

# Bill of Materials

TI DESIGNS

TIDM-SERVODRIVE

Item	# needed per macro	Reference	Part Description and Value	Manufacturer Part Number	Digikey Part #	Macro Name	Type
1	6	[Main]-U1,U2,U3,U4, U5, U8	Digital Isolator, Quad 4/0, 25Mbps, ISO7220CD	TI ISO7220CD	296-26075-5-ND	Main Base Board	U
2	1	[Main]-U7	Digital Isolator, Quad 4/0, 25Mbps, ISO7221ADR	TI ISO7221ADR	296-21955-2-ND	Main Base Board	U
3	1	[Main]-U6	IC 3-INPUT OR GATE SOT-23-6, SN74LVC1G332	TI SN74LVC1G332	296-18587-1-ND	Main Base Board	U
4	1	[Main]-U9	ISO1050 - IC TXRX CAN 5V 8SOP	TI ISO1050	296-24818-1-ND	Main Base Board	U
5	1	[Main]-U11	AMC1204DW, SOIC16 - Isolated SDM	TI AMC1204DW	296-28557-ND	Main Base Board	U
6	3	[Main]-C1,C2,C3	Electrolytic Capacitors - Leaded 400V, 220uF 25X30 20%		1189-2025-ND	Main Base Board	C
7	1	[Main]-C5	Metal Poly Cap. 0.22uF, 400V DC, Lead spacing 0.591" (15.00mm) - EF4224		EF4224-ND	Main Base Board	C
8	19	[Main]-Cd1,Cd2,Cd3,Cd4,Cd5,Cd6, Cd7,Cd8, Cd9,Cd10,Cd11, Cd12, Cd13, Cd15, Cd16, Cd17, Cd18, Cd20, Cd22,	Cer. Cap - 100nF, 25V, XR7, 0805			Main Base Board	C
9	1	[Main]-Cd21	Cer. Cap - 100nF, 25V, XR7, 0805 (DNP when AMC1204 is used)			Main Base Board	C
10	1	[Main]-Cd14	Cer. Cap - 470nF, 25V, XR7, 0805			Main Base Board	C
11	1	[Main]-Cd19	Cer. Cap - 1uF, 25V, XR7, 0805			Main Base Board	C
12	2	[Main]-C9,C10	Cer. Cap - 10pF, 25V, X5R, 0805			Main Base Board	C
13	2	[Main]-C8	Cer. Cap - 330pF, 25V, X5R, 0805			Main Base Board	C
14	7	[Main]-R1,R2,R3,R4,R5,R6,R7	Res. - 15K, 1%,1/8W, 0805			Main Base Board	R
15	1	[Main]-R57	Res. 10K, 5%, 1/8W, 0805			Main Base Board	R
16	12	[Main]-R24, R31, R32, R33, R35, R38, R39, R42, R45, R54, R55, R56	Res. -0R ,1/8W, 0805			Main Base Board	R
17	1	[Main]-R53	Res. -0R ,1/8W, 0805 (DNP when AMC1304 is used)			Main Base Board	R

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18	19	[Main]-R17, R18, R19, R20, R21, R22, R23, R25, R26, R27, R28, R29, R30, R34, R36, R40, R41, R43, R44	DNP : Res. -0R ,1/8W, 0805, Determines isolation settings !! Consult before populating			Main Base Board	R
19	2	[Main]-RS1 , RS2	Res. - 20mOhms, 1%, 3W, 2512		CRA2512-FZ-R020ELFCT-ND	Main Base Board	R
20	2	[Main]-PR1, PR2	Power Resistor 150K, 1/2W		541-150KVCT-ND	Main Base Board	R
21	8	[Main]-R8,R9,R10,R11,R12,R13,R14,R15	Res - 0E, 1/4W, 1206			Main Base Board	R
22	2	[Main]-R16, R37	Res. 1K ,1/8W, 0805			Main Base Board	R
23	2	[Main]-R47, R48	Res. 1M ,1/8W, 1206, 1%			Main Base Board	R
24	1	[Main]-R49	Res. 1.5K ,1/8W, 1206, 1%			Main Base Board	R
25	1	[Main]-R50	Res. 1.5K ,1/8W, 0805, 1%			Main Base Board	R
26	2	[Main]-R51, R52	Res. 12R ,1/8W, 0805, 1%			Main Base Board	R
