

This document outlines the device support, new features added in 4.0, fixed issues and open issues in e<sup>2</sup> studio 4.0.0.

### 1. Project Generator Support

CPU	Family	Devices
RH850	C1H	R7F701260, R7F701270 (Debug Support Only)
	C1M	R7F701263, R7F701271 (Debug Support Only)
	E1L	R7F701201, R7F701205 (Debug Support Only)
	E1M-S	R7F701202, R7F701204 (Debug Support Only)
	E1x	R7F701Z05, R7F701Z06, R7F701Z07 (Debug Support Only)
	F1H	R7F701501,R7F701502xAFP,R7F701503,R7F701506,R7F701507,R7F701508,R7F701511, R7F701512,R7F701513 (Debug Support Only)
	F1H-GW	R7F701521,R7F701522,R7F701524,R7F701525 (Debug Support Only)
	F1L	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)
	F1L-GW	R7F701002xAFP, R7F701003xAFP (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, R5F10BBB,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
	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,R5F10E8C,R5F10E8D,R5F10E8E, 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
	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,R5F110NE,R5F110NF,R5F110NG,R5F110NH, R5F110NJ,R5F111NE,R5F111NF,R5F111NG,R5F111NH,R5F111NJ
RX	110	R5F51101,R5F51103,R5F51104,R5F51105,R5F5110H,R5F5110J
	111	R5F51111,R5F51113,R5F51114,R5F51115,R5F5111J, R5F51116, R5F51117, R5F51118
	113	R5F51135,R5F51136,R5F51137,R5F51138
	210	R5F52103,R5F52104,R5F52105,R5F52106,R5F52107,R5F52108,R5F5210A,R5F5210B
	21A	R5F521A6,R5F521A7,R5F521A8
	220	R5F52201,R5F52203,R5F52205,R5F52206
	610	R5F56104,R5F56106,R5F56107,R5F56108
	621	R5F56216,R5F56217,R5F56218
	62G	R5F562G7,R5F562GA

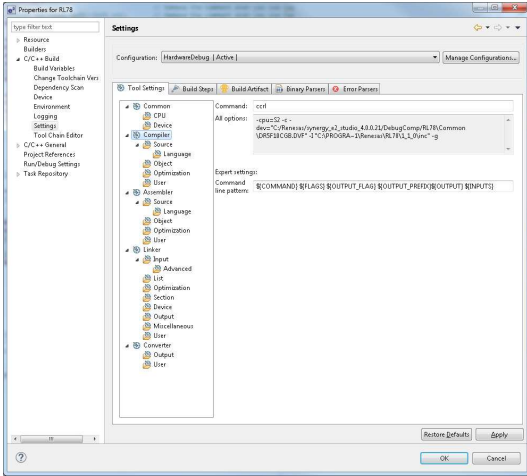
	62N	R5F562N7,R5F562N8
	62T	R5F562T6,R5F562T7,R5F562TA
	630	R5F56307,R5F56308,R5F5630A,R5F5630B,R5F5630D,R5F5630E
	631	R5F56316,R5F56317,R5F56318,R5F5631A,R5F5631B,R5F5631D,R5F5631E,R5F5631F,R5F5631G,R5F5631J,R5F5631K,R5F5631M,R5F5631N,R5F5631P,R5F5631W,R5F5631Y,R5S5631R5F5631MF, R5F5631PF (Debug Support Only)
	63N	R5F563NA,R5F563NB,R5F563ND,R5F563NE,R5F563NF,R5F563NK,R5F563NW,R5F563NY
	63T	R5F563T4,R5F563T5,R5F563T6,R5F563TB,R5F563TC,R5F563TE R5F563TB_5V,R5F563TC_5V,R5F563TE_5V (Debug Support Only)
	64M	R5F564MF,R5F564MG,R5F564MJ,R5F564ML
	71M	R5F571MF,R5F571MG,R5F571MJ,R5F571ML
RZ	A1	R7S72100,R7S721001,R7S72101,R7S72102,R7S721020,R7S721021
	T1	R7S910001,R7S910002,R7S910006,R7S910007,R7S910011,R7S910013,R7S910015,R7S910016,R7S910017,R7S910018,R7S910101,R7S910102,R7S910106,R7S910111,R7S910113,R7S910116,R7S910117,R7S910118,
SH	SH2	SH7047F, SH70834A, SH70844A, SH70854A, SH70865A, SH71242, SH71252, SH7144F, SH7145F, SH71464A, SH71491R, SH7615, SH7616, SH7618, SH7619
	SH2A	SH7201, SH7203, SH72165AD, SH72546RFCC, SH72611, SH72620, SH72630, SH72640, SH72690, SH7670
	SH2a (No FPU)	SH7206, SH7211, SH7243, SH7285, SH7286,SH7239
	Other	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, SH72394B, 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)

