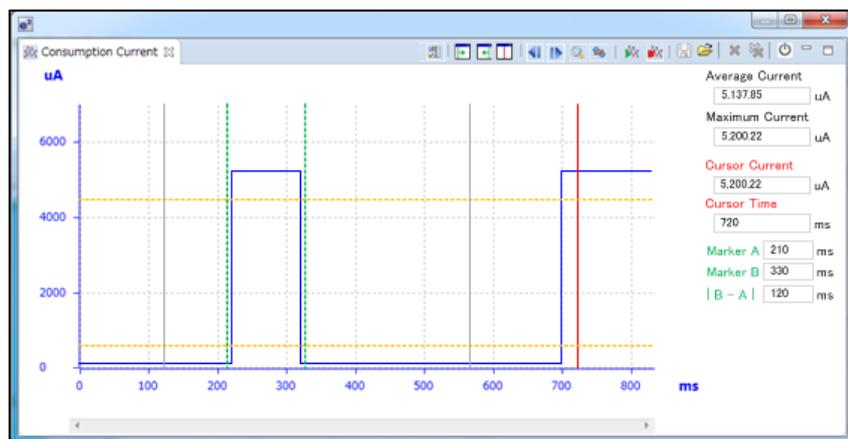
E2 emulator support has been added to e2 studio 6.0. This emulator offers all the same functions as the E1 emulator.

It also offers:

- Consumption current measurement support.
- External trigger support.

The Consumption current measurement shows graphically the current drawn by the board.

It allows monitor points to be set which are shown on this view as markers. This allows you to tie the source code to specific power consumption.



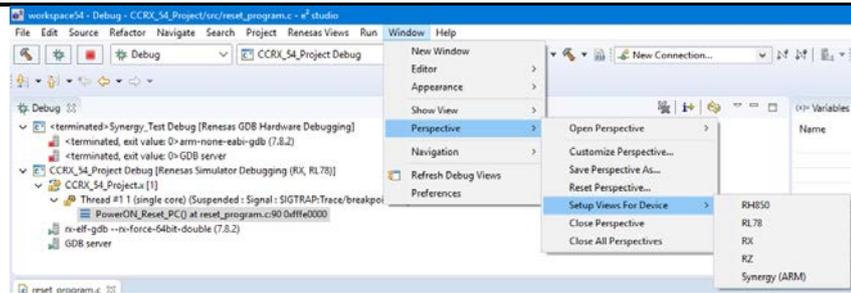
Application All

e2 studio has many debug views and not all are supported for all device families.

This can cause confusion so a new feature has been added to close debug views that are not supported by the current debug session.

This is available from the Window menu under the Perspective menu. Selecting the device will close all windows not supported by that device.

Note this menu item is only available in the debug perspective.



Enhanced  
Threads  
Page

Synergy

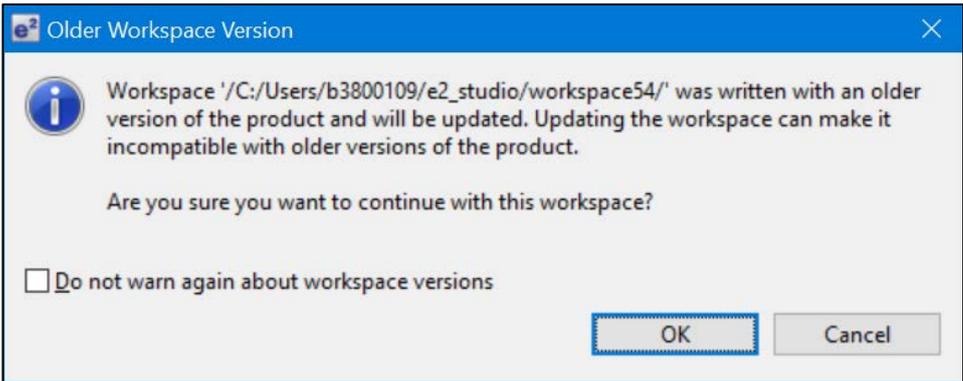
The Synergy threads page has had the following enhancements made to it:

