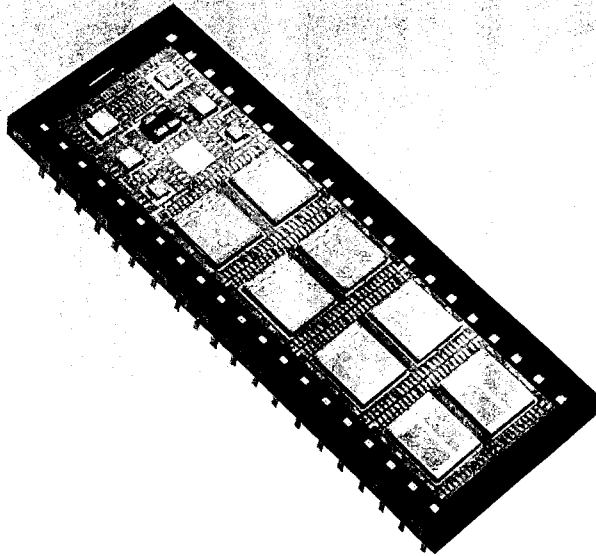


White Technology, Inc.

16K BYTE STATIC RAM MODULE DHC8-M16

Advance Information

Model 16K (2Kx8) CMOS Module



FEATURES

- Operates From -55°C to $+200^{\circ}\text{C}$
- 16K Bytes Static CMOS RAM Module
- Low Operating and Standby Power Consumption
- In-Module Address Decoding and Latches
- User Selectable Memory Address Partitions
- Suitable for Bank and Block Selectable Operation
- Easy Interfacing to DHC8-P85 and Other Microcomputers

DESCRIPTION

The DHC8-M16 is a fast 16384 by 8 Static Random Access Memory. Low power operation is achieved by using CMOS components and is enhanced by the use of synchronous circuit techniques that keep the active power low. The pinout of the DHC8-M16 is the standard White Technology 40 pin configuration which allows easy memory connections with the DHC8-P85 Microcomputer.

The DHC8-M16 is ideally suited for use in the White Technology DHC8-P85 Microcomputer System and other microcomputer systems which operate in extreme environments. The module features byte wide organization that simplifies the memory array design, and keeps operating power low. The on board address latches and decoders allow very simple interfacing to either the DHC8-P85 Microcomputer or recent generation microprocessors which employ a multiplexed address/data bus. The convenient output enable control also simplifies multiplexed bus interfacing by allowing the data outputs to be controlled independent of the chip enable.

The DHC8-M16 also incorporates considerable flexibility for chip enable, block enable and address assignment. The module features the capability to set the internal decoder for memory operation at any of the four major module boundaries. The user can easily design a full 65536 byte memory system using four DHC8-M16 modules. Each

module has two address lines that program a given module to respond at one of four page locations. The available locations are as shown below:

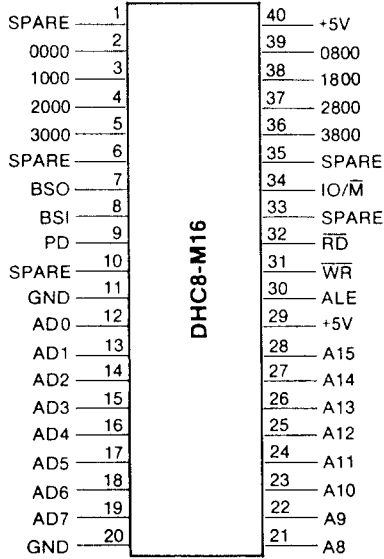
Block Code	Memory Range
00	0000H - 3FFFH
01	4000H - 7FFFH
10	8000H - BFFFH
11	C000H - FFFFH

The internal organization of the module permits the user to deactivate the module selectively in 2K byte blocks (2048 by 8). The module has eight such blocks with individual enable/disable lines independent of the chip enable. One way in which a user might utilize these lines would be by masking one or more blocks during initialization and then turning off the ROM in the DHC8-P85 and enabling the RAM in its place. Also, the user may elect to use the hardware enable function to provide for program overlays.