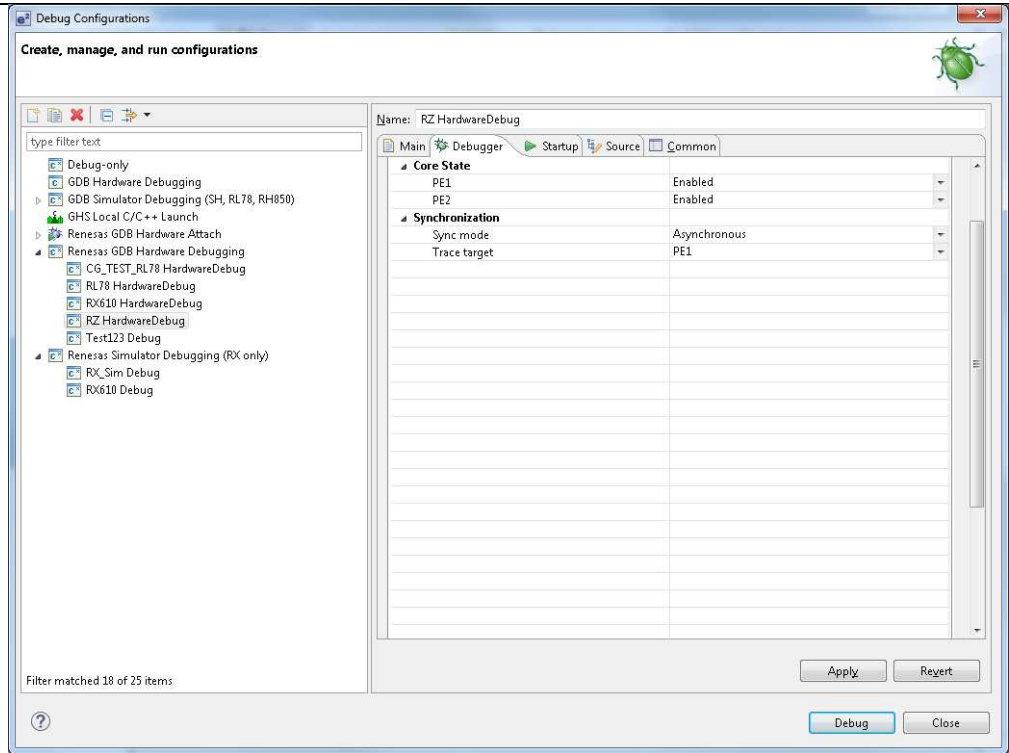
## 2. Code Generator Support

CPU	Family	Devices
RL78	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, R5F10BBB,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
	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,R5F10E8C,R5F10E8D,R5F10E8E, R5F10EGA,R5F10EGC,R5F10EGD,R5F10EGE,R5F10ELC,R5F10ELD,R5F10ELE
	G1C	R5F10JBC,R5F10JGC,R5F10KBC,R5F10KGC
	G1E	R5F10FLC,R5F10FLD,R5F10FLE,R5F10FMC,R5F10FMD,R5F10FME
G1G	R5F11EA8,R5F11EAA,R5F11EB8,R5F11EBA,R5F11EF8,R5F11EFA	

	I1A	R5F1076C,R5F107AC,R5F107AE,R5F107DE
	I1B	R5F10MME,R5F10MMG,R5F10MPE,R5F10MPG
	I1D	R5F11768,R5F1176A,R5F11778,R5F1177A,R5F117A8,R5F117AA,R5F117AC,R5F117BA, R5F117BC,R5F117GA,R5F117GC
	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,
RX	110	R5F51101,R5F51103,R5F51104,R5F51105,R5F5110H,R5F5110J
	111	R5F51111,R5F51113,R5F51114,R5F51115,R5F5111J
	113	R5F51135,R5F51136,R5F51137,R5F51138
	64M	R5F564MF,R5F564MG,R5F564MJ,R5F564ML
	71M	R5F571MF,R5F571MG,R5F571MJ,R5F571ML
RZ	T1	R7S910001,R7S910002,R7S910006,R7S910007,R7S910011,R7S910013,R7S910015,R7S910016, R7S910017,R7S910018,R7S910101,R7S910102,R7S910106,R7S910111,R7S910113,R7S910116, R7S910117,R7S910118

### 3. What is new in 4.0?

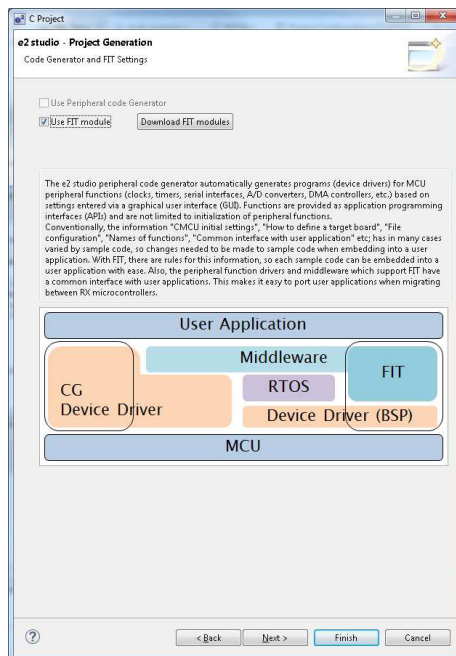
Component	Description
Application	<p>e<sup>2</sup> studio 4.0 has updated Eclipse version to Luna SR2.</p> <p>In addition CDT was updated to 8.6.</p> <p>For a list of added features see below:</p> <p><a href="http://wiki.eclipse.org/CDT/User/NewIn85">http://wiki.eclipse.org/CDT/User/NewIn85</a></p> <p><a href="http://wiki.eclipse.org/CDT/User/NewIn86">http://wiki.eclipse.org/CDT/User/NewIn86</a></p>
Installer	<p>A new installer has been developed for e<sup>2</sup> studio 4.0. It enables some improvements :</p> <ul style="list-style-type: none"> <li>You can download an installer capable of delivering full product and associated installers for tool chains, etc. in a single install operation.</li> <li>You can download just the support for the device you want to use, reducing the download time.</li> <li>The download and installation time has been reduced.</li> </ul>
Debugger	Stepping performance has been improved by around 20% across all debugger families.
CCRL Toolchain support	<p>The new Renesas CCRL toolchain is now supported. This toolchain is used to build code for the RL78 device family.</p> 
ARM Debugging	For the ARM Segger J-link debugger we now pass GDB run commands also at reset. This ensures the target board is automatically re-configured after the reset is issued.
RZ	Support for the RZ/T1 has been added to e <sup>2</sup> studio.
Debugging	Real-time memory has been enhanced to allow shorter memory update intervals and better user feedback if the refresh interval is overflowing. E.g. A memory fetch cannot be performed in the user requested time interval.
Multicore Debugging	<p>e<sup>2</sup> studio 3.1 supported synchronous multicore debugging for RH850. In version 4.0 asynchronous multicore debugging has also been implemented.</p> <p>This is available for configuration on the RH850 debug configuration dialog:</p>



FIT plugin

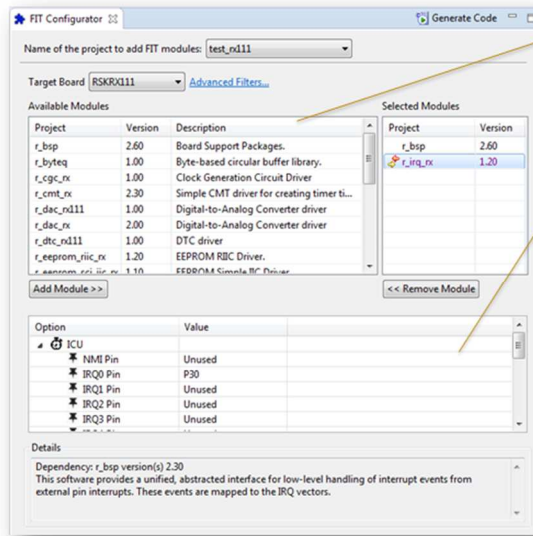
Improvements have been made to the FIT plugin and also the project generator to integrate the FIT system more effectively within e<sup>2</sup> studio. The FIT configurator has also been developed to enhance usability. This can be opened by Renesas Views->e2 solution toolkit->FIT Configurator.

