MICROPROCESSOR COMPONENTS LIBRARY

Schematic Symbols

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MICROPROCESSOR COMPONENTS LIBRARY

SCHEMATIC SYMBOLS

This manual and the Microprocessor Library Symbol Diskettes comprise the P-CAD Microprocessor Symbol Library.

This manual includes information on how to use the library; general information about the library; component lists by sequence, function, and file; component plots; and component pin sequences.

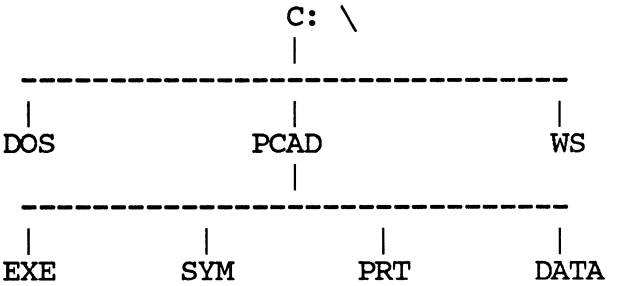
The library diskettes contain the component files, a layer structure file, and standard size sheet files.

HOW TO USE THIS LIBRARY

This section describes a recommended directory structure and steps in creating a design.

DIRECTORY STRUCTURE

In order to conserve space on your hard disk, and increase performance, it is recommended that you store library components within a directory structure. This structure should be tailored to your particular applications and design methodologies. The following example illustrates how this is done.



In this case symbols are stored in the SYM directory. Parts are stored in the PRT directory.

CREATING A DESIGN

To use the library in a design, start PC-CAPS or PC-CARDS. After the menu is displayed, load the correct layer structure. You can load the layer structure supplied with the library, or you can load one of the drawing sheets on the diskettes (A, B, C, D, or E size).

Then you can create the design by entering components, wires, text, instance, and net names.

For each PC-CAPS Symbol, there is a corresponding PC-CARDS Part. These are supplied on separate libraries. Both Symbols and Parts contain the electrical "intelligence" required for creating schematics, extracting data, and laying-out printed circuit boards.

Although P-CAD has gone to great effort to carefully verify the integrity of this information, P-CAD is not responsible for the usage of this library, or damages resulting from any technical inaccuracies. P-CAD may make improvements and/or changes in this product at any time and without prior notice.

This library has been developed at the request of our users, and we welcome any suggestions regarding improvements, or other libraries that are desired.

GENERAL INFORMATION

This section provides general information about various aspects of the P-CAD Microprocessor Library, including the layer structures, assignment of symbol attributes, and signal naming conventions.

SCHEMATIC LAYER STRUCTURE

The following layer structure, LAYS.SCH, is included on the Microprocessor Symbol Library diskettes. This LAYS.SCH is a version of the standard P-CAD layer structure that has been edited and used in creating the Microprocessor Library Symbols.

LAYER	NAME	PEN #	STATUS	USE
1	WIRES	1	OFF	Interconnecting wires
2	BUS	1	OFF	Interconnecting busses/wires
3	GATE	2	ON	Gate geometry/symbol
4	IEEE	2	OFF	Not used
5	PINFUN	3	OFF	Not used
6	PINNUM	1	ABL	Pin Numbers
7	PINNAM	6	ABL	Pin names
8	PINCON	1	ABL	Pin connections (dot)

LAYER	NAME	PEN #	STATUS	USE
9	REFDES	2	ABL	Reference Designator
10	ATTR	6	OFF	Not Used
11	SDOT	1	OFF	Not used
12	DEVICE	5	OFF	Device Name

PRINTED CIRCUIT BOARD LAYER STRUCTURE

The following layer structure, MULTI.PCB, is included on the Microprocessor Part Library diskettes. MULTI.PCB is a version of the standard P-CAD layer structure (LAYS.PCB) that has been edited and used in creating the Microprocessor Library Parts.