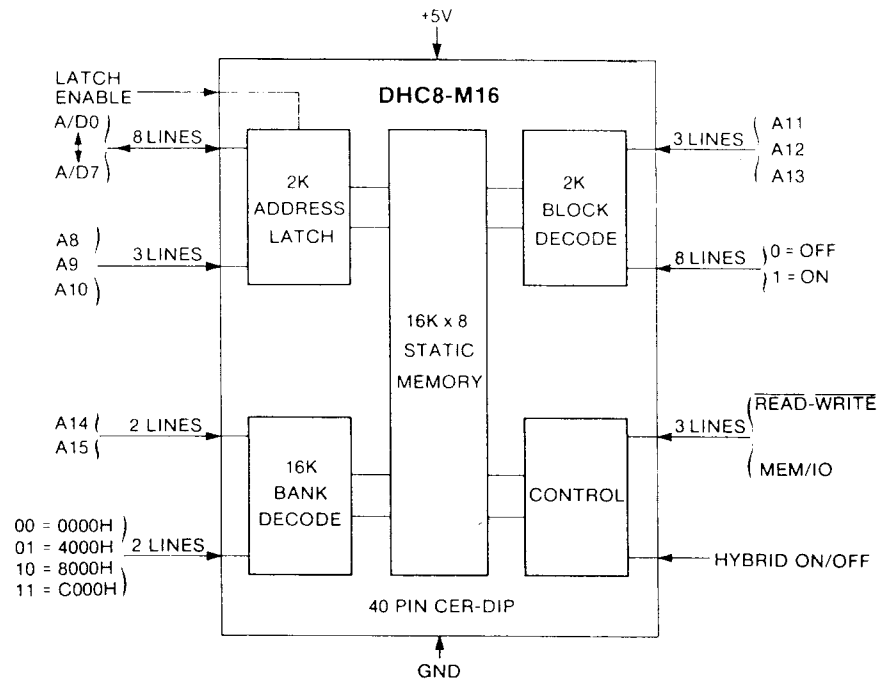
The address and data bus lines are similar to the DHC8-P85 and are arranged to permit virtually direct connections on a printed circuit board. The module uses the eight address lines from A8 through A15, the eight multiplexed Address/Data lines labelled AD0 through AD7, IO/M, RD, WR and ALE in addition to the package boundary address lines BS0 and BS1, package enable PD and the eight block enable lines.

