

I have?	I Need?	Reference #	Value	BOM_Qty	OrderQty	Part_No	Each	Source	Footprint	Info
		C4, C5, C6, C7, C8, C9, C10, C11, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C35, C36, C37, C38, C39, C40, C46	0.1uF, 50 Volt, X7R, 10%, Radial, Monolithic Ceramic	35	35	544921	\$ 0.19	Jameco	C2	min order 10+
		C2, C3, C33, C34	10uF, 25 Volt, Aluminum Radial-Lead, Polarized Electrolytic Capacitor, (±20%) 85°C	4	10	1946367	\$ 0.17	Jameco	C1V5	min order 10+
		C1	33 uF, 50 Volt, Aluminum Radial-Lead, Polarized Electrolytic Capacitor, (±20%) 85°C	1	10	93747	\$ 0.17	Jameco	C1V5	min order 10+
		C12	Trim Cap, 5.5 - 65pF, Ceramic Trimmer Capacitor, 10mm (.394"), 250 Volt DC	1	1	BFC280831659-ND	\$ 6.12	Digikey	CV3-50PF	
		D2, D3, D4, D5, D6, D7, D12, D14, D15, D16	LED, Red, Diffused, 643 nm, 65mcd, 3mm T-1	10	10	333851	\$ 0.12	Jameco	LEDV	min order 10+
		D1, D9, D13	LED, Yellow, Diffused, 588nm 40mcd, 3mm T-1	3	10	2006705	\$ 0.13	Jameco	LEDV	min order 10+
		D8	LED, Green, Diffused, 567nm, 30mcd, 3mm T-1	1	10	156930	\$ 0.15	Jameco	LEDV	min order 10+
		D10	LED, Blue, Diffused, 466nm, 50mcd, 3mm T-1	1	1	333383	\$ 0.49	Jameco	LEDV	
		D11 (Not Used)	DIODE, (1N4148 or 1N914), 100V 200mA 10mA(I <sub>f</sub> ) Small Signal Switching	1		36038	\$ 0.06	Jameco	D5	min order 10+
		JP1, JP2, JP3, JP4, JP5, JP6, P24, P25	Jumper, 2 Position, Unshrouded Header 2.54mm Solder Straight	8		68339	\$ 0.99	Jameco	SIL-2	order 36 Pin strip
		K1, K2, K3, K4, K5	Jumper, 3 Position, Unshrouded Header 2.54mm Solder Straight	5		68339	\$ 0.99	Jameco	SIL-3	order 36 Pin strip
		P2, P3, P4, P21, P23	Jumper, 5 Position, Unshrouded Header 2.54mm Solder Straight	5		68339	\$ 0.99	Jameco	SIL-5	order 36 Pin strip
		P12	Jumper, 6 Position, Unshrouded Header 2.54mm Solder Straight	1		68339	\$ 0.99	Jameco	SIL-6	order 36 Pin strip
		P11, P14	Jumper, 7 Position, Unshrouded Header 2.54mm Solder Straight	2		68339	\$ 0.99	Jameco	SIL-7	order 36 Pin strip
		P16, P22, P29, P33	Jumper, 4x2 Position, Unshrouded Header 2.54mm Solder Straight	4		68574	\$ 0.99	Jameco	pin_array_4X2	order 30x2 strip
		P20	Jumper, 6x2 Position, Unshrouded Header 2.54mm Solder Straight	1		68574	\$ 0.99	Jameco	pin_array_6X2	order 30x2 strip
		P17	Jumper, 8x2 Position, Unshrouded Header 2.54mm Solder Straight	1		68574	\$ 0.99	Jameco	pin_array_8X2	order 30x2 strip
		P1	Header, Shrouded w/Ejector, 34-pin 2-Row, 0.100" (2.54mm), Solder, RT angle, (3" or 5.25" Floppy)	1	1	617-09185346913	\$ 4.22	Mouser	pin_array_17X2	
