

This document outlines the device support, new features added in 3.1, fixed issues and open issues in e² studio 3.1.1.

1. Project Generator Support

CPU	Family	Devices
RH850	F1H	R7F701503, R7F701513 (Debug Support Only)
	F1L	R7F701002xAFF, R7F701003xAFF, R7F701006xAFF, R7F701007xAFF, R7F701008xAFF, R7F701009xAFF, R7F701010xAFF, R7F701011xAFF, R7F701012xAFF, R7F701013xAFF, R7F701014xAFF, R7F701015xAFF, R7F701016xAFF, R7F701017xAFF, R7F701018xAFF, R7F701019xAFF, R7F701020xAFF, R7F701021xAFF, R7F701022xAFF, R7F701023xAFF, R7F701024xAFF, R7F701025xAFF, R7F701026xAFF, R7F701027xAFF, R7F701028xAFF, R7F701029xAFF, R7F701030xAFF, R7F701031xAFF, R7F701032xAFF, R7F701033xAFF, R7F701034xAFF, R7F701035xAFF, R7F701040, R7F701041, R7F701042, R7F701043, R7F701044, R7F701045, R7F701046, R7F701047, R7F701048, R7F701049, R7F701050, R7F701051, R7F701052, R7F701053, R7F701054, R7F701055, R7F701056, R7F701057 (Debug Support Only)
	R1L	R7F701062xAFF, R7F701067xAFF, R7F701071xAFF (Debug Support Only)
RL78	D1A	R5F10CGB, R5F10CGC, R5F10CGD, R5F10CLD, R5F10CMD, R5F10CME, R5F10DGC, R5F10DGD, R5F10DGE, R5F10DL, R5F10DLE, R5F10DMD, R5F10DME, R5F10DMF, R5F10DMG, R5F10DMJ, R5F10DPE, R5F10DPF, R5F10DPG, R5F10DPJ
	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, R5F10E8A, R5F10E8C, R5F10E8D, R5F10E8E, R5F10E8A, R5F10E8C, R5F10E8D, R5F10E8E
	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, R5F10WVG
	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
	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, R7S72101, R7S72102

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, R5F100FI, R5F100FJ, R5F100FK, 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, R5F10E8A, R5F10E8C, R5F10E8D, R5F10E8E, R5F10EGA, R5F10EGC, R5F10EGD, R5F10EGE, R5F10ELC, R5F10ELD, R5F10ELE,
	G1C	R5F10JBC, R5F10JGC, R5F10KBC, R5F10KGC
	G1E	R5F10FLC, R5F10FLD, R5F10FLE, R5F10FMC, R5F10FMD, R5F10FME
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
	64M	R5F564MF, R5F564MG, R5F564MJ, R5F564ML

3. 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.

4. 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>

5. 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.

6. 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><code>**.: *** Missing separator. Stop.</code></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	<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>
5841	Application	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.

		This is often more noticeable when using additional settings in the C run-time library from defaults also.
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7. Fixed issues in 3.1

ID	Component	Description
301	Trace plugin	Trace buffer full functionality needs addition. New checkbox needs adding to the GUI.
475	GDB server RL78	Once a debug session has been terminated when using an IECUBE another connection is not possible until the IECUBE had been unplugged from the machine.
785	Trace plugin	Bus mode records sometimes fail to update if rapid cycling through the available trace modes.
2735	Trace plugin	When using an IECUBE emulator saving large trace buffers can fail to complete.
3160	Application	The address of pointer type variable cannot be modified in Expressions View. e.g. <pre>typedef int* PI;</pre> <pre>PI s_pi = &glb;</pre> In this case, address value of s_pi cannot be modified in Expressions View.
3625	Application	When using the Snapshot trace feature the data mask settings are not applied correctly.
3798	Trace plugin	Creating a new trace file for E20 trace data takes a long time to complete due obtaining disassembly data for all the available records. During this period of obtaining disassembly data the debugger controls can become unresponsive.
3867	Application	When the current configuration is set to a custom configuration created by the user. The configuration following an export and import into another workspace is not restored correctly. It is restored to HardwareDebug.
3932	Application	If e2 studio is installed into the desktop folder or the workspace is within the "My documents" area on Japanese operating systems, the object converter can fail to execute correctly.
4176	CCRX Build plugin	The Renesas CCRX toolchain fails to build projects with the following conditions: <ul style="list-style-type: none"> a. Project name with Chinese characters b. Project located in a path with Chinese character c. Project contains file with Chinese character
4280	Integration Server	The GetExpressionS function in the Integration Server will in some cases return an invalid string. Workaround is to use the ReadMemory call to get the raw data.