27	1	[Main]-L1	INDUCTOR 22UH 13MA 0805		490-4030-1	Main Base Board	L
28	1	[Main]-LD1	LED, green, 0805 Mfr # PG1112H-TR	PG1112H-TR	404-1021-1-ND	Main Base Board	LD
29	1	[Main]-P1	CONN AC RECEPT 7MM R/A RND PCB		Q218-ND	Main Base Board	TB
30		[Main]-J1,J2,J3,J4,J5,J6,J7,J8,H9,J10,J12, J13, J14, J15, J16, J19, J20, J21	Standard 0.1" SIL headers, cut to fit, total needed 1x2			Main Base Board	J
31		[Main]-H5, J17, J9, H10, J18	Standard 0.1" SIL headers, cut to fit, total needed 1x3			Main Base Board	J
32	4	[Main]-H3, H4, H6, H15	8 pos keyed 0.1" vertical header 2x4		70246-0801	Main Base Board	J
33	1	[Main]-H13	20 pos keyed 0.1" vertical header 2x10		70246-2002	Main Base Board	J
34		[Main]-H2	Standard 0.1" SIL headers, cut to fit, total needed 1x5			Main Base Board	J
35	1	[Main]-TB1	3 input connector for connecting Motor		ED1610-ND	Main Base Board	TB
36	1	[Main]-H14	Terminals (2 screw) 5.08mm, 7.5mm wide		ED1975-ND	Main Base Board	TB
37	3	[Main]-H1, H7, H8	180 pin (120 + 60) HSEC8 socket, samtec Mfr # HSEC8-130-01-L-DV-A & HSEC8-160-01-L-DV-A-BL	HSEC8-130-01-L-DV-A & HSEC8-160-01-L-DV-A-BL	SAM8081-ND & SAM8084-ND	Main Base Board	J
38	3	[Main]-BS1,BS2,BS3	Banana Connector and Screws		501-1115-ND	Main Base Board	BC
39	1	M1-C1	CAP FILM 0.047UF 760VDC RADIAL		495-3972-ND	AC-PwrEntry[R2]	C
40	2	M1-C2,C3	CAP FILM 4n7/2KVdc RADIAL		399-5901-nd	AC-PwrEntry[R2]	C
41	1	M1-F1	Fuse Holder		486-1160-ND	AC-PwrEntry[R2]	F
42	1	M1-Fuse-F1	FUSE 250V IEC SLO 5X20MM 10A		F2425-ND	AC-PwrEntry[R2]	F
43	1	M1-RT1	CURRENT LIMITR INRSH 10 OHM 15A - SL32 10015	SL32 10015	570-1058-ND	AC-PwrEntry[R2]	RT
44	1	M1-VAR1	VARISTOR 275V RMS 10MM RADIAL		495-1433-ND	AC-PwrEntry[R2]	VAR
45	1	M1-DB1	RECT BRIDGE 35A 600V - GBPC3506W-G	GBPC3506W-G	641-1384-ND	AC-PwrEntry[R2]	DB
46	1	M1-T1	8121-RC, CHOKE COMM MODE W/HDR 1mH 20A		M8916-ND	AC-PwrEntry[R2]	T
47	2	M1-L1, L2	INDUCT PWR 7.8UH TH		553-1503-ND	AC-PwrEntry[R2]	L

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48	1	M2-M2	400V to 15V auxially power supply, PR902	PR902		Aux 400v to 15V	M	
49	1	M8-M8	400V to 15V auxially power supply, PR902	PR902		Aux 400V to 15V	M	
50	1	M3-C1	Cer. Cap - 22u, 25V, X5R, 1206			DC-PwrEntry1Sw[R	C	
51	1	M3-C2	Cer. Cap - 10u, 25V, X5R, 1206			DC-PwrEntry1Sw[R	C	
52	1	M3-C3	Cer. Cap - 4u7, 25V, X5R, 0805			DC-PwrEntry1Sw[R	C	
53	1	M3-C4	Cer. Cap - 0.1uf, 25V, X5R, 0805			DC-PwrEntry1Sw[R	C	
54	2	M3-C5,C6	Elec. Cap - 330uf/ 63V, Alum, radial		P15739CT-ND	DC-PwrEntry1Sw[R	C	
55	1	M3-R1	Res. - 330R, 1%, 0.1W, 0805			DC-PwrEntry1Sw[R	R	
56	1	M3-R2	Res. - 470R, 5%, 0.1W, 0805			DC-PwrEntry1Sw[R	R	
