

Bill of Materials

TI DESIGNS

Item	P/N	ION Footprint	Qty	Unit	Type	Rev	Stat	Title	Detail	Mfr P/N	Reference(m)	Mfr Name
1	515501-0001R		1	each	DWG	D	U	PWB.DRV830X-HC-C2 MOTOR BOARD	CSTM			
2	515502-0001		1	each	DOC	D	U	LOGIC.DRV830X-HC-C2 MOTOR BOARD	SCH			
4	103742-0001R	pw16-14x70	1	each	PS		U	IC,TSSOP16,TRANSLATOR,6-BIT BIDIRECTIONAL,VOLTAGE-LEVEL	MATL	TXB0106PWR	U7	Texas Instruments
5	103808-0002R		1	each	PS		U	IC,TSSOP56,THREE PHASE PRE-DRIVER	MATL	DRV8302DCA	U1	Texas Instruments
7	103805-0001R	dbv-20x60-5	2	each	PS		U	IC,SOT23-5,OP AMP	MATL	OPA365AIDBVR	U13, U9	Texas Instruments
8	103806-0001R	dw16-25x75-375	1	each	PS		U	IC,SOIC,HIGH SPEED QUAD DIGITAL ISOLATORS,1Mbps	MATL	ISO7241ADW	U5	Texas Instruments
9	103518-0001R	dub8-35x90	1	each	PS		U	IC,SMT8,ISOLATED CAN TRANSCEIVER	MATL	ISO1050DUBR	U4	Texas Instruments
10	103743-0001R	dbv6-27x39-6	1	each	PS		U	IC,DBV6,DUAL SCHMITT-TRIGGER BUFFER	MATL	SN74LVC2G17DBVR	U6	Texas Instruments
11	103807-0033R	dbv-20x60-5	2	each	PS		U	IC,DBV5,LDO REGULATOR,3.3V,400mA	MATL	TPS73633MDBVREP	U3, U8	Texas Instruments
12	103739-0005R	edj4-6040	1	each	PS		U	POWER MODULE,5V,1W,ADJUSTABLE	MATL	DCH010505SN7	U2	Texas Instruments
15	103825-0001R		2	each	PS		U	TRANSISTOR,SOT23,MOSFET,150V,530mA	MATL	SI2325DS-T1-E3	Q1, Q2	Vishay Intertechnology
16	103824-0001R	SOT23-28X44-GSD	1	each	PS		U	TRANSISTOR,SOT23,MOSFET,N CHANNEL	MATL	2N7002E.215	Q3	NXP Semiconductors
17	103810-0001R		6	each	PS		U	TRANSISTOR,T0263,MOSFET,60V,110A	MATL	SUM110N06-3M9H-E3	Q4, Q5, Q6, Q7, Q8, Q9	Vishay Intertechnology
18	103952-0001R	dbv5-27x39	3	each	PS		U	IC,S05,OP AMP,1.8V	MATL	TLV2781IDBVR	U10, U11, U12	Texas Instruments
20	103820-0001R		1	each	PS		U	DIODE,SMT,SCHOTTKY,2A,100V	MATL	CDBB2100-G	D1	Comchip Technology
25	103827-0002R	led2-47sq	5	each	PS		U	LED,SMT 0805, GREEN	MATL	LTST-C170KGKT	LED1, LED10, LED11, LED12, LED3	LITEON
26	103827-0001R	led2-47sq	1	each	PS		U	LED,SMT 0805,SUPER RED	MATL	LTST-C170KRKT	LED6	LITEON
27	103330-0003R		1	each	PS		U	LED,SMT 0805, YELLOW	MATL	LTST-C171YKT	LED5	LITEON
30	103135-0331R	dr74-98x126	1	each	PS		U	INDUCTOR,SMT,33uH	MATL	DR74-330-R	L1	Coiltronics Incorporated
40	103818-0222R		1	each	PS		U	CAP,ELEC,SMT,220uF,10V	MATL	EEE-1A221XP	C57	Panasonic
45	103819-0332R		2	each	PS		U	CAP,ELEC,RADIAL,330uF,100V,20%	MATL	UVZ2A331MHD	C93, C94	Nichicon Corporation
46	103817-0103R		1	each	PS		U	CAP,ELEC,RADIAL,1000uF,100V,20%	MATL	ECA-2AHG102	C50	Panasonic
50	103815-0471R	c1210-70x102	1	each	PS		U	CAP,CER,SMT 1210,47uF,16V,X5R,+/-20%	MATL	EMK325BJ476MM-T	C11	Taiyo Yuden
51	103814-0220R	c1210-70x102	5	each	PS		U	CAP,CER,SMT 1210,2.2uF,100V,X7R,+/-10%	MATL	C3225X7R2A225K	C6, C7, C81, C82, C83	TDK Corporation
55	101415-0220R	c805-35x80	1	each	PS		U	CAP,CER,SMT 0805,2.2uF,25V,X7R,10%	MATL	0805C3225KAT2A	C14	AVX Corporation