4312	Application	<p>The current e2 studio build restricts the file types that can be used as input files.</p> <p>For example assembler input files only supports the following:</p> <pre>.src .SRC .Src</pre>
4397	Application	<p>If the *.linker files in a project are read-only and the linker map is modified then no error is displayed or logged. But the changes are not saved.</p>
4445	Application	<p>For GCC RL78 there is an option "Select Additional CPU Options" in the project generator with the following options:</p> <pre>: None : Use Emulation for multiplication : Use RL78 native multiply for G14 : Use RL78 hardware multiply for G13</pre> <p>However, there are more device families which support the native or hardware multiply:</p> <p>RL78 native multiply: F13, F14, G14</p> <p>RL78 hardware multiply: D1A, F12, G12, G13, G1E, I1A, L12, L13</p> <p>Emulation for multiplication ONLY: G10</p> <p>The user interface should be updated to better reflect the situation for the RL78 devices.</p>
4538	Static Analysis plugin	<p>The static analysis plugin cannot jump to the source location of a specified static function.</p>
4548	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 Program ROM" is set to yes. As this means software breakpoints cannot be set.</p>
4550	Application	<p>There is a problem in e2 studio that the .cproject file can be modified even when the settings for the project were not changed. This can be seen by entering the settings dialog and clicking apply directly after project creation.</p> <p>In addition there are issues in generic Eclipse in this area.</p> <p>For option comparison, comparing the makefile is the easiest way to ensure the project settings are identical.</p>
4640	Application	<p>When a program is compiled by inter-module optimization with the CCRX toolchain, the disassembly view cannot always display the disassembly instructions mixed with source code.</p>
4665	Profile plugin	<p>When a single address is specified as the filter for the profile plugin it does not work correctly. The addresses matching the filter are not displayed in the view.</p>

4698	GDB	<p>A symbol address is not changed correctly at registering an Event Point for "Trace Start" and "Trace Stop" eventpoints with RL78.</p> <p>The right address is displayed in the Select Symbol dialog.</p> <p>However it is changed into the wrong value when shown in the Eventpoints view.</p>
4813	HEW Project Converter	The simultaneous build setting is not setup when the project is imported from HEW. Please visit the C/C++ Build preferences and select the Behavior tab.
4825	CCRX Build plugin	"Build selected file" does not work correctly when the assembler source file is selected.
4939	Trace plugin	<p>In the Trace Acquisition dialog for the Renesas RX simulator,</p> <p>The Trace Output field is not necessary. It cannot be modified.</p>
4940	Application	An "Exception occurred during launch" message is displayed approximately 30 seconds after connecting to a target when using Hot Plug and using an image file.
4948	Application	<p>When source file is modified while debugging and the module rebuilt is downloaded via the 'module has changed' dialog.</p> <p>The module downloads correctly, the target is reset, but the e2 studio user interface does not show that PC has changed until a step is done.</p>
4972	Application	<p>Parallel build is not enabled after conversion from CCRX project to GNURX project.</p> <p>This can be switched on in the build configuration after conversion.</p>
5014	Application	CCRX to GNURX conversion: Custom tool added in CCRX project is not available in the converted GNURX project.
5054	Application	CCRX to GNURX Project Conversion: .mot file is not generated while building release configuration for the converted project
5058	Application	Section name ending with * is not mapped after conversion.
5060	Application	Optimization options are not mapped as expected when options are set on single file.
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 ind GDB.</p> <p>unsigned long, unsigned int and uint16_t work fine. This can be observed when using CCRX.</p>
5190	Coverage plugin	Address Range Coverage for IECUBE does not correctly display coverage where the address range contains any region which contain non-code data or code which does not have a line number.
5200	Coverage plugin	When enabling coverage support for a file that should have been executed in the last debug operation it shows all source lines as not covered. When another debug operation such as a step takes place the file then shows coverage results.

