e² studio 5.2.0.20

Release Note

Introduction

This document outlines the device support, new features added in 5.2.0, fixed issues and open issues in e² studio 5.2.0.

Contents

1.   Product Information

1.1   Supported Operating Systems

These operating systems are officially supported by e2 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 e² studio 5.2.

		Renesas	Launchpad GCC (*2)	Renesas GCC/ KPIT GCC (*3)	IAR (*4)	Green Hills (*5)
Device Family	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
	SH	Yes (SHC)	No	Yes	No	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 website and is available here: https://launchpad.net/gcc-arm-embedded.

*3: Legacy KPIT GCC toolchains are now available from 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 Workshop 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 e² studio product. These plugins are provided by Green Hills and are not supported by Renesas.

2.   Device Support

2.1   Project Generator Support

CPU	Family	Devices
RH850	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)
	-	R7F701Z05, R7F701Z06, R7F701Z07,(Debug Support Only)
	F1H	R7F701501, R7F701502, R7F701503, R7F701506, R7F701507, R7F701508, R7F701511, R7F701512, R7F701513,(Debug Support Only)
	F1H-GW	R7F701521, R7F701522, R7F701524, R7F701525,(Debug Support Only)
	F1L	R7F701002xAFP, R7F701003xAFP, R7F701006xAFP, R7F701007xAFP, R7F701008xAFP, R7F701009xAFP, R7F701010xAFP, R7F701011xAFP, R7F701012xAFP, R7F701013xAFP, R7F701014xAFP, R7F701015xAFP, R7F701016xAFP, R7F701017xAFP, R7F701018xAFP, R7F701019xAFP, R7F701020xAFP, R7F701021xAFP, R7F701022xAFP, R7F701023xAFP, R7F701024xAFP, R7F701025xAFP, R7F701026xAFP, R7F701027xAFP, R7F701028xAFP, R7F701029xAFP, R7F701030xAFP, R7F701032xAFP, R7F701033xAFP, R7F701034xAFP, R7F701040, R7F701041, R7F701042, R7F701043, R7F701044, R7F701045, R7F701046, R7F701047, R7F701048, R7F701049, R7F701050, R7F701051, R7F701052, R7F701053, R7F701054, R7F701055, R7F701056, R7F701057,(Debug Support Only)
	F1M	R7F701544, R7F701545, R7F701548, R7F701549, R7F701552, R7F701553, R7F701564, R7F701565, R7F701568, R7F701569, R7F701572, R7F701573,(Debug Support Only)
	P1M	R7F701304, R7F701305, R7F701310, R7F701311, R7F701312, R7F701313, R7F701314, R7F701315, R7F701318, R7F701319, R7F701320, R7F701321, R7F701322, R7F701323,(Debug Support Only)
	-	R7F701060xAFP, R7F701062xAFP, R7F701064xAFP, R7F701065xAFP, R7F701067xAFP, R7F701069xAFP, R7F701071xAFP,(Debug Support Only)
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
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, R5F10EBA, R5F10EBC, 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
RX	110	R5F51101, R5F51103, R5F51104, R5F51105, R5F5110H, R5F5110J
	111	R5F51111, R5F51113, R5F51114, R5F51115, R5F51116, R5F51117, R5F51118, R5F5111J
	113	R5F51135, R5F51136, R5F51137, R5F51138
	130	R5F51303, R5F51305
	210	R5F52103, R5F52104, R5F52105, R5F52106, R5F52107, 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
	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
	631	R5F56316, R5F56317, R5F56318, R5F5631A, R5F5631B, R5F5631D, R5F5631E, R5F5631F, R5F5631G, R5F5631J, R5F5631K, R5F5631M, R5F5631MF, R5F5631N, R5F5631P, R5F5631PF, R5F5631W, R5F5631Y, R5S56310
	634	R5F5634B, R5F5634B_5V, R5F5634D, R5F5634D_5V, R5F5634E, R5F5634E_5V

	63N	R5F563NA, R5F563NB, R5F563ND, R5F563NE, R5F563NF, R5F563NK, R5F563NW, R5F563NY
	63T	R5F563T4, R5F563T5, R5F563T6, R5F563TB, R5F563TB_5V, R5F563TC, R5F563TC_5V, R5F563TE, R5F563TE_5V
	64M	R5F564MF, R5F564MG, R5F564MJ, R5F564ML
	651	R5F56514, R5F56517, R5F56519
	65N	R5F565N4, R5F565N7, R5F565N9
	71M	R5F571MF, R5F571MG, R5F571MJ, R5F571ML
RZ	A1	R7S721000, R7S721000_DualSPI, R7S721001, R7S721001_DualSPI, R7S721010, R7S721010_DualSPI, R7S721011, R7S721011_DualSPI, R7S721020, R7S721020_DualSPI, R7S721021, R7S721021_DualSPI, R7S721030, R7S721030_DualSPI, R7S721031, R7S721031_DualSPI, R7S721034, R7S721034_DualSPI
	T1	R7S910001, R7S910002, R7S910006, R7S910007, R7S910011, R7S910013, R7S910015, R7S910015_M3, R7S910016, R7S910016_M3, R7S910017, R7S910017_M3, R7S910018, R7S910018_M3, R7S910025, R7S910026, R7S910027, R7S910028, R7S910035, R7S910036, R7S910101, R7S910102, R7S910106, R7S910107, R7S910111, R7S910113, R7S910115, R7S910115_M3, R7S910116, R7S910116_M3, R7S910117, R7S910117_M3, R7S910118, R7S910118_M3, R7S910125, R7S910126, R7S910127, R7S910128, R7S910135, R7S910136
SH		CUSTOM_DEVICE_1, SH-2A_C_1C3A_3, SH-2A_C_1C3A_4, SH-2A_C_1C3A_5, SH-2A_C_1C3A_6, SH-2A_C_1C3A_F, SH-2_CUSTOM_MCU, SH2A_CUSTOM_MCU1, SH2A_CUSTOM_SOC_1, SH2A_CUSTOM_SOC_2, SH2A_CUSTOM_SOC_3, SH2A_CUSTOM_SOC_4, SH2A_CUSTOM_SOC_5, SH70835A, SH70835R, SH70845A, SH70845R, SH70855A, SH70855R, SH70865R, SH71243, SH71253, SH71464R, SH71494A, SH71494R, SH7214, SH72145AD, SH72145BD, SH72146AD, SH72146BD, SH72147AD, SH72147BD, SH7215, SH72165BD, SH72166AD, SH72166BD, SH72167AD, SH72167AD_Option, SH72167BD, SH72265, SH72266, SH72267, SH72275, SH72276, SH72277, SH72314L, SH72315A, SH72315L, SH72374A, SH72374B, SH72375B, SH72394A, SH72395A, SH72395B, SH72531, SH72531FCC, SH72531RFCC, SH72533, SH72533FCC, SH72543R, SH72544R, SH72546R, SH72612, SH7261_FPULess, SH72621, SH72622, SH72623, SH72624, SH72625, SH72626, SH72627, SH72631, SH72632, SH72633, SH72641, SH72642, SH72643, SH72644, SH72645, SH72646, SH72647, SH72660, SH72661, SH72662, SH72663, SH72670, SH72671, SH72672, SH72673, SH72680, SH72681, SH72691, SH7606, SH7618A, SH7671, SH7672, SH7673,(Debug Support Only)
	SH2	SH7047F, SH70834A, SH70844A, SH70854A, SH70865A, SH71242, SH71252, SH7144F, SH7145F, SH71464A, SH71491R, SH7615, SH7616, SH7618, SH7619
	SH2A-FPU	SH72394B

RENESAS

	SH2a	SH7201, SH7203, SH72165AD, SH72546RFCC, SH72611, SH72620, SH72630, SH72640, SH72690, SH7670
	SH2a (No FPU)	SH7206, SH7211, SH7243, SH7285, SH7286
Synergy *1	S124	R7FS124773A01CFM, R7FS124772A01CNB, R7FS124773A01CNB, R7FS124763A01CFM, R7FS124762A01CNB,R7FS124763A01CNB, R7FS124773A01CFL, R7FS124772A01CNE, ,R7FS124773A01CNE, R7FS124763A01CFL, R7FS124762A01CNE, R7FS124763A01CNE, R7FS124772A01CNF, R7FS124773A01CNF, R7FS124762A01CNF, R7FS124763A01CNF, R7FS124772A01CLM, R7FS124762A01CLM
	S3A7	R7FS3A77C2A01CLK, R7FS3A77C3A01CFB, R7FS3A77C2A01CBJ, R7FS3A77C3A01CFP, R7FS3A77C2A01CLJ, R7FS3A77C3A01CFM, R7FS3A77C2A01CNB, R7FS3A77C3A01CNB
	S7G2	R7FS7G27H2A01CBD, R7FS7G27G2A01CBD, R7FS7G27H2A01CBG, R7FS7G27G2A01CBG, R7FS7G27H2A01CFC, R7FS7G27H3A01CFC, R7FS7G27G2A01CFC,R7FS7G27G3A01CFC, R7FS7G27H2A01CLK, R7FS7G27G2A01CLK, R7FS7G27H3A01CFB, R7FS7G27G3A01CFB

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, 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
	G10	R5F10Y14, R5F10Y16, R5F10Y17, R5F10Y44, R5F10Y46, R5F10Y47
	G11	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
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, R5F10EBA, R5F10EBC, 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

