

**This document outlines the device support, new features added in 5.0.1, fixed issues and open issues in e<sup>2</sup> studio 5.0.1.**

## 1. Project Generator Support

CPU Family	Group	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)
	E1x-FCC1	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
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, 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
	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
	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
	71M	R5F571MF, R5F571MG, R5F571MJ, R5F571ML
	A1	R7S721000, R7S721000_DualSPI, R7S721001, R7S721001_DualSPI, R7S721010, R7S721010_DualSPI, R7S721011, R7S721011_DualSPI, R7S721020, R7S721020_DualSPI, R7S721021, R7S721021_DualSPI
RZ	T1	R7S910001, R7S910002, R7S910006, R7S910007, R7S910011, R7S910013, R7S910015, R7S910015_M3, R7S910016, R7S910016_M3, R7S910017, R7S910017_M3, R7S910018, R7S910018_M3, R7S910025, R7S910026, R7S910027, R7S910028, R7S910101, R7S910102, R7S910106, R7S910107, R7S910111, R7S910113, R7S910115, R7S910115_M3, R7S910116, R7S910116_M3, R7S910117, R7S910117_M3, R7S910118, R7S910118_M3, R7S910125, R7S910126, R7S910127, R7S910128
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
	SH2a	SH7201, SH7203, SH72165AD, SH72546RFCC, SH72611, SH72620, SH72630, SH72640, SH72690, SH7670
	SH2a (No FPU)	SH7206, SH7211, SH7243, SH7285, SH7286
Synergy	S7G2	R7FS7G27H2A01CBD, R7FS7G27G2A01CBD, R7FS7G27H2A01CBG, R7FS7G27G2A01CBG, R7FS7G27H2A01CFC, R7FS7G27H3A01CFC, R7FS7G27G2A01CFC, R7FS7G27G3A01CFC, R7FS7G27H2A01CLK, R7FS7G27G2A01CLK, R7FS7G27H3A01CFB, R7FS7G27G3A01CFB
	S3A7	R7FS3A77C2A01CLK, R7FS3A77C3A01CFB, R7FS3A77C2A01CBJ, R7FS3A77C3A01CFP, R7FS3A77C2A01CLJ, R7FS3A77C3A01CFM, R7FS3A77C2A01CNB, R7FS3A77C3A01CNB
	S124	R7FS124773A01CFM, R7FS124772A01CNB, R7FS124773A01CNB, R7FS124763A01CFM, R7FS124762A01CNB, R7FS124763A01CNB, R7FS124773A01CFL, R7FS124772A01CNE, R7FS124773A01CNE, R7FS124763A01CFL, R7FS124762A01CNE, R7FS124763A01CNE, R7FS124772A01CNF, R7FS124773A01CNF, R7FS124762A01CNF, R7FS124763A01CNF, R7FS124772A01CLM, R7FS124762A01CLM

## 2. Code Generator Support

CPU Family	Group	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
	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



	G1H	R5F11FLJ, R5F11FLK, R5F11FLL
	I1A	R5F1076C, R5F107AC, R5F107AE, R5F107DE
	I1B	R5F10MME, R5F10MMG, R5F10MPE, R5F10MPG
	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
	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
RX	71M	R5F571MF, R5F571MG, R5F571MJ, R5F571ML
RZ	T1	R7S910001, R7S910002, R7S910006, R7S910007, R7S910011, R7S910013, R7S910015, R7S910016, R7S910017, R7S910018, R7S910025, R7S910026, R7S910027, R7S910028, R7S910101, R7S910102, R7S910106, R7S910107, R7S910111, R7S910113, R7S910115, R7S910116, R7S910117, R7S910118, R7S910125, R7S910126, R7S910127, R7S910128



### 3. Current 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 30<sup>th</sup> of March, 2016.

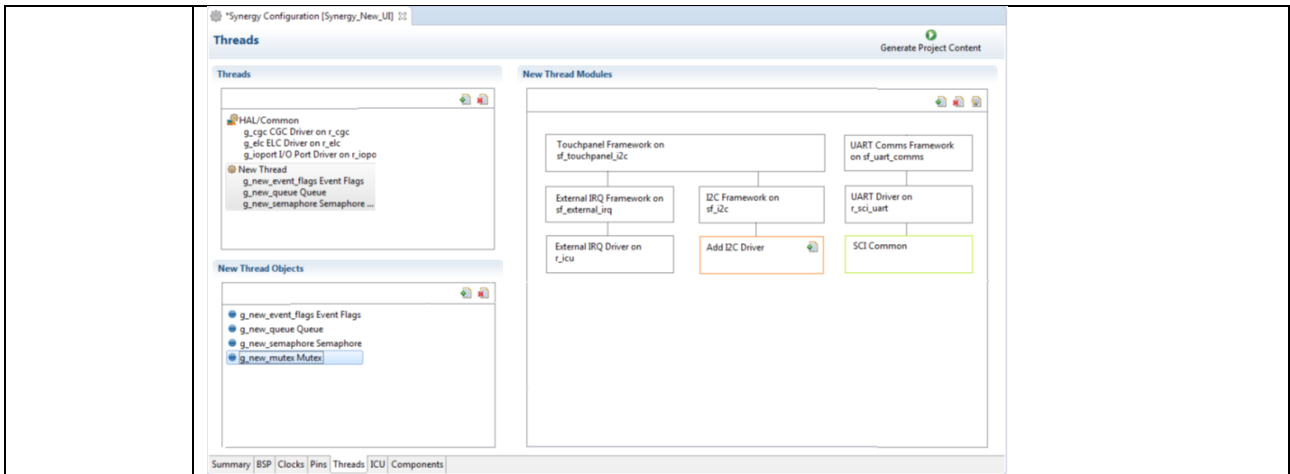
- RX62G
- RX62T
- RX63N
- RX63T
- RX64M
- RX71M
- RX110
- RX111
- RX113
- RX210
- RX220
- RX631

#### 4. What is new in 5.0.1?

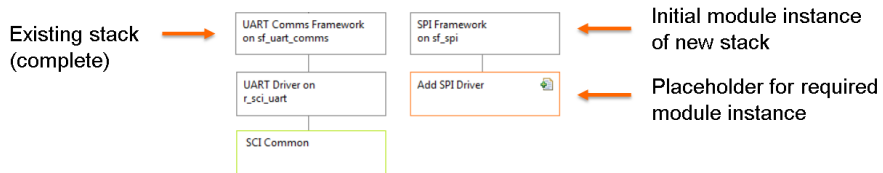
Component	Description
Smart Browser	<p>Renesas Web contents access through Smart Browser feature will be suspended as the Web site scheduled to be migrated on May 30, 2016.</p> <p>V5.0.1 supports new WEB system from May, 30, 2016.</p>

#### 5. What is new in 5.0.0?

Component	Description
Application	<p>Base Eclipse Platform for e2 studio has been updated to Mars (4.5) and the latest version of CDT.</p> <p>New and Noteworthy features can be viewed here:  <a href="https://www.eclipse.org/eclipse/news/4.5/jdt.php">https://www.eclipse.org/eclipse/news/4.5/jdt.php</a></p> <p>New and Noteworthy for CDT:  <a href="https://wiki.eclipse.org/CDT/User/NewIn87">https://wiki.eclipse.org/CDT/User/NewIn87</a>  <a href="https://wiki.eclipse.org/CDT/User/NewIn88">https://wiki.eclipse.org/CDT/User/NewIn88</a></p> <p>Fixed items in Mars:  <a href="https://bugs.eclipse.org/bugs/buglist.cgi?bug_status=RESOLVED&amp;bug_status=VERIFIED&amp;bug_status=CLOSED&amp;classification=Eclipse&amp;list_id=14214415&amp;product=Platform&amp;query_format=advanced&amp;resolution=FIXED&amp;target_milestone=4.5&amp;target_milestone=4.5%20M1&amp;target_milestone=4.5%20M2&amp;target_milestone=4.5%20M3&amp;target_milestone=4.5%20M4&amp;target_milestone=4.5%20M5&amp;target_milestone=4.5%20M6&amp;target_milestone=4.5%20M7&amp;target_milestone=4.5%20RC1&amp;target_milestone=4.5%20RC2&amp;target_milestone=4.5%20RC3&amp;target_milestone=4.5%20RC4&amp;target_milestone=4.5.1&amp;target_milestone=4.5.2">https://bugs.eclipse.org/bugs/buglist.cgi?bug_status=RESOLVED&amp;bug_status=VERIFIED&amp;bug_status=CLOSED&amp;classification=Eclipse&amp;list_id=14214415&amp;product=Platform&amp;query_format=advanced&amp;resolution=FIXED&amp;target_milestone=4.5&amp;target_milestone=4.5%20M1&amp;target_milestone=4.5%20M2&amp;target_milestone=4.5%20M3&amp;target_milestone=4.5%20M4&amp;target_milestone=4.5%20M5&amp;target_milestone=4.5%20M6&amp;target_milestone=4.5%20M7&amp;target_milestone=4.5%20RC1&amp;target_milestone=4.5%20RC2&amp;target_milestone=4.5%20RC3&amp;target_milestone=4.5%20RC4&amp;target_milestone=4.5.1&amp;target_milestone=4.5.2</a></p> <p>Fixed items in CDT:  <a href="https://bugs.eclipse.org/bugs/buglist.cgi?bug_status=RESOLVED&amp;bug_status=VERIFIED&amp;bug_status=CLOSED&amp;classification=Tools&amp;list_id=14214417&amp;product=CDT&amp;query_format=advanced&amp;resolution=FIXED&amp;target_milestone=8.7.0&amp;target_milestone=8.8.0&amp;target_milestone=8.8.1">https://bugs.eclipse.org/bugs/buglist.cgi?bug_status=RESOLVED&amp;bug_status=VERIFIED&amp;bug_status=CLOSED&amp;classification=Tools&amp;list_id=14214417&amp;product=CDT&amp;query_format=advanced&amp;resolution=FIXED&amp;target_milestone=8.7.0&amp;target_milestone=8.8.0&amp;target_milestone=8.8.1</a></p>
Synergy Configurator – Threads Page	<p>In the Synergy configurator an improved user interface has been provided on the threads page for software stack creation and display.</p> <p>Intent:</p> <ul style="list-style-type: none"> <li>Graphical presentation of dependencies</li> <li>Common module instances presented within stacks</li> <li>Multiple stacks per thread</li> <li>Placeholders for missing module instances</li> <li>Add/Remove buttons moved to toolbars</li> </ul>



