

HiFive Unmatched Bill of Materials

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DOCUMENT

DOCUMENT DESCRIPTION

BOARD NAME

BOARD PART NUMBER

PCB VERSION

DATE

bill-of-materials-hifive-unmatched-3c0

Bill of Materials for Printed Circuit Board Assembly

HiFive Unmatched - FU740 Production Board

HF105-ASSY-4B0

4

13-Oct-23

Item #	Designator	Description	Quantity	Mfr 1	Mfr 1 PN	Mfr 2	Mfr 2 PN	Mfr 3	Mfr 3 PN	Mfr 4	Mfr 4 PN
1	BATH1	BATTERY HOLDER COIN 12MM PC PIN VERTICAL	1	MPD	BC501SM-TR	Harwin	S8411-45R			Antenk	BT-M-GO-R-CR1220B
2	C1, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C52, C54, C55, C56, C57, C58, C61, C62, C63, C64, C65, C70, C71, C72, C73, C74, C75, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C95, C96, C97, C98, C99, C108, C109, C110, C111, C112, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C143, C144, C145, C146, C148, C149, C151, C152, C153, C154, C156, C157, C158, C159, C160, C161, C162, C163, C168, C169, C171, C172, C173, C174, C176, C177, C179, C180, C181, C182, C184, C185, C187, C188, C197, C202, C203, C204, C205, C207, C208, C210, C211, C212, C213, C215, C216, C218, C219, C220, C221, C223, C224, C225, C226, C227, C235, C236, C237, C238, C240, C241, C242, C243, C250, C256, C257, C259, C260, C261, C264, C266, C267, C268, C269, C270, C271, C272, C273, C277, C278, C279, C280, C285, C286, C287, C288, C289, C290, C291, C299, C301, C317, C319, C320, C371, C372, C373, C374, C375, C377, C378, C381, C382, C383, C384, C386, C389, C390, C391, C392, C393, C394, C395, C396, C398, C400, C407, C408, C418, C419, C420, C424, C425, C427, C429, C430, C431, C435, C436, C437, C438, C442, C445, C447, C449, C450, C451, C456, C461, C470, C471, C472, C473, C491, C493, C495, C525, C526, C527, C528, C530, C531, C543, C551, C552, C553, C554, C555, C556, C557, C558, C559, C562, C576, C577, C578, C579, C580, C581, C594, C595, C596, C597, C602, C603, C626, C630, C632, C634, C635, C652	CAP CER 0.1UF 16V X7R 0402	279	Samsung Electro-Mechanics	CL05B104KO5NFNC	Yageo	CC0402KRX7R7BB104	Kemet	C0402C104K4RACTU		
3	C2, C3, C4, C5, C6, C21, C22, C23, C26, C27, C28, C66, C77, C78, C79, C80, C81, C103, C104, C105, C106, C107, C113, C114, C115, C116, C117, C142, C147, C150, C155, C170, C175, C178, C183, C195, C201, C206, C209, C214, C217, C222, C234, C239, C284, C300, C318, C376, C434, C441, C446	CAP CER 4.7UF 6.3V X5R 0402	51	Murata Electronics	GRM155R60J475ME47D	Taiyo Yuden	JMK105BBJ475MV-F	Yageo	CC0402MRX5R5BB475		

