

1088 XLD Main and Level 1 BOM Rev 1.1

Qty	Name/Value	Description	Vendor	Part Number	Part ID
1	1088XLD	4-Layer 1.6 mm Board Thickness(Mandatory)	EasyEDA	Version 1.0	Upload Gerber Files to Website
1	1088XLD Level 1 I/O	2-Layer Level 1 I/O Board (Mandatory)	EasyEDA or AllPCB	Version 1.0	Upload Gerber Files to Website
1	PSU	Atari XF551/1050 9V AC Power Brick	Best	C017945	PSU
1	U1MB Module	1 MB RAM,SDX, RT8, Multiple OS & Languages (Mandatory)	Lotharek	U1MB w/Vert Headers	M3
Capacitors					
1	22 pF	Capacitor Ceramic 50V Radial	Digi-Key	BC1034CT-ND	C13
1	56 pF	Capacitor Ceramic 50V Radial	Digi-Key	BC1039CT-ND	C14
1	820 pF	Capacitor Ceramic 50V Radial	Digi-Key	BC2693CT-ND	C16
4	.047 uF	Capacitor Ceramic 50V Radial	Digi-Key	.399-4371-ND	C40,C41,C42,C43
2	.01 uF	Capacitor Ceramic 50V Radial	Digi-Key	399-4206-ND	C30,C38
40	.1 uF	Capacitor Ceramic 50V Radial	Digi-Key	399-9877-1-ND	C1-C12,C15,C17-C25,C29,C31,C33,C35,C37,C44,C45,C47-C49,C51-C58
3	10 uF	Capacitor ALUM 8V Radial (1.5 pitch x 4 mm)	Digi-Key	P966-ND	C34,C46,C50
2	47 uF	Capacitor ALUM 16V Radial (2 pitch x 5 mm)	Mouser	710-860160372007	C32,C36
1	1000 uF	Capacitor ALUM 6.3V Radial (3.5 pitch x 8mm)	Digi-Key	P5509-ND	C39
3	4700 uF	Capacitor ALUM 35V Radial (7.5 pitch x 18mm)	Mouser	80-ESK478M035AN2AA	C26-C28
Resistors (Individual)					
1	150	Resistor 1/4W 5% Axial	Digi-Key	150QBK-ND	R6
2	180	Resistor 1/4W 5% Axial	Digi-Key	180QBK-ND	R40,R41
2	300	Resistor 1/4W 5% Axial	Digi-Key	300QBK-ND	R2,R3
10	390	Resistor 1/4W 5% Axial	Digi-Key	390QBK-ND	R5,R21-R24,R26,R29,R33,R38,& R39
1	470	Resistor 1/4W 5% Axial	Digi-Key	470QBK-ND	R14
12	1K	Resistor 1/4W 5% Axial	Digi-Key	1.0KQBK-ND	R1,R9-R11,R16,R17,R25,R30,R34,R36,R37 & 43
2	2.2K	Resistor 1/4W 5% Axial	Digi-Key	2.2KQBK-ND	R18,R19
3	3.3K	Resistor 1/4W 5% Axial	Digi-Key	3.3KQBK-ND	R20,R35,R42
1	4.7K	Resistor 1/4W 5% Axial	Digi-Key	4.7KQBK-ND	R15
1	6.8K	Resistor 1/4W 5% Axial	Digi-Key	6.8kQBK-ND	R13
1	10K	Resistor 1/4W 5% Axial	Digi-Key	10KQBK-ND	R12
4	100K	Resistor 1/4W 5% Axial	Digi-Key	100KQBK-ND	R27,R28,R31,R32
1	680K	Resistor 1/4W 5% Axial	Digi-Key	680KQBK-ND	R4
2	1M	Resistor 1/4W 5% Axial	Digi-Key	1.0MQBK-ND	R7,R8
or	for louder key click				
2	470K	Resistor 1/4W 5% Axial	Digi-Key	470KQBK-ND	R7,R8
1	0.5M	Trimmer Potentiometer 0.2W PC Pin	Digi-Key	3319P-1-504-ND	RT1
Resistors (networks)					
2	75	Resistor Network 3 RES Bussed 6SIP	Mouser	4606X-102-750LF	RN11,RN12
1	100	Resistor Network 8 RES Isolated 16DIP	Digi-Key	4116R-1-101LF-ND	RN1
1	220	Resistor Network 8 RES Isolated 16DIP	Digi-Key	4116R-1-221LF-ND	RN7
1	1K	Resistor Network 5 RES Bussed 6SIP	Digi-Key	4606X-1-102LF-ND	RN3
1	1.8K	Resistor Network 8 RES Isolated 16DIP	Digi-Key	4116R-1-182LF-ND	RN8
2	3.3K	Resistor Network 5 RES Bussed 6SIP	Digi-Key	4606X-1-332LF-ND	RN4,RN6
1	4.7K	Resistor Network 7 RES Bussed 8SIP	Digi-Key	987-1252-ND	RN2
1	4.7K	Resistor Network 8 RES Bussed 9SIP	Digi-Key	4609X-101-472LF-ND	RN5
2	22K	Resistor Network 4 RES Bussed 5SIP	Digi-Key	4605X-101-223LF-ND	RN9,RN10
Inductors					
1	0.1 uH	Fixed Inductor 1.79A 25mohm	Digi-Key	M10079-ND	L2
1	1.5 uH	Signal Inductor	Mouser	542-78F1R5K-RC	L1
1	6.8 uH	Fixed Inductor 1.3A 29mohm	Digi-Key	AIUR-16-6R8K-ND	L3
Semiconductors					

