

# Bill of Materials

TI DESIGNS

TIDA-00782 DLP6401 Formatter Board

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
1	76	C1 C3 C21 C24 C45 C75 C78 C79 C80 C87 C90 C91 C92 C95 C100 C101 C102 C103 C104 C105 C106 C107 C108 C109 C110 C111 C112 C113 C118 C119 C120 C121 C122 C123 C124 C125 C126 C127 C128 C129 C130 C131 C132 C133 C134 C140 C141 C142 C143 C144 C145 C146 C147 C148 C149 C150 C151 C152 C153 C154 C155 C156 C157 C159 C160 C161 C183 C184 C186 C187 C188 C189 C190 C191 C193 C194	0.1 uF	CAP CER 0.1UF 25V 10% X7R 0402	TDK	C1005X7R1E104K0508B		0402	
2	9	C2 C98 C99 C137 C138 C139 C158 C182 C185	10 uF	CAP CER 10UF 10V 10% X7R 0805	Murata	GRM21BR71A106KE51L		0805	
3	13	C4 C5 C6 C7 C11 C29 C30 C51 C58 C66 C69 C72 C73	0.1 uF	CAP CER 0.1UF 16V 10% X7R 0603	AVX	0603YC104KAT2A		0603	
4	5	C8 C15 C16 C18 C27	1 uF	CAP CER 1UF 25V 10% X5R 0603	Samsung	CL10A105K8ANNNC		0603	
5	3	C9 C19 C25	10uF	CAP CER 10UF 25V 10% X7R 1210	Murata	GRM32DR71E106KA12L		1210	
6	1	C10	6.2 pF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 0402 6.2pF 50Volts COG +/-0.25pF	Murata Electronics	GJM1555C1H6R2CB01D		0402	
7	8	C12 C42 C50 C62 C71 C77 C93 C96	22 uF	CAP CER 22UF 16V 20% X5R 1210	Taiyo Yuden	EMK325BJ226MM-T		1210	
8	1	C13	1000PF	CAP CER 1000PF 50V 10% X7R 0805	Panasonic	ECJ-2V81H102K		0805	
9	8	C14 C17 C20 C26 C85 C86 C88 C89	0.1 uF	CAP CER 0.1UF 50V 20% X7R 0805	AVX	08055C104MAT2A		0805	
10	2	C22 C47	2.2 uF	CAP CER 2.2UF 10V 10% X7R 0603	Murata	GRM188R71A225KE15D		0603	
11	1	C23	0.22 uF	CAP CER 0.22UF 25V 10% X8R 0805	TDK	C2012X8R1E224K		0805	
12	1	C28	4.7 uF	CAP CER 4.7UF 6.3V 10% X5R 0805	AVX	08056D475KAT2A		0805	
13	4	C31 C32 C33 C81	100 uF	CAP TANT 100UF 16V 10% 2917	Vishay	293D107X9016E2TE3		2917	
14	2	C34 C35	10 pF	CAP CER 18PF 50V 5% NPO 0402	Panasonic	ECI-0E1C1H801		0402	
15	2	C36 C76	0.01 uF	CAP CER 10000PF 25V 10% X7R 0603	Panasonic	ECI-1V81E103K		0603	
16	7	C37 C38 C39 C40 C49 C59 C68	10 uF	CAP CER 10UF 25V 10% X7R 1210	TDK	C325X7R1E106KT		1210	
17	4	C41 C52 C57 C60	47 nF	CAP CER 0.047UF 16V 10% X7R 0402	TDK	C1005X7R1C473K		0402	
18	7	C43 C44 C46 C54 C55 C63 C64	4.7 nF	CAP CER 4700PF 50V 10% X7R 0402	Murata	GRM155R71H472KA01D		0402	
19	3	C48 C56 C65	100 pF	CAP CER 100PF 50V 5% CGO 0402	TDK	C1005CG01H101J0508A		0402	
20	4	C53 C61 C94 C97	10 nF	CAP CER 10000PF 16V 10% X7R 0402	TDK	C1005X7R1C103K0508A		0402	
21	1	C67	3.3 uF	CAP CER 3.3UF 25V 10% X7R 1206	TDK	C3216X7R1E335K160AC		1206	
22	2	C70 C74	1 uF	CAP CER 1UF 16V 10% X7R 0805	Kemet	C0805C105K4RACU		0805	
