

Bill of Materials

TI DESIGNS

TIDA-00882 USB Type-C™ HDD with USB Power Delivery

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint
1	1	CN1		SATA Connector Right Angle, 22POS	FCI	10029364-001LF	see datasheet
2	12	C1,C2,C3,C5,C6,C11,C12,C13,C14,C33,C37,C44,C62	0.01uF	CAP CERM, 10000pF, 25V, X7R, 10%, 0402	Any		0402
3	4	C7,C8,C9,C10	0.1uF	CAP CERM, 0.1uF, 6.3V, X5R, 10%, 0201	Any		0201
4	6	C15,C27,C28,C74,C77,C81	22uF	CAP CERM, 22uF, 6.3V, X5R, 20%, 0603	Any		0603
5	1	C16	220uF	CAP POLY, 220uF, 20%, 10V	Würth	875105244013	6.6x6.6mm
6	2	C17,C71	220uF	CAP POLY, 220uF, 20%, 25V	Nichicon	PCR1E221MCL1GS	10.3x10.3mm
7	23	C4,C18,C23,C24,C25,C26,C30,C31,C32,C34,C35,C36,C38,C39,C41,C42,C43,C54,C66,C69,C73,C78,C79,C80	0.1uF	CAP CERM, 0.1uF, 10V, X7R, 10%, 0402	Any		0402
8	2	C19,C20	18pF	CAP CERM, 18pF, 50V, NPO, 5%, 0402	Any		0402
9	3	C21,C55, C59	10uF	CAP CERM, 10uF, 6.3V, X5R, 10%, 0603	Any		0603
10	4	C22,C29,C40,C72	1uF	CAP CERM, 1uF, 10V, X5R, 10%, 0402	Any		0402
11	5	C27,C28,C74,C77,C81	22uF	CAP CERM, 22uF, 6.3V, X5R, 20%, 0603	Any		0603
12	1	C45	10uF	CAP CERM, 10uF, 25V, X5R, 20%, 0805	Any		0805
13	2	C46,C47	NC, 22uF	CAP CERM, 22uF, 25V, X5R, 20%, 1206	Any		1206
14	2	C48,C49	22uF	CAP CERM, 22uF, 25V, X5R, 20%, 1206	Any		1206
15	3	C50,C63,C64	0.1uF	CAP CERM, 0.1uF, 25V, X5R, 20%, 0402	Any		0402
16	1	C51	0.22uF	CAP CERM, 0.22uF, 6.3V, X5R, 20%, 0402	Any		0402
17	3	C52,C53,C76	22uF	CAP CERM, 22uF, 10V, X5R, 20%, 0603	Any		0603
18	2	C56,C57	220pF	CAP CERM, 220pF, 50V, X7R, 10%, 0402	Any		0402
19	3	C58,C60,C61	2.2uF	CAP CERM, 2.2uF, 6.3V, X5R, 20%, 0402	Any		0402
20	1	C65	10uF	CAP CERM, 10uF, 25V, X5R, 10%, 0805	Any		0805
21	2	C67,C68	100uF	CAP CERM, 100uF, 10V, X5R, 20%, 1206	Any		1206
22	1	C70	1000pF	CAP CERM, 1000pF, 10V, X7R, 10%, 0402	Any		0402
23	1	C75	30pF	CAP CERM, 30pF, 50V, NPO, 5%, 0402	Any		0402
24	1	C82	4.7uF	CAP CERM, 4.7uF, 25V, X5R, 10%, 0805	Any		0805
25	1	D1	White	Cool White LED	Vishay	VLMW1300-GS08	0603
26	1	D2	40V	Schottky Diode, 40V, 3A	Diodes	B340A-13-F	DO-214AC
27	1	D3	Green	Green LED	Lumex	SML-LX0402SUGC-TR	0402
28	4	FB1,FB2,FB3,FB8		Ferrite Bead 220 Ohm @100MHz, 2A	MuRata	BLM18EG221SN1D	0603
29	1	FB4	NC	Ferrite Bead 21 Ohm @100MHz, 6A	Taiyo Yuden	FBMJ2125HM210NT	0805
30	3	FB5,FB6,FB7		Ferrite Bead 21 Ohm @100MHz, 6A	Taiyo Yuden	FBMJ2125HM210NT	0805
31	1	F1		PTC Fuse, 16V, 1.1A	Littelfuse	1210L110/16WR	1210
32	1	J1		Type-C Recepticle, Dual SMT, Top Mount	Foxconn	UT12113-11601-7H	see datasheet
33	1	J2	NC	Header, 1x3, 100mil, TH	Any		Header, 1x3, 100mil, TH
34	1	J3		Header, 2x5, 100mil, Shroud, SMT	ASSMANN	AWHW-10G-SMD	see datasheet
35	1	J4		DC Power Jack, 2.1mm ID, 5.5mm OD, 16V, 5A	CUI	PJ-051AH	see datasheet
36	1	L1	3.3uH	Inductor, 3.3uH, 7A, 24mOhm, 20%	Bourns	SRP7030-3R3FM	see datasheet
37	1	L2	2.2uH	Inductor, 2.2uH, 1.72A, 59mOhm, 30%	TDK	VLFC4020T-2R2N1R7	see datasheet
38	1	MH1		Mounting Hole, 150mil	N/A		150mil