57	1	M3-LD1	LED, green, 0805		404-1021-1-ND	DC-PwrEntry1Sw[R	LD	
58	1	M3-SW1	Toggle Switch - Miniature, SPDT		CKN1002-ND	DC-PwrEntry1Sw[R	SW	
59	1	M3-M1	Power Module - PTH08080	PTH08080	296-20432-ND	DC-PwrEntry1Sw[R	P	
60	1	M3-U1	LDO - 3.3V - TPS79533		296-13810-1-ND	DC-PwrEntry1Sw[R	U	
61	1	M3-JP1	Power jack 2.1 x 5.5 mm		CP-002AH-ND	DC-PwrEntry1Sw[R	JP	
62	1	M9-C1	Cer. Cap - 22u, 25V, X5R, 1206			DC-PwrEntry1Sw[R	C	
63	1	M9-C2	Cer. Cap - 10u, 25V, X5R, 1206			DC-PwrEntry1Sw[R	C	
64	1	M9-C3	Cer. Cap - 4u7, 25V, X5R, 0805			DC-PwrEntry1Sw[R	C	
65	1	M9-C4	Cer. Cap - 0.1uf, 25V, X5R, 0805			DC-PwrEntry1Sw[R	C	
66	2	M9-C5,C6	Elec. Cap - 330uf, 63V, Alum, radial		P15739CT-ND	DC-PwrEntry1Sw[R	C	
67	1	M9-R1	Res. - 330R, 1%, 0.1W, 0805			DC-PwrEntry1Sw[R	R	
68	1	M9-R2	Res. - 470R, 5%, 0.1W, 0805			DC-PwrEntry1Sw[R	R	
69	1	M9-LD1	LED, green, 0805		404-1021-1-ND	DC-PwrEntry1Sw[R	LD	
70	1	M9-SW1	Toggle Switch - Miniature, SPDT		CKN1002-ND	DC-PwrEntry1Sw[R	SW	
71	1	M9-M1	Power Module - PTH08080	PTH08080	296-20432-ND	DC-PwrEntry1Sw[R	P	
72	1	M9-U1	LDO - 3.3V - TPS79533	TI	TPS79533	296-13810-1-ND	DC-PwrEntry1Sw[R	U
73	1	M9-JP1	Power jack 2.1 x 5.5 mm		CP-002AH-ND	DC-PwrEntry1Sw[R	JP	
74	4	M4-C1,C2,C3,Cd5	Elec. Cap - 100uF, 50V, 20%, SMD		565-2133-1-ND	Inverter-3PH -HV[R	C	
75	8	M4-C4,C5,C6, Cd1,Cd2,Cd3,Cd4,Cd7	Cer. Cap - 2.2uF, 25V, X5R, 0805			Inverter-3PH -HV[R	C	
76	1	M4-Cd10	Cer. Cap - 2.2uF, 25V, X5R, 1206			Inverter-3PH -HV[R	C	
77	6	M4-C7,C8,C9,C10,C11,C12	Cer. Cap - 220p, 50V, X7R, 0805			Inverter-3PH -HV[R	C	
78	1	M4-C13	Cer. Cap - 22nF, 25V, X5R, 0805			Inverter-3PH -HV[R	C	
79		M4-C15, C16, C17,C18	DNP			Inverter-3PH -HV[R	C	
80	4	M4-C21-24	Cer. Cap - 47nF, 50V, 5%, 0805			Inverter-3PH -HV[R	C	
81	4	M4-Cd6,Cd8,Cd9,Cd12	Cer. Cap - 100nF, 50V, XR7, 0805			Inverter-3PH -HV[R	C	
82	1	M4-Cd11	Cer. Cap - 4.7uF, 25V, X7R, 0805			Inverter-3PH -HV[R	C	
83	3	M4-D1,D2,D3	US1J-13-F, Diode Ultra Fast SW 600V 1A	US1J-13-F	US1J-FDICT-ND	Inverter-3PH -HV[R	DA	
84	3	M4-D4,D5,D6	SMAZ16-TP, Diode Zener 1W 16V SMA	SMAZ16-TP	SMAZ16-FDICT-ND	Inverter-3PH -HV[R	DA	
85	3	M4-R1,R2,R3	Res. 10R, 5%, 0.25W, 1206 SMD			Inverter-3PH -HV[R	R	
86	6	M4-R4,R5,R6,R7,R8,R9	Res. 120R, 5%, 0.25W, 0805			Inverter-3PH -HV[R	R	

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87	3	M4-R10,R11, R39	Res. - 20mOhms, 1%, 3W, 2512	2512	CRA2512-FZ-R020ELFCT-ND	Inverter-3PH -HV[R	R
88	8	M4-R47-R50, R12, R31, R58, R59	Res. - 0R, 5%, 0.1W, 0805			Inverter-3PH -HV[R	R
89	1	M4-R13	Res. - 100R, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
90	6	M4-R14,R16,R17,R33,R34,R41	Res. - 221R, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