Item #	Designator	Description	Quantity	Mfr 1	Mfr 1 PN	Mfr 2	Mfr 2 PN	Mfr 3	Mfr 3 PN	Mfr 4	Mfr 4 PN
4	C20, C68, C69, C164, C165, C166, C167, C186, C189, C190, C191, C192, C228, C229, C230, C231, C232, C233, C249, C251, C252, C254, C255, C323, C326, C327, C328, C329, C330, C331, C332, C336, C337, C343, C362, C432, C496, C497, C498, C499, C500, C501, C502, C503, C504, C505, C506, C511, C512, C513, C514, C515, C516, C517, C518, C519	CAP CER 1UF 16V X5R 0402	56	Samsung Electro-Mechanics	CL05A105KO5NNNC	Taiyo Yuden	EMK105BJ105KV-F	Kemet	C0402C105K4PAC7867	[NoParam], Walsin	[NoParam], 0402X105K160CT
5	C24, C25, C29, C30, C51, C53, C193, C194, C198, C199, C200, C258, C262, C263, C265, C274, C339, C354, C355, C356, C385, C428, C433, C489, C561, C564, C566, C612, C613, C629, C633	CAP CER 10UF 10V X5R 0603	31	Murata Electronics	GRM188R61A106KE69D, GRM188R61A106KE69J					Walsin	0603X106K100CT
6	C59, C60, C100, C101, C275, C276, C454, C455	CAP CER 18PF 50V COG/NPO 0402	8	Murata Electronics	GRM1555C1H180JA01D	Kemet	C0402C180J5GAC7867	Yageo	CC0402JRNPO9BN180	Walsin, [NoParam]	0402N180J500CT, [NoParam]
7	C67, C416	CAP CER 12PF 50V NPO 0402	2	Murata Electronics	GRM1555C1H120JA01D					Walsin	0402N120J500CT
8	C76, C244, C245, C253, C297, C298, C302, C303, C304, C305, C306, C307, C308, C309, C310, C311, C312, C313, C314, C315, C365, C366, C397, C399, C401, C402, C403, C404, C405, C406, C409, C410, C411, C412, C413, C414, C415, C417, C421, C422, C440, C443, C444, C448, C458, C460, C462, C464, C465, C466, C467, C468, C474, C475, C476, C477, C478, C480, C482, C484, C486, C488, C490, C492	CAP CER 0.22UF 16V X7R 0402	64	Samsung Electro-Mechanics	CL05B224KO5NNNC	Murata Electronics	GCM155R71C224KE02D	Taiyo Yuden	EMK105B7224KV-FR		
9	C94	CAP CER 100PF 50V COG/NPO 0402	1	Murata Electronics	GRM1555C1H101JA01D	Yageo	CC0402JRNPO9BN101	Samsung Electro-Mechanics	CL05C101JB5NNNC		
10	C102, C283, C342, C369, C548, C609	CAP CER 10000PF 50V X7R 0402	6	Murata Electronics	GRM155R71H103KA88D	Yageo	CC0402KRX7R9BB103	Kemet	C0402C103K5RACTU		
11	C196	CAP CER 1000PF 50V COG/NPO 0402	1	Murata Electronics	GRM1555C1H102JA01D	Taiyo Yuden	UMK105CG102JV-F	yageo	CC0402JRNPO9BN102		
12	C281, C282	CAP CER 1000PF 2KV X7R 1206	2	Johanson Dielectrics Inc	202R18W102KV4E	Kemet	C1206C102KGRACTU	Yageo	CC1206KKX7RDBB102		
13	C294, C295, C296, C334, C335	CAP ALUM 470UF 20% 16V SMD	5	Nichicon	UWT1C471MNL1GS						
14	C321, C322, C324, C325, C349, C350, C351, C357, C360, C361, C363, C364	CAP CER 2.2UF 10V X5R 0402	12	Taiyo Yuden	LMK105BJ225MV-F	Murata Electronics	GRM155R61A225KE95D	Kemet	C0402C225M8PACTU		
15	C333, C423, C426, C439, C560, C565, C588	CAP ALUM 100UF 20% 16V SMD	7	Panasonic	EEE-HC1C101XP						
16	C338, C340, C344, C345, C347, C358, C359, C379, C380, C388, C646, C647, C648, C649, C650, C651	CAP CER 47UF 6.3V X5R 0805	16	Murata Electronics	GRM21BR60J476ME15L	Taiyo Yuden	JMK212BBJ476MG-T	Samsung Electro-Mechanics	CL21A476MQYNNE		
17	C341, C346, C348, C352, C353, C469, C507, C508, C509, C510, C520, C521, C522, C523, C524, C529, C593, C601, C610, C611, C628	CAP CER 22UF 10V X5R 0603	21	Samsung Electro-Mechanics, Murata Electronics	CL10A226MPCNUB-E, GRM188R61A226ME15D	Taiyo Yuden, Samsung Electro-Mechanics	LMK107BBJ226MA-T, CL10A226MPCNUB-E	TDK, Taiyo Yuden	C1608X5R1A226M080AC, LMK107BBJ226MA-T	Walsin, [NoParam]	0603X226M100CT, [NoParam]
18	C367	CAP CER 0.047UF 16V X7R 0402	1	Samsung Electro-Mechanics	CL05B473KO5NNNC					Walsin	0402B473K160CT
19	C368	CAP CER 0.47UF 6.3V X5R 0402	1	Murata Electronics	GRM155R60J474KE19D	Yageo	CC0402KRX5R5BB474	Kemet	C0402C474K9PACTU		
20	C370, C387	CAP CER 15PF 50V COG/NPO 0402	2	Yageo	CC0402JRNPO9BN150	Kemet	C0402C150J5GACTU	Murata Electronics	GCM1555C1H150JA16D		
21	C494	CAP CER 10PF 50V COG/NPO 0402	1	Murata Electronics	GRM1555C1H100JA01D						
22	C605, C606, C607, C608	CAP ALUM 47UF 20% 25V SMD	4	Nichicon	UWT1E470MCL6GS	Panasonic	EEE-HC1E470XP	Panasonic	EEE-1EA470WP		
23	C631	CAP CER 180PF 50V COG/NPO 0402	1	MUR	GRM1555C1H181JA01D						

