

krtkl inc.
350 Townsend Street
Suite 301A
San Francisco, CA 94107
+1 415 857 4857

Bill Of Materials March 31,2016 13:45:30

Item	Qty	Reference	Description	Manufacturer	Part Number
1	4	C3, C4, C5, C6	Capacitor, Ceramic, 22uF 6.3V 10% X5R, SMD 1206	Samsung	CL31A226KQHNNNE
2	2	C7, C14	Capacitor, Ceramic, 3300pF 25V 10% X7R, SMD 0603	Murata	C0402C332K3RACTU
3	5	C8, C9, C11, C12, C110	Capacitor, Ceramic, 10uF 25V 10% X7R, SMD 1210	Samsung	CL32B106KAULNNE
4	64	C10, C13, C15, C16, C17, C18, C19, C20, C21, C23, C24, C25, C27, C28, C30, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C48, C49, C50, C51, C52, C54, C56, C57, C60, C62, C64, C65, C68, C69, C70, C73, C76, C79, C84, C86, C88, C90, C91, C95, C103, C106, C111, C112, C113, C114, C115, C116, C117,	Capacitor, Ceramic, 0.1uF 25V 10% X7R, SMD 0603	Samsung	CL10B104KA8NNNC
5	9	C22, C26, C29, C31, C63, C85, C92, C107, C108	Capacitor, Ceramic, 10uF 6.3V 10% X5R, SMD 0805	Samsung	CL21A106KQQNNNE
6	2	C32, C33	Capacitor, Ceramic, 33pF 50V 5% NPO, SMD 0603	Samsung	CL10C330JB8NNNC
7	5	C47, C53, C55, C58, C96	Capacitor, Ceramic, 1.0uF 25V 10% X5R, SMD 0603	Samsung	CL10A105KA8NNNC
8	2	C59, C67	Capacitor, Ceramic, 4.7uF 6.3V 10% X5R, SMD 0805	Samsung	CL21A475KQFNNNE
9	1	C61	Capacitor, Ceramic, 150uF 6.3V 20% X5R, SMD 1210	Samsung	CL32A157MQVNNNE
10	1	C66	Capacitor, Ceramic, 2.2uF 10V 10% X5R, SMD 0603	Samsung	CL10A225KP8NNNC
11	4	C71, C74, C77, C80	Capacitor, Ceramic, 0.01uF 25V 5% NPO, SMD 0603	Samsung	CL10C103JA8NNNC
12	4	C72, C75, C78, C81	Capacitor, Ceramic, 1000pF 50V 5% NPO, SMD 0603	Samsung	CL10C102JB8NNNC
13	1	C82	Capacitor, Ceramic, 0.22uF 16V 10% X5R, SMD 0603	Samsung	CL10B224K08NNNC
14	8	C83, C89, C94, C100, C101, C102, C104, C105	Capacitor, Ceramic, 0.01uF 25V 10% X7R, SMD 0603	Samsung	CL10B103KA8NNNC
15	4	C87, C93, C97, C109	Capacitor, Ceramic, 47uF 10V 10% X5R, SMD 1210	Samsung	CL32A476KPJNNNE
16	2	C98, C99	Capacitor, Ceramic, 27pF 50V 5% NPO, SMD 0603	Samsung	CL10C270JB8NNNC
17	3	D3, D4, D7	LED, Green 0603	Lumex	SML-LX0603SUGW-TR
18	1	D5	Diode, Schottky, 30V 30mA, SOD323	ON Semiconductor	RB751V40T1G
19	5	FB1, FB2, FB3, FB4, FB5	Ferrite Bead, 120 ohms 25% @ 100MHz, 2A max, SMD 0603	Vishay Dale	ILHB0603ER121V
20	1	F1	3A 24V PTC Resettable Fuse	Bourns	MF-LSMF300/24X-2
21	7	PC1, PB1, PA1, JC1, PB2, PA2, P3	Conn, Header, 40-pin, 20-posx2-row, 0.05" Vert Shrouded, TH	Samtec	TFM-120-01-F-D-A
22	1	JP1	Conn, Header, 3-pos, 0.1" Vert, Gold Flash	Samtec	TSW-103-07-F-S
23	1	J1	Conn, Jack, 2-pos, 5.5mm OD x 2.5mm ID DC Power, 8A T/H RA	CUI Inc	PJ-063BH
24	1	J4	Conn, Header, 14-pos, 2MM VERT Gold SHRD	Molex Inc.	87831-1420
25	2	J5, J6	Conn, Recept, HDMI 19-pos, TH, RA Horizontal	CNC Tech	2000-1-1-20-00-BK
26	1	J7	Connector, Receptacle, USB Type A 2.0, 4 Position Through Hole, Right Angle, Horizontal	Amphenol	UE27AC5410H
27	2	J9, J10	Header, 25 pos x 2 rows, 50 Pins, 0.1 Centers	Samtec	TSW-125-07-F-D
28	1	J11	Conn, Header, 20-pin, 10-posx2-row, 0.1" Vert, TH	Samtec	TST-110-01-F-D
29	2	L1, L2	Inductor 2.2uH 20% 2milliohm 3.7A SMD 4mmx4mmx2mm	Coilcraft	XFL4020-222MEB
30	12	L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14	Inductor, 10uH 20% 700mohm 470mA, Shielded, SMD 2mmx2mmx1.2mm	Abracon	ASPI-2012-100M-T
31	1	P2	Conn, Header, 30-pin, 15-posx2-row, 0.05" Vert Shrouded, TH	Samtec	TFM-115-01-F-D-A
32	1	P8	Conn, Magjack, 1-port 1000 Base-T	Bel Fuse	0826-1X1T-43-F
33	8	RP1, RP2, RP3, RP4, RP5, RP6, RP7, RP8	Resistor Pack, 100 ohm 5% x4 Individual, 1/16W per resistor, Convex, SMD 1206	Yageo	YC164-JR-07100RL

