

This document outlines the device support, new features added in 3.1, fixed issues and open issues in e² studio 3.1.2.

1. Project Generator Support

CPU	Family	Devices
RH850	F1H	R7F701503, R7F701513 (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,R7F701031xAFP,R7F701032xAFP,R7F701033xAFP, R7F701034xAFP,R7F701035xAFP,R7F701040,R7F701041,R7F701042,R7F701043,R7F701044, R7F701045,R7F701046,R7F701047,R7F701048,R7F701049,R7F701050,R7F701051,R7F701052, R7F701053,R7F701054,R7F701055,R7F701056,R7F701057 (Debug Support Only)
	R1L	R7F701062xAFP, R7F701067xAFP, R7F701071xAFP (Debug Support Only)
RL78	D1A	R5F10CGB,R5F10CGC,R5F10CGD,R5F10CLD,R5F10CMD,R5F10CME,R5F10DGC,R5F10DGD, R5F10DGE,R5F10DLD,R5F10DLE,R5F10DMD,R5F10DME,R5F10DMF,R5F10DMG,R5F10DMJ, R5F10DPE,R5F10DPF,R5F10DPG,R5F10DPJ,R5F10DPK,R5F10DPL,R5F10DSJ,R5F10DSK, R5F10DSL,R5F10TPJ
	F12	R5F10968,R5F1096A,R5F1096B,R5F1096C,R5F1096D,R5F1096E,R5F109AA,R5F109AB, R5F109AC,R5F109AD,R5F109AE,R5F109BA,R5F109BB,R5F109BC,R5F109BD,R5F109BE, R5F109GA,R5F109GB,R5F109GC,R5F109GD,R5F109GE,R5F109LA,R5F109LB,R5F109LC, R5F109LD,R5F109LE,
	F13	R5F10A6A,R5F10A6C,R5F10A6D,R5F10A6E,R5F10AAA,R5F10AAC,R5F10AAD,R5F10AAE, R5F10ABA,R5F10ABC,R5F10ABD,R5F10ABE,R5F10AGA,R5F10AGC,R5F10AGD,R5F10AGE, R5F10AGF,R5F10AGG,R5F10ALC,R5F10ALD,R5F10ALE,R5F10ALF,R5F10ALG,R5F10AME, R5F10AMF,R5F10AMG,R5F10BAC,R5F10BAD,R5F10BAE,R5F10BAF,R5F10BAG,R5F10BBC, R5F10BBD,R5F10BBE,R5F10BBF,R5F10BBG,R5F10BGC,R5F10BGD,R5F10BGE,R5F10BGF, R5F10BGG,R5F10BLC,R5F10BLD,R5F10BLE,R5F10BLF,R5F10BLG,R5F10BME,R5F10BMF, R5F10BMG
	F14	R5F10PAD,R5F10PAE,R5F10PBD,R5F10PBE,R5F10PGD,R5F10PGE,R5F10PGF,R5F10PGG, R5F10PGH,R5F10PGJ,R5F10PLE,R5F10PLF,R5F10PLG,R5F10PLH,R5F10PLJ,R5F10PME, R5F10PMF,R5F10PMG,R5F10PMH,R5F10PMJ,R5F10PPE,R5F10PPF,R5F10PPG,R5F10PPH, R5F10PPJ
	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,R5F104JK,R5F104JL,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
	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, 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, R5S56310 R5F5631MF, R5F5631PF (Debug Support Only)
	63N	R5F563NA, R5F563NB, R5F563ND, R5F563NE, R5F563NF, R5F563NK, R5F563NW, R5F563NY
	63T	R5F563T4, R5F563T5, R5F563T6, R5F563TB, R5F563TC, R5F563TE R5F563TE_5V, R5F563TB_5V, R5F563TC_5V (Debug Support Only)
	64M	R5F564MF, R5F564MG, R5F564MJ, R5F564ML