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24	C636, C637, C638	CAP CER 10UF 25V X5R 0805	3	Murata Electronics	GRM21BR61E106K-A73L	Taiyo Yuden	TMK212BBJ106KG-T	Samsung Electro-Mechanics	CL21A106KAYNNNE	Walsin	0805X106K250CT
25	C639, C640, C641	CAP CER 1µF 25V X5R 0402	3	MUR	GRM155R61E105KA12D						
26	C642	CAP CER 1µF 16V X7R 0603	1	YAG	CC0603KRX7R7BB105						
27	C643	CAP CER 1nF 50V X7R 0402	1	YAG	CC0402KRX7R9BB102						
28	C644	CAP CER 0.1µF 50V X7R 0402	1	YAG	CC0402KRX7R9BB104						
29	C645	CAP CER 22nF 25V X7R 0402	1	YAG	CC0402KRX7R8BB223						
30	D1, D4, D17, D21	TVS Diode 24VWM 45VClamp	4	Littlefuse	PESD0603-240	Littlefuse	XGD10603MR	Diodes Incorporated	D22V0H1U2LP1610-7		
31	D2	LED RGB DIFFUSED CHIP 0606 SMD	1	Lite-on Inc.	LTST-C19HE1WT	Inolux	IN-S66TBTRGB	Kingbright	APTF1616SEEZGKQ-BKC		
32	D3	DIODE GEN PURP 80V 125MA SOD523	1	Diodes Incorporated	1N4148WT-7	Micro Commercial	1N4148X-TP	Diodes Incorporated	1N4148WTQ-7		
33	D5, D6, D8, D10, D11	TVS DIODE 5.5V SOT143B	5	Nexperia	PRTR5V0U2X,215	Nexperia	PESD2ETH-AXR	Diodes Incorporated	DRTR5V0U2SR-7		
34	D9, D12, D13, D14, D15, D16, D18, D19, D20, D22, D23	LED GREEN CLEAR 0603 SMD	11	Lite-on Inc.	LTST-C190KGKT	Kingbright	APT1608SGC	Rohm	SML-D12M8WT86		
35	FB1, FB2, FB3, FB4, FB5, FB6, FB8, FB9	FERRITE BEAD 120 OHM 0603 1LN	8	Murata	BLM18SG121TN1D	Murata	BLM18KG121TN1D	Murata	BLM18KG121TH1D		
36	HS1	HEATSINK FU740-C000 27X27MMX19.5MM WITHOUT FAN	1	ATS	ATS-61270R-C0-R0					Radian	INM27001-20.1W/2.1BU
37	HS2	HEATSINK ASM2824 21X21MM 1.4MM	1	RTP	INM21001-33W/2.6O+T725						
38	J5	MICRO SD PUSH/PUSH SMALL 8C 9 (8 + 1)	1	Molex, LLC	5033981892						
39	J6	CONN HEADER SMD 10POS 1.27MM SHROUDED 2X5	1	CNC Tech	3221-10-0300-00	Amphenol FCI	20021221-00010C4LF				
40	J8	CONN HEADER VERT 24POS 2.54MM	1	Sullins Connector Solutions	PRPC012DAAN-RC	Harwin Inc	M20-9981245			Antenk Electronics	PHE504-24-G0-D-0600-0300-A-B-H1
41	J13	CONN MOD JACK 8P8C R/A SHIELDED	1	Amphenol Conmmercial Products	RJHSE5384						
42	J14	CONN PCI EXP FEMALE 164POS 0.039	1	Amphenol FCI	10018783-10103TLF						
43	J15	CONN RCPT USB2.0 MICRO B SMD R/A	1	ATK	YF-M485-011B						
44	J16	CONN HEADER VERT 24POS 4.2MM	1	Amphenol ICC	10127820-2422LF	TE Connectivity	2-1586038-4	Molex	0442060002		
45	J18, J29	CONN HEADER VERT 2POS 2.54MM BERG 1x2 TH	2	Sullins Connector Solutions	PRPC002SAAN-RC	Amphenol	861400021YO10LF	Molex, LLC	0022285024		
46	J19	CONN M.2 EDGE M KEY DUAL FMALE 67POS 0.020	1	TE Connectivity	1-2199119-5						
47	J20	CONN HEADER VERT 10POS 2.54MM	1	Sullins Connector Solutions	M20-9760542	Harwin Inc	M20-9760542	Amphenol ICC	861400102YO2LF		
48	J21	CONN HEADER VERT 2POS 2.54MM FAN	1	Molex, LLC	0022232021	TE Connectivity	640456-2	Sullins Connector Solutions	SWR25X-NRTC-S02-ST-BA	Antenk Electronics	AW2543VA-02P

