Bill of Materials – H89 MSX Board Rev. 1.1

01/30/26

Qty	Designation	Type	Description	Supplier	Comments
15	C2,C3,C4,C5,C6,C7,C11,C12,C13,C14,C15,C16,C17,C18,C19	Capacitor	0.1uF ceramic disc		
2	C1,C10	Capacitor	10uF, 25V, non-polarized	Digikey	Murata RCER71E106K3DBH
2	C8,C9	Capacitor	47uF 25V tantalum or electrolytic		
6	R2,R3,R10,R11,R12,R13	Resistor	4.7K		
3	R1,R4,R5	Resistor	470		
2	R6,R7	Resistor	1K		
2	R8,R9	Resistor	1.8K		
1	L1	Inductor	Ferrite bead, 76 Ohm	Tayda	
2	D2,D3	Diode	1N5819		
2	D4,D5	Diode	1N4148		
1	D1	Diode	BAT48		
5	U5,U6,U7,U10,U11	IC	74LVC245		
2	U12,U13	IC	74LS540		
1	U1	IC	74LS32		
1	U2	IC	74LS02		
1	U3	IC	74LS74		
1	U4,U7	IC	AY-3-8910	Ebay, Amazon	
1	U8	IC	74LS245		
1	U9	IC	ESP32-WROOM (30-pin)	Digikey, Amazon	Be sure to get 30-pin version
1	U14	IC	74LS125		
1	U15	IC	GAL, 16V8		Needs to be programmed
1	-	IC	Tang Nano 9K F18A	Amazon, AliExpress	
1	SW1	Switch	DIP switch, 4-pos.		
2	JP1,JP2	Connector	1x3 male header		
1	JP5	Connector	1x2 male header		
2	J1,J2	Connector	2x5 male header		
1	J3	Connector	3.5mm stereo audio jack	Digilkey	Digikey CP1-3535NG-GR-ND
2	J4,J5	Connector	1x24 pin socket	For TANG Nano	Use tall headers
1	P507,P508,P509	Connector	25-pin Molex	Can use two 10-pin an	The part numbers are: 5-pin:

1	P501,P502,P503	Connector	10-pin Molex	
1	J13	Connector	1x6 male header, right angle	
1	n/a	n/a	Printed Circuit Board	
1	n/a	IC socket	40-pin	
4	n/a	IC socket	14-pin	
9	n/a	IC socket	20-pin	
1	n/a	Cable	HDMI cable	
2	n/a	Joystick	Xbox Bluetooth Controllers	
2	n/a	Joystick	Wired joysticks	Optional
7	n/a	Wires	Dupont jumper wires, female to female	To U509 board or CF Flash board

H03

. Needs to be programmed.

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 Molex #22-15-2056, 10-pin: Molex #22-15-2106.