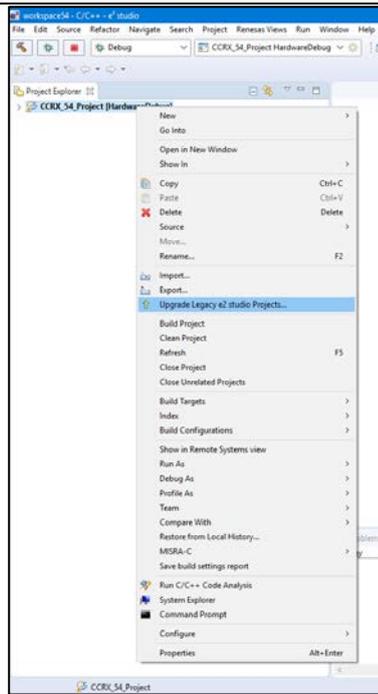
- Keyboard navigation within the module stack viewer
- Renaming threads will refactor code accordingly

### 5. Useful workarounds and information for 6.0.0

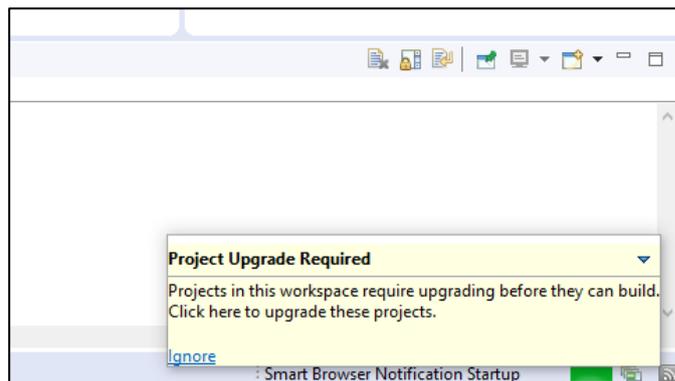
Please visit the Renesas FAQ for e<sup>2</sup> studio for the latest up to date information:

[Online FAQ link.](#)