91	3	M4-R15,R30,R46	Res. - 300R, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
92	4	M4-R19,R22,R25,R36	Res. - 300K, 1%, 1/3W, 1206 SMD			Inverter-3PH -HV[R	R
93	7	M4-R18,R29,R32,R35,R40,R42, R54	Res. - 2K, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
94	6	M4-R43-45, R51-53	Res. - 22K, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
95	4	M4-R20,R23,R26,R37	Res. - 820K, 1%, 1/4W, 1206			Inverter-3PH -HV[R	R
96	4	M4-R21,R24,R27,R38	Res. - 9.09K, 1%, 1/4W, 1206			Inverter-3PH -HV[R	R
97	2	M4-R28,R56	Res. - 2.7K, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
98	2	M4-R55,R57	Res. - 29.4K, 1%, 1/8W, 0805			Inverter-3PH -HV[R	R
99	1	M4-U1	PS21765, MOD IPM 600V 20A MINI DIP	PS21765	835-1037-ND	Inverter-3PH -HV[R	U
100	1	M4-U2	1.8V Voltage Reference Chip, REF3318AIDBZT SOT23-3	TI REF3318AIDBZT	296-22637-1-ND	Inverter-3PH -HV[R	U
101	2	M4-U3, U4	OPA2350, CMOS Dual Opamp 8-Soic	TI OPA2350	OPA2350UA-ND	Inverter-3PH -HV[R	U
102		M4-J1-4	Standard 0.1" SIL headers, cut to fit, total needed 1x2			Inverter-3PH -HV[R	JP
103	1	M4-HS1	Heat sink - 0.25" aluminum plate for board size (10.925" x 8.125")			Inverter-3PH -HV[R	HS
104	1	M5-Cd1	Cer. Cap - 2.2uF, 25V, X5R, 0805			LEM-CurrentSense-2	C
105	5	M5-Cd2,Cd3,Cd5, C1, C2	Cer. Cap - 100nF, 25V, XR7, 0805			LEM-CurrentSense-2	C
106	2	M5-Cd4, Cd6	Cer. Cap 10nF, 25V, X5R, 0805			LEM-CurrentSense-2	C
107	2	M5-N1,N2	Current Sensor Hall effect, LTS 6-NP / CAS 6-NP	LTS 6-NP / CAS 6-NP	398-1087-5-ND	LEM-CurrentSense-2	N
108	1	M5-U1	OPA2350, CMOS Dual Opamp 8-Soic	TI OPA2350	OPA2350UA-ND	LEM-CurrentSense-2	U
109	4	M5-R1,R3, R7, R5	Res. - 5K, 1%, 1/8W, 0805			LEM-CurrentSense-2	R
110	4	M5-R2, R4, R6, R8	Res. - 3.3K, 1%, 1/8W, 0805			LEM-CurrentSense-2	R
111	2	M5-R9, R10	Res. - 10R, 1%, 1/8W, 0805			LEM-CurrentSense-2	R
112	1	M6-Cd1	Cer. Cap - 220nF, 16V, X7R, 0603			OverCurrentProtect	C
113	2	M6-Cd2,Cd3	Cer. Cap - 100nF, 50V, XR7, 0603			OverCurrentProtect	C
114	1	M6-Cd4	Cer. Cap - 1uF, 50V, XR7, 0603			OverCurrentProtect	C
115	2	M6-C1,C2	Cer. Cap - 10nF, 50V, X7R, 0603			OverCurrentProtect	C
116	2	M6-R1,R2	Res. - 100R, 5%, 0.1W, 0603			OverCurrentProtect	R
117	1	M6-R3	Res. 1K, 1%, 0.1W, 0603			OverCurrentProtect	R
118	1	M6-R4	Res. - 22K, 1%, 1/8W, 0603			OverCurrentProtect	R
119	1	M6-U1	IC Comparator 8 SOIC -TLV3502AID	TI TLV3502AID	296-18147-1-ND	OverCurrentProtect	U
120	1	M6-U2	IC 3-INPUT OR GATE SOT-23-6, SN74LVC1G332	TI SN74LVC1G332	296-18587-1-ND	OverCurrentProtect	U

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121	1	M6-U3,	IC POS-EDGE-TRIG D F-F-8-US8,SN74AUP1G74DCUR	TI	SN74AUP1G74DCUR	296-19761-1-ND	OverCurrentProtect	U