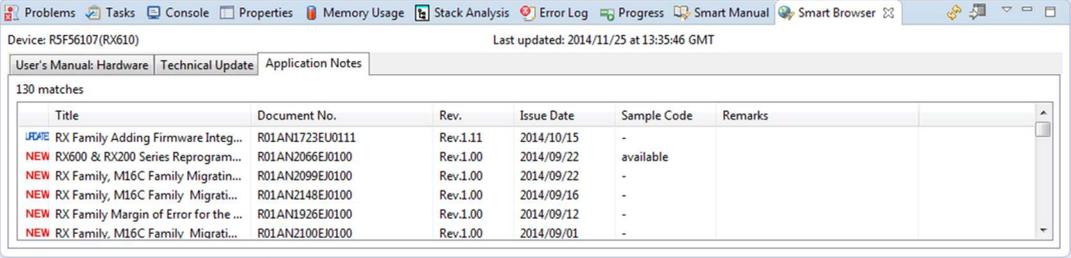
RZ	A1	R7S72100,R7S721001,R7S72101,R7S72102,R7S721020,R7S721021
SH	SH2	SH7047F, SH70834A, SH70844A, SH70854A, SH70865A, SH71242, SH71252, SH7144F, SH7145F, SH71464A, SH71491R, SH7615, SH7616, SH7618, SH7619
	SH2A	SH7201, SH7203, SH72165AD, SH72546RFCC, SH72611, SH72620, SH72630, SH72640, SH72690, SH7670
	SH2a (No FPU)	SH7206, SH7211, SH7243, SH7285, SH7286
	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, 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
	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,R5F104JK,R5F104JL,R5F104LC,R5F104LD,R5F104LE,R5F104LF, R5F104LG,R5F104LH,R5F104LJ,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, 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, R5F5111J
	113	R5F51135,R5F51136,R5F51137,R5F51138
	64M	R5F564MF, R5F564MG, R5F564MJ, R5F564ML

3. What is new in 3.1.2?

Component	Description																																										
RX113	RX113 is now supported in the project generator and code generator in e ² studio 3.1.2.																																										
Smart Browser	<p>e² studio 3.1.2 contains the Smart Browser view. This provides a window that shows related Internet resources from the Renesas website for your selected project/device.</p> <p>The view is available via the Help->Show Views->Other. You will see it in the e2 solution toolkit folder.</p> <p>The view can show application notes, device manuals and whether there is sample code available for the device in use.</p>  <table border="1" data-bbox="357 730 1428 887"> <thead> <tr> <th>Title</th> <th>Document No.</th> <th>Rev.</th> <th>Issue Date</th> <th>Sample Code</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>URM RX Family Adding Firmware Integ...</td> <td>R01AN1723EU0111</td> <td>Rev.1.11</td> <td>2014/10/15</td> <td>-</td> <td></td> </tr> <tr> <td>NEW RX600 & RX200 Series Reprogram...</td> <td>R01AN2066E0100</td> <td>Rev.1.00</td> <td>2014/09/22</td> <td>available</td> <td></td> </tr> <tr> <td>NEW RX Family, M16C Family Migratin...</td> <td>R01AN2099E0100</td> <td>Rev.1.00</td> <td>2014/09/22</td> <td>-</td> <td></td> </tr> <tr> <td>NEW RX Family, M16C Family Migrati...</td> <td>R01AN2148E0100</td> <td>Rev.1.00</td> <td>2014/09/16</td> <td>-</td> <td></td> </tr> <tr> <td>NEW RX Family Margin of Error for the ...</td> <td>R01AN1926E0100</td> <td>Rev.1.00</td> <td>2014/09/12</td> <td>-</td> <td></td> </tr> <tr> <td>NEW RX Family, M16C Family Migrati...</td> <td>R01AN2100E0100</td> <td>Rev.1.00</td> <td>2014/09/01</td> <td>-</td> <td></td> </tr> </tbody> </table>	Title	Document No.	Rev.	Issue Date	Sample Code	Remarks	URM RX Family Adding Firmware Integ...	R01AN1723EU0111	Rev.1.11	2014/10/15	-		NEW RX600 & RX200 Series Reprogram...	R01AN2066E0100	Rev.1.00	2014/09/22	available		NEW RX Family, M16C Family Migratin...	R01AN2099E0100	Rev.1.00	2014/09/22	-		NEW RX Family, M16C Family Migrati...	R01AN2148E0100	Rev.1.00	2014/09/16	-		NEW RX Family Margin of Error for the ...	R01AN1926E0100	Rev.1.00	2014/09/12	-		NEW RX Family, M16C Family Migrati...	R01AN2100E0100	Rev.1.00	2014/09/01	-	
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4. What is new in 3.1?