23	3	C114 C115 C135	10 uF	CAP CER 10UF 16V 10% X5R 0805	Murata	GRM21BR61C106KE15L		0805	
24	2	C116 C136	0.001 uF	CAP CER 1000PF 50V 10% X7R 0402	AVX	04025C102KAT2A		0402	
25	2	C117 C192	100 uF	CAP CER 100UF 6.3V 20% X5R 1206	Murata	GRM31CR60J107ME39L		1206	
26	1	D1	STPS0540Z	DIODE SCHOTTKY 40V 500MA SOD123	STMicroelectronics	STPS0540Z		SOD123	
27	1	D2	MAZ80330HL	DIODE ZENER 3.3V 150MW SMINI2	Panasonic	MAZ80330HL		DIO_SMINI2F1_PAN	
28	1	D3	Green_LED	LED GREEN CLEAR 25MD	Osram	LG M67K-G1J2-24-Z		0603	
29	1	D6	Red_LED	LED RED CLEAR 25MD	Osram	LS M67K-J2L1-1-Z		0603	
30	2	D4 D5	DIODE_SCHOTTKY	DIODE SCHOTTKY 60V 500MA SOD123	STMicroelectronics	STPS0560Z		SOD_123	
31	2	DN1 DN2	BAT545W	DIODE ARRAY SCHOTTKY 30V SOT323	NXP	BAT545W_115		SOT323	
32	8	FB1 FB3 FB4 FB5 FB6 FB7 FB8 FB9	120 OHM	FERRITE CHIP 120 OHM 2000MA 0603	Murata	BLM18PG1215N1D		0603	
33	1	FB2	FERRITE	FERRITE CHIP POWER 80 OHM SMD	Laird-Signal Integrity Products	HI0805R800R-10		0805	
34	1	J1	AXK5S40047YG	CONN SOCKET P5KS_5MM 40POS SMD	Panasonic	AXK5S40047YG		P5KS_40PIN_0.5MM	
35	1	J2	50044-06001-002	CONN-PLUG-60Pin-0.5MM	ACES	50044-06001-002		CONN-PLUG-60Pin-0.5MM	Made in Taiwan - Layout has to be modified by choosing a different connector
36	1	J3	SM06B-SRSS-TB	CONN HEADER SH 6POS SIDE 1MM TIN	JST	SM06B-SRSS-TB		SM06B-1.0MM-6PIN	
37	5	J4 J5 J6 J7 J8	SM03B-SRSS-TB	CONN HEADER SH 3POS SIDE 1MM TIN	JST	SM03B-SRSS-TB		SM03B-1.0MM-3PIN	
38	1	J10	SM14B-SRSS-TB	CONN HEADR SH 14POS SIDE 1MM TIN	JST	SM14B-SRSS-TB		SM14B-1.0MM-14PIN	
39	1	J11	AXK5S20047YG	CONN SOCKET BRD/BRD_5MM 20POS	Panasonic	AXK5S20047YG		P5KS_20PIN_0.5MM	
40	1	J12	Mini USB	Connector Receptacle USB mini B 5 Position Surface Mount, Right Angle, Horizontal	EDAC	690-005-299-043		MiniUSB_CONN	
41	1	L1	L1	DT1608C Series Shielded SMT Power Inductors	CoilCraft	DT1608C-223		d1608a	
42	3	L2 L3 L4	4.7 uH	FIXED IND 4.7UH 2.5A 40 MOHM SMD	Bourns	SRR1005-4R7M		IND_SRR1005	
43	1	Q1	BCP68	TRANS NPN 20V 1A SOT223	ON Semiconductor	BCP68T1G		SOT223	
44	3	Q2 Q3 Q5	2N2907A	TRANS PNP 60V 0.6A SOT23	ON Semiconductor	MMBT2907A		SOT23-3_FC	
45	12	Q4 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16	MMBT2222A	TRANS NPN 40V 0.6A SOT23	ON Semiconductor	MMBT2222ALT1G		SOT23AVXD	
46	1	Q17	FDV303N	MOSFET N-CH 25V 680MA SOT-23	Fairchild Semiconductor	FDV303N		SOT_23	
47	1	Q18	DMP2160UW	MOSFET P-CH 20V 1.5A SOT-323	Diodes Incorporated	DMP2160UW		SOT-323	
