

# Bill of Materials



Project: UltraZed-7EG SOM  
 Project Name: PRJ-US2SOM  
 Revision: 2  
 BOM: 02  
 Variant: 02

Report Date: 2/27/2020 12:11 PM

#	Quantity	Designator	Description	Manufacturer 1	Manufacturer Part Number 1	Fitted	Notes
1	94	C1, C2, C4, C5, C7, C8, C10,	CAP CER 0.1UF 25V 10% XSR 0201	Samsung	CL03A104KA3NNNC	Fitted	
2	7	C3, C6, C226, C291, C320,	CAP CER 2.2UF 10V 10% XSR 0201	Samsung	CL03A225M3PCRRNC	Fitted	
3	13	C8, C134, C243, C245, C247,	CAP CER 1UF 16V 20% XSR 0201	Samsung	CL03A105M03NRNH	Fitted	
4	70	C24, C34, C36, C38, C39, C38,	CAP CER 4.7UF 10V 10% XSR 0402	Samsung	CL03A470K169NNC	Fitted	
5	15	C30, C52, C56, C135, C136,	CAP CER 0.47UF 10V 20% XSR 0201	TDK	C1005XSR1A475K050BC	Fitted	
6	14	C31, C37, C36, C311, C331,	CAP CER 100UF 10V 20% XSR 0402	Kyocera AVX	0402ZD109MATAZ	Fitted	
7	3	C39, C45, C46	CAP CER 27PF 25V 5% NP0 0201	Kyocera AVX	02013A270A12AZ	Fitted	
8	31	C53, C54, C55, C56, C57, C58,	CAP CER 10000PF 10V 10% XSR 0201	Kyocera AVX	0201ZD103KATZA	Fitted	
9	1	C63	CAP CER 2700PF 10V 10% XSR 0201	Kyocera AVX	0201ZD272KATZA	Fitted	
10	1	C86	CAP TANT 680UF 6.3V 20% 2917	Panasonic	6TPE680MI	Fitted	
11	14	C87, C90, C91, C92, C93,	CAP TANT 100UF 6.3V 20% 0805	Kyocera AVX	F950J107MPAAQ2	Fitted	
12	17	C98, C99, C104, C105, C106,	CAP TANT 47UF 6.3V 20% 0603	Kyocera AVX	F980J476MMA	Fitted	
13	10	C157, C168, C174, C175,	CAP CER 68PF 25V 5% COG 0201	Kyocera AVX	02013A68JATZA	Fitted	
14	11	C203, C204, C205, C206,	CAP CER 33UF 25V 20% XSR 1206	TDK	C3216XSR1E33M169AC	Fitted	
15	0	C225, C228, C227, C228,	CAP CER 4.7UF 10V 10% XSR 0402	TDK	C1005XSR1A475K050BC	Not Fitted	
16	6	C242, C244, C277, C279,	CAP CER 22UF 25V 20% XSR 0805	TDK	C2012XSR1E22M125AC	Fitted	
17	9	C250, C259, C263, C270,	CAP CER 220UF 6.3V 20% XSR 1210	Murata	GRM32ER60J22ME0SK	Fitted	
18	10	C251, C260, C264, C271,	CAP CER 47UF 10V 20% XSR 1206	Murata	GRM31CR61A476M15L	Fitted	
19	8	C253, C265, C272, C275,	CAP CER 22UF 10V 20% XSR 0603	TDK	C1608XSR1A22M6080AC	Fitted	
20	1	C313	CAP CER 220PF 10V 10% XSR 0201	Kyocera AVX	0201ZC22KATZA	Fitted	
21	1	C314	CAP CER 10000PF 10V 10% XSR 0201	Kyocera AVX	02013A68JATZA	Fitted	
22	1	C319	CAP CER 220PF 16V 10% X7R 0201	Kyocera AVX	0201C2221KATZA	Fitted	
23	2	C328, C341	CAP CER 1000PF 25V 10% X7R 0201	Samsung Electro-Mechanics America,	CL03B100KA3NNNC	Fitted	
24	0	C361	CAP CER 0.1UF 25V 10% XSR 0201	Samsung	CL03A104KA3NNNC	Not Fitted	