LAYER	NAME	PEN #	STATUS	USE
1	PADCOM	7	ON	Graphic Component Pads
2	FLCOMP	7	OFF	Flash Component Pads
3	PADSLD	8	OFF	Graphic Solder Pads
4	FLSOLD	8	OFF	Flash Solder Pads
5	PADINT	9	OFF	Graphic Internal Pads

LAYER	NAME	PEN #	STATUS	USE
6	FLINT	9	OFF	Flash Internal Pads
7	GNDCON	10	OFF	Graphic Internal Ground Connection
8	FLGCON	10	OFF	Flash Internal Ground Connection
9	CLEAR	12	OFF	Graphic Universal Clearance
10	FLCLER	12	OFF	Flash Universal Clearance
11	PWRCON	13	OFF	Graphic Internal Power Connections
12	FLPCON	13	OFF	Flash Internal Power connections
13	SLDMSK	14	OFF	Graphic Solder Mask Relief
14	FLSMSK	14	OFF	Flash Solder Mask
15	DRILL	15	OFF	Graphic Drill Template
16	FLDRLL	15	OFF	Flash Drill Template

LAYER	NAME	PEN #	STATUS	USE
17	PIN	4	ON	Pin Color
18	BRDOUT	4	ON	Board Outline
19	FLTARG	4	OFF	Flash Alignment Targets
20	SLKSCR	6	ON	Silkscreen Paint
21	DEVICE	5	ON	Device Names
22	ATTR	6	OFF	Attributes
23	REFDES	6	OFF	Reference Designators
24	COMP	1	ABL A	Component Traces
25	SOLDER	2	ABL	Solder Side Traces
26	INT1	3	OFF	Internal Traces

SIGNAL NAMING CONVENTIONS

The following signal naming conventions are used in the components library.

Signal	Convention
READY	RDY
CLOCK	CLK
RESET	RST and RES

INFORMATION ON COMPONENT PARTS

Library Component Parts are created with the pin types shown below. Special types 5 or 6 are used when pin 1 is used as power or ground.

TYPE	FUNCTION	SHAPE
1	PIN 1 I.D.	SQUARE
2	STD PIN I.D.	ROUND
3	STD. GROUND	ROUND
4	STD. POWER	ROUND
5	PIN 1 POWER	SQUARE
6	PIN 1 GROUND	SQUARE

INFORMATION ON SPECIAL PACKAGES

Special Quad packaged microprocessors i.e., 80186, 80188 and 80286 follow these conventions.

1. The symbols are shown in dip form.

2. The parts are shown as four sided.

3. The standard symbols and parts reflect the 68 Lead Ceramic Pin Grid Array Package Type CG.

4. The alternate symbols and parts "T" reflect the Textool 68 Lead Chip Carrier Socket.

COMPONENT LIST BY SEQUENCE

NUMBER	SYMBOL PAGE#	SYMBOL DISK#
2004	37	1
2114A	38	1
2115A	37	1
2115H	37	1
2125A	37	1
2125H	37	1
2148H	38	1
2149H	38	1
2164A	37	1
2186	37	1
2186A	37	1
2187A	37	1
27128	37	1
27128A	37	1
27256	37	1
2732A	38	1
2764	37	1
2764A	37	1
2816A	37	1
2817A	37	1
51C64	37	1
51C65	37	1
7220	38	1
7220-1	38	1
7220-4	38	1
7220-5	38	1
7224	38	1
80130	38	1
80130-2	38	1
80150	38	1
80150-2	38	1
80186	49	3

NUMBER	SYMBOL PAGE#	SYMBOL DISK#
80188	49	3
80286	49	3
80287	39	1
80287-3	41	1
8031AH	39	1
8032AH	39	1
8035AHL	40	1
8039AHL	40	1
8040AHL	40	1
8041A	39	1
8042	40	1
8044AH	45	1
8048AH	40	1
8049AH	40	1
8050AH	40	1
8051AH	39	1
8052AH	39	1
8080A	41	1
8080A-1	41	1
8080A-2	41	1
8085A	41	2
8085A-2	41	2
8085AH	41	2
8085AH-1	41	2
8085AH-2	41	2
8086	41	2
8086-1	42	2
8086-2	42	2
8087	42	2
8088	42	2
8088-2	42	2
8089	42	2
80C39-7	41	1
80C49-7	41	1
8155	42	2