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49	J22	2x10 CONN HEADER 2MM SMD AU 20POS	1	Harwin Inc	M22-5321005					Antenk Electronics	PHDM05-20-G0-D-0400-0075-0650-B-B-A-H1
50	J23, J24	CONN HEADER VERT 3POS 2.54MM FAN	2	Molex, LLC	0022232031	TE Connectivity	640456-3	Sullins Connector Solutions	SWR25X-NRTC-S03-ST-BA		
51	J26	CONN HEADER VERT 5POS 2.54MM	1	Amphenol FCI	68002-205HLF					Antenk Electronics	PHES01-05-G0-S-0600-0300-A-B-H1 PHES01-10-G0-S-0600-0300-A-B-H1
52	J27, J28	CONN RCPT USB3.0 TYPEA STACK R/A	2	Amphenol FCI	GSB4112312HR						
53	J30	CONN HEADER VERT 8POS 1.27MM TH	1	Adam Tech	HPH2-A-08-UA	Sullins Connector Solutions	GRPB042VWVN-RC			Antenk Electronics	PHCS07-08-G0-D-0300-0180-B-B-H2
54	J32	CONN M.2 EDGE E KEY DUAL FEMALE 67POS 0.020	1	TE Connectivity	2199119-4						
55	J33, J34, J35	Header1X3 2.54MM	3	ATK	PHES01-03-G0-S-0600-0300-A-B-H1						
56	K1	FAN DC, 25x10MM, 12VDC, 3.8CFM, 0.6W, 26dBA, 14000RPM	1	Sunon	MF25101V1-1000C-A99						
57	L3, L4, L5, L9, L10	FIXED IND 1UH 3.7A 42 MOHM SMD	5	TDK Corporation	TFM252012ALVA1R0MTAA					[NoParam], TAI-TECH	[NoParam], AHP252012RA-1R0M
58	L7	FIXED IND 2.2UH 2.2A 84 MOHM SMD	1	Murata Electronics	DFE252012P-2R2M=P2	Bourns Inc	SRN2510F-2R2M	Littelfuse Inc	LPWI252010H2R2T		
59	L11	400 nH Shielded Wirewound Inductor 24 A 0.67mOhm Nonstandard	1	Würth Elektronik	744325040						
60	MK1, MK2	M.2 SMD SPACER M2.5 SCREW	2	Penn Engineering	SMTSO-M25-2ET						
61	PS1	ARCTIC MX-4 2019 EDITION THERMAL COMPOUND	1	Arctic	ACTCP00002B 2019						
62	Q1, Q7, Q9	MOSFET P-CH 20V 3.7A SOT-23	3	Infineon Technologies	IRLML6402TRPBF	Nexperia	PMV48XP,215	Vishay Siliconix	SQ2301ES-T1_GE3		
63	Q2, Q3, Q4, Q6, Q8, Q10, Q11, Q12, Q13, Q14, Q15	MOSFET 2N-CH 30V 0.22A SOT363	11	Diodes Inc	DMN63D8LDW-7	ON Semiconductors	NTJD4001NT1G	Diodes Inc	DMN33D8LDW-7		
64	Q16	MOSFET P-CH 20V 3.7A SOT-23	1	Infineon Technologies	IRLML6402TRPBF	Nexperia	PMV48XP,215	Vishay Siliconix	SQ2301ES-T1_GE3		
65	Q17	MOSFET 115mA 60V N-Channel SOT23	1								
66	R1, R2, R3, R21, R35, R37, R145, R149, R152	RES ARRAY 4 RES 33 OHM 5% 0804	9	Panasonic Electronics Components	EXB-N8V330JX	Bourns	CAT10-330J4LF				
67	R4, R53, R76, R82, R114, R115, R116, R122, R123, R138, R140, R142, R159, R165, R168, R169, R178, R186, R191, R196, R197, R201, R215, R216, R224, R227, R228, R230, R235, R236, R257, R258, R261, R262, R263, R264, R266, R267, R273, R274, R292, R299, R302, R322, R328, R329, R332, R345, R350, R395, R396, R397, R398, R439	RES SMD 10K OHM 1% 1/16W 0402	54	Yageo	RC0402FR-0710KL	Panasonic Electronics Components	ERJ-2RKF1002X	Vishay Dale	CRCW040210K0FKE DC	[NoParam], Walsin	[NoParam], WR04X1002FTL