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39	2	R1,R2	2M	RES, 2M, 5%, 1/20W, 0201	Any		0201
40	13	R3,R11,R19,R21,R22,R23,R25,R26,R27,R47,R48,R89,R90	0	RES, 0, 5%, 1/16W, 0402	Any		0402
41	3	R4,R18,R20,R49,R50	NC, 0	RES, 0, 5%, 1/16W, 0402	Any		0402
42	3	R5,R7,R10	10	RES, 10, 5%, 1/8W, 0805	Any		0805
43	7	R6,R8,R14,R15,R83,R84,R85	4.7K	RES, 4.7k, 5%, 1/16W, 0402	Any		0402
44	2	R81, R91	10K	RES, 10k, 5%, 1/16W, 0402	Any		0402
45	1	R12	2M	RES, 2M, 5%, 1/16W, 0402	Any		0402
46	1	R13	56.2K	RES, 56.2k, 1%, 1/16W, 0402	Any		0402
47	3	R9, R16,R76	10K	RES, 10k, 1%, 1/16W, 0402	Any		0402
48	1	R17	180	RES, 180, 5%, 1/16W, 0402	Any		0402
49	1	R24	NC, 0.01, 1%, 0.25W	RES, 0.01, 1%, 1/4W, 0805	Any		0805
50	2	R28,R29	0	RES, 0, 5%, 1/20W, 0201	Any		0201
51	2	R30,R31	NC, 0	RES, 0, 5%, 1/20W, 0201	Any		0201
52	1	R32	15K	RES, 15k, 5%, 1/16W, 0402	Any		0402
53	12	R33,R34,R37,R54,R55,R58,R59,R60,R61,R62,R63,R65	1M	RES, 1M, 5%, 1/20W, 0201	Any		0201
54	2	R35,R36	1K	RES, 1k, 5%, 1/16W, 0402	Any		0402
55	8	R38,R40,R41,R42,R43,R44,R45,R46	3.3K	RES, 3.3k, 5%, 1/16W, 0402	Any		0402
56	6	R39,R51,R52,R75,R78,R79	100K	RES, 100k, 5%, 1/16W, 0402	Any		0402
57	2	R56,R57	NC, 1K	RES, 1k, 5%, 1/20W, 0201	Any		0201
58	1	R64	NC, 0	RES, 0, 5%, 1/20W, 0201	Any		0201
59	1	R66	750K	RES, 750k, 5%, 1/16W, 0402	Any		0402
60	1	R67	470K	RES, 470k, 5%, 1/16W, 0402	Any		0402
61	1	R68	2K	RES, 2k, 5%, 1/16W, 0402	Any		0402
62	1	R69	75K	RES, 75k, 1%, 1/16W, 0402	Any		0402
63	1	R70	3.01	RES, 3.01, 1%, 1/16W, 0402	Any		0402
64	1	R71	120K	RES, 120k, 5%, 1/16W, 0402	Any		0402
65	1	R72	200K	RES, 200k, 5%, 1/16W, 0402	Any		0402
66	3	R73,R74,R77	NC, TBD	RES, TBD, 5%, 1/16W, 0402	Any		0402
67	1	R80	400K	RES, 400k, 1%, 1/16W, 0402	Any		0402
68	1	R82	475K	RES, 475k, 1%, 1/16W, 0402	Any		0402
69	1	R86	NC, 4.7K	RES, 4.7k, 5%, 1/16W, 0402	Any		0402
70	1	R87	20K	RES, 20k, 1%, 1/16W, 0402	Any		0402
71	1	R88	330	RES, 330, 5%, 1/16W, 0402	Any		0402
72	1	U1		Two Channel Differential 2:1/1:2 USB3.1 Mux/Demux	Texas Instruments	HD3SS3212	VQFN-20
73	4	U2,U3,U4,U5		4 Channel Ultra Low Capacitance IEC ESD Protection Diodes	Texas Instruments	TPD4E05U06	USON-14
74	1	U6		SuperSpeed USB 3.0 to Serial ATA Bridge	Texas Instruments	TUSB9261PVP	PVP-64
75	1	U7		1Mbit SPI Flash, 50MHz	Micron	M25P10-AVMN6TP	SOIC-8
76	1	U8	NC	30-V Dual N-Channel Common Drain NexFET™ Power MOSFET	Texas Instruments	CSD87501L	LGA-10
77	1	U9		USB Type-C & USB PD Controller Power Switch & High Speed Multiplexer	Texas Instruments	TPS65982	BGA-96
78	1	U10		8Mbit SPI Flash, 104MHz	Winbond	W25Q80DVSNIIG	SOIC-8
79	1	U11		High-Efficiency 8-A Synchronous Buck Converter with Eco-mode	Texas Instruments	TPS53318	LSON-22
80	1	U12		Nanopower, 1.8V, SOT23 Push-Pull Comparator with Voltage Reference	Texas Instruments	TLV3012AIDCK	SC70-6
81	1	U13		2.25MHz Step-Down Converter with Dual LDOs & SVS Power Management IC (PMIC)	Texas Instruments	TPS650061	WQFN-20

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82	1	U14		Dual Channel Precision Adjustable Current-Limited Power Switches	Texas Instruments	TPS2561DRC	VSON-10
83	1	X1	40MHz	Crystal, 40MHz, 20pF, 40ohm ESR	ECS	ECS-400-20-33-TR	ECX-32

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