

## S-100 FPGA Board V2.1c

6/7/2019

I have?	I Need?	Reference #	Value	BOM_Qty	OrderQty	Part_No	Each	Source	Footprint	Info
		C12, C19, C20	47 pF, Capacitor Monolithic, 100 Volt, 5%, NPO	3	10	332567	\$ 0.19	Jameco	C2	multiples of 10
		C1, C2, C4, C5, C6, C7, C8, C9, C11, C14, C15, C16, C17, C18, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C33, C37, C39, C41, C42, C43, C45, C52, C54	0.1 uF, 25 Volt, Monolithic X7R, Radial	33	40	544921	\$ 0.15	Jameco	C2	multiples of 10
		C3, C13	10 uF, 25 Volt, 10%, Radial Tantalum	2	2	545641	\$ 0.59	Jameco	C1V5	
		C10	33 uF, 25 Volt, 10%, Radial Tantalum	1	1	33785	\$ 1.75	Jameco	C1V5	
		D1, D2, D3, D4, D5, D6, D7, D8	LED, Uni-Color Green, 567nm, 30mcd, 2-Pin, T-1	8	10	156930	\$ 0.15	Jameco	LEDV	multiples of 10
		D9	LED, Blue, 466nm, 50mcd, T1	1	1	333383	\$ 0.59	Jameco	LEDV	
		D10	LED, Uni-Color Yellow, 595nm, 450mcd, 2-Pin, T-1	1	10	206480	\$ 0.12	Jameco	LEDV	multiples of 10
		D11	LED, Red Diffused, 65mcd 660 nm, T-1	1	10	333851	\$ 0.12	Jameco	LEDV	multiples of 10
		K2	LED, Bi-Color Green/Red, 565nm/697nm, 3-Pin, T-1 3/4	1	10	34673	\$ 0.19	Jameco	led-duoled-C-5mm	multiples of 10
		P18, P66, P71, P72, P73	Test Pin, 1 Position, Unshrouded Header, Solder, Straight	5		160882	\$ 0.79	Jameco	SIL-1	buy 40 Pin strips, cut to size
		JP1, JP2, JP3, JP4, JP5, JP6, JP12, JP13, JP14, JP15, P14, P48	Jumper, 2 Position, Unshrouded Header, 2.54mm, Solder, Straight	12		160882	\$ 0.79	Jameco	SIL-2	buy 40 Pin strips, cut to size
		K1, K3, K4, K5	Jumper, 3 Position, Unshrouded Header, 2.54mm, Solder, Straight	4		160882	\$ 0.79	Jameco	SIL-3	buy 40 Pin strips, cut to size
		P21, P29, P82	Jumper, 4 Position, Unshrouded Header, 2.54mm, Solder, Straight	3		160882	\$ 0.79	Jameco	SIL-4	buy 40 Pin strips, cut to size
		P2	Jumper, 5 Position, Unshrouded Header, 2.54mm, Solder, Straight	1		160882	\$ 0.79	Jameco	SIL-5	buy 40 Pin strips, cut to size
		P45	Jumper, 6 Position, Unshrouded Header, 2.54mm, Solder, Straight	1		160882	\$ 0.79	Jameco	SIL-6	buy 40 Pin strips, cut to size
		P43, P47	Jumper, 7 Position, Unshrouded Header, 2.54mm, Solder, Straight	2		160882	\$ 0.79	Jameco	SIL-7	buy 40 Pin strips, cut to size
		P42, P46	Jumper, 2x2 Position, Unshrouded Header, 2.54mm, Solder, Straight	2		53532	\$ 0.85	Jameco	pin_array_2X2	Buy 20x2pins and cut down
		P80	Jumper, 3x2 Position, Unshrouded Header, 2.54mm, Solder, Straight	1		53532	\$ 0.85	Jameco	pin_array_3X2	Buy 20x2pins and cut down
		P63, P70	Jumper, 4x2 Position, Unshrouded Header, 2.54mm, Solder, Straight	2		53532	\$ 0.85	Jameco	pin_array_4X2	Buy 20x2pins and cut down

