

Bill Of Materials for: [Practicum Group 5] [TEAM NAME]

Last modified: [11/20/2022]

PCB version: [PCB VERSION #2]

BOM revision: [BOM REVISION #2]

P/NP = Place/Not Place (components marked NP are not stuffed on the board)

Cnt	Part References	P/NP	Mfg	Device
1	U4	P	Microchip	ATMEGA328P-PU
1	U1	P	JOYNANO	Stepper motor
1	U2	P	Pololu	A4988_STEPPER_MOTOR_DRIVER_
1	U4	P	Parallax	Single Relay Board
2	IC1, IC2	P	Texas Instruments	LM7805S/NOPB
1	U2	P	Crystalfontz	16x2 White on Blue Character LCD
1	U3	P	Parallax	KEYPAD4X4
1	D2	P	Würth Elektronik	LEDCHIP-LED0805
1	SW1	P	C&K	SWITCH-MOMENTARY-2SMD
1	SW2	P	C&K	SWITCH-MOMENTARY-2SMD
1	X1	P	ECS	CRYSTALSMD-HC49UP
2	R1, R2	P	Yageo	R-US_R0805
3	R3, R4, R5	P	Yageo	R-US_R0805
4	C1, C2, C3, C4	P	Samsung Electro-Mechanics	C-EUC0805K
2	C5, C6	P	Samsung Electro-Mechanics	C-EUC0805K
1	C7	P	Samsung Electro-Mechanics	C-EUC0805K
2	C8, C9	P	Samsung Electro-Mechanics	C-EUC0805K
1	J1	P	Harwin	PINHD-2X3
1	J2	P	Sullins	PINHD-1X6

VERSION INFO

Rev	Date	Notes
1.0r1	2022-11-20	Update some wrong components
1.0r1	2022-11-10	Cleaned up parts, fixed mistakes, rough draft of board
1.0r0	2022-10-31	Initial BOM, an simple list of all the components required. Dist Part Number and cost

Mfg PN	Description	Dist	Dist Part Number
ATMEGA328P-PU	MICROCONTROLLER	Amazon	N/A
N/A	JoyNano Nema 17 Stepper Motor Integrated 310mm T8 Lead Scr	Amazon	M42SH40-1684A
1182	Stepper motor controler; IC: A4988; 1A; Uin mot: 8÷35V	Pololu	1182
27115	Single Relay Board	Mouser	619-27115
LM7805S/NOPB	IC REG LINEAR 5V 1.5A	Digi-key	296-49741-ND
CFAH1602B-TMI-JT	16x2 White on Blue Character LCD	Crystalfontz	N/A
27899	SWITCH KEYPAD 16 KEY NON-ILLUM	Crystalfontz	CFAH1602B-TMI-JT
150080GS75000	LED	Mouser	710-150080GS75000
RS-187R05A2-DS MT RT	Various NO switches- pushbuttons, reed, etc	Digi-key	CKN10361TR-ND
RS-187R05A2-DS MT RT	Various NO switches- pushbuttons, reed, etc	Digi-key	CKN10361TR-ND
ECS-160-18-5PX-TR	Crystals (Generic)	Digi-key	XC2081TR-ND
RC0805FR-0710KL	Moisture Resistant Thick Film	Digi-key	311-10.0KCRTR-ND
RC0805FR-071KL	RES 1K OHM 1% 1/8W 0805	Digi-key	311-1.00KCRTR-ND
CL21B104KBCNNNC	CAP CER 100nF 50V X7R 0805	Digi-key	1276-1003-2-ND
CL32Z107MQV6PNE	CAPACITOR, European symbol	Digi-key	1276-CL32Z107MQV6PNETR-ND
CL31B106KLHNNNE	10 µF ±10% 35V Ceramic Capacitor X7R 1206 (3216 Metric)	Digi-key	1276-3103-2-ND
CL21C300JBANNNC	CAP CER 30PF 50V C0G/NP0 0805	Digi-key	1276-1130-2-ND
M20-9980345	PIN HEADER	Digi-key	952-2120-ND
PRPC006SAAN-RC	PIN HEADER	Digi-key	S1011EC-06-ND

Cost Ea.	Cost Total
\$13.50	\$13.50
\$12.99	\$12.99
\$14.45	\$14.45
\$9.99	\$9.99
\$2.27	\$4.54
\$6.99	\$6.99
\$7.95	\$7.95
\$0.19	\$0.19
\$0.64	\$0.64
\$0.64	\$0.64
\$0.45	\$0.45
\$0.10	\$0.20
\$0.10	\$0.30
\$0.10	\$0.40
\$0.10	\$0.20
\$0.66	\$0.66
\$0.10	\$0.20
\$0.34	\$0.34
\$0.19	\$0.19
TOTAL	\$74.82