Now it is possible to create a FIT project from within the project generator in e<sup>2</sup> studio.



This page also dynamically links to the Renesas website to download suitable modules for use in the project.

The FIT plugin has also been enhanced to provide a more user friendly experience to the user.



(1) Easy selection of installed FIT modules  
(Drop-down to select older versions)

(3) Configuration of pins (output to .h)

The FIT configurator has improved features which were missing from the FIT plugin such as:

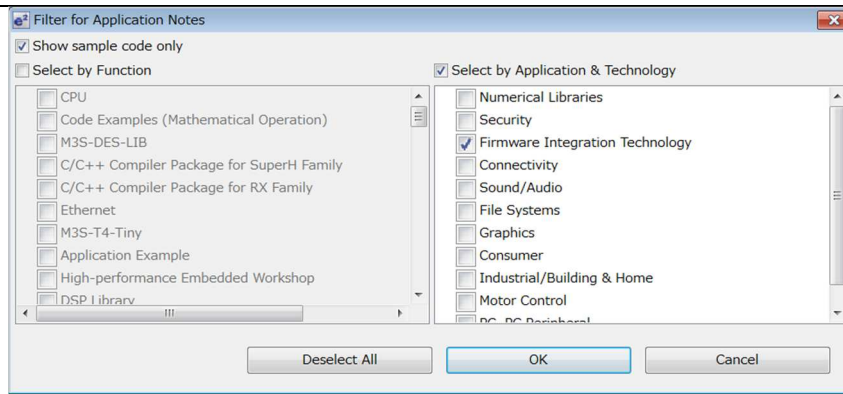
- Adding dependent libraries automatically to the project that the FIT modules need.
- When adding a new FIT module, if dependent FIT modules are required you are informed.
- A “user” selection has been added to the target board selection control. When this is used the r\_bsp module is not added to the project.
- Depending on the target board selection the FIT configurator automatically modifies the code to ensure the correct “platform.h” definition.
- When the r\_bsp is selected the correct target board files are automatically copied by the plugin.

Smart Browser

The smart browser has been enhanced. This release of the tool can import sample source code when downloaded from the Renesas website via the Smart Browser user interface.

In addition there are improved filtering options to reduce the scope of the smart browser search results:

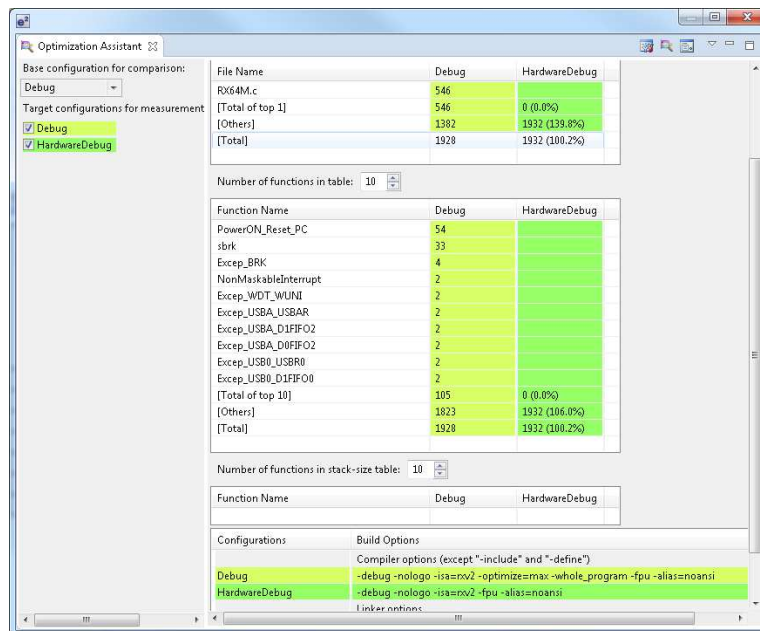




Optimization Assistant

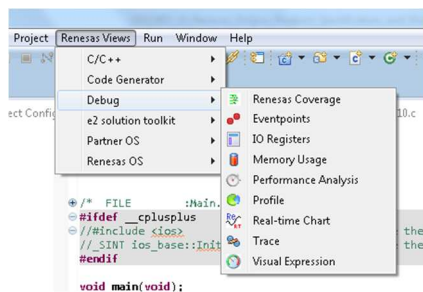
The optimization assistant has been improved in e<sup>2</sup> studio 4.0. It now provides the following features in addition to those implement in 3.1.

- When using non-Renesas toolchains, clicking Create Configuration shows the manage configurations dialog.
- Stack size entry now provided on the dialog.



Application

A new “Show View” menu has been added to e<sup>2</sup> studio. This enables quick and easy access to the Renesas views.


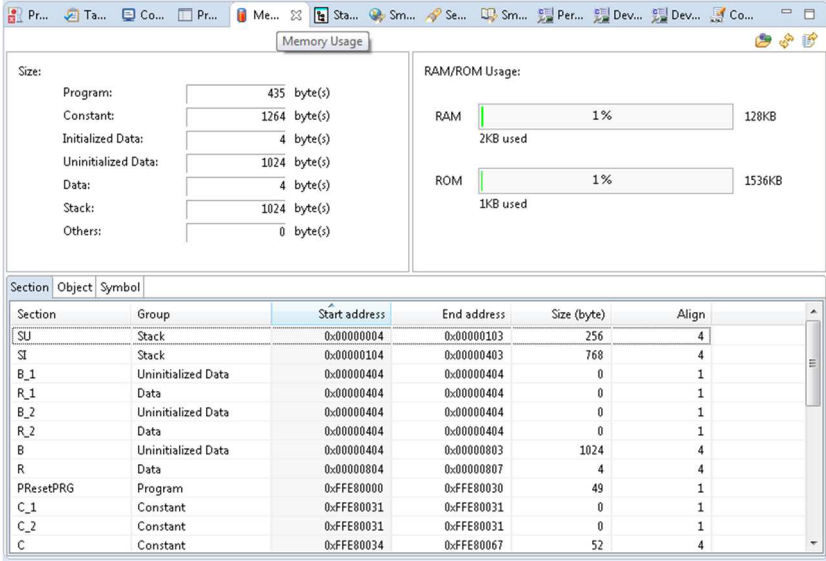


Partner RTOS

Partner OS plugin has been updated to support the Smalight OS and ThreadX.