NUMBER	SYMBOL PAGE#	SYMBOL DISK#
8155-2	43	2
8155H	42	2
8155H-2	42	2
8156	42	2
8156-2	43	2
8156H	42	2
8156H-2	42	2
8185	43	2
8185-2	43	2
8202A	43	2
8203	37	1
82C03	43	2
8205	43	2
82062	43	2
8208	43	2
8212	43	2
8216	43	2
8218	43	2
8219	43	2
8224	44	2
8226	43	2
8228	44	2
82284	44	2
82284-6	44	2
82285	44	2
82288	44	2
82288-6	44	2
8231A	44	2
8237A	44	2
8237A-4	44	2
8237A-5	44	2
8238	44	2
8243	44	2
82501	44	2
8251A	44	2
8253	45	2

NUMBER	SYMBOL PAGE#	SYMBOL DISK#
82530	45	2
82530-6	45	2
8253-5	45	2
8254	45	2
8255A	45	2
8255A-5	45	2
8256AH	45	2
8257	45	2
8257-5	45	2
82586	46	3
8259A	46	3
8259A-2	46	3
8259A-8	46	3
8271	46	3
8271-6	46	3
82720	46	3
8272A	46	3
8273	46	3
8273-4	46	3
82731	47	3
8274	47	3
8275	47	3
8276	47	3
8279	47	3
8279-5	47	3
8282	47	3
8283	47	3
8284A	47	3
8284A-1	47	3
8286	47	3
8287	47	3
8288	47	3
8289	48	3
8289-1	48	3
8291A	48	3
8292	48	3

NUMBER	SYMBOL PAGE#	SYMBOL DISK#
8293	48	3
8294A	48	3
8295	48	3
8344AH	45	2
8355	48	3
8355-2	48	3
8641A	39	1
8741A	40	1
8742	40	1
8744H	46	2
8748H	40	1
8749H	40	1
8751H	39	1
8751H-8	39	1
8751H-10	39	1
8751H-11	39	1
8755A	48	3
8755A-2	48	3

COMPONENT LIST BY FUNCTION

Component	Description
MCS-80/85 MICROPROCESSORS	
8080A	8-Bit N-channel Microprocessor
8080A-1	8-Bit N-channel Microprocessor
8080A-2	8-Bit N-channel Microprocessor
8085AH	8-Bit HMOS Microprocessor
8085AH-2	8-Bit HMOS Microprocessor
8085AH-1	8-Bit HMOS Microprocessor
8085A	Single Chip 8-Bit N-Channel Microprocessor
8085A-2	Single Chip 8-Bit N-Channel Microprocessor
8155H	2048-Bit Static HMOS RAM with I/O Ports and timer
8156H	2048-Bit Static HMOS RAM with I/O Ports and timer
8155H-2	2048-Bit Static HMOS RAM with I/O Ports and timer
8156H-2	2048-Bit Static HMOS RAM with I/O Ports and timer
8155	2048-Bit Static MOS RAM with I/O Ports and Timer
8156	2048-Bit Static MOS RAM with I/O Ports and Timer
8155-2	2048-Bit Static MOS RAM with I/O Ports and Timer
8156-2	2048-Bit Static MOS RAM with I/O Ports and Timer
8185	1024 X 8-Bit Static RAM for MCS-85
8185-2	1024 X 8-Bit Static RAM for MCS-85
8205	High Speed 1 Out of 8 Binary Decoder
8212	8-Bit Input/Output Port