Component	Description
Multicore Debugger	e ² studio 3.1 contains support for the RH850 F1H device. This is a multicore device and support has been added to support multicore debugger features in 3.1.
RH850 Debugging	The RH850 debugger now includes performance analysis support.
Application	Some customers noticed that the .cproject file could be changed when the project is saved even though no changes were made by the user. This has been improved in e2 studio 3.1.
CDT	CDT has been updated to version 8.4. A list of newly added features can be found here on the CDT wiki site: https://wiki.eclipse.org/CDT/User/NewIn84
Trace view	The trace view has been revised in e2 studio 3.1 to improve reliability and robustness. All areas of the view have been improved in particular scrolling speed and response and saving and loading large amounts of trace data.
Waveform	The waveform view has been enhanced to support 24bit (32bit) stereo/mono.
Stack Analysis	The following features have been improved in the Stack Analysis view: <ul style="list-style-type: none"> • Find now allows search conditions to be specified. Such as symbol, code size or data size. • A sort feature has been added to the function details table. • A feature to show the ascending order of stack size has been added to the function tree display. • Improved progress controls have been implemented when the system is busy to better inform the user the status of what is happening.
RZ Debugger	The RZ debugger has been improved to add hardware eventpoint support.
Renesas RTOS plugin	Plugins have been added to support the RI600V4 Renesas RTOS. Views have been added that can show RTOS resource usage and task analysis. In addition special support has been added to the project generator to assist the user to generate and build RI600V4 RTOS projects.
Project Import	A new feature has been added that allows users to import and change the name of the project in one operation. This makes it much easier to copy and clone a project to another name. This is available from the File->Import menu item.
Language support	Chinese language support has been added for the menus.
ARM DS-5 Project Import	e ² studio 3.1 implements a project import facility from the KPIT RZ GCC DS-5 projects into the equivalent support in e2 studio. This feature will be made available via the standard Eclipse import function. This import facility also changes the RZ toolchain projects to the generic naming of the ARM GCC toolchain. Note the ARM toolchain DS-5 projects will not be supported by this import function.

Partner OS plugin	A new view named the Partner OS view has been provided in e ² studio 3.1. This view provides simple RTOS support for 3 rd party RTOS vendors. In 3.1 there is support for Micrium and Segger included.
HEW Import	The HEW import facility has been enhanced to include a “Emulate HEW link order” feature. This allows the user to select whether e ² studio should change its standard link order to emulate that used in HEW. Some customers have experienced project build issues due to the difference in link order between HEW and e ² studio.
IO Registers	The IO register window is now linked to the smart manual so that information on registers can be displayed when hovering over IO registers in the view.
Optimization Assistant	<p>The Optimization Assistant is a new plugin provided within e² studio to guide the user which build options are best for their project.</p> <p>The Optimization Assistant plug-in provides recommended build option sets for each optimization level. The Optimization Assistant plug-in builds the selected configurations, and this plug-in acquires information about the build such as ROM size, function size and so on.</p> <p>This plug-in then displays the following information in the view:</p> <ol style="list-style-type: none">1. Displays a total value of the ROM size for each configuration graphically.2. Displays the size of each function or file by a table.