34	9	RP9, RP10, RP11, RP12, RP13, RP14, RP15, RP16, RP17	Resistor Pack, 75 ohm 1% x4 Individual, 1/16W per resistor, Convex, SMD 1206	Vishay	CRA06S08375R0FTA
35	7	R2, R3, R19, R26, R31, R35, R36	Resistor, 330 ohm 1% 1/10W, SMD 0603	Samsung	RC1608F331CS
36	4	R4, R5, R6, R32	Resistor, 100K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F104CS
37	2	R7, R11	Resistor, 24.9K ohm 0.1% 1/8W, SMD 0805	Yageo	RT0805BRD0729K4L
38	3	R8, R10, R12	Resistor, 10.0K ohm 0.1% 25ppm 1/10W, SMD 0603	Yageo	AT0603BRD0710KL
39	1	R9	Resistor, 100K ohm 0.1% 1/8W, SMD 0805	Yageo	RT0805BRD07100KL
40	4	R13, R14, R17, R18	Resistor, 2.00K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F202CS
41	1	R15	Resistor, 49.9 ohm 1% 1/10W, SMD 0603	Samsung	RC1608F49R9CS
42	1	R16	Resistor, 27.0K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F273CS
43	2	R20, R27	Resistor, 4.70K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F472CS
44	1	R21	Resistor, 10.0K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F103CS
45	4	R22, R39, R40, R46	Resistor, 1.00K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F102CS
46	2	R23, R24	Resistor, 47.0K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F473CS
47	1	R25	Resistor, 390K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F394CS
48	1	R28	Resistor, 12.0K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F123CS
49	1	R29	Resistor, 0ohms 1/10W, SMD 0603	Samsung	RC1608J000CS
50	1	R30	Resistor, 8.06K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F8061CS
51	1	R38	Resistor, 4.99K ohm 1% 1/10W, SMD 0603	Yageo	RC0603FR-074K99L
52	1	R41	Resistor, 1.13K ohm 1% 1/10W, SMD 0603	Samsung	RC1608F1131CS
53	1	R42	Resistor, 29.4K ohm 1% 1/10W, SMD 0603	Vishay	CRCW060329K4FKEA
54	1	R43	Resistor, 30.0K 1/10W 1% 0603	Vishay	CRCW060330K0FKEA
55	1	R44	Resistor, 5.60K ohm 1% 1/10W, SMD 0603	Vishay	CRCW06035K60FKEA
56	1	R45	Resistor, 24.0K 1/10W 1% 0603	Vishay	CRCW060324K0FKEA
57	139	TP3, TP4, TP5, TP6, TP7, TP8, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP23, TP87, TP88, TP91, TP92, TP95, TP96, TP99, TP100, TP104, TP105, TP109, TP110, TP113, TP114, TP115, TP116, TP119, TP120, TP123, TP124, TP128, TP129, TP132, TP133, TP136, TP137, TP149, TP150, TP151, TP152, TP153, TP155, TP156, TP157, TP158, TP160, TP161, TP163, TP164, TP166, TP167, TP168, TP170, TP172, TP173, TP174, TP175, TP178, TP184, TP185, TP186, TP187, TP188, TP189, TP192, TP193, TP196, TP197, TP198, TP199, TP202, TP203, TP208, TP209, TP212, TP219, TP221, TP224, TP228, TP230, TP234, TP239, TP243, TP246, TP247, TP248, TP249, TP250, TP253, TP254, TP257, TP258, TP260, TP261, TP263, TP264, TP265, TP266, TP281, TP282, TP283, TP284, TP285, TP286, TP308, TP316, TP317, TP318, TP320, TP321, TP322, TP323, TP324, TP325, TP326, TP327, TP328, TP329, TP330, TP331, TP367, TP369, TP371, TP372, TP373, TP374, TP375,	PCB Integral Test Pad, Not Stuffed	N/A	PCB-INTERGRAL-TEST-PAD
		TP243, TP246, TP247, TP248, TP249, TP250, TP253, TP254, TP257, TP258, TP260, TP261, TP263, TP264, TP265, TP266, TP281, TP282, TP283, TP284, TP285, TP286, TP308, TP316, TP317, TP318, TP320, TP321, TP322, TP323, TP324, TP325, TP326, TP327, TP328, TP329, TP330, TP331, TP367, TP369, TP371, TP372, TP373, TP374, TP375,			
58	2	TVS1, TVS5	TVS DIODE 3.3VWM SOD523	NXP Semiconductors	PESD3V3U1UB,115
59	2	TVS2, TVS3	Diode Array, Quint 3.3V ESD Prot., SOT363	NXP Semiconductor	PESD3V3L5UY,115
60	1	TVS4	TVS Diode, Dual, 17VWM max, 400W peak, SMA	Bourns	SMAJ17A
61	2	U1, U2	IC, Buck Regulator, Synchronous, 0.9V - 6V 1A, 16QFN 3x3mm	Texas Instruments	TPS62150ARGTR
62	1	U3	IC, Quad Voltage Supervisor with Manual Reset Input, VSSOP-8	Texas Instruments	TPS386596L33DGKR