56	103813-1100R	c805-35x80	3	each	PS		U	CAP,CER,SMT 0805,1uF,100V,+10/-10%,X7R	MATL	C0805C104K1RACTU	C5, C51, C8	Kemet Electronics Corporation
58	100993-1682R	c603-35x45	1	each	PS		U	CAP,CER,SMT 0603,6800pF,50V,+/-10%,X7R	MATL	ECJ-1VB1H682K	C1	Panasonic
59	101002-1394R	c603-35x45	1	each	PS		U	CAP,CER,SMT 0603,39pF,50V,+/-5%,NPO	MATL	ECJ-1VC1H390J	C2	Panasonic
60	102965-0220R	c603-35x45	5	each	PS		U	CAP,CER,SMT 0603,2.2uF,10V,+/-10%,X7R	MATL	GRM188R71A225KE15D	C20, C22, C44, C46, C48	Murata Electronics
61	103594-0100R	c603-35x45	5	each	PS		U	CAP,CER,SMT 0603,1uF,25V,+/-10%,X5R	MATL	GRM188R61E105KA12D	C10, C12, C15, C19, C23	Murata Electronics
62	103816-1470R	c603-35x45	4	each	PS		U	CAP,CER,SMT 0603,.47uF,25V,+/-10%,X7R	MATL	GRM188R71E474KA12D	C29, C30, C31, C33	Murata Electronics
63	100993-1100R	c603-35x45	28	each	PS		U	CAP,CER,SMT 0603,.1uF,50V,+/-10%,X7R	MATL	06035C104KAT2A	C13, C16, C17, C18, C21, C24, C25, C26, C27, C28, C32, C34, C35, C42, C43, C45, C47, C58, C59, C67, C68, C69, C72, C74, C76, C77, C85, C9	AVX Corporation
64	100993-1221R	c603-35x45	1	each	PS		U	CAP,CER,SMT 0603,.022uF,50V,+/-10%,X7R	MATL	GRM188R71H223KA01D	C3	Murata Electronics
65	102482-1101R	c603-35x45	1	each	PS		U	CAP,CER,SMT 0603,.01uF,100V,+/-10%,X7R	MATL	C1608X7R2A103K	C53	TDK Corporation
66	100993-1151R	c603-35x45	1	each	PS		U	CAP,CER,SMT 0603,.015uF,50V,+/-10%,X7R	MATL	ECJ-1VB1H153K	C4	Panasonic
67	100993-1102R	c603-35x45	12	each	PS		U	CAP,CER,SMT 0603,.001uF,50V,+/-10%,X7R	MATL	06035C102KAT2A	C36, C37, C38, C39, C40, C41, C75, C78, C79, C80, C84, C98	AVX Corporation
75	103811-1003R		1	each	PS		U	POT,12mm SQ,10K,1/8 WATT,SINGLE TURN	MATL	296UD103B1N	R28	CTS Electronics Corporation
80	100687-0001R	r603-35X45	14	each	PS		U	RES,SMT 0603,0 OHM,1/16 WATT	MATL	ERJ-3GEY0R00V	R109, R110, R111, R112, R117, R130, R133, R134, R135, R5, R50, R91, R97, R98	Panasonic
81	100687-0100R	r603-35X45	7	each	PS		U	RES,SMT 0603,1 OHM,5%,1/16 WATT	MATL	ERJ-3RQJ1R0V	R6, R67, R68, R69, R70, R71, R8	Panasonic
82	100642-1000R	r603-35x45	1	each	PS		U	RES,SMT 0603,10 OHM,1%,1/16 WATT	MATL	ERJ-3EFK10R0V	R87	Panasonic
84	100687-1201R	r603-35X45	1	each	PS		U	RES,SMT 0603,120 OHM,5%,1/16 WATT	MATL	ERJ-3GEYJ121V	R17	Panasonic
85	100687-1002R	r603-35X45	11	each	PS		U	RES,SMT 0603,1K OHM,5%,1/16 WATT	MATL	RC0603JR-071KL	R12, R13, R21, R29, R30, R31, R32, R33, R34, R43, R47	Yageo
86	100687-8201R	r603-35X45	1	each	PS		U	RES,SMT 0603,820 OHM,5%,1/16 WATT	MATL	ERJ-3GEYJ821V	R49	Panasonic
87	100687-4701R	r603-35X45	4	each	PS		U	RES,SMT 0603,470 OHM,5%,1/16 WATT	MATL	ERJ-3GEYJ471V	R20, R22, R23, R26	Panasonic
88	100687-3301R	r603-35X45	5	each	PS		U	RES,SMT 0603,330 OHM,5%,1/16 WATT	MATL	ERJ-3GEYJ331V	R14, R15, R18, R24, R27	Panasonic

