



Corsham Technologies, LLC

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KIM Clone Motherboard User Manual

Revision 1 Boards

Introduction

The KIM Clone Motherboard plugs into the Corsham Technologies KIM Clone expansion ports and provides three buffered positions to plug in user designed boards or the Corsham Tech KIM Clone Proto Board to add new functionality. The motherboard provides buffering of all important signals. The signals on each pin match those on the KIM Clone expansion connectors, so a board that can plug into the KIM Clone can also plug into the motherboard.

Signal Buffering

Use of Unassigned Pins

All unused pins on EXP1 are reserved for future use and must not be used by applications.

There are designated pins on EXP2 which are available for customer use. None of these pins are connected on the KIM Clone side, nor are they buffered by the motherboard.

Known Issues

None

Expansion Connectors

There aren't a whole lot of switches and connectors, but the few deserve some explanation.

Connector	KIM Clone	Motherboard	Use
EXPA Connector			
1 & 2	Ground	Ground	
3 & 4	+8 VDC	+8 VDC	
5 & 6	Not used	+5 VDC	
7	/RESET	/RESET	6502 RESET line, active low
8	PH2	PH2	6502 phase 2 clock
9	PH0	PH0	6502 phase 0 clock
10	SO	SO	6502 SO signal
11	R/W	R/W	High = read, low = write
12	PH1	PH1	6502 phase 1 clock
13	/RDY	/RDY	
14	/IRQ	/IRQ	
15	SYNC	SYNC	
16	/NMI	/NMI	
17	/RAM_SELECT	/RAM_SELECT	Pull low to select RAM on KIM Clone, or pulled low when KIM Clone RAM is selected.
18	Not used	/DISABLE_BUS	Pull low to disable bus drivers on A0-A15 and D0-D7 to/from the KIM Clone.
19 & 20	Not used	RESERVED	
21 - 30	Not used	Available	User-defined functionality
EXPB Connector			
1 & 2	Ground	Ground	
3	A15	A15	
4	A14	A14	
5	A13	A13	
6	A12	A12	
7	A11	A11	
8	A10	A10	
9	A9	A9	

10	A8	A8	
11	A7	A7	
12	A6	A6	
13	A5	A5	
14	A4	A4	
15	A3	A3	
16	A2	A2	
17	A1	A1	
18	A0	A0	
19	Not used	RESERVED	
20	Not used	RESERVED	
21	Not used	RESERVED	
22	Not used	RESERVED	
23	Not used	RESERVED	
24	Not used	RESERVED	
25	D7	D7	
26	/0000-1FFF	/8K_0	
27	D6	D6	
28	/2000-3FFF	/8K_1	
29	D5	D5	
30	/4000-5FFF	/8K_2	
31	D4	D4	
32	/6000-7FFF	/8K_3	
33	D3	D3	
34	/8000-9FFF	/8K_4	
35	D2	D2	
36	/A000-BFFF	/8K_5	
37	D1	D1	
38	/C000-DFFF	/8K_6	
39	D0	D0	
40	/E000-FFFF	/8K_7	

*Bob Applegate
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Revision History

Version	Changes
1A	Internal engineering version

Errata

None.

Parts List (definitely not done yet)

Note that all capacitors are .1" (2.54mm) pin spacing.

All resistors are ¼ or 1/8 watt. Part numbers in parenthesis are Digikey part numbers.

Part	Number	Description
PCB	1	Printed Circuit Board (Corsham Tech)
IC1-IC4, IC6	5	74LS245
IC5	1	LM7805
IC7	1	74LS02
C1-C4	4	22uf 25v electrolytic capacitor
C5-C8	4	0.1uf disc capacitor
R1, R2	2	3.3K ohm ¼ watt resistor
JP1	1	2x15 right angle female connector (S2111EC-15-ND)
JP2	1	2x20 right angle female connector (S2111EC-20-ND)
EXPA1-3	3	2x15 female connector (S7083-ND)
EXPB1-3	3	2x20 female connector (S7123-ND)
D2	1	1N4001
	1	TO-220 heat sink
	1	4-40 bolt (heatsink)
	1	4-40 nut