48	23	R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R112 R113 R114 R123 R124 R125 R126 R129 R131 R156 R160	0	RES SMD 0.00HM JUMPER 1/10W 0603	Panasonic	ERJ-3GEY0R00V		0603	
49	28	R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31 R32 R33 R34 R35 R36 R37 R38 R40 R41	5.1	RES SMD 5.1 OHM 5% 1/20W 0201	Yageo	RC0201JR-075R1		0201	
50	21	R57 R58 R60 R65 R68 R73 R80 R83 R88 R94 R98 R105 R106 R119 R120 R121 R128 R140 R141 R146 R147	10K	RES SMD 10K OHM 1% 1/16W 0402	Yageo	RC0402FR-0710KL		0402	
51	5	R42 R43 R44 R45 R46	20	RES SMD 20 OHM 1% 1/20W 0201	Panasonic	ERJ-1GEF20R0C		0201	
52	1	R47	160	RES SMD 160 OHM 1% 1/16W 0402	Vishay	CRCW0402160RFKED		0402	
53	1	R49	10K	RES SMD 10K OHM 5% 1/10W 0603	Panasonic	ERJ-3GSY1103		0603	
54	1	R50	360K	RES SMD 360K OHM 5% 1/10W 0603	Panasonic	ERJ-3GEYJ364V		0603	
55	1	R51	15K	RES SMD 15K OHM 1% 1/10W 0603	Yageo	RC0603FR-0715KL		0603	

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56	2	R52 R56	56.0K	RES SMD 15K OHM 1% 1/10W 0603	Panasonic	ERJ-3EKF5602V		0603	
57	1	R53	75K	RES SMD 75K OHM 5% 1/10W 0603	Panasonic	ERJ-3GEY1753		0603	
58	1	R54	620K	RES SMD 620K OHM 5% 1/10W 0603	Panasonic	ERJ-3GEY1624		0603	
59	1	R55	680K	RES SMD 680K OHM 1% 1/10W 0603	Panasonic	ERJ-3EKF6803V		0603	
60	4	R59 R61 R67 R130	12	RES SMD 12 OHM 5% 1/10W 0603	Panasonic	ERJ-3GEY1120V		0603	
61	11	R62 R63 R70 R71 R72 R76 R96 R103 R132 R133 R135	3.3K	RES SMD 3.3K OHM 0.1% 1/16W 0402	Panasonic	ERA-2AE8332X		0402	
62	3	R64 R101 R142	2.2K	RES SMD 2.2K OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ222X		0402	
63	2	R66 R39	33K	RES SMD 33K OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ333X		0402	
64	10	R69 R77 R107 R108 R109 R110 R111 R122 R134 R161	1K	RES SMD 1K OHM 0.1% 1/16W 0402	Panasonic	ERA-2AE8102X		0402	
65	1	R74	1M	RES SMD 1M OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ105X		0402	
66	1	R75	100	RES SMD 100 OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ101X		0402	
67	3	R78 R84 R89	40.2K	RES SMD 40.2K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF4022X		0402	
68	1	R79	100K	RES SMD 100K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF1003X		0402	
69	3	R81 R86 R91	20K	RES SMD 20K OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ203X		0402	
70	1	R82	80.6K	RES SMD 80.6K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF8062X		0402	
71	2	R85 R90	150K	RES SMD 150K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF1503X		0402	
72	1	R87	29.4K	RES SMD 29.4K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF2942X		0402	