122	2	M7-M1,M2	CONV DC-DC MINI 1W 3KVDC ISOL, DCH010512DN7(5V->12V), DCH010505SN7 (5V->5V)	TI	DCH010512DN7	296-20638-ND	SD-CurrentSense-2p	M
123	2	M7-U1,U2	IC AMC1204DW -Isolated SDM 16SOIC	TI	AMC1204DW	296-28557-ND	SD-CurrentSense-2p	U
124	4	M7-L1, L2, L3,L4	INDUCTOR 22UH 13MA 0805			490-4030-1	SD-CurrentSense-2p	L
125		M7-D1,D2	Zener Diode 5.6V - DNP				SD-CurrentSense-2p	D
126	4	M7-Cd5,Cd6,Cd7,Cd8	Cer. Cap - 1uF, 25V, X5R, 0805				SD-CurrentSense-2p	C
127	4	M7-Cd1,Cd3,Cd2,Cd4	Cer. Cap - 100nF, 25V, X5R, 0805				SD-CurrentSense-2p	C
128	2	M7-Cd9, Cd10	Cer. Cap - 100nF, 25V, X5R, 0805 (DNP when AMC1204 is used)				SD-CurrentSense-2p	C
129	2	M7-C1,C4	Cer. Cap - 330pF, 25V, X5R, 0805				SD-CurrentSense-2p	C
130	4	M7-C2,C3,C5,C6	Cer. Cap - 10pF, 25V, X5R, 0805				SD-CurrentSense-2p	C
131	4	M7-R2,R3,R5,R6	Res. - 12R, 1%, 1/8W, 0805				SD-CurrentSense-2p	R
132	2	M7-R1,R4	Res. 0R,1%, 1/8W, 0805 (DNP when AMC1304 is used)				SD-CurrentSense-2p	R
133	1	M10-U1	TXB0106PWR, IC 6BIT NON-INV TRANSLTR 16TSSOP	TI	TXB0106PWR	296-23759-1-ND	QEP Macro	U
134	2	M10-Cd1, Cd2	Cer. Cap. 0.1uF, 25V, 0805, X5R				QEP Macro	C
135	3	M10-C1, C2, C3	Cer. Cap. 10nF, 25V, 0805, X5R				QEP Macro	C
136	3	M10-R1, R2, R3	Res. 47K, 5%, 1/8W, 0805				QEP Macro	R
137	1	M11-C1	Cer. Cap - 1u, 25V, X5R, 0805				Resolver[R1]	C
138	1	M11-C2	Cer. Cap - 47n, 25V, X7R, 0805				Resolver[R1]	C
139	1	M11-C3	Cer. Cap - 1n2, 25V, X7R, 0805				Resolver[R1]	C
140	1	M11-C4	Cer. Cap - 4n7, 25V, X7R, 0805				Resolver[R1]	C
141	2	M11-C5,C6	Cer. Cap - 220p, 25V, X7R, 0805				Resolver[R1]	C
142	4	M11-C7,C8,C13,C18	Cer. Cap - 1n, 25V, X7R, 0805				Resolver[R1]	C
143	2	M11-C9,C14	Cer. Cap - 47p, 25V, X7R, 0805				Resolver[R1]	C
144	4	M11-C10,C11,C15,C16	Cer. Cap - 330p, 25V, X7R, 0805				Resolver[R1]	C
145	7	M11-C12,C17,C19,Cd1,Cd3,Cd4, Cd6	Cer. Cap - 100n, 25V, X7R, 0805				Resolver[R1]	C
146	2	M11-Cd2,Cd5	Cer. Cap - 2u2, 25V, X5R, 0805				Resolver[R1]	C
147	2	M11-L1,L3	Inductor Bead, 60Ohm, 0805				Resolver[R1]	L
148	1	M11-L2	Res. - 0R0, 0805				Resolver[R1]	L
149	2	M11-R1,R24	Res. - 47R, 1%, 0.1W, 0805				Resolver[R1]	R
150	2	M11-R2,R3	Res. - 3K3, 1%, 0.1W, 0805				Resolver[R1]	R
151	2	M11-R4,R9	Res. - 68K, 1%, 0.1W, 0805				Resolver[R1]	R
152	2	M11-R5,R7	Res. - 5K1, 1%, 0.1W, 0805				Resolver[R1]	R
153	8	M11-R6,R8,R13,R14,R19,R20,R2 2,R23	Res. - 10K, 1%, 0.1W, 0805				Resolver[R1]	R
154	2	M11-R10,R16	Res. - 47K, 1%, 0.1W, 0805				Resolver[R1]	R
155	4	M11-R11,R12,R17,R18	Res. - 11K, 1%, 0.1W, 0805				Resolver[R1]	R

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156	2	M11-R15,R21	Res. - 2K, 1%, 0.1W, 0805			Resolver[R1]	R		