RENESAS

	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, 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, R5F110PE, R5F110PF, R5F110PG, R5F110PH, R5F110PJ, R5F111ME, R5F111MF, R5F111MG, R5F111MH, R5F111MJ, 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
	230	R5F52305, R5F52306
	231	R5F52315, R5F52316, R5F52317, R5F52318
	23T	R5F523T3, R5F523T5
	24T	R5F524T8, R5F524TA
	64M	R5F564MF, R5F564MG, R5F564MJ, R5F564ML
	651	R5F56514, R5F56517, R5F56519
	65N	R5F565N4, R5F565N7, R5F565N9
RX	71M	R5F571MF, R5F571MG, R5F571MJ, R5F571ML
RZ	T1	R7S910001, R7S910002, R7S910006, R7S910007, R7S910011, R7S910013, R7S910015, R7S910016, R7S910017, R7S910018, R7S910025, R7S910026, R7S910027, R7S910028, R7S910035, R7S910036, R7S910101, R7S910102, R7S910106, R7S910107, R7S910111, R7S910113, R7S910115, R7S910116, R7S910117, R7S910118, R7S910125, R7S910126, R7S910127, R7S910128, R7S910135, R7S910136

3. Smart Manual Support

Smart manual support is delivered independently of e² studio releases when available. The following devices are available as of the 6th of October, 2016.

- RX62G
- RX62T
- RX63N
- RX63T
- RX64M
- RX71M
- RX110
- RX111
- RX113
- RX210
- RX220
- RX631
- RX651

4. What is new in 5.2.0?

Component	Device	Description
ARM CoreSight ITM	Synergy	This improvement adds further support for CoreSight ITM features to e² studio for ARM Synergy devices. In particular, there is the addition of timestamp support and integration of this data into the new Control Flow Trace Compass view. This feature enables PC sampling which then will return the PC location at a user defined interval. The program flow at each of these intervals is then graphed. The PC sampling is setup from the CoreSight ITM Trace Settings Dialog. These settings are accessed via the settings button on the CoreSight ITM Live Trace Console.
CPython Scripting Support (Ease)	All	e² studio now supports a feature to script user interface operations using CPython. Previously this has not been a supported feature of Eclipse. However, there are open source developments in this area provided by the Ease project. https://www.eclipse.org/ease/ This release provides an early version of the ease plugin before general release. It will allow scripting of general Eclipse features in the first instance. In the future we will add further scripting support for all Renesas debugging windows. Currently no Renesas plugins offer the scripting functionality. To access ease: • Open the "Scripting" perspective. • When opened the following view will be available:
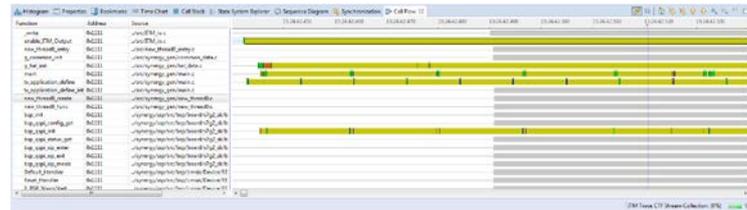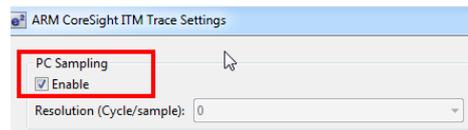
OpenOCD plugin	RZ	The OpenOCD plugin has been added to e² studio. This allows mbed projects to be imported and automatically setup debug configurations correctly without installing additional components. It is available in the debug configuration dialog.

CDT	All	CDT has been enhanced to provide "Expand vertical ruler annotation on hovering" which allows easy viewing and selection of annotations where there is more than one on a single line. e.g.

	RL78	e² studio now supports the import and conversion of CS+ projects for RL78/78K0R(CA78K0R). It is only the conversion of project structure and build options. In addition, there is also a source code converter. This converts the source code of RL78/78K0R(CA78K0R) to RL78(CC-RL).

RL78 Simulator	RL78	The RL78 simulator will support RL78/G10 peripheral functions in e² studio 5.2. The following devices are supported: RL78/G10: R5F10Y14, R5F10Y16, R5F10Y17, R5F10Y47, R5F10Y46, R5F10Y44 When you select the RL78/G10 device a simulator GUI window will be opened and the peripheral functions can be simulated.
RL78 Device Support	RL78	e² studio 5.2 supports the new RL78 L1A and G11 devices. The G1F group is also updated.
RX Device Support	RX	e² studio 5.2 supports the new RX651 and RX65N devices.
RL78 IECUBE Debugging	RL78	Two additional debug configuration items are required for the RL78 debugger setup. These are: • Remove "Erase time" and "Address for erase time" from Emulation Settings->Data Flash. • Remove "Erase Error" from Drop Down list of "Macro service error x" Note: • When a debug configuration of an old project is loaded and the user sets the "Erase time" and "Address for erase time", these settings should ignore. • When a debug configuration of old project is loaded and the user sets the "Macro service error x" as "Erase Error", it should be set as "None"
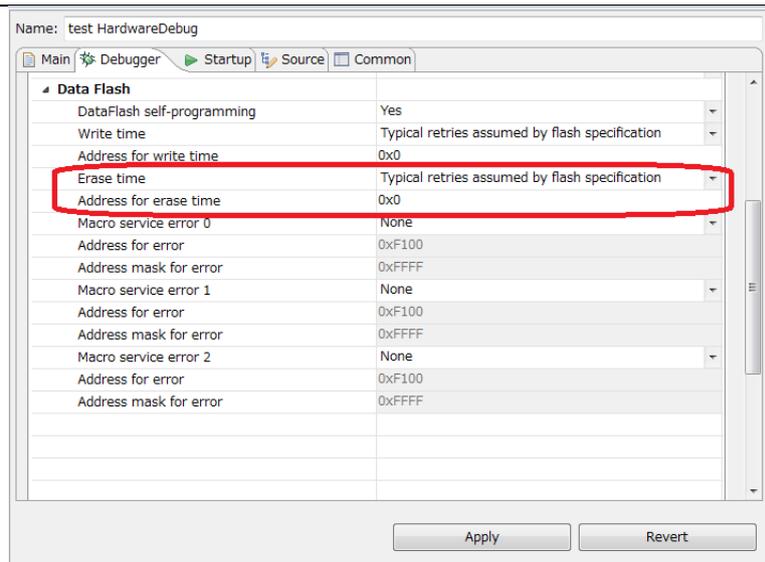
Synergy Debugging	Synergy	Debugging crashes for Synergy has been improved in e² studio 5.2. When debugging using the Synergy devices when the target crashes the software ends up at the SSP Default handler. This does give a good indication of what issue caused the crash. The ARM CM4, CM3 and also CM0+ have the ability to analyse crash registers to determine the cause of the crash. This has been implemented within the GDB server and allows the call stack before the crash to be shown within the debug view window.	
Synergy Debugging	Synergy	A new view has also been added to the Synergy debugger for debugging crashes. This is named the Fault Status view. This view will show the user possible reasons for the crash and the values of the key registers. The view is shown below: 	
Synergy Report	Synergy	The Synergy configurator has a new feature which creates a verbose configuration report of the current settings when the Synergy configurator generates the code. The format is generated such that differences can be easily viewed using a textual difference tool. The generated file is located in the project directory and named synergy_cfg.txt.	
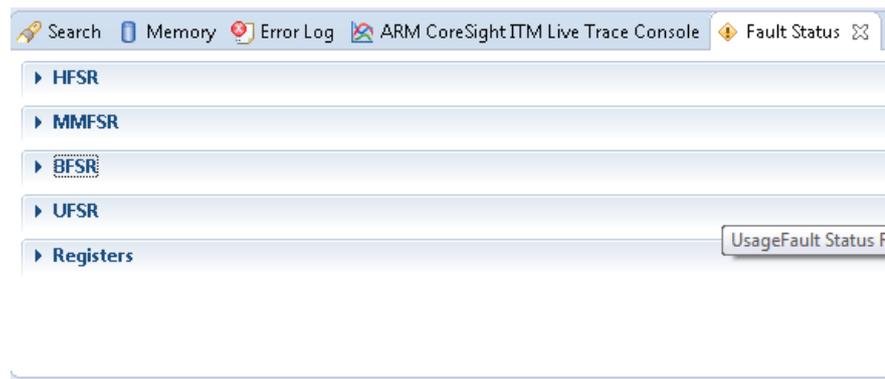
| Synergy Summary | Synergy | The Summary Page in the System Configurator has been re-designed with a more professional and better designed look and feel.

The summary page now uses a live web page from the Synergy Explorer in the top of the summary page. A report is shown in the bottom of the view showing simple information on the current Synergy configurator setup.

