

**This document outlines the device support, new features added in 5.1.0, fixed issues and open issues in e<sup>2</sup> studio 5.1.0.**

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## 1. Project Generator Support

CPU Family	Group	Devices	
	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)	
	RH850	-	R7F701060xAFP, R7F701062xAFP, R7F701064xAFP, R7F701065xAFP, R7F701067xAFP, R7F701069xAFP, R7F701071xAFP,(Debug Support Only)
		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,	
RL78			

	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
	I1C	R5F10NLE, R5F10NLG, R5F10NME, R5F10NMG, R5F10NMJ, R5F10NPG, R5F10NPJ
	I1D	R5F11768, R5F1176A, R5F11778, R5F1177A, R5F117A8, R5F117AA, R5F117AC, R5F117BA, R5F117BC, R5F117GA, R5F117GC
	I1E	R5F11CBC, R5F11CCC
	L12	R5F10RB8, R5F10RBA, R5F10RBC, R5F10RF8, R5F10RFA, R5F10RFC, R5F10RG8, R5F10RGA, R5F10RGC, R5F10RJ8, R5F10RJA, R5F10RJC, R5F10RLA, R5F10RLC
	L13	R5F10WLA, R5F10WLC, R5F10WLD, R5F10WLE, R5F10WLF, R5F10WLG, R5F10WMA, R5F10WMC, R5F10WMD, R5F10WME, R5F10WMF, R5F10WMG
	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, R7S721030, R7S721030_DualSPI, R7S721031, R7S721031_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

	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
G13	
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, R5F10WVG
	L1C	R5F110ME, R5F110MF, R5F110MG, R5F110MH, R5F110MJ, R5F110PE, R5F110PF, R5F110PG, R5F110PH, R5F110PJ, R5F111ME, R5F111MF, R5F111MG, R5F111MH, R5F111MJ, 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
	230	R5F52305, R5F52306
	231	R5F52315, R5F52316, R5F52317, R5F52318
	23T	R5F523T3, R5F523T5
	24T	R5F524T8, R5F524TA
	64M	R5F564MF, R5F564MG, R5F564MJ, R5F564ML
	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

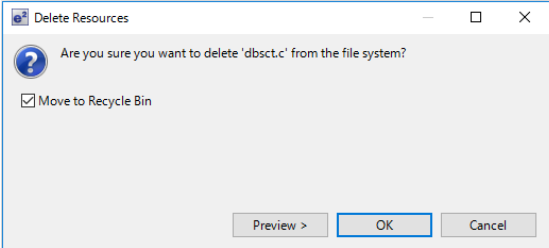
### 3. Current Smart Manual support

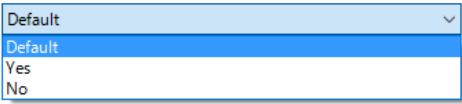
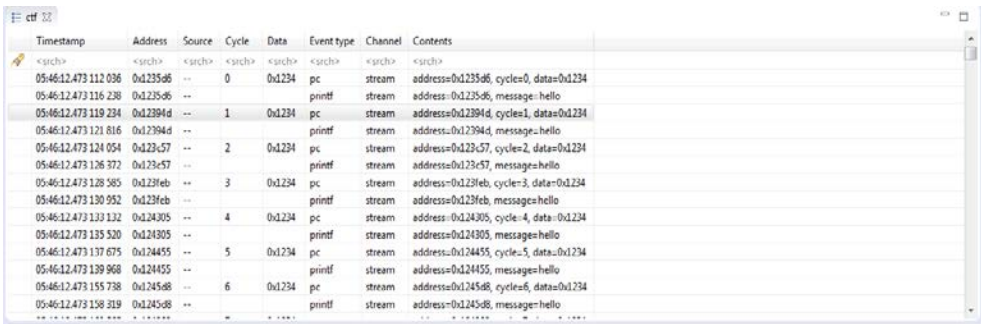
Smart manual support is delivered independently of e<sup>2</sup> studio releases when available. The following devices are available as of the 11<sup>st</sup> of July, 2016.