You can create a new stack within a thread via toolbar button  
 New stacks are presented side-by-side with any existing stacks in the thread

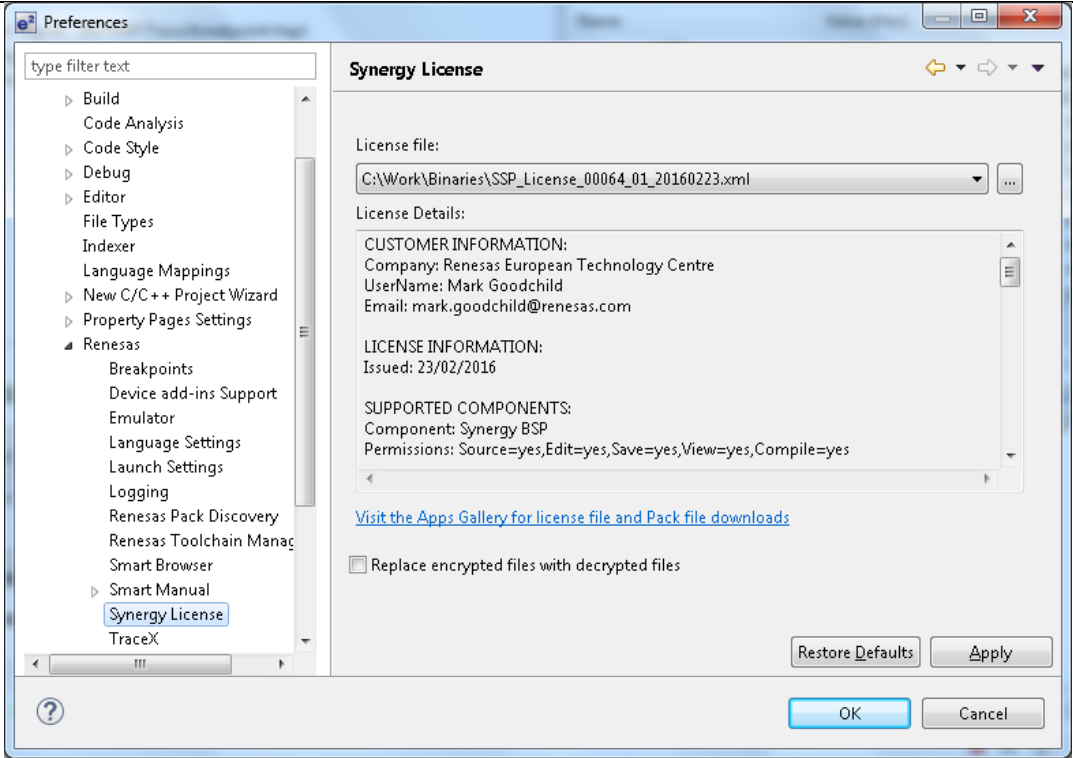



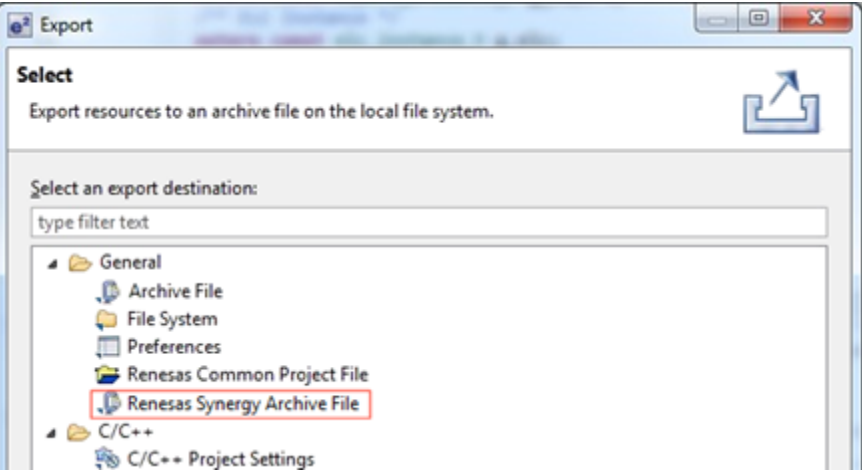
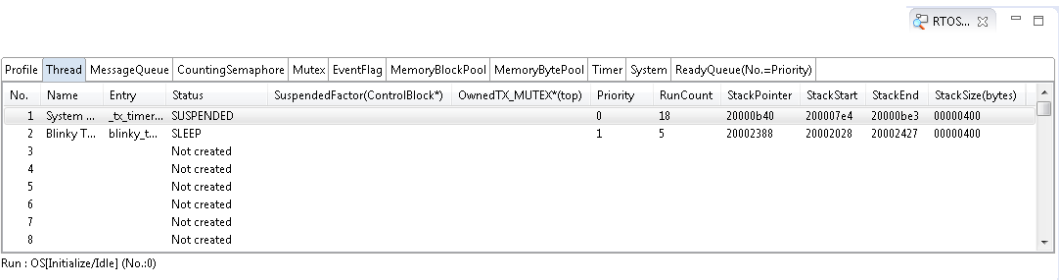
Any dependencies of the new module are presented as placeholders immediately

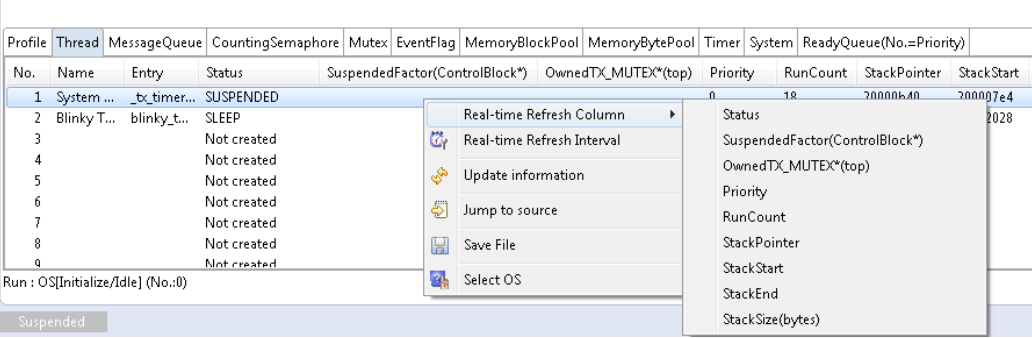
The software stack is grown downwards automatically in cases where only one module choice is applicable.

Placeholders for common modules may be replaced by an existing instance or a new instance.

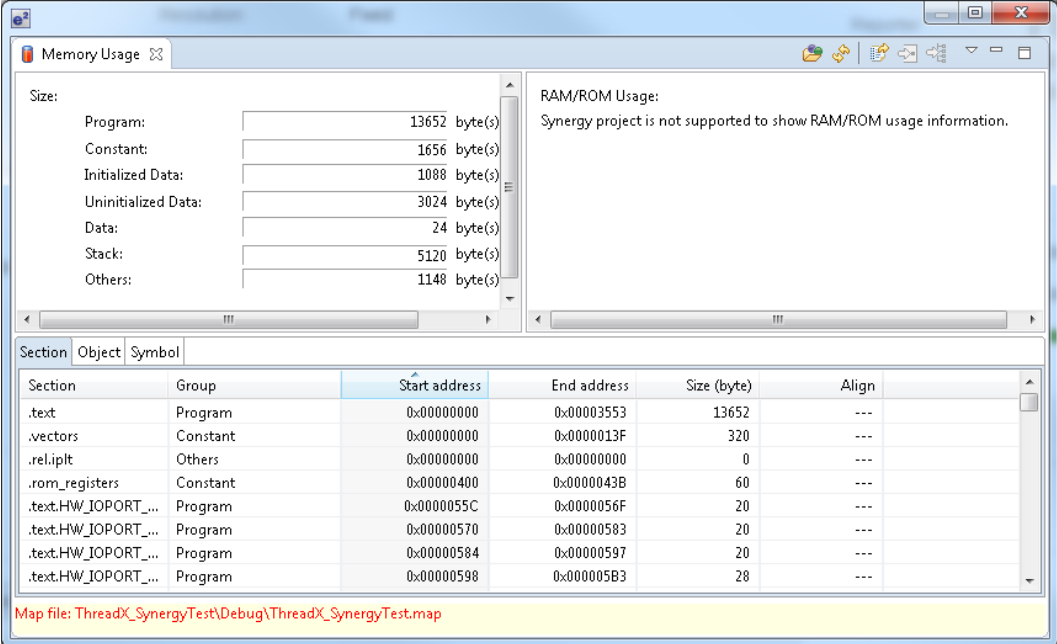
<p>Synergy Configurator</p>	<p>The Synergy license file has been moved from a project preference to a workspace preference.                  This means when you import an older 4.x project you will need to set the licence file for your workspace in the preferences page.</p>
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<p>Synergy Pins view</p>	<p>When generating Synergy files the configurator now also generates a flat pin file list. This list is in a .csv format. This enables post processing of this pin data for purposes outside of the e2 studio IDE.</p> <p>The pins view also supports color coding of pins in the view.</p>
<p>Synergy Configurator migration</p>	<p>When migrating from SSP 1.0 to 1.1 within e2 studio 5.0 you will be prompted to migrate your project to the new version.</p> <p>It is recommended that your project is backed up before doing this operation.</p> <p>The upgrade will replace some files within the project that will allow you to take maximum advantage of the new e2 studio 5.0 and SSP 1.1 features such as the threads tab software stack representations.</p>
<p>ARM Semihosting</p>	<p>Full semi-hosting support is included in e2 studio 5.0.</p> <p>This update includes scanf from the console and read/write to file.</p>
<p>Synergy Configurator – Pins tab</p>	<p>The Pins tab has been updated to allow the generation of multiple pin configurations for different use cases.</p>