Component	Description
8216	4-Bit Parallel Bidirectional Bus Driver
8226	4-Bit Parallel Bidirectional Bus Driver
8218	Bipolar Microcomputer Bus Controller for MCS-80 & MCS-85 Family
8219	Bipolar Microcomputer Bus Controller for MCS-80 & MCS-85 Family
8224	Clock Generator and Driver for 8080A CPU
8228	System Controller and Bus Driver for 8080A CPU
8238	System Controller and Bus Driver for 8080A CPU
8237A	High Performance Programmable Interrupt Controller
8237A-4	High Performance Programmable Interrupt Controller
8237A-5	High Performance Programmable Interrupt Controller
8257	Programmable DMA Controller
8257-5	Programmable DMA Controller
8259A	Programmable Interrupt Controller
8259A-2	Programmable Interrupt Controller
8259A-8	Programmable Interrupt Controller
8355	16,384-Bit ROM with I/O
8355-2	16,384-Bit ROM with I/O
8755A	16,384-Bit EPROM with I/O
8755A-2	16,384-Bit EPROM with I/O

Component	Description
iAPX 86, 88, 186, 188 MICROPROCESSORS	
8086	16-Bit HMOS Microprocessor
8086-1	16-Bit HMOS Microprocessor
8086-2	16-Bit HMOS Microprocessor
80186	High Integration 16-Bit Microprocessor
8088	8-Bit HMOS Microprocessor
8088-2	8-Bit HMOS Microprocessor
80188	High Integration 8-Bit Microprocessor
8089	8 & 16-Bit HMOS I/O Processor
8087	Numeric Data Coprocessor
80130	iRMX 86 Operating System Processor
80130-2	iRMX 86 Operating System Processor
80150	CP/M-86 Operating System Processors
80150-2	CP/M-86 Operating System Processors
8282	Octal Latch
8283	Octal Latch
8284A	Clock Generator and Driver for iAPX 86, 88 Processors
8284A-1	Clock Generator and Driver for iAPX 86, 88 Processors
8286	Octal Bus Transceiver
8287	Octal Bus Transceiver
8288	Bus Controller for iAPX 86, 88 Processors
8289	Bus Arbiter
8289-1	Bus Arbiter

Component	Description
iAPX 286 MICROPROCESSORS	
80286	High Performance Microprocessor with Memory Management and Protection
80287	80-Bit HMOS Numeric Processor Extension
80287-3	80-Bit HMOS Numeric Processor Extension
82284	Clock Generator and Ready Interface for iAPX 286 Processor
82284-6	Clock Generator and Ready Interface for iAPX 286 Processor
82288	Bus Controller for iAPX 286 Processors
82288-6	Bus Controller for iAPX 286 Processors
MEMORY CONTROLLERS	
8202A	Dynamic RAM Controller
8203	64K Dynamic Ram Controller
82C03	CMOS 64K Dynamic Ram Controller
8208	Dynamic RAM Controller
SUPPORT PERIPHERALS	
8231A	Arithmetic Processing Unit
8253	Programmable Interval Timer
8253-5	Programmable Interval Timer
8254	Programmable Interval Timer
8255A	Programmable Peripheral Interface
8255A-5	Programmable Peripheral Interface

Component	Description
8256AH	Multifunctional Universal Asynchronous Receiver Transmitter (MUART)
8279	Programmable Keyboard/Display Interface
8279-5	Programmable Keyboard/Display Interface
82285	Clock Generator and Ready Interface for I/O Coprocessors

FLOPPY DISK CONTROLLERS

8271	Programmable Floppy Disk Controller
8271-6	Programmable Floppy Disk Controller
8272A	Single/Double Density Floppy Disk Controller

HARD DISK CONTROLLERS

82062	Winchester Disk Controller
8041A	Universal Peripheral Interface 8-Bit Microcomputer
8641A	Universal Peripheral Interface 8-Bit Microcomputer
8741A	Universal Peripheral Interface 8-Bit Microcomputer
8042	Universal Peripheral Interface 8-Bit Microcomputer
8742	Universal Peripheral Interface 8-Bit Microcomputer
8243	MCS-48 Input/Output Expander
8295	Dot Matrix Print Controller