There are also useful links to the Synergy Gallery and the Renesas Synergy YouTube channel.

 |
|---|---|---|
| Synergy Debugging
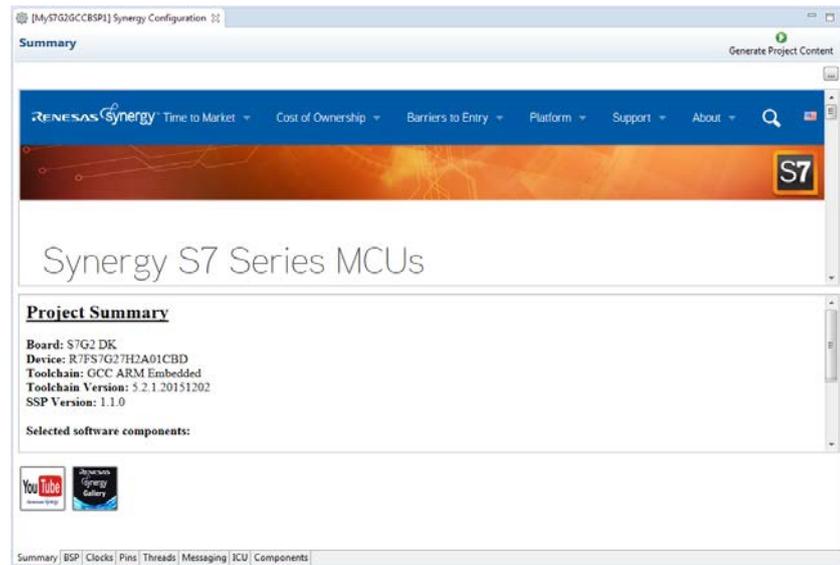
RTOS context aware debug | Synergy | ThreadX debugging has now been fully integrated into the e² studio GDB server when debugging this RTOS with Synergy devices.

This means that when the target is suspended the ThreadX threads appear in the debugger window of e² studio.

This allows RTOS task "context" debugging. Changing the context in the debug view affects register values for example. This allows "task aware" RTOS debugging. Changing the selection in the debug view changes the context for all the other debugging windows visible.

If you encounter issues with debugging this feature can be switched off in the debug configuration. |

| Synergy pin migration | Synergy | When using the Synergy configurator, you can migrate from one device to another. When migrating device one of the more difficult issues is migrating the pin configuration to the new device while retaining user setup. e.g. S5 to S7. |
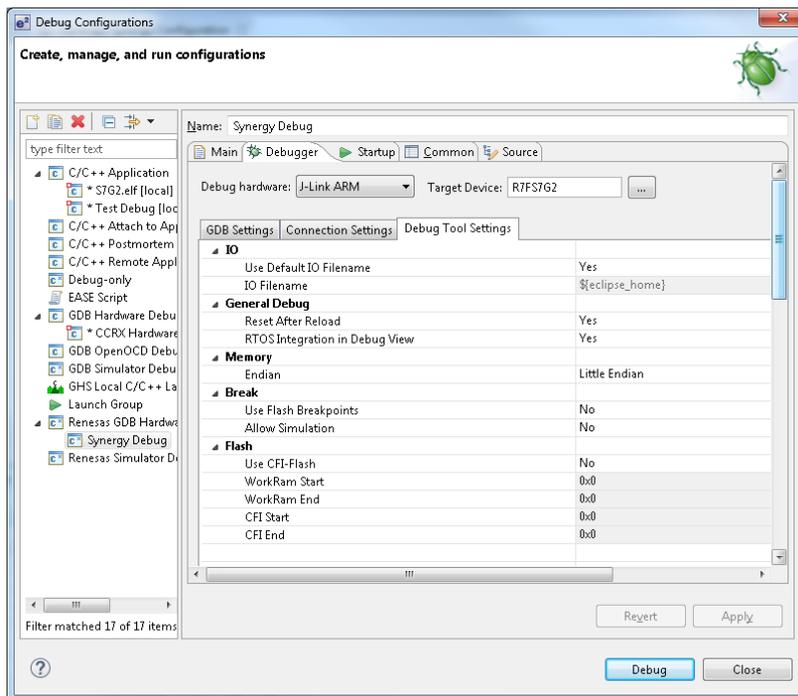
The new pin view has facilities to do this migration from one device to another via a toolbar button on the pin view.
The buttons are "Import a pin configuration" and "Transform configuration for another device".
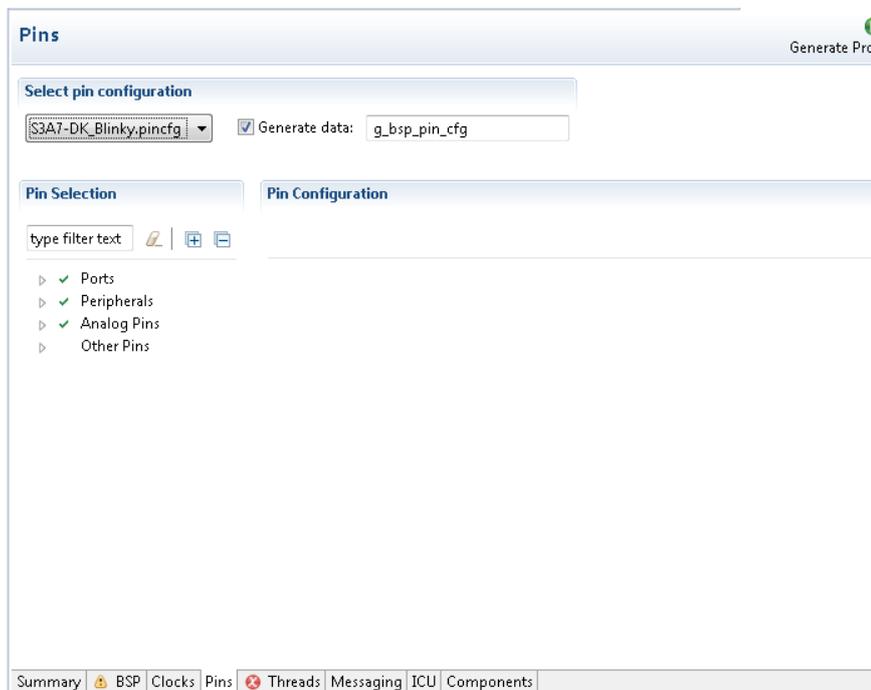
Synergy Configurator	Synergy	The look and feel of modules on the threads page of the Synergy Configurator has been improved.
		The colour coding of the modules was not easily seen with the narrow border. The borders have therefore been expanded and coloured to make them more visible.
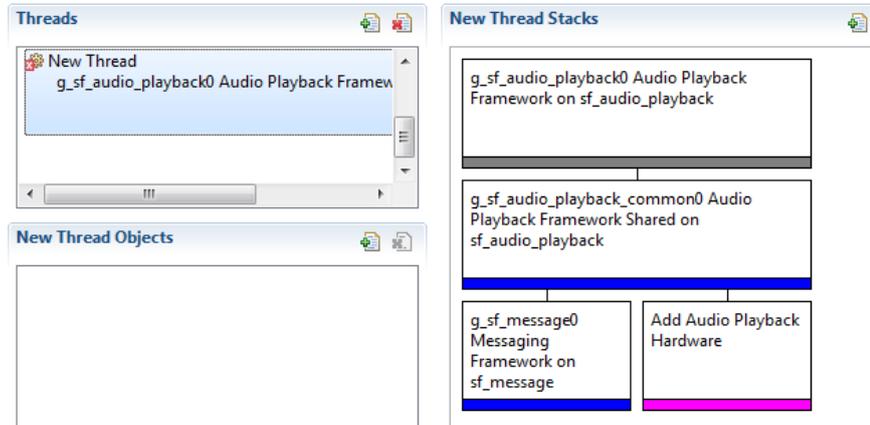
Bug reporter	All	A new feature has been provided that allows you to more easily give feedback to the support teams for bugs or new features.
		A new menu item will be added to the Help menu. This is named "Create user feedback..."
		When this menu item is selected a bug report wizard is displayed allowing you to select your region and whether the issue is an improvement or a bug.
		Once the wizard is completed a zip file is created with all of the information inside it. This can then be easily transferred to the support teams.
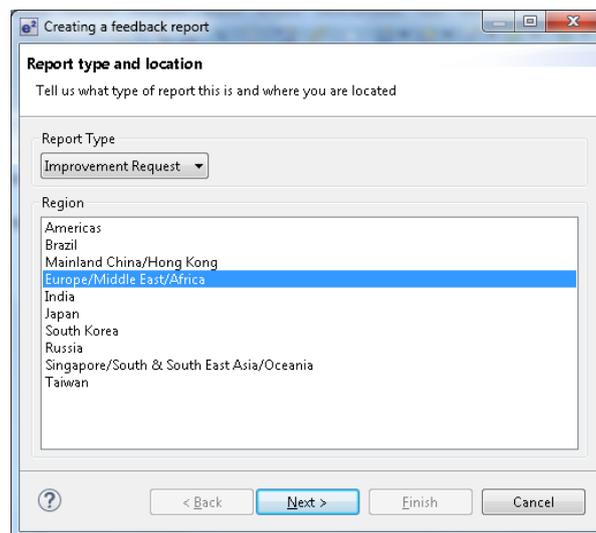
Synergy Configurator	Synergy	It is now possible to copy and paste complete software stacks on the threads page of the Synergy Configurator.
		This is available from the context menu on each stack.
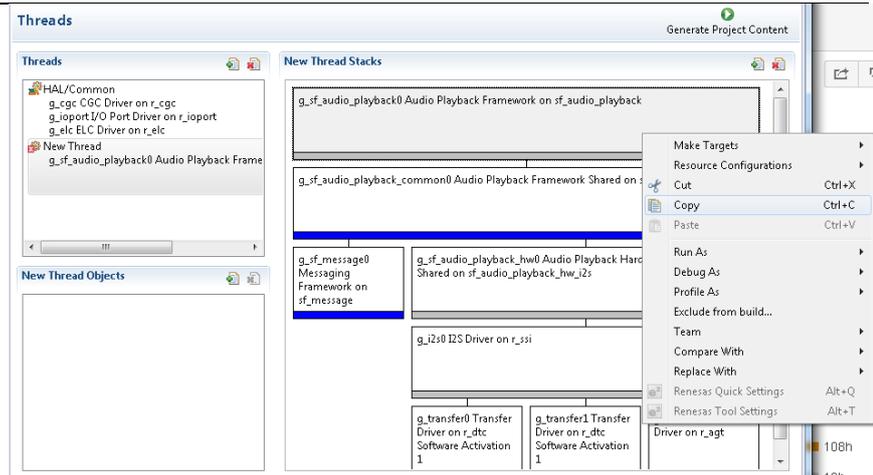
Optimization Assistant	All	The optimization assistant feature has been improved so that when using the "By Function:" facility to measure the execution time it takes sub functions into account not just the specified function.
Optimization Assistant	All	The optimization assistant feature has also been enhanced to include a time measurement feature. This feature allows you to compare execution time between different build configurations. Allowing comparison of optimization speed not just size.
Partner OS Plugin	Synergy	The Partner OS Plug-in already supported the display of the stack pointer, stack top, stack end, and stack size. Stack usage information will also be added to the view to show utilization of the stack. This shows the high memory watermark that was detected during execution. In addition, numerous other modifications have been made such as: • Modified data in the view is highlighted in red text.
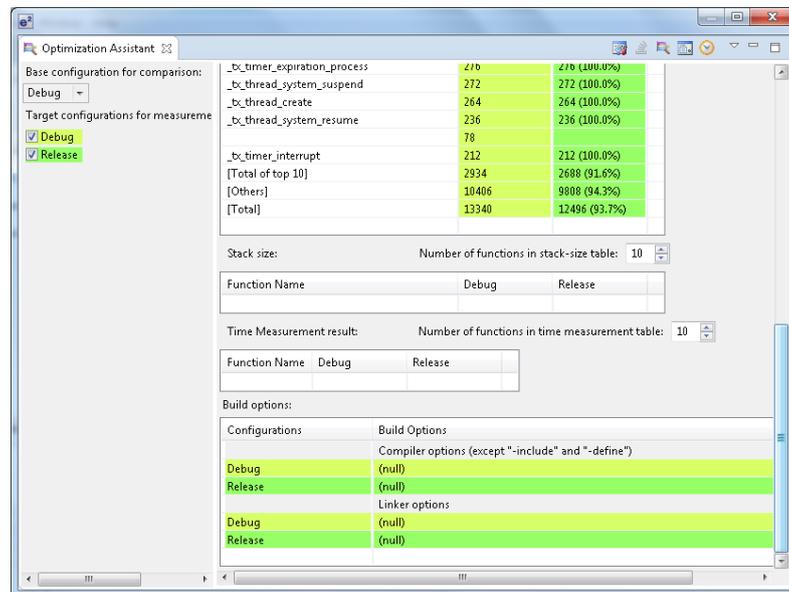
- The selected operating system is displayed in the lower status bar.
- Real-time refresh options such as column and interval are saved between debug sessions.