16K BYTE STATIC RAM MODULE - DHC8-M16

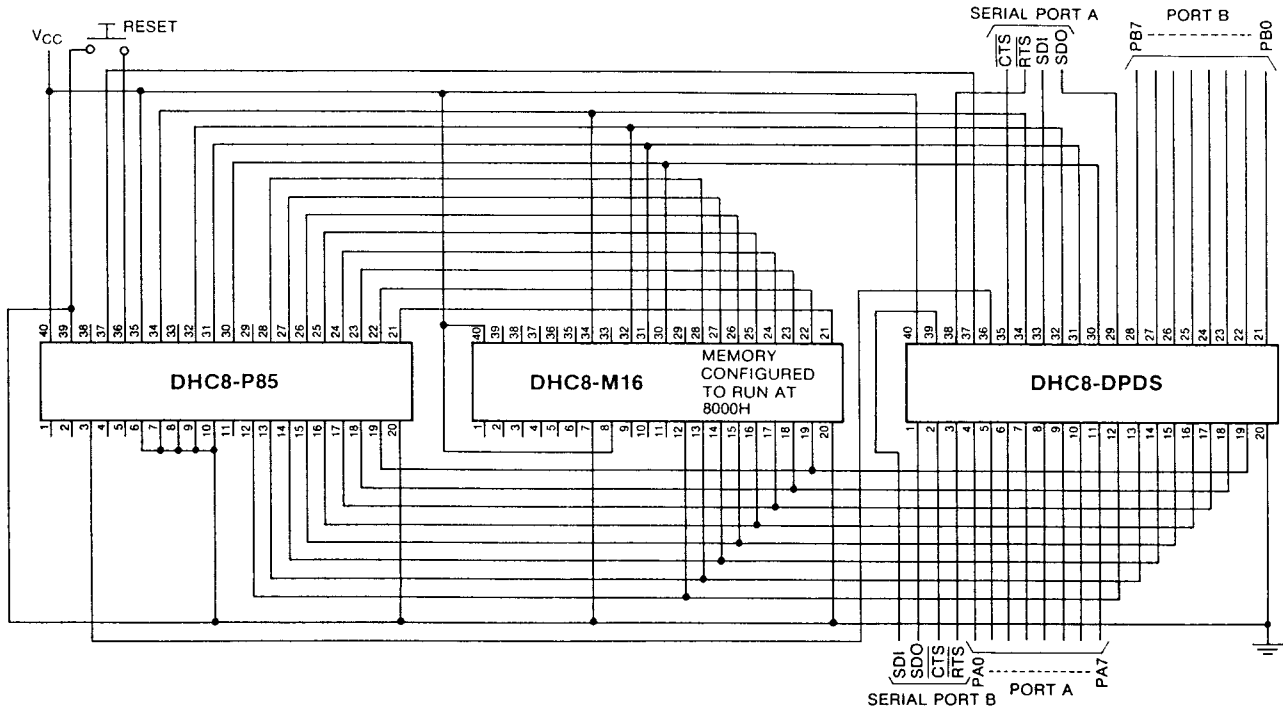
Pin Description



Functional Block Diagram

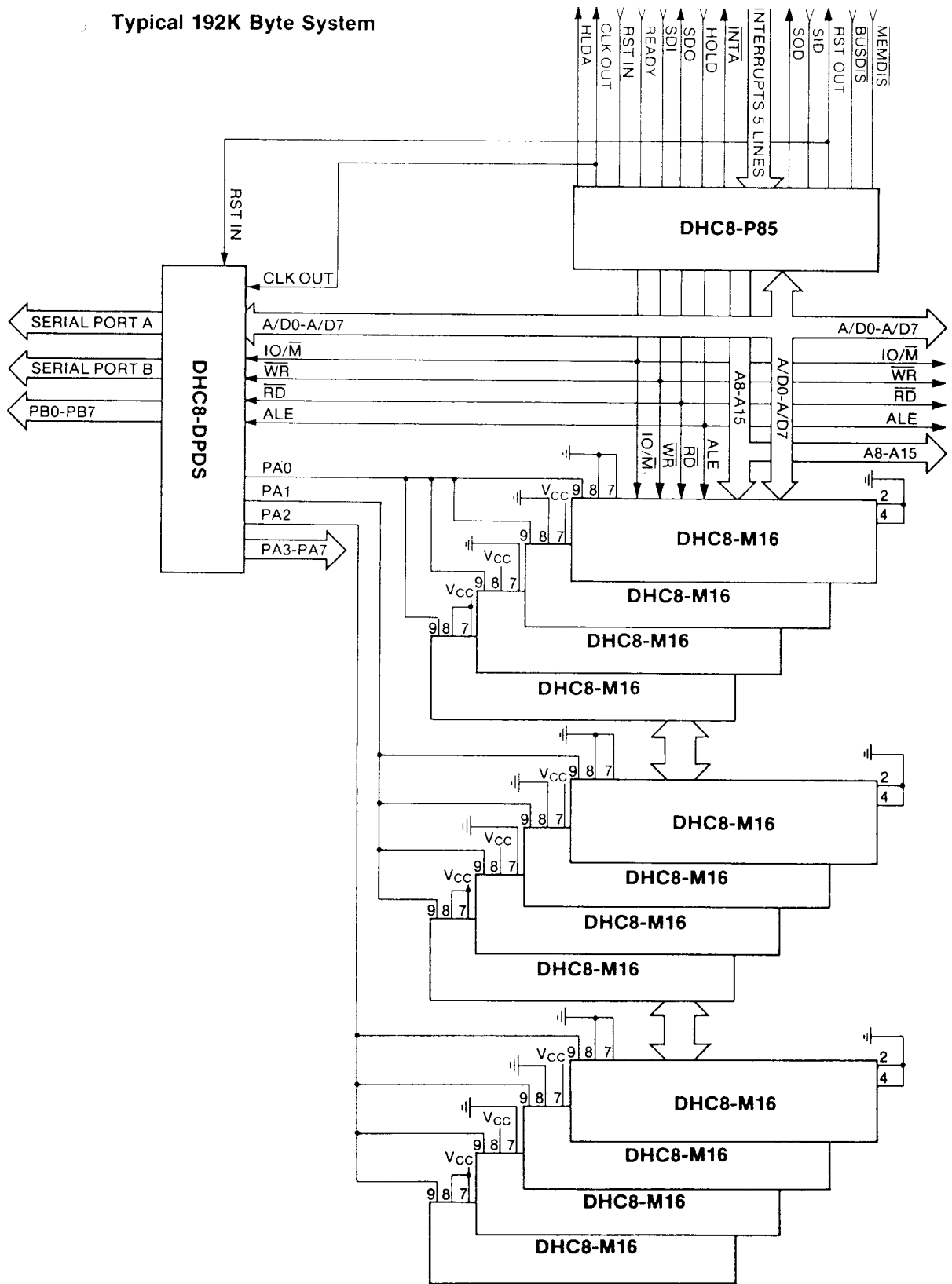


Typical System Hookup with Multi Port I/O



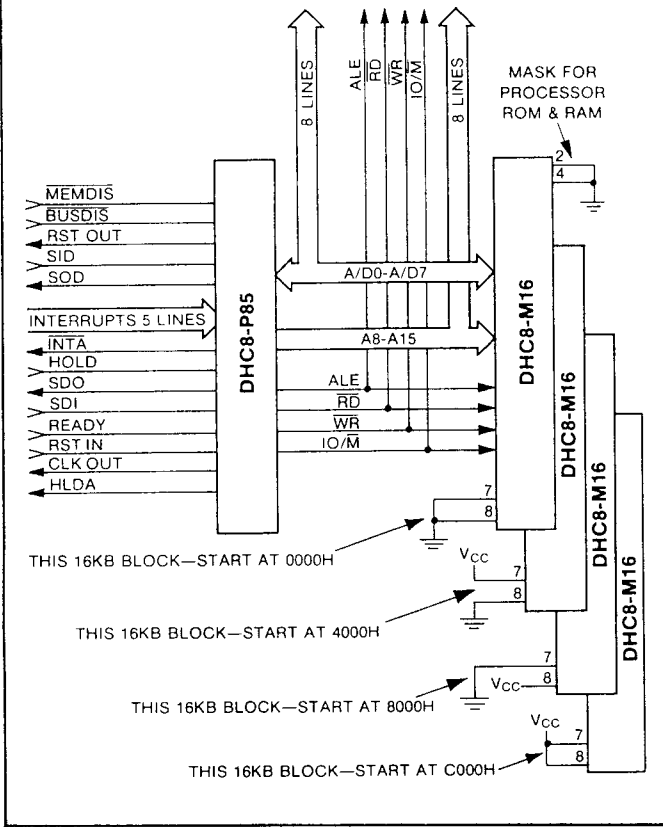
16K BYTE STATIC RAM MODULE—DHC8-M16

Typical 192K Byte System

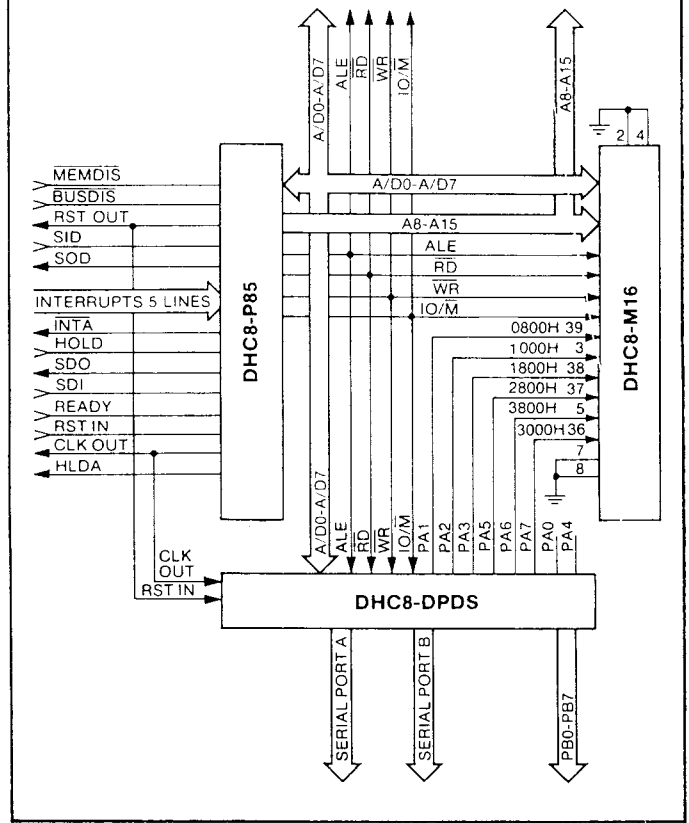


16K BYTE STATIC RAM MODULE—DHC8-M16

Typical 64K Byte System



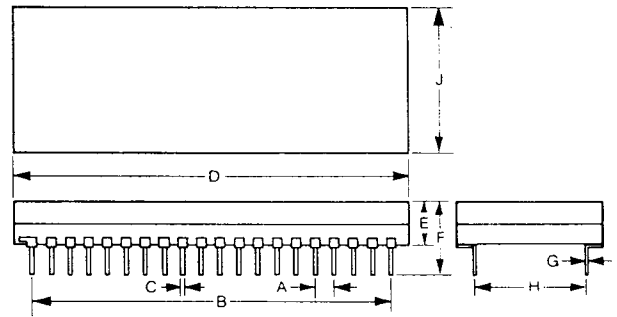
Memory Block De-Select Using the Optional DHC8-DPDS