Component	Description
GLOBAL COMMUNICATIONS	
8251A	Programmable Communication Interface
8273	Programmable HDLC/SDLC Protocol Controller
8273-4	Programmable HDLC/SDLC Protocol Controller
8274	Multi-Protocol Serial Controller (MPSC)
82530	Serial Communications Controller (SCC)
82530-6	Serial Communications Controller (SCC)
LOCAL AREA NETWORKS	
82501	Ethernet Serial Interface
82586	Local Area Network Coprocessor
OTHER DATA COMMUNICATIONS	
8291A	GPIB Talker/Listener
8292	GPIB Controller
8293	GPIB Transceiver
8294A	Data Incription Unit
ALPHANUMERIC TERMINAL CONTROLLERS	
8275	Programmable CRT Controller
8276	Small System CRT Controller
GRAPHIC DISPLAY PRODUCTS	
82720	Graphic Display Controller

Component	Description
TEXT PROCESSING PRODUCTS	
82731	Video Interface Controller
RAMs (Random Access Memories)	
2114A	1024 x 4-Bit Static Ram
2115A	High Speed 1K x 1-Bit Static RAM
2125A	High Speed 1K x 1-Bit Static RAM
2115H	High Speed 1K x 1-Bit Static RAM
2125A	High Speed 1K x 1-Bit Static RAM
2148H	1024 x 4-Bit Static RAM
2149H	1024 x 4-Bit Static RAM
2164A	65,536 x 1-Bit Dynamic RAM
2186A	8192 x 8 Bit Integrated RAM
2186	8192 x 8 Bit Integrated RAM
2187A	8192 x 8 Bit Integrated RAM
51C64	65,536 x 1-Bit CHMOS Dynamic RAM
51C65	Static Column CHMOS Dynamic RAM
EPROMS (Erasable Programmable Read Only Memories)	
2732A	32K (4K x 8 VU Erasable PROM)
2764	64K (8K x 8 VU Erasable PROM)
2764A	Advanced 64K (8K x 8 VU Erasable PROM)
27128	128K (16K x 8 VU Erasable PROM)
27128A	Advanced 128K (16K x 8 VU Erasable PROM)
27256	256K (32K x 8 VU Erasable PROM)

Component	Description
E2PROMS & NVRAMS (Incircuit Programmable Writable Memories)	
2004	4K (512 x 8) Non-volatile Random Access Memory
2816A	16K (2K x 8) Electrically Erasable EPROM
2817A	16K (2K x 8) Electrically Erasable EPROM
BUBBLE MEMORY	
7220	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7220-1	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7220-4	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7220-5	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7224	Controller for 4MBit
MCS-51	
8031AH	Single-Component 8-Bit Microcomputer
8051AH	Single-Component 8-Bit Microcomputer
8032AH	Single-Component 8-Bit Microcomputer
8052AH	Single-Component 8-Bit Microcomputer
8751H	Single-Component 8-Bit Microcomputer
8751H-11	Single-Component 8-Bit Microcomputer
8751H-10	Single-Component 8-Bit Microcomputer

Component	Description
8751H-8	Single-Component 8-Bit Micro
MCS-48	
8048AH	HMOS Single-Component 8-Bit Microcomputer
8748H	HMOS Single-Component 8-Bit Microcomputer
8035AHL	HMOS Single-Component 8-Bit Microcomputer
8049AH	HMOS Single-Component 8-Bit Microcomputer
8749H	HMOS Single-Component 8-Bit Microcomputer
8039AHL	HMOS Single-Component 8-Bit Microcomputer
8050AH	HMOS Single-Component 8-Bit Microcomputer
8040AHL	HMOS Single-Component 8-Bit Microcomputer
MC3-48 Express	
80C49-7	CHMOS Single-Component 8-Bit Microcomputer
80C39-7	CHMOS Single-Component 8-Bit Microcomputer
RUPI	
8044AH	High Performance 8-Bit Microcontroller with On-Chip Serial Communication Center
8344AH	High Performance 8-Bit Microcontroller with On-Chip Serial Communication Center
8744H	High Perf 8-Bit Microcontroller with On-Chip Serial Comm Center

FILE LIST BY COMPONENT FUNCTION

8-BIT N-CHANNEL MICROPROCESSOR
PC-CAPS SYMBOL: 8080A.SYM, 8080A-1.SYM, 8080A-2.SYM
PC-CARDS PART : 8080A.PRT, 8080A-1.PRT, 8080A-2.PRT
PIN CONFIGURATION: DIP40

