

Motion Controller V1 BOM			Engineer:	Trevor Murphy		Prepared For: Motor Motion Control Systems			Sheet ID		Manuf. Capability		\$0.00		
Category	Item Name	Part Designator (if applicable)	Part Value	Link	Vendor	Vender No	Price	BOM Quantity	BOM Total	Purch. Quan.	Notes	BOM Total:	\$35.20	Purchase Total:	\$203.38
Res		R1	51k	Link	Digikey	RMCF0603FT51K0CT-ND	\$0.01	1	\$0.01	100					\$0.65
Res		R2	22.1k	Link	Digikey	RMCF0603FT22K1CT-ND	\$0.01	1	\$0.01	100					\$0.65
Res		R3	120	Link	Digikey	RMCF0603FT120RCT-ND	\$0.01	1	\$0.01	100					\$0.65
Res		R4, R5	27	Link	Digikey	RMCF0603FT27ROCT-ND	\$0.01	2	\$0.01	100					\$0.65
Res		R6, R7, R10, R11	1k	Link	Digikey	RMCF0603FT1K0OCT-ND	\$0.01	4	\$0.03	100					\$0.65
Res		R8, R13	10k	Link	Digikey	RMCF0603FT10K0CT-ND	\$0.01	2	\$0.01	100					\$0.65
Res		R9	330	Link	Digikey	RMCF0603FT330RCT-ND	\$0.01	1	\$0.01	100					\$0.65
Res		R12	15k	Link	Digikey	RMCF0603FG15K0CT-ND	\$0.01	3	\$0.02	100					\$0.65
Res		R14, R15, R16	470	Link	Digikey	RMCF0603FT470RCT-ND	\$0.01	3	\$0.02	100					\$0.65
Res		R17	220	Link	Digikey	RMCF0603FT220RCT-ND	\$0.01	1	\$0.01	100					\$0.65
Cap		C1	10uF	Link	Digikey	490-16266-1-ND	\$1.20	1	\$1.20	10					\$11.95
Cap		C2, C6, C9, C13, C14, C15, C16, C17, C19, C21, C25	100nF	Link	Digikey	490-14359-1-ND	\$0.07	11	\$0.76	100					\$6.91
Cap		C3	100pF	Link	Digikey	490-4771-1-ND	\$0.11	1	\$0.11	10					\$1.10
Cap		C4	47uF	Link	Digikey	490-10531-1-ND	\$0.63	1	\$0.63	10					\$6.28
Cap		C5	2.2uF	Link	Digikey	490-11993-1-ND	\$0.16	1	\$0.16	10					\$1.57
Cap		C7, C8	10nF	Link	Digikey	490-8028-1-ND	\$0.08	2	\$0.16	10					\$0.79
Cap		C10	4.7uF	Link	Digikey	490-GRM188C71A475KE21J	\$0.23	1	\$0.23	10					\$2.30
Cap		C11, C12, C20	1uF	Link	Digikey	490-12297-1-ND	\$0.18	3	\$0.55	20					\$3.68
Cap		C18, C22	5.6pF	Link	Digikey	490-GCM1885C2A6R8BA16E	\$0.22	2	\$0.43	10					\$2.16
Cap		C23, C24	8pF	Link	Digikey	490-17771-1-ND	\$0.15	2	\$0.29	10					\$1.45
Cap		C26, C27, C28, C29	68uF	Link	Digikey	PCE4307CT-ND	\$0.53	4	\$2.12	12					\$6.35
Diode	RGB LED	D1		Link	Digikey	CLV1A-FKB-CK1VW1DE1BB	\$0.40	1	\$0.40	10					\$3.95
Diode	TVS DIODE 3V ST0201	D2		Link	Digikey	497-8752-1-ND	\$0.28	1	\$0.28	10					\$2.75
Diode	Green LED	D3		Link	Digikey	L62405CT-ND	\$0.32	1	\$0.32	10					\$3.18
Inductor	Fixed	L1	18uH	Link	Digikey	732-1271-1-ND	\$1.76	1	\$1.76	3					\$5.28
Inductor	Ferrite Bead	L2, L3	600Ohm@100MHz	Link	Digikey	732-1593-1-ND	\$0.17	2	\$0.34	10					\$1.70
IC	3.3V Switching Reg	U1		Link	Digikey	296-47267-1-ND	\$3.03	1	\$3.03	3					\$9.09
IC	FDCAN Transceiver	U2		Link	Digikey	296-48677-1-ND	\$2.61	1	\$2.61	3					\$7.83
IC	Common Mode Choke	U3		Link	Digikey	497-10773-1-ND	\$0.52	1	\$0.52	5					\$2.60
IC	Motor Controller	U4		Link	Digikey	497-17630-1-ND	\$3.49	1	\$3.49	3					\$10.47
IC	RS485 transceiver	U5		Link	Digikey	497-14086-1-ND	\$2.23	1	\$2.23	3					\$6.69
IC	STM32G431RB	U6		Link	Digikey	497-19473-ND	\$5.32	1	\$5.32	3					\$15.96
Timer	Crystal Timer	X1	32.768kHz	Link	Digikey	644-1171-1-ND	\$0.60	1	\$0.60	10					\$6.02
Timer	Crystal Timer	X2	24.000MHz	Link	Digikey	SER4180CT-ND	\$0.30	1	\$0.30	10					\$3.03
Switch	Tactile Switch	Sw1		Link	Digikey	P13349SCT-ND	\$0.81	1	\$0.81	10					\$8.07
Conn	XT-30 female	J1		Link	AliExpress	61008	\$0.69	1	\$0.69	0					\$0.00
Conn	Mini USB Molex	J2		Link	Digikey	WM17115-ND	\$1.56	1	\$1.56	10					\$15.59
Conn	2 pin Molex Mini-lock	J3, J4		Link	Digikey	WM3423-ND	\$0.32	2	\$0.65	20					\$6.46
Conn	3 pin Molex Mini-lock	J5, J6		Link	Digikey	WM7586-ND	\$0.41	2	\$0.81	20					\$8.12
Conn	J-Link Connector	J7		Link	Digikey	1175-1627-ND	\$0.54	1	\$0.54	10					\$5.40
Conn	XT-30 male	J8		Link	AliExpress	61007	\$0.69	1	\$0.69	0					\$0.00
TP	Test Point (Black)	3v3, GND, PB5, PB11, VIN		Link	Digikey	36-5001-ND	\$0.30	5	\$1.51	100					\$30.15