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68	R7, R22, R36, R38, R41, R42, R44, R52, R54, R57, R64, R67, R69, R73, R85, R86, R87, R88, R89, R90, R94, R128, R171, R173, R175, R179, R187, R195, R231, R238, R239, R242, R245, R247, R249, R279, R293, R330, R338, R349, R355, R356, R358, R359, R360, R364, R383, R390, R425, R427, R429, R430, R431, R438, R450, R451, R453, R455, R457	RES SMD 100K OHM 1% 1/16W 0402	59	Yageo, [NoParam]	RC0402FR-07100KL, [NoParam]	Panasonic Electronics Components, [NoParam]	ERJ-2RKF1003X, [NoParam]	Vishay Dale, [NoParam]	CRCW0402100KFKE D, [NoParam]	[NoParam], Walsin	[NoParam], WR04X1003FTL
69	R19, R154, R155, R156, R157	RES SMD 75 OHM 1% 1/16W 0402	5	Yageo	RC0402FR-0775RL	Panasonic Electronics Components	ERJ-2RKF75R0X	Vishay Dale	CRCW040275R0FKE DC		
70	R20, R109, R110, R120, R121, R124, R125, R126, R127	RES SMD 240 OHM 1% 1/16W 0402	9	Yageo	RC0402FR-07240RL	Panasonic Electronics Components	ERJ-2RKF2400X	Vishay Dale	CRCW0402240RFKE D	[NoParam], Walsin	[NoParam], WR04X2400FTL
71	R23, R33, R49, R50, R55, R56, R62, R66, R68, R75, R77, R78, R79, R81, R84, R91, R93, R95, R160, R162, R163, R167, R188, R189, R190, R192, R198, R199, R200, R211, R220, R222, R223, R226, R233, R234, R243, R275, R276, R277, R278, R287, R296, R297, R298, R304, R305, R306, R307, R310, R311, R312, R315, R316, R317, R320, R321, R324, R325, R326, R327, R342, R346, R348, R351, R353, R384, R385, R386, R387, R389, R391, R399, R400, R404, R405, R406, R408, R424, R426, R428, R433, R434, R435, R436, R440, R443, R447, R452	RES SMD 0.0OHM JUMPER 1/16W 0402	89	Yageo	RC0402JR-070RL	Panasonic Electronics Components	ERJ-2GE0R00X	Vishay Dale	CRCW04020000Z0E D	[NoParam], Walsin	[NoParam], WR04X000PTL
72	R27, R58, R59, R60, R151, R153, R244, R246, R281, R282, R382, R392	RES SMD 330 OHM 1% 1/16W 0402	12	Yageo	RC0402FR-07330RL	Panasonic Electronics Components	ERJ-2RKF3300X	Vishay Dale	CRCW0402330RFKE DC	[NoParam], Walsin	[NoParam], WR04X3300FTL
73	R28	RES SMD 200 OHM 1% 1/16W 0402	1	Yageo	RC0402FR-07200RL	Panasonic Electronics Components	ERJ-2RKF2000X	Vishay Dale	CRCW0402200RFKE DC		
74	R29, R30, R31, R32, R61, R65	RES SMD 49.9 OHM 1% 1/16W 0402	6	Yageo	RC0402FR-0749R9L	Panasonic Electronics Components	ERJ-2RKF49R9X	Vishay Dale	CRCW040249R9FKE D		
75	R45, R46, R47, R48, R161, R170	RES SMD 2K OHM 1% 1/16W 0402	6	Yageo	RC0402FR-072KL	Panasonic Electronics Components	ERJ-2RKF2001X	Vishay Dale	CRCW04022K00FKE D		
76	R51	RES SMD 47K OHM 1% 1/16W 0402	1	Yageo	RC0402FR-0747KL	Panasonic Electronics Components	ERJ-2RKF4702X	Vishay Dale	CRCW040247K0FKE DC		
77	R63	RES 2.2K OHM 1/16W 1% 0402	1	Yageo	RC0402FR-072K2L						
78	R83, R150	RES SMD 1M OHM 1% 1/16W 0402	2	Yageo	RC0402FR-071ML	Panasonic Electronics Components	ERJ-2RKF1004X	Vishay Dale	RCA04021M00FKED		
79	R103, R104, R146, R147, R164, R202, R254, R255, R256, R271, R394, R419	RES SMD 4.7K OHM 1% 1/16W 0402	12	Yageo	RC0402FR-074K7L	Panasonic Electronics Components	ERJ-2RKF4701X	Vishay Dale	CRCW04024K70FKE D	[NoParam], Walsin	[NoParam], WR04X4701FTL
80	R105, R106, R107, R108, R111, R112, R113	RES ARRAY 4 RES 33 OHM 0804 1% CONVEX	7	Yageo	YC124-FR-0733RL						
81	R117, R118, R119, R144, R158, R333, R334, R335, R341	RES SMD 33 OHM 1% 1/16W 0402	9	Yageo	RC0402FR-0733RL	Panasonic Electronics Components	ERJ-2RKF33R0X	Stackpole Electronics	RMCF0402FT33R0	Walsin, [NoParam]	WR04X33R0FTL, [NoParam]
82	R148	RES SMD 39 OHM 1% 1/16W 0402	1	Yageo	RC0402FR-0739RL	Panasonic Electronics Components	ERJ-2RKF39R0X	Vishay Dale	CRCW040239R0FKE D		