5. Useful workarounds and information for 3.1

ID	Component	Workaround or information
NA	Application	<p>If you are experiencing slow building of projects within e2 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 e2 studio 2.1 or later this now defaults to on for new projects.</p>
NA	RZ Support	<p>There are some limitations with the current RZ integration in e2 studio:</p> <ol style="list-style-type: none"> 1. The iodef.h file is not generated as part of the project generation process. This file is available from the Renesas website along with sample code to help your development. 2. The IO Registers window does not show the IO registers for the RZ/A1. 3. When using real-time features for the RZ/A1 the debugger will be suspended when any real-time memory operation takes place. This includes expressions, memory and Visual expressions. 4. The RZ/A1 does not support the trace window in 3.1.
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 e2 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 has changed in 3.0. This means projects that are developed in 3.0 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> 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>
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>

		Workaround: Move the original HEW project to a shallow directory structure (i.e.) C:\Workspace and import from there. Also ensure that the HEW project is relocated before importing into e2 studio.
2421	Debug Configurations	<p>Debug configurations have been modified since e2 studio 2.x. So although you can re-use the workspace and projects from e2 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 e2 studio 1.x projects which are for the V850 device into e2 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>
2761	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>
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 e2 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 -> IAR Embedded Workbench plugin manager.</p> <p>In some cases you may need to remove existing IAR RX & RL78 plugins to install other newly supported device plugins (e.g. RH850).</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>

6. Fixed issues in 3.1.2.9

ID	Component	Description
5100	GDB	<p>If uint32_t is used as variable type for bit-field members, the values for the variables cannot be displayed in expressions windows, including GDB console.</p> <p>unsigned long, unsigned int and uint16_t work fine. This can be observed when using CCRX.</p>
5223	FIT plugin	<p>The FIT Wizard has been improved and selections for "Family", "Series" and "Group" are now filtered and default to the user's selected device.</p>
5259	GDB	<p>Changes to structures are not shown correctly after the download module is reloaded following a rebuild.</p>
5275	Application	<p>In some cases the project build fails for a custom configuration when it is created from a 'Default configuration'. Exceptions are often thrown due to missing linker section setup data for the new configuration.</p>
5348	CCRX Build plugin	<p>Could not add new section in case the list already contain any section was named NEW_SECTION_* (* is not number 1, 2, 3...) in CCRX project.</p>
5471	CCRX Build plugin	<p>When the project is imported before a CCRX project is created, the message "Can not specify this option" may be displayed even if the relation between FPU and CPU options is correct.</p>
5529	CCRX Build plugin	<p>When building a RTOS project using the CCRX toolchain it can show many CODAN errors even if include paths are set correctly.</p>
5539	Application	<p>To use trace record events for RH850 with E1 emulator, trace start events are required.</p>
5542	Trace plugin	<p>If no records acquired in Trace View, tool bar buttons for trace conditions are disabled. To enable them, once disable trace and enable it again.</p>
5569	RX GCC build plugin	<p>GNU (RX) assembly list is not generated for the last compiled C source file in the build.</p> <p>The work around is to specify the options for this file specifically for the list file setting.</p>
5586	Code Generator plugin	<p>When importing project which did an export by CS+ in e2 studio, the setting contents of code generator aren't reflected.</p>

5598	GDB server RL78	When using RL78 104LE, display the PORT branch in the IO Registers window. The values displayed for this registers does not correspond to the data in the memory view at the same location.
5616	Code Generator plugin	An input of a project name may delay a character input. The cause is loading Code Generator plugin module.
5622	Project Generation	Regardless of using trusted memory, TMEF and TMINF register settings are necessary and should be pre-set before running RX64M device. The values are placed typically in vector table. See the device hardware manual for the details. If Trusted Memory is not used, 0xffffffff (==factory default) should be set for both TMEF and TMINF registers to avoid unexpected behaviour.
5652	Application	The debugger does not show the contents of float variables in a structure correctly when the compiler option "Pack structures" is used. This is with the CCRX toolchain.
5656	Multicore	For RH850 multicore devices the connection process can stall if there are active breakpoints in the project. To remedy disable the breakpoints before connection and enable once connected.
5662	FIT plugin	The FIT Wizard selections for "Toolchain", "Application" and "Function" have been temporarily disabled and will be re-organized again in the next release.
5674	CCRX Build plugin	RTOS project is generated and build, CODAN error "Symbol xxx could not be resolved" is shown.
5677	Application	When importing projects into e2 studio using the Import and Rename option in some cases the debug configurations are no longer available.
5699	Project Generation	The included RZ project generators in e2 studio do not currently include iodef.h files.

5705	CCRX Build plugin	<p>When the "Renesas Toolchain Settings" is opened from the Optimization Assistant and clicked the "Linker -> Section", null pointer exception occurs.</p> <p>Please select the project name and perform the right clicked menu "Renesas Tool Settings".</p>
5707	FIT plugin	<p>If a FIT module with missing dependencies is selected, the FIT Wizard will try to add a later version of the same dependency found in the installation folder.</p>
5712	Project Generation	<p>The e2studio IDE for ARM-None toolchain integration does not support all the options for -mfpu (Target FPU) under Compiler -> CPU.</p> <p>In this fix, 'none' category in the -mfpu option is added, so that users can specify the user defined -mfpu= option.</p> <p>To specify -mfpu= option, select 'none' category in the -mfpu option, which when selected the -mfpu option is not passed at all, then set your preference via the user defined options box of the compiler -> other setting.</p>
5774	Application	<p>When using the GNU(ARM-NONE) toolchain, assembly list files are not generated for the '.src' files.</p>
5784	DS-5 importer	<p>DS-5 project conversion fails if it's location is deeper than one folder in the root of the current workspace. To fix, move the project to be converted to the root of the workspace folder.</p>
5788	Image Memory Rendering	<p>When attempting to use the Image Rendering in the memory view on Little Endian RX targets an error "Invalid image" is displayed. It works correctly when the target is big endian.</p>
5795	Application	<p>Importing an ARM-RZ project from 3.0 into 3.x could reset the default build configuration to Debug on initial import.</p>
5836	Application	<p>In some cases the performance analysis view will not show data for the execution. This issue was noted for both the RX Simulator and the IECUBE for RL78.</p>
5872	GDB Server RZ	<p>When using the RZ target an incorrect CtrlMask value set into Data Access eventpoints means the event will not fire</p>
5875	Application	<p>Spaces as tab setting is not working for C source files but is okay for text files,</p>

5881	GDB Server RZ	Support is required for the extended CPSR core registers for RZ. These are necessary for complex cache and context switch debugging.
5929	GDB Server RZ	Trace support added for RZ devices.

7. Fixed issues in 3.1.1.8

ID	Component	Description
5891	RL78 GDB Server	When using an IAR project the download can fail due to the project being setup to write to the vector table area. This check has been removed in 3.1.1.8 so download now succeeds.

8. Fixed issues in 3.1.1.7

ID	Component	Description
3490	Real-time Watch	<p>If a data type of a variable already displayed in the expressions view is updated, e.g. from char to long, after a re-build the expression view data type is not updated. However the data value is correct.</p> <p>Closing the debugger or e2studio does not clear the issue but clean does.</p>
5628	Application	When debugging RZ devices the IO Register window remains empty. It should show the IO registers for these devices.
5659	Profile plugin	The workaround for Profile not working on subsequent debug sessions is to restart e2Studio.
5731	GDB Server RZ	When viewing IO registers for the RZ debugger the values are not shown correctly in the memory view or IO Registers view.
5751	Project Generation	New projects that are created for the RZ device family do not include an iodef.h file.
5752	Application	<p>When updating dependencies in a build for the ARM GCC toolchain the following error can be displayed. This error occurs when assembly source files are present in the ARM GCC project.</p> <p>"".d: *** Missing separator. Stop."</p> <p>The only workaround is to delete the .d file mentioned in the error.</p>
5754	Application	RZ projects from previous e2 studio products that use the KPIT RZ GCC toolchain are not importing to the new KPIT ARM-none toolchain correctly. The paths are not corrected.
5772	IAR Plugins	The IAR Plugin Manager is now included in e2 studio. This provides support for RX, RL78, RH850 and RZ (ARM).