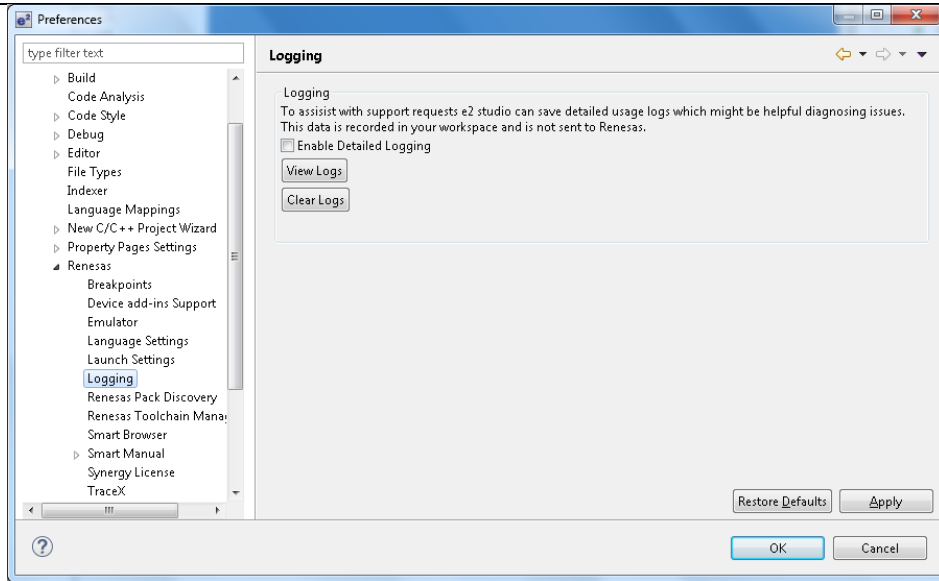
																																																																																																																																																							
<p>Synergy Exporter</p>	<p>A special Synergy export has been made available to the Synergy community.</p> <p>The Synergy exporter allow project exporting easily</p> <p>The exporter excludes the following folders:</p> <ul style="list-style-type: none"> <li>\synergy</li> <li>\synergy_cfg</li> <li>\src\synergy_gen</li> </ul> <p>This is available via a pop-up menu on the project item.</p> 																																																																																																																																																						
<p>Partner OS Plugin</p>	<p>The Partner OS view has been improved to provide a more usable and informative display. Here is an example of it being used with Express Logic's ThreadX RTOS.</p>  <table border="1" data-bbox="359 1617 1423 1818"> <thead> <tr> <th>Profile</th> <th>Thread</th> <th>MessageQueue</th> <th>CountingSemaphore</th> <th>Mutex</th> <th>EventFlag</th> <th>MemoryBlockPool</th> <th>MemoryBytePool</th> <th>Timer</th> <th>System</th> <th>ReadyQueue(No.=Priority)</th> <th>StackPointer</th> <th>StackStart</th> <th>StackEnd</th> <th>StackSize(bytes)</th> </tr> </thead> <tbody> <tr> <td>No.</td> <td>Name</td> <td>Entry</td> <td>Status</td> <td>SuspendedFactor(ControlBlock*)</td> <td>OwnedTX_MUTEX*(top)</td> <td>Priority</td> <td>RunCount</td> <td>StackPointer</td> <td>StackStart</td> <td>StackEnd</td> <td>StackSize(bytes)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>System ...</td> <td>_tx_timer...</td> <td>SUSPENDED</td> <td></td> <td></td> <td>0</td> <td>18</td> <td>20000b40</td> <td>200007e4</td> <td>20000be3</td> <td>00000400</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Blinky T...</td> <td>blinky_t...</td> <td>SLEEP</td> <td></td> <td></td> <td>1</td> <td>5</td> <td>20002398</td> <td>20002028</td> <td>20002427</td> <td>00000400</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td>Not created</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td>Not created</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td>Not created</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td>Not created</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td>Not created</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td>Not created</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Profile	Thread	MessageQueue	CountingSemaphore	Mutex	EventFlag	MemoryBlockPool	MemoryBytePool	Timer	System	ReadyQueue(No.=Priority)	StackPointer	StackStart	StackEnd	StackSize(bytes)	No.	Name	Entry	Status	SuspendedFactor(ControlBlock*)	OwnedTX_MUTEX*(top)	Priority	RunCount	StackPointer	StackStart	StackEnd	StackSize(bytes)				1	System ...	_tx_timer...	SUSPENDED			0	18	20000b40	200007e4	20000be3	00000400				2	Blinky T...	blinky_t...	SLEEP			1	5	20002398	20002028	20002427	00000400				3			Not created												4			Not created												5			Not created												6			Not created												7			Not created												8			Not created											
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	<p>Various features have been added to the view's pop-up context menu such as real-time monitoring of data and jump to source.</p> 
<p>Optimization Assistant</p>	<p>The optimization assistant has been updated to support the GNU RX and GNU RL78 toolchains.</p> <p>The optimization assistant has also been improved so that when results cannot be displayed for stack size an informative message is shown.</p>
<p>CCRX Build Support</p>	<p>The following command line options are now supported in the user interface:</p> <p><b>Compiler</b></p> <ul style="list-style-type: none"> <li>-message</li> <li>-nomessage</li> <li>-change_message</li> <li>-asm_path</li> </ul> <p><b>Assembler</b></p> <ul style="list-style-type: none"> <li>-chkpm</li> <li>-chkfpu</li> <li>-chkdsp</li> </ul> <p><b>Linker</b></p> <ul style="list-style-type: none"> <li>-message</li> <li>-nomessage</li> <li>-msg_unused</li> <li>-align_section</li> <li>-cpu</li> <li>-contiguous_section</li> <li>-change_message</li> </ul> <p><b>Librarian</b></p> <ul style="list-style-type: none"> <li>-message</li> <li>-nomessage</li> <li>-msg_unused</li> </ul>

	<p>-change_message</p> <p><b>Converter</b></p> <p>-space -message -nomessage -msg_unused -change_message</p>
<p>CCRL Build Support</p>	<p>The following command line options are now supported in the user interface:</p> <p><b>Compiler</b></p> <p>-asm_path -no_warning_num -pass_source -convert_cc</p> <p><b>Assembler</b></p> <p>-base_number -convert_asm -warning -no_warning</p> <p><b>Linker</b></p> <p>-message -nomessage -msg_unused -CHECK_64K_ONLY -NO_CHECK_SECTION_LAYOUT -CHECK_DEVICE -change_message</p> <p><b>Librarian</b></p> <p>-message -nomessage -change_message</p> <p><b>Converter</b></p> <p>-space</p>

	<p>-message -nomessage -change_message</p>
<p>Memory Usage Plugin</p>	<p>The memory usage plugin has been updated to support GCC. The sizes are consolidated into groups in the same manner as the CCRX and CCRL toolchains. Unfortunately the RAM/ROM usage area is not supported for the Synergy devices.</p>  <p>In addition the map file in use is now shown at the bottom of the view.</p>
<p>Code Generator</p>	<p>Code generator support has been revised to provide code generation for RL78/G1H and RL78/I1C. Maintenance updates have been made for RL, RX and RZ.</p>
<p>FIT Configurator</p>	<p>The FIT configurator has been modified to only add relevant sections when required. Previously some sections were modified such as EXCEPTVECT without reason.</p>
<p>Logging feature</p>	<p>A new logging feature has been added to e2 studio. This can assist with technical support problems. You can access the feature from the Window-&gt;Preferences dialog.</p>





Once enabled the log files are saved to your workspace.

No data is transmitted to Renesas but this information can be emailed to support departments for detailed analysis of issues.

**Breakpoints**

The e2 studio breakpoint system has been overhauled in 5.0.

Previously breakpoints were set according to the “Force hardware breakpoints” setting in the debug configuration of the debugger being launched.

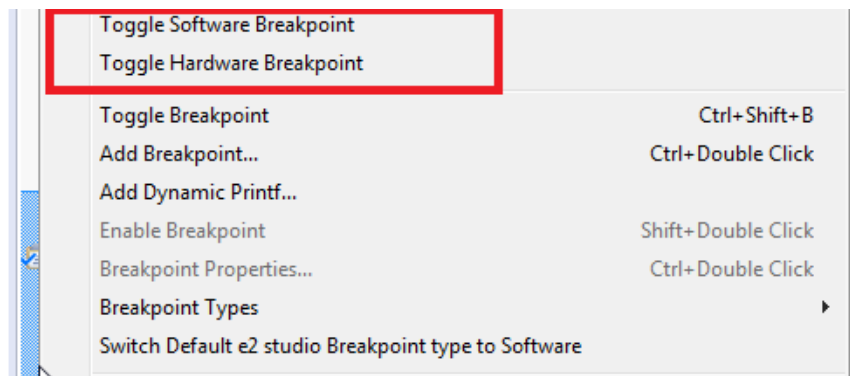
This would mean that standard Eclipse breakpoints would use hardware or software breakpoints according to the resources available. Then automatically swap them if resources run low.