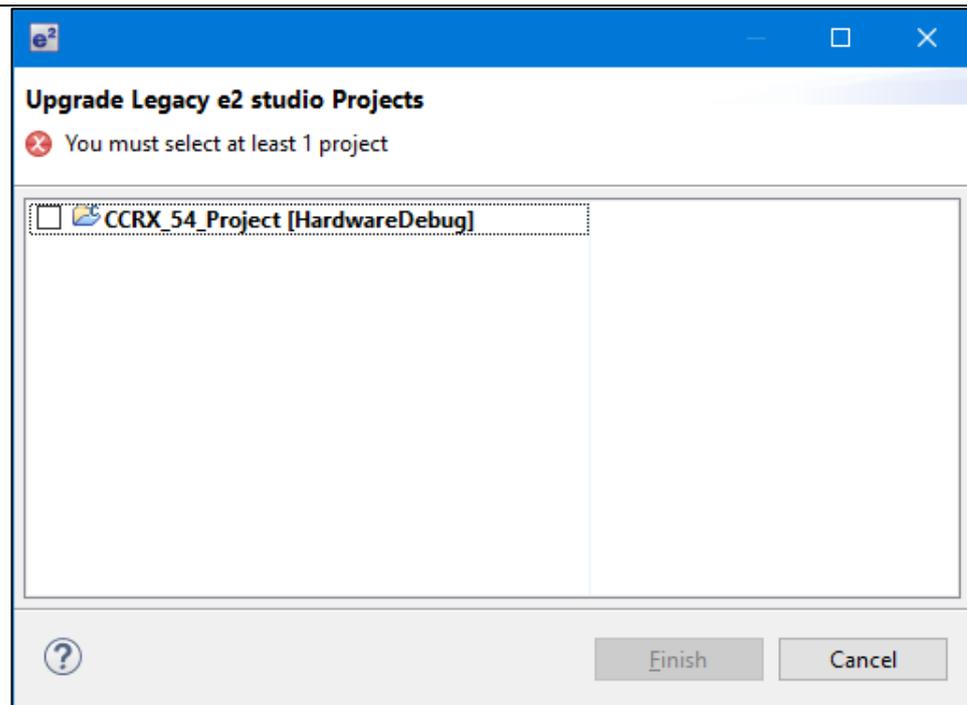
| ID | Component                       | Workaround or information   |
|----|---------------------------------|---|
|    | Application                     | <p>This version of e<sup>2</sup> studio is based on Eclipse Neon.1 and CDT 9.2.1. This release note does not describe the Eclipse framework and CDT plugin issues and fixes. You can find the detailed information on the sites below:</p> <p>For information on the Neon release see here:<br/> <a href="https://projects.eclipse.org/releases/neon">https://projects.eclipse.org/releases/neon</a></p> <p>CDT:<br/>                     Has been significantly improved and this version contains a major version up over 5.4:<br/>                     Please see New and Noteworthy for CDT here:<br/> <a href="https://wiki.eclipse.org/CDT/User/NewIn90">https://wiki.eclipse.org/CDT/User/NewIn90</a><br/> <a href="https://wiki.eclipse.org/CDT/User/NewIn91">https://wiki.eclipse.org/CDT/User/NewIn91</a><br/> <a href="https://wiki.eclipse.org/CDT/User/NewIn92">https://wiki.eclipse.org/CDT/User/NewIn92</a></p> <p>The Eclipse bug tracker is here:<br/> <a href="https://bugs.eclipse.org/bugs/">https://bugs.eclipse.org/bugs/</a></p> |
|    | SH support                      | <p>The Renesas SH device family is no longer supported in e2 studio.</p> <p>If you need to use the SH device support please use e2 studio 5.4 or earlier.</p>   |
|    | Importing old projects into 6.x | <p>All projects being migrated into e2 studio 6.0 from previous e2 studio versions will need to be migrated to the new builder plugins. The new builder plugins have different user interface pages and different option IDs.</p> <p>Upon opening an older workspace the following dialog would be displayed:</p>  <p>Clicking OK will update the workspace to e2 studio 6.0.</p> <p>Importing an existing project to the workspace or opening a workspace with old projects will automatically start the legacy project upgrade procedure.</p> <p>If for some reason this process does not start it is also possible to launch the “Upgrade Legacy of e2 studio Projects...” from the project context menu.</p>  |



The automatic system pops up a message bubble in the bottom left of the e2 studio application window.



After selecting the menu item or clicking the bubble the following dialog will be shown:



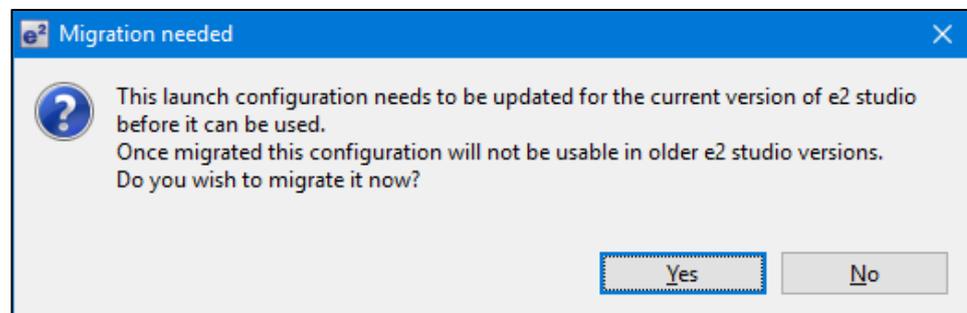
To upgrade the project, click the corresponding check box and then click Finish. Note, this will update the project to the latest build plugins and options. Before doing this you should ensure your project is backed up as this operation is not reversible.

It is possible to upgrade multiple projects in a single operation.

For the GCC toolchains for RX and RL changes have been made to the build options which mean we cannot guarantee the same binary output after upgrade. Please consider this before upgrading to 6.0.

For the GNUARM-NONE toolchain projects, they can be converted to 6.0 project but options and configuration might not be migrated exactly the same as original project. Please consider using 5.x in the meantime if you have any difficulty in migrating to 6.0, or create a new project on 6.0 environment.