Item #	Designator	Description	Quantity	Mfr 1	Mfr 1 PN	Mfr 2	Mfr 2 PN	Mfr 3	Mfr 3 PN	Mfr 4	Mfr 4 PN
83	R180, R181	DIODE SCHOTTKY 30V 100MA 0402	2	Comchip Technologies	CDBQR0130L-HF						
84	R183, R184, R209, R225, R283, R432	RES SMD 1K OHM 1% 1/16W 0402	6	Yageo	RC0402FR-071KL	Panasonic Electronics Components	ERJ-2RKF1001X	Vishay Dale	CRCW04021K00FKE D	[NoParam], Walsin	[NoParam], WR04X1001FTL
85	R193, R194, R212, R272	RES SMD 12.1K OHM 1% 1/16W 0402	4	Yageo	RC0402FR-0712K1L						
86	R219	RES SMD 200K OHM 1% 1/16W 0402	1	Yageo	RC0402FR-07200KL						
87	R232	RES SMD 22K OHM 1% 1/16W 0402	1	Yageo	RC0402FR-0722KL					Walsin	WR04X2202FTL
88	R241	RES SMD 35.7K OHM 1% 1/16W 0402	1	Stackpole	RMCF0402FT35K7	Yageo	RC0402FR-0735K7L	Panasonic	ERJ-2RKF3572X		
89	R339, R340	RES SMD 12K OHM 1% 1/16W 0402	2	Yageo	RC0402FR-0712KL	Panasonic Electronics Components	ERJ-2RKF1202X	Vishay Dale	CRCW040212K0FKE DC		
90	R354	RES SMD 66.5K OHM 1% 1/16W 0402	1	Stackpole	RMCF0402FT66K5	Yageo	RC0402FR-0766K5L	Panasonic	ERJ-2RKF6652X	Walsin	WR04X6652FTL
91	R444	RES 3.4K OHM 1% 1/16W 0402	1	YAG	RC0402FR-073K4L						
92	R445	RES 6.19K OHM 1% 1/16W 0402	1	YAG	RC0402FR-076K19L						
93	R446	RES 5.23K OHM 1% 1/16W 0402	1	YAG	RC0402FR-075K23L						
94	R448, R449	RES SMD 10 OHM 1% 1/16W 0402	2	Yageo	RC0402FR-0710RL	Panasonic Electronics Components	ERJ-2RKF10R0X	Vishay Dale	CRCW040210R0FKE DC	Walsin	WR04X10R0FTL
95	R454	RES 100 OHM 1/16W 1% 0402	1	Yageo	RC0402FR-07100RL						
96	RS1, RS3, RS4, RS6, RS8, RS9	Current Sense Resistors - SMD 1watt 0.001ohms 1%	6	Vishay Dale	WSKW06121L000FE A	Bourns	CST0612-FC-R001E	Yageo	PS0612FKL070R001 L		
97	RS2, RS5, RS7	RES SMD 0.2 OHM 1% 1/4W 0603	3	Rohm Semiconductor	UCR03EVPFLR200	Bourns	CRL0603-FW-R200ELF	Vishay Dale	RCWE0603R200FKE A		
98	S2	SWITCH SLIDE DIP 5 SPST 100MA 20V	1	CTS Electrocomponents	219-5MST	CTS Electrocomponents	219-5LPST				
99	S4, S5	SWITCH TACTILE SPST-NO RED 0.05A 12V	2	C & K Components	PTS645SK43SMTR9 2 LFS						
100	SW1, SW2	Dip Switch SPST 4 Position Surface Mount Slide (Standard) Actuator 25mA 24VDC	2	CTS Electrocomponents	218-4LPSTR						
101	T1	Audio Transformers / Signal Transformers Genesis 0-70C Mini 1G For MiniPhy	1	Halo Electronics	TG111-MSC13LF						
102	TP63, TP64, TP65, TP66, TP67, TP68, TP69, TP70	Black Color coded printed circuit test point	8	Components Corporation, [NoParam]	TP-104-01-00, [NoParam]						
103	U1	IC SiFive U740 Quadcore Processor	1	SiFive	FU740-C000						
104	U2	IC OSC PCI EXPRESS GEN 3 - 2 OUTPUT	1	Silicon Labs	Si52112-B6-GM2						
105	U3, U4	IC TRNSLTR BIDIRECTIONAL 4 CHANNEL 14VQFN	2	Texas Instruments	TXB0104RGYR						