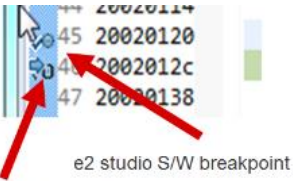
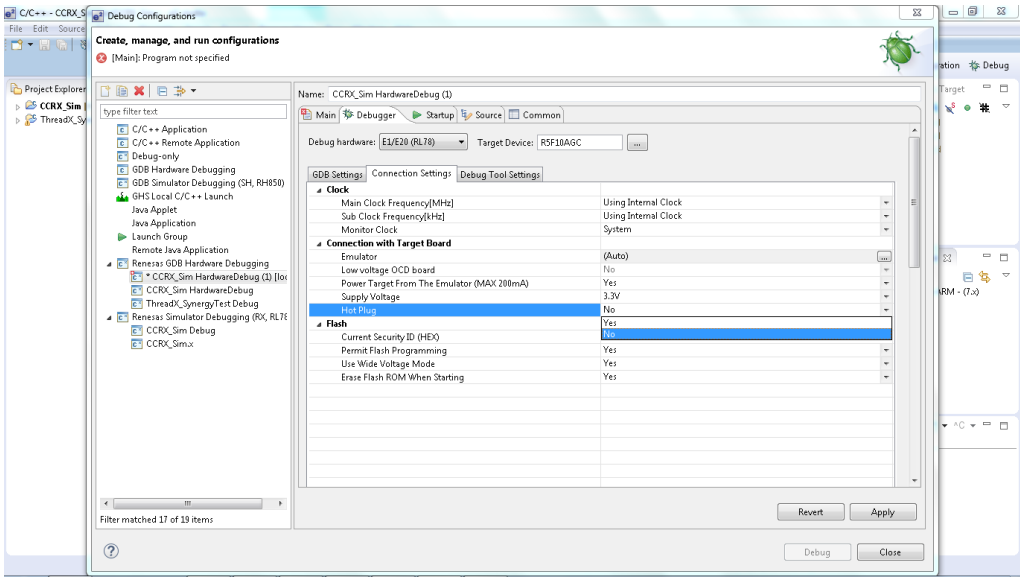
Although this system was flexible it was confusing for customers.

In addition e2 studio also supported before PC (BPC) eventpoints.

In e2 studio this has functionality has been simplified.

- BPC Eventpoints are no longer available.
- Any breakpoints added via double click are automatically hardware breakpoints. If the hardware resources are not there then the breakpoint setting will fail.
- The default breakpoint set by double click can be modified to software if required.
- There are pop-up menu items to add software and hardware breakpoints explicitly.



	<ul style="list-style-type: none"> <li>Software and hardware breakpoints have an icon indicating their type.</li> </ul>  <p>e2 studio S/W breakpoint</p> <p>e2 studio H/W breakpoint</p>
<p>RL78 Debugging</p>	<p>RL78 Hot Plug connection is now supported. This is available via the debug configuration pages for the RL78 E1 emulator.</p>  <p>This feature is supported for RL78/F1A, F13, F14 and F15 only.</p>
<p>Project reporter</p>	<p>In e2 studio it can be hard to compare projects and build configurations to each other to determine what is different.</p> <p>A new project reporter feature has been implemented in 5.0. This can output project settings to a file to allow easy comparison.</p> <p>The report should be human readable and difference tool compatible</p> <p>The menu to do this operation is available on the project context menu in the Project Explorer View.</p> <p>The menu entry 'Save build settings' option is listed and selecting it will create the report.</p>
<p>RX64M debugging</p>	<p>RX64M DMA Trace feature has now been implemented. This feature can be setup by selecting DMA on the trace acquisition dialog of the trace plugin when debugging with RX64M.</p>
<p>IO Registers</p>	<p>The IO Registers plugin will be enhanced to show more columns which additional information such as binary and hex value.</p>

Name	Value (Hex)	Value (Bin)	...	Address	Access
MB0					
MB0_ID	0x00000000	0000000000000000...		0x00092200	RW
MB0_DLC	0x0000	0000000000000000		0x00092204	RW
MB0_DATA0	0x00	00000000		0x00092206	RW
MB0_DATA1	0x00	00000000		0x00092207	RW
MB0_DATA2	0x00	00000000		0x00092208	RW
MB0_DATA3	0x00	00000000		0x00092209	RW
MB0_DATA4	0x00	00000000		0x0009220a	RW
MB0_DATA5	0x00	00000000		0x0009220b	RW
MB0_DATA6	0x00	00000000		0x0009220c	RW
MB0_DATA7	0x00	00000000		0x0009220d	RW
MB0_TS	0x0000	0000000000000000		0x0009220e	RW

**ARM GCC import and convert to Launchpad GCC**

From e2 studio 5.0 we are suggesting that users wanting to use GCC for ARM should consider using the ARM GCC Launchpad toolchain.

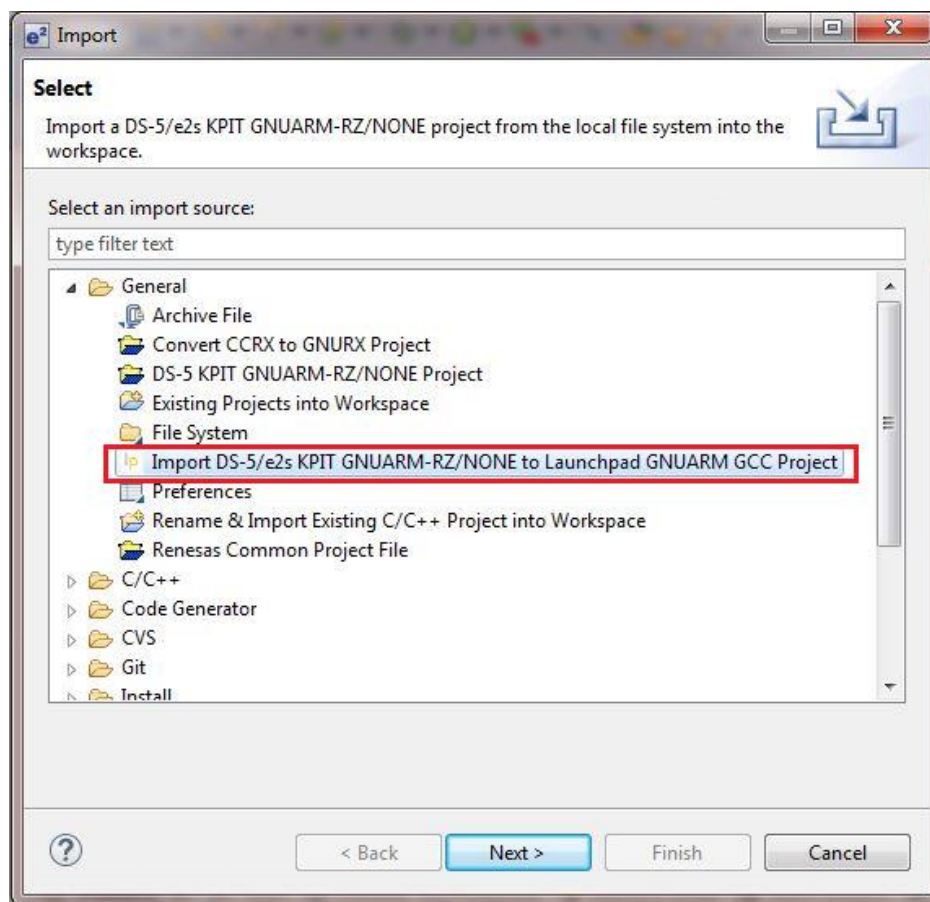
With this in mind in e2 studio 5.0 we have implemented some conversion tools to assist this process:

This feature request is to add an importer from the following toolchain projects:

- e2 studio project with a KPIT RZ GCC toolchain
- e2 studio project with a KPIT ARM-None toolchain
- DS-5 project with a KPIT RZ GCC toolchain
- DS-5 project with a KPIT ARM-None toolchain

During the import a conversion would take place and convert these projects to the ARM Launchpad toolchain.

This feature will be available on the [File->Import] feature of e2 studio.



The actual import dialog looks like this:

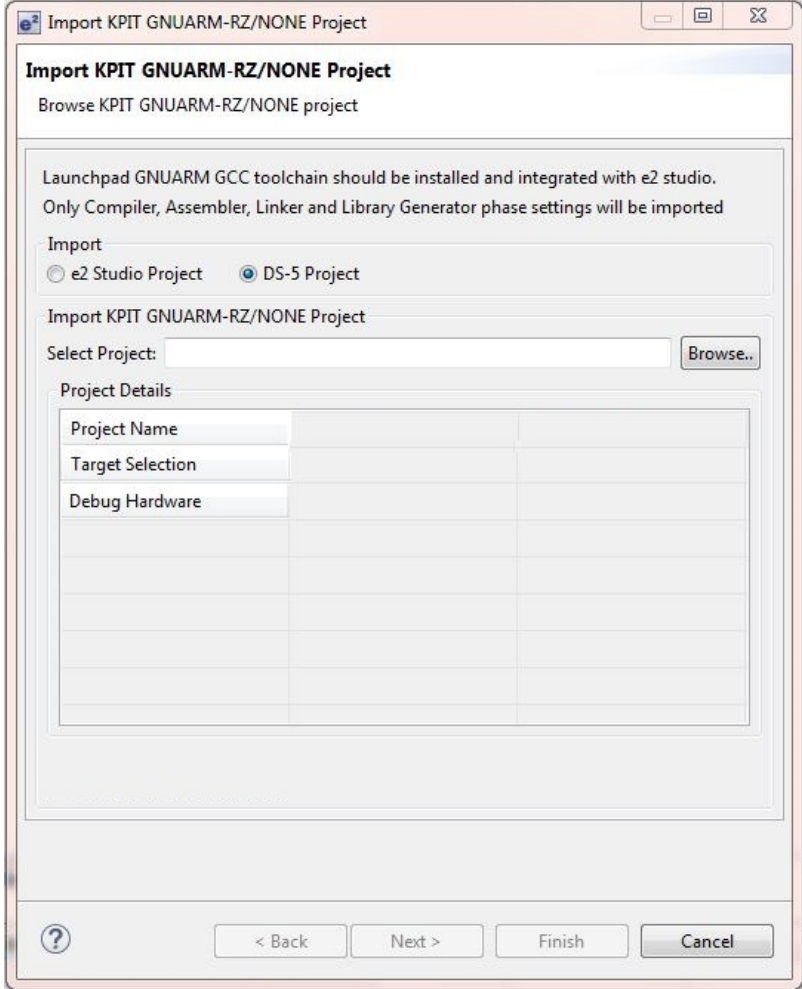
	
<p>3<sup>rd</sup> party build plugins</p>	<p>In previous e2 studio releases 3<sup>rd</sup> party build related plugins may have been hidden from the build settings dialog.</p> <p>This behaviour has been modified to now allow 3<sup>rd</sup> party plugins to be visible as expected.</p>
<p>Coverage when using the simulator</p>	<p>When using the RX Simulator it is now possible to use the coverage debugging feature.</p>
<p>Heap size</p>	<p>The heap size used by e2 studio has been increased from 512MB to 1024MB.</p> <p>This will improve performance of the IDE.</p> <p>However if you experience issues with start-up please reduce the number back to – Xmx512m.</p> <p>This is a parameter of the e2studio.ini file in the Eclipse directory. e.g. c:\renesas\e2_studio\eclipse</p>