Smart Browser	All	The Smart Browser plugin has been enhanced to include a new tab for the Tool News information.

In addition, development tools and software manuals are now displayed in the user manuals tab.

Smart Configurator	RX	This feature adds a new feature to e² studio named the "Smart Configurator" This feature combines the code generator and FIT (Firmware Integration Technology) features of e² studio and allows you to use them together. The configurator allows the selection of modules from either of the tools and allows configuration of them within a new user interface. This feature uses the e² studio editor area in a similar way to the Synergy configurator. The initially supported device family is RX and the group is RX64M. Only supported toolchain is CC-RX. The editor can be opened by double clicking the configuration file or opening the editor like this:
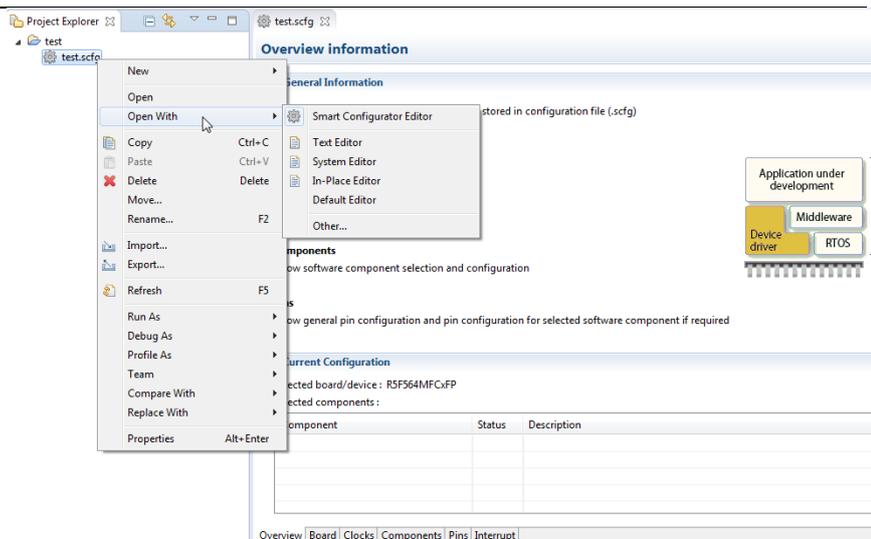
The configuration editor itself has six pages:

Overview:

Board:

Clocks:

Components:

Pins:
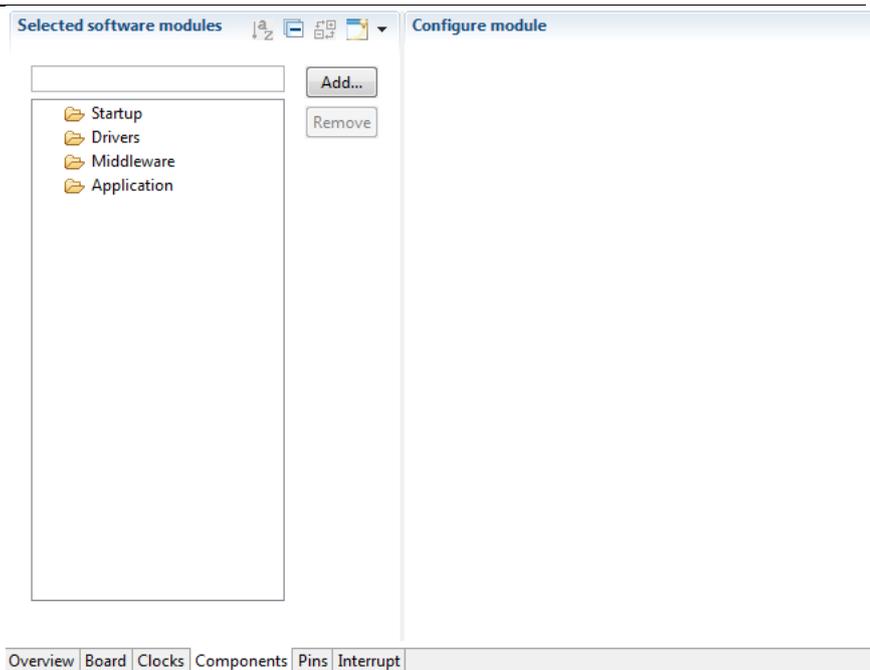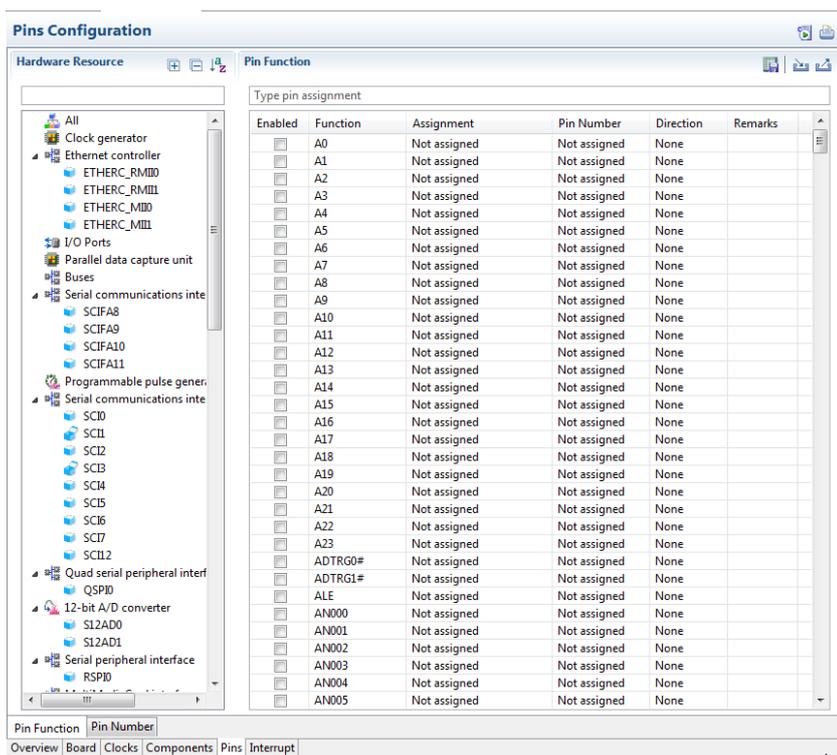
Interrupts:

Interrupt information

Once happy with the settings you can then generate their code from the "Generate Code" toolbar button. This will automatically generate code generator and FIT code for the selections within the Smart Configurator.