5202	Debug Console plugin	<p>Changing text encoding into a non UTF-8 setting, such as Shift-JIS also changes the setting for the debug console.</p> <p>To stop this happening you can modify the setting for "Encoding" to not inherit on the debug configuration, common tab.</p>
5216	Application	<p>The KPIT RZ GCC toolchain is no longer supported within e2 studio. Instead you must download the new KPIT ARM-none-eabi GCC toolchain which is available from the KPIT website.</p> <p>The KPIT ARM-none-eabi 14.01 release is exactly the same as the KPIT RZ 14.01 release but with a different name. This is the only difference.</p>
5244	Application	When using the RX Simulator in some cases the program can stop at a breakpoint which was already removed.
5266	CubeSuite+ importer/exporter	When importing a CubeSuite+ project a build error occurs in some cases. This was due to the %ProjectDir% which is a placeholder for CS+ which should be converted as \${ProjDirPath?}. This was not happening correctly.
5267	CubeSuite+ importer/exporter	When a RX64M project is imported the "-rx-force-v2" option for gdb was missing. This option needs to be specified for successful RX64M connection.
5271	Application	As now -mcpu=rx100 option is supported by GNURX toolchain from v13.01 onwards, e2 studio should handle the cpu command based on CPU selection and toolchain version.
5272	Application	The RL78 GCC Linker section displays the same address for stack and data section only for debug configuration
5273	Application	The edit eventpoint dialog for a 'data access' type shows address conditions, 'address mask' and 'end address' when using the RL78. These are not supported for this debugger so should be disabled.
5274	Application	<p>To see saved trace file, users have to do two steps:</p> <p>First they need to "Load trace file" and then check "View Saved Trace". The second step should not be necessary.</p>
5277	Application	In certain situations when using CCRX there were problems displaying local variables.
5280	RL78 GCC build plugin	<p>There are Non-G13 devices (except G10, G14, F13&14) which have external multiplier capability with -mmul=g13 option.</p> <p>Therefore this option needs to be made available for more devices.</p>
5324	Memory Usage plugin	The memory usage view fails to read the map file correctly to determine memory usage when the map file contains some sections that not belong to the RAM and ROM area.
5326	CCRX Build plugin	When importing a CCRX project from HEW to e2 studio some the -nostuff option is not converted correctly.
5349	Coverage plugin	In the coverage view variable type information and the related data is not listed correctly for each variable.

5350	CDT	RL78 Unable to view IO Registers in Memory View. Adding a memory monitor at address 0xFFFF00 (start of IO Register area) shows a message stating that only memory addresses from 0x0000 to 0xFFFF can be viewed.
5362	HEW Project Converter	<p>There are issues with HEW project conversion for the CCRX toolchain. Some options were not converted correctly.</p> <p>e.g. -lang=ec++</p> <p>When a C++ source file does not exist in a project, its option is deleted.</p> <p>When a C++ source file exists in a project, its option is converted as individual option of C++ source file but the option is not output while building.</p> <p>-nostuff It is deleted, without being converted.</p> <p>-section=C=CE It is deleted, without being converted.</p> <p>-nostuff=C,B It is deleted, without being converted.</p> <p>-case=ifthen It is deleted, without being converted.</p> <p>-obj=prep -noline It is converted correctly but the option is not output during building.</p> <p>-save_acc (Library Generator) It is deleted, without being converted.</p> <p>-pack (Library Generator) It is converted correctly but the option is not output during building.</p> <p>-show=all (Linker) It is deleted, without being converted.</p>
5387	Trace plugin	In some cases saving large amounts of trace data to file using the E20 can fail. In some cases (~500k records) an exception occurs and save fails.
5396	Application	When opening a new editor from "New editor" of "Window" menu, the editor always enable folding after restarting e2 studio. This is even the case when the user has disabled folding for a new editor in the Editor preferences.
5430	Application	e2 studio should be updated to use the latest GDB. This means that symbol information modified by a reload operation would be reflected within the e2 studio environment.
5440	Application	The Profile view is not updated following the first load of debugger. Subsequent load operations show data as expected.
5451	Profile plugin	<p>In some cases the coding assistance "format" function removes source code lines that should not be removed.</p> <p>This was noted in a file that has two #defines separated by a single blank line.</p>