	P68	Jumper, 5x2 Position, Unshrouded Header, 2.54mm, Solder, Straight	1		53532	\$ 0.85	Jameco	pin_array_5X2	Buy 20x2pins and cut down
	P3	Jumper, 8x2 Position, Unshrouded Header, 2.54mm, Solder, Straight	1		53532	\$ 0.85	Jameco	pin_array_8X2	Buy 20x2pins and cut down
	P22	Header, 6 Position, Vertical Receptacle, Female, 1 Row, .100" 2.54mm L.S.	1		2168173	\$ 1.09	Jameco	HDR-6	buy 40 pin strips, cut to size
	P12, P15, P16, P17, P19, P24, P25, P65	Header, 8 Position, Vertical Receptacle, Female, 1 Row, .100" 2.54mm L.S.	8		2168173	\$ 1.09	Jameco	HDR-8	buy 40 pin strips, cut to size
	P26	Header, 10 Position, Vertical Receptacle, Female, 1 Row, .100" 2.54mm L.S.	1		2168173	\$ 1.09	Jameco	HDR-10	buy 40 pin strips, cut to size
	P10, P23	Header, 4x2 Position, Vertical Receptacle, Female, 2 Row, .100" 2.54mm L.S.	2		70827	\$ 0.95	Jameco	hdr_array_4X2	Buy 20x2pins and cut down
	P4, P11, P60, P61	Header, 8x2 Position, Vertical Receptacle, Female, 2 Row, .100" 2.54mm L.S.	4	4	70721	\$ 0.89	Jameco	hdr_array_8X2	
	P5, P6	Header, 16x2 Position, Vertical Receptacle, Female, <b>0.079" (2.00mm)</b> , Through Hole, Gold	2		437-83387038 10001101	\$ 3.04	Mouser	hdr_array_16X2	Buy 19x2 pins and cut down
	P7, P8	Header, 27x2 Position, Vertical Receptacle, Female, <b>0.079" (2.00mm)</b> , Through Hole, Gold	2		437-83387038 10001101	\$ 3.04	Mouser	hdr_array_27X2	Buy 19x2 pins and cut down
	R11	100 Ohm 5% 1/4W, (CF)	1	10	690620	\$ 0.06	Jameco	R3	multiples of 10
	R1	150 Ohm 5% 1/4W, (CF)	1	10	690662	\$ 0.06	Jameco	R3	multiples of 10
	R3	330 Ohm 5% 1/4W, (CF)	1	10	690742	\$ 0.06	Jameco	R3	multiples of 10
	R7	470 Ohm 5% 1/4W, (CF)	1	10	691500	\$ 0.06	Jameco	R3	multiples of 10
	R5, R10	510 Ohm 5% 1/4W, (CF)	2	10	690793	\$ 0.06	Jameco	R3	multiples of 10
	R12	2K Ohm 5% 1/4W, (CF)	1	10	690937	\$ 0.06	Jameco	R3	multiples of 10
	R2, R4, R6	10K Ohm 5% 1/4W, (CF)	3	10	691104	\$ 0.06	Jameco	R3	multiples of 10
	RR1, RR2	1K Ohm SIP 10 pin, 9 Resistors, 125 mWatt, 2%	2	2	97877	\$ 0.29	Jameco	r_pack9	
	RR5	1K Ohm SIP 6 pin, 5 Resistors, 125 mWatt, 2%	1	1	652-4306R-101-1K	\$ 1.06	Mouser	r_pack5	
	L1	Choke, 10uH, 10% Inductive Tol, 130mA Idc, Axial Conformal	1	1	372171	\$ 0.35	Jameco	R3	
	SP1	Audio Buzzer, Piezo, 12VDC 7mA, 3VDC, 3500Hz to 4500Hz, Through Hole	1	1	138713	\$ 1.99	Jameco	buzzer_AL11P_modified	
	SW2	DIP Switch, 4-Pos, On-Off, SPST, Raised Slide	1	1	38820	\$ 0.89	Jameco	8dip300	
	SW1	Switch, Push Button, Tactile, SPST, Normally Off, Momentary (On), 15 Volt DC @ 20mA	1	1	149948	\$ 0.35	Jameco	sw_push_small	
	Q1	PN2907A, PNP, Silicon Transistor, 625mW Max, TO-92	1	10	178520	\$ 0.09	Jameco	TO-92	multiples of 10
	U12	74LS04	1	1	46316	\$ 0.69	Jameco	14dip300	