		<p>This is a tool which simplifies installation and configuration of IAR toolchain plugins. You can access this through Help -> IAR Embedded Workbench plugin manager.</p> <p>In some cases you may need to remove existing IAR RX & RL78 plugins to install other newly supported device plugins (e.g. RH850).</p>
5841	Application	<p>On Japanese Windows a problem was noted for GCC projects. When a user is using a non-default value for the "Command file override" option in the linker settings it can cause the build to fail.</p> <p>This is often more noticeable when using additional settings in the C runtime library from defaults also.</p>

9. Known open issues in 3.1.2

ID	Component	Description
17	IO view plugin	<p>There are some IO Registers where the same memory address holds 2 registers with difference access sizes. These registers are general a read-only register and another register used for writing which is write-only.</p> <p>These registers are currently all listed as R/W in the IO Map file and so the view will attempt to display values for the wrote-only registers. When it does this the bytes are displayed reversed.</p>
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 & 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.
1460	CCRX Build plugin	Project builds, but rx_convertor.exe fails when on network drive.
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 > Properties > Compiler > Source > 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 wont 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 -> .asm .s -> .src</p>
1950	HEW Project Converter	<p>A user tries to import a 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	<p>For Renesas CCRX the Converter phase gets invoked even when using the external linker subcommand option. This should not happen.</p>
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"> 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.
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>
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.
2693	Application	<p>HEW Importer, output file(.P/.PP) is not generated while building the project.</p> <p>Workaround : User will need to select Settings -> Compiler -> Object -> output file type -> Preprocessed source file -> OK after importing the project and then build the project.</p>
2716	GDB server RL78	Before PC events on IECube temporarily hard coded limit of 4.
2762	Application	When using assembly code within a C source file, Codan errors can be observed in the editor. Even though the project builds successfully.
2859	IAR plugins	When using IAR projects the SFR names (e.g. PIOR1_bit.no1) are not understood correctly in the editor.
2910	GDB	Registers do not display properly on SH2A 72691.
3389	Application	When debugging files with the same name show source addresses even though it may not be correct for the file in question. The full file path is not considered just the filename and current debug context. This can lead to e2 studio showing addresses unnecessarily.
3410	GDB Server SH	<p>SH2-70865A - clicking step-in when on the closing brace of a function will cause the server to run, but never respond again.</p> <p>The only option is to terminate.</p>
3470	Application	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.
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 behaviour 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.
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.
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.
3847	Application	When using the display as array feature in the expressions window it appears that data can be skipped and is not updated.
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	<p>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.</p> <p>i.e.</p> <p>"....\WorkSpace\WorkSpace\Developments\src\embOS\Util\MEASUREMENT.c"</p> <p>"....\WorkSpace\WorkSpace\Developments\src\protocols\util\SerialUtil.c"</p>
3950	Application	<p>Breakpoints cannot be unset within the editor when code is #ifdef out.</p> <p>These breakpoints will need to be removed from the breakpoints plugin.</p>
3992	Application	<p>When importing projects from HEW into e2 studio when the files are read only, build errors occur following import. Ensure the files are writable.</p>
4104	Application	<p>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.</p>
4105	Application	<p>When using GCC on Japanese Windows. If you create a new workspace on the desktop the default GCC projects fail to build correctly.</p>
4189	Project Generation	<p>It is not possible to build project which has more than 98 characters in its project name.</p>
4191	GDB server RX	<p>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.</p>
4303	RL78 GCC build plugin	<p>When the project has a toolchain that does not match the path for the toolchain installed on the machine problems with build can occur.</p> <p>Workaround is to delete the 'org.eclipse.cdt.core.prefs' file from .settings folder and then import the project.</p> <p>Alternatively you can modify the toolchain path from Properties > C/C++ Build > Environment. Modifying the toolchain path builds the project successfully.</p>
4314	GDB Server SH	<p>For the SH debugger the Debug Tool Settings -> Use User Stack option is not processed by the debugger. The setting is not used.</p>
4350	CubeSuite+ importer/exporter	<p>When importing a project from CubeSuite+ to e2 studio the "toolchain version is changed" dialog is always displayed.</p> <p>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.</p>