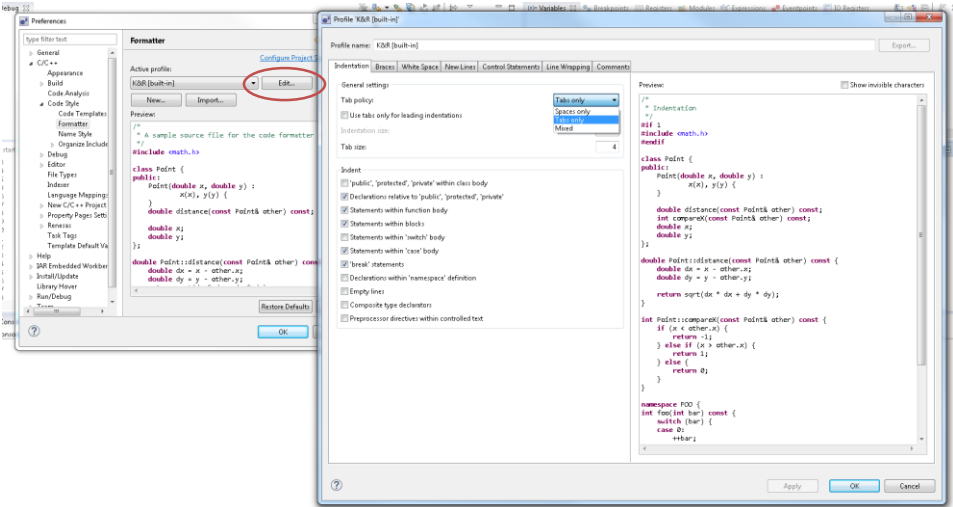
Image memory renderer	The raw memory image rendering view now has a custom YUV format.
Trace view	The trace view has been improved so that the scroll bar can be more easily used when the trace buffer is not huge.
RL78 debugging	RL78 memory import and download performance has been improved.
RZ Debugging	NOR boot project type has been added to the RZ/T1 project generator.
RX Linker sections	The Linker section editor for the CCRX toolchain now supports overlaid sections.

## 6. Useful workarounds and information for 5.0

ID	Component	Workaround or information
	Application	<p>This version of e<sup>2</sup> 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:</p> <p>For information on the Mars release see here:  <a href="https://projects.eclipse.org/releases/mars">https://projects.eclipse.org/releases/mars</a></p> <p>CDT:  <a href="https://wiki.eclipse.org/CDT/User/NewIn88">https://wiki.eclipse.org/CDT/User/NewIn88</a></p> <p>The Eclipse bug tracker is here:  <a href="https://bugs.eclipse.org/bugs/">https://bugs.eclipse.org/bugs/</a></p>
5954	Application	<p>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.</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>
6981	RL78 Debugging	<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> <ul style="list-style-type: none"> <li>- Open Property.</li> <li>- Select [C/C++ build]-[Settings] at left side.</li> <li>- Select 'IAR RL78 Xlink linker' at right side, add '-HFF' at the textbox 'command'.</li> </ul> <p>Not doing this will cause problems with connection and download when using interrupts.</p>
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. In e<sup>2</sup> studio 2.1 or later this now defaults to on for new projects.</p>
NA	RZ GCC	<p>In 3.0 the KPIT GCC RZ toolchain was support at version 14.01. This version is no longer supported within e<sup>2</sup> studio.</p>

		<p>KPIT have 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 toolchain is available at version 14.01 and 14.02 from the KPIT website. The binaries in the 14.01 version is identical to that 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	GCC Build Plugin	The GNU toolchain linker file format was changed in 3.0. This means projects that are developed in 3.0 or later and opened in 2.x will still continue to build. However you may experience issues visiting the GCC Linker Sections user interface.
2010	HEW Importer	<p>Symptoms: Project fails to build after import 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>
NA	Application	It is not possible to import e <sup>2</sup> studio 1.x projects which are for the V850 device into e <sup>2</sup> studio 2.0 or later.
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> <p>On occasion you may also see this for C source files. This is normally a case of the indexer needing to be refreshed.</p> <p>Right click on the project, select Index-&gt;Freshen all files. Then right click again select Index-Rebuild. This should solve unexpected CODAN errors in C source files.</p>
2728	GDB	<p>Step into does not always work when using the CCRX 1.02.01 toolchain.</p> <p>To ensure this behaves correctly you will need to use CCRX 2.00.00 or greater as this issue with the debug information is corrected in this release.</p>
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	<p>The IAR Plugin Manager is now included in e<sup>2</sup> studio. This provides support for RX, RL78, RH850 and RZ (ARM).</p> <p>This is a tool which 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/CCRL 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>
5995	CCRX to GNU RX Converter	<p>When converting from CCRX to GCC projects some comments like <code>/** comment */</code> 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.</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> 

## 6. Closed Tickets in 5.0.0.43

Key	Summary	Component/s	Description
IDE-9004	CCRX Builder is building when it should not	CCRL Build plugin, CCRX Build plugin	The following issue fixed. When executing the Build command at a project which macro definitions option at the compiler is specified, it is rebuilt each time.
IDE-7988	[BREAKPOINT ISSUE] Event points not being managed correctly	Eventpoints	Hardware breakpoints and event points may remain set but invisible in the e2 studio user interface after disconnection and reconnection. Powering the board down removes the breakpoints and restores to normal.
IDE-7546	[e2 solution toolkit] Smart Browser cannot open PDF file with Windows Edge	Smart Browser	PDF file is associated with Microsoft Edge by default in Windows 10. However, Smart Browser and Smart Manual will not be able to recognize that the Microsoft Edge is associated with a PDF.  Please install the PDF viewer such as Adobe Reader and specify the application of default to open the PDF file.

## 7. Closed Tickets in 5.0.0.43

Key	Summary	Component/s	Description
IDE-8718	SHC+E10A project causes some issues	SH Debug Support	Fixed an issue where disconnecting from an SH-based device would throw an error dialog.
IDE-8690	[BREAKPOINT ISSUE] 'Permit Clock Source Change On Writing Internal Flash Memory' will cause GDB crash.	Debug Configuration, GDB, GDB server RX	When using the RX with the E1 emulator. When 'Permit Clock Source Change On Writing Internal Flash Memory' is set to 'No' and 'Set breakpoint at' is set to 'main', GDB will crash on restarting from main.
IDE-8610	[CCRL] exported rpcpc file has no section layout info	CCRL Project Export	How to reproduce and what was wrong: 1. Turn off "Layout sections automatically" in Linker -> Section option of project property (then press OK). 2. Export the project as "Renesas Common Project File" (*.rpcpc). In the *.rpcpc file, -start option was not generated, while it was generated in LinkerSubCommand.tmp. As a result, CS+ imported project had no section layout settings.  Possible workaround: 1. On CS+, after imported a project, turn set the automated section layout as off (or once on then off, if necessary). 2. Then copy -start option string from "LinkerSubCommand.tmp" file left in the e2 studio build folder, 3. Paste the string for CS+ linker -start option.  This issue is fixed at e2 studio V.5
IDE-8586	Synergy tool-chain selection from imported project	Application	Synergy projects created in 4.3 will be automatically updated to the latest GCC installed version on your installation.  You can change this back to the version you are expecting in the build settings pages.

			In e2 studio 5.0 this will no longer happen for newly created projects from 5.0 onwards.
IDE-8477	GNURL78: Native multiply for G14 cannot be selected for RL78 - G1H	RL78 GCC build plugin	The RL78 GCC toolchain does not allow Native multiply for G14 to be selected for RL78 - G1H.
IDE-8457	-merge_files was ignored when set by Optimization Assistant	CCRX Build plugin	Problem: When the "Slightly strong" for Speed configuration is create at Optimization Assistant and executed the "Measure and Compare", the following warning occurs. W0511170: "-merge_files" option is ignored due to the specification of another option.  This issue is fixed at e2 studio V.5.
IDE-8435	The startup files of GNU-RX is incorrect	Device Support RX	Corrected the following issue of the startup files of GNU-RX. (1)In the vect.h of RX610, following line is wrong. NG: void INT_Excep_DMAC_DMTEND0(void); OK: void INT_Excep_DMAC_DMTEND0(void); _attribute_ ((interrupt)); (2)In the vecttbl.h of RX63T dose not define "Access exception" in fixed vector Table.
IDE-8433	The definition of the following RX device is incorrect.	Device Support RX	When following MCU had been selected, the problem that 5V was not able to be specified by the service voltage from E1 was corrected. RX63T : R5F563TBxFA, R5F563TBxFB, R5F563TBxFH, R5F563TBxFP, R5F563TBDxFA, R5F563TBDxFB, R5F563TBDxFH, R5F563TBDxFP, R5F563TCxFA, R5F563TCxFB, R5F563TCxFH, R5F563TCxFP, R5F563TCDxFA, R5F563TCDxFB, R5F563TCDxFH, R5F563TCDxFP, R5F563TExFA, R5F563TExFB, R5F563TExFH, R5F563TExFP, R5F563TEDxFA, R5F563TEDxFB, R5F563TEDxFH, R5F563TEDxFP, RX634 : R5F5634EYxFB, R5F5634DYxFB, R5F5634BYxFB When following MCU had been selected, the problem that the user boot start was not able to be done was corrected. RX631 : R5F5631MFxLH, R5F5631PFxLH
IDE-8386	ELF/Dwarf failure will be thrown in case the app is generated with IAR RL78 V2.xx	RL78 Debug Support	When using the IAR RL78 2.20 toolchain, program download causes a GPF in the RL78 GDB executable.
IDE-8316	GNUARM Library project: Incorrect CPU type and Architecture for RZ/T	Application	When creating a RZ/T library project the CPU compiler options are incorrect.  On creating GNU ARM 'Library project' for target 'RZ/T', CPU type 'cortex-a9' and Architecture 'armv7-a' are set in build settings. However, 'cortex-r4f' and 'armv7-r' should set for target 'RZ/T'.
IDE-8275	GDB server cannot connect to RX simulator	Device Support RX	When the debug hardware is RX Simulator and the Target Device is RX64M or RX71M, if one of the following conditions is satisfied, the connection will fail. - In the compiler option for RXC, '-isa=rxv1' is specified or '-cpu=rx200' is specified. - In the compiler option for KPIT GNURX, '-mcpu=rx64m' is not specified. - 'Symbols only' is selected at 'Load image and symbols' in Startup of Debug Configurations.  In this case, please add the option string '-rx-force-v2' at