Another consideration for migration is that debug configurations when opened in 6.0 will also need to be migrated. The following message will be displayed.

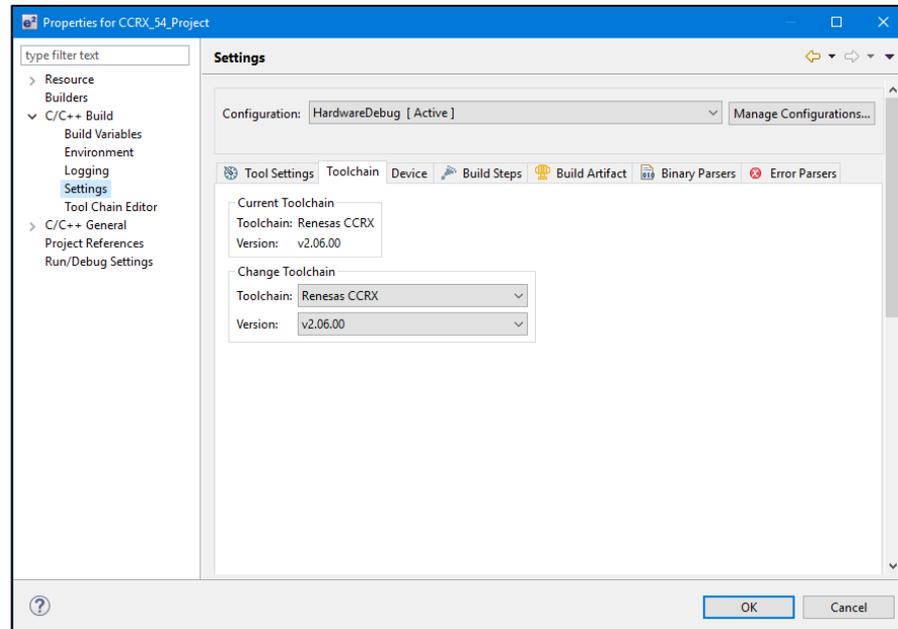


Please ensure that your projects are backed up or in revision control before migration allowing you to return to older versions if required.

**Toolchain Management** Before e2 studio 6.0 the toolchain management facility automatically upgraded or downgraded the imported project to the latest tools installed on the host machine.

This no longer happens in e2 studio 6.0. Instead the toolchain remains the same and user operation is the only way to change the toolchain version.

This operation is now available within the build settings on the toolchain tab. An example of CCRX is shown below:



If the particular toolchain version does not exist and build is performed then an error message is displayed and the build will fail.

**DS-5 to e2 studio converter**

The DS-5 to e2 studio import and conversion utility is not provided in e2 studio 6.0.

To import a DS-5 project to e2 studio 6.0, please use the import facility in 5.4 and then import into 6.0.

This utility will be provided in a later release of 6.0.

**RZ Toolchain**

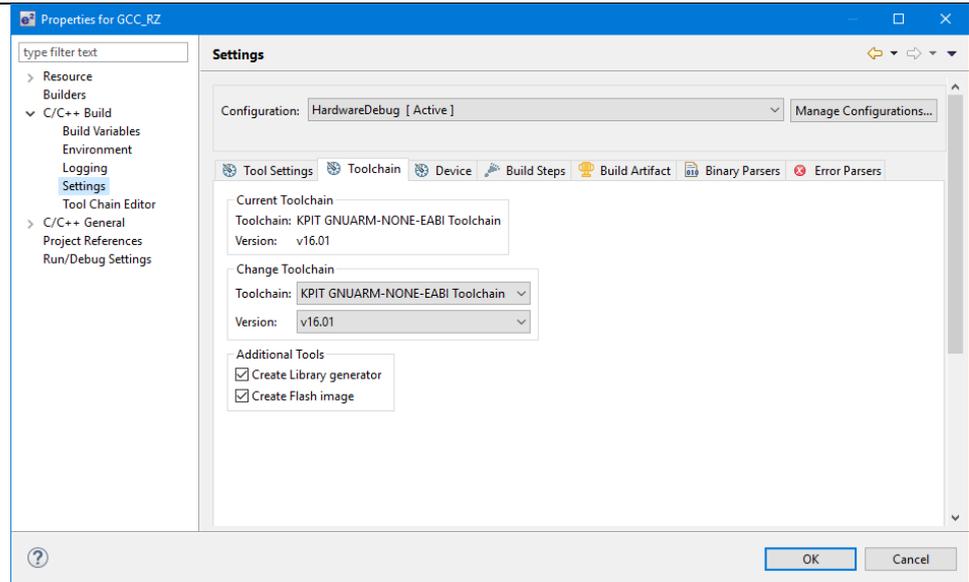
The now legacy KPIT GNU ARM-NONE toolchain is still supported within the e2 studio product but now using the gnuarmeclipse plugins.