ARM Debugging

Semi-hosting has been implemented for the ARM debugger so that printf commands can be output in the Renesas Debug Virtual Console.

<p>Waveform plugin</p>	<p>In e<sup>2</sup> studio 4.0 we have added the function to save the data to wav format file. This allows users to check the sound stored in memory in an external package to make sure it is correct.</p> <p>We have also added the function to read the data from wav format file and display the data.</p>  <p>The waveform plugin can also play audio directly from the waveform view.</p>																																																																																											
<p>Map view plugin</p>	<p>The memory usage plugin will be used to get the map file from the project. This will list out the total memory size, usage of ROM and RAM and detailed information of sections, objects and symbols used in the project.</p>  <table border="1"> <thead> <tr> <th>Section</th> <th>Object</th> <th>Symbol</th> <th>Start address</th> <th>End address</th> <th>Size (byte)</th> <th>Align</th> </tr> </thead> <tbody> <tr> <td>SU</td> <td>Stack</td> <td></td> <td>0x0000004</td> <td>0x0000103</td> <td>256</td> <td>4</td> </tr> <tr> <td>SI</td> <td>Stack</td> <td></td> <td>0x0000104</td> <td>0x0000403</td> <td>768</td> <td>4</td> </tr> <tr> <td>B_1</td> <td>Uninitialized Data</td> <td></td> <td>0x0000404</td> <td>0x0000404</td> <td>0</td> <td>1</td> </tr> <tr> <td>R_1</td> <td>Data</td> <td></td> <td>0x0000404</td> <td>0x0000404</td> <td>0</td> <td>1</td> </tr> <tr> <td>B_2</td> <td>Uninitialized Data</td> <td></td> <td>0x0000404</td> <td>0x0000404</td> <td>0</td> <td>1</td> </tr> <tr> <td>R_2</td> <td>Data</td> <td></td> <td>0x0000404</td> <td>0x0000404</td> <td>0</td> <td>1</td> </tr> <tr> <td>B</td> <td>Uninitialized Data</td> <td></td> <td>0x0000404</td> <td>0x0000803</td> <td>1024</td> <td>4</td> </tr> <tr> <td>R</td> <td>Data</td> <td></td> <td>0x0000804</td> <td>0x0000807</td> <td>4</td> <td>4</td> </tr> <tr> <td>PResetPRG</td> <td>Program</td> <td></td> <td>0xFFE8000</td> <td>0xFFE8030</td> <td>49</td> <td>1</td> </tr> <tr> <td>C_1</td> <td>Constant</td> <td></td> <td>0xFFE80031</td> <td>0xFFE80031</td> <td>0</td> <td>1</td> </tr> <tr> <td>C_2</td> <td>Constant</td> <td></td> <td>0xFFE80031</td> <td>0xFFE80031</td> <td>0</td> <td>1</td> </tr> <tr> <td>C</td> <td>Constant</td> <td></td> <td>0xFFE80034</td> <td>0xFFE80067</td> <td>52</td> <td>4</td> </tr> </tbody> </table>	Section	Object	Symbol	Start address	End address	Size (byte)	Align	SU	Stack		0x0000004	0x0000103	256	4	SI	Stack		0x0000104	0x0000403	768	4	B_1	Uninitialized Data		0x0000404	0x0000404	0	1	R_1	Data		0x0000404	0x0000404	0	1	B_2	Uninitialized Data		0x0000404	0x0000404	0	1	R_2	Data		0x0000404	0x0000404	0	1	B	Uninitialized Data		0x0000404	0x0000803	1024	4	R	Data		0x0000804	0x0000807	4	4	PResetPRG	Program		0xFFE8000	0xFFE8030	49	1	C_1	Constant		0xFFE80031	0xFFE80031	0	1	C_2	Constant		0xFFE80031	0xFFE80031	0	1	C	Constant		0xFFE80034	0xFFE80067	52	4
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#### 4. Useful workarounds and information for 4.0

ID	Component	Workaround or information
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	<p>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.</p>
5041	Code Generator	<p>Code Generator can delete user code between /* Start */ End comments in some situations.</p> <p>Using the code generator if the following code is placed in the main function:  <pre>//if(data_in!=0xAA){</pre> <p>On a line by itself, all of the main code will be removed when Generate Code button is pressed.</p> <p>The key issue is that the {brace is on the same line as the comment.</p> </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>
2421	Debug Configurations	<p>Debug configurations have been modified since e<sup>2</sup> studio 2.x. So although you can re-use the workspace and projects from e<sup>2</sup> studio 1.x when you open the debug launch configuration for the first time it is updated.</p> <p>Before doing this you should back-up the .launch file if you need to keep a 1.x version.</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.
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	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.
6800	RZ/T1 Project Generation	The program which is downloaded to RAM and executes in the RAM does not work well. e2 studio only supports the program which is downloaded to NOR flash or serial flash with the standard generated project.
6847	RZ/T1 Debugging	It is not currently possible to connect and debug the Cortex M3 core which is part of the RZ/T1 device in e2 studio.
	RZ/T1 Debugging	The Segger J-Link emulator executes the boot program prepared for RZ/T1 before downloading your user program. This means that your user program will need to be downloaded twice by disconnecting and re-connecting the e2 studio debugger, if the parameters for the loader area were changed or not written correctly on board.
6798	RZ/T1 Debugging	On RZ/T1 devices the CPSR register is shown endian reversed.