	U23, U28	74LS07N	2	2	46367	\$ 0.89	Jameco	14dip300	
	U16	74LS125	1	1	46501	\$ 0.69	Jameco	14dip300	
	U3, U4, U5, U6, U7, U10, U11, U13, U14, U15, U17, U20, U22, U32, U33, U34	74LVC245A, Bus Transceivers, Tri-State Octal Bus, Designed for 1.65-V to 3.6-V VCC operation	16	20	595-SN74LVC245AN	\$ 0.49	Mouser	20dip300	<b>multiples of 10 for Volume Price</b>
	U8	ATMega328P-PU 32kB Flash Microcontroller 8bit, un-programmed, DIP28	1	1	2139111	\$ 2.95	Jameco	28dip300	
	X1	CRYSTAL, 16.0 MHz, HC49/US, 20pF, Low Profile	1	1	325139	\$ 0.59	Jameco	HC49	
	P9	Clock Oscillator, 2.00 MHz, DIP-14, 5V, soldered <b>(socket is optional)</b>	1	1	27924	\$ 1.49	Jameco	14dip300	
		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		
	P20	MicroSD card breakout board, with CD74HC4050 Buffer IC, 3.3V Voltage Regulator, 8-Pin Header Connector	1	1	254	\$ 7.50	Adafruit	SIL-8	
		USB-to-Serial Adapter, FT231X Breakout board, microUSB jack, 3.3V	1	1	BOB-13263	\$ 12.95	Sparkfun.com		
	P67	D24V22F5 Pololu 5V 2.5A Step-Down Voltage Regulator	1		D24V22F5	\$ 8.95	Pololu.com	SIL-5	
	P1 (Alternate for P67)	D24V25F5 Pololu 5V 2.5A Step-Down Voltage Regulator	1		D24V25F5	\$ 10.95	Pololu.com	SIL-5	
	U1 (Alternate for P1)	L7805ACV, 5 Volt, 1 Amp, 3 Pin (3+Tab) TO-220	1		924570	\$ 0.39	Jameco	TO-220	
	U2	LM3940 Low Dropout Regulator, 3.3 Volt, 1 Amp, 3-Pin (3+Tab), TO-220	1	1	926-LM3940IT-3.3NOPB	\$ 1.81	Mouser	TO-220	
	U1, U2	Heat Sink TO-220, 0.75" x 0.36" x 0.75" (for LM7805 & LM3940)	2	2	70658	\$ 0.35	Jameco		
	U1, U2	Screw, 6-32, 1/4" Phillips	2						
	U1, U2	NUT, HEX, 6-32	2						
	DIP14	DIP socket, 14 Pins	4	10	112214	\$ 0.14	Jameco	14dip300	multiples of 10
	DIP20	DIP socket, 20 Pins	16	20	112248	\$ 0.17	Jameco	20dip300	multiples of 10
	DIP28 (0.300")	DIP socket, 28 Pin, Machine Tooled, Low-Profile, 0.3 Inch Wide	1	1	114412	\$ 1.09	Jameco	28dip300	
	P1, P2 (Card Ejector)	Circuit Board Card Ejector and Pin, 0.062 inch, White Nylon, BIVAR PN# CP-06 WE	2	2	749-CP-06-WE	\$ 0.49	Mouser		