

## S-100 FPGA Z80 SBC Board V1.1

11/10/2019

I have?	I Need?	Reference #	Value	BOM_Qty	OrderQty	Part_No	Each	Source	Footprint	Info
		BT1	Battery Holder, 20mm, CR2032, PCB Mount, Keystone-103	1	1	236996	\$ 1.49	Jameco	CR2032H	
		C12, C13, C14, C15, C16, C17, C19, C20, C21, C23, C24, C25, C26, C27, C28, C29, C30, C31, C35, C36, C37, C38, C40, C42, C44, C45, C46	0.1 uF, 50 Volt, Monolithic, X7R, Radial	27	30	544921	\$ 0.19	Jameco	C2	multiples of 10
		C2, C3	10 uF, 25 Volt, 10%, Radial Tantalum	2	2	545641	\$ 0.59	Jameco	C1V5	
		C4	22 uF, 16 Volt, 10%, Radial Tantalum	1	1	94094	\$ 0.65	Jameco	C1V5	
		C1	33 uF, 25 Volt, 10%, Radial Tantalum	1	1	33785	\$ 1.95	Jameco	C1V5	
		D1	LED, Amber, Transparent, 605nm, 29mcd, T-1	1	1	859-LTL-1CHAE	\$ 0.41	Mouser	LEDV	
		D2, D3, D4, D5, D6, D7, D8, D9, D16	LED, Green Diffused, 572nm, 30mcd, T-1	9	10	156930	\$ 0.15	Jameco	LEDV	multiples of 10
		D10	LED, Blue Diffused, 466nm, 50mcd, T-1	1	1	333383	\$ 0.49	Jameco	LEDV	
		D11, D12, D13, D14, D19, D20, D21	LED, Yellow, Non Diffused, 588nm, 40mcd, T-1	7	10	2006705	\$ 0.07	Jameco	LEDV	multiples of 10
		D15, D17, D18	LED, Red Diffused, 643 nm, 65mcd, T-1	3	10	333851	\$ 0.12	Jameco	LEDV	multiples of 10
		P1, P17, P30, P31, P32, P33	Test Pin, 1 Position, Unshrouded Header, Solder, Straight	6		160882	\$ 0.75	Jameco	SIL-1	buy 40 Pin strips, cut to size
		JP1, JP2, JP3, JP4, JP5, JP6, JP7, JP8, JP9, JP10, P10	Jumper, 2 Position, Unshrouded Header 2.54mm Solder Straight	11		160882	\$ 0.75	Jameco	SIL-2	buy 40 Pin strips, cut to size
		K1	Jumper, 3 Position, Unshrouded Header 2.54mm Solder Straight	1		160882	\$ 0.75	Jameco	SIL-3	buy 40 Pin strips, cut to size
		P2, P3, P4, P25	Jumper, 5 Position, Unshrouded Header 2.54mm Solder Straight	4		160882	\$ 0.75	Jameco	SIL-5	buy 40 Pin strips, cut to size
		P12	Jumper, 6 Position, Unshrouded Header 2.54mm Solder Straight	1		160882	\$ 0.75	Jameco	SIL-6	buy 40 Pin strips, cut to size
		P11, P14, P34, P35	Jumper, 7 Position, Unshrouded Header 2.54mm Solder Straight	4		160882	\$ 0.75	Jameco	SIL-7	buy 40 Pin strips, cut to size
		P28, P29	Jumper, 8 Position, Unshrouded Header 2.54mm Solder Straight	2		160882	\$ 0.75	Jameco	SIL-8	buy 40 Pin strips, cut to size
		P15, P16, P26	Jumper, 10 Position, Unshrouded Header 2.54mm Solder Straight	3		160882	\$ 0.75	Jameco	SIL-10	buy 40 Pin strips, cut to size
		P27	Jumper, 4x2 Position, Unshrouded Header 2.54mm Solder Straight	1		53532	\$ 0.85	Jameco	pin_array_4x2	Buy 20x2pins and cut down
		P9	Jumper, 20x2 Position, Unshrouded Header 2.54mm Solder Straight	1	1	53532	\$ 0.85	Jameco	pin_array_20x2	
		P22	Jumper, 5x2 Position, Unshrouded Header 2.54mm Solder, <b>Right Angle</b>	1	1	203932	\$ 0.35	Jameco	pin_array_5x2	
		P21	Jumper, 8x2 Position, Unshrouded Header 2.54mm Solder, <b>Right Angle</b>	1	1	203967	\$ 0.55	Jameco	pin_array_8x2	
		P18	Jumper, 13x2 Position, Unshrouded Header 2.54mm Solder, <b>Right Angle</b>	1	1	53583	\$ 0.75	Jameco	pin_array_13x2	