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

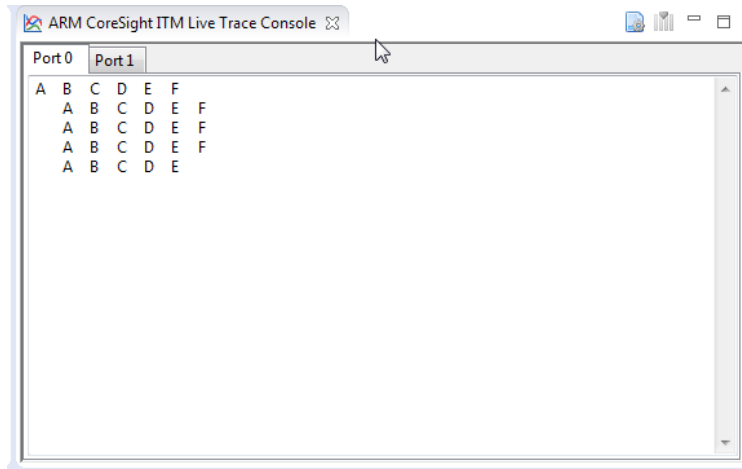
#### 4. What is new in 5.1.0?

Component	Description
Application	<p>The e2 studio base Eclipse Platform version has been updated to Mars.2 and CDT 8.8.1.</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/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>
Application	<p>e2 studio can import RZ/A1 "mbed" project. The following two methods are supported within e2 studio:</p> <ol style="list-style-type: none"> <li>1. Debug with CMSIS-DAP by using Open OCD plugin. This is direct connection to the board via USB without an emulator. CMSIS-DAP runs on the board.</li> <li>2. Debug with Segger J-Link emulator connection.</li> </ol> <p><b>What is mbed?</b> mbed is an IoT platform for ARM devices.</p> <p><a href="https://www.mbed.com/en/">https://www.mbed.com/en/</a></p> <p><b>What is CMSIS-DAP?</b> CMSIS-DAP Interface Firmware (Japanese) <a href="https://developer.mbed.org/users/MACRUM/notebook/cmsis-dap-interface-firmware/">https://developer.mbed.org/users/MACRUM/notebook/cmsis-dap-interface-firmware/</a> (English) <a href="https://developer.mbed.org/handbook/cmsis-dap-interface-firmware">https://developer.mbed.org/handbook/cmsis-dap-interface-firmware</a></p>

Application	<p>e2 studio now supports the “Recycle bin” function when deleting files or folders from the Project View.</p> <p>If you delete files from e2 studio they are moved to, the Windows recycle bin when the checkbox is checked.</p> <p>The “Move to Recycle Bin” check box is enabled by default on the “Delete Resources” dialog box.</p>  <p>NOTE: When deleting a project, the project will be deleted and it will not be stored in the recycle bin.</p>
CCRL Build plugin	<p>CC-RL V1.03 is supported by the CC-RL build plugin, and the new libraries below are now supported.</p> <ul style="list-style-type: none"> <li>· malloc_n.lib: Normal malloc library</li> <li>· malloc_s.lib: Security malloc library (Professional edition)</li> </ul> <p>malloc library functions and the other standard library functions are provided as separate libraries.</p> <p>(1) [Linker]-&gt;[Input]-&gt;"Use standard/mathematical library"</p> <ul style="list-style-type: none"> <li>· Check off <ul style="list-style-type: none"> <li>No library</li> </ul> </li> <li>· Check on <ul style="list-style-type: none"> <li>o When a compiler is V1.02 or earlier version rl78XXXs.lib</li> <li>o When a compiler is V1.03 or later version rl78XXXs.lib and malloc_X.lib</li> </ul> </li> </ul> <p>(2) Security check box.</p> <p>e2 studio supports a check box for the security malloc library under "Use standard/mathematical library".</p> <p>When a compiler is V1.03 or later version, this check box is visible.</p> <p>When "Use standard/mathematical library" is checked, it is enabled.</p> <ul style="list-style-type: none"> <li>· Check on <ul style="list-style-type: none"> <li>malloc_s.lib (for RL78-S1, RL78-S2, RL78-S3)</li> </ul> </li> <li>· Check off (Default) <ul style="list-style-type: none"> <li>malloc_n.lib (for RL78-S1, RL78-S2, RL78-S3)</li> </ul> </li> </ul>
CCRX Build plugin	<p>The spec of -alias option in compiler (CC-RX) is changed shown below.</p> <p>"Default" is added to the selection item. "Default" is selected by default.</p>