91	100642-1004R	r603-35x45	1	each	PS	U	RES,SMT 0603,100K OHM,1%,1/16 WATT	MATL	RC0603FR-07100KL	R40	Yageo
92	100642-1963R	r603-35x45	1	each	PS	U	RES,SMT 0603,19.6K OHM,1%,1/16 WATT	MATL	ERJ-3EKF1962V	R41	Panasonic
93	100642-1003R	r603-35x45	5	each	PS	U	RES,SMT 0603,10K OHM,1%,1/16 WATT	MATL	ERJ-3EKF1002V	R10, R11, R7, R9, R44	Panasonic
94	100642-2054R	r603-35x45	1	each	PS	U	RES,SMT 0603,205K OHM,1%,1/16 WATT	MATL	ERJ-3EKF2053V	R1	Panasonic
95	100642-2803R	r603-35x45	1	each	PS	U	RES,SMT 0603,28K OHM,1%,1/16 WATT	MATL	ERJ-3EKF2802V	R4	Panasonic
96	100642-4992R	r603-35x45	13	each	PS	U	RES,SMT 0603,4.99K OHM,1%,1/16 WATT	MATL	ERJ-3EKF4991V	R122, R123, R124, R125, R126, R127, R19, R25, R36, R48, R62, R64, R65	Panasonic
97	100642-4993R	r603-35x45	2	each	PS	U	RES,SMT 0603,49.9K OHM,1%,1/16 WATT	MATL	ERJ-3EKF4992V	R128, R129	Panasonic
98	100642-5363R	r603-35x45	1	each	PS	U	RES,SMT 0603,53.6K OHM,1%,1/16 WATT	MATL	ERJ-3EKF5362V	R6	Panasonic
99	100642-9533R	r603-35x45	4	each	PS	U	RES,SMT 0603,95.3K OHM,1%,1/16 WATT	MATL	ERJ-3EKF9532V	R35, R60, R61, R63	Panasonic
101	103951-2003R	r603-35x45	6	each	PS	U	RES,SMT 0603,20K OHM, .1%,1/10 WATT	MATL	ERA-3AEB203V	R103, R105, R107, R108, R113, R95	Panasonic
102	103951-1003R	r603-35x45	2	each	PS	U	RES,SMT 0603,10K OHM, .1%,1/10 WATT	MATL	ERA-3AEB103V	R37, R38	Panasonic
103	103951-1002R	r603-35x45	6	each	PS	U	RES,SMT 0603,1K OHM, .1%,1/10 WATT	MATL	ERA-3AEB102V	R99, R101, R104, R92, R94, R102	Panasonic
106	100155-0100R	r1206-40x70	1	each	PS	U	RES,SMT 1206,1 OHM,5%,1/4 WATT	MATL	ERJ-8GEYJ1R0V	R16	Panasonic
108	100155-0330R	r1206-40x70	1	each	PS	U	RES,SMT 1206,3.3 OHM,5%,1/4 WATT	MATL	ERJ-8GEYJ3R3V	R39	Panasonic
110	103809-0002R		3	each	PS	U	RES,SMT 4527, .002 OHM,1%,5W	MATL	WSR52L000FEA	R80, R81, R82	Vishay Intertechnology
115	102984-0001R	sw4-50x70-7914J	2	each	PS	U	SWITCH,SMT,PUSHBUTTON,MOMENTARY,4mm	MATL	7914J-1-000E	SW1, SW2	Bourns
120	103823-0002R		2	each	PS	U	TERMINAL BLOCK,2 POS.,VERT.,.15mm SPC.,.90A	MATL	39920-0502	J25, J26	Molex
121	103821-0002R		1	each	PS	U	TERMINAL BLOCK,2 POS.,VERT.,.5mm SPC.	MATL	ED500/2DS	J2	On-Shore Technology, Inc.
122	103823-0004R		1	each	PS	U	TERMINAL BLOCK,4 POS.,VERT.,.15mm SPC.,.90A	MATL	39920-0504	J11	Molex
125	102232-0100R	molex100-71251-5101	1	each	PS	U	CONN,100 PIN,DIMM SOCKET,W/EXTRACTORS	MATL	87630-1001	J1	Molex
129	100115-0002R	JUMP1X2-6040	6	each	PL	U	HEADER,2 X 1,VERTICAL,PIN	SUBA		J12, J13, J23, J24, JP2, JP4	
130	100115-0003R	JUMP1X3-6040	1	each	PL	U	HEADER,3 X 1,VERTICAL,PIN	SUBA		J7	
133	100115-0005R	JUMP1X5-6040	4	each	PL	U	HEADER,5 X 1,VERTICAL,PIN	SUBA		J10, J4, J6, J8	
134	100116-0005R	JUMP2X5-6040	1	each	PL	U	HEADER,5 X 2,VERTICAL,PIN	SUBA	2011-2X05G00SB/SN	J20	Oupiin
135	100116-0007R	JUMP2X7-6040	1	each	PL	U	HEADER,7 X 2,VERTICAL,PIN	SUBA	2011-2X07G00SB/SN	J21	Oupiin
136	100116-0020R	conn40-5638	1	each	PL	U	HEADER,20 X 2,VERTICAL,PIN	SUBA		J5	
145	103020-5003R		10	each	PS	U	TEST POINT,ORANGE	MATL	5003	TP12, TP13, TP14, TP16, TP17, TP19, TP23, TP24, TP25, TP3	Keystone Electronics Corp.
146	103020-5000R		4	each	PS	U	TEST POINT,RED	MATL	5000	TP11, TP4, TP5, TP6	Keystone Electronics Corp.
147	103020-5001R		5	each	PS	U	TEST POINT,BLACK	MATL	5001	TP10, TP20, TP7, TP8, TP9	Keystone Electronics Corp.
150	100123-0001R		2	each	PS	U	JUMPER,SHUNT,2 POS	MATL	SPC02SYAN	JP2, JP4	Sullins Electronics, Corp.
151	100329-0250R		8	each	PS	U	SCREW,PHILLIPS,PAN,SS,4-40 X .250	MATL	0440X0250PNPHSSPS	XMH1, XMH2, XMH3, XMH4, XMH5, XMH6, XMH7, XMH8	Above Board Electronics,Inc.
152	103812-0875R		8	each	PS	U	SPACER,ROUND,ALUM,4-40,.187 O.D. X .875L	MATL	2030	XXMH1, XXMH2, XXMH3,	Keystone Electronics Corp.
155	C0603-NOPOP	c603-35x45	8	each	PS	U		NP		C52, C86, C87, C88, C95, C96,	
160	R0603-NOPOP	r603-35x45	7	each	PS	U		NP		R2, R3, R42, R45, R46, R119,	
170	NO-POP		1	each	PS	U		NP		D2	
200	TP-27SQ15-NO-POP		6	each	PS	U		NP		TP1, TP15, TP18, TP2, TP21,	

