

Bill of Materials

TI DESIGNS
TIDM-RGB-LED
Main Board

Item	Macro Name	Ref. Des	Type	Description	# needed per macro	# needed per board	Digikey Part #	Mouser Part #	Newark	Comments
1	Main Board [R1]	BS1,BS2,BS3	BS	Banana Plug socket	3	3	501-1115			10 per bag
2	Main Board [R1]	C1,C2,C3,C4,C5,C6	C	CAP 47UF 100V ELECT HE RADIAL	6	6	493-1663-ND			
3	Main Board [R1]	C7	C	CAP .10UF 16V CERAMIC X7R 0805	1	1	399-1167-1-ND			
4	Main Board [R1]	H1	J	100 pin DIMM socket - Molex 0876301001	1	1		538-87630-1001		
5	Main Board [R1]	R1	R	RES 4.99K OHM 1/8W 1% 0805 SMD	1	1	RHM4.99KCRCT-ND			
6	Main Board [R1]	R2	R	RES 475 OHM 1/8W 1% 0805 SMD	1	1	RHM475CCT-ND			
7	Main Board [R1]	TB1,TB2,TB3,TB4,TB5,TB6,TB7,TB8	TB	TERMINAL BLOCK 5.08MM 2POS PCB	8	8	ED1975-ND			
8	Main Board [R1]	J1	J	Standard 0.1" SIL headers, cut to fit, 1x3	1	1				
9	Main Board [R1]	J2	J	Standard 0.1" SIL headers, cut to fit, 1x2	1	1				
10	Main Board [R1]	Rubber Feet	RF	Bumpon hemisphere 0.44"x 0.2" Clear	7	7	SJ5303-7-ND			
11	DC-PwrEntry [R1]	C1	C	CAP CER 22UF 16V X5R 10% 1206	1	1	478-5727-1-ND			
12	DC-PwrEntry [R1]	C2	C	CAP CER 10UF 16V X5R 10% 1206	1	1	478-1573-1-ND			
13	DC-PwrEntry [R1]	C3	C	CAP CER 4.7UF 16V X7R 10% 0805	1	1	587-2394-1-ND			
14	DC-PwrEntry [R1]	C4	C	CAP .10UF 16V CERAMIC X7R 0805	1	1	399-1167-1-ND			
15	DC-PwrEntry [R1]	C5,C6,C7	C	CAP 330UF 25V ALUM LYTIC RADIAL	3	3	P5154-ND			
16	DC-PwrEntry [R1]	GND	GND	Standard 0.1" SIL header, cut to fit, 1x2	1	1				
17	DC-PwrEntry [R1]	J1	J	Standard 0.1" SIL header, cut to fit, 1x2	1	1				
18	DC-PwrEntry [R1]	JP1	JP	CONN PWR JACK 2.1X5.5MM HIGH CUR	1	1	CP-002AH-ND			
19	DC-PwrEntry [R1]	LD1	LD	LED PURE GREEN 0805 SMD	1	1	404-1022-1-ND			

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20	DC-PwrEntry [R1]	M1	M	MODULE PIP .9-5.5V 2.25A HORZ TH	1	1	296-20432-ND		24K0569	PTH08080W
21	DC-PwrEntry [R1]	R1	R	RES 330 OHM 1/4W 1% 0805 SMD	1	1	RHM330AECT-ND			
22	DC-PwrEntry [R1]	R2	R	RES 470 OHM 1/8W 1% 0805 SMD	1	1	RHM470CRCT-ND			
23	DC-PwrEntry [R1]	SW1	SW	SWITCH TOGGLE SPDT PC MNT 5A @ 120VAC	1	1	CKN1002-ND			
24	DC-PwrEntry [R1]	U1	U	IC LDO REG 3.3V 500MA SOT223-6	1	1	296-13810-1-ND			
25	USB-JTAG-ISO	C1, C4, C5	C	Cer. Cap - 1u, 6.3V, X5R, 0603	3	3	PCC2174CT-ND			
26	USB-JTAG-ISO	C2	C	Cer. Cap - 2u2, 6.3V, X5R, 0603	1	1	490-1551-1-ND			
27	USB-JTAG-ISO	C3, C6-C16	C	Cer. Cap - 100n, 16V, X7R, 0603	12	12	GRM188R71C104 KA01D			
28	USB-JTAG-ISO	C17	C	Cer. Cap - 0.1uf, 100V, 20% , Axial	1	1	478-3154-1-ND			
29	USB-JTAG-ISO	DA1	DA	Diode Array, Quad, SOT363	1	1	BAW567DW- FDICT-ND			
30	USB-JTAG-ISO	J2	J	Standard 0.1" DIL header, cut to fit, 2x7, remove pin 6	1	1				
31	USB-JTAG-ISO	J4	J	Standard 0.1" SIL headers, cut to fit, 1x2	1	1				
32	USB-JTAG-ISO	JP1	JP	Connector - USB Type B	1	1	ED90064-ND			
33	USB-JTAG-ISO	L1, L2	L	Inductor, 22uH, 0805	2	2	490-4030-1			
34	USB-JTAG-ISO	LD1	LD	LED, green, 0805	1	1	404-1021-1			
35	USB-JTAG-ISO	R1	R	Res. - 470R, 5%, 0.1W, 0603	1	1	RHM470GCT-ND			
36	USB-JTAG-ISO	R2, R3	R	Res. - 27R, 5%, 0.1W, 0603	2	2	RHM27GCT-ND			
37	USB-JTAG-ISO	R4, R6, R9, R10, R14	R	Res. - 2K2, 5%, 0.1W, 0603	5	5	RHM2.2KGCT-ND			
38	USB-JTAG-ISO	R5	R	Res. - 1M, 1%, 0.1W, 0603	1	1	RHM1.00MHCT- ND			
39	USB-JTAG-ISO	R7	R	Res. - 10K, 5%, 0.1W, 0603	1	1	RHM10KGCT-ND			
40	USB-JTAG-ISO	R8	R	Res. - 1K, 5%, 0.1W, 0603	1	1	RHM1.0KGCT-ND			
41	USB-JTAG-ISO	R11	R	Res. - 680R, 5%, 0.1W, 0603	1	1	RHM680GCT-ND			
42	USB-JTAG-ISO	R13	R	Res. - 47K, 5%, 0.1W, 0603	1	1	RHM47KGCT-ND			