In addition, there is also an all new package view in the smart configurator:
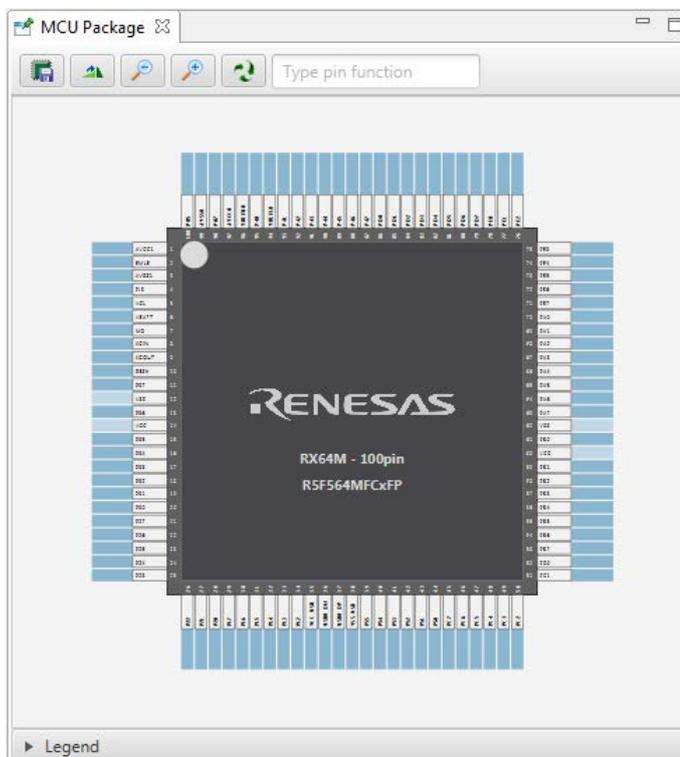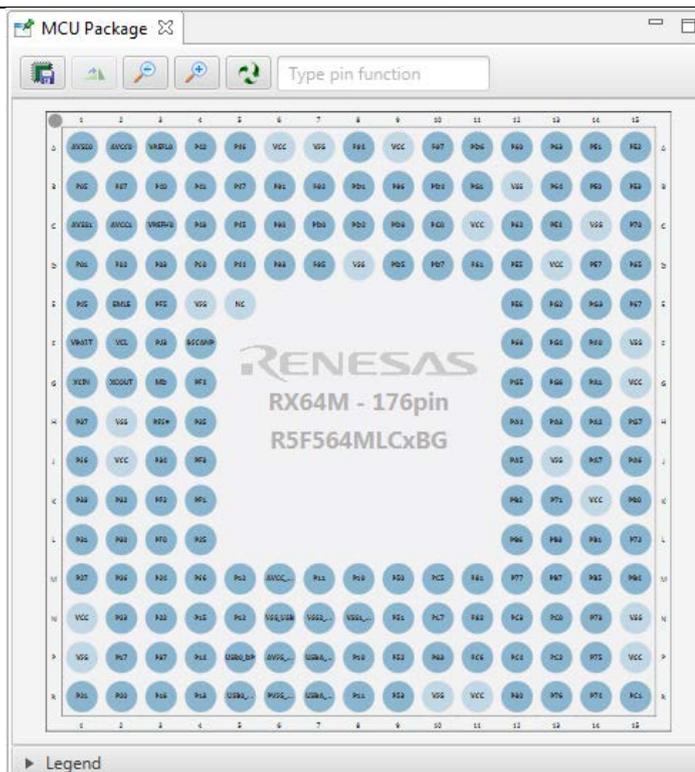
Device	RZ	
Support RZ		The RZ device support has been expanded to include RZ/A1LC.

5.   Useful workarounds and information for 5.2

Please visit the Renesas FAQ for e² studio for the latest up to date information:

https://www.renesas.com/en-eu/search/keyword-search.html#q=studio&genre=designsupport&ds_resourcename=faq

ID	Component	Workaround or information
	Application	This version of e² studio is based on Eclipse Mars.2 and CDT 8.8. 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: For information on the Mars release see here: https://projects.eclipse.org/releases/mars CDT: https://wiki.eclipse.org/CDT/User/NewIn88 The Eclipse bug tracker is here: https://bugs.eclipse.org/bugs/
5954	Application	If you experience the error message "org.eclipse.swt.SWTError: No more handles" this can be caused by certain multi-monitor software and the Eclipse framework. If this error occurs there are 2 workarounds: 1. Use a single monitor display. 2. Uninstall the multiple monitor software from your graphics chipset vendor and revert to the standard Windows multi-monitor feature.
6981	RL78 Debugging	When debugging IAR C source file with an OCD emulator (E1), the Monitor program area (0x00002-0x00003) is used. So this area must be excluded from usable address space. Please add '-HFF' in the linker option. - Open Property. - Select [C/C++ build]-[Settings] at left side. - 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	If you are experiencing slow building of projects within e² studio there are some possibilities to improve. 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. 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.
NA	RZ GCC	In 3.0 the KPIT GCC RZ toolchain was supported at version 14.01. This version is no longer supported within e² studio.

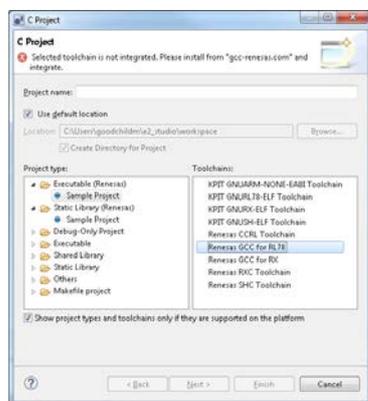|		
		KPIT modified the name of their ARM toolchain to be ARM-none-eabi to follow standard ARM naming convention like other GCC toolchain vendors. The ARM-none toolchain is available at versions 14.01, 14.02 and 16.01 from the www.gcc-renesas.com website. The binaries in the 14.01 version are identical to those used in the 14.01 RZ toolchain. 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.
NA	KPIT GCC	The KPIT toolchains are now no longer supported by the www.kpitgnutools.com website. Support is now available from the www.gcc-renesas.com website. 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. Both integrate into e² studio 5.2 and can be selected from the project wizard as seen in the image below:
2010	HEW Importer	Symptoms: Project fails to build after importing a legacy project from HEW Conditions: If a long filename or path is used, and the HEW project importer is used, the project may fail to build. 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 e² studio.
1922	Application	Symptoms: Project fails to build in first instance after archive project import (not from HEW) Conditions: If an archived project is imported, it may fail to build the first time, due to a residual .d file. Workaround: Clean and Build a second time.
2762	CODAN	When using assembly code within a C source file, CODAN errors can be observed in the editor. Even though the project builds successfully. We do not have a workaround for this at this time. 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	Step into does not always work when using the CC-RX 1.02.01 toolchain. 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.
NA	Eventpoints	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.
5772	IAR Plugins	The IAR Plugin Manager is now included in e² studio. This provides support for RX, RL78, RH850 and RZ (ARM). This is a tool, which simplifies installation and configuration of IAR toolchain plugins. You can access this though Help -> IAR Embedded Workbench plugin manager.
5903	Code Generator	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. 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. RL78/G12, RL78/G13, RL78/G14, RL78/G1A, RL78/I1A, RL78/F13, RL78/F14, RL78/F12, RL78/L12
6184	RL78/CC-RL debugging	When the load module for RL78/G10 which created at CC-RL is debugged in E1, please specify the following option: [Linker] -> [Device] -> "Set enable/disable on-chip debug by link option
5995	CC-RX to GNU RX Converter	When converting from CC-RX to GCC projects some comments like //* comment */ are left intact which will result in an error if standard is set to C89. Changing the standard to C99 or above will fix this problem.
7217	Application	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.
7524	RZ/T1 Debugging	In a RZ/T1 RAM-based project, the "Reload" function does not work. Reloading or re-downloading during debugging resets the device and the RAM content is erased. To continue the debugging, disconnect and connect the debugger again.
	Use spaces as tabs	Eclipse and CDT both have settings for use spaces as tabs. The option on the Editor preferences page conflicts with the CDT formatter settings. To change the use spaces as tabs option in e² studio please use this page:
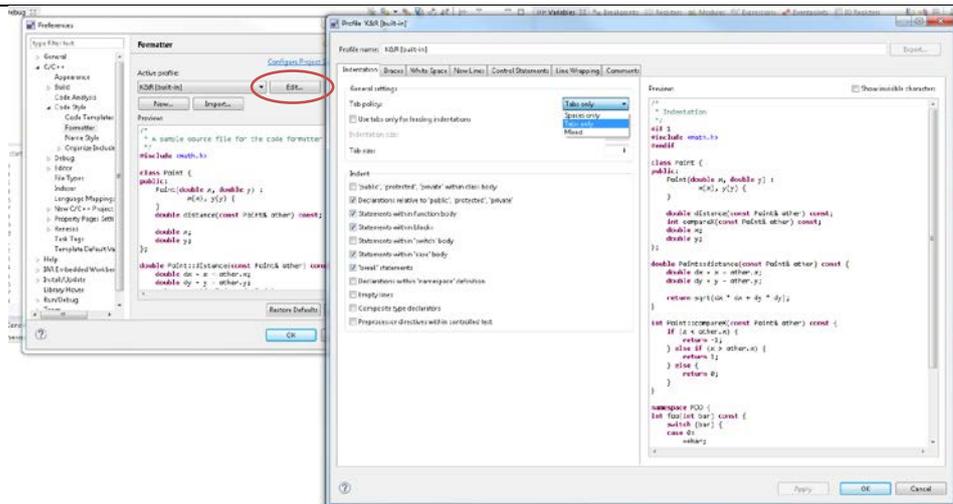
Installer problems	In some situations, the AVG virus checker appears to interfere with the e² studio installation process. If you experience such a problem, please temporarily disable the AVG tool and try the installation again.