	<p>Option item selection for “-alias”:</p> <ul style="list-style-type: none"> <li>• Default (The default value)</li> <li>• Yes</li> <li>• No</li> </ul> <p>Performs optimization considering the type of the data indicated by the pointer</p> 
<p>Consumption Current</p>	<p>Display chart performance is improved.</p>
<p>CubeSuite+ importer/exporter</p>	<p>When mtpj file of CA78K0R project is specified, e2 studio can import it directly. Converting .mtpj file to .rcpc file by using CS+ is not needed.</p> <p>If an error happens in conversion, the error message is output to the console view.</p>
<p>Partner OS Plugin</p>	<p>Graphical profile view for ThreadX EPK is supported for Renesas Synergy.</p>
<p>GCC build plugin</p>	<p>The new GCC toolchain for RX and RL78 is now supported by e2 studio. These are named GCC for Renesas RL and GCC for Renesas RX. These toolchain can be downloaded from the following website. (URL: <a href="https://gcc-renesas.com/">https://gcc-renesas.com/</a> )</p>
<p>ARM debugging</p>	<p>ARM ITM trace is now supported when debugging with Synergy. All ITM trace channels can be configured so ITM trace data can be captured by e2 studio.</p> <p>There are new views implemented to support this feature. The CoreSight ITM trace view provides a snapshot of the trace data when the debugger suspends and ITM trace is enabled.</p> <p>These snapshots of data are also saved to the “traces” directory. Opening these files re-opens the CoreSight trace view again with the post-mortem data.</p> <p>When in this view the top line allows filtering terms to be entered which then effect the content displayed.</p> 

Another view has also been implemented which is the ITM Live Trace Console. This view shows the trace data for each channel in a separate tab. When the data is received, it is show live not like the post mortem view which only shows the data on suspend.

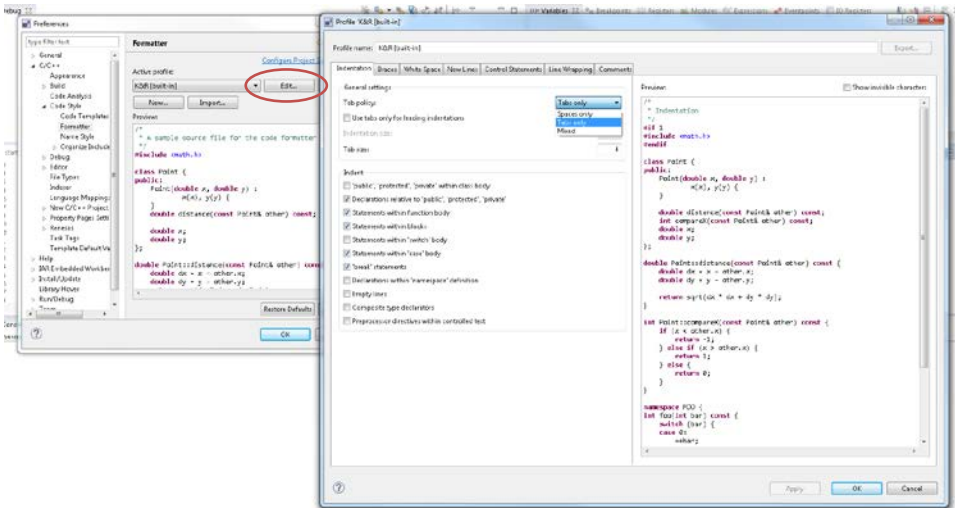


## 5. Useful workarounds and information for 5.1

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.</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>
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 e2 studio please use this page:</p> 