## 5. Fixed issues in 4.0.0.26

ID	Component	Description
1460	CCRX Build plugin	Project builds, but rx_convertor.exe fails when on network drive.
2657	Application	When importing a configuration from another project when building a "File not found" exception is shown when the user tries to import external linker file. Creating the file inside the project directory should solve this issue.
2667	GDB	When using a big endian target, areas of memory not covered by the download module are considered little endian. This causes problems when viewing disassembly and memory.
3795	Trace plugin	Saving RX Simulator trace data to the disk can take some time due to the number of records obtained from the server.
3847	Application	When using the display as array feature in the expressions window it appears that data can be skipped and is not updated.
4474	GDB Server SH	Source line single step with the SH using the E10A emulator would sometimes fail with the message: "Cannot access memory at address 0xxxxxxx". The previous workaround is no longer required. The GDB memory configuration command: "mem 0 0x100000000 rw nocache" is now sent as part of the launch sequence. The user no longer needs to add this command to the Debug Configuration dialog for SH E10A targets.
4857	Application	GDB considers PUSHC instruction to be part of the function prologue and it skips it. Inserting a break point at *functionname, instead of functionname solves the problem. (* tells GDB to start at the actual beginning of the function without skipping the prologue).
4881	CCRX Build plugin	When using CCRX if there are certain characters in the build path such as \$ in the workspace name it can cause the build to fail.
5162	Coverage plugin	New code after a reload operation is shown as executed (RX).
5243	Application	When using GCC build plugins there are some library generator options that are not restored when you select "Restore Defaults". These are:  -falign-jumps, -funit-at-a-time, -ffunction-sections, -fdata-sections, -fno-function-cse
5310	RL78 GCC build plugin	In some case attempting to remove the first section in the GCC linker sections can fail. To rectify this change the address of the section so it appears further down the list and then a remove operation should succeed.
5341	CCRX Build plugin	""Problem"" Project is cleaned incorrectly before running "Build Configurations > Build All" at 2nd time after "Build Configurations > Clean All" ""Workaround"" Build the Configurations individually.

5372	Application	If you use RX200 series E1/E20, and if you set Data as Trace Type in the Trace Acquisition dialog even once, Trace view does not show the branch trace information. To show the branch trace information, please disconnect debugger once and then connect again.
5414	Real-time Watch	With a RL78104LEA (G14) attempting to monitor in real-time more than 5 expressions at the same time fails.
5456	IAR plugins	In some situations e2 studio IAR projects are not imported correctly into later versions of the tools.
5531	Application	To use the data access events for RH850 with E1 emulator, the condition "Not Specified" in the access size is treated as "Byte".
5576	GDB	For RH850 multicore devices, step return may cause the error. Please do not use step return execution. Instead, try 'finish' command in GDB console.
5592	CodeGenerator plugin	<p>RL78/L12 group of MCUs (RL78 family)</p> <ol style="list-style-type: none"> <li>1. The value of User option byte C1H is wrong when LVD is used as Interrupt mode. User option byte setting is generated in r_cg_vector_table.c. Please change the value of C1H to correct one.</li> <li>2. Detection level '3.98V' is missing as a choice at GUI when LVD is used as Interrupt mode and Reset mode.</li> </ol>
5606	Static Analysis plugin	<p>Stack Analysis does not recognize "_PowerON_reset_PC" as "Global Function". So, user cannot jump from stack list to _PowerON_reset_PC.</p> <p>Workaround: comment out the following codes of "reset_program.c" and re-build.</p> <pre>- #pragma entry PowerON_Reset_PC</pre>
5666	Application	For RH850 multicore devices, trace view may not respond if the disassembly mode is selected. Please do not use disassembly mode in trace view.
5672	Trace plugin	RH850 F1H does not show trace core in Disassembly only mode. Add in Bus mode to show core information too.
5716	Application	Uninstalled toolchains are not removed from the registered toolchain list in e2 studio. It should however be possible to un-tick the toolchain in the toolchain management dialog.
5717	Application	RXC/SHC: 'Optimize for access to external variables' option value is not persisting for imported RXC/SHC projects.

5809	Application	<p>Regarding the stack size table:</p> <p>(1) It doesn't show functions that have no-name.</p> <p>(2) It shows the encoded function name. So the name in Stack size table may not be same as Size table.</p> <p>(3) It just shows the maximum stack size of variadic functions for each configuration.</p> <p>(4) It may include some library functions. So the number of function in stack size table may be different from size table.</p> <p>(5) The stack size is 0 in case of the function without stack size (Reference by Unknown function) or the stack size is too large.</p> <p>(6) The stack size may be empty in case of using un-reference functions.</p> <p>It happens with build configurations that have not same build options list to selection build configuration.</p> <p>When the build options list is so long, the Build Options table cannot display the full content of the command line. And the tooltip content has the same behaviour (It misses some characters at the end).</p>
5846	Real-time Watch	<p>The real-time refresh does not work correctly for RL78 G10.</p> <p>Workaround:</p> <p>modify code for ".vec" section in file vector_table.c as follows:</p> <pre>... #define VEC    __attribute__((section(".vec")))  const void *HardwareVectors[] VEC = {  // Address 0x0  PowerON_Reset,  // Secure for Debugging  (void*)0xFEDC  };</pre>
5896	GDB Server RH850	The registers view when debugging in multicore for RH850 does not show all of the available registers.
5948	Application	When selecting -flto in e2 studio the build does not succeed.
5958	Integration Server	New API added to ISServer, ReadMemoryCSV which returns a comma delimited list of hex bytes. See Integration Server help for more information.
5963	Real-time Watch	When debugging with ARM devices, the Expressions view is not properly showing values for structure records.
5973	Memory Usage plugin	<p>Some limitation of Memory Usage for KPIT project support. [[BR]]</p> <ul style="list-style-type: none"> <li>* Just support "Section" tab and "ARM/ROM" usage. (Memory Usage cannot display "Group size" of KPIT projects, "Object" and "Symbol" tabs.)</li> <li>* Memory Usage doesn't show sections that have no start address.</li> <li>* Has no "Align" information.</li> </ul>



5980	Application	<p>Missing Listing files when using KPIT tool chains.</p> <p>The work-a-round to this is to turn off the listing option in the main level project and then walk through each and every source file and change / enable the listing option on the individual source modules manually.</p>
5990	GDB	When using pointer arithmetic in the expressions view it can cause GDB to crash.
6000	Application	<p>A NullPointerException can sometimes occur during indexing.</p> <p>!MESSAGE An internal error occurred during: "Discover compiler built-in language settings".</p>
6014	Trace plugin	The trace view for the RL78 IECube hangs when disassembly is turned on. On a simple while (1) project, no problem, however in a more complex project with multiple files and functions the trace view hangs with 81% status and the message "Getting Trace Records".
6055	RX GCC build plugin	Changing options for one build configuration can change for all configurations unintentionally when you have used the "All Configurations" selection in the build options dialog.
6191	Application	<p>For Multiple configuration, selection of different optimization level throws exception when using RX GCC build plugins.</p> <p>One configuration should be a custom user created configuration to exhibit this behaviour.</p>
6242	Application	<p>""Problem""</p> <p>When the library project for RX71M is created, the following Build error occurs.</p> <p>E0511175: Neither isa nor cpu is specified.</p> <p>""Workaround""</p> <p>Please specify the -isa=rxv2.</p>
6246	Application	If breakpoints are set before a debug session is started they are never hit.
6256	Debug Configuration	<p>The debugger has a problem with the decimal separator on my German Windows.</p> <p>The performance timer setting inserts as decimal separator and then on subsequent connections it does not understand this setting any more.</p>
6257	Memory View plugin	Select symbol dialog in RZ/A has truncated names.
6278	GDB	RL78 debug features like step-over and step-out do not work in case of using the IAR Compiler.
6330	Visual Expressions plugin	Gauges and meters do not report correct floating values in the Visual Expressions view.
6365	RX GCC build plugin	When using a makefile project and then switching on Generate makefiles automatically checkbox on the build properties dialog it causes exceptions.
6369	Application	When Link Timer option is specified at Timer setting in Performance Analysis View for RX, the result shows only lower 32bit value.