25	1	D1	LED GREEN CHIP 0603 TOP EMIT	Broadcom Avago	HSMQ-C191	Fitted	
26	1	D2	LED BLUE CHIP 0603 TOP EMIT	Broadcom Avago	HSMR-C190	Fitted	
27	2	D3, D4	LED RED CHIP 0603 TOP EMIT	Broadcom Avago	HSMH-C190	Fitted	
28	1	ESD1	ESD Bag	3M	TBD	Fitted	
29	11	F81, F82, F83, F84, F85, F86,	FERRITE BEAD 22 OHM 0603 1 L/N	Murata	BLM18S220T7N1D	Fitted	
30	3	JF1, JF2, JF3	CONN HEADER 2POS 2MM RA SMD	Samtec	MMT-102-01-S-01	Fitted	
31	3	JF1, JF2, JF3	RES 0.0 OHM 1/16W JUMP 0402 SMD-3 PAD JUMPER (1-2)	Yageo	RC0402JR-070R1	Fitted	Position 1-2
32	1	JF4	RES 0.0 OHM 1/2W JUMP 1210 SMD-3 PAD JUMPER (2-3)	Vishay Dale	CRCW1210000020EA	Fitted	Position 2-3
33	1	JF5	RES 0.0 OHM 1/2W JUMP 1210 SMD-3 PAD JUMPER (1-2)	Vishay Dale	CRCW1210000020EA	Fitted	Position 1-2
34	2	JX1, JX2	ULTRA-HIGH DENSITY, PLUG, 200POS, 0.8MM PITCH, 7MM STACK	Samtec	SEAM8-50-S02-0-S-04-2-K	Fitted	
35	1	JX3	ULTRA-HIGH DENSITY, PLUG, 120POS, 0.8MM PITCH, 7MM STACK	Samtec	SEAM8-30-S02-0-S-04-2-K	Fitted	
36	3	L1, L2, L5	FIXED IND 1.5UH 2.5A 96 mOHM SMD	Bourns	SRN2512-1R5M	Fitted	
37	4	L3, L4, L7, L8	FIXED IND 1.5UH 5A 25 mOHM SMD	Bourns	SRP50307A-1R5M	Fitted	
38	1	L6	FIXED IND 3.3UH 2.2A 96 mOHM SMD	Vishay Dale	IFSC1515SAHER3R6M01	Fitted	
39	1	L9	FIXED IND 150mH 70A 0.18 mOHM	Pulse	PA379A.151H	Fitted	
40	1	L10	FIXED IND 2.2UH 1.8A 72 mOHM SMD	Bourns	SRN3015-2R2M	Fitted	
41	1	Label1	Label, Product	AES	PBA-US2SOM-2-02-02	Fitted	DO NOT PLACE LABEL ON COMPONENT U1
42	1	Label2	Label, Serial Number	AES	TBD	Fitted	DO NOT PLACE LABEL ON COMPONENT U1
43	1	Label, ESD1	Label, ESD	AES	TBD	Fitted	
44	1	MECH1	Plastic base for ATS-61310K-C1-R0 Heatsink Assembly	ATS	NA (Comes with ATS-61310K Heatsink Purchase)	Fitted	Install using MGT310 maxGRIP tool
45	1	PCB1	64RE PCB Part Number	AES	PBA-US2SOM-2	Fitted	
46	7	Q1, Q2, Q3, Q4, Q5, Q6, Q7	MOSFET N-CH 50V 200MA 30T23-3	Diodes	BSS138-7	Fitted	
47	26	R1, R2, R3, R4, R5, R6, R46,	RES 4.7K OHM 0201 1% 1/20W	Vishay Dale	CRCW02014K75FKE2	Fitted	
48	30	R7, R16, R17, R18, R19, R20,	RES 10.0K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF1002C	Fitted	
49	8	R21, R31, R134, R164, R176,	RES 0.0 OHM JUMP 0201 1/20W	Panasonic	ERJ-1GNR00C	Fitted	
50	2	R22, R48	RES 22.1 OHM 0201 1% 1/20W	Panasonic	ERJ-1GEF22R1C	Fitted	
51	5	R23, R26, R27, R29, R30	RES 2.00K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF2001C	Fitted	