## 6. Closed Tickets in 5.1.0.22

Key	Summary	Component/s	Description
IDE-9493	RL78 E1 download incorrect data	GDB server RL78	RL78 E1 module download is not correct in the following conditions: - Using the RL78 devices that do not have data flash. - Placement address of the section begins with an odd address. - It specifies an .x file as a download module.
IDE-9395	RL78 and RX CG not being saved	CG plugin	RL78 and RX CG settings are not saved in some situations.
IDE-8964	Update policy is reset to [Automatic] when resuming CPU	Expressions view	The update policy in the Expressions plugin can be lost when the CPU executes and suspends.
IDE-8957	Code Generator causes e2 studio to crash on startup after updating to 4.3.0.008	CG plugin	After updating e2 studio to 4.3.0.008 it may crash on startup. This is related to the code generator plugin. If you re-register the code generator plugin the crash no longer occurs. C:\renesas\e2_studio\eclipse\plugins\com.renesas.cg_2.3.0.201603221507\CodeGenerator\Tools\CGregister.exe
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-8650	MAP optimization option does not output to the common file.	CubeSuite+ importer/exporter	When a project for CC-RX is created in e2 studio and the map optimization option is specified. When a project is exported, the common project 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	The total count of Performance Analysis is not 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-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-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-8583	Cannot enable coverage and profile feature.	Coverage plugin, Profile plugin	When I use the 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 will work well. This issue can also be seen for profile.
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	Synergy	When using Synergy the "Restore Default Values" button in the properties window does not restore the BSP properties to their default value.
IDE-8498	Synergy multiple pin-files allows duplicates pin-output names	Synergy	The Pins page in the Synergy Configuration Editor allows the user to work with multiple pin configurations and their corresponding data symbols. However, the same symbol

			can be specified for multiple pin configurations leading to symbol clashes on compilation.
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-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-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, Synergy	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-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-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-7497	MISRA-C option is changed when the toolchain version updated.	CCRX Build plugin	"Problem"  When a project which specifies MISRA-C option has the toolchain version changed, the MISRA-C option is deleted.  "Workaround" Please re-specify the MISRA-C option."
IDE-7351	[MULTICORE] Should maintain Filter and Find settings (Trace view)	Trace plugin	"When using the multicore debugger, the trace filter and find settings are not saved.  When changing debug session in the debug view the settings are reset to a default value."
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-7228	C++ support for Synergy	Synergy	The New Synergy project menu item has now been modified due to the C++ support.  We now have: New Synergy C Project New Synergy C++ Project  If you cannot see these menu items in an existing workspace please reset the perspective to enable them.

			You can do this via Window->Perspective->Reset Perspective.
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-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. In addition, if 'Not Specified' is specified at the access size of data access condition, the RX simulator will ignore other compare conditions.
IDE-5467	Settings in 'Format...' dialog (Memory view) are not restored.	Memory View plugin	Settings in the 'Format...' dialog (Memory view) are not restored.
IDE-5083	[rcpe export] folder level options are not converted correctly	CubeSuite+ importer/exporter	Folder level options are not converted correctly following an import of a CubeSuite+ exported project.
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-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-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.

## 7. Open Issues in 5.1.0.22

Key	Summary	Component/s	Description
IDE-9602	On RL78 Simulator GUI, an error occurs when Cut or Copy on Signal Data Editor window or I/O Panel Window	Device Support RL78	<p>Phenomenon:</p> <p>On Signal Data Editor window or I/O Panel window of RL78 Simulator GUI, when Cut or Copy button is pressed in the client area, an error occurs "Colnitalize has not been called".</p> <p>Workaround:</p> <p>On Signal Data Editor Window, please make the data on the other editor and copy it and then paste it to the client area.</p> <p>On I/O Panel window, please make the content in the client area once more.</p>
IDE-9600	On RL78 Simulator GUI, specified input value on Signal Data Editor becomes wrong	Device Support RL78	<p>Phenomenon:</p> <p>On Signal Data Editor window of RL78 Simulator GUI specified input value in wait area, data area of Analog pins becomes wrong.</p> <p>Example, if "1" is input to wait area, "11" is displayed and "11" is treated as input value.</p> <p>Similarly, if "23" is input to wait area, "2233" is displayed and "2233" is treated as input value.</p> <p>Workaround:</p> <p>Please edit the input value on the other editor and copy it.</p> <p>Then paste it on wait area/data area of Analog pins.</p> <p>If the wrong string is pasted, application error may occur. Please use the correct value.</p>
IDE-9537	Changes in "Device List View" are not recorded when * is added at only "Device List View"	CodeGenerator plugin	<p>"When only ""Device List View"" has * at tab, the changes of ""Device List View"" are not saved.</p> <p>Please save the changes of ""Device List View"" when ""Peripheral Functions"" or ""Device Top View"" have * at tab."</p>
IDE-9534	RZ/T1 CodeGenerator generate code is wrong at 1st Code Generation	CodeGenerator plugin	<p>After creating RZ/T1 project using Code Generator newly and configuring Peripheral settings, there are cases when generated code is wrong at 1st code generation.</p> <p>[Workaround]</p> <p>Please generate codes after reloading the project.</p> <ol style="list-style-type: none"> <li>1. Create new RZ/T1 project using Code Generator.</li> <li>2. Configure Peripherals.</li> <li>3. Save the project.</li> <li>4. Reload the project.</li> <li>5. Open using Peripheral GUI once, and then generate code.</li> </ol> <p>Please do these operations once when creating new project.</p>
IDE-9523	When using the KPIT GCC ARM none plugins the options on "All option:" of e2 studio are specified in different order from the actual compiler option order.	ARM GCC Plugins	<p>The options on "All option:" of the ARM-NONE build plugin user interface inside e2 studio are specified in different order from the actual compiler option order when the file is built.</p>