6370	Performance Analysis	When "Exception and Interrupt Count" is selected at Timer setting in Performance Analysis View for RX, it is changed to "Exception and Interrupt Cycle".
6383	Debug Configuration	When the USD file for CS0 is specified in the External Flash Definition for RX, the information is not loaded.
6388	GDB server RX	<p>When upgrading the project from 2.2 to 3.1 it is not possible to set breakpoints.</p> <p>This is due to incorrect language.mapping settings in the .cproject file.</p> <p>Closing e2 studio and deleting this section of the .cproject file fixes the problem:</p> <pre>&lt;storageModule moduleId="org.eclipse.cdt.core.language.mapping"&gt; &lt;project-mappings&gt; &lt;content-type-mapping configuration="" content-type="org.eclipse.cdt.core.cHeader" language="com.renesas.cdt.managedbuilder.renesastools.ui.extend"/&gt; &lt;content-type-mapping configuration="" content-type="org.eclipse.cdt.core.cSource" language="com.renesas.cdt.managedbuilder.renesastools.ui.extend"/&gt; &lt;/project-mappings&gt; &lt;/storageModule&gt;</pre>
6397	RX GCC build plugin	When using the KPIT GCC plugins "Generate list file" option does not work when "Include symbol table" is enabled
6427	Coverage plugin	Disabling coverage for any source file removes source highlighting for current file.
6435	GDB Server RZ	When using RZ/A and RZ/T1 devices the debugger now leaves the target suspended on termination and/or disconnection. Previous behaviour was to free run.
6452	Application	Terminating sessions with another connection attempt is not clearing the GDB executables correctly from the system and allowing re-connection.
6454	CodeGenerator plugin	At e2 studio V3.1.3.06, the necessary source files generated by Code Generator are excluded when re-generating code.
6475	Application	Add '-mrelax' option support for GNURL78 toolchain projects.
6485	GDB	When debugging with inline functions it is possible to hit problems with GDB failing with an internal problem.
6522	GDB Server RZ	Settings file support added to the ARM Segger J-link launch configuration for debugging.
6559	CodeGenerator plugin	After creating a new project with Code Generator enabled, double clicking on the different peripheral names under 'Code Generator > Peripheral Functions' in the Project Explorer window has no effect and the Peripheral Functions window is not updated to show corresponding peripheral settings.

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6568	Profile plugin	When disabling the Profile view, any data currently displayed should be cleared.
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## 6. Open issues in 4.0.0.26

ID	Component	Description
874	Event points plugin	<p>Execution Address Eventpoints with trigger count do not work with Breakpoints on Segger RX.</p> <p>Setting an execution address eventpoint with a trigger count on Segger JLink RX62N is not possible if any breakpoints exist, including the default at main.</p> <p>If an execution address eventpoint with a trigger count is set with a breakpoint both the eventpoint &amp; the breakpoint do not function. Multiple breakpoints are set then only 1 does not work. Additional eventpoints function as normal.</p>
987	Application	Exporting project if linker sections are modified and not saved generates an error. Resource not synchronized is the message.
1486	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.
1616	RX GCC build plugin	The options of a Build Configuration were not correct after specifying Multiple Configurations... functionality.
1640	Application	After creation a project cannot be deleted straight away. If the user waits around 30 seconds the project can then be deleted.
1642	Application	<p>Erase flash on start-up option on RL78 should be executed once.</p> <p>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.</p>
1645	Event points plugin	For the SH7216 target (and most likely other targets), when using the address conditions and associated mask, the boolean parameter (parameter 17) 'address mask compare type' is not being set to true.
1778	Application	<p>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.</p> <p>When setting this option ensure the limit (16 for RX devices) is not exceeded.</p>
1808	HEW Project Converter	<p>Import a HEW RX project in e2studio using the HEW project importer.</p> <p>Check: Project &gt; Properties &gt; Compiler &gt; Source &gt; Include file directories. Paths are duplicated</p>
1859	GDB server	Program execution stops inside a range when Range Exclusive is specified in the address settings for OA event points.
1889	Application	<p>Due to file extension issue with .s and .S and due to known bug, e2studio users won't be able to use .s or .S effectively to pre-process assembly files that need GCC. Hence we suggest renaming these files to use:</p> <p>.S -&gt; .asm .s -&gt; .src</p>
1950	HEW Project Converter	<p>A user tries to import an already imported project (in a different workspace) again. However the project is deleted from the previous workspace.</p> <p>This results in the following error message "The selected .hwp file overlaps the location of another project". See attached dialog.</p> <p>This is because when the project is removed from the project tree the Eclipse projects are not physically removed. Deleting the Eclipse project files from the directory allows the operation to continue.</p>
1982	RX GCC build plugin	For Renesas CCRX the Converter phase gets invoked even when using the external linker subcommand option. This should not happen.