	P5, P6	Header, 16x2 Position, Vertical Receptacle, Female, 0.079" (2.00mm), Through Hole, Gold	2		1212-1786-ND	\$ 6.37	Digi-Key	hdr_array_16X2	Buy 50x2 pins (cut down to one each 27x2 and 16x2)
	P7, P8	Header, 27x2 Position, Vertical Receptacle, Female, 0.079" (2.00mm), Through Hole, Gold	2		1212-1786-ND	\$ 6.37	Digi-Key	hdr_array_27X2	Buy 50x2 pins (cut down to one each 27x2 and 16x2)
	P20	Connector, Circular DIN, MINI DIN, 6 Position, Mouse/Keyboard	1	1	161-2306	\$ 1.03	Mouser	MINIDIN-6	
	J1	Connector, DE15F, High Density, D-Subminiature, Female, 15 Position, Solder, Right Angle, W/O Jack Screw, VGA	1	1	1952273	\$ 0.29	Jameco	Conn_Dsub_DE15F	
	R15, R16, R17, R18	10 Ohm 5% 1/4W	4	10	690380	\$ 0.06	Jameco	R3	multiples of 10
	R14	100 Ohm 5% 1/4W	1	10	690620	\$ 0.06	Jameco	R3	multiples of 10
	R9, R12, R19	240 Ohm 5% 1/4W	3	10	690718	\$ 0.06	Jameco	R3	multiples of 10
	R3, R4, R5	470 Ohm 5% 1/4W	3	10	690785	\$ 0.06	Jameco	R3	multiples of 10
	R13	680 Ohm 5% 1/4W	2	10	690822	\$ 0.06	Jameco	R3	multiples of 10
	R6	1K Ohm 5% 1/4W	5	10	690865	\$ 0.06	Jameco	R3	multiples of 10
	R7, R8	2K Ohm 5% 1/4W	2	10	690937	\$ 0.06	Jameco	R3	multiples of 10
	R1, R10, R11	4.7K Ohm 5% 1/4W	3	10	691024	\$ 0.06	Jameco	R3	multiples of 10
	R20, R21, R22	47K Ohm 5% 1/4W	3	10	691260	\$ 0.06	Jameco	R3	multiples of 10
	R2	220K Ohm 5% 1/4W	1	10	691420	\$ 0.06	Jameco	R3	multiples of 10
	RR3	680 Ohm SIP 10 pin, 9 Resistors, 125 mWatt, 2%	1	1	652-4610X-1LF-680	\$ 0.35	Mouser	r_pack9	
	RR7	1K Ohm SIP 6 pin, 5 Resistors, 125 mWatt, 2%	1	1	652-4606M-1LF-1K	\$ 0.23	Mouser	r_pack5	
	RR1, RR2, RR4, RR5, RR6	1K Ohm SIP 10 pin, 9 Resistors, 125 mWatt, 2%	2	2	858-L101S102LF	\$ 0.45	Mouser	r_pack9	
	SP1	Audio Buzzer, Piezo, 12VDC 7mA, 3VDC, 3.5KHz to 4.5KHz, Through Hole	1	1	138713	\$ 1.99	Jameco	buzzer_AL11P_modified	
	SW2	Switch, Push Button, Tactile, SPST, Normally Off, Momentary (On), 15 Volt DC @ 20mA	1	1	149948	\$ 0.35	Jameco	sw_push_small	
	SW3	DIP Switch, 8-Pos, On-Off, SPST, Raised Rocker	1	1	696917	\$ 1.49	Jameco	SWDIP8	
	Q1	2N3904, NPN, TO-92, General Purpose	1	1	38359	\$ 0.25	Jameco	TO92-INVERT	
	Q2	PN2907A, PNP, Silicon Transistor, 625mW Max, TO-92	1	1	178520	\$ 0.25	Jameco	TO-92	
	X1	Crystal Oscillator, 32.768KHZ, Tuning Fork, 12.5PF, case AT39	1	10	325244	\$ 0.19	Jameco	HC-18UV	multiples of 10
	U1, U25	7403 (Alt.: 74LS38)	2	2	47693	\$ 0.89	Jameco	14dip300	
	U12	74LS05	1	1	46341	\$ 0.89	Jameco	14dip300	
	U11	74LS07	1	1	46367	\$ 0.95	Jameco	14dip300	
	U24, U27	74LS244	2	2	47183	\$ 0.89	Jameco	20dip300	
	U4, U7, U8, U9, U10, U13, U14, U15, U16, U17, U23	74LVC245A, Bus Transceivers, Tri-State Octal Bus, Designed for 1.65-V to 3.6-V VCC operation	11	20	595-SN74LVC245AN	\$ 0.487	Mouser	20dip300	multiples of 10 for Volume Price
	U2	DS1305+ Real Time Clock, Serial, 3-Wire, SPI	1	1	700-DS1305	\$ 6.07	Mouser	16dip300	

