USB Rotary Joystick/Trackball BOM

Item #	Reference Designator	Qty	Manufacturer	Mfg Part #	Description / Value	Package/Footprint	Type	Instructions / Notes
1	C1 C2 C3	3	KEMET	C320C104K5R5TA7317	0.1 µF ±10% 50V Ceramic Capacitor X7R Radial	2.5mm Pitch	THRU-HOLE	
2	D1	1	Kingbright	WP7113ID	LED RED DIFFUSED T-1 3/4 T/H	T-1 3/4	THRU-HOLE	
3	D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18 D19 D20 D21 D22 D23 D24 D25	24	Littelfuse Inc.	SA5.0A	TVS DIODE 5VWM 9.2VC DO204AC	DO-15	THRU-HOLE	
4	J1 J3 J7 J9	4	Sullins Connector Solutions	PREC003SAAN-RC	Connector Header Through Hole 3 position 0.100"	3POS	THRU-HOLE	
5	J4 J6	2	XKB Connectivity	X6511WR-13H-C30D60R1	Connector Header Through Hole 1x13P P=2.54mm	13POS	THRU-HOLE	
6	J2 J5 J8 J10	4	Phoenix Contact	1729160	TERM BLK 6P SIDE ENT 5.08MM PCB	6POS	THRU-HOLE	
7	R1	1	YAGEO	CFR-25JR-52-330R	RES 330 OHM 5% 1/4W AXIAL	Axial	THRU-HOLE	
8	RN1 RN2 RN3 RN4 RN5 RN6	6	FH (Guangdong Fenghua Advanced Tech)	A05-103JP	±5% 4x10kΩ 125mW SIP-5-2.54mm Resistor Network	SIP-5-2.54mm	THRU-HOLE	
9	U1	2	Sullins Connector Solutions	PPTC201LFBN-RC	CONN HDR 20POS 0.1 TIN PCB	20POS	THRU-HOLE	U1 should be populated with two 20 pin headers to let the user plug in a "Raspberry Pi Pico" module
10	U2 U3 U4	3	Texas Instruments	SN74LVC245AN	Transceiver, Non-Inverting 8 Bit 3-State Output 20-PDIP	DIP-20	THRU-HOLE	

Note: The BOM does not list the Raspberry Pi Pico module required to plug into the female header pins of U1. The user is assumed to supply their own module.