2010	HEW Project Converter	<p>HEW Project Import fails to build file due to File or path name too long.</p> <p>This is due to the difference between HEW and Eclipse. In HEW object files are output to the configuration directory. In Eclipse the files are output alongside the source file in the same directory.</p>
2081	Application	<p>After building a project if user changes anything in linker subcommand file option, only ObjCopy is gets invoked. Linker should get invoked.</p>
2299	RX GCC build plugin	<p>It is possible for .c and .C files to be treated in the same manner in certain situations which is not correct.</p> <p>(.C extension is changed to .c during project build).</p>
2416	Project Generation	<p>Use of duplicate register is allowed for RXC project generation.</p> <ol style="list-style-type: none"> <li>1. Create RXC project</li> <li>2. Go to RXC Global option page, select "ROM" -&gt; "R8"</li> <li>3. Select the same value for any other register (e.g. "RAM" -&gt; "R8"), it gives error message and prevents the user from project creation.</li> <li>4. Now select "R8" again for "RAM" register. It doesn't show any error message and allows user to create the project.</li> </ol>
2486	Profile plugin	<p>Acquiring profile results can take a very long time following RX Simulator debugging.</p>
2537	Performance Analysis	<p>Performance Analysis: Performance time is not updating following changes to start and stop performance addresses.</p> <p>For the G13 IECube it supports one run/break timer. Currently e2 studio is setting the support to 3.</p>
2693	Application	<p>HEW Importer, output file (.P/.PP) is not generated while building the project.</p> <p>Work around: User will need to select Settings -&gt; Compiler -&gt; Object -&gt; output file type -&gt; Pre-processed source file -&gt; OK after importing the project and then build the project.</p>
2716	GDB server RL78	<p>Before PC events on IECube temporarily hard coded limit of 4.</p>
2762	Application	<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>
2859	CDT	<p>When using IAR projects the SFR names (e.g. PIOR1_bit.no1) are not understood correctly in the editor.</p>
2910	GDB	<p>Registers do not display properly on SH2A 72691.</p>
3389	Application	<p>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.</p>
3470	Application	<p>When debugging with the RX210 the FPSW register is displayed on the register view. This should not be the case as the RX210 does not have the FPSW register.</p>

3526	Application	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.
3550	Application	Custom placeholders are not expanded when importing a project from HEW. This is currently expected behavior but may be improved in a future version.
3585	Application	The GDB server crashes when an E1 emulator is connected to a debug configuration configured for the Segger emulator.
3626	Application	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.
3663	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.
3804	Application	The code generator is not automatically registered when installing into generic Eclipse. Browse to the CG plugin and then run the batch files that reside in the tools directory.  e.g. C:\Renesas\e2_studio\eclipse\plugins\com.renesas.cg_1.0.0.201309061659\CodeGenerator\Tools
3813	Event points plugin	OA event break event points not breaking at correct addresses on SH7203 (External Flash) target.
3836	Application	Dependencies with file name that have spaces may cause dependency scanning issues. Where possible it is better to avoid using spaces in dependency file names.
3928	CCRX Build plugin	By default the e2 studio editor character code is set to UTF-8. This means it is possible to enter characters that are then not supported by default by the CCRX toolchain.  CCRX default input is SJIS.  To enable UTF-8 for the toolchain you must first select C99 support.
3945	Application	When importing a HEW project if it contains folders with the same name at the same hierarchy then not all the files will import successfully.  i.e. "....\Workspace\Workspace\Developments\src\embOS\Util\MEASUREMENT.c" "....\Workspace\Workspace\Developments\src\protocols\util\SerialUtil.c"
3950	Application	Breakpoints cannot be unset within the editor when code is #ifdef out.  These breakpoints will need to be removed from the breakpoints plugin.
3992	Application	When importing projects from HEW into e2 studio when the files are read only, build errors occur following import. Ensure the files are writable.
4104	Application	When the project is re-named. If the user then uses the feature project > Build Configurations > Build All. The active configuration builds successfully but subsequent configurations fail.

4105	Application	When using GCC on Japanese Windows. If you create a new workspace on the desktop the default GCC projects fail to build correctly.
4189	Project Generation	It is not possible to build project which has more than 98 characters in its project name.
4191	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.
4303	RL78 GCC build plugin	When the project has a toolchain that does not match the path for the toolchain installed on the machine problems with build can occur.  Workaround is to delete the 'org.eclipse.cdt.core.prefs' file from .settings folder and then import the project.  Alternatively you can modify the toolchain path from Properties > C/C++ Build > Environment. Modifying the toolchain path builds the project successfully.
4314	GDB Server SH	For the SH debugger the Debug Tool Settings -> Use User Stack option is not processed by the debugger. The setting is not used.
4350	CubeSuite+ importer/exporter	When importing a project from CubeSuite+ to e2 studio the "toolchain version is changed" dialog is always displayed.  This is because the version string in imported project file and the toolchain information in e2 studio does not match. Ignoring this dialog and continuing should result in a successful import.
4422	Application	When debugging a project that has been imported but that has not been rebuilt you need to setup the debugger to look in the original source file location.  This is done via the Source tab of the Debug Configurations dialog.
4450	CCRX Build plugin	Linker section settings of Renesas toolchain are not getting saved for multiple configurations.
4492	Application	The Module View of e2 studio does not display any information when an executable which includes debug information was downloaded to the target.
4515	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.
4579	RX GCC build plugin	All configuration changes are not saved on changing multiple configuration settings in one session for GCC tools. Specifically this is referring to multiple settings changes across multiple configurations and the clicking apply.
4597	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.
4607	Event points plugin	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.

4783	Performance Analysis	<p>The option to Reset timer before each run, which is setup on the "Performance Analysis" dialog box is not reflected for RL78.</p> <p>The specification for RL78 is that the values are reset all of the time so the option has no meaning.</p>
4819	CCRX Build plugin	Individual compile is not execute when Level2 is specified at the "Perform inter-module optimization".
4869	Application	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.
4876	Application	When debugging with RX, if the settings are in flash write mode, the debugger features should be disabled.
5041	CodeGenerator plugin	<p>Code Generator can delete user code between /* Start */ End comments in some situations.</p> <p>Using the code generator if the following code is placed in the main function:</p> <pre>//if(data_in!=0xAA){</pre> <p>on a line by itself, all of the main code will be removed when Generate Code button is pressed.</p> <p>The key issue is that the {brace is on the same line as the comment.</p>
5056	GDB server RX	Timestamp setting on the Trace view has no effect on results for Profile view for RX devices.
5063	Application	Dependency scanning is not working for assembler file. This is for GCC build plugins.
5110	GDB	For some RX devices the default display of PSW the IPL is displayed wrong. The MSB is not shown.
5124	Application	Active configuration lost while importing project (which is exported as file system).
5171	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.
5179	CubeSuite+ importer/exporter	<p>When CubeSuite+ project imports to e2 studio, Build cannot perform sometimes.</p> <p>[Workaround]</p> <p>Please add the &lt;root folder&gt; to "C/C++ General -&gt; Paths and Symbol -&gt; Source Location"</p>
5201	Application	<p>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.</p> <p>To work around setup and launch a hardware debug session. You do not actually need hardware to do this.</p>
5290	Application	<p>When you add a new configuration, please do not specify 'Default Configuration' as a configuration used as a base.</p> <p>If you specify the 'Default Configuration', the configuration which does not operate correctly is created.</p>
5394	CCRX Build plugin	<p>""Problem""</p> <p>If a source file folder (already included in C option) is deleted, its path was added to Assemble include.</p> <p>""Workaround""</p>



		Remove the path in "Include file directories" will stop the warning.
5467	Application	Settings in the 'Format' dialog (Memory view) are not restored.
5530	Application	Indexer settings are not persisted on a project import into e2 studio.
5547	Application	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.
5551	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.
5632	Multicore	When using multicore projects the Debug View may show an incorrect name for the second loaded module (as a duplicate of the first)
5637	Multicore	For RH850 multicore devices, disassembly result may be different from the expected. In this case, please refresh the view after changing the debug context to the other PE.
5668	Coverage plugin	In some cases when using the Coverage facility with the RL78 IECUBE some lines are shown as 'branch' or partial coverage when they should be 100% covered.
5669	Application	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.
5721	CDT	When modifying code that changes the line an already set breakpoint is located at the breakpoint is not moved according to the modification.
5770	Application	RX targets and IO registers greater than 1 byte.  E.g.  winA 0x88028  winB 0x8802a  View register in both IO view and register view.  Value in memory view is reversed.  This is because the IO, (like all RX memory for little endian targets is reversed).
5778	Debug Configuration	When importing a project and debugging before visiting the debug configuration the debug connection will fail.  Visiting the debug configuration or creating a new project uncompressed the support files. Once this has happened debug connection can continue as normal.
5826	GDB Server RZ	Using Move to Line with an RZ target can cause the GUI to stop responding. Set the PC directly via the Registers window instead.

5903	CodeGenerator plugin	<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>
5911	DS-5 importer	The current DS-5 importer in e2 studio imports KPIT GNU "Application" project types only. Other projects cannot be imported at this time.
6208	Application	<p>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.</p> <p>In this case the breakpoint appears to be valid but the debugger will not stop.</p> <p>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.</p>
6336	Application	Start / Stop Function Settings 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.
6350	Application	<p>NullPointerException is observed when adding a custom configuration and selecting the same configuration within the "Multiple Configuration!" selection at the same time.</p> <p>This issue only occurs if user has not applied after creating new configuration:  <a href="https://bugs.eclipse.org/bugs/show_bug.cgi?id=352047">https://bugs.eclipse.org/bugs/show_bug.cgi?id=352047</a></p>
6394	GDB server RX	Trace Record event point does not filter correctly with Segger RX63N.
6408	Application	<p>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.</p> <p>Please click 'yes' if the device does not have USB boot program.</p>
6450	Application	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.
6463	Application	Memory view requires manual refresh to see changes when downloading auxiliary file.
6484	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.
6525	Trace plugin	The Trace View does not show disassembly when tracing through code in a memory area not in the download module.
6529	Application	After restart on occasion the disassembly window can be empty. Refreshing the window or stepping works around the problem.
6531	CCRL Build plugin	<p>In some cases CCRL code is not seen as source code and you cannot set breakpoints on the source line.</p> <p>The issue is the indexer does not understand the "near" keyword and treats it as a syntax error.</p>
6534	Application	CCRL toolchain with the GDB Simulator: addresses are not shown in source view.
6545	Profile plugin	No profile data is displayed in the profile view for GNUSH or SHC projects.
6549	Profile plugin	The Profile View 'Execution Time' and 'Average Execution Time' columns are showing as zero after suspending the current debug session (for all targets).
6557	GDB Server RH850	Breakpoints are not always being cleared completely when a breakpoint is removed.

6566	Real-time Watch	In some situations the RH850 multicore real-time expression update does not work. 1. Due to the optimization of the compiler, the static function is not sometimes indicated in Static Analysis View. In this case, please select "Debug Precedence" in "Level of optimization". 2. The label indication of static function is different between CC-RX and CC-RL. This difference is due to CCRL and CCRL Compiler spec. <Example> static int function01(int a) {...}  CC-RX: function01 CC-RL: fucntion01@1
6594	Static Analysis plugin	In case of CC-RL, "@1" string is added to the function label.
6605	Event points plugin	The enable state of eventpoints for any debug configuration is not restored when the debug configuration is launched for the first time after e2 studio is started. In subsequent launches the eventpoints are enabled/disabled appropriately.
6616	Event points plugin	When adding a new Data Access eventpoint, the Compare value (on the Data Access Settings tab) is always converted to hex and subsequently displayed in hex even if the value entered does not include an 0x prefix.
6657	Coverage plugin	If the workspace is copied or moved from the original folder, coverage information may not be displayed. Please re-build the program in the new workspace.
6659	Application	When the coverage setting is loaded from the workspace, the setting may not be affected. In such a case, please disable the coverage and enable it again.
6674	CodeGenerator plugin	Code Generator doesn't have the property to change the encoding (character code). Code Generator loads/saves the generated source file according to the default encoding of Windows. Therefore, when the comment with the different encoding from the Windows default one is added into the generated file by Code generator, it is not properly encoded and it cannot be displayed properly at the editor.
6676	Application	The "Renesas GDB Hardware Attach" causes a NullPointerException. This results in this feature not being usable.
6678	GDB server	Removing a previously set breakpoint by double clicking the Line Breakpoint marker at the side of the editor, sometimes does not remove the breakpoint.  Disconnecting and re-connecting the debugger does resolve the issue.
6685	Installer	Modify for standalone installer does not remember proxy settings.

6696	Project Generation	<p>""Problem""</p> <p>When the configuration which generated code is changed into a different configuration, a build error occurs.</p> <p>""Workaround""</p> <p>Please change the address of "FIXEDVECT" section into 0xFFFFFFFF0.</p>
6704	Application	<p>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.</p>
6800	RZ/T1 Project Generation	<p>The program which is downloaded to RAM and executes in the RAM does not work well. e2 studio only supports the program which is downloaded to NOR flash or serial flash with the standard generated project.</p>
6798	RZ/T1 Debugging	<p>On RZ/T1 devices the CPSR register is shown endian reversed.</p>