		P9	Header, Shrouded w/Ejector, 50-pin 2-Row, 0.100" (2.54mm), Solder, RT angle, (8" Floppy)	1	1	617-09185506913	\$ 4.80	Mouser	pin_array_25X2	

	P10, P15	Header, RT angle, 20X2 Pins (40 positions), 2.54MM, Contact Length-Mating = 0.230" (5.84mm), Contact Length-Post = 0.400" (10.16mm)	2	2				pin_array_20X2	order 2 pieces 10x2 pin parts for each connector
	P5, P6	Header, 16x2 Pins (32 positions), Vertical Receptacle, Female, <b>0.079" (2.00mm)</b> , Through Hole, Gold (Preci-dip)	2	2	437-83387032640011	\$ 6.86	Mouser	hdr_array_16X2	
	P7, P8	Header, 27x2 Pin (54 positions), Vertical Receptacle, Female, <b>0.079" (2.00mm)</b> , Through Hole, Gold (Preci-dip)	2		437-8338306410453101	\$ 14.32	Mouser	hdr_array_27X2	Buy 32x2 pins (64 positions) and cut down
	R11, R17	330 Ohm 5% 1/4W	2	10	690742	\$ 0.06	Jameco	R3	min order 10+
	R1, R2, R4, R5	470 Ohm 5% 1/4W	4	10	690785	\$ 0.06	Jameco	R3	min order 10+
	R3, R6, R9, R10, R14, R15, R16	1K Ohm 5% 1/4W	7	10	690865	\$ 0.06	Jameco	R3	min order 10+
	R13	2K Ohm 5% 1/4W	1	10	690937	\$ 0.06	Jameco	R3	min order 10+
	R7, R8	10K Ohm 5% 1/4W	2	10	691104	\$ 0.06	Jameco	R3	min order 10+
	R12	220K Ohm 5% 1/4W	1	10	691420	\$ 0.06	Jameco	R3	min order 10+
	RR4	150 Ohm SIP, 7 pin, 6 Resistors, 125 mWatt, 2%	1	1	652-4607X-1LF-150	\$ 0.63	Mouser	r_pack6	
	RR3	680 Ohm SIP, 10 pin, 9 Resistors, 125 mWatt, 2%	1	1	652-4310R-1LF-680	\$ 1.73	Mouser	r_pack9	
	RR2	1K Ohm SIP, 9 pin, 8 Resistors, 125 mWatt, 2%	1	1	652-4609X-1LF-1K	\$ 0.49	Mouser	r_pack8	
	RR1	1K Ohm SIP, 10 pin, 9 Resistors, 125 mWatt, 2%	1	1	858-L101S102LF	\$ 0.47	Mouser	r_pack9	
	RV1, RV2	50k Ohm Trimmer Potentiometer, 10%, 1/2 Watt, 25 Turn, Through Hole	2	2	853791	\$ 1.49	Jameco	RV2	
	SW1	DIP Switch, 8-Pos, On-Off, SPST, Raised Rocker	1	1	696917	\$ 1.49	Jameco	16dip300	
	SW2	Switch, Push Button, Tactile, SPST, Normally Off, Momentary (On), 15 Volt DC @ 20mA	1	1	149948	\$ 0.35	Jameco	sw_push_small	
	X1	Crystal, 32.768 KHz, Tuning Fork, 10.5PF, Frequency Tolerance ±50 ppm, case AT39	1	1	14584	\$ 0.59	Jameco	AT39	
	(P26, P27, P30, P31)	Coin Cell Battery Holder, CR2032, 20mm	1	1	236996	\$ 1.49	Jameco	CR2032	
		CR2032 Coin Cell Lithium Battery, 3V 225mAh	1	1	14162	\$ 0.79	Jameco	CR2032	
	U5	AS6C4008-55PCN, SRAM, Asynchronous Memory, 4Mb (512K x 8), Parallel, 55ns, 32-pin PDIP	1	1	913-AS6C4008-55PCN	\$ 6.38	Mouser	32dip600	
	U20, U21	74LS00	2	2	74LS00	\$ 0.39	anchor-electronics.com	14dip300	