			GDB Command on GDB Settings in Debugger of Debug Configurations.
IDE-8273	When using Synergy when the Synergy builder runs the linker script setting is reset to default	ISDE	When using Synergy and the linker script is changed from the default. It is reset back to default when the Synergy builder executes.
IDE-8265	Imported RAW image is not shown correctly with Bottom Start Position	Image Memory Rendering	When using the RAW image view an image is not shown correctly with the Bottom Start Position.  This can be seen when using the YCbCr 16bpp (4:2:2 chunky) (y0, Cr, y1, Cb) image encoding.
IDE-8263	Synergy GDB crash on build and reload.	ISDE	When using Synergy if the currently downloaded module is modified and then subsequently reloaded it can cause GDB to crash.  A new option has been added to the debug configurations to reset the device after a re download operation.
IDE-8229	e2 studio V4.3.0 installer causes error on Windows Server 2012	Installer	The 4.3.0 installer does not work correctly on Windows Server 2012.  It is possible to work around this by the following steps:  1: To install e2 studio on Windows Server 2012, download and install the latest version of Java run-time environment (JRE) 32-bit 2: Decompress the e2 studio installation file. 3: Go to Program Files (x86)/Java/jre xx and copy and then paste this folder to setup_e2_studio_4_3_0_007/jre 4: Run eclipse.exe inside setup_e2_studio_4_3_0_007 folder.  Installation should then run correctly.
IDE-8222	Displayed ID code in Write On Chip Flash Memory mode for RXv2 core is incorrect.	GDB server RX	When the program is downloaded with "Write On Chip Flash Memory" mode for RX64M or RX71M, the security code which is displayed in Console View is incorrect. Please refer to the actual program to see the ID code.
IDE-8221	E2Studio has wrong compiler settings for S124	ISDE	After creating a new project for the S124, the compiler settings incorrectly have the FPU enabled. The S124 does not have an FPU and files will fail to compile while this is enabled.
IDE-8200	GNUARM: Selecting Re-Apply makes all the sections disappear	Application	For the KPIT GNU ARM toolchain. In the linker sections editor if you select Re-Apply it makes all the defined sections disappear.
IDE-8184	Change toolchain version not functioning as expected	Application	When changing toolchain a rebuild does not cause a full rebuild to take place.
IDE-8172	GDB server stop working in special case	GDB server RL78	If the simulator is disconnected during program execution, an error "E2 Server GDB has stopped working" may occur. Even after this error occurred, the simulator can be reconnected.
IDE-8152	Performance Analysis view does not show correct value	Performance Analysis	Timer 1 and Timer 2 show same value when timer start and timer stop are different.
IDE-8149	Debugger status is not shown on the Status Bar.	Application	The debugger status is not shown on the status bar.
IDE-8041	Cannot import some options	CubeSuite+ importer/exporter	When CS+ project is imported, the following options are not specified correctly.

			-ocdbg -user_opt_byte
IDE-7989	Profile data is duplicate	Profile plugin	When Profile View is opened and is enabled after connection, the view may show the duplicated lines. To avoid this, please open the view and enable it before connection.
IDE-7924	[RTOS] Current state of [Select OS] seems be incorrect.	Partner OS	When invoking the Partner OS plugin when the debugger is in a running state will not allow you to select the RTOS being used.
IDE-7907	Improve the way breakpoints and event points are handled in e2 studio	Application	Eclipse Breakpoints and Renesas BPC Eventpoints have merged. The Force Hardware Breakpoints feature has also been removed from the debug configurations.
IDE-7607	GNURL78: -mmul option not mapped after project generation in project build settings	RL78 GCC build plugin	When changing the build optimization settings for RL78 GCC toolchain the multiplication code generation option is modified. The state of this option should not be affected by changing the optimization settings.  Please manually modify the switch back to your desired setting after changing the optimization settings.
IDE-7601	Compiler Registration not possible (CCRX and GUN RX)	Application	When the user does not have the required compiler plugin he cannot register toolchains that are supported by the uninstalled build plugin.  This is correct behavior however the registration message is misleading. An improved message should be provided.
IDE-7588	Start/Stop Function Setting for RL78 needs reconnecting the debugger, if the program is built.	Debug Configuration, GDB server RL78	Start / Stop Function Settings for RL78 are sent once on connecting. If the address for start function or stop function is changed by building the program, please disconnect from target and reconnect again.
IDE-7547	[e2 solution toolkit] Smart Manual cannot open PDF file with Windows Edge	Smart Manual plugin	PDF file is associated with Windows Edge by default in Windows 10. However, Smart Browser and Smart Manual will not be able to recognize that the Windows Edge is associated with a PDF.  Please install the PDF viewer such as Adobe Reader and specify the application of default to open the PDF file.
IDE-7468	[Trace] Cannot get Source and Disassembly information in RX simulator	GDB server RX	When using the RX Simulator the trace view does not show correct source and disassembly information when these two modes are enabled.
IDE-7457	The option "Hot Plug" is not supported for E2 Lite.	GDB server RL78	The option "Hot Plug" in the debug configuration for RL78 E2 Lite is not supported. Please don't set this option to "Yes".
IDE-7456	The option "Low voltage OCD board" is not supported for E2 Lite.	GDB server RL78	The option "Low voltage OCD board" in the debug configuration for RL78 E2 Lite is not supported. Please don't set this option to "Yes".
IDE-7380	When debugging with Simulator, Profile view does NOT show information.	GDB server RX, Profile plugin	When connecting with RX simulator, Profile view does not show any information. Profile view sometimes show some information, it is not correct information.
IDE-7355	Failed to connect with "User Boot mode" for RX631.	GDB server RX	When connecting to RX63x, RX64x, RX7xx, RX2xx, or RX1xx with user-boot mode, it will fail. Please do not use user boot mode for these devices.

IDE-6704	RZ/T1 Target allows profile to be enabled	GDB Server RZ	For RZ/T1 target a user can select Profile View. When selecting button 'Turn Profiling On' this is allowed to be enabled although this is not supported.
IDE-6549	Execution Time and Average Execution not shown in Profile View	GDB server RX	The Profile View 'Execution Time' and 'Average Execution Time' columns are showing as zero after suspending the current debug session (for all targets).
IDE-6484	Additional CDT Build Settings tabs contributes by 3rd party plugins by e2 studio Build Plugins	Application	Additional build tabs contributed by other third party tools can be hidden by e2 studio. This is caused by Renesas/KPIT build plugins replacing the standard build settings page with a custom one.
IDE-6450	[BREAKPOINT ISSUE] When "Prevent debugger from re-writing on-chip Program ROM" is checked and "Force Hardware Breakpoints" is set to No setting breakpoint fails and the program will not execute	GDB, GDB server RX	When "Prevent debugger from re-writing on-chip Program ROM" is checked and "Force Hardware Breakpoints" is set to No setting breakpoint fails and the program will not execute.
IDE-6208	(RX) The behavior for "-uProgReWriteDFlash" is different from "-uProgReWriteRom".	GDB server RX	When debugging with RX there are problems with setting breakpoints when the hardware breakpoint resources have been exhausted and the software breakpoint setting also fails.  In this case the breakpoint appears to be valid but the debugger will not stop.  This can often be seen when the option "Program re-writes internal Data Flash" is set to yes. As this means software breakpoints cannot be set.
IDE-5669	[BREAKPOINT] Program breaks every time where 'Move To Line' was executed once	GDB server	An invisible breakpoint is left in the project following a 'Move To Line' operation. Program execution continues to halt at this location once the Move to Line operation has been performed.
IDE-5551	[BREAKPOINT] (RX) After failing to set break point, execution does not work at all.	Application	If the maximum number of break points are used for RX with E1/E20 emulator, the connection or the program execution may fail. In this case, please reduce the using break points.
IDE-5201	GNURL78: GDB simulator debugging gives error	Application	If you create a project and debug session for a GDB simulator before executing a hardware debug session it will fail. This is because the debugger support is not unpacked until a hardware debug session is used.  To work around setup and launch a hardware debug session. You do not actually need hardware to do this.
IDE-5056	timestamp empty on RX profile results	GDB server RX	Timestamp setting on the Trace view has no effect on results for Profile view for RX devices.
IDE-5041	Code Generator deletes user code between /* Start */ End comments	CodeGenerator plugin	Code Generator can delete user code between /* Start */ End comments in some situations.  Using the code generator if the following code is placed in the main function: <pre>//if(data_in!=0xAA){</pre> on a line by itself, all of the main code will be removed when Generate Code button is pressed.  The key issue is that the { brace is on the same line as the comment.