In addition RZ within e2 studio now supports the GNU ARM Launchpad toolchain. Available from <https://launchpad.net/gcc-arm-embedded>.

One drawback of this toolchain is that it does not have a standard library builder provided in the same manner as the legacy KPIT ARM-NONE toolchain. To use this feature for ARM Launchpad and gain access to the more efficient optlib libraries a further download is required.

This can be downloaded within the e2 studio installer or directly from here: <https://gcc-renesas.com/rz/rz-download-toolchains/>

Once integrated it is possible to integrate the library generator from the toolchain tab of the build settings page.



See “Create Library generator” option. Once checked the library generator (libgen) is added to the available tool settings.

|                              |   |
|------------------------------|---|
| <p>CCRX to GCC converter</p> | <p>The CCRX to GCC e2 studio import and conversion utility is not provided in e2 studio 6.0.</p>  |
|                              | <p>To import and convert a CCRX to GCC and e2 studio 6.0, please use the import facility in 5.4 and then import into 6.0.</p>   |
|                              | <p>This utility will be provided in a later release of 6.0.</p>   |
| <p>QE compatibility</p>      | <p>If QE for TCP/IP V1.0.0 is used, please update it to V1.0.1.<br/>Other QE series can be used with e2 studio 6.0.</p>   |
|                              | <p>What is QE?<br/><a href="https://www.renesas.com/products/software-tools/tools/solution-toolkit/qe.html">https://www.renesas.com/products/software-tools/tools/solution-toolkit/qe.html</a></p>  |
|                              | <p>Details of QE for TCP/IP<br/><a href="https://www.renesas.com/products/software-tools/tools/solution-toolkit/qe-qe-for-tcp-ip.html">https://www.renesas.com/products/software-tools/tools/solution-toolkit/qe-qe-for-tcp-ip.html</a></p> |
| <p>5954 Application</p>      | <p>If you experience the error message “org.eclipse.swt.SWTErrror: No more handles” this can be caused by certain multi-monitor software and the Eclipse framework.</p>   |
|                              | <p>If this error occurs there are 2 workarounds:</p>  |
|                              | <ol style="list-style-type: none"> <li>1. Use a single monitor display.</li> <li>2. Uninstall the multiple monitor software from your graphics chipset vendor and revert to the standard Windows multi-monitor feature.</li> </ol>          |
| <p>6981 RL78 Debugging</p>   | <p>When debugging IAR C source file with an OCD emulator (E1), the Monitor program area (0x00002-0x00003) is used.</p>  |
|                              | <p>So this area must be excluded from usable address space. Please add '-HFF' in the linker option.</p>   |
|                              | <p>- Open Property.</p>   |
|                              | <p>- Select [C/C++ build]-[Settings] at left side.</p>  |

- Select 'IAR RL78 Xlink linker' at right side, add '-HFF' at the textbox 'command'.