5461	Application	<p>When using multiple download modules, if any one of the download module operation fails the connection operation is halted.</p> <p>Users would expect an error message for the sub-modules rather than an aborted debugger connection.</p>
5496	Application	<p>When creating a RL78 project and launching the RL78 GDB simulator the launch fails. This is because the debugger support is not extracted until a hardware debug session is launched.</p> <p>To work around this launch a hardware debug configuration. No hardware is required to just extract the files.</p>
5545	Application	<p>Once filtering for trace is set, it remains set in the debugger even if the trace feature is disabled - but cleared from the filter dialog box.</p>
5570	Application	<p>When using the headless build function of Eclipse, e2 studio uses the wrong build configuration even when the configuration is specified on the command line.</p>
5591	GDB	<p>In case of KPIT GNUSH-ELF v13.01 Toolchain ""-fomit-frame-pointer"" must be added, Settings->Compiler->Other->User defined options, in order to able to debug the project properly.</p>

8. Known open issues in 3.1.1

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>
220	GDB server	e2-server-gdb executable currently causes a security alert in Windows when executed for the first time. The publisher is currently undefined also. Accepting the dialog allows normal operation to proceed.
364	Application	<p>In case of MinGW toolchain projects - Whenever you add any include path in the compiler / assembler include path option, it is displayed in the Project Explorer -> <prj_name> -> Includes.</p> <p>In case of KPIT / Renesas toolchain projects - Whenever you add any include path in compiler / assembler include path option, it is not displayed in the Project Explorer -> <prj_name> -> Includes.</p> <p>It only displays the default include paths added during project generation. The include paths are shown in the build option preferences as you would expect.</p>
803	GDB server	RL78 program execution stopping on 'Equal' when 'Not Equal' is specified in the Compare Settings.
873	Debug Configuration	No Renesas GDB hardware launch shortcut for IAR & Green Hills plugins. Launch shortcut needs manual creation.
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>
935	GDB server	RL78 G14-2 only allows one Event Break eventpoint
1263	Application	<p>RX200 CPU selection should not be supported for toolchains =< 1.00.01 for the CCRX Renesas toolchain.</p> <p>This toolchain does not support RX200.</p>
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.
1595	Application	Renaming a project using the right click menu in the project explorer causes its respective debug configuration to disappear.
1616	RX GCC build plugin	The options of a Build Configuration were not correct after specifying Multiple Configurations...
1640	Application	After creation a project cannot be deleted straight away. If the user waits around 30 seconds the project can then be deleted.
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	Import a HEW RX project in e2studio using the HEW project importer. Check: Project > Properties > Compiler > Source > Include file directories. Paths are duplicated
1859	GDB server	Program execution stops inside a range when Range Exclusive is specified in the address settings for OA event points.
1889	Application	Due to file extension issue with .s and .S and due to known bug, e2studio users will not be able to use .s or .S effectively to pre-process assembly files that need GCC. Hence we suggest renaming these files to use: .S -> .asm .s -> .src
1936	Coverage plugin	When using the IECUBE for RL78 the source lines for coverage are not being highlighted correctly in some cases.
1950	HEW Project Converter	A user tries to import an already imported project (in a different workspace) again. However the project is deleted from the previous workspace. This results in the following error message "The selected .hwp file overlaps the location of another project". See attached dialog. 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.
2010	HEW Project Converter	HEW Project Import fails to build file due to File or path name too long. 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.
2081	Application	After building a project if user changes anything in linker subcommand file option, only ObjCopy is gets invoked. Linker should get invoked.
2161	Application	Software breakpoints are not supported on targets that use external flash to run application. Also, in this case 'force Hardware Breakpoints'(In Debug tool settings) set to 'No' by default. A warning message should be displayed while trying to set software breakpoints in such cases.
2193	GDB Server SH	Reload of code for SH devices with external flash does not work. Instead, disconnect and reconnect.
2299	RX GCC build plugin	It is possible for .c and .C files to be treated in the same manner in certain situations which is not correct. (.C extension is changed to .c during project build).
2416	Project Generation	Use of duplicate register is allowed for RXC project generation. 1. Create RXC project 2. Go to RXC Global option page, select "ROM" -> "R8" 3. Select the same value for any other register (e.g. "RAM" -> "R8"), it gives error message and prevents the user from project creation. 4. Now select "R8" again for "RAM" register. It doesn't show any error message and allows user to create the project.