			<p>Environment :</p> <p>e2 studio v.5.0.0.043</p> <p>toolchain: KPIT GNUARM-NONE-EABI v15.01</p> <p>The user options are appended to the end of the command line but they appear at the beginning of the all options user interface.</p>
IDE-9507	Setting breakpoint in function referenced in expression view causes debugger to hang	Application	<p>Setting a breakpoint to a function which is referenced from an expression in the expression view causes the debugger to hang when execution is resumed. When this happens e2 studio must be restarted to resume normal operation.</p> <p>Steps:</p> <p>Add a function "test(int)"</p> <p>Set a breakpoint in it</p> <p>Add an expression "test(5)"</p> <p>Resume</p>
IDE-9494	Memory view address caption should match to endianness		<p>It may be possible for users to misunderstand the data order in the memory view due to the address column heading.</p> <p>The "Address" caption of Memory view is always the like "0 - 3", "4 - 7" regardless of the endian which is selected.</p>
IDE-9463	Dwarf converters point to KPIT email support address		<p>All dwarf converters (RX, RL78, SH) have a message in them which points to KPIT for support/information.</p> <p>"For more information contact gnusupport@kpitgntools.com."</p> <p>This is no longer a valid address.</p> <p>Please register at <a href="http://www.gcc-renesas.com">www.gcc-renesas.com</a> and get support from this website.</p>
IDE-9393	Coresight SWV Clock setup needs improvement	Synergy	<p>On Synergy devices the default "Core Clock" value for SWV usage should be set to the same as the system clock (in Mhz). For S7 devices (where the trace clock is halved) this should be set at half the system clock.</p>
IDE-9363	Code Generator becomes unstable when renaming/closing of a project are repeated.	CodeGenerator plugin	<p>When renaming/closing of a project are repeated, there are cases such as these below.</p> <ul style="list-style-type: none"> <li>- The Device Top View does not work correctly. (Multiple projects in a workspace.)</li> <li>- Code Generator node of a project disappears.</li> </ul> <p>Workaround:</p> <p>Please avoid renaming or closing a project which is using the Code Generator as much as possible. If the Code Generator becomes unstable, please restart e2 studio.</p>
IDE-9362	The problems of saving Code Generator settings when a project is closed.	CodeGenerator plugin	<p>Code Generator GUI setting is not saved at the time when a project is closed.</p> <p>steps:</p> <ol style="list-style-type: none"> <li>1. Create a project using Code Generator.</li> <li>2. Change Code Generator GUI settings.</li> <li>3. Close a project on the project tree.</li> <li>4. Confirmation dialog of Code Generator setting is shown.</li> <li>5. Select 'Yes'.</li> </ol>

			<p>-&gt; Code Generator settings are not saved.</p> <p>Workaround:</p> <p>Please save Code Generator settings by [Save/All save] menu before closing a project at Step3.</p> <p>Error can also occurs when closing e2 studio at specific conditions.</p> <p>steps:</p> <ol style="list-style-type: none"> <li>1. Create a RZ/T1 project using Code Generator.</li> <li>2. Change Code Generator GUI settings.</li> <li>3. Close a project on the project tree.</li> <li>4. Confirmation dialog of Code Generator setting is shown.</li> <li>5. Select 'Yes' or 'No'. (Code Generator settings are not saved even if 'Yes' is selected due to the first problem)</li> <li>6. Close or Restart e2 studio.</li> </ol> <p>-&gt; Error occurs.</p> <p>Workaround:</p> <p>Please save Code Generator settings by [Save/All save] menu before closing a project at Step3 and select 'No' at Step5."</p>
IDE-9338	Get correct number of HW breakpoints and eventpoints	Event points plugin	<p>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.</p> <p>Events which can be set in Eventpoint view may be less than displayed.</p>
IDE-9335	Smart browser shows no information for RX634 project .	Smart Browser	<p>The document list of the following devices cannot be displayed in smart browser.</p> <p>RX643 R5F5634xY</p> <p>RX63T R5F563TxA</p> <p>RX63T R5F563TxD</p>
IDE-9309	Cannot perform source level debugging for the section that inside another section	Debugging	<p>The editor view might not show an address for a .src file if two or more sections are defined in a .src file and another section defined in another file is located between these sections.</p> <p>Disassembly View (Mix mode) does not show source line in this case.</p> <p>Following cases cause problem.</p> <p>Case (1)</p> <p>file1.src : SECTION_A, SECTION_B</p> <p>file2.src : SECTION_C</p> <p>Section linkage order : SECTION_A, SECTION_C, SECTION_B</p> <p>(SECTION_B is not next of SECTION_A.)</p> <p>Case (2)</p> <p>file1.src : SECTION_A, SECTION_B</p> <p>file2.src : SECTION_A</p> <p>Section linkage order : SECTION_A(file1.src), SECTION_A(file2.src), SECTION_B</p> <p>(SECTION_B is not next of SECTION_A(file1.src))</p>

			<p>Workaround:</p> <p>Separate .src file for each section that are located at not next address.</p> <p>Case (1)</p> <p>file1_1.src : SECTION_A file1_2.src : SECTION_B file2.src : SECTION_C</p> <p>Case (2)</p> <p>file1_1.src : SECTION_A file1_2.src : SECTION_B file2.src : SECTION_A</p>
IDE-9296	Data coverage of variables are not updated for RX Simulator	Coverage plugin	Data coverage of variables are not updated for RX Simulator when using the RX71M.
IDE-9284	Changes in "Peripheral Functions" view is not recorded after closing and opening this view again	CodeGenerator plugin	<p>After closing the "Peripheral Functions" view of Code Generator and opening it again, "*" which means GUI setting is changed is not attached at "Peripheral Functions" sometimes even if GUI setting is changed. Then, GUI setting cannot be saved.</p> <p>Please confirm whether "*" is attached by changing of GUI setting after reopening "Peripheral Functions" view. If no "*", please restart e2 studio before changing of Code Generator GUI settings.</p>
IDE-9200	MISRA C option of individual file option is wrong when import a project.	CubeSuite+ importer/exporter	<p>[Problem]</p> <p>The individual file option cannot be converted correctly when import a project from CS+.</p> <p>[Workaround]</p> <p>Please check and modify an option after import a project.</p>
IDE-9195	-noprelink is not outputted to the renesas common file when export a project.	CubeSuite+ importer/exporter	<p>[Problem]</p> <p>When a project which -noprelink is specified is exported to CS+, -noprelink cannot be converted correctly.</p> <p>[Workaround]</p> <p>Please check and modify it at CS+.</p>
IDE-9160	Problem with iodefine.h file created via e2 studio for the RX24T 100-pin device	Device Support RX	<p>The RX24T 100-pin device (R5F524TAAxFP).</p> <p>The definition for TWCRB is missing the SCC bit.</p>
IDE-9159	%ActiveProjectDir% cannot be converted when import a project.	CubeSuite+ importer/exporter	<p>The following placeholder can use when import/export a project.</p> <p>[Import a project (CS+ -&gt; e2 studio)]</p> <p>%FileName% =&gt; \${ProjDirPath}/\${basename \${notdir %&lt;}}</p> <p>%MainProjectDir% =&gt; %ProjDirPath%</p> <p>%ProjectDir% =&gt; \${ProjDirPath}</p> <p>%ConfigDir% =&gt; \${CONFIGDIR}</p> <p>%TempDir% =&gt; \${TEMP}</p> <p>%WinDir% =&gt; \${windir}</p> <p>[Export a project (e2 studio -&gt; CS+)]</p> <p>\${workspace_loc} =&gt; %ProjectFolder%/../</p>



			<pre> \${ProjDirPath} =&gt; %ProjectFolder% \${ProjName} =&gt; %ProjectName% \${CONFIGDIR} =&gt; %ConfigDir% \${ConfigName} =&gt; %BuildModeName% \${selected_resource_name} =&gt; %FullFile% \${selected_resource_name} =&gt; %FileName% \${TEMP} =&gt; %TempDir% \${windir} =&gt; %WinDir% </pre>
IDE-9135	It seems Timestamp doesn't support in 'Trace Acquisition' dialog (JLink/Synergy)	Trace plugin	<p>The trace view does not support Timestamp feature when connecting to JLink/Synergy.</p> <p>When Timestamp feature is enabled in Trace Acquisition dialog, Timestamp column is displayed in Trace view. However, the result of timestamp is not displayed.</p>
IDE-9101	Cannot launch debug session when breakpoint cannot be set	Debugging	If GDB is unable to set a breakpoint during the launch then the whole launch will be aborted. Removing the breakpoint(s) will allow the launch to complete successfully.
IDE-9090	Multiple breakpoints set for multiple symbol files	GDB	<p>When the same symbol files are downloaded on to 2 different processes and the User sets a source breakpoint, GDB will set the breakpoint on both processes.</p> <p>This will cause the system to appear to have only half the number of breakpoints.</p>
IDE-9057	[Trace view] The Filter + Find feature seems not work correctly with Synergy project	Synergy	Trace find and filter functionality is currently not supported for ARM-based devices
IDE-9050	Cannot add or delete include path after deleting source folder	CCRX Build plugin, RL78 GCC build plugin, RX GCC build plugin	<p>Cannot add or delete include path after deleting source folder.</p> <p>When adding a new source directory and adding an include path. Removing the directory then stops the user from adding or removing include paths.</p>
IDE-9032	"Rename & Import Existing C/C++ Project into Workspace" option allows the use of illegal characters in the new project name	Application	Rename and Import existing C/C++ project does not have the same restrictions as new project wizard.
IDE-8998	Error occurs when creating C project with KPIT GNUARM-NONE-EABI toolchain	Project Generation	Deselecting project types and toolchains only if they are supported on the platform can cause project generation errors.
IDE-8931	'Build Selected Files' command creates ~/Debug/\$@.lst file instead of ~/Debug/--src-path--/filename.lst	Synergy	<p>When a project is set to generate an assembly listing and a selected .c file is built using "Build File", a listing file \$@.lst is generated in the Debug folder.</p> <p>This is unexpected. The expected output is a listing file in ~/Debug/src-path/filename.lst</p> <p>NOTE: On a general 'Build Project' command everything works as expected.</p>
IDE-8875	e2studio will be crashed when Start address is larger than End address in Find/Replace/Fill Memory dialog	CDT	e2 studio can crash when the memory view Find/Replace/Fill feature has a start address larger than the end address.
IDE-8848	Downloading executable into S124 target while Trace is on leads to erroneous program	Synergy	Downloading a ThreadX project to the S124 board can cause a program execution error if the Trace is on. Workaround is to turn off the Trace.

	execution while under debugger control		
IDE-8791	Breakpoints set in encrypted files don't work when using IAR	Synergy	Breakpoints set in Synergy encrypted source do not stop when using the IAR toolchain.
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-8726	Exception was thrown when specify synergy license file by place-holder	Synergy	When using a placeholder in the Synergy license dialog it throws an exception. Please use a full path to the file.
IDE-8725	GDB 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-8682	Debug launch does not work correctly when the Program Name contains project specific variables	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 selection rather than the project specified in the debug configuration.
IDE-8652	Pin configurator, LCD Graphics multiple pin assignment error	Synergy	In the Synergy 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-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-8631	Pin configurator Symbol name #define	Synergy	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-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-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	Synergy, Project Generation	When using Turkish Windows with Synergy you may experience problems creating a project.  Please use English language settings for your host OS and re-try if you experience this.
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	Synergy	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	Synergy	When changing the selected board which then automatically changes the device the options are not updated correctly.  E.g. Changing the board to force the device from a Synergy S7G2 to a S124 will leave the FPU command line option in an incorrect state.
IDE-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-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 "-Osized -Osamed_code=off" in compiler, please add "-Osamed_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	When using semihosting, having a printf command before file io operations causes them to fail.

			<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----- // Before fix, the Renesas Debug Virtual Console has the following output Hello // There was no file c:\\alphabet.txt  //After fix the Renesas Debug Virtual Console has the following output Hello // There should also be a file c:\\alphabet.txt created, with the following output: ABCDEFGHIJKLMNOPQRSTUVWXYZ</pre>
IDE-8262	Synergy mixed mode source missing in disassembly view	SYNERGY, 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-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.	Synergy	You cannot configure for ThreadX with error checking, TraceX setting, etc. on Synergy configurator before ThreadX source generation component is added.  Once the component is added then you can select the Thread X source component in the common modules area.
IDE-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-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-7619	When the project dependency is specified to two project, Build warning occurs.	CCRX Build plugin	<p>"Problem"</p> <p>When the [C/C++ General] &gt; [Paths and Symbols] &gt; [References] is specified, Build warning occurs. And, .x file is not created at the time of using Renesas Toolchain.</p> <p>"Workaround"</p> <p>When you'd like to use the project dependency, please specify a child project in [Project Reference].</p>
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	<p>"Problem"</p> <p>An error occurs by project operation when the character besides ASCII cord was used for the file name or the folder name.</p> <p>"Workaround"</p> <p>Please don't use the character besides ASCII cord for the file name or the folder name.</p>
IDE-7498	Multi-byte chars should be denied as Build-Debug configuration name	Application	<p>Multi-byte characters can cause a compilation failure when used as a build configuration name in e2 studio.</p> <p>Therefore, multi-byte characters should NOT be applied to debug/build configuration names.</p> <p>Note: This issue affect both for configuration management dialog and the configuration creation dialog of Optimization Assistant.</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	The setting 'Use a fixed build configuration' in the dialog, Properties->C/C++ General->Indexer is not saved when the

			<p>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-7333	1ms refresh interval in expressions using RX Simulator does not work	Real-time Watch	<p>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.</p> <p>Reverting the interval to 10ms works well.</p>
IDE-7298	dialog should be re-sizable as font size	Application	<p>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.</p>
IDE-7277	[IAR][RL78] Linker extra options were not imported	IAR plugins	<p>In some cases the IAR project importer does not perfectly import all set build options.</p> <p>One example is the -HFF command line option that can be specified in the command line options text box for the linker.</p>
IDE-7057	Adding a new eventpoint to external file seems not work	Event points plugin	<p>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.</p>
IDE-6859	Reload download module when connected	CDT	<p>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.</p>
IDE-6852	[CCRL] C++ project options should be disabled	Project Generation	<p>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.</p>
IDE-6817	Waveform view takes constant address	Waveform plugin	<p>If address of variable is changed then this address should be updated in waveform view as well, but it is not so.</p>
IDE-6701	Step Immediate targets improvement	GDB server RX	<p>For RX devices, when 'step' command is invoked for WAIT instruction, GDB might report an error. Please use 'resume' command for WAIT instruction instead.</p>
IDE-6657	Failed to show coverage for the copied or moved workspace.	Coverage plugin	<p>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.</p>
IDE-6616	Data Access Event Break compare value always converted to hex	Event points plugin	<p>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.</p>
IDE-6613	RX Simulator data event break related issues	Event points plugin	<p>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.</p>
IDE-6605	Eventpoints disabled when e2 studio first opened.	Event points plugin	<p>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.</p>

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-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-5960	[Trace] Cannot filter trace records by Address	GDB server RX	Trace filtering feature is not supported for Simulator.
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	CCR/SXC: Project build fails for the custom configuration in case custom configuration is created from 'Default configuration'	CCR 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-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-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-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-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.