Qty	Name/Value	Description	Vendor	Part Number	Part ID
4	1N914	Diode 100V 200mA D035	Digi-Key	1N914BCT-ND	D3,D4,D5,D14
2	1N4001	Power Diode 1A	Digi-Key	1N4001GOS-ND	D7,D9
4	1N5401	Power Diode 3A	Mouser	863-1N5401RLG	D10-D13
1	LM4040	Zener Diode 10V	Mouser	926-LM4040AIZ100NOPB	D2
5	PN2222	Transistor NPN 40V 1A TO-92	Digi-Key	PN2222AD26ZCT-ND	Q2 -Q6
1	PN2907	Transistor PNP 60V 0.8A TO-92	Digi-Key	PN2907ABUFS-ND	Q1
2	LED (+5V & +12V)	GRN T-1	Digi-Key	160-1142-ND	D6,D8
1	LED (Midi Activity)	RED T-1	Digi-Key	160-1877-ND	D1
1	PCT200TWRG4H-3C	Bi-Color RA	Quest Components	PCT200TWRG4H-3C	D15
1	SSF-LXH2103GGD/4	Dual Stacked GRN LED	Digi-Key	67-1255-ND	Level 1 I/O Board D3
2	SSF-LXH2103GGD/4	Dual Stacked GRN LED (modified – remove bottom LED)	Digi-Key	67-1255-ND	Level 1 I/O Board D1,D2,
Integrated Circuits					
1	CPU Sally	Atari Custom 6502 CPU	Best or B&C	CO14806	U9
1	PIA(R6520)	Atari Peripheral Interface	Best or B&C	CO14795	U14
1	GTIA	Atari Television Interface Adapter	Best or B&C	See Note *2	U5
1	Antic	Atari Display List Co-processor	Best or B&C	See Note *1	U7
2	Pokey	Atari Pots, Keyboard, SIO	Best or B&C	CO12294	U18, U21
1	Memory	64x8 SRAM	Ebay	UM61512AK-15	U10
2	74F08	Fast Quad AND Gate	Digi-Key	296-3543-5-ND	U12, U23
1	74F32	Fast Quad AND Gate	Digi-Key	296-3583-5-ND	U26
1	74F138	Fast 3-8 Line Decoder/DeMux	Digi-Key	296-3552-5-ND	U25
1	74F245	Fast Octal Buffer	Digi-Key	296-3572-5-ND	U22(Note pcb orientation)
1	74HC14	CMOS HEX Schmitt Inverter	Digi-Key	296-1577-5-ND	U8
2	74HCT00	Quad 2-Input NAND Gate	Digi-Key	296-1603-5-ND	U13, U24
1	74HCT08	Quad 2-Input AND Gate	Digi-Key	296-1606-5-ND	U3
1	74HCT74	Dual D-TYPE Positive Trigger Latch	Digi-Key	296-1625-5-ND	U6
1	74HCT138N	3-8 Line Decoder/Demux	Digi-Key	296-1608-5-ND	U11
1	74HCT4053	Triple 2x1 Mux/DeMux	Digi-Key	296-2121-5-ND	U19
2	PIC16F1847	Keyboard and Mouse MCU (See Note *3)	Mouser	579-PIC16F1847-I/P	U15, U20