Item #	Designator	Description	Quantity	Mfr 1	Mfr 1 PN	Mfr 2	Mfr 2 PN	Mfr 3	Mfr 3 PN	Mfr 4	Mfr 4 PN
106	U5	IC TRNSLTR BIDIRECTIONAL 8X2SON	1	Texas Instruments	TXS0102DQER						
107	U6	IC 4-Port USB 3.0 Hub	1	Asmedia	ASM1074						
108	U7, U29, U41	IC FLASH 1M SPI 104MHZ 8SOP	3	Macronix	MX25L1006EMI-10G						
109	U8	IC REG LINEAR 3.3V 300M 4XDFN	1	ON Semiconductor	NCP115CMX330TCG	Texas Instruments	TLV73333PDQNR	Richtek USA	RT9078-33GQZ		
110	U9	IC PCIE GEN 2.0 TO 2-PORT USB 3.0 XHCI CONTROLLER	1	Asmedia	ASM1042A-48						
111	U10	IC FLASH 256MBIT 1.8V SERIAL 16SOIC	1	ISSI	IS25WP256D-RMLE						
112	U11	IC SENSOR DIGITAL -40C-125C 8WSON	1	Texas Instruments	TMP451AIDQFR						
113	U12	IC SWITCH QUAD SPDT 16TSSOP	1	Texas Instruments	TS3A5018PWR						
114	U13, U14, U15, U16, U18, U19, U20, U21	IC DDR4-2666 16Gb (2Gx8) DDP 78-FBGA	8	SK Hynix Inc.	H5ANAG8NCMR-VKC						
115	U17	IC CONV DDR DDR2 DDR3 DDR4 10SON	1	Texas Instruments	TPS51200DRCR						
116	U22, U43, U52, U56	IC PWR SWITCH P-CHAN 1A 1:1 SOT25	4	Diodes Inc	AP2171DWG-7						
117	U23	IC Gigabit ETHERNET RGMII/RMII/GMII 68QFN	1	Microsemi Solutions	VSC8541XMV-02						
118	U24	Buck Switching Regulator IC Positive Adjustable 0.6V 1 Output 20A 21-PowerVFQFN	1	Monolithic Power Systems Inc.	MP8795HGLE-Z						
119	U25	IC GATE AND 1CH 2-INP 5TSSOP	1	Nexperia	74LVC1G08GW,125						
120	U26	IC EEPROM 2K SPI 2MHZ SOT23-6	1	Microchip Technology	93LC56BT-I/OT						
121	U27	IC EEPROM 2KBIT 400KHZ 8TSSOP	1	ST Microelectronics	M24C02-FDW6TP						
122	U30	IC REG BUCK ADJ 2A SYNC 8WSON	1	Texas Instruments	TLV62084DSGT	Texas Instruments	TLV62084DSGR				
123	U31, U32	IC PWR MGMT HOTSWAP 3-20V 16QFN	2	Texas Instruments	TPS25910RSA						
124	U33, U34, U35, U54	IC TVS DIODE 3.6V 8.8V 10USON	4	Texas Instruments	TPD4E02B04DQAR						
125	U36	IC System PMIC (6 bucks + 11 LDO)	1	Silicon Labs	DA9063-XXHO1						
126	U39	IC PWR SWITCH N-CHAN 1:1 x2 6A14WSON	1	Texas Instruments	TPS22966DPUR						
127	U40	IC PCie Gen 3 Switch	1	Asmedia	ASM2824						
128	U48	IC USB Bridge, USB to UART,FIFO USB 2.0 UART Interface 64-LQFP	1	FTDI	FT2232HL-REEL						
129	U57	Inverter IC 6 Channel Schmitt Trigger 14-SSOP	1	Texas Instruments	SN74HC14ADBR						
130	U58	IC BINARY COUNTR 14BIT HS 16SOIC	1	Texas Instruments	CD74HC4020M						
131	U60	NEXPERIA 74LVC1G06GS - INVERTER,	1	NXP Semiconductors	74LVC1G06GS,132						