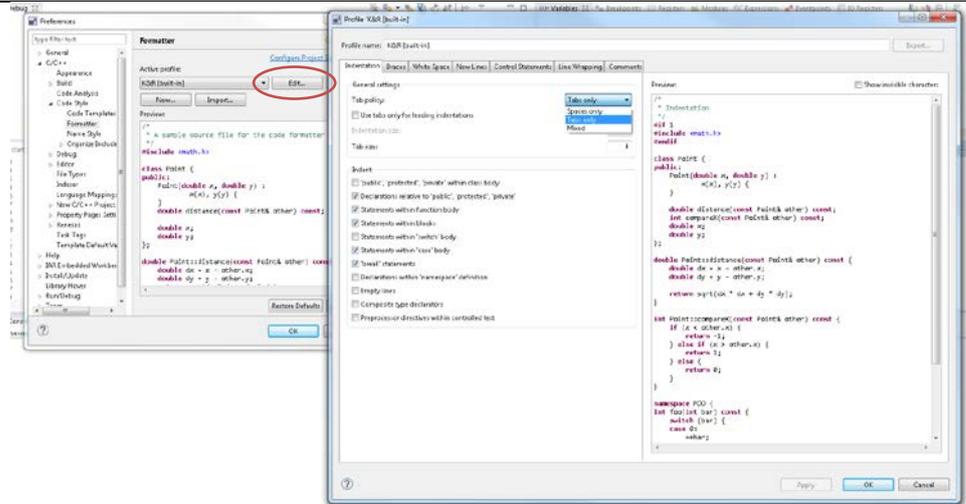
Not doing this will cause problems with connection and download when using interrupts.

|      |              |   |
|------|--------------|---|
| NA   | Application  | <p>If you are experiencing slow building of projects within e<sup>2</sup> studio there are some possibilities to improve.</p> <p>The system environment will attempt to find the make.exe tool via the system environment. If you ensure the directory make resides in is at the start of the path variable it will find it more quickly. Especially important if there are network drives in the path.</p> <p>In the project properties, C/C++ Build tab, behavior tab you can switch on parallel build. This will take advantage of the multi-cores on your host machine if it has them.</p>  |
| NA   | RZ GCC       | <p>In 3.0 the KPIT GCC RZ toolchain was supported at version 14.01. This version is no longer supported within e<sup>2</sup> studio.</p> <p>KPIT modified the name of their ARM toolchain to be ARM-none-eabi to follow standard ARM naming convention like other GCC toolchain vendors.</p> <p>The ARM-none toolchain is available at versions 14.01, 14.02 and 16.01 from the <a href="http://www.gcc-renesas.com">www.gcc-renesas.com</a> website. The binaries in the 14.01 version are identical to those used in the 14.01 RZ toolchain.</p> <p>Once the toolchain is installed your projects will be imported and ported to ensure there is as little disruption as possible due to this change.</p> |
| NA   | KPIT GCC     | <p>The KPIT toolchains are now no longer supported by the <a href="http://www.kpitgnutools.com">www.kpitgnutools.com</a> website. Support is now available from the <a href="http://www.gcc-renesas.com">www.gcc-renesas.com</a> website.</p> <p>In addition, there are two new releases for the GNU toolchains for RX and RL78. These are now named Renesas GCC for RX and Renesas GCC for RL78.</p> <p>Both integrate into e<sup>2</sup> studio and can be selected from the project wizard.</p>  |
| 2010 | HEW Importer | <p>Symptoms: Project fails to build after importing a legacy project from HEW</p> <p>Conditions: If a long filename or path is used, and the HEW project importer is used, the project may fail to build.</p> <p>Workaround: Move the original HEW project to a shallow directory structure (i.e.) C:\Workspace and import from there. Also, ensure that the HEW project is relocated before importing into e<sup>2</sup> studio.</p>   |
| 1922 | Application  | <p>Symptoms: Project fails to build in first instance after archive project import (not from HEW)</p> <p>Conditions: If an archived project is imported, it may fail to build the first time, due to a residual .d file.</p> <p>Workaround: Clean and Build a second time.</p>  |
| 2762 | CODAN        | <p>When using assembly code within a C source file, CODAN errors can be observed in the editor. Even though the project builds successfully.</p> <p>We do not have a workaround for this at this time.</p>  |

On occasion, you may also see CODAN errors for C source files. This is normally a case of the indexer needing to be refreshed.