157	1	M11-U1	IC OPAMP GP R-R 18MHZ LN OPA2209 8SOIC	TI OPA2209	296-27783-1-ND	Resolver[R1]	U		
158	1	M11-U2	IC OPAMP GP R-R 5.1MHZ TLV2772 8SOIC	TI TLV2772	296-10677-1-ND	Resolver[R1]	U		
159	1	M11-U3	TLV2771 in SOT23-5 footprint	TI TLV2771	296-1347-1-ND	Resolver[R1]	U		
160	4	M12-Cd1-Cd4	Cer. Cap - 100nF, 25V, 0805			EnDat_BiSS[R1]	C		
161	5	M12-C1-C5	Cer. Cap - 330pF, 25V, X5R, 0805			EnDat_BiSS[R1]	C		
162	3	M12-R1,R2,R3	Res. - 10R, 5%, 0.1W, 0805			EnDat_BiSS[R1]	R		
163	1	M12-R4	Res. - 120R, 1%, 0.1W, 0805			EnDat_BiSS[R1]	R		
164	1	M12-R5	Res. - 47K, 5%, 0.1W, 0805			EnDat_BiSS[R1]	R		
165	2	M12-R6,R7	Res. - 150K, 5%, 0.1W, 0805			EnDat_BiSS[R1]	R		
166	1	M12-U1	Voltage Translator, 4 channel, TXB0104 - TSSOP-14	TI TXB0104	296-21929-1-ND	EnDat_BiSS[R1]	U		
167	2	M12-U2,U3	Transceiver, RS485 Half Duplex, SN65HVD3088ED - SOIC-8	TI SN65HVD3088ED	296-17172-5-ND	EnDat_BiSS[R1]	U		
168	1	M12-U4	High Side Switch, TPS27082L - SOT-23-6	TI TPS27082L	296-35595-1-ND	EnDat_BiSS[R1]	U		
169	3	M13-C1-C3	Cer. Cap - 10pF, 25V, NPO, 0805			SinCos[R1]	C		
170	3	M13-Cd1-Cd3	Cer. Cap - 100nF, 25V, 0805			SinCos[R1]	C		
171	8	M13-R1-	Res. - 20K, 1%, 0.1W, 0805			SinCos[R1]	R		
172	6	M13-R5-R8,R11,R12	Res. - 10K, 1%, 0.1W, 0805			SinCos[R1]	R		
173	3	M13-R13-R15	Res. - 120R, 1%, 0.1W, 0805			SinCos[R1]	R		
174	2	M13-U1,U2	OpAmp OPA2350, SOIC-8	TI OPA2350	OPA2350UA-ND	SinCos[R1]	U		
0-0 Item #	QTY	Reference	Value	Part Description and Value	Mfg	Manufacturer Part Number	Digikey Part #	Macro Name	Type
CNCD-01	69	[CNCD]-A:C1 A:C6-12 A:C14 A:C16-17 A:C20-30 C1-3 C7 C10-14 C43 C45 C48-64 C66 C75-80 C83-89 C95 C97-100	100n	CAP CER 16V 10% X7R 0402					
CNCD-02	1	[CNCD]-A:C4	10n	CAP CER 16V 10% X7R 0402					
CNCD-03	2	[CNCD]-C4-5	1n	CAP CER 16V 10% X7R 0402					
CNCD-04	1	[CNCD]-C46	470n	CAP CER 6.3V 10% X5R 0402					
CNCD-05	2	[CNCD]-C6 C67	DNP	CAP CER 16V 10% X7R 0402					
CNCD-06	2	[CNCD]-C8-9	15p	CAP CER 50V NP0 0402					
CNCD-07	2	[CNCD]-A:C18-19	27p	CAP CER 50V NP0 0402					
CNCD-08	1	[CNCD]-C68	33p	CAP CER 50V NP0 0402					
CNCD-09	4	[CNCD]-A:C2 C71-72 C74	10u	CAP CER 6.3V 20% X5R 0603					
CNCD-10	4	[CNCD]-C44 C82 C91 C96	2u2	CAP CER 10V 20% X5R 0603					
CNCD-11	3	[CNCD]-A:C5 A:C13 A:C15	4u7	CAP CER 6.3V 10% X5R 0603					
CNCD-12	24	[CNCD]-C19-42	DNP	CAP CER 16V 10% X7R 0603					
CNCD-13	3	[CNCD]-C70 C73 C94	10u	CAP CER 10V 20% X5R 0805					
CNCD-14	3	[CNCD]-C47 C65 C69	22u	CAP CER 6.3V 20% X5R 0805					
CNCD-15	6	[CNCD]-C15-18 C81 C90	2u2	CAP CER 10V 20% X5R 0805					

Item	# needed per macro	Reference	Part Description and Value	Manufacturer Part Number	Digikey Part #	Macro Name	Type