Item #	Designator	Description	Quantity	Mfr 1	Mfr 1 PN	Mfr 2	Mfr 2 PN	Mfr 3	Mfr 3 PN	Mfr 4	Mfr 4 PN
132	X1	XTAL OSC XO 1.0000MHZ CMOS SMD	1	EPSON	SG-210STF 1.0000ML	Suntsu	SX022C1A481- 1.000M	TXC Corporation	8W-1.000MDB-T		
133	X2	MEMS OSC XO 26.0000MHZ LVCMOS	1	Abracon	ASEMB-26.000MHZ- L-T	ECS Inc	ECS-3225MV-260- BN-TR	ECS inc	ECS-3225MV-260- CN-TR		
134	X3	XTAL OSC XO 25.0000MHZ CMOS SMD	1	EPSON	SG-210STF 1.0000ML	SJK	SJK-2N-25.00- 1.6~3.3-50-CJ				
135	Y1, Y4, Y6, Y9	CRYSTAL 25.0000MHZ 10PF SMD	4	Epson	FA-238 25.0000MB- K3	ECS Inc	ECS-250-8-33-JGN- TR	NDK America	NX3225GA- 25.000M-STD-CRG- 1	Aker-USA, [NoParam]	C3E-25.000-10- 5030-X-R, [NoParam]
136	Y2	CRYSTAL 32.7680 KHZ 12.5PF SMD	1	Micro Crystal	CM7V-T1A- 32.768KHZ-12.5PF- 20PPM-TA-QC	EPSON	FC-135 32.7680KA- A3	ECS Inc	ECS-.327-12.5-34B- TR	Aker-USA	CTS3-32.768-9-20-R
137	Y3	CRYSTAL 26.00 MHZ 9.0PF SMD	1	EPSON	TSX-3225 26.0000MF09Z-AC0	ECS Inc	ECS-260-10-33B- CKM-TR	Abracon	ABM8-26.000MHZ- 10-B-1-U-T		
138	Y5	CRYSTAL 20.0000MHZ 9PF SMD	1	EPSON	TSX-3225 20.0000MF20G-AC3						
139	Y7	CRYSTAL 12.0000MHZ 10PF SMD	1	Abracon LLC	ABM8G-12.000MHZ- B4Y-T	TXC Corporation	7M-12.000MAHE-T	ECS Inc	ECS-120-12-33-AGN- TR		
140	Y10	32.768 kHz XO (Standard) CMOS Oscillator 1.2V ~ 5.5V Enable/Disable 4-SMD, No Lead	1	Micro Crystal AG	OM-7604-C7- 32.768KHZ-20PPM- TA-QC						