

**Klondike 16 – ASIC Miner Board**

Pricing was checked online but is a guide only and may not be accurate at the time of viewing.

Part#	Description	Product #	MFR.	Value	Package	QTY	Qty 1	Qty 25	Qty 100	Dist.
PCB	4 Layer Circuit Board	PCB	China	10cm x 10cm		1	9.000	5.000	2.700	
U1-U16	Avalon ASIC chip	AVALON	Avalon		QFN48	16	0.000	0.000	0.000	Avalon
U17	USB Micro Controller	PIC16LF1459-I/SS	Microchip		TSSOP-20	1	1.620	1.480	1.340	Microchip
U17	Alternate: USB Micro Controller	PIC16LF1459-I/ML	Microchip		QFN20	0	1.660	1.520	1.380	Microchip
U18-19	1.2V, 16A Buck Step Down Regulator	IR3895	Intl. Rect.	16A	PQFN-16	2	3.600	2.870	2.370	Mouser
U20	3.3V, 1A Buck Step Down Regulator	MCP16321T-330E/NG	Microchip	1A	VQFN-16	1	1.550	1.290	1.180	Microchip
U21,U25	Dual Schmitt Trigger Inverter	NL27WZ14DFT2G	On Semi.		SOT-363	2	0.440	0.260	0.208	Mouser
U22,U23	1.2V, 600mA LDO Regulator	AP7217D-12YG-13	Diodes Inc.	1.2V, 600mA	SOT-89-3L	2	0.490	0.360	0.309	Digikey
U24	Dual NOR Gate	74AUP2G02DC	NXP		SOT-765-1	1	0.210	0.197	0.186	Mouser
X1	Oscillator	ASDMB-32.0-LC	Abracon	32MHz	QFN4	1	1.690	1.430	1.010	Digikey
Q1	N-Channel MOSFET	NDS351AN	Fairchild	1.4A, 30V	SSOT-3	1	0.230	0.199	0.171	Mouser
D1	Red LED (Data)	VLMS1300-GS08	Vishay	2V, 20mA	0603	1	0.080	0.072	0.066	Mouser
D2	Green LED (Power)	VLMG1300-GS08	Vishay	2V, 20mA	0603	1	0.080	0.076	0.070	Mouser
D3	Schottky Diode, Low Vf	SL02-GS08	Vishay	1A, 30V	DO-219AB	1	0.220	0.190	0.170	Mouser
L1-2	Power Inductor, Low DCR, 18A	38L361C	Murata	0.360uH	10x10	2	1.620	1.290	1.140	Mouser
L3	Power Inductor	MLP2016S4R7M	TDK	4.7uH	0806	1	0.290	0.273	0.236	Mouser
L4-19	Ferrite Bead Choke	ILBB0603ER600V	Vishay	60 ohm, 25%	0603	16	0.110	0.036	0.029	Mouser
L20,L21	Ferrite Bead Choke	BLM15BB121SN1D	Murata	120 ohm, 25%	402	2	0.240	0.105	0.060	Mouser
L22,L23	Ferrite Bead Choke	BLM15BB221SN1D	Murata	220 ohm, 25%	402	2	0.240	0.105	0.060	Mouser
C19,C273	Electrolytic Capacitor	UWT1V331MNL1GS	Nichicon	330uF	10x10	2	0.165	0.132	0.132	ES
C4-8,C23-27,C41,C42	Ceramic Capacitor	GRM21BR61E106KA73L	Murata	10uF	0805	12	0.218	0.179	0.130	Mouser
C9-11,C28-30	Ceramic Capacitor	GRM188R71E104KA01J	Murata	0.1uF	0603	6	0.040	0.028	0.019	Mouser
C3,C22	Reference Capacitor	GRM1885C1H101JA01D	Murata	100pF	0603	2	0.250	0.034	0.024	Mouser
C16,C35	Ceramic Capacitor	VJ0603Y332KXACW1BC	Vishay	3300pF	0603	2	0.060	0.050	0.040	Mouser
C18,C37	Ceramic Capacitor	VJ0603Y221MXJCW1BC	Vishay	220pF	0603	2	0.060	0.040	0.032	Mouser
C12-15,C31-34	Ceramic Capacitor	C3216X7S0J476M	TDK	47uF	1206	8	0.470	0.330	0.300	Mouser
C2,C21	Ceramic Capacitor	C1608X5R1V225M	TDK	2.2uF	0603	2	0.090	0.061	0.055	Mouser
