

Batch size

1

Part ID	Part Desc	Vendor Part No.	Vendor source location	Manufacturer Part No.	Manufacturer Name	Part Value	Package/Case	QTY on board	1-9 Vendor Pricing	10-24 Vendor Pricing	25-99 Vendor Pricing	>=100 Vendor Pricing	Extended Pricing for board batch
U1-U16	Avalon ASIC chip	AVALON	AVALON	Avalon A256	Avalon		QFN48	0	\$11,00	\$11,00	\$11,00	\$11,00	\$0,00
U17	USB Micro Controller	579-PIC16LF1459-I/SS	mouser.com	PIC16LF1459-I/SS	Microchip		SSOP-20	1	\$1,94	\$1,62	\$1,48	\$1,34	\$1,94
U18-19	1.0V, 16A Buck Step Down Regulator	942-IR3895MTR1PBF	mouser.com	IR3895MTR1PBF	International Rectifier	16A	PQFN-16 (5x6)	2	\$4,69	\$2,70	\$2,70	\$2,55	\$9,38
U20	3.3V, 2A Buck Step Down Regulator	579-MCP16322T-330ENG	mouser.com	MCP16322T-330E/NG	Microchip Technology	3.3V@2A	VQFN-16	1	\$1,86	\$1,55	\$1,29	\$1,18	\$1,86
U21,U25	Dual Schmitt Trigger Inverter	863-NL27WZ14DFT2G	mouser.com	NL27WZ14DFT2G	On Semi.		SOT-363	2	\$0,44	\$0,26	\$0,21	\$0,12	\$0,88
U22,U23	1.0V, 1A LDO Regulator	863-NCP694D10HT1G	mouser.com	NCP694D10HT1G	On Semi.	1.0V, 1A	SOT-89-5	2	\$1,67	\$1,35	\$1,35	\$1,08	\$3,34
U24	Dual NOR Gate	771-AUP2G02DC125	mouser.com	74AUP2G02DC,125	NXP	1.8V	SOT-765-1	1	\$0,21	\$0,21	\$0,20	\$0,19	\$0,21
X1	Oscillator	815-ASDMB-25MHZ-LC	mouser.com	ASDMB-25.000MHZ-LC-T	Abracon	25MHz	QFN4	1	\$1,46	\$1,22	\$1,15	\$0,97	\$1,46
Q1	N-Channel MOSFET	512-NDS351AN	mouser.com	NDS351AN	Fairchild	1.4A, 30V	SSOT-3	1	\$0,55	\$0,32	\$0,32	\$0,15	\$0,55
D1	Red LED (Data)	78-VLMS1300-GS08	mouser.com	VLMS1300-GS08	Vishay	2V, 20mA	603	1	\$0,08	\$0,07	\$0,07	\$0,07	\$0,08
D2	Green LED (Power)	78-VLMG1300-GS08	mouser.com	VLMG1300-GS08	Vishay	2V, 20mA	603	1	\$0,08	\$0,08	\$0,08	\$0,07	\$0,08
D3	Schottky Diodes & Rectifiers	78-SL02	mouser.com	SL02-GS08	Vishay Semiconductors	1A, 30V	DO-219AB	1	\$0,22	\$0,19	\$0,19	\$0,17	\$0,22
L1-2	Power Inductor, Low DCR, 18A	580-38L361C	mouser.com	38L361C	Murata Power Solutions	0.360uH 10x10	SMD/SMT	2	\$1,62	\$1,45	\$1,36	\$1,29	\$3,24
L3	Power Inductor	810-MLP2016S4R7M	mouser.com	MLP2016S4R7M	TDK	4.7uH	806	1	\$0,36	\$0,26	\$0,26	\$0,21	\$0,36
L4-19	Ferrite Bead Choke	70-ILBB0603ER600V	mouser.com	ILBB0603ER600V	Vishay / Dale	60 ohm, 25%	603	16	\$0,11	\$0,11	\$0,11	\$0,05	\$1,76
L20,L21	Ferrite Bead Choke	81-BLM15BB121SN1D	mouser.com	BLM15BB121SN1D	Vishay / Dale	120 ohm, 25%	402	2	\$0,11	\$0,05	\$0,05	\$0,03	\$0,22
L22,L23	Ferrite Bead Choke	81-BLM15BB221SN1D	mouser.com	BLM15BB221SN1D	Vishay / Dale	220 ohm, 25%	402	2	\$0,11	\$0,05	\$0,05	\$0,03	\$0,22