	U17	74LS04	1	1	74LS04	\$ 0.48	anchor-electronics.com	14dip300	
	U1, U19, U22, U27	74LS06	4	4	74LS06	\$ 0.60	anchor-electronics.com	14dip300	

	U25, U28	74LS07N	2	2	74LS07	\$ 0.60	anchor-electronics.com	14dip300	
	U30	74LS09	1	1	74LS09	\$ 0.25	anchor-electronics.com	14dip300	
	U29	74LS123	1	1	74LS123	\$ 0.46	anchor-electronics.com	16dip300	
	U24	74LS139	1	1	74LS139	\$ 0.46	anchor-electronics.com	16dip300	
	U6	74LS244	1	1	74LS244	\$ 0.79	anchor-electronics.com	20dip300	
	U8, U11, U12	74LS645	3	3	74LS645	\$ 1.06	anchor-electronics.com	20dip300	
	U2, U3, U4, U7, U9, U10, U14, U15, U16, U23, U32	SN74LVC245AN	11		595-SN74LVC245AN	\$ 0.98	Mouser	20dip300	
	U31	DS1305+ Real Time Clock, Serial, 3-Wire, SPI, DIP-16	1	1	700-DS1305	\$ 7.42	Mouser	16dip300	
	U13 (ALTERNATE)	DS1305EN+T&R Real Time Clock, Serial, 3-Wire, SPI, TSSOP-20	1		700-DS1305ENT&R	\$ 6.39	Mouser	TSSOP-20	
	U26	NEC 82C55AC-2, CMOS Programmable Peripheral Interface, 5 MHz, 40-Pin PDIP	1	2	82C55AC-2 221	\$ 2.42	Utsource.net	40dip600	Minimum: 2
	U18	WD2793PL-02 Floppy Disk Controller - Formatter, 40-pin PDIP	1	1	WD2793	\$ 19.95	anchor-electronics.com	40dip600	
	(P3)	D24V25F5 Pololu 5V, 2.5A Step-Down Voltage Regulator	1	1	2850	\$ 11.95	Pololu.com	SIL-5	
	(P2) (ALTERNATE)	D24V22F5 Pololu 5V 2.5A Step-Down Voltage Regulator			2858	\$ 17.95	Pololu.com	SIL-5	
	(P4)	D24V25F3 Pololu 3.3V 2.5A Step-Down Voltage Regulator	1	1	2849	\$ 11.95	Pololu.com	SIL-5	
	(P21) (ALTERNATE)	D24V22F3 Pololu 3.3V, 2.6A Step-Down Voltage Regulator			2857	\$ 17.95	Pololu.com	SIL-5	
		FPGA Board, Core EP4CE10 FPGA NIOS II evaluation development board, Cyclone 4 EP4CE10F17C8N chip	1	1	RB-Wav-256	\$ 129.99	robotshop.com		
		USB Blaster V2, ALTERA FPGA CPLD download cable programmer	1	1	5989	\$ 21.99	WaveShare.com		
	(P11, P12, P14)	USB-to-Serial Adapter, FT231X Breakout board, microUSB jack, 3.3V	1	1	474-BOB-13263	\$ 12.95	Mouser		
	(P11, P12, P14) (ALTERNATE)	CP2104 Friend - USB to Serial Converter			3309	\$ 5.95	Adafruit.com		
	DIP14	DIP socket 14	10	10	526192	\$ 0.20	Jameco	14dip300	min order 10+
	DIP16	DIP socket, 16 Pins	3	10	112222	\$ 0.18	Jameco	16dip300	min order 10+
	DIP20	DIP socket, 20 Pins	15	15	112248	\$ 0.22	Jameco	20dip300	min 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	526272	\$ 0.45	Jameco	40dip600	

		Card Ejector	Circuit Board Card Ejector, 0.062 inch, Nylon, White, BIVAR PN# CP-06 WE	2	2	749-CP-06-WE	\$ 0.52	Mouser		
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