

piSmasher SBC BOM 15081802-02 Revision 3.7, Revised 04/15/2016
Reference Drawings:
Schematic: 15081802-01
Mechanical: 15081802-03
Layout: 15081802-04
Gerbers: 15081802-05
Assembly: 15081802-06

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

Bill Of Materials April 15,2016 11:07:15

Item	Qty	Reference	Description	Manufacturer	Part Number
1	4	C3, C4, C5, C6	Capacitor, Ceramic, 22uF 6.3V 10% X5R, SMD 1206	Samsung	CL31A226KQHNNE
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, C118, C119, C120	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	CL21A106KQQNNE
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-LSMP300/24X-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	1	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% 21milliohm 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 Array, 75 ohm 1/16W 5% 0804	Vishay	CRA04P08375R0JTD
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	2	R21, R47	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	1	SH1	Conn, Jumper, 2pos Open Top, For 0.025" Square Pins 0.1" LS, Gold Flash	Sullins	QPC02SXGN-RC
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	PESD3V315UY,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/C1,557
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	Texas Instruments	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