C17,C36	Ceramic Capacitor	GRM188R71E103KA01J	Murata	10nF	0603	2	0.200	0.027	0.018	Mouser
C1,C20	Ceramic Capacitor	GRM188R61E105KA12D	Murata	1.0uF	0603	2	0.110	0.045	0.032	Mouser
C38	Ceramic Capacitor	VJ0603Y223KXACW1BC	Vishay	22nF	0603	1	0.080	0.060	0.050	Mouser
C39,C40,C268-C271	Ceramic Capacitor	C1608X5R0J226M	TDK	22uF	0603	6	0.150	0.117	0.106	Mouser
C43-266	Ceramic Capacitor	C1005X7S1A474K	TDK	0.47uF	0402	192	0.020	0.017	0.015	Mouser
C272,C275	Ceramic Capacitor	VJ0402Y103KXXAC	Vishay	0.01uF	0402	2	0.025	0.016	0.015	Mouser
C274	Ceramic Capacitor	GRM1555C1E300JA01D	Murata	30pF	0402	1	0.250	0.034	0.024	Mouser
C267,C276	Ceramic Capacitor	GRM155R71C104KA88D	Murata	0.1uF	0402	2	0.100	0.014	0.010	Mouser
R8,R18	Thick Film Resistor	ERJ-3EKF1781V	Panasonic	1.78K 1%	0603	2	0.070	0.020	0.003	Mouser
R5,R9,R15,R19	Thick Film Resistor	ERJ-3EKF4021V	Panasonic	4.02K 1%	0603	4	0.070	0.020	0.003	Mouser
R7,R17,R10,R20	Thick Film Resistor	ERJ-3EKF2871V	Panasonic	2.87K 1%	0603	4	0.070	0.020	0.003	Mouser
R6,R16,R22,R43-44,R47	Thick Film Resistor	ERJ-3EKF1000V	Panasonic	100 1%	0603	6	0.070	0.020	0.003	Mouser
R1,R11	Thick Film Resistor	ERJ-3EKF3922V	Panasonic	39.2K 1%	0603	2	0.070	0.020	0.003	Mouser
R3-4,R13-14	Thick Film Resistor	ERJ-3EKF4992V	Panasonic	49.9K 1%	0603	4	0.070	0.020	0.003	Mouser
R2,R12	Thick Film Resistor	ERJ-3EKF7501V	Panasonic	7.5K 1%	0603	2	0.070	0.020	0.003	Mouser
R21	Thick Film Resistor	ERJ-3EKF1002V	Panasonic	10K 1%	0603	1	0.070	0.020	0.003	Mouser
R23,R42,R45,R46,R48	Thick Film Resistor	ERJ-3EKF1001V	Panasonic	1K 1%	0603	5	0.070	0.020	0.003	Mouser
R24,R25	Thick Film Resistor	ERJ-3EKF2201V	Panasonic	2.2K 1%	0603	2	0.070	0.020	0.003	Mouser
R26-41	Thick Film Resistor	ERJ-2RKf1003X	Panasonic	100K	0402	16	0.070	0.020	0.003	Mouser
RT	Thermistor	NCP15XW222J03RC	Murata	2.2K 5%	0402	1	0.270	0.127	0.085	Mouser
J1	Power Connector, MiniFitJr, PCIe	45718-0002	Molex	6pin, 4.2mm	Thru-Hole	1	0.960	0.800	0.737	Mouser
J1	Alternate: Right Angle MiniFirJr, PCIe	45558-0003	Molex	6pin, 4.2mm	Thru-Hole	0	0.850	0.770	0.612	Mouser
J1	Alternate: Phoenix Terminal 2 pin	1814634 or 1771091	Phoenix	6A, 2.5mm	SMD RA	0	0.430	0.390	0.350	Mouser
J2	Mini USB Connector, Type B	10033526-N3212MLF	FCI	5pin	SMD	1	0.450	0.430	0.390	Mouser
J3,J5	Pin Headers, SMD 4 pin Vertical	14112	4UCONN	2x2pin, 2.54mm	Vertical SMD	4	0.089	0.089	0.089	4UCONN
J4	Pin Header SMD, RA mount (FAN)	11182	4UCONN	3 pin, 2.54mm	RA SMD	1	0.037	0.037	0.037	4UCONN
				TOTAL	PER BOARD	352	49.23	33.33	26.02	
					SMD	325				
					QFN	20				
					Fine-Pitch	1				
					Thru-Hole	1				
					Manual SMD	5				