1	PIC12F1572	Vgate Timing Generator MCU (See Note *3)	Mouser	579-PIC12F1572-I/P	U4
1	TPSM84205	5V Switching Regulator	Digi-Key	296-47074-ND	U17
1	TPSM84212	Switching 12V Regulator for Higher Current Draw	Digi-Key	296-47075-ND	U16
Connectors					
1	Power Jack	1050 Power Jack In	Best	CO14715	J11
2	SIO Jack	Atari Standard SIO Connectors	Best	CO12995	J2, J10
1	Din-13 Jack	DIN 13 RA Jack	Digi-Key	CP-2313-ND	J1
1	Cart	0.1" 30-pin Card Edge Connector	Morlinkom Centronic	ECS30SB1A1-B	J4
1	Cart	0.1" 14-pin Card Edge Connector	Morlinkom Centronic	ECS14SB1A1-B	J4
1	Audio Jack	3.5mm Stereo R/A Jack (Level 1 I/O Board)	Digi-Key	SC1463-ND	Level 1 I/O Board J5
			Jameco	2161553	
1	Keyboard PS2 Jack	Mini-DIN 6 Purple PS/2 (Level 1 I/O Board)	eBay		Level 1 I/O Board J3
1	Mouse PS2 Jack	Mini-DIN 6 GRN PS/2 (Level 1 I/O Board)	eBay		Level 1 I/O Board J4
2	Joystick Jack	CONN D-SUB PLUG 9POS R/A SOLDER	Digi-Key	AE10968-ND	Level 1 I/O Board J1, J2
Headers					
1	SIO-AUX	0.1" SIL 5-pin Latched Male Header	Digi-Key	WM2703-ND	J13
1	PWR-OUT	0.1" SIL 4-pin Latched Male Header	Digi-Key	WM4202-ND	J12
1	Various Headers	0.1" DIL Dual Row Breakaway Male Header	Digi-Key	S2011EC-40-ND	J5, M2
1	Various Headers	0.1" SIL Single Row Breakaway Male Header	Digi-Key	S1011EC-40-ND	J6, J7, J8,J14,J16
1	Midi Aux Header	0.1" SIL Single Row Breakaway Male Header	Digi-Key	S1011EC-40-ND	J3
or for Dropcheck's Rear Level 1 I/O Board					
1	Midi Aux Socket	0.1" SIL 7-pin Female Header	Digi-Key	S7005-ND	J3
1	MIDI Socket	0.1" SIL 6-pin Female Header	Phoenix Enterprises	HWS1068	Level 1 I/O Board J6
1	U1MB Module Socket	0.1" 2x5 Female Header	Digi-Key	S6105-ND	M3
1	U1MB Module Socket	0.1" 2x10 Female Header	Digi-Key	S6106-ND	M3
1	U1MB Module Socket	0.1" 2x15 Female Header	Digi-Key	S7083-ND	M3
1	IDE	0.079"(2 mm) 2x22 Dual Row Male Header	Digi-Key	S5801-22-ND	J15

