



Board Assembly Bill Of Materials

Board ID: LIV EVB RevC LIV3FL
BOM Issue: 1
Dated: 20 Aug 2021

NOTES:
Parts to be bought by assembly subcontractor except those in sections marked as free-issue or those in the Do Not Fit section.

Part No	Part Type	Part Qty	Refs	Value	Description	Package	Manufacture 1			Manufacture 2		Manufacture 3		Distributor		Fitted (Y/N)	Supplied by	RoHS	Comments
							Name	Part Number	Name	Part Number	Name	Part Number	Name	Order Code					
PN-C0603X7R1K100N	CAS	3	C305, C308, C313	100n	Surface mount, general purpose multilayer ceramic chip capacitor 100n; 50V; X7R; +/-10%.	603	TDK	C1608X7R1H104KT	Yageo	CC0603KRX7R9BB104					Yes	SubCo	Yes		
PN-R0402F16K5	RES	3	R505, R536, R548	16.5K	Surface mount chip resistor 16.5K 1% 0402 16.5K; 1%; 0.0525W.	402	Rohm	MCR01MZPF1652	KAO Speer	FN73H1ETTP1652F					Yes	SubCo	Yes		
PN-R0402F23K2	RES	1	R553	23K2	Surface mount chip resistor 23.2k 1% 0402 23K2; 1%; 0.0525W.	402	Rohm	MCR01MZPF2322	Yageo	RT0402FRE0723K2					Yes	SubCo	Yes		
PN-R0603J100K	RES	1	R341	100K	Surface mount chip resistor 100K; 5%; 0.1W.	603	Rohm	MCR03EZP1J04	YAGEO	AC0603JR-07100KL					Yes	SubCo	Yes		
PN-R0603J1K	RES	1	R304	1K	Surface mount chip resistor 1K; 5%; 0.1W.	603	Rohm	MCR03EZP1J02	Yageo	RC0603JR-131KL	KOA Speer	RK73H1JTD1001F			Yes	SubCo	Yes		
PN-R0603J1M	RES	3	R502, R506, R512	1M	Surface mount chip resistor 1M; 5%; 0.1W.	603	Rohm	MCR03EZP1J05							Yes	SubCo	Yes		
PN-R0603J22K	RES	1	R311	22K	Surface mount chip resistor 22K; 5%; 0.1W.	603	Rohm	MCR03EZP1J23	Yageo	AC0603JR-0722KL	KOA Speer	RK73H1JTD2202F			Yes	SubCo	Yes		
PN-R0603J2K2	RES	1	R325	2K2	Surface mount chip resistor 2K2; 5%; 0.1W.	603	Rohm	MCR03EZP1J22							Yes	SubCo	Yes		
SBS-CAS0374	CAS	1	C302	10n	Surface mount, general purpose multilayer ceramic chip capacitor 10n; 25V; X7R; +/-10%.	603	Murata	GRM188R71E103K							Yes	SubCo	Yes		
SBS-CAS0396	CAS	1	C314	10uF	Ceramic chip capacitor. 10uF; 6.3V; X5R; 20%.	603	TDK	C1608X5R0J106M							Yes	SubCo	Yes		
SBS-CAS0424	CAS	1	C501	4u7	Surface mount, general purpose multilayer ceramic chip capacitor 4.7; 16V; X7R; +/-10%.	805	Murata	GRM21BR71C475KA73L	TDK	C2012X7R1C475K125AB	YAGEO	CC0805KKX7R7BB475			Yes	SubCo	Yes		
SBS-CAS0493	CAS	2	C508, C511	1uF	Surface mount capacitor chip. Low ESR 1uF; 16V; X7R; +/-10%.	603	TDK	C1608X7R1C105K	Murata	GRM188R71C105KA12	Yageo	AC0603KRX7R7BB105			Yes	SubCo	Yes		
SBS-CAS0496	CAS	6	C300, C309, C312, C502, C504, C506	4u7	Surface mount 0603 capacitor ceramic 4.7uF, 10% 10V X7S 4u7; 10; X7S; 10;	603	Murata	GRM188C71A475KE11							Yes	SubCo	Yes		