Right click on the project, select Index->Freshen all files. Then right click again select Index-Rebuild. This should solve unexpected CODAN errors in C source files.

|      |                      |   |
|------|----------------------|---|
| 2728 | GDB                  | <p>Step into does not always work when using the CC-RX 1.02.01 toolchain.</p> <p>To ensure this behaves correctly you will need to use CC-RX 2.00.00 or greater as this issue with the debug information is corrected in this release.</p>  |
| NA   | Eventpoints          | <p>If eventpoints do not always work just after they are set, you can use the "Apply to Target" toolbar button in the Eventpoint view to send the Eventpoints to the target manually. This will always ensure the debugger target has all the required eventpoint updates before execution starts.</p>  |
| 5772 | IAR Plugins          | <p>The IAR Plugin Manager is included in e<sup>2</sup> studio and provides support for RX, RL78, RH850 and RZ (ARM).</p> <p>This tool, simplifies installation and configuration of IAR toolchain plugins. You can access this through Help -&gt; IAR Embedded Workbench plugin manager.</p>  |
| 5903 | Code Generator       | <p>For the following RL78 code generator project, "Peripheral Functions" view tabs may not be operated with double-clicking "Peripheral Functions" branch of Project Explorer view.</p> <p>After creating/loading the project, please show "Code Preview" view by double-clicking of "Code preview" branch at Project Explorer tree at first. Then, please access Code Generator setting tabs by double-clicking Project Explorer tree or using pull-down menu by pressing triangle button at the up-right corner of Peripheral Functions view.</p> <p>RL78/G12, RL78/G13, RL78/G14, RL78/G1A, RL78/I1A, RL78/F13, RL78/F14, RL78/F12, RL78/L12</p> |
| 6184 | RL78/CC-RL debugging | <p>When the load module for RL78/G10 which created at CC-RL is debugged in E1, please specify the following option:</p> <p>[Linker] -&gt; [Device] -&gt; "Set enable/disable on-chip debug by link option"</p>  |
| 7217 | Application          | <p>The restore default settings does not restore all of the options set during project generation. Instead, it sets the defaults to the base settings for the device family in use.</p>   |
| 7524 | RZ/T1 Debugging      | <p>In a RZ/T1 RAM-based project, the "Reload" function does not work.</p> <p>Reloading or re-downloading during debugging resets the device and the RAM content is erased.</p> <p>To continue the debugging, disconnect and connect the debugger again.</p>   |
|      | Use spaces as tabs   | <p>Eclipse and CDT both have settings for use spaces as tabs. The option on the Editor preferences page conflicts with the CDT formatter settings.</p> <p>To change the use spaces as tabs option in e<sup>2</sup> studio please use this page:</p>   |



|                                   |   |
|-----------------------------------|---|
| <p>Installer problems</p>         | <p>In some situations, the AVG virus checker appears to interfere with the e2 studio installation process. If you experience such a problem, please temporarily disable the AVG tool and try the installation again.</p>  |
| <p>Antivirus</p>                  | <p>In some situations, the Norton anti-virus tool can interfere with the building of Renesas Synergy projects. If possible, please disable the antivirus program when building Renesas Synergy projects on systems with Norton Antivirus installed.</p>   |
| <p>Green Hills RH850 Projects</p> | <p>When debugging the RH850 object built with the Green Hills compiler in e2 studio, specify the following option for the compiler option.</p> <p style="padding-left: 40px;">-gtws</p> <p>The GUI setting menu is as follows.</p> <p>[GHS C Compiler for V800 Standalone]-[Debugging Option]</p> <p style="padding-left: 40px;">"Generate Target-Walkable Stack" -&gt; On</p> <p>If this option is not specified, Step Over and Step Return may not work properly.</p> |

## 6. Open Issues in 6.0.0

Open issues in the e2 studio 6.0 product will be kept up to date [here](#):

Please visit to see the latest open issue list.

## 7. Appendix

### 7.1 Website and Support

Renesas Electronics Website

<http://www.renesas.com/>

Inquiries

<http://www.renesas.com/contact/>

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