CNCD-16	1	[CNCD]-C92	DNP	CAP TANT 20% 1206			
CNCD-17	1	[CNCD]-J1	HSEC8-	180 pin (120 + 60) HSEC8 fingers; mates with samtec connectors			
CNCD-18	2	[CNCD]-A:D3-4	BLUE	LED BLUE 0805 SMD, Clear, 470nm			
CNCD-19	2	[CNCD]-A:D2 LD1	GREEN	LED GREEN 0805 SMD, Diffused, 567nm			
CNCD-20	2	[CNCD]-LD2-3	RED	LED RED 0805 SMD, Diffused, 647nm			
CNCD-21	1	[CNCD]-R66	200K	RES 1/16W 0.1% 0402 SMD			
CNCD-22	1	[CNCD]-R65	205K	RES 1/16W 1% 0402 SMD			
CNCD-23	1	[CNCD]-R58	22K	RES 1/16W 1% 0402 SMD			
CNCD-24	1	[CNCD]-R56	2K	RES 1/16W 1% 0402 SMD			
CNCD-25	1	[CNCD]-R61	340K	RES 1/16W 1% 0402 SMD			
CNCD-26	2	[CNCD]-R1-2	4K7	RES 1/16W 1% 0402 SMD			
CNCD-27	1	[CNCD]-R63	75K	RES 1/16W 0.1% 0402 SMD			
CNCD-28	7	[CNCD]-A:R7 A:R10 R16 R59 R69-70 R78	0	RES 1/16W 5% 0402 SMD			
CNCD-29	2	[CNCD]-A:R3 R72	100K	RES 1/16W 5% 0402 SMD			
CNCD-30	13	[CNCD]-A:R2 A:R4 A:R6 A:R8 A:R15 A:R17 R26-27 R29 R62 R71 R73-74	10K	RES 1/16W 5% 0402 SMD			
CNCD-31	4	[CNCD]-A:R5 A:R9 A:R11-12	1K	RES 1/16W 5% 0402 SMD			
CNCD-32	4	[CNCD]-A:R16 R11 R24-25	2K2	RES 1/16W 5% 0402 SMD			
CNCD-33	7	[CNCD]-R5-10 R14	39	RES 1/16W 5% 0402 SMD			
CNCD-34	1	[CNCD]-R22	510K	RES 1/16W 5% 0402 SMD			
CNCD-35	2	[CNCD]-R18-19	56K	RES 1/16W 5% 0402 SMD			
CNCD-36	4	[CNCD]-A:R1 R12-13 R60	680	RES 1/16W 5% 0402 SMD			
CNCD-37	4	[CNCD]-A:R13-14 R15 R28	DNP	RES 1/16W 5% 0402 SMD			
CNCD-38	1	[CNCD]-R21	120K	RES 1/10W 1% 0603 SMD			
CNCD-39	1	[CNCD]-R23	560K	RES 1/10W 1% 0603 SMD			
CNCD-40	1	[CNCD]-R17	649K	RES 1/10W 1% 0603 SMD			
CNCD-41	1	[CNCD]-R20	750K	RES 1/10W 1% 0603 SMD			
CNCD-42	27	[CNCD]-R30-42 R44-55 R67-68	0	RES 1/10W 5% 0603 SMD			
CNCD-43	3	[CNCD]-R75-77	100K	RES 1/10W 5% 0603 SMD			
CNCD-44	4	[CNCD]-R3-4 R43 R64	DNP	RES 1/10W 5% 0603 SMD			
CNCD-45	1	[CNCD]-R57	0	RES 1/8W 5% 0805 SMD			
CNCD-46	9	[CNCD]-A:TP1-2 TP1-7		Via, 20 ID, 40 OD (mil)			
CNCD-47	1	[CNCD]-U5	micro-S	micro SD Connector+Ejector, 10 (8+2) positions, SMT-top	101-00581-59	101-00581-59-1-ND	
CNCD-48	1	[CNCD]-A:C31	10n	CAP CER 1.5KV 10% X7R 1812	1812SC103KAT1A	478-4735-1-ND	
CNCD-49	1	[CNCD]-J8		USB micro AB Female USB2.0	1981584-1	A97799CT-ND	

Item	# needed per macro	Reference	Part Description and Value	Manufacturer Part Number	Digikey Part #	Macro Name	Type
CNCD-50	2	[CNCD]-A:SW1 SW1	18-2LPST 2xSPST DIP switch SMT, half-pitch	218-2LPST	CT2182LPST-ND		
CNCD-51	1	[CNCD]-SW2	4xSPST 4xSPST DIP Switch	281-4LPST	CT2184LPST-ND		
CNCD-52	1	[CNCD]-X1	10MHz, 20ppm 20MHz Crystal, 20ppm	7B-20.000MEEQ-T	887-1303-1-ND		
CNCD-53	1	[CNCD]-A:U5	IC EEPROM 2KBIT 3MHZ 8SOIC	93LC56C-I/SN	93LC56C-I/SN-ND		
CNCD-54	2	[CNCD]-L5-6	600Ohm FERRITE 3A 600HM@100MHZ 0805 SMD	BKP2125HS600-T	587-1932-1-ND		