8-BIT HMOS MICROPROCESSORS
PC-CAPS SYMBOL: 8085AH.SYM, 8085AH-1.SYM, 8085AH-2.SYM
PC-CARDS PART : 8085AH.PRT, 8085AH-1.PRT, 8085AH-2.PRT
PIN CONFIGURATION: DIP40

SINGLE CHIP 8-BIT N-CHANNEL MICROPROCESSORS
PC-CAPS SYMBOL: 8085A.SYM, 8085A-2.SYM
PC-CARDS PART : 8085A.PRT, 8085A-2.PRT
PIN CONFIGURATION: DIP40

2048-BIT STATIC HMOS RAM WITH I/O PORTS AND TIMER
PC-CAPS SYMBOL: 8155H.SYM, 8155H-2.SYM, 8156H.SYM, 8156H-2.SYM
PC-CARDS PART : 8155H.PRT, 8155H-2.PRT, 8156H.PRT, 8156H-2.PRT
PIN CONFIGURATION: DIP40

2048-BIT STATIC MOS RAM WITH I/O PORTS AND TIMER
PC-CAPS SYMBOL: 8155.SYM, 8155-2.SYM, 8156.SYM, 8156-2.SYM
PC-CARDS PART : 8155.PRT, 8155-2.PRT, 8156.PRT, 8156-2.PRT
PIN CONFIGURATION: DIP40

1024 X 8-BIT STATIC RAM
PC-CAPS SYMBOL: 8185.SYM, 8185-2.SYM
PC-CARDS PART : 8185.PRT, 8185-2.PRT
PIN CONFIGURATION: DIP18

HIGH SPEED 1 OUT OF 8 BINARY DECODER
PC-CAPS SYMBOL: 8205.SYM
PC-CARDS PART : 8205.PRT
PIN CONFIGURATION: DIP16

8-BIT INPUT/OUTPUT PORT
PC-CAPS SYMBOL: 8212.SYM
PC-CARDS PART : 8212.PRT
PIN CONFIGURATION: DIP24

4-BIT PARALLEL BIDIRECTIONAL BUS DRIVER
PC-CAPS SYMBOL: 8226.SYM
PC-CARDS PART : 8226.PRT
PIN CONFIGURATION: DIP16

4-BIT PARALLEL BIDIRECTIONAL BUS DRIVER
PC-CAPS SYMBOL: 8216.SYM
PC-CARDS PART : 8216.PRT
PIN CONFIGURATION: DIP16

BIPOLAR MICROCOMPUTER BUS CONTROLLER
PC-CAPS SYMBOL: 8218.SYM
PC-CARDS PART : 8218.PRT
PIN CONFIGURATION: DIP28

BIPOLAR MICROCOMPUTER BUS CONTROLLER
PC-CAPS SYMBOL: 8219.SYM
PC-CARDS PART : 8219.PRT
PIN CONFIGURATION: DIP28

CLOCK GENERATOR AND DRIVER
PC-CAPS SYMBOL: 8224.SYM
PC-CARDS PART : 8224.PRT
PIN CONFIGURATION: DIP16

SYSTEM CONTROLLER AND BUS DRIVER
PC-CAPS SYMBOL: 8228.SYM, 8238.SYM
PC-CARDS PART : 8228.PRT, 8238.PRT
PIN CONFIGURATION: DIP28

HIGH PERFORMANCE PROGRAMMABLE DMA CONTROLLER
PC-CAPS SYMBOL: 8237A.SYM, 8237A-4.SYM,
8237A-5.SYM
PC-CARDS PART : 8237A.PRT, 8237A-4.PRT,
8237A-5.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE DMA CONTROLLER
PC-CAPS SYMBOL: 8257.SYM, 8257-5.SYM
PC-CARDS PART : 8257.PRT, 8257-5.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE INTERRUPT CONTROLLER
PC-CAPS SYMBOL: 8259A.SYM, 8259A-2.SYM,
8259A-8.SYM
PC-CARDS PART : 8259A.PRT, 8259A-2.PRT,
8259A-8.PRT
PIN CONFIGURATION: DIP28