Qty	Name/Value	Description	Vendor	Part Number	Part ID
1	I/O Socket	RASPBERRY PI GPIO TALL HEADER (modified – reduce to 2x15)	Digi-Key	1568-1462-ND	J9
1	I/O Plug	0.1" 2x17 Header Dual Insulator (modified – reduce to 2x15)	Phoenix Enterprises	HWS3849	Level 1 I/O Board P1
IC Sockets					
3	8-pin IC Socket	0.3 width, machined IC socket	Digi-Key	ED11082-ND	U1, U2,U4
or					
3	8-pin IC Socket	0.3 width, dual wipe, IC socket	Digi-Key	AE9986-ND	U1, U2,U4
8	14-pin IC Socket	0.3 width, machined IC socket	Digi-Key	ED56143-ND	U3,U6,U8,U12,U13,U23,U24,U26
or					
8	14-pin IC Socket	0.3 width, dual wipe, IC socket	Digi-Key	AE9989-ND	U3,U6,U8,U12,U13,U23,U24,U26
3	16-pin IC Socket	0.3 width, dual wipe, IC socket	Digi-Key	AE9992-ND	U11,U19,U25
or					
3	16-pin IC Socket	0.3 width, machined IC socket	Digi-Key	ED56163-ND	U11,U19,U25
2	18-pin IC Socket	0.3 width, machined IC socket	Digi-Key	ED56183-ND	U15,U20
1	20-pin IC Socket	0.3 width, dual wipe, IC socket	Digi-Key	AE9998-ND	U22
or					
1	20-pin IC Socket	0.3 width, machined IC socket	Digi-Key	ED56203-ND	U22
1	32-pin IC Socket	0.3 width, dual wipe, IC socket	Jameco	137621	U10
			Phoenix Enterprises	HWS10030	
6	40-pin IC Socket	0.6 width, machined IC socket	Digi-Key	ED56406-ND	U5,U7,U9,U14,U18,U21
1	16-pin IC Socket	UAV Module Socket	Digi-key	ED56163-ND	M1
1	6-pin SIP Socket	0.1" 6-pin SIP UAV Module Socket 2	Digi-Key	A771AR-ND	M1
Misc & Hardware					
1	3.579545MHz	Crystal(NTSC)	Digi-Key	X1085-ND	X2
3	2-pin Jumper Block	0.1" Jumper Shorting Gold Finish	Digi-Key	S9001-ND	J3,J6,J7
1	SPDT ON-OFF	Rocker Switch SPDT Through Hole, Right Angle, Horizontal	BEST	CO14397	SW1
		(See Note * 4)			
		External cable assembly for Video Output Options			
1	DIN13 Plug	Conn Plug Male Din 13POS Solder	Digi-Key	CP-1013-ND	Mates with J1
1		1 - 6 ft 13 Wire Cable length	Various		
or much easier					
1		13 Pin DIN MIDI 1.5M 4.9ft Cable for Fender/Roland GC-1	Ebay	13 Pin DIN MIDI Cable	Mates with J1
and		Cut cable in half and solder			
		Your choice of S-Video, Composite, SCART, DB9, or 1084S DIN and L & R Audio oposite cable end termination			
Level 1 Mounting Hardware					
2	#4 Threaded Standoff	1" Length F-F 4-40 Standoff Aluminum	Mouser	761-2112-440-AL-7	Level 1 I/O Board
4	#4 Flat Washers	#4x0.030" Thick Zinc Plated Steel Flat Washers	Jameco	106826	Level 1 I/O Board
6	4-40 Pan Head Screw	4-40 x 1/4" length. Zinc Plated Steel Screw	Jameco	2094389	Level 1 I/O Board
4	#6 Flat Washer	#6 Zinc Plated Steel Flat Washer	Jameco	106833	Level 1 I/O Board
4	#6 Nuts	6-32 Zinc Plated Steel Nut	Jameco	42420	Level 1 I/O Board
2	#6 Studs	6-32x3/4"	Home Depot(In Store)	752233	Level 1 I/O Board
Optional					
1	UAV Module	Ultra Video Daughter Board(Optional if RGB only)	MacRorie	UAV w/Vert Headers	M1
1	Dream Blaster S2 Module	Dream Blaster S2 Module(Optional)	SerdaShop	S2	M2
1	LM1881	Sync Separator(Optional if Not Using RGB)	Digi-Key	LM1881N/NOPB-ND	U2
1	PIC12F1572	PIC MCU (Optional for Midi See Note *3)	Mouser	579-PIC12F1572-I/P	U1
1	3.546894MHz	Crystal(Optional for PAL)	Best	CO16112	X3
1	4.433618MHz	Crystal(Optional for PAL Color Burst)	Digi-Key	X1047-ND	X1

Note *1 NTSC ANTIC CO12296 or CO21697 PAL ANTIC CO14887 or CO21698

Note *2 NTSC GTIA CO14805 PAL CO14889

Note *3 Requires programming of chip prior to use in to order to become TK-II, MouseAtari,Vgate or Midi. Firmware available at www.AtariBits.com Requires TK-II v2.4 or later firmware

Note *4 Mandatory read of Tips and Tricks Installation pdf is necessary

1088 XLD Level Two Original BOM Rev 1.1

Qty	Name/Value	Description	Vendor	Part Number	Part ID
1	1088XLD Level 2 I/O	2-Layer Level 2 I/O Board	EasyEDA or AllPCB	Version 1.1	Upload Gerber Files to Website
5	220	Resistor 1/4W 5% Axial	Digi-Key	220QBK-ND	R2-R4,R6,R7
1	390	Resistor 1/4W 5% Axial	Digi-Key	390QBK-ND	Level 2 I/O Board R1
1	1K	Resistor 1/4W 5% Axial	Digi-Key	1.0KQBK-ND	Level 2 I/O Board R5
1	10K	Resistor 1/4W 5% Axial	Digi-Key	10KQBK-ND	Level 2 I/O Board R8
1	.1 uF	Capacitor	Digi-Key	399-4328-ND	Level 2 I/O Board C1
1	1N914	Diode 100V 200mA D035	Digi-Key	1N914BCT-ND	Level 2 I/O Board D2
3	MIDI Jack	Standard DIN 5 R/A PCB Mount	Jameco	29399	Level 2 I/O Board J1-J3
1	MIDI Plug	0.1" SIL Single Row Breakaway Extended Male Header	Phoenix Enterprises	HWS3155	Level 2 I/O Board P1
1	74HC14	CMOS HEX Schmitt Inverter	Digi-Key	296-1577-5-ND	Level 2 I/O Board U2
1	H11L1	Open Collector Logic Opto-Isolator	Digi-Key	H11L1IS-ND	Level 2 I/O Board U1
1	SSF-LXH2103GGD/4	Dual Stacked GRN LED (modified – remove bottom LED)	Digi-Key	67-1255-ND	Level 2 I/O Board D1
1	SPDT ON-OFF-ON	Toggle Switch SPDT Through Hole, Right Angle, Vertical	Digi-Key	EG2382-ND	Level 2 I/O Board SW1
		(See Note *4)			
1	CF-IDE44 Adapter	Single CF-IDE44 v.H2 Adapter Board	AliExpress	MOSUNX CF-IDE44	Level 2 I/O Board M4
or					
1	CF-IDE44 Adapter	Dual CF-IDE44 V.H0 Adapter Board	Brando	UCABL007500	Level 2 I/O Board M4
1	IDE44 Laptop HDD Cable	2.5" Laptop HDD Cable(Length = Short)	Ebay or other	IDE44 6" Cable	
Level 2 Mounting Hardware					
2	#4 Threaded Standoff	5/8" Length M-F 4-40 Standoff Zinc Plated Steel	Mouser	728-FC4536-440-S-12	Level 2 I/O Board
3	4-40 Pan Head Screw	4-40 x 1/4" Length Zinc Plated Steel Screw	Jameco	2094389	Level 2 I/O Board
3	4-40 Flat Head Screw	4-40 x 3/8" Length Stainless Steel Screw	Mouser	SFR4-40 x 3/8 2701	Level 2 I/O Board
2	4-40 RA Bracket	4-40 x .25" x .375", 0.62" Nickel Plated Steel Bracket	Jameco	1581530	Level 2 I/O Board
CF Mounting Hardware					
4	#2 Threaded Standoff	1/4" Length F-F 2-56 Standoff Aluminum	Jameco	2235410	CF-IDE44 Adapter Mounting
8	2-56 Pan Head Screw	2-56 x 3/16" Length, Zinc Plated Steel Screw	Ebay	LINK	CF-IDE44 Adapter Mounting

Note *4 Mandatory read of Tips and Tricks Installation pdf is necessary