52	5	R32, R42, R59, R135, R165	RES 40.2 OHM 0201 1% 1/20W	Vishay	CRCW020140R2FNE2	Fitted	
53	2	R34, R65	RES 8.06K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNR8061C	Fitted	
54	15	R35, R37, R38, R43, R77, R86,	RES 1.00K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF1001C	Fitted	
55	4	R38, R40, R47, R51, R52, R71,	RES 240 OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF240C	Fitted	
56	4	R38, R41, R44, R45	RES 4.99K OHM 0201 1% 1/20W	Vishay	CRCW02014K99FNE2	Fitted	
57	1	R54	RES 4.7K OHM 0402 5% 1/16W	Vishay Dale	CRCW04024M70JNE2	Fitted	
58	12	R61, R62, R63, R64, R99,	RES 499 OHM 0201 1% 1/20W	Vishay Dale	CRCW0201499RFKE2	Fitted	
59	1	R74	RES 500 OHM 0402 0.1% 1/20W	Vishay Dale	PNM0402E5000B8T1	Fitted	
60	0	R76	RES 1.00K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF1001C	Not Fitted	
61	0	R78, R79, R82, R83	RES 20.5K OHM 0201 1% 1/20W	Vishay Dale	CRCW020120K5FKE2	Not Fitted	
62	0	R80, R84	RES 0.0 OHM JUMP 0201 1/20W	Panasonic	ERJ-1GNR00C	Not Fitted	
63	4	R81, R85, R86, R87	RES 100 OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF100C	Fitted	
64	0	R92	RES 40.2K OHM 0201 1% 1/20W	Vishay Dale	CRCW020140K2FKE2	Not Fitted	
65	4	R131, R132, R168, R169	RES 36.5 OHM 0201 1% 1/20W	Vishay Dale	CRCW020136R5FNE2	Fitted	
66	2	R170, R184	RES 2 OHM 0402 1% 1/16W	Samsung	RC1005F2R0CS	Fitted	
67	2	R177, R180	RES 4.12K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF4121C	Fitted	
68	2	R181, R193	RES 6.49K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF6491C	Fitted	
69	1	R183	RES 4.64K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF4641C	Fitted	
70	2	R185, R186	RES 64K OHM 0201 1% 1/20W	Vishay Dale	CRCW020164R9FKE2	Fitted	
71	2	R188, R215	RES 2.49K OHM 0201 1% 1/20W	Vishay Dale	CRCW02012K49FKE2	Fitted	
72	1	R197	RES 4.87K OHM 0201 1% 1/20W	Vishay	CRCW02014K87FNE2	Fitted	
73	1	R198	RES 86.6 OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF86R6C	Fitted	
74	1	R199	RES 1.87K OHM 0201 1% 1/20W	Vishay Dale	CRCW02011K87FKE2	Fitted	
75	3	R200, R207, R214	RES 100K OHM 0201 1% 1/20W	Panasonic	ERJ-1GNF1003C	Fitted	
76	1	R202	RES 5.23K OHM 0201 1% 1/20W	Vishay Dale	CRCW02015K23FKE2	Fitted	
77	1	R208	RES 24.0K OHM 0201 1% 1/20W	Vishay Dale	CRCW020124K0FKE2	Fitted	
78	1	R210	RES 11.3K OHM 0201 1% 1/20W	Vishay Dale	CRCW020111K3FKE2	Fitted	
79	2	RPI, R92	RES ARRAY 10K OHM 4 RES 0502	Panasonic	EXB-18V103JX	Fitted	
80	12	RF3, RF4, RF5, RF6, RF7,	RES ARRAY 39 OHM 4 RES 0502	Panasonic	EXB-18V290JX	Fitted	
81	2	SH1, SH2	CONN SHUNT 2POS .079" (2mm) GOLD	Samtec	2SN-BK-0	Fitted	Place across JP3 Pin 1 and Pin 2, Place across JP2 Pin 1 and Pin 2
82	0	SW1, SW3, SW4	SWITCH TACTILE SPST-NO 0.1A 24V	Bourns	7914J-1-000E	Not Fitted	
83	1	SW2	SWITCH DIP 4POS HALF PITCH 24V	TE Connectivity	1571983-5	Fitted	
84	1	U1	IC MP50C 2VYNO ULTRASCAL+ 7EG 900BGA, EXTENDED, -1 SPEED	Xilinx	XCUZ7E-1FBV8900E	Fitted	
85	2	U2, U3	IC FLASH 256MBIT 166MHZ, 8-WPDPFN	Micron Technology	MT25QU256ABA1E7H-QS1TR	Fitted	
86	1	U4	IC 6MMG 64Gb (8G x 8)	Micron Technology	MTFC8GAKAJCN-4M1T	Fitted	
87	1	U5	IC IO EXPANDER I2C 88 161TSSOP	ON Semiconductor	PCA9545EDTR2G	Fitted	
88	5	U6, U8, U11, U14, U15	AND SM LVCMOS Single	Texas Instruments	SN74LVC12800RNR	Fitted	
89	1	U7	IC EPF10K10 10K 100K 144PQFN	Microchip / Almet	AT34C02-MAHM-1	Fitted	
90	1	U8	IC I2C SW 2CH W/RESET 14TSSOP	NXP Semiconductors	PCA9543APW11B	Fitted	
91	1	U10	MULTI-FREQ USB 2.0 ULPI PHY	Microchip	USB3302C-E2K	Fitted	
92	1	U12	SINGLE-PORT EEG GIGABIT ETHERNET PHY WITH RGMII, INDUSTRIAL	Marvell	88E1512-AD-NP21000	Fitted	
93	1	U13	TXRX TRANSLATING DUAL 6TSSOP	NXP Semiconductors	NTS0101GW-125	Fitted	
94	1	U16	IC GATE NAND 1CH 2-NP SC-70	ON Semiconductor	NL17SZ000PT2G	Fitted	
95	1	U17	IC SUPERVISORY CIRC DL 16TQFN	Maxim	MAX16025T+K	Fitted	
96	1	U18	IC VREF SERIES 1.25V 50T32-3	Intersil	ISL9100DFR3J22-TK	Fitted	
97	5	U19, U20, U21, U22, U23	DDR4 Memory IC 8Gb (512M x 16) Parallel 1.5GHz 96-FBGA	Micron Technology	MT40A512MHL062ET-E	Fitted	
98	2	U24, U25	IC REG BUCK SYNC, 5 OUTPUTS (A03)	IR	AVT-IRP55401MTRPBF/BKN-481435-PMR	Fitted	A03
99	1	U26	IC REG BUCK ADJ 25A SYNC POFN (0x16)	IR	AVT-IR38063MTRPBF/BKN-453733-PMR	Fitted	(0.85V, 0x16)
100	2	U27, U30	IC REG VTT TERM 3A DDR 10DFN	ON Semiconductor	NCPS1200M1TXG	Fitted	
101	1	U28	IC REG CTRLR STEPDOWN BDFN	ON Semiconductor	NCV890430MV50TXG	Fitted	
102	2	U29, U31	IC REG LDO ADJ 1A U-DFNG030-8	Diodes	ZPT361C-FGE-7	Fitted	
103	1	X1	CRYSTAL 32.768kHz 12 SPP SMD	Abracon	ABS07AG-32.768KHZ-1-T	Fitted	
104	1	Y1	OSC MEMS 24.000MHz CMOS SMD	Abracon	ASD0MB-24.000MHz-LC-T	Fitted	
105	1	Y2	OSC MEMS 25.000MHz CMOS SMD	Abracon	ASD0MB-25.000MHz-LC-T	Fitted	
106	1	Y3	OSC XO 33.333MHz CMOS SMD	Kyocera AVX	KC2520B33.3333C10E00	Fitted	
107	1	Y4	OSC MEMS 300.000MHz LVDS SMD	Microchip	DSC1100C15-300.0000	Fitted	

Approved

Notes