SBS-CAS0506	CAS	1	C510	2.2uF	Surface mount 0603 capacitor ceramic 2.2uF, 10% 10V X7R 2.2uF; 10; X7R; 10;	603	Murata	GRM188R71A225KE15	TDK	C1608X7R1A225K080AC					Yes	SubCo	Yes		
SBS-CAS0507	CAS	3	C500, C505, C507	22uF	22uF capacitor - 6.3V +/-20% (0805) 22uF; 6.3V; 20%;	805									Yes	SubCo	Unknwn		
SBS-CAS0530	CAS	4	C400, C512, C513, C514	1nF	Automotive Grade Surface mount 0402 capacitor ceramic 1nF, 10% 50V X7R 1nF; 50; X7R; 10;	402	Murata	GCM155R71H102KA37	TDK	CGA2B2X7R1H102K050BA					Yes	SubCo	Yes		
SBS-CAS0534	CAS	3	C401, C402, C403	120pF	Automotive Grade Surface mount 0402 capacitor ceramic 120pF, 5% 50V COG 120pF; 50; COG; 5;	402	Murata	GCM155C1H1121JA16	TDK	CGA2B2COG1H1121J050BA	Yageo	CC0402JRNPC09BN121			Yes	SubCo	Yes		
SBS-CAS0653	CAS	1	C311	1u	Automotive Grade Surface mount 0402 capacitor ceramic 1uF, 10% 10V X6S 1u; 10; X6S; 10;	402	Murata	GRT155C81A105KE01							Yes	SubCo	Yes		
SBS-CAS0696	CAS	3	C301, C310, C322	100nF	AEC-Q200 Compliant Chip Multilayer Ceramic Capacitors for Infotainment, 100nF, 10%, 50V, X7R 100nF; 50; X7R(EIA); 10;	402	Murata	GRT155R71H104KE01							Yes	SubCo	Unknwn		
SBS-COD0482	COD	2	J401, J509	header_1x1	TSW-101-07-G-S: Samtec TSW series. Through Hole Male terminal header. Single row, 1 pin, Dim: Tail 2.54, contact 5.84, total 10.92. header_1x1;	HEADER_1X1	SAMTEC	TSW-101-07-G-S							Yes	SubCo	Yes		
SBS-COD0512	COD	1	CN302		HTSY series, 10 way right angled terminal strip through hole shrouded pin header connector. Double row, 2x5 pins, pitch 2.54mm.	IDC_2x5_RA	Lycn	301010R01B0	Samtec	HTST-105-04-L-DA	E-Tec	SLS-010-R920-95			Yes	SubCo	Yes		
SBS-COD0728	COD	17	P302, P305, P306, P307, P308, P309, P311, P312, P313, P400, P502, P503, P504, P508, P510, P514, P515	SNT-100-BK-G	Shunt Samtec 29pins pitch 2.54mm - Black coloured SNT-100-BK-G.		SAMTEC	SNT-100-BK-G							Yes	SubCo	Yes		
SBS-COD0737	COD	3	J302, J400, J503	HEADER	Header connector 1x3 gold finish 2.54mm through hole HEADER;	HEADER_1X3	SAMTEC	TSW-103-07-G-S							Yes	SubCo	Yes		
SBS-COD0758	COD	1	CN300	U.FL-R-SMT	SMT Ultra-Miniature Coaxial Connectors U.FL-R-SMT;		Hirose	U.FL-R-SMT(10)							Yes	SubCo	Unknwn		
SBS-COD0893	COD	1	J301		Micro-USB B Receptacle, Bottom Mount, SMT, with Solder Tabs, Lead-Free		FCI	10103594-0001LF							Yes	SubCo	Unknwn		
SBS-COD0910	COD	1	CN400	50ohms	50 Ohm SMA Jack, Edge Mount, 1.6mm PCB thickness, 50ohms;	SMA	Samtec	SMA-J-P-H-ST-EM2	Samtec	SMA-J-P-H-ST-EM1					Yes	SubCo	Unknwn		
