None
8/21/2026 9:34 AM
TIDA-060054

Robotics Design REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C2, C3, C4, C5, C6, C7, C8, C22, C24, C27, C28, C30	13	0.1uF	GCM155R71C104JA55D	MuRata	CAP, CERM, 0.1 µF, 16 V,+/- 5%, X7R, AEC-Q200 Grade 1, 0402	0402
C9, C32	2	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	0603
C10, C15	2	0.22uF	GCJ188R71H224KA01D	MuRata	CAP, CERM, 0.22 µF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C11, C20	2	0.01uF	CGA2B3X8R1H103K050BB	TDK	CAP, CERM, 0.01 µF, 50 V,+/- 10%, X8R, AEC-Q200 Grade 0, 0402	0402
C12	1	0.1uF	GCM188R71H104KA57D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C13, C14, C19	3	1uF	GCJ21BR71H105MA01L	MuRata	CAP, CERM, 1 µF, 50 V,+/- 20%, X7R, AEC-Q200 Grade 1, 0805	0805
C16, C17	2	1uF	GRM185D71A105KE36D	MuRata	CAP, CERM, 1 uF, 10 V, +/- 10%, X7T, 0603	0603
C18	1	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
C21, C23, C31, C46	4	1uF	C0603C105K4RACAUTO	Kemet	CAP, CERM, 1 µF, 16 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C25	1	10uF	GCJ21BR71A106KE01L	MuRata	CAP, CERM, 10 µF, 10 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C26, C29	2	10uF	GRT188C81A106ME13D	MuRata	CAP, CERM, 10 uF, 10 V, +/- 20%, X6S, AEC-Q200 Grade 2, 0603	0603
C33	1	0.1uF	CGA3E2X7R1H104K080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C34	1	330uF	UCM1H331MNL1GS	Nichicon	CAP, AL, 330 uF, 50 V, +/- 20%, SMD	D10xL10mm
C35	1	4.7uF	UMK325B7475MMHT	Taiyo Yuden	CAP, CERM, 4.7 µF, 50 V,+/- 20%, X7R, AEC-Q200 Grade 1, 1210	1210
C36	1	8200pF	GCD188R71H822KA01D	MuRata	CAP, CERM, 8200 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C37	1	4700pF	C0603C472J1GAC7867	Kemet	CAP, CERM, 4700 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
C38	1	2200pF	C0603X222K5RACTU	Kemet	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	0603
C39, C40	2	4.7uF	CGA6P3X7R1H475K250AB	TDK	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	1210
C41	1	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C42	1	0.1uF	06035C104KAT2A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C43, C44	2	33uF	C2012X5R1A336M125AC	TDK	CAP, CERM, 33 uF, 10 V, +/- 20%, X5R, 0805	0805
C45	1	33pF	GCM1555C1H330JA16D	MuRata	CAP, CERM, 33 pF, 50 V,+/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402
C47	1	2.2uF	GRT155C81C225ME13D	MuRata	CAP, CERM, 2.2 µF, 16 V,+/- 20%, X6S, AEC-Q200 Grade 2, 0402	0402
D1	1	Green	LTST-C170KGKT	Lite-On	LED, Green, SMD	LED_0805
D2	1	Red	LTST-C170KRKT	Lite-On	LED, Red, SMD	Red 0805 LED
J1	1		7006	Keystone	Binding Post, RED, TH	11.4x27.2mm
J2	1		7007	Keystone	Binding Post, BLACK, TH	11.4x27.2mm
J3	1		RAPC712X	Switchcraft	Power Jack, mini, 2.5mm OD, R/A, TH	Jack, 14.5x11x9mm
J4, J5	2		575-4	Keystone	Standard Banana Jack, Uninsulated, 5.5mm	Keystone_575-4
J6	1		TSW-104-07-G-D	Samtec	Header, 100mil, 4x2, Gold, TH	4x2 Header
J7	1		PBC02DAAN	Sullins Connector Solutions	Header, 2.54mm, 2x2, Gold, TH	Header, 2.54mm, 2x2, TH
J8	1		QTE-020-01-L-D-A	Samtec	Connector, Header, High Speed, 20 pairs, SMT	QTE-020-01-X-D-A
L1, L2	2	3.3uH	DFE322520FD-3R3M=P2	MuRata Toko	Inductor, Shielded, Metal Composite, 3.3 µH, 3.3 A, 0.051 ohm, SMD	3.2x2.5mm
L3	1		SRP5015TA-R15Y	Bourns	FIXED IND 150NH 16A 4.1 MOHM SMD	SMD2
L4	1	180 ohm	NFZ2MSM181SN10L	MuRata	Ferrite Bead, 180 ohm @ 100 MHz, 3.4 A, 0806	0806
L5	1	4.7uH	CBC3225T4R7MR	Taiyo Yuden	Inductor, Wirewound, 4.7 uH, 1.01 A, 0.1 ohm, SMD	3.2x2.5x2.5mm
MIC1, MIC2, MIC3, MIC4, MIC5, MIC6, MIC7, MIC8	8		MTMM-103-04-T-D-157	Samtec	Header, 2mm, 3x2, Tin, TH	Header, 2mm, 3x2, TH
R1, R2, R3, R4	4	22	RC0603FR-0722RL	Yageo	RES, 22.0, 1%, 0.1 W, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R5, R6	2	10.0k	RMCF0402FT10K0	Stackpole Electronics Inc	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R7	1	4.99k	CRCW04024K99FKED	Vishay-Dale	RES, 4.99 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R8	1	10.0k	RK73H1ETTP1002F	KOA Speer	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R9, R10	2	2.2k	CRCW06032K20JNEA	Vishay-Dale	RES, 2.2 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R11	1	1.0k	CRCW08051K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R12	1	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R13	1	1.00k	ERA3AEB102V	Panasonic	RES, 1.00 k, 0.1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R14	1	442	CRCW0603442RFKEA	Vishay-Dale	RES, 442, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R15	1	19.1k	CRCW060319K1FKEA	Vishay-Dale	RES, 19.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R16	1	0	CRCW08050000Z0EAHP	Vishay-Dale	RES, 0, 5%, 0.333 W, AEC-Q200 Grade 0, 0805	0805
U1	1		PCMD3180QRGERQ1	Texas Instruments	Octal-Channel, PDM Input to TDM or I 2S Output Converter	VQFN24
U2	1		TAS6511RGE	Texas Instruments	45-W, 2-MHz Digital Input 1-Channel Automotive Heatsink-Free Class-D Audio Amplifier with Current Sense and Real-time Load Diagnostics	VQFN24
U3	1		LMR51450SQDRRRQ1	Texas Instruments	36-V, 4-A/5-A Synchronous Step-Down DC/DC Converter With Low IQ	WSON12
U4	1		TLV76733QWDRBRQ1	Texas Instruments	Linear Voltage Regulator IC Positive Fixed 1 Output 3.3V 1A 8-SON (3x3)	SON8
Y1	1		SIT8008BC-71-33E-12.288000G	SiTime	Oscillator, 12.288 MHz, SMD	2x1.6mm