		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.
4422	Application	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.
		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.
4607	Event points plugin	An error occurs by "Add Watchpoint", when the maximum number of events was exceeded, or when a ROM area is specified.
		The option to Reset timer before each run, which is setup on the "Performance Analysis" dialog box is not reflected for RL78.
4783	Performance Analysis	The specification for RL78 is that the values are reset all of the time so the option has no meaning.
4819	CCRX Build plugin	Individual compile is not execute when Level2 is specified at the "Perform inter-module optimization".
4857	GDB	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).
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.
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.

		When using the CCRX toolchain, variables placed at address 0x0000 are displayed as "no debug info" in GDB and variable type is lost.
5021	GDB	For variable type unsigned char (section B_1) and unsigned short (section B_2).
		Code Generator can delete user code between /* Start */ End comments in some situations. Using the code generator if the following code is placed in the main function: <pre>//if(data_in!=0xAA){</pre> on a line by itself, all of the main code will be removed when Generate Code button is pressed.
5041	CodeGenerator plugin	The key issue is that the { brace is on the same line as the comment.
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.
5083	CubeSuite+ importer/exporter	folder level option is not converted correctly
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.
		When CubeSuite+ project imports to e2 studio, the Build function cannot be performed sometimes.
5179	CubeSuite+ importer/exporter	[Workaround] Please add the <root folder> to "C/C++ General -> Paths and Symbol -> Source Location"
		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.
5201	Application	To work around setup and launch a hardware debug session. You do not actually need hardware to do this.
5290	Application	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.
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	<p>""Problem""</p> <p>Project is cleaned incorrectly before running "Build Configurations > Build All" at 2nd time after "Build Configurations > Clean All"</p> <p>""Workaround""</p> <p>Build the Configurations individually.</p>
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.
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> <p>Remove the path in "Include file directories" will stop the warning.</p>
5456	IAR plugins	In some situations e2 studio IAR projects are not imported correctly into later versions of the tools.
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.
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".
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.
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> <p>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.</p> <p>2. Detection level '3.98V' is missing as a choice at GUI when LVD is used as Interrupt mode and Reset mode.</p>
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.
5717	Application	RXC/SHC: 'Optimize for access to external variables' option value is not persisting for imported RXC/SHC projects.
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	<p>RX targets and IO registers greater than 1 byte.</p> <p>e.g. winA 0x88028 winB 0x8802a</p> <p>View register in both IO view and register view. Value in memory view is reversed.</p> <p>This is because the IO, (like all RX memory for little endian targets is reversed).</p>
5778	Debug Configuration	<p>When importing a project and debugging before visiting the debug configuration the debug connection will fail.</p> <p>Visiting the debug configuration or creating a new project uncompressed the support files. Once this has happened debug connection can continue as normal.</p>
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.

5846	Real-time Watch	The real-time refresh does not work correctly for RL78 G10.
5896	GDB Server RH850	The registers view when debugging in multicore for RH850 does not show all of the available registers.
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.
5948	Application	When selecting -flt0 in e2 studio the build does not succeed.
5963	Real-time Watch	When debugging with ARM devices, the Expressions view is not properly showing values for structure records.
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>