SBS-DIS0099	DIS	11	D300, D304, D305, D306, D307, D308, D309, D310, D311, D312, D501	ESDAXLC6-1BT2	Single Line bidirectional ESD Protection for High speed Interface ESDAXLC6-1BT2;	SOD882T	STMicroelectronics	ESDAXLC6-1BT2							Yes	SubCo	Unknwn		
SBS-DIS0100	DIS	1	D502		Surface mount SCHOTTKY RECTIFIERS 0.33; 0.5;	SOD 123	STMicroelectronics	STPS0530Z							Yes	SubCo	Unknwn		
SBS-DIS0102	DIS	1	D500	BZT52H-B5V1	Single SMT Zener diodes 5.1V BZT52H-B5V1; 5.1V;	SOD123F	NXP	BZT52H-B5V1							Yes	SubCo	Unknwn		

SBS-HDW0500	HDW	1	HW500		Board label Zebra 27mm x 14mm													Yes	SubCo	Yes
SBS-HDW0655	HDW	1	B500		Lithium rechargeable battery		SEIKO	MS920SE										Yes	SubCo	Unknwn
SBS-ICD0680	ICD	1	U505	LDFPUR	1A very low drop voltage regulator. Adjustable LDFPUR Adj: 1A	DFN6-3x3	STMicroelectronics	LDFPUR										Yes	SubCo	Yes
SBS-ICS1527	ICS	1	Z300		Common mode filter with ESD protection for USB2.0 interface	µQFN-8L	STMicroelectronics	ECMF02-4CMX8										Yes	SubCo	Unknwn
SBS-ICS1654	ICS	1	Z400		Automotive SAW RF filter for GPS+COMPASS+GLONASS	QCS5P	Epcos	B39162B4327P810										Yes	SubCo	Yes
SBS-ICS1684	ICS	1	U300		CP2104 SINGLE-CHIP USB TO UART BRIDGE	QFN24	Silicon_labs	CP2104-F03-GM										Yes	SubCo	Yes
SBS-ICS1882	ICS	1	U303	TPS22943DCKR	Low-input voltage current-limited load switches. Active Hight. TPS22943DCKR; 40 mA.	sc70-5 (DCK)	Texas Instruments	TPS22943DCKR		Farnell	1782839						Yes	SubCo	Yes	
SBS-ICS1884	ICS	3	U502, U503, U504	ST1S12GR	Synchronous rectification adjustable step-down switching regulator ST1S12GR, 0.7: 1.7.		SRMICROELECTRONIC	ST1S12GR TSOT23-5L									Yes	SubCo	Unknwn	
SBS-ICS1885	ICS	1	U400	BGA824N6	Low Noise Amplifier for GPS, GLONASS, Galileo and Compass BGA824N6.		infineon	BGA824N6									Yes	SubCo	Yes	
SBS-ICS2092	ICS	1	U304		TESE011 module with external SMPS version 1.8V and 3.3V		STMicroelectronics	LIV3FL									Yes	SubCo	Unknwn	
SBS-IND0205	IND	1	L401	5n6H	Surface mount wire wound inductor. 5n6H; 3%; 0.76A.	L0402	Coilcraft	0402CS-SN6XJLU	Murata		LOW15AN5N6G80D-00-21						Yes	SubCo	Yes	
SBS-IND0470	IND	3	L500, L501, L502	10u	Surface mount magnetically shielded, wire wound inductor for power line applications. 10u; 1.4A.	5x5.2mm SMT	TDK	LTF5022T-100M1R4-LC									Yes	SubCo	Yes	
SBS-IND0499	IND	1	L300	40 ohm @ 100MHz	Chip Ferrite Bead Inductor. 40 ohm @ 100MHz; 40 ohm @ 100MHz.	805	LAIRD	M10805K400R-10									Yes	SubCo	Unknwn	