Specifications (+5 Vdc, -55°C to +200°C)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V _{CC(OP)}	Supply Voltage (Operating)	4.75	5.0	5.25	Vdc
V _{CC(SB)}	Supply Voltage (Stand-By)	3.5	—	7.0	Vdc
I _{CC(OP)}	Supply Current (Operating)	—	40	—	mA
I _{CC(SB)}	Supply Current (Stand-By)	—	4.0	—	mA
V _{IH}	Input High Voltage	2.0	—	—	Vdc
V _{IL}	Input Low Voltage	—	—	0.8	Vdc
V _{OH}	Output High Voltage	3.0	—	—	Vdc
V _{OL}	Output Low Voltage	—	—	0.4	Vdc
F _{CLK}	CPU Clock Frequency	1.8432			MHz
T _{access}	Memory Access Time from Address Change	—	—	500	nsec
I _{IL}	Input Low Leakage	—	—	100	μA
I _{IH}	Input High Leakage	—	—	100	μA
I _{OL}	Output Low Leakage	—	—	1000	μA
I _{OH}	Output High Leakage	—	—	1000	μA

BASE OUTLINE



DIM	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	.095	.105	2.4	2.7
B	1.802	1.908	45.8	48.5
C	.016	.020	0.4	0.5
D	2.074	2.116	52.7	53.7
E	.226	.284	5.7	7.2
F	.395	.480	10	12.2
G	.008	.012	.2	.3
H	.590	.610	15	15.5
J	.780	.805	19.8	20.4