2486	Profile plugin	Acquiring profile results can take a very long time following RX Simulator debugging.
2651	Application	Library Template: Build fails when spaces are present for file or folder name.
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.
2693	Application	HEW Importer, output file(.P/PP) is not generated while building the project. Workaround: User will need to select Settings -> Compiler -> Object -> output file type -> Pre-processed source file -> OK after importing the project and then build the project.
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.
3039	Application	When exporting a project that has external linked folders rather than files which are resident in a source directory they lose their directory structure in the exported archive. When importing back into e2 studio the files specified as the original relative path are then not found. This is a standard Eclipse issue and is the current specification.
3054	Application	Real-time refresh will not update visually for a complete structure. The workaround is to monitor individual members of the structure.
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.
3412	Application	'Execute The User Program After Ending The Debugger' should not be enabled when the target is powered internally. This can cause the debugger to hang.
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.
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

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	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.
4129	Project Generation	FPU option is not set correctly for GNURX (RX200/RX100) executable project. "Disable generation of RX hardware FPU instructions" option should be checked and greyed out for RX200 and RX100. However this option is not checked and is not greyed out.
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.
4213	RX GCC build plugin	It is not permitted to use the tool chain editor on the Settings pages to attempt a conversion from GCC to CCRX or CCRX to GCC. This conversion is not permitted and may stop your project working correctly.
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.

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>
4422	Application	<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.</p> <p>This is done via the Source tab of the Debug Configurations dialog.</p>
4450	CCRX Build plugin	Linker section settings of Renesas toolchain are not getting saved for multiple configurations.
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.
4833	Application	The clean functionality executes every time irrespective of whether the object file is present or not.
4857	GDB	<p>GDB considers PUSHHC instruction to be part of the function prologue and it skips it.</p> <p>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).</p>
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.
4976	CCRX Build plugin	When using the SHC compiler. Selecting "Absolute (SYSROF)" in [Linker][Output][Type of output file] does not work correctly.
5021	GDB	<p>When using the CCRX toolchain, variables placed at address 0x0000 are displayed as "no debug info" in GDB and variable type is lost.</p> <p>For variable type unsigned char (section B_1) and unsigned short (section B_2).</p>
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>
5063	Application	Dependency scanning is not working for assembler file. This is for GCC build plugins.
5083	CubeSuite+ importer/exporter	Folder level build options are not converted correctly.
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. [Workaround]</p> <p>Please add the <root folder> to "C/C++ General -> Paths and Symbol -> 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>
5243	Application	<p>When using GCC build plugins there are some library generator options that are not restored when you select "Restore Defaults". These are:</p> <p>-falign-jumps, -funit-at-a-time, -ffunction-sections, -fdata-sections, -fno-function-cse</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>
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>
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>
5348	CCRX Build plugin	<p>""Issue""</p> <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> <p>""Workaround""</p> <p>Avoid naming new added section as NEW_SECTION_* (* is not number 1, 2, 3...)</p>
5372	Application	<p>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.</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> <p>Remove the path in "Include file directories" will stop the warning.</p>