SBS-IND0511	IND	2	L301, L400	27nH	Surface mount inductor Inductance: 27nH ±5%. Rated current 350mA. Max. of DC resistance 0.46Ω, Qmin 8. Self resonance frequency (min.) 1700MHz. Operating temperature range -55 to 125°C. Z77H-2, 0.35.	402	Murata	LOG15HS27N.J02									Yes	SubCo	Unknwn	
SBS-LED0046	LED	1	LD300		LED CBI series single LED indicator lamp, GREEN, 3mm diameter. Right angled. LED center 5.08mm above PCB.	LED_RA_3MM_CBI	Dialight	551-0207F									Yes	SubCo	Yes	
SBS-LED0057	LED	1	LD301		LED CBI series single LED indicator lamp, RED, 3mm diameter. Right angled. LED center 5.08mm above PCB.	LED_RA_3MM_CBI	Dialight	551-0407F									Yes	SubCo	Yes	
SBS-PCB0440	PCB	1	PCB500		PCB EV9 LIV TESE02												Yes	SubCo	Yes	
SBS-PIN0015	PIN	5	J305, J309, J313, J502, J518	HEADER_1X2 2.54mm	2 way pin post PTH header connector. Shroudless, arranged as 1 by 2, pitch 2.54mm. HEADER_1X2 2.54mm.	HEADER_1X2	Samtec	MTSW-102-07-L-S-240									Yes	SubCo	Yes	
SBS-PIN0024	PIN	18	J306, J307, J308, J311, J312, J504, J505, J506, J507, J508, J510, J511, J512, J513, J514, J515, J516, J517		3 way pin post PTH header connector. Shroudless, arranged as 1 by 3, pitch 2.54mm.	HEADER_1X3	Samtec	MTSW-103-07-L-S-240									Yes	SubCo	Yes	
SBS-RES0513	RES	1	R540	100R	Surface mount resistor. 100R; 0.125W.	R0805	Vishay	CRCW0805100RJN	Yageo		RC0805JR-07100RL						Yes	SubCo	Yes	
SBS-RES0526	RES	1	R321	1R0	Chip Resistor 1.0R; 1% 1R0; 1%; 0.1W.	R0603	YAGEO	RC0603FR-071RL									Yes	SubCo	Yes	
SBS-RES0559	RES	16	R320, R323, R324, R328, R338, R500, R501, R503, R507, R527, R528, R529, R530, R531, R534, R535	0R	Automotive Grade Surface mount chip resistor 0603 package 0Ohm 0R; 0.1.	603	Vishay	CRCW06030000ZS	Yageo		AC0603JR-070RL	Yageo	RC0603FR-070RL				Yes	SubCo	Yes	
SBS-RES0560	RES	1	R319	10k	Automotive Grade Surface mount chip resistor 0603 package 10kOhm - 5% 10k; 5; 0.1.	603	Vishay	CRCW060310K0J	Yageo		AC0603JR-0710KL						Yes	SubCo	Yes	
SBS-RES0565	RES	1	R340	10k	Automotive grade Surface mount chip resistor 10k 1% 0603 10k; 1; 0.1.	603	Vishay	CRCW060310K0FK	Yageo		AC0603FR-0710KL	Yageo	RC0603FR-0710KL				Yes	SubCo	Yes	
SBS-RES0570	RES	11	R302, R303, R306, R337, R339, R401, R405, R533, R546, R556, R563	0R	Automotive Grade Surface mount chip resistor 0402 package 0Ohm 0R; 1.5.	402	Vishay	CRCW04020000Z0EDC	Yageo		AC0402JR-070RL						Yes	SubCo	Yes	
SBS-RES0572	RES	4	R322, R532, R541, R551	10K	Automotive grade Surface mount chip resistor 10kOhm 5% 0402 10K; 5; 0.0625.	402	Vishay	CRCW040210K0JN	Yageo		AC0402JR-0710KL	Yageo	RC0402JR-0710KL				Yes	SubCo	Yes	