63	1	U4	16 key ECC/ECDSA/SHA-256 Crypto Authenticator/EEPROM	Atmel	ATECC508A-SSHDA-T
64	2	U5, U7	TVS Diode Array, 13 Channel HDMI, 5.5VWM 15VC 1pF Cio 0.05pF diff Cio, 5V Load Switch, 16TSSOP	Texas Instruments	TPD13S523PWR
65	1	U6	IC, HDMI Transmitter, HVQFN-64	NXP	TDA19988BHN/C1,557
66	1	U8	IC, HDMI Receiver, HVQFN-72	NXP	TDA19971BHN/C1,518
67	1	U9	IC, USB PHY, Host/Dev/OTG, ULPI I/F, 24-QFN	Microchip Technology	USB3315C-CP-TR
68	1	U10	IC, USB TVS and Current Limit Switch, SOT-23-6	Texas Instruments	TPD3S014DBVR
69	1	U11	IC, Gigabit Ethernet PHY, QFN-48	Marvell	88E1510PB2-NNB2C000
70	1	U12	IC, Dual Non-Inverting Buffer/Driver, Open Drain Output, SOT23-6	Diodes Incorporated	74LVC2G07W6-7
71	9	U13, U14, U15, U16, U17, U18, U19, U20, U21	IC, Quad Non-Inverting Buffer with Individual Output Enables, 14VQFN	TI	SN74AUC126RGYR
72	1	X1	Crystal, 28.63636MHz, 20ppm, 18pF, 50 Ohm, -40C - 85C, 3.2mm x 2.5mm DFN4 SMD	Abracon	ABM8G-28.63636MHZ-18- D2Y-T
73	1	X2	Crystal, 25.0000MHz, 20ppm, 18pF, 50 Ohm, -40C - 85C, 3.2mm x 2.5mm DFN4 SMD	AVX Corp/Kyocera Corp	CX3225GB25000P0HPQCC
74	1	Y1	Oscillator, MEMS, 24.000MHz +/-50ppm, 1.8V-3.3V, SMD 3.2mmx2.5mm	Abracon LLC	ASEMB-24.000MHZ-LC-T