Bill of Materials

TI DESIGNS
F28035 Control Card

Item	Description	Digikey Part #	Comments
U1	F28035 (TI) SMD (LQFP-80)		Texas Instruments
C1, C14, C22-C29	CAP ceramic 100n X5R, SMD 0603 (decoupling)		
C2-C9	CAP ceramic 3300p X7R, SMD 0603		
C10-C12, C19-C21	CAP ceramic 2u2 X7R, SMD 0603		
C13	CAP Tant 47u 10V SMD (3216-12)	511-1500-2	
C15	CAP ceramic 10u X5R, SMD 0603		
C16, C18	CAP ceramic 1u X7R, SMD 0603		
C17	CAP ceramic 0.01u X7R, SMD 0603		
L1, L2	Inductor 60Ω impedance, 100MHz, SMD 0805	587-1932-1-ND	
L3, L4	Inductor 220Ω impedance, 100MHz, SMD 0805	490-1054-1-ND	
R1, R13	Resistors 2K2, 5% - SMD, 0603		
R2, R5, R6	Resistors 0R, 5% - SMD, 0805		
R3, R7, R8	Resistors 680R, 5% - SMD, 0603		
R4	Do NOT populate - SMD, 0805	---	
R9, R10	Resistors 3K3, 5% - SMD, 0603		
R11, R12	Resistors 820R, 5% - SMD, 0603		
RN1, RN2	Resistor network 56R 5%	Y1560CT	
RN3	Resistor network 33R 5%	Y1330CT	

X1	Do NOT populate - SMD	---	
LD1	LED SMD 0805 - Green	404-1021-1	
LD2,LD3	LEDs SMD 0805 - Red	404-1017-1	
U2, U3	Diodes, clamping, NUP4201MR6 TSOP-6	NUP4201MR6T1GOSTR	
U4	TPS73033 (TI) - SOT23-5	296-2652-5	
U6	ISO7221CDR	296-21955-1	
U5	MAX3221 (TI)	296-19825-2	
U7	SN74LVC2G07 (TI)	296-13494-2	
SW1	CHS-01TB	563-1004-1-ND	
SW2	CT2182LPST	CT2182LPST-ND	
SW3	CAS-D20TA - 2xSPDT	CASD20JCT-ND	

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