5420	Application	Renaming & Importing an existing project fails to find projects in the current workspace folder. The automatic project search filters out all existing projects located in the same directory as the chosen workspace.
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.
5471	CCRX Build plugin	Problem When the project is imported before CCRX project is created, "Cannot specify this option" may be displayed even if the relation between FPU and CPU is correct. Workaround Please perform import of a project after creating a project once.
5529	Application	When building a RTOS project using the CCRX toolchain it can show many CODAN errors even if the include paths are set correctly. [Work around] Change the CODAN preferences. (Set "Symbol is not resolved" to be unchecked.)
5539	Application	To use trace record events for RH850 with E1 emulator, trace start events are required.
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.
5569	RX GCC build plugin	GNU (RX) assembly list is not generated for the last compiled C source file in the build. The work around is to specify the options for this file specifically for the list file setting.
5573	Waveform plugin	More sample data than the user has requested is displayed on the waveform view after making the buffer size smaller than a previously larger buffer.
5575	CodeGenerator plugin	The dialogue which confirms the save of a project of code generation isn't indicated. The condition is the case that e2studio opens debugging perspective and doesn't open a panel of code generator.
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.
5586	CodeGenerator plugin	When importing project which did an export by CS+ in e2 studio, the setting contents of code generator aren't reflected.
5587	CodeGenerator plugin	Even when the source code generated by a code generator became unnecessary by change in the setting of a code generator, source code will be while being made the build target. When source code became unnecessary, please open a property of source code and check "Exclude resource from build".

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>
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.
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> <p>- #pragma entry PowerON_Reset_PC</p>
5622	Project Generation	<p>Regardless of using trusted memory, TMEF and TMINF register settings are necessary and should be pre-set before running RX64M device.</p> <p>The values are placed typically in vector table. See the device hardware manual for the details.</p> <p>If trusted memory is not used, 0xffffffff (==factory default) to be set for both TMEF and TMINF registers to avoid unexpected behaviour.</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)
5636	Multicore	When using multicore debugging with RH850. When a reset operation takes place both cores are reset as you would expect. However the second core status is not updated in the debug view. Further execution will refresh this information.
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.
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 re-enable once connected.
5665	CodeGenerator plugin	<p>The project kinds supported by Code Generator are below.</p> <p>- C project - Executable (Renesas)</p> <p>- C project - Executable (IAR) - Empty project</p>
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.
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.
5670	V850 GCC build plugin	When rebuilding an RH850/F1H project there should not be an active debug session or a build using the GHS toolchain will fail.

5674	CCRX Build plugin	<p>""Problem""</p> <p>RTOS project is generated and build, CODAN error "Symbol xxx could not be resolved" is shown.</p> <p>""Workaround""</p> <p>Unchecked Preferences>Code Analysis>Syntax and Semantic Errors>Symbol is not resolved and disable CODAN settings.</p>
5693	GDB server RX	<p>The PSW register shown in the register window does not match the PSW value at reset as shown in the RX hardware manual.</p>
5705	CCRX Build plugin	<p>""Problem""</p> <p>When the "Renesas Toolchain Settings" is opened from the Optimization Assistant and clicked the "Linker -> Section", null pointer exception occurs.</p> <p>""Workaround""</p> <p>Please select the project name and perform the right clicked menu "Renesas Tool Settings".</p>
5708	GDB server RX	<p>RX64M OFS1 setting: The voltage monitoring 0 reset function cannot be used. If OFS1 register is modified by downloading to enable the voltage monitoring 0 reset function the emulator will modify the register value to disable the voltage monitoring 0 reset function.</p>