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6. Open Issues in 5.2.0.20

Key	Component/s	Description
IDE-10208	CA78K0R Importer	[Issue] When CA78K0R project from CS+ is imported, the iodefine.h file is not always registered with the project. [Workaround] Create a new project for CC-RL to ensure all support files for this device and decompressed. Then please import the project again after doing this.
IDE-10257	Renesas Synergy	After a reset operation the CoreSight ITM trace is not setup again and ITM trace data is not displayed by e2 studio. To work around this please disconnect and reconnect the target to see CoreSight ITM data.
IDE-10198	Smart Configurator	In the Japanese version the 2 selections for "Power supply to the on-chip RAM and USB resumption detecting unit" in the configuration view of Low Power Consumption module are reversed. Please select the "Power is not supplied..." to enable power supply, and select "Power is supplied..." to disable power supply.
IDE-10197	Smart Configurator	In S12AD code generator configuration, the generated code of R_<S12AD configuration name>_Create function is wrong in the following conditions. -Data placement: Left-alignment The number of bit shift for the value set to ADCMPDR0 or ADCMPDR1 is wrong. Example: ADCMPDR0 is 0x0100 and conversion resolution is 10 bit Wrong code: "S12AD1.ADCMPDR0 = 0x0100U << 4U;" Correct code: "S12AD1.ADCMPDR0 = 0x0100U << 6U;" Please change the generated code as follows. Correct bit shift value for 8 bit resolution : 8 Correct bit shift value for 10 bit resolution : 6 Correct bit shift value for 12 bit resolution : 4

IDE-10196	Smart Configurator	The following generated code for Low Power Consumption module sets OPCCR.OPCMTSF, but this code is not correct.
		Function: R_<LPC configuration name>_Create
		----- 	
		while (1U == SYSTEM.OPCCR.BIT.OPCMTSF)
		{
		SYSTEM.OPCCR.BIT.OPCMTSF = 1U;
		}
		----- 	
		Please change the line "SYSTEM.OPCCR.BIT.OPCMTSF = 1U;" to "nop();" .

IDE-10160	RL78 Debug Configuration	When debugging using the device R5F10Y16 either with the standard project or the code generated project they can be problems debugging. To avoid this please ensure you select the On-Chip debug and RRM/DMM functions in the project generator. They are not on by default when entering or building for a debug session.
IDE-10147	Renesas Synergy	When using the Synergy configurator if the device is changed on the BSP tab the build options are now modified. However, if the configuration is not saved the project options will still reflect the change made on the BSP tab if the core type was changed. E.g. from a Cortex M4 (S3A7, S7G2) to a S124 or S128.
IDE-10140	Segger Debugging	On RX devices, when connected via an external Segger J-Link emulator if you add a mixture of HW and SW breakpoints it can lead to the situation where the SW breakpoints are ignored. Workaround: Use only HW breakpoints in a debug session
IDE-10133	Renesas Synergy	When using Synergy projects, the automatic re-download of code (when changed whilst connected) can fail. Workaround: Disconnect and reconnect and the updated files will be reprogrammed.
IDE-10126	FIT Configurator	In the pin configuration view for RX210 69/64/48pin packages displayed when r_rspi_smstr_rx FIT module with pin configuration information is imported, PA5 can be selected for RSPCKA, but PA5 is not available for RX210 69/64/48pin packages. Please do not select PA5 for RSPCKA.
IDE-10120	FIT Configurator	In the pin Configuration view for RX210 145/144pin package displayed when r_sci_rx FIT module with pin configuration information is imported, P70 cannot be selected for SCK4.

IDE-10111	FIT Configurator	If r_s12ad_rx FIT module with pin configuration information is imported, FIT Configurator shows A000 in pin configuration view for 38 and 40 pin package of RX110/RX111. A000 pin is not supported by these device packages. Please do not enable A000 pin for these device packages.
IDE-10108	Application	When hitting Disconnect on a running debug session (with breakpoints in use) the debugger will error and fail to disconnect Workaround: Only click Disconnect when the session is paused (the Disconnect operation will return the device to the running state automatically)
IDE-10099	Renesas Synergy	On Synergy devices creating a mixture of HW and SW breakpoints can lead to a situation where the SW breakpoints are ignored. Workaround: use only HW breakpoints in a debug session
IDE-10065	ARM GCC Plugins	The GCC toolchains are sensitive to the file extensions being used on the source files. In the case of the assembler it changes how the assembly files are compiled. If the extension is .asm or .S then the source file is passed to the compiler. The compiler options are used. If the extension is .s, .src then the source file is passed to the assembler and the assembler options are used.
IDE-10061	Installer	The e² studio installer can fail when installing to machines where the user name has spaces included in the name. If you can login with another user name such as "Administrator" then this problem can be avoided.
IDE-10059	Renesas Synergy	When using high-definition 4K displays the e² studio can have issues on some dialogs. In particular, when using the Synergy project wizard, the user cannot see the link to change the license file. To avoid this issue please use a lower resolution to setup this area initially or you may be able to tab to the hidden control.
IDE-10019	Renesas Synergy	When using the Launchpad GNU ARM plugins pressing reset defaults does not change the defaults back to those used when the project was created. Instead it reverts to the default options for this set of build plugins.
IDE-9918	Event points plugin	When setting the timer event on the Disassembly view, the status of timer icon sometimes does not match with status of eventpoint on the Eventpoint view.
IDE-9873	Smart Manual plugin	"Show in Smart Manual view" button does not work correctly when the active project does not contain file which showing on editor.

IDE-9743	Coverage plugin	Source coverage's result sometimes is not displayed even if the file is added and source coverage's address range is set. [Work around] If the variable coverage is enabled, change the order of variable coverage's address range to below of source coverage's address range.
IDE-9701	Profile plugin	The sort function of "File Name" column in Profile view works only once.
IDE-9696	Profile plugin	The execution count/execution time of some functions is increased when Profile is enabled and the user program is reset.
IDE-9685	Performance Analysis	When "Pin to Debug Context" is selected for the Performance Analysis view, Profile view, Trace view and Coverage view the data is sometimes not displayed when the debugger is suspended.
IDE-9673	GCC Build Tool	When using the GCC build plugins for the GNU RZ/RX/RL78 project the linker tool is skipped when a Build Artifact Name is defined using a variable string such as ${ProjName}.
IDE-9612	Renesas Synergy	On Synergy devices, repeated setting of Trace Start and Stop eventpoints can lead to a situation where the eventpoints fail to set. Workaround: Disconnect and reconnect.
IDE-9554	Expressions view	For RL78/G10 devices there can be issues where global variables and local variables are showing incorrect data. This is due to some problems with the linker sections. GCC uses 24 bytes of memory (0xFFEC8 to 0xFFEE0) as pseudo registers. In the attached project the stack begins at FFED8 (0xFFEC8 < FFED8 < 0xFFEE0) and grows down overlapping with this area of memory.
IDE-9533	RL78 GDB Server	When the failsafe break is configured to "Stop on read from uninitialized RAM" on the RL78 IECUBE the break occurs but the cause is not clear.
IDE-9507	Application	Setting a breakpoint to a function which is referenced from an expression in the expression view causes the debugger to hang when execution is resumed. When this happens e² studio must be restarted to resume normal operation. Steps: Add a function "test(int)" Set a breakpoint in it Add an expression "test(5)" Resume

IDE-9494		It may be possible for users to misunderstand the data order in the memory view due to the address column heading. The "Address" caption of Memory view is always the like "0 - 3", "4 - 7" regardless of the endian which is selected.
IDE-9413	Renesas Synergy	When using SSP 1.2 the Interrupt tab of the Synergy configurator is no longer used. The interrupts should be modified via the properties window for the selected module.
IDE-9393	Renesas Synergy	On Synergy devices the default "Core Clock" value for SWV usage should be set to the same as the system clock (in MHz). For S7 devices (where the trace clock is halved) this should be set at half the system clock.
IDE-9338	Event points plugin	The event count on Eventpoint View shows the total event count including hardware break points which are set on source view as line break points. Events which can be set in Eventpoint view may be less than displayed.