C19,C273	Electrolytic Capacitor	647-UWT1V331MNL1S	mouser.com	UWT1V331MNL1GS	Nichicon	330uF, 35 volt	SMT 10mm Dia. x 10mm L x 10.3mm H	2	\$0,72	\$0,45	\$0,45	\$0,19	\$1,44
C4-8,C23-27,C41,C42	Ceramic Capacitor	81-GRM21BR61E106KA3L	mouser.com	GRM21BR61E106KA73L	Murata Electronics	10uF	805	12	\$0,40	\$0,22	\$0,22	\$0,13	\$2,62
C9-11,C28-30	Ceramic Capacitor	81-GRM188R71E104KA01	mouser.com	GRM188R71E104KA01J	Murata Electronics	0.1uF	603	6	\$0,32	\$0,04	\$0,04	\$0,02	\$1,92
C3,C22	Reference Capacitor	81-GRM39C101J50	mouser.com	GRM1885C1H101JA01D	Murata Electronics	100pF	603	2	\$0,10	\$0,03	\$0,03	\$0,01	\$0,20
C16,C35	Ceramic Capacitor	77-VJ0603Y332KXACBC	mouser.com	VJ0603Y332KXACW1BC	Vishay / Vitramon	3300pF	603	2	\$0,06	\$0,06	\$0,05	\$0,04	\$0,12
C18,C37	Ceramic Capacitor	77-VJ0603Y221MXJCBC	mouser.com	VJ0603Y221MXJCW1BC	Vishay / Vitramon	220pF	603	2	\$0,06	\$0,06	\$0,04	\$0,03	\$0,12
C12-15,C31-34	Ceramic Capacitor	810-C3216X750J476M	mouser.com	C3216X750J476M	TDK	47uF	1206	8	\$0,47	\$0,47	\$0,36	\$0,33	\$3,76
C2,C21	Ceramic Capacitor	810-C1608X5R1V225M	mouser.com	C1608X5R1V225M	TDK	2.2uF	603	2	\$0,09	\$0,09	\$0,07	\$0,06	\$0,18
C17,C36	Ceramic Capacitor	81-GRM18R71E103KA01J	mouser.com	GRM188R71E103KA01J	Murata Electronics	10nF	603	2	\$0,21	\$0,03	\$0,03	\$0,02	\$0,42
C1,C20	Ceramic Capacitor	81-GRM188R61E105KA12	mouser.com	GRM188R61E105KA12D	Murata Electronics	1.0uF	603	2	\$0,11	\$0,05	\$0,05	\$0,03	\$0,22
C38	Ceramic Capacitor	77-VJ0603Y223KXACBC	mouser.com	VJ0603Y223KXACW1BC	Vishay / Vitramon	22nF	603	1	\$0,09	\$0,09	\$0,08	\$0,06	\$0,09
C39,C40,C268-C271	Ceramic Capacitor	810-C1608X5R0J226M	mouser.com	C1608X5R0J226M	TDK	22uF	603	6	\$0,15	\$0,12	\$0,12	\$0,11	\$0,90
C43-266	Ceramic Capacitor	810-C1005X7S1A474K	mouser.com	C1005X7S1A474K	TDK	0.47uF	402	192	\$0,09	\$0,09	\$0,05	\$0,02	\$3,84
C272,C275	Ceramic Capacitor	77-VJ0402Y103KXXAC	mouser.com	VJ0402Y103KXXAC	Vishay / Vitramon	0.01uF	402	2	\$0,07	\$0,07	\$0,07	\$0,05	\$0,14
C274	Ceramic Capacitor	81-GRM1555C1E471JA1D	mouser.com	GRM1555C1E471JA01D	Murata Electronics	470pF	402	1	\$0,20	\$0,03	\$0,03	\$0,02	\$0,20
C267,C276	Ceramic Capacitor	81-GRM155R71C104KA88	mouser.com	GRM155R71C104KA88D	Murata Electronics	0.1uF	402	2	\$0,10	\$0,01	\$0,01	\$0,01	\$0,20
R8,R18	Thick Film Resistor	667-ERJ-3EKF1781V	mouser.com	ERJ-3EKF1781V	Panasonic	1.78K 1%	603	2	\$0,08	\$0,01	\$0,01	\$0,01	\$0,16
R5,R9,R15,R19	Thick Film Resistor	667-ERJ-3EKF4021V	mouser.com	ERJ-3EKF4021V	Panasonic	4.02K 1%	603	4	\$0,08	\$0,01	\$0,01	\$0,01	\$0,32