16,384-BIT ROM WITH I/O
PC-CAPS SYMBOL: 8355.SYM, 8355-2.SYM
PC-CARDS PART : 8355.PRT, 8355-2.PRT
PIN CONFIGURATION: DIP40

16,384-BIT EPROM WITH I/O
PC-CAPS SYMBOL: 8755A.SYM, 8755A-2.SYM
PC-CARDS PART : 8755A.PRT, 8755A-2.PRT
PIN CONFIGURATION: DIP40

16-BIT HMOS MICROPROCESSOR
PC-CAPS SYMBOL: 8086.SYM, 8086-1.SYM,
8086-2.SYM
PC-CARDS PART : 8086.PRT, 8086-1.PRT,
8086-2.PRT
PIN CONFIGURATION: DIP40

8 & 16-BIT HMOS I/O PROCESSOR
PC-CAPS SYMBOL: 8089.SYM
PC-CARDS PART : 8089.PRT
PIN CONFIGURATION: DIP40

8-BIT HMOS MICROPROCESSOR
PC-CAPS SYMBOL: 8088.SYM, 8088-2.SYM
PC-CARDS PART : 8088.PRT, 8088-2.PRT
PIN CONFIGURATION: DIP40

NUMERIC DATA COPROCESSOR
PC-CAPS SYMBOL: 8087.SYM
PC-CARDS PART : 8087.PRT
PIN CONFIGURATION: DIP40

iRMX 86 OPERATING SYSTEM PROCESSORS
PC-CAPS SYMBOL: 80130.SYM, 80130-2.SYM
PC-CARDS PART : 80130.PRT, 80130-2.PRT
PIN CONFIGURATION: DIP40

CP/M-86 OPERATING SYSTEM PROCESSORS
PC-CAPS SYMBOL: 80150.SYM, 80150-2.SYM
PC-CARDS PART : 80150.PRT, 80150-2.PRT
PIN CONFIGURATION: DIP40

OCTAL LATCH
PC-CAPS SYMBOL: 8282.SYM
PC-CARDS PART : 8282.PRT
PIN CONFIGURATION: DIP20

OCTAL LATCH
PC-CAPS SYMBOL: 8283.SYM
PC-CARDS PART : 8283.PRT
PIN CONFIGURATION: DIP20

CLOCK GENERATOR AND DRIVER
PC-CAPS SYMBOL: 8284A.SYM, 8284A-1.SYM
PC-CARDS PART : 8284A.PRT, 8284A-1.PRT
PIN CONFIGURATION: DIP18

OCTAL BUS TRANSCEIVER
PC-CAPS SYMBOL: 8286.SYM
PC-CARDS PART : 8286.PRT
PIN CONFIGURATION: DIP20

OCTAL BUS TRANSCEIVER
PC-CAPS SYMBOL: 8287.SYM
PC-CARDS PART : 8287.PRT
PIN CONFIGURATION: DIP20

BUS CONTROLLER
PC-CAPS SYMBOL: 8288.SYM
PC-CARDS PART : 8288.PRT
PIN CONFIGURATION: DIP20

BUS ARBITER
PC-CAPS SYMBOL: 8289.SYM, 8289-1.SYM
PC-CARDS PART : 8289.PRT, 8289-1.PRT
PIN CONFIGURATION: DIP20

80-BIT HMOS NUMERIC PROCESSOR EXTENSION
PC-CAPS SYMBOL: 80287.SYM, 80287-3.SYM
PC-CARDS PART : 80287.PRT, 80287-3.PRT
PIN CONFIGURATION: DIP40

CLOCK GENERATOR AND READY INTERFACE
PC-CAPS SYMBOL: 82284.SYM, 82284-6.SYM
PC-CARDS PART : 82284.PRT, 82284-6.PRT
PIN CONFIGURATION: DIP18

BUS CONTROLLER
PC-CAