

Bill of Materials

Project: UltraZed-EV SOM
 Project Name: PRJ-US2SOM
 Revision: 1
 BOM: 01
 Variant: 03



Report Date: 2/1/2018 4:14:36 PM

#	Quantity	Designator	Description	Manufacturer 1	Manufacturer Part Number 1	Fitted	Notes
1	94	C1, C2, C4, C5, C7, C9, C10,	CAP CER 0.1UF 25V 10% X5R 0201	Taiyo Yuden	TMK063C6104KP-F	Fitted	
2	7	C3, C6, C256, C291, C320,	CAP CER 2.2UF 10V 10% X5R 0201	Murata	GRM033R61A225KE47D	Fitted	
3	13	C8, C134, C243, C245, C247,	CAP CER 1UF 16V 20% X5R 0201	Samsung Electro-Mechanics America,	CL03A105MO3NRRNH	Fitted	
4	70	C24, C94, C95, C96, C97, C98,	CAP CER 4.7UF 10V 10% X5R 0402	TDK Corporation	C1005X5R1A475K050BC	Fitted	
5	15	C30, C62, C65, C135, C136,	CAP CER 0.47UF 10V 20% X5R 0201	TDK Corporation	C0603X5R1A474M030BC	Fitted	
6	14	C31, C37, C66, C311, C331,	CAP CER 10UF 10V 20% X5R 0402	Samsung Electro-Mechanics America,	CL05A106MP5NUNC	Fitted	
7	3	C39, C45, C46	CAP CER 27PF 25V 5% NPO 0201	AVX Corporation	02013A270JAT2A	Fitted	
8	31	C53, C54, C55, C56, C57, C58,	CAP CER 10000PF 10V 10% X5R 0201	AVX Corporation	02012D103KAT2A	Fitted	
9	1	C63	CAP CER 2700PF 10V 10% X5R 0201	AVX Corporation	02012D272KAT2A	Fitted	
10	1	C86	CAP TANT 680UF 6.3V 20% 2917	AVX Corporation	TCME687M006R0012	Fitted	
11	14	C87, C90, C91, C92, C93, C107,	CAP TANT 100UF 6.3V 20% 0805	AVX Corporation	F950J107MPAAQ2	Fitted	
12	17	C88, C89, C104, C105, C106,	CAP TANT 47UF 6.3V 20% 0603	AVX Corporation	F980J476MMA	Fitted	
13	10	C167, C168, C174, C175, C181,	CAP CER 68PF 25V 5% C0G 0201	Murata	GRM0335C1E680JA01D	Fitted	
14	11	C203, C204, C205, C206, C207,	CAP CER 33UF 25V 20% X5R 1206	TDK	C3216X5R1E336M160AC	Fitted	
15	0	C225, C226, C227, C228, C230,	CAP CER 4.7UF 10V 10% X5R 0402	TDK Corporation	C1005X5R1A475K050BC	Not Fitted	
16	6	C242, C244, C277, C279, C330,	CAP CER 22UF 25V 20% X5R 0805	TDK Corporation	C2012X5R1E226M125AC	Fitted	
17	9	C250, C259, C263, C270, C285,	CAP CER 220UF 6.3V 20% X5R 1210	Samsung Electro-Mechanics America,	CL32A227MQVNNNE	Fitted	
18	10	C251, C260, C264, C271, C286,	CAP CER 47UF 10V 20% X5R 1206	TDK	CL31A476MPHNNNE	Fitted	
19	8	C253, C265, C272, C275, C288,	CAP CER 22UF 10V 20% X5R 0603	TDK Corporation	C1608X5R1A226M080AC	Fitted	
20	1	C313	CAP CER 2200PF 10V 10% X5R 0201	AVX Corporation	02012D222KAT2A	Fitted	
21	1	C314	CAP CER 10000PF 16V 10% X5R 0201	KEMET	C0201C103K4PACTU	Fitted	
22	1	C319	CAP CER 220PF 16V 10% X7R 0201	AVX Corporation	0201YC221KAT2A	Fitted	
23	2	C328, C341	CAP CER 1000PF 25V 10% X7R 0201	Murata	GRM033R71E102KA01J	Fitted	
24	0	C351	CAP CER 0.1UF 25V 10% X5R 0201	Taiyo Yuden	TMK063C6104KP-F	Not Fitted	
25	1	D1	LED GREEN CHIP 0603 TOP EMIT	OSRAM Opto Semiconductors Inc.	LT L29S-P2R1-25-Z	Fitted	
26	1	D2	LED BLUE CHIP 0603 TOP EMIT	Broadcom Limited	HSMR-C190	Fitted	
27	2	D3, D4	LED RED CHIP 0603 TOP EMIT	Broadcom Limited	HSMH-C190	Fitted	
28	1	ESD1	ESD Bag	3M	=ESDBagPN	Fitted	
29	11	FB1, FB2, FB3, FB4, FB5, FB6,	FERRITE BEAD 22 OHM 0603 1 LN	MURATA	BLM18SN220TN1D	Fitted	
30	3	JP1, JP2, JP3	CONN HEADER 2POS 2MM RA SMD	Samtec	MMT-102-01-S-SH	Fitted	
31	3	JT1, JT2, JT3	RES 0.0 OHM 1/16W JUMP 0402 SMD-3 PAD JUMPER (1-2)	Panasonic Electronic Components	ERJ-2GE0R00X	Fitted	Position 1-2
32	2	JT4, JT5	RES 0.0 OHM 1/2W JUMP 1210 SMD-3 PAD JUMPER (1-2)	Panasonic Electronic Components	ERJ-14Y0R00U	Fitted	Position 1-2
33	2	JX1, JX2	ULTRA-HIGH DENSITY, PLUG, 200POS, 0.8MM PITCH, 7MM STACK	Samtec	SEAM8-50-S02.0-S-04-2-K	Fitted	
34	1	JX3	ULTRA-HIGH DENSITY, PLUG, 120POS, 0.8MM PITCH, 7MM STACK	Samtec	SEAM8-30-S02.0-S-04-2-K	Fitted	
35	3	L1, L2, L5	FIXED IND 1.5UH 2.5A 96 mOHM SMD	Bourns	SRN2512-1R5M	Fitted	
36	4	L3, L4, L7, L8	FIXED IND 1.5UH 6A 25 MOHM SMD	Bourns	SRP5030T-1R5M	Fitted	
37	1	L6	FIXED IND 3.3UH 2.7A 56 mOHM SMD	Vishay Dale	IFSC1515AHER3R3M01	Fitted	
38	1	L9	FIXED IND 150nH 70A 0.18 mOHM	Pulse Electronics Corporation	PA3784.151HL	Fitted	
39	1	L10	FIXED IND 2.2UH 1.8A 72 MOHM SMD	Bourns	SRN3015-2R2M	Fitted	
40	1	Label1	Label, Product	AES	=SerialNumberFormat	Fitted	DO NOT PLACE LABEL ON COMPONENT U1
41	1	Label2	Label, Serial Number	AES	=SerialNumberFormat	Fitted	DO NOT PLACE LABEL ON COMPONENT U1
42	1	Label_ESD1	Label, ESD	AES	=ESD_Label_PN	Fitted	
43	1	MECH1	Plastic base for ATS-61310K-C1-R0 Heatsink Assembly	ATS	N/A (Comes with ATS-61310K Heatsink Purchase)	Fitted	Install using MGT310 maxiGRIP tool
44	1	PCB1	BARE PCB Part Number	AES	PBA-US2SOM-1	Fitted	
45	7	Q1, Q2, Q3, Q4, Q5, Q6, Q7	MOSFET N-CH 50V 200MA SOT23-3	Infineon Technologies	BSS138NH6327XTSA2	Fitted	
46	26	R1, R2, R3, R4, R5, R6, R46,	RES 4.75K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF4751C	Fitted	
47	30	R7, R16, R17, R18, R19, R20,	RES 10.0K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF1002C	Fitted	