IDE-4597	[BREAKPOINT] (RX) A before PC eventpoint which is just after a break point does not hit.	Application	In some cases when a before PC eventpoint is set just after a break point, the program execution will not stop at the address the eventpoint is located at.
IDE-4450	Renesas toolchain Linker section changes are not saved for Multiple configuration	CCRX Build plugin	Linker section settings of Renesas toolchain are not getting saved for multiple configurations.
IDE-4191	[BREAKPOINT] RX Segger HW breakpoint removal disables breakpoints. RX62N8	GDB server RX	When using Segger JLink, with the "Force Hardware Breakpoints" debug option enabled, adding more than the maximum amount of breakpoints for a device and then removing some can lead to none of the breakpoints firing. Workaround is to add a single breakpoint back in to trigger the reapply of all others.
IDE-1486	[BREAKPOINT ISSUE] The "Filter" setting for a breakpoint or watchpoint was not applied.	Application	Breakpoint properties do not work when set in the CDT dialogs. For example using the filter operation and removing the breakpoint for the process being debugged.

## 8. Open Issues in 5.0.0.43

Key	Summary	Component/s	Description
IDE-8771	[5.0] Build error on imported SHC project.	SH Build Support	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-8731	RX, RL78 & ARM JLink (RZ/Synergy) Debug support files not updated when updating to 4.3.0.007	Application	When updating to 4.3.0.007 Debug support files for RX, RL78 & RZ/Synergy are not updated.
IDE-8726	Exception was thrown when specify synergy license file by place-holder	ISDE	When using a placeholder in the Synergy license dialog it throws an exception. Please use a full path to the file.
IDE-8725	GDB will crash when resume command or step command returns an error.	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-8713	Code Generator may not work after updating to 4.3.0.007	Application	Code generator may not work when updating from 4.2 to 4.3.
IDE-8712	Hardware breakpoint will overwrite eventpoints.	Application	Hardware breakpoints and eventpoints seem to conflict on hardware resource usage. It is not easy to determine which is using the hardware resources.
IDE-8711	Timing to show 'Unable to modify eventpoints' message is strange.	Application	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-8710	Eventpoint view does not show the correct valid event count.	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-8682	Debug launch does not work correctly when the Program	Debug Configuration	Debug launch does not work correctly when the Program Name contains project specific variables e.g. "\${project_name}". They resolve based on workspace



	Name contains project specific variables		selection rather than the project specified in the debug configuration.
IDE-8676	Default project for R5F10Y16 cannot connect	Project Generation	Default project for R5F10Y16 cannot connect.  When the load module 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"
IDE-8661	[Help] Coverage View Help for English does not show the picture.	Coverage plugin	The help contents for Coverage View does not show any pictures.
IDE-8652	Pin configurator, LCD Graphics multiple pin assignment error	ISDE	In the ISDE pin configurator for S7G2 it is possible to configure the LCD_Graphics peripheral to output data onto the option A and option B pins simultaneously by enabling both GLCD_Controller__Pin_Option_A and B. For example LCD_CLK on P101 and P900 Device user manual specifically prohibits this in section 20.6
IDE-8650	MAP optimization option does not output to the common file.	CubeSuite+ importer/exporter	We created a project for CC-RX in e2 studio and specified the map optimization option. When a project is exported, the common file does not output the map optimization option of Linker. This occurs only on the first project build.
IDE-8649	Total count of Performance Analysis cannot be displayed	Performance Analysis	Total count of Performance Analysis cannot be displayed.  When the link timer option in the performance analysis setting is on the total count is displayed. When this option is off the total count is not displayed.
IDE-8644	When the 'verbose mode' is enabled, connection will fail.	GDB server	If the verbose mode option is enabled, connection to debugger will fail. Please do not enable this option.
IDE-8635	Performance analysis does not shown value if Timer event have not been set before	GDB server RX, Performance Analysis	Performance Analysis view may not show the timer result for RX. In this case, please add timer start event. Once timer start event is added correctly, it can be removed.
IDE-8631	Pin configurator Symbol name #define	ISDE	The symbolic name and comment associated to a pin is not reflected in the output pin header file.
IDE-8627	System Explorer launch breaking E2	System Explorer	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-8622	'Turn Profiling On/Off' button is disable when debugging project.	Profile plugin	The enabling button for Profile view and Coverage view may not be sensitive. In this case, please invoke a step. This will change the status of buttons to sensitive.
IDE-8603	The memory monitor is not stored/restored for DSP cores	Memory View plugin	Memory monitors are not restored correctly when debugging in multicore. Only one of the cores memory monitors are restored.
IDE-8596	CC-RL project does step return / step over stops at not expected location	RL78 Simulator	In some cases a CC-RL project does not step over and step return correctly when using the RL78 Simulator.
IDE-8592	Step return and step over does not work for RL78 after hot plug connection.	RL78 GDB	After connection with hot plug for RL78, 'step return' and 'step over' execution may not work. Please use a hardware break and resume command.
IDE-8583	Cannot enable coverage and profile feature.	Coverage plugin, Profile plugin	When I use RX simulator, sometimes it is not possible to enable the coverage feature in Coverage View.  If you experience this issue, activate this before connection and the view works well.



			This can also be seen for profile.
IDE-8579	Execution time for the last function may not be displayed in Profile View.	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	Unable to create a synergy project in Turkish Windows 8.1	ISDE, 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.
IDE-8539	[Japanese][Help] incorrect sample code link	Application	RL78 and RZ/A1 sample project link is broken.
IDE-8529	"Restore Default Value" button in Properties View does not work for Synergy-related properties	ISDE	When using Synergy the "Restore Default Values" button in the properties window does not restore the BSP properties to their default value.
IDE-8503	RL78 Smart Analog Memory can't be read during execution	GDB server RL78	The devices with a SmartAnalog(e.g.RL78/I1E) will not be able to memory read during execution.
IDE-8498	Synergy multiple pin-files allows duplicates pin-output names	ISDE	The Pins page in the Synergy Configuration Editor allows the user to specify multiple pin setups and their pin-output files. The pin-output files however can be a duplicate name of another pin output file, which may cause symbol clashes in the code.
IDE-8450	Empty view on minimize and restore (Variables, Expression, IO Register, etc.)	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	'Internal Flash Memory Overwrite' option for RX E1 needs the number limitation.	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	Connection with 'Internal Flash Memory Overwrite' may fail.	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	Changing BSP board does not change FPU option to suit	ISDE	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-8404	Update of disassembly view in source mode never completes	GDB server	When using Green DSP and viewing the DSP area in the disassembly view if the user has source mixed mode enabled it can cause the disassembly view to stop loading data.
IDE-8389	Inconsistent behavior in product and development setup	Application	In some situations you may see settings not being stored correctly or wiped out. In this case please visit the page in the settings you wish to modify and click apply and close the preferences page.  If you also visit the Build Settings page the changes you make previously can disappear in certain situations.
IDE-8353	[Linker Sections]: Error not displayed on adding multiple Labels	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-8322	[CC-RL] The default of -Osame_code option is not correct.	CCRL Build plugin	If you would like to specify "-Osize -Osame_code=off" in compiler, please add "-Osame_code=off" as User-defined options at [Compiler]->[Users].
IDE-8304	[GCC] Build error when both ".S" and ".s" files are included in project built targets	GCC Build Plugin	When mixing .s and .S files in the same project a build error occurs.
IDE-8303	Time shown in profile view is wrong	Profile plugin	An internal error for "Acquiring Profile Result" may be shown when the program stopped.
IDE-8302	Semihosting - printf causes subsequent file operations to fail	GDB server	<p>When using semihosting, having a printf command before file io operations causes them to fail.</p> <p>Scenario best explained through sample code.</p> <p>Create a synergy Blinky project</p> <p>in hal_entry.c at the top of the file include the following line: #include "stdio.h"</p> <p>//inside void hal_entry(void) try the following samle code: //-----SAMPLE CODE----- initialise_monitor_handles();</p> <pre>printf("Hello\n"); FILE * pFile; char c;  pFile=fopen("c:\\alphabet.txt", "wt"); for (c = 'A' ; c &lt;= 'Z' ; c++) {     putc (c , pFile); } fclose (pFile); //-----END SAMPLE CODE-----</pre> <p>// Before fix, the Renesas Debug Virtual Console has the following output Hello // There was no file c:\\alphabet.txt</p> <p>//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</p>
IDE-8262	Synergy mixed mode source missing in disassembly view	ISDE, Secure Debug View	Mixed mode display in the disassembly window is not available for encrypted files.
IDE-8197	Chart takes much time to display when program stopped	Consumption Current	If there are many changing points during measurement of the "Consumption Current", the chart display of "Consumption Current" may take long time. For example, if the number of changing points is over 10000, the displaying time becomes 30 seconds.
IDE-8167	Programming multiple files using debug configuration not working (Synergy)	Application, ISDE	When using multiple download modules with Synergy. Only the first download module is downloaded correctly. The subsequent module does not modify the memory on the target. Workaround: S-Record files can be downloaded by specifying 'load <filepath>' in the Initialization Commands section of the debug configuration.
IDE-8165	The stack size of GCC-RL is incorrect for a few devices	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	ThreadX Configuration should be shown before ThreadX source generation.	ISDE	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-8099	Mouse hovering over the breakpoint Types causes e2 studio to crash	Application	When using Ubuntu using Unity there is an issue which causes e2 studio to crash. When hovering over the breakpoint types the e2 studio application crashes.  Caused by Ubuntu/Eclipse issue, see Eclipse Bug 419729. Workaround is given but cannot be added to product automatically.
IDE-7980	[CCRL and CCRX] unable to locate Asm path on debugger	Loadmodule Converter	When using CCRL and CCRX toolchains there can be problems locating the assembly file paths when debugging.  [Problem] When two or more code sections are specified in one assembler source file, source line debugging cannot work in the assembler source file. [Workaround] Specify only one code section in one assembler source file.
IDE-7965	GNU: Post-build step is not invoked in case project is already built	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-7942	Consider how to change our packs to work correctly in Keil	ISDE	Renesas CMSIS packs for Synergy do not load well into the Keil development environment.
IDE-7619	When the project dependency is specified to two project, Build warning occurs.	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-7533	RL78 + E1 (E2 E2Lite) does not show Run-break result in performance analysis view	Performance Analysis	Performance Analysis view does not show time result (even 0) if the time taken is very short (less than 1 unit of the emulator or device).
IDE-7524	RZ/T1 Reload doesn't work on RAM_BOOT project	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	CCRX: Warning dialog shows many times on Turkish OS when input 'i' key for e2 studio location	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	Multi-byte chars should be denied as Build-Debug configuration name	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-7497	MISRA-C option is changed when the toolchain version updated.	CCRX Build plugin	<p>"Problem" (V.4.1.0) When a project which specifies MISRA-C option changed the toolchain version, the MISRA-C option is deleted.</p> <p>"Workaround" Please re-specify the MISRA-C option.</p>
IDE-7423	Disassembly view does not always update on initial opening	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	RL78 on-chip debugging and reserved areas problem	Application	<p>In older versions of e2 studio the RL78 debugger would protect OCD memory areas for the E1 emulator.</p> <p>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.</p> <p>A new GDB monitor command has been added to protect/overwrite memory. This will allow the same behavior as e2 studio 3.x.</p> <p>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.</p> <p>This can be added to the initialization commands within the debug configuration for the RL78 E1 emulator.</p>
IDE-7412	Setting RL78 register fails	GDB server RL78	<p>When using RL78 the HL register value cannot be modified in some circumstances.</p> <p>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.</p>
IDE-7403	Indexer setting not saved.	CDT	<p>The setting 'Use a fixed build configuration' in the dialog, Properties-&gt;C/C++ General-&gt;Indexer is not saved when the user checks it.</p> <p>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.</p>
IDE-7393	Eventpoints not remember their states after disconnect then reconnect	Event points plugin	<p>In some cases the eventpoints are removed on disconnection from the target.</p> <p>This should not be the case and is often seen when debugging a multicore device.</p>
IDE-7351	[MULTICORE] Should maintain Filter and Find settings (Trace view)	Trace plugin	<p>When using the multicore debugger the trace filter and find settings are not saved.</p> <p>When changing debug session in the debug view the settings are reset to a default value.</p>