IDE-9309	Application	Problem (condition): The editor view might not show an address for .src file if two or more sections are defined in a .src file and other section defined in other file is located between these sections. Disassembly View (Mix mode) does not show source line in this case. Following cases cause problem. Case (1) file1.src : SECTION_A, SECTION_B file2.src : SECTION_C Section linkage order : SECTION_A, SECTION_C, SECTION_B (SECTION_B is not next of SECTION_A.) Case (2) file1.src : SECTION_A, SECTION_B file2.src : SECTION_A Section linkage order : SECTION_A(file1.src), SECTION_A(file2.src), SECTION_B (SECTION_B is not next of SECTION_A(file1.src)) Workaround: Separate .src file for each section that are located at not next address. Case (1) file1_1.src : SECTION_A file1_2.src : SECTION_B file2.src : SECTION_C Case (2) file1_1.src : SECTION_A file1_2.src : SECTION_B file2.src : SECTION_A
IDE-9101	Application	If GDB is unable to set a breakpoint during the launch, then the whole launch will be aborted. Removing the breakpoint(s) will allow the launch to complete successfully.
IDE-9090	GDB	When the same symbol files are downloaded on to 2 different processes and the User sets a source breakpoint, GDB will set the breakpoint on both processes. This will cause the system to appear to have only half the number of breakpoints.
IDE-9057		Trace find and filter functionality is currently not supported for ARM-based devices
IDE-9045	Application	Project based variables in the debug configuration are not evaluated correctly at launch and the launch then fails. This is caused by the project based variables being evaluated on the context of the active project not the

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		specified project in the debug configuration. Using variables with a workspace context work correctly.
IDE-9032	Application	Rename and Import existing C/C++ project does not have the same restrictions as new project wizard.
IDE-8998	Project Generation	Deselecting project types and toolchains only if they are supported on the platform can cause project generation errors.
IDE-8980	Application	When using the eclipsec.exe tool and running headless builds it is possible to see an error created as seen below: A message box is displayed that states "An error has occurred. See the log file <name>.log" This is due to the eclipsec.exe not picking up the correct Java version. To work around this issue please copy eclipse.ini to eclipsec.ini and execute the headless build again.
IDE-8931	Renesas Synergy	When a project is set to generate an assembly listing and a selected .c file is built using "Build File", a listing file $@.lst is generated in the Debug folder. This is unexpected. The expected output is a listing file in ~/Debug/src-path/filename.lst NOTE: On a general 'Build Project' command everything works as expected.
IDE-8875		e² studio can crash when the memory view Find/Replace/Fill feature has a start address larger than the end address.
IDE-8771		When importing a SH project into e² studio the build will fail with the message unable to find the file specified. sh_converter.exe. If you create a new SH project then the sh_converter file is extracted. Then rebuilding your imported project will no longer fail.
IDE-8726	Renesas Synergy	When using a placeholder in the Synergy license dialog it throws an exception. Please use a full path to the file.
IDE-8725	GDB	If the software break points are used even if they are not allowed, GDB will fail to debug. For example, setting software breakpoints in trusted memory area for RXv2 core, or in CS0 area for Internal ROM disabled extended mode will cause this. Please use hardware breakpoints in this case.

IDE-8711	Application, Event points plugin	When the timer start/stop events are set in Editor view of RX, the message to notify the limit number may not be displayed.
IDE-8682		Debug launch does not work correctly when the Program Name contains project specific variables e.g. "${project_name}". They resolve based on workspace selection rather than the project specified in the debug configuration.
IDE-8651	Application	If during the update process you see a message similar to: "Backup of file c:\renesas\e2studio\eclipse\e2studio.exe failed. File that was copied to backup could not be deleted: c:\renesas\e2studio\eclipse\e2studio.exe" Then this can be avoided by renaming the e2studio.exe executable after the check for updates process has started.
IDE-8644	GDB server	If the verbose mode option is enabled, connection to debugger will fail. Please do not enable this option.
IDE-8631	Renesas Synergy	The symbolic name and comment associated to a pin is not reflected in the output pin header file.
IDE-8627		On some systems you may encounter an error when launching the system explorer from the Project Explorer context menu. If using this causes e² studio to freeze or context menus to stop displaying, you should terminate the e² studio process.
IDE-8596		In some cases, a CC-RL project does not step over and step return correctly when using the RL78 Simulator.
IDE-8592	GDB	After connection with hotplug for RL78, 'step return' and 'step over' execution may not work. Please use a hardware break and resume command.
IDE-8579	GDB server RX	In Profile view, execution time for each function is calculated for the function which is returned out. If the execution stopped at the middle of the function, execution time of the function may not be added.
IDE-8555	Renesas Synergy, Project Generation	When using Turkish Windows with Synergy you, may experience problems creating a project. Please use English language settings for your host OS and re-try if you experience this.

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IDE-8503	GDB server RL78	The devices with a SmartAnalog(e.g. RL78/I1E) will not be able to memory read during execution.
IDE-8461	Renesas Synergy	On Synergy S3-based devices the trace can sometimes fail with 0 records.
IDE-8450	Application	When minimizing a view such as Expressions, Registers or IO Registers and the restoring the view it can appear blank. If this happens repeat the operation and the view contents will be visible again.
IDE-8438	Debug Configuration	If more than 16 non-adjacent items are selected from the "Internal Flash Memory Overwrite" dialog, only the first items will be valid. Others will be discarded.
IDE-8415	GDB server RX	Selecting more than 16 non-adjacent items from the "Internal Flash Memory Overwrite" dialog will cause the connection to an RX device to fail.
IDE-8405	Renesas Synergy	When changing the selected board which then automatically changes the device the options are not updated correctly. E.g. Changing the board to force the device from a Synergy S7G2 to a S124 will leave the FPU command line option in an incorrect state.
IDE-8353	Application	Adding multiple labels of the same name in the GCC Linker sections dialog is permitted in the user interface but will cause errors at the link stage.
IDE-8304		When mixing .s and .S files in the same project a build error occurs.
IDE-8303	Profile plugin	An internal error for "Acquiring Profile Result" may be shown when the program stops/starts

| IDE-8302 | GDB server | When using semihosting, having a printf command before file I/O operations causes them to fail.

Scenario best explained through sample code.

Create a synergy Blinky project

in hal_entry.c at the top of the file include the following line: #include "stdio.h"

//inside void hal_entry(void) try the following samle code: ///-----------------------SAMPLE CODE------------------------- initialise_monitor_handles();

printf("Hello\n"); FILE * pFile; char c;

pFile=fopen("c:\\alphabet.txt","wt"); for (c = 'A' ; c <= 'Z' ; c++) { putc (c , pFile); } fclose (pFile); //----------------------END SAMPLE CODE-------------------- // Before fix, the Renesas Debug Virtual Console has the following output Hello // There was no file c:\\alphabet.txt

//After fix the Renesas Debug Virtual Console has the following output Hello // There should also be a file c:\\alphabet.txt created, with the following output: ABCDEFGHIJKLMNOPQRSTUVWXYZ |
|---|---|---|
| IDE-8262 | Renesas Synergy, Secure Debug View | Mixed mode display in the disassembly window is not available for encrypted files. |
| IDE-8165 | TargetInformationTool | For the devices:

DR7F0C8066 DR7F0C8076 DR7F0C8086 DR7F0C8096

The stack size should be 0x64 but is in fact 0x32. You can modify this in the linker sections after the project is created. |
| IDE-8104 | Renesas Synergy | You cannot configure for ThreadX with error checking, TraceX setting, etc. on Synergy configurator before ThreadX source generation component is added.

Once the component is added then you can select the Thread X source component in the common modules area. |

IDE-7965	RX GCC build plugin	When the project is already up to date and build is clicked when a post-build step exists it is not executed. To get the post build step to execute clean and rebuild the project.
IDE-7619	CCRX Build plugin	'''Problem''' When the [C/C++ General] > [Paths and Symbols] > [References] is specified, Build warning occurs. And, .x file is not created at the time of using Renesas Toolchain. '''Workaround''' When you'd like to use the project dependency, please specify a child project in [Project Reference].
IDE-7524	GDB Server RZ	For RAM based RZ-T1 projects a re-download of code will trigger a reset that erases the RAM making further debugger operation impossible. The workaround is to instead disconnect and then reconnect.
IDE-7508	Application	'''Problem''' An error occurs by project operation when the character besides ASCII cord was used for the file name or the folder name. '''Workaround''' Please don't use the character besides ASCII cord for the file name or the folder name.
IDE-7498	Application	Multi-byte characters can cause a compilation failure when used as a build configuration name in e² studio. Therefore, multi-byte characters should NOT be applied to debug/build configuration names. Note: This issue affect both for configuration management dialog and the configuration creation dialog of Optimization Assistant.
IDE-7423	CDT	In some cases, the disassembly view does not refresh correctly on suspend. When this problem happens the refresh operation does not fix the problem. To restore the functionality close and re-open the view.