R7,R17,R10,R20	Thick Film Resistor	667-ERJ-3EKF2871V	mouser.com	ERJ-3EKF2871V	Panasonic	2.87K 1%	603	4	\$0,08	\$0,01	\$0,01	\$0,01	\$0,32
R22		667-ERJ-3EKF4992V	mouser.com	ERJ-3EKF4992V	Panasonic	49.9k 1%	603	1	\$0,08	\$0,01	\$0,01	\$0,01	\$0,08
R6,R16,R43-44	Thick Film Resistor	667-ERJ-3EKF1000V	mouser.com	ERJ-3EKF1000V	Panasonic	100 1%	603	4	\$0,08	\$0,01	\$0,01	\$0,01	\$0,32
R1,R11	Thick Film Resistor	667-ERJ-3EKF3922V	mouser.com	ERJ-3EKF3922V	Panasonic	39.2K 1%	603	2	\$0,08	\$0,01	\$0,01	\$0,01	\$0,16
R3-4,R13-14	Thick Film Resistor	667-ERJ-3EKF4992V	mouser.com	ERJ-3EKF4992V	Panasonic	49.9K 1%	603	4	\$0,08	\$0,01	\$0,01	\$0,01	\$0,32
R2,R12	Thick Film Resistor	667-ERJ-3EKF7501V	mouser.com	ERJ-3EKF7501V	Panasonic	7.5K 1%	603	2	\$0,08	\$0,01	\$0,01	\$0,01	\$0,16
R21	Thick Film Resistor	667-ERJ-3EKF1002V	mouser.com	ERJ-3EKF1002V	Panasonic	390 1%	603	1	\$0,08	\$0,01	\$0,01	\$0,01	\$0,08
R45,R46	Thick Film Resistor	667-ERJ-3EKF3900V	mouser.com	ERJ-3EKF3900V	Panasonic	10K 1%	603	2	\$0,08	\$0,01	\$0,01	\$0,01	\$0,16
R23,R42,R48	Thick Film Resistor	667-ERJ-3EKF1001V	mouser.com	ERJ-3EKF1001V	Panasonic	1K 1%	603	3	\$0,08	\$0,01	\$0,01	\$0,01	\$0,24
R24,R25	Thick Film Resistor	667-ERJ-3EKF2201V	mouser.com	ERJ-3EKF2201V	Panasonic	2.2K 1%	603	2	\$0,08	\$0,01	\$0,01	\$0,01	\$0,16
R26-41	Thick Film Resistor	667-ERJ-2RKF1003X	mouser.com	ERJ-2RKF1003X	Panasonic	100K 1%	402	16	\$0,08	\$0,02	\$0,02	\$0,02	\$0,38
R47	Thick Film Resistor	667-ERJ-2RKF1000X	mouser.com	ERJ-2RKF1000X	Panasonic	100 1%	402	1	\$0,08	\$0,02	\$0,02	\$0,02	\$0,08
RT1	Thermistor	81-NCP15XW222J03RC	mouser.com	NCP15XW222J03RC	Murata Electronics	2.2K 5%	402	1	\$0,14	\$0,09	\$0,09	\$0,07	\$0,14
J1	Rt angle PCI-E header	538-45558-0003	mouser.com	45558-0003	Molex	6pin, 4.2mm	Through Hole	1	\$0,85	\$0,77	\$0,77	\$0,61	\$0,85
J2	Mini USB Connector, Type B	649-10033526N3212MLF	mouser.com	10033526-N3212MLF	FCI	FCI 5pin	SMD	1	\$0,68	\$0,56	\$0,56	\$0,49	\$0,68
J3,J5	Pin Headers, SMD 4 pin Vertical	14112	4uconnector.com	14112	4UCONN	2x2pin, 2.54mm Vertical	SMD	4	\$1,89	\$1,64	\$1,64	\$1,32	\$7,56
J4	Pin Header SMD, RA mount (FAN)	11182	4uconnector.com	11182	4UCONN	3 pin, 2.54mm RA	SMD	1	\$1,89	\$1,64	\$1,64	\$1,32	\$1,89
PCB								1	\$49,00	\$48,00	\$47,00	\$46,00	\$49,00
<b>Alternatives</b>													
U17	USB Micro Controller	579-PIC16LF1459-I/ML	mouser.com	PIC16LF1459-I/ML	Microchip	only for K16q PCB	QFN20	1				Total parts + PCB cost	\$105,23
U20	3.3V, 1A Buck Step Down Regulator	579-MCP16321T-330ENG	mouser.com	MCP16321T-330E/NG	Microchip Technology	3.3V@1A	QFN16	1				Parts cost per board	\$105,23