

XR-1000 Motion Control Board Bill of Materials, Rev .0

#	Reference	Qty	Value	Description or AliExpress-suitable Search Terms	Source
1	R19,R23	2	100R	0805 Resistor	Farnell
2	R6,R5,R21,R24,R12, R17,R14,R3,R2,R4,R1	11	1k	0805 Resistor	Farnell
3	R11,R13,R18,R20	4	10k	0805 Resistor	Farnell
4	R16,R15	2	3.3k	0805 Resistor	Farnell
5	R22	1	100k	0805 Resistor	Farnell
6	R9,R7	2	0R	0805 Zero-Ohm Resistor	Farnell
7	R10,R8	2	DNF	Do not fit - 0805 Resistor	n/a
8	U5	1	Pi Pico Board	Pi Pico	Farnell
9	Q1,Q5,Q2	3	BC847	SOT-23 NPN Transistor	Farnell
10	Q4,Q3,Q6,Q7	4	Si2301 or FDV304P or IRLML2246	SOT-23 P-ch MOSFET	Farnell
11	C2,C4,C5,C3,C1	5	47uF 16V	Capacitor, electrolytic, 5mm diameter, 2mm or 2.5mm pitch	Farnell
12	U6	1	XR2981 DC-DC-Converter Module	DC 5V 3A Lithium Battery Step Up Boost Charger Module 18650	AliExpress
13	B1	1	MCP73831 Charger Module	MCP73831 LiPo Charger Basic Micro USB 3.7V 500mA Lithium Battery Charger Module	AliExpress
14	J1,J2,J3,J4	4	53047-0410 PicoBlade 4-way	Pin Header, Vertical, 1.25 mm, 4 Contacts, Through Hole Straight	Farnell
15	J6, J7, J8	1	2.54 mm Pin Header MC34737	Generic Pin Header, snapped to size	Farnell or AliExpress
16	U4,U3,U2,U1	4	DRV8833 Motor Driver Module	DRV8833 2Channel DC Motor Driver Module Board	AliExpress
17	SW2	1	Tact Switch B3F-4050 or similar	Momentary Tact Touch Micro Switch 12*12	Farnell or AliExpress
18	J5	1	52808-1070 Molex FFC Connector	1.0mm FPC/FFC Connector LCD Flexible Flat Cable Socket	Farnell or AliExpress
19	SW1	1	MTS-102 or WS-12D02-G5-Y-00 or WS12D02G5Y00	SPDT right-angle slide or toggle switch	CPC or AliExpress
20	D1	1	3mm Red LED	Generic 3mm Red LED	Farnell or AliExpress
21	n/a	8	2.54 mm Pin Header 6-way	May be supplied with the DRV8833 boards	AliExpress
22	n/a	1	B32-1210 or similar	Tact switch cap/cover	Farnell or AliExpress
23	n/a	1	MP-FFCA10101003B FFC 1mm 10 way	Flat flexible cable FFC 1.0mm 10 pin	Farnell or AliExpress
24	n/a	1	JST PH cable for battery	JST PH 2-pin cable (NOTE - will likely need to remove contacts and swap around)	AliExpress
25	n/a	4	PicoBlade 1.25mm cable 4-way	1.25mm PicoBlade 4Pin wire JST 1.25mm	Farnell or AliExpress
26	n/a	4	Stepper Motor 5V or 6V	Stepping Gear Motor DC5V 6V 2-phase 4-wire Gearbox	AliExpress
27	n/a	1	PA-LN19 18650 Battery with connector	Li-Ion / Li-Po single cell with connector	Farnell
28	n/a	4	13.14.305 Ettinger Turret Solder Terminal	Turret Solder / Press Mount Terminal, 1 mm dia	Farnell
29	n/a	1	Plastic M3 or M2.5 Screw and Nut	M3 (or M2.5) screw and nut, both plastic (not metal)	AliExpress