48	8	R21, R31, R134, R164, R176,	RES 0.0 OHM JUMP 0201 1/20W	Panasonic Electronic Components	ERJ-1GE0R00C	Fitted	
49	2	R22, R48	RES 22.1 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF22R1C	Fitted	
50	5	R23, R26, R27, R29, R30	RES 2.00K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF2001C	Fitted	
51	5	R32, R42, R59, R135, R165	RES 40.2 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF40R2C	Fitted	
52	2	R34, R65	RES 8.06K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF8061C	Fitted	
53	15	R35, R37, R39, R43, R77, R86,	RES 1.00K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF1001C	Fitted	
54	14	R36, R40, R47, R51, R52, R71,	RES 240 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF2400C	Fitted	
55	4	R38, R41, R44, R45	RES 4.99K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF4991C	Fitted	
56	1	R54	RES 4.7M OHM 0402 5% 1/16W	Panasonic Electronic Components	ERJ-2GEJ475X	Fitted	
57	12	R61, R62, R63, R64, R99, R101,	RES 499 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF4990C	Fitted	
58	1	R74	RES 500 OHM 0402 0.1% 1/20W	Vishay Dale	PNM0402E5000BST1	Fitted	
59	0	R76	RES 1.00K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF1001C	Not Fitted	
60	0	R78, R79, R82, R83	RES 20.5K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF2052C	Not Fitted	
61	0	R80, R84	RES 0.0 OHM JUMP 0201 1/20W	Panasonic Electronic Components	ERJ-1GE0R00C	Not Fitted	
62	4	R81, R85, R95, R97	RES 100 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF1000C	Fitted	
63	0	R92	RES 40.2K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF4022C	Not Fitted	
64	4	R131, R132, R168, R169	RES 36.5 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF36R5C	Fitted	
65	2	R170, R184	RES 2 OHM 0402 1% 1/16W	Vishay Dale	CRCW04022R00FKED	Fitted	
66	2	R177, R180	RES 4.12K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF4121C	Fitted	
67	2	R181, R193	RES 6.49K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF6491C	Fitted	
68	1	R183	RES 4.64K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF4641C	Fitted	
69	2	R185, R186	RES 649 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF6490C	Fitted	
70	2	R195, R215	RES 2.49K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF2491C	Fitted	
71	1	R197	RES 4.87K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF4871C	Fitted	
72	1	R198	RES 86.6 OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF86R6C	Fitted	
73	1	R199	RES 1.87K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF1871C	Fitted	
74	3	R200, R207, R214	RES 100K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GNF1003C	Fitted	
75	1	R202	RES 5.23K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF5231C	Fitted	
76	1	R208	RES 24.0K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF2402C	Fitted	
77	1	R210	RES 11.3K OHM 0201 1% 1/20W	Panasonic Electronic Components	ERJ-1GEF1132C	Fitted	
78	2	RP1, RP2	RES ARRAY 10K OHM 4 RES 0502	Panasonic Electronic Components	EXB-18V103JX	Fitted	
79	12	RP3, RP4, RP5, RP6, RP7, RP8,	RES ARRAY 39 OHM 4 RES 0502	Panasonic Electronic Components	EXB-18V390JX	Fitted	
80	2	SH1, SH2	SHUNT, ECON, PHBR 15 AU, BLACK	Samtec	2SN-BK-G	Fitted	Place across JP3 Pin 1 and Pin 2, Place across JP2 Pin 1 and Pin 2
81	0	SW1, SW3, SW4	SWITCH TACTILE SPST-NO 0.1A 24V	Bourns	7914J-1-000E	Not Fitted	
82	1	SW2	SWITCH DIP 4POS HALF PITCH 24V	TE Connectivity Alcoswitch Switches	1571983-5	Fitted	
83	1	U1	IC MPSoC ZYNQ ULTRASCALE+ 7EV 900BGA, EXTENDED, -1 SPEED	XILINX	XCZU7EV-1FBVB900E	Fitted	
84	2	U2, U3	IC FLASH 256MBIT 166MHZ, 8-WPDFN	Micron	MT25QU256ABA1EW7-0SIT	Fitted	
85	1	U4	IC eMMC 8GB	Micron	MTFC8GAKAJCN-4M IT	Fitted	
86	1	U5	IC I/O EXPANDER I2C 8B 16TSSOP	ON Semiconductor	PCA9654EDTR2G	Fitted	
87	5	U6, U9, U11, U14, U15	AND SM LVCMOS Single	Fairchild Semiconductor	NC7SZ08P5X	Fitted	
88	1	U7	IC EEPROM 2KBIT 1MHZ 8UDFN	Atmel	AT34C02D-MAHM-T	Fitted	
89	1	U8	IC I2C SW 2CH W/RESET 14TSSOP	NXP USA Inc.	PCA9543APW,118	Fitted	
90	1	U10	MULTI-FREQ USB 2.0 ULPI PHY	Microchip Technology	USB3320C-EZK	Fitted	
91	1	U12	SINGLE-PORT EEE GIGABIT ETHERNET PHY WITH RGMII, INDUSTRIAL	Marvell	88E1512-A0-NNP2I000	Fitted	
92	1	U13	TXRX TRANSLATING DUAL 6TSSOP	NXP USA Inc.	NTS0101GW,125	Fitted	
93	1	U16	IC GATE NAND 1CH 2-INP SC-70	ON Semiconductor	NL17S200DFT2G	Fitted	
94	1	U17	IC SUPERVISORY CIRC DL 16TQFN	MAXIM INTEGRATED	MAX16025TE+T	Fitted	
95	1	U18	IC VREF SERIES 1.25V SOT23-3	Intersil	ISL21010DFH312Z-TK	Fitted	
96	5	U19, U20, U21, U22, U23	8Gb 512M x 16 DDR4 SDRAM	Micron	MT40A512M16JY-083E IT:B TR	Fitted	
97	2	U24, U25	IC REG BUCK SYNC, 5 OUTPUTS (A01)	Infineon	IRPS5401MTRPBF0A1	Fitted	
98	1	U26	IC REG BUCK ADJ 25A SYNC PQFN (0x18)	Infineon	IR38063MTRPBF0X18	Fitted	(0.85V, 0x18)
99	2	U27, U30	IC REG VTT TERM 3A DDR 10DFN	ON Semiconductor	NCP51200MNTXG	Fitted	
100	1	U28	IC REG CTRLR STEPDOWN 8DFN	ON Semiconductor	NCV890430MW50TXG	Fitted	
101	2	U29, U31	IC REG LDO ADJ 1A U-DFN3030-8	Diodes Incorporated	AP7361C-FGE-7	Fitted	
102	1	X1	CRYSTAL 32.768kHz 12.5PF SMD	Abracon LLC	ABS07AIG-32.768KHZ-1-T	Fitted	
103	1	Y1	OSC MEMS 24.000MHZ CMOS SMD	Abracon LLC	ASDMB-24.000MHZ-LC-T	Fitted	
104	1	Y2	OSC MEMS 25.000MHZ CMOS SMD	Abracon LLC	ASDMB-25.000MHZ-LC-T	Fitted	
105	1	Y3	OSC XO 33.3333MHZ CMOS SMD	AVX/Kyocera	KC2520K33.3333C1GE00	Fitted	
106	1	Y4	OSC MEMS 300.000MHZ LVDS SMD	Microchip	DSC1103CI5-300.0000	Fitted	

Approved

Notes