SBS-RES0584	RES	1	R336	100R	Automotive grade Surface mount chip resistor 100Ohm 1% 0402 100R; 1; 0.0625.	402	Vishay	CRCW0402100RF	Yageo		AC0402FR-07100RL						Yes	SubCo	Yes	
SBS-RES0586	RES	1	R504	1K	Automotive grade Surface mount chip resistor 1kOhm 5% 0402 1K; 5; 0.0625.	402	Vishay	CRCW04021K00J	Yageo		AC0402JR-0711KL						Yes	SubCo	Yes	
SBS-RES0587	RES	1	R330	100k	Automotive grade Surface mount chip resistor 100kOhm 5% 0402 100k; 5; 0.0625.	402	Vishay	CRCW0402100KJ	Yageo		AC0402JR-07100KL						Yes	SubCo	Yes	
SBS-RES0590	RES	2	R329, R561	4K7	Automotive grade Surface mount chip resistor 4k7Ohm 5% 0402 4K7; 5; 0.0625.	402	Vishay	CRCW04024K70J	Yageo		AC0402JR-074K7L						Yes	SubCo	Yes	
SBS-RES0594	RES	1	R559	1M	Automotive grade Surface Mount Chip Resistor 1M , 0402 , 5% 1M; 5; 0.1.	402	Vishay	CRCW04021M00J	Yageo		AC0402JR-0711ML						Yes	SubCo	Unknwn	
SBS-RES0596	RES	1	R331	47K	Automotive grade Surface mount chip resistor 47kOhm 5% 0402 47K; 5; 0.0625.	402	Vishay	CRCW040247K0J	Yageo		AC0402JR-0747KL						Yes	SubCo	Yes	

SBS-RES0657	RES	1	R562	1.5k	Automotive grade Surface mount chip resistor 1.5kOhm 5% 0402 1.5k; 5; 0.0625;	402	Vishay	CRCW04021K50J	Yageo	AC0402JR-071K5L						Yes	SubCo	Yes	
SBS-RES0676	RES	3	R513, R547, R557	10K	Automotive grade Surface mount chip resistor 10kOhm 1% 0402 10K; 1%; 0.0625;	402	Vishay	CRCW040210K0F	Yageo	AC0402FR-0710KL						Yes	SubCo	Yes	
SBS-RES0677	RES	2	R511, R539	51k	Automotive Grade Surface mount chip resistor 0402 package 51kOhm 1% 51k; 1; 0.0625;	402	Vishay	CRCW040251K0F	Yageo	AC0402FR-0751KL						Yes	SubCo	Yes	
SBS-RES0711	RES	1	R326	100	Surface mount chip resistor 100Ohm 0.1% 0603 100; 0.1; 0.125;	603	Vishay	MCT0603MD1000BP100							Yes	SubCo	Unknown		
SBS-RES0787	RES	1	R552	19.1k	Surface mount chip resistor 0603 19.1k 1%; 19.1k; 1%; 0.1W;	603	Yageo	RT0603FRE0719K1L							Yes	SubCo	Yes		
SBS-RES0788	RES	1	R549	20k	Chip Resistor 20k, Tol 1%, 0.063W, 0402 20k; 1; 0.063;	402	Yageo	RC0402FR-0720KL	Vishay	CRCW040220K0FKED C					Yes	SubCo	Unknown		
SBS-RES0791	RES	1	R554	44.2k	Surface mount chip resistor 44.2k 1% 0402 44.2k; 1%; 0.0625W;	402	Vishay	CRCW040244K2FKED	Yageo	RC0402FR-0744K2L					Yes	SubCo	Yes		
SBS-RES0792	RES	1	R555	49.9k	Surface mount chip resistor 49.9k 1% 0402 49.9k; 1%; 0.0625W;	402	Vishay	CRCW040249K9FKED C	Yageo	RC0402FR-0749K9L					Yes	SubCo	Yes		