73	1	R92	7.68K	RES SMD 7.68K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF7681X		0402	
74	1	R93	383K	RES SMD 383K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF3833X		0402	
75	4	R95 R97 R102 R104	1.5K	RES SMD 1.5K OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ152X		0402	
76	1	R99	110	RES SMD 110 OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ111X		0402	
77	1	R100	10K	RES SMD 10K OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF1002X		0402	
78	1	R127	4.7K	RES SMD 4.7K OHM 5% 1/10W 0402	Panasonic	ERJ-2GEJ472X		0402	
79	1	R136	22K	RES SMD 22K OHM 5% 1/10W 0603	Panasonic	ERJ-3GEY1223V		0603	
80	1	R137	1.5K	RES SMD 1.5K OHM 5% 1/10W 0603	Panasonic	ERJ-3GEY1152V		RES_0603	
81	2	R138 R139	22	RES SMD 22 OHM 1% 1/10W 0603	Panasonic	ERJ-3EKF22R0V		RES_0603	
82	3	R150 R152 R155	33.2	RES SMD 33.2 OHM 1% 1/10W 0402	Panasonic	ERJ-2RKF33R2X		RES_0402	
83	1	U2	TPS65145	IC LCD SUPPLY TFT QUAD 24HTSSOP	Texas Instruments	TPS65145PWP		SOIC24-PWP_TI	
84	1	U3	TPS73025	IC REG LDO 2.5V 0.2A SOT23-5	Texas Instruments	TPS73025DBVR		TI_DBV	
85	1	U4	TPS65251	IC REG BCK ADJ 3A/2A TRPL 40VQFN	Texas Instruments	TPS65251RHAR		QFN_40	
86	1	U5	TPS79718	IC REG LDO 1.8V 50MA SC70-5	Texas Instruments	TPS79718DCKT		TI_DCK	
87	1	U6	TL7712A	IC SUPPLY VOLT SUPERVISOR 8-SOIC	Texas Instruments	TL7712ACD		8-SOIC	
88	2	U7 U8	SN74AHC1G08	IC GATE AND 1CH 2-INP SOT-5	Texas Instruments	SN74AHC1G08DRLR		TI_DRLR	
89	1	U10	M24C32	EEPROM I2C 32KB 8SOIC	STMicroelectronics	M24C32		SOIC-8	
90	1	U11	TPD2E001	TVS DIODE 5.5VVM 100VC 4SOP	Texas Instruments	TPD2E001		SOP_4	
91	1	U12	S29JL032H	Flash Memory	Spansion	S29GL032N90TFIR04		TSOP48	
92	1	U17	MAX3232	IC DRVR/RCLR MLTCH RS232 16TSSOP	Texas Instruments	MAX3232CPWR		SOIC16-PW_TI	
93	1	U18	74LVC1G125	IC BUS BUFF TRI-ST N-INV SOT23-5	Texas Instruments	SN74LVC1G125DBVR		SOT23-DBV_TI	
94	1	U19	SN65220	IC SINGLE USB PORT TVS SOT-23-6	Texas Instruments	SN65220DBVT		SOIC6-DBV_TI	
95	1	U1	DLPC6401	DLP DISPLAY CONTROLLER	Texas Instruments	DLPC64012FF		PBGA_419	
96	1	U9	LM393	IC DUAL DIFF COMPARATOR 8-TSSOP	Texas Instruments	LM393APWR		SOIC8-PW_TI	
97	1	U13	TMP100	SENSOR TEMP I2C/SMBUS SOT23-6	Texas Instruments	TMP100NA/250		SOT-23-6	
98	1	U14	MXD2020EL	IC ACCELEROMETER XY AXIS LCC8	Memsc Inc.	MXD2020EL		LCC8	
99	1	X1	32.0 MHZ	Crystal 32.0000MHz 15ppm 8pF 50 Ohm -10°C -75°C Surface Mount 4-SMD, No Lead (DFN, LCC)	NDK	NX32255A-32.000MHZ-STD-CSR-1		3_2mm_2_5mm	

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