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43	USB-JTAG-ISO	U1	U	FTDI UART/FIFO Dual, 48-LQFP	1	1	768-1010-1-ND			
44	USB-JTAG-ISO	U2	U	EEPROM, SOT23-6	1	1	93LC46BT-I/OTCT-ND			
45	USB-JTAG-ISO	U3	U	DFP - LVC2G74	1	1	296-13273-1-ND			
46	USB-JTAG-ISO	U4	U	LDO - 3.3V - TPS73033	1	1	296-17580-1-ND			
47	USB-JTAG-ISO	U5	U	Digital Isolator, Quad 4/0, 25Mbps	1	1		595-ISO7240CDW		
48	USB-JTAG-ISO	U6	U	Digital Isolator, Quad 2/2, 25Mbps	1	1		595-ISO7242CDW		
49	USB-JTAG-ISO	X1	X	Resonator - 6MHz	1	1	490-1218-1-ND			
50	Boost-2ch [R1]	C2,C3,C4,C6,C7,C8	C	CAP CER 10UF 50V X7S 1210	6	18	445-4536-1-ND			
51	Boost-2ch [R1]	C5,C9	C	CAP 82PF 50V CERM CHIP 0805 SMD	2	6	PCC820CGCT-ND			
52	Boost-2ch [R1]	C10,C11	C	CAP .10UF 16V CERAMIC X7R 0805	2	6	399-1167-1-ND			
53	Boost-2ch [R1]	Cd1,Cd3	C	CAP CER 4.7UF 25V X5R 0805	2	6	587-1782-1-ND			
54	Boost-2ch [R1]	Cd2	C	CAP CERM .22UF 10% 16V X7R 0805	1	3	478-1400-1-ND			
55	Boost-2ch [R1]	D1,D2	D	DIODE SCHOTTKY 70V 2A SMB	2	6	B270-FDICT-ND			
56	Boost-2ch [R1]	GND	J	Standard 0.1" SIL headers, cut to fit, 1x2	1	3				
57	Boost-2ch [R1]	L1,L2	L	INDUCTOR 330UH .35A SMD SHIELDED	2	6	811-1163-1-ND			
58	Boost-2ch [R1]	Q1,Q2	Q	MOSFET N-CH 60V 24A DPAK	2	6	497-4329-1-ND			
59	Boost-2ch [R1]	R1,R2	R	RES 33 OHM 1/8W .5% 0805 SMD	2	6	311-33BCT-ND			
60	Boost-2ch [R1]	R3,R4	R	RES 10.0K OHM 1/8W 1% 0805 SMD	2	6	RHM10.0KCCT-ND			
61	Boost-2ch [R1]	R5,R13	R	RES 5.1 OHM 1/10W 1% 0805 SMD	2	6	311-5.1VCT-ND			
62	Boost-2ch [R1]	R7,R15	R	RES 4.99K OHM 1/8W 1% 0805 SMD	2	6	RHM4.99KCRCT-ND			
63	Boost-2ch [R1]	R8,R16	R	RES 215 OHM 1/8W 1% 0805 SMD	2	6	RHM215CCT-ND			
64	Boost-2ch [R1]	R9	R	RES 18 OHM 1/8W .5% 0805 SMD	1	3	311-18BCT-ND			
65	Boost-2ch [R1]	R10,R17	R	RES 1.91K OHM 1/8W 1% 0805 SMD	2	6	RHM1.91KCRCT-ND			
66	Boost-2ch [R1]	R11,R18	R	RES 39.0 OHM 1/8W 1% 0805 SMD	2	6	RHM39.0CCT-ND			
67	Boost-2ch [R1]	R12,R19	R	RES .10 OHM 1/2W 1% 1206 SMD	2	6	RL16R.10FCT-ND			

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68	Boost-2ch [R1]	U1	U	IC MOSFET DVR DUAL HS 4A 8-SOIC	1	3	296-23486-1-ND			UCC27324
69	Boost-2ch [R1]	U2	U	IC OPAMP GP R-R 38MHZ DUAL 8SOIC	1	3	OPA2350UA-ND	595-OPA2350UA	35C1873	OPA2350
70	Sepic-2ch [R1]	C1,C2	C	CAP CER 10UF 50V X7S 1210	6	6	445-4536-1-ND			
71	Sepic-2ch [R1]	C3,C8	C	CAP 220UF 50V ELECT HE RADIAL	2	2	493-1609-ND			
72	Sepic-2ch [R1]	C4,C9		CAP 47UF 100V ELECT HE RADIAL	2	2	493-1663-ND			
73	Sepic-2ch [R1]	C5,C10	C	CAP CERM .10UF 5% 100V X7R 1210	2	2	478-3813-1-ND			
74	Sepic-2ch [R1]	C6,C11	C	CAP .10UF 16V CERAMIC X7R 0805	2	2	399-1167-1-ND			
75	Sepic-2ch [R1]	C7,C12	C	CAP 82PF 50V CERM CHIP 0805 SMD	2	2	PCC820CGCT-ND			
76	Sepic-2ch [R1]	Cd1,Cd2	C	CAP CER 4.7UF 25V X5R 0805	2	2	587-1782-1-ND			
77	Sepic-2ch [R1]	Cd3	C	CAP CERM .22UF 10% 16V X7R 0805	1	1	478-1400-1-ND			
78	Sepic-2ch [R1]	D1,D2	D	DIODE ULTRA FAST 1A 100V SMD	2	2	MURS110T3GOSCT-ND			
79	Sepic-2ch [R1]	GND	J	Standard 0.1" SIL headers, cut to fit, 1x2	1	1				
80	Sepic-2ch [R1]	L1,L3	L	INDUCTOR 330UH 1A 20% SMD	2	2	445-3860-1-ND			
81	Sepic-2ch [R1]	L2,L4	L	INDUCTOR 330UH 1A 20% SMD	2	2	445-3860-1-ND			
82	Sepic-2ch [R1]	Q1,Q2	Q	MOSFET N-CH 60V 24A DPAK	2	2	497-4329-1-ND			
83	Sepic-2ch [R1]	R1,R2	R	RES 33 OHM 1/8W .5% 0805 SMD	2	2	311-33BCT-ND			
84	Sepic-2ch [R1]	R3,R4	R	RES 10.0K OHM 1/8W 1% 0805 SMD	2	2	RHM10.0KCCT-ND			
85	Sepic-2ch [R1]	R5,R6	R	RES 5.1 OHM 1/10W 1% 0805 SMD	2	2	311-5.1VCT-ND			
86	Sepic-2ch [R1]	R7,R13	R	RES 4.99K OHM 1/8W 1% 0805 SMD	2	2	RHM4.99KCRCT-ND			
87	Sepic-2ch [R1]	R8,R14	R	RES 215 OHM 1/8W 1% 0805 SMD	2	2	RHM215CCT-ND			
88	Sepic-2ch [R1]	R9	R	RES 18 OHM 1/8W .5% 0805 SMD	1	1	311-18BCT-ND			
89	Sepic-2ch [R1]	R10,R15	R	RES 1.91K OHM 1/8W 1% 0805 SMD	2	2	RHM1.91KCRCT-ND			
90	Sepic-2ch [R1]	R11,R16	R	RES 39.0 OHM 1/8W 1% 0805 SMD	2	2	RHM39.0CCT-ND			
91	Sepic-2ch [R1]	R12,R17	R	RES .10 OHM 1/2W 1% 1206 SMD	2	2	RL16R.10FCT-ND			

Item	Macro Name	Ref. Des	Type	Description	# needed per macro	# needed per board	Digikey Part #	Mouser Part #	Newark	Comments
92	Sepic-2ch [R1]	U1	U	IC MOSFET DVR DUAL HS 4A 8-SOIC	1	1	296-23486-1-ND			UCC27324
93	Sepic-2ch [R1]	U2	U	IC OPAMP GP R-R 38MHZ DUAL 8SOIC	1	1	OPA2350UA-ND	595-OPA2350UA	35C1873	OPA2350

Bill of Materials

TI DESIGNS
TIDM-RGB-LED
LED Panel

Item	Macro Name	Ref. Des	Type	Description	# needed per macro	# needed per board	Digikey Part #	Mouser Part #	Newark	Comments
1	Main Board [R1]	LD1 (see BuildInstructions)	LED	LED RGB 6MM X 5MM WTR CLR SMD	24	24	897-1016-1-ND			
2	Main Board [R1]	LD2 (see BuildInstructions)	LED	LED DRAGON PLUS WHITE	12	12	475-2810-1-ND			
3	Main Board [R1]	J (see BuildInstructions)	J	Standard 0.5" SIL headers, cut to fit, 1x3	8	8				cut center pin, bend to 80degree from vertical

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