IDE-7350	[MULTICORE] Should display trace data when debug session returns.	Trace plugin	If the selected line of Debug View is changed, the contents of Trace View will be cleared. To avoid this, please set "Pin to Debug Context" option in Trace View.
IDE-7333	1ms refresh interval in expressions using RX Simulator does not work	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	dialog should be re-sizable as font size	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][RL78] Linker extra options were not imported	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-7057	Adding a new eventpoint to external file seems not work	Event points plugin	When adding an event point to an external source code file. (File added using "Link to file in the file system" option). There can be problems adding the event point in this case.
IDE-6859	Reload download module when connected	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	[CCRL] C++ project options should be disabled	Project Generation	Combination of "C++ project" and "CC-RL" toolchain is selectable. But, "CC-RL" toolchain does not support "C++ project". So, do not select the combination of "C++ project" and "CC-RL" toolchain.
IDE-6817	Waveform view takes constant address	Waveform plugin	If address of variable is changed then this address should be updated in waveform view as well, but it is not so.
IDE-6701	Step Immediate targets improvement	GDB server RX	For RX devices, when 'step' command is invoked for WAIT instruction, GDB might report an error. Please use 'resume' command for WAIT instruction instead.
IDE-6657	Failed to show coverage for the copied or moved workspace.	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	Data Access Event Break compare value always converted to hex	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-6613	RX Simulator data event break related issues	Event points plugin	When setting a data access event in eventpoint view, address mask or address range can be set for RX simulator, but RX simulator will ignore them. Only the start address is available. And also, if 'Not Specified' is specified at the access size of data access condition, RX simulator will ignore other compare conditions.
IDE-6605	Eventpoints disabled when e2 studio first opened.	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	RH850 multicore real-time expression update does not work	Real-time Watch	In some situations the RH850 multicore realtime expression update does not work.

IDE-6529	Disassembly view is empty after restart	CDT	After restart on occasion the disassembly window can be empty. Refreshing the window or stepping works around the problem.
IDE-6463	Memory view requires manual refresh to see changes when downloading auxiliary file	Application	Memory view requires manual refresh to see changes when downloading auxiliary file.
IDE-6408	(RX) Selecting user boot mode always show the message.	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-6394	Trace Record eventpoint does not filter correctly with Segger RX63N	GDB server RX	Trace Record event point does not filter correctly with Segger RX63N.
IDE-6350	[Multiple Configuration]: NullPointerException with custom configuration	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: <a href="https://bugs.eclipse.org/bugs/show_bug.cgi?id=352047">https://bugs.eclipse.org/bugs/show_bug.cgi?id=352047</a>
IDE-5770	Memory View for RX Little Endian shows IO endian reversed	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-5721	Breakpoints moving after deleting lines and reloading	CDT	When modifying code that changes the line an already set breakpoint is located at the breakpoint is not moved according to the modification.
IDE-5668	Coverage: IECUBE shows 'branch' for lines that should be 'covered'	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	(RH850) Disassembly result of PE1 is different from the result of PE2.	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	RH850 multicore shows incorrect module names in debug view	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	Trace record event for READ access with compared data acquires information which does not match it.	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-5467	Settings in 'Format...' dialog (Memory view) is not restored.	Memory View plugin	Settings in the 'Format...' dialog (Memory view) are not restored.
IDE-5290	CCRX/SHC: Project build fails for the custom configuration in case custom configuration is created from 'Default configuration'	CCRX Build plugin	When you add a new configuration, please do not specify 'Default Configuration' as a configuration used as a base. If you specify the 'Default Configuration', the configuration which does not operate correctly is created.
IDE-5171	Preinclude file is not analyzed for preprocess statement in editor	CCRX Build plugin	Files included in the Pre-include build options are not analyzed 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	Active configuration lost while importing project (which is exported as file system)	Application	Active configuration lost while importing project (which is exported as file system).
IDE-5083	[rcpe export] folder level option is not converted correctly	CubeSuite+ importer/exporter	folder level option is not converted correctly
IDE-4982	[RX] The debugger works same as 'Equals' even if I select 'Not Equals' in 'Comparison:' of 'Data Access Settings'. (only when 0x0 is specified to Mask Value)	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-4869	Memory view always opened on launch of debug session	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-4819	Individual compile is not execute when Level2 is specified at the "Perform inter-module optimization".	CCRX Build plugin	Individual compile is not execute when Level2 is specified at the "Perform inter-module optimization".
IDE-4783	(RL78)Reset timer setup on a "Performance Analysis" setting dialog box is not reflected.	Performance Analysis	The option to Reset timer before each run, which is setup on the "Performance Analysis" dialog box is not reflected for RL78.  The specification for RL78 is that the values are reset all of the time so the option has no meaning.
IDE-4607	[BREAKPOINT] (RL78)Behavior in the case of the error by Add Watchpoint.	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	Unable to build project with produces input longer than 8191 characters	CCRX Build plugin	When building projects with CCRX 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	The Module View of e2studio does not display any information when an executable which includes debug information was downloaded to the target.	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	RL78 Assembler/Disassembler does not treat instruction code of DIVWU correctly	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	[Common project converter bug fix] e2 studio always display "toolchain version is changed".	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	Not able to build project which is having more than 98 characters in its project name.	Project Generation	It is not possible to build project which has more than 98 characters in its project name.



IDE-3950	breakpoints cannot be unset within the editor when code is #ifdef out	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	Editor and Compiler default input character code should match	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 CCRX toolchain. CCRX default input is SJIS.  To enable UTF-8 for the toolchain you must first select C99 support.
IDE-3663	Source Address: switching context does not get detected in this case	Application	With 2 targets connected, clicking between the two debug contexts in the Debug View will update the source addresses in the open Editor files. However changing debug context does not seem to get detected if clicking on the top-level of the debug context rather than on the lower level.
IDE-3626	Trace Record Eventpoints do not seem to be removed during a session	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-3526	[Debugger] > [Profile View] File Name and File path information are not displayed	Profile plugin	In some cases when using RX with the CCRX compiler the profile view does not display the source file name and path in the window.
IDE-3389	Source Addresses: multiple debug contexts with same-named source file	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-2859	Symbol cannot be resolved (IAR plugin)	CDT	When using IAR projects the SFR names (e.g. PIOR1_bit.no1) are not understood correctly in the editor.
IDE-2762	CODAN errors for assembly code in C file	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	BeforePC events on IECube temporarily hardcoded limit of 4	GDB server RL78	Before PC events on IECube temporarily hard coded limit of 4.
IDE-2537	Performance time is not updating	Performance Analysis	Performance Analysis: Performance time is not updating following changes to start and stop performance addresses.  For the G13 IECube it supports one run/break timer. Currently e2 studio is setting the support to 3.
IDE-2486	Acquiring profile results takes very long time in RX Simulator Projects	Profile plugin	Acquiring profile results can take a very long time following RX Simulator debugging.
IDE-2416	Use of duplicate register is allowed for RXC project generation	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	.c/.C file extension issue	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	Renesas : Converter phase gets invoked for external linker subcommand option	CCRX Build plugin	For Renesas CCRX the Converter phase gets invoked even when using the external linker subcommand option. This should not happen.
IDE-1889	Appears to some "case sensitivity" in files extensions	Application	Due to file extension issue with .s and .S and due to known bug, e2studio users will not 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	Include paths are duplicated when using HEW importer	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	More than 4 'Internal Flash Memory Overwrite' blocks being allowed.	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	Erase flash on startup option on RL78 should be executed once	Application	Erase flash on startup 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	The options of a Build Configuration were not correct after specifying "Multiple Configurations..." functionality.	RX GCC build plugin	The options of a Build Configuration were not correct after specifying Multiple Configurations... functionality.
IDE-874	[BREAKPOINT ISSUE]: Execution Address Eventpoints with trigger count do not work with Breakpoints on Segger RX	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 J-Link 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.