SBS-RES0793	RES	2	R545, R558	60.4k	Surface mount chip resistor 60.4k 1% 0402 60.4k; 1%; 0.0625W;	402	Vishay	CRCW040260K4FKED	Yageo	RC0402FR-0760K4L					Yes	SubCo	Yes		
SBS-RES0864	RES	2	R514, R542	20k	Chip Resistor 20k, Tol 1%, 0.1W, 0603 20k; 1; 0.1;	603	Yageo	RC0603FR-0720KL	Vishay	CRCW060320K0FK					Yes	SubCo	Unknown		
SBS-RES0866	RES	2	R515, R537	21.5k	Chip Resistor 21.5k, Tol 1%, 0.063W, 0402 21.5k; 1; 0.063;	402	Yageo	RC0402FR-0721K5L	Vishay	CRCW040221K5FKED					Yes	SubCo	Unknown		
SBS-RES0867	RES	2	R508, R543	24k	Chip Resistor 24k, Tol 1%, 0.063W, 0402 24k; 1; 0.063;	402	Yageo	RC0402FR-0724KL	Vishay	CRCW040224K0FKED					Yes	SubCo	Unknown		
SBS-RES0868	RES	3	R509, R538, R559	41.2k	Chip Resistor 41.2k, Tol 1%, 0.063W, 0402 41.2k; 1; 0.063;	402	Yageo	RC0402FR-0741K2L	Vishay	CRCW040241K2FKED					Yes	SubCo	Unknown		
SBS-RES0869	RES	2	R510, R544	45.3k	Chip Resistor 45.3k, Tol 1%, 0.063W, 0402 45.3k; 1; 0.063;	402	Yageo	RC0402FR-0745K3L	Vishay	CRCW040245K3FKTD					Yes	SubCo	Unknown		
SBS-SWD0053	SWD	1	SW500		Right angle Push button with latchdown		NKK	BB16AH-FA						Yes	SubCo	Unknown			
SBS-SWD0054	SWD	1	SW300	OFF[ON]	Micro miniature push button switch 4.24 length OFF[ON];		TE connectivity	FSMRA6JH						Yes	SubCo	Unknown			
SBS-TRS0095	TRS	1	Q300		General Purpose Transistor, NPN Silicon	SOT-416	NXP	BC847BT,115	On Semi	BC847BTT1G				Yes	SubCo	Yes			

PCB Do Not Fit parts list

Part No	Part Type	Part Qty	Refs	Value	Description	Package	Manufacture 1	Manufacture 2	Manufacture 3	Distributor	Fitted (Y/N)	Supplied by	RoHS	Comments		
PN-R0603F1K5	RES	2	R342, R343	1K5	Surface mount chip resistor 1K5; 1%; 0.1W;	603	Rohm	MCR03EZPF152	Yageo	RC0603FR-071K5L			No	N/A	Yes	
SBS-CAS0536	CAS	2	C405, C406	3.9pF	Automotive Grade Surface mount 0402 capacitor ceramic 3.9pF, 0.25pF 50V X7R 3.9pF; 50; COG; S;	402	Murata	GCM1555C1H3R9CA16					No	N/A	Yes	
SBS-CAS0678	CAS	7	C315, C316, C317, C318, C319, C320, C321	56p	56pF surface mount, general purpose multilayer ceramic chip capacitor, COG, 0201, 50V, +/-2% 56p; 50V; +/-2%;	201	Murata	GRM0335C1H560GA01					No	N/A	Yes	
SBS-RES0559	RES	2	R315, R318	0R	Automotive Grade Surface mount chip resistor 0603 package 0Ohm 0R; 0.1;	603	Vishay	CRCW06030000ZS	Yageo	AC0603JR-070RL	Yageo	RC0603FR-070RL		No	N/A	Yes
SBS-RES0570	RES	10	R332, R333, R334, R344, R345, R346, R400, R402, R403, R404	0R	Automotive Grade Surface mount chip resistor 0402 package 0Ohm 0R; 1.5;	402	Vishay	CRCW04020000Z0ED C	Yageo	AC0402JR-070RL			No	N/A	Yes	
SBS-TESTPNT	COD	1	TP306		PCB test point DNF								No	N/A	Yes	