	U26	82C55A (Alt.: CP82C55A-5), Peripheral Interface, 5MHZ, DIP 40-pin	1	1	52732	\$ 5.95	Jameco	40dip600	
	U5	AS6C4008-55PCN, HM628512, SRAM, Asynchronous Memory, 4Mb (512K x 8), Parallel, 55ns, 32-PDIP	1	1	1450-1027- ND	\$ 4.80	Digi-Key	32dip600	
	P5, P6, P7, P8	FPGA Board, Core EP4CE10 FPGA NIOS II evaluation development board, Cyclone 4 EP4CE10F17C8N chip	1	1	6973	\$ 33.99	WaveShare. com		
		USB Blaster V2, ALTERA FPGA CPLD download cable programmer	1	1	5989	\$ 19.99	WaveShare. com		
	P12	RS232 UART circuit, FT231X Breakout	1	1	BOB- 13263	\$ 12.95	Sparkfun.co m	SIL-6	
	P9	SYBA SD-CF-IDE-DI IDE to Compact Flash Adapter ( Direct Insertion Mode )	1	1	9SIA4M55 797035	\$ 9.56	Newegg.co m	pin_array_20x2	
	P34, P35	MicroSD Transflash Breakout board, 7-Pin Header Connector, 3.3V supply only	2		BOB- 00544	\$ 4.50	Sparkfun.co m	SIL-7	
	P28, P29 (Alternate for P34, or P35)	MicroSD card breakout board, with CD74HC4050 Buffer IC, 3.3V Voltage Regulator, 8-Pin Header Connector	2		254	\$ 7.50	Adafruit	SIL-8	
	P15	SD/MMC Card Breakout, to a standard 0.10" 10-pin header	1	1	BOB- 12941	\$ 9.95	Sparkfun.co m	SIL-10	
	P2	D24V22F5 Pololu 5V 2.5A Step-Down Voltage Regulator	1		D24V22F5	\$ 8.95	Pololu.com	SIL-5	
	P3 (Alternate for P2)	D24V25F5 Pololu 5V 2.5A Step-Down Voltage Regulator	1		D24V25F5	\$ 10.95	Pololu.com	SIL-5	
	U4, U7, U8, U9, U10, U13, U14, U15, U16, U17, U23	D24V25F3 Pololu 3.3V 2.5A Step- Down Voltage Regulator	1	1	D24V25F3	\$ 10.95	Pololu.com	SIL-5	
	DIP14	DIP socket, 14 Pins	4	10	112214	\$ 0.20	Jameco	14dip300	order 10+
	DIP16	DIP socket, 16 Pins	1	10	112222	\$ 0.18	Jameco	16dip300	order 10+
	DIP20	DIP socket, 20 Pins	16	16	38608	\$ 0.23	Jameco	20dip300	order 10+
	DIP32 (.600")	DIP socket, 32 Pins (.600")	1	1	105381	\$ 1.25	Jameco	32dip600	
	DIP40 (.600")	DIP socket, 40 Pins (.600")	1	1	41111	\$ 0.39	Jameco	40dip600	
	P23, P24 (Card Ejector)	Circuit Board Card Ejector and Pin, 0.062 inch, White Nylon, BIVAR PN# CP-06 WE	2	2	749-CP-06- WE	\$ 0.56	Mouser		