IDE-7419	Application	In older versions of e² studio the RL78 debugger would protect OCD memory areas for the E1 emulator. However, in some cases, this would cause issues. This is no longer done and GCC projects will work well. If you are using IAR projects this may cause some problems for your debugging. A new GDB monitor command has been added to protect/overwrite memory. This will allow the same behaviour as e² studio 3.x. e.g. monitor protect_memory, fef00, 100, ff Any attempt to write to address 0xfef00 to 0xfefff will cause 0xff to be written instead. A warning message will be shown in the GDB server console window. This can be added to the initialization commands within the debug configuration for the RL78 E1 emulator.
IDE-7412	GDB server RL78	When using RL78 the HL register value cannot be modified in some circumstances. This will only occur when bank 0 is not selected. Changing HL value only ever causes Bank 0 HL to change. View will always show current bank value. Values not in bank 0 can still be changed by accessing bank registers directly.
IDE-7403	CDT	The setting 'Use a fixed build configuration' in the dialog, Properties->C/C++ General->Indexer is not saved when the user checks it. This can be caused by visiting the properties, modifying the indexer setting and then visiting settings. If you do not visit settings, the option is stored correctly.
IDE-7333	Real-time Watch	When using the RX Simulator with real-time expressions if you use 1ms real-time interval the expression view goes blank. On suspend, e² studio appears to hang while messages are processed. Reverting the interval to 10ms works well.
IDE-7298	Application	When font size is changed as magnified, some of components of dialog can be hidden with magnified fonts. In this case, please resize and expand dialog size.

IDE-7277	IAR plugins	In some cases, the IAR project importer does not perfectly import all set build options. One example is the -HFF command line option that can be specified in the command line options text box for the linker.
IDE-6859	CDT	In some cases, after reload symbols are not being updated correctly. Appears to be related to caching with CDT. GDB symbol information is correctly updated, and expressions which directly access fields in structures updated correctly, but overall structures are not correct.
IDE-6852	Project Generation	The combination of a "C++ project" and "CC-RL" toolchain can be chosen. But, the "CC-RL" toolchain does not support "C++ projects" So, do not select the combination of "C++ project" and "CC-RL" toolchain.
IDE-6701	GDB server RX	For RX devices, when 'step' command is invoked for a WAIT instruction, GDB might report an error. Please use 'resume' command for WAIT instruction instead.
IDE-6657	Coverage plugin	If the workspace is copied or moved from the original folder, coverage information may not be displayed. Please re-build the program in the new workspace.
IDE-6616	Event points plugin	When adding a new Data Access eventpoint, the Compare value (on the Data Access Settings tab) is always converted to hex and subsequently displayed in hex even if the value entered does not include an 0x prefix.
IDE-6605	Event points plugin	The enable state of eventpoints for any debug configuration is not restored when the debug configuration is launched for the first time after e² studio is started. In subsequent launches the eventpoints are enabled/disabled appropriately.
IDE-6566	Real-time Watch	In some situations, the RH850 multicore real-time expression update does not work.
IDE-6529	CDT	After restart on occasion the disassembly window can be empty. Refreshing the window or stepping works around the problem.
IDE-6463	Application	Memory view requires manual refresh to see changes when downloading auxiliary file.

IDE-6408	Debug Configuration	When User boot mode is selected at the setting for Mode pin in CPU Operating Mode, the warning for USB boot program is displayed even if the device does not have USB boot program. Please click 'yes' if the device does not have USB boot program.
IDE-6350	Application	NullPointerException is observed when adding a custom configuration and selecting the same configuration within the 'Multiple Configuration…' selection at the same time. This issue only occurs if user has not applied after creating new config: https://bugs.eclipse.org/bugs/show_bug.cgi?id=352047
IDE-5770	Application	RX targets and IO registers greater than 1 byte. e.g. winA 0x88028 winB 0x8802a View register in both IO view and register view. Value in memory view is reversed. This is because the IO, (like all RX memory for little endian targets is reversed).
IDE-5668	Coverage plugin	In some cases, when using the Coverage facility with the RL78 IECUBE some lines are shown as 'branch' or partial coverage when they should be 100% covered.
IDE-5637	Multicore	For RH850 multicore devices, disassembly result may be different from the expected. In this case, please refresh the view after changing the debug context to the other PE.
IDE-5632	Multicore	When using multicore projects, the Debug View may show an incorrect name for the second loaded module (as a duplicate of the first)
IDE-5547	GDB Server RH850	To use the data access events as trace start, trace stop or trace record for RH850 with E1 emulator, please do not use the "Compare Settings" condition for the event.
IDE-5171	CCRX Build plugin	Files included in the Pre-include build options are not analysed for the pre-processor statement in the editor. This can give the impression that code is not included in the build when it is.
IDE-5124	Application	Active configuration lost while importing project (which is exported as file system).

IDE-4982	GDB server RX	When a data access event for RX is set with the data mask value as 0, the comparison will be treated as "Equals" and the data mask value will be treated as 0xFFFFFFFF.
IDE-4876	Debug Configuration, GDB server RX	When debugging with RX, if the settings are in flash write mode, the debugger features are not available. If the ID code is changed or the communication I/F is FINE, reading memory will fail after download finished. Please disconnect from emulator and pull USB cable out in this case.
IDE-4869	Memory View plugin	The "Memory" view always opened on launch of a debug session. It should not be re-opened on launch if it has been closed in the previous debug session.
IDE-4607	GDB server	When sub menu "Add Watchpoint" is performed from a Memory view, it seems to have been registered correctly in the Breakpoints view even if there is an error condition.

An error occurs by "Add Watchpoint", when the maximum number of events was exceeded, or when a ROM area is specified. |
| IDE-4515 | CCRX Build plugin | When building projects with CC-RX that are in deep directory structures it is possible to experience build issues. e² studio is unable to build projects which create command lines greater than 8191 characters. |
| IDE-4492 | Application | The Module View of e² studio does not display any information when an executable which includes debug information was downloaded to the target. |
| IDE-4438 | Application | The e² studio debugger (GDB) does not deal correctly with this RL78 mnemonic. It uses the wrong instruction code:

Mnemonic: DIVWU
Instruction code: (Wrong) CEFB04
(Correct) CEFB0B |
| IDE-4350 | CubeSuite+ importer/exporter | When importing a project from CubeSuite+ to e² studio the "toolchain version is changed" dialog is always displayed. This is because the version string in imported project file and the toolchain information in e² studio does not match. Ignoring this dialog and continuing should result in a successful import. |
| IDE-4189 | Project Generation | It is not possible to build project which has more than 98 characters in its project name. |

IDE-3950	Application	Breakpoints cannot be unset within the editor when code is #ifdef out. These breakpoints will need to be removed from the breakpoints plugin.
IDE-3928	CCRX Build plugin	By default, the e² studio editor character code is set to UTF-8. This means it is possible to enter characters that are then not supported by default by the CC-RX toolchain. CC-RX default input is SJIS. To enable UTF-8 for the toolchain you must first select C99 support.
IDE-3626	Trace plugin	Snapshot trace - adding IO register eventpoints increases the data shown in the trace view, but as they were removed there was no change in the data shown.
IDE-3389	Application	When debugging files with the same name show source addresses even though it may not be correct for the file in question. The full file path is not considered just the filename and current debug context. This can lead to e² studio showing addresses unnecessarily.
IDE-2762	Application	When using assembly code within a C source file, CODAN errors can be observed in the editor. Even though the project builds successfully.
IDE-2716	GDB server RL78	Before PC events on IECUBE temporarily hard coded limit of 4.
IDE-2416	Project Generation	Use of duplicate register is allowed for RXC project generation. 1. Create RXC project 2. Go to RXC Global option page, select "ROM" -> "R8" 3. Select the same value for any other register (e.g. "RAM" -> "R8"), it gives error message and prevents the user from project creation. 4. Now select "R8" again for "RAM" register. It doesn't show any error message and allows user to create the project.
IDE-2299	RX GCC build plugin	It is possible for .c and .C files to be treated in the same manner in certain situations which is not correct. (.C extension is changed to .c during project build).
IDE-1982	CCRX Build plugin	For Renesas CC-RX the Converter phase gets invoked even when using the external linker subcommand option. This should not happen.

IDE-1889	Application	Due to file extension issue with .s and .S and due to known bug, e2studio users won't be able to use .s or .S effectively to pre-process assembly files that need GCC. Hence we suggest renaming these files to use: .S -> .asm .s -> .src
IDE-1808	HEW Project Converter	Import a HEW RX project in e2studio using the HEW project importer. Check: Project > Properties > Compiler > Source > Include file directories. Paths are duplicated
IDE-1778	Debug Configuration	When setting the 'Internal Flash Memory Overwrite' debug option, it is possible to exceed the maximum number of non-continuous memory blocks supported. No warning is given if this limit is exceeded. When setting this option ensure the limit (16 for RX devices) is not exceeded.
IDE-1642	Application	Erase flash on start-up option on RL78 should be executed once. When e2studio connects successfully to RL78 target and erases the flash, this option should return to false, so that flashing is not done every time target is connected.
IDE-1616	RX GCC build plugin	The options of a Build Configuration were not correct after specifying Multiple Configurations... functionality.
IDE-874	GDB server RX	Execution Address Eventpoints with trigger count do not work with Breakpoints on Segger RX. Setting an execution address eventpoint with a trigger count on Segger JLink RX62N is not possible if any breakpoints exist, including the default at main. If an execution address eventpoint with a trigger count is set with a breakpoint both the eventpoint & the breakpoint do not function. Multiple breakpoints are set then only 1 does not work. Additional eventpoints function as normal.

RENESAS

7. Appendix

7.1   Website and Support

Renesas Electronics Website
   http://www.renesas.com/

Inquiries
   http://www.renesas.com/contact/

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