CNCD-55	2	[CNCD]-L3-4	220Ohm FERRITE 2A 220OHM@100MHZ 0805 SMD	BLM21PG221SN1D	490-1054-1-ND		
CNCD-56	2	[CNCD]-SW3-4	CAS-D20T Switch SPDT, 2 position	CAS-D20TA	CASD20JCT-ND		
CNCD-57	1	[CNCD]-A:X1	12 MHz CRYSTAL 12.000 MHZ 20PF SMD	ECS-120-20-30B-TR	XC1118CT-ND		
CNCD-58	1	[CNCD]-A:U4	IC USB HS DUAL UART/FIFO 64-QFN	FT2232HL	768-1024-1-ND		
CNCD-59	2	[CNCD]-A:L1-2	FERRITE 500MA 600 OHM 0805 SMD	HZ0805E601R-10	240-2399-1-ND		
CNCD-60	5	[CNCD]-A:U6-8 A:U10-11	IC DGTL ISOLATOR 25MBPS 2CH 8SOIC	TI ISO7220CD	296-21953-1-ND		
CNCD-61	1	[CNCD]-U12	IC OPAMP GP R-R 15MHZ QUAD 14TSSOP	TI LMP7709MT/NOPB	LMP7709MT/NOPB-ND		
CNCD-62	6	[CNCD]-J2-7	3x3 HD Header Male; 1x3, 2mm pitch	M22-2510305	952-1312-ND		
CNCD-63	3	[CNCD]-A:D1 D1-2	DIODE SCHOTTKY 10V 1A POWERMITE	MBRM110ET1G	MBRM110ET1GOSC-T-ND		
CNCD-64	1	[CNCD]-U16	7002N N-channel MOSFET 30V 0.154A	NTA7002NT1G	NTA7002NT1GOSC-T-ND		
CNCD-65	6	[CNCD]-U6-11	201MR TVS 4-ch Diode Array, 5V breakdown	NUP4201MR6T1G	NUP4201MR6T1GOSC-T-ND		
CNCD-66	1	[CNCD]-U13	IC, Voltage Reference, 3.0V, 0.2%, 14uVpp noise	TI REF3030AIDBZR	296-26323-1-ND		
CNCD-67	1	[CNCD]-U17	IC, Voltage Reference, 3.3V, 0.2%, 14uVpp noise	TI REF3033AIDBZR	296-26324-1-ND		
CNCD-68	1	[CNCD]-A:U9	3-State Buffer, 2 elements x 4 bits	TI SN74ALVC244PWR	296-5136-1-ND		
CNCD-69	1	[CNCD]-A:U3	IC GATE NAND QUAD 2INP 14TSSOP	TI SN74HC03PW	296-29731-1-ND		
CNCD-70	1	[CNCD]-U2	VC2G0 Buffer Line Driver, non-inverting, 32mA	TI SN74LVC2G07DBVR	296-13494-1-ND		
CNCD-71	1	[CNCD]-A:C3	47u CAP TANT 20% 0805 6.3V	TCTPOJ476M8R	511-1682-1-ND		
CNCD-72	1	[CNCD]-C93	68u CAP TANT 10V 20% 1206	TLJA686M010R1500	478-4925-1-ND		
CNCD-73	1	[CNCD]-U1	MCU F2837x 337pin ZWT BGA	TI TMS320F28377DZWT			
CNCD-74	1	[CNCD]-A:U2	IC ESD-PROT ARRAY 2CH SOT-5	TI TPD2E001DRLR	296-21883-1-ND		
CNCD-75	1	[CNCD]-U15	2051BD High-Side Power Distribution Switch	TI TPS2051BDBVR	296-21265-1-ND		
CNCD-76	1	[CNCD]-U3	IC SVS Adjustable SON-6/DRY; PushPull; ActiveLow	TI TPS3895ADRY	296-29806-1-ND		
CNCD-77	1	[CNCD]-U4	IC SVS Adjustable SON-6/DRY; OpenCollector	TI TPS3897ADRY	296-29810-1-ND		
CNCD-78	1	[CNCD]-U14	IC Dual Step Down Converter, 2.25MHz, 600mA/1A	TI TPS62420DRC	296-25650-1-ND		
CNCD-79	1	[CNCD]-A:U1	IC LDO REG HI-PSRR 3.3V SOT23-5	TI TPS73033DBV	296-17580-1-ND		
CNCD-80	1	[CNCD]-A:J1	CONN RECEPT MINI USB2.0 5POS	UX60-MB-5ST	H2959CT-ND		
CNCD-81	1	[CNCD]-L1	2u Inductor Power 2.2uH 1.0A SMD 20%	VLF3010AT-2R2M1R0	445-3215-1-ND		
CNCD-82	1	[CNCD]-L2	3u Inductor Power 3.3uH 0.87A SMD 20%	VLF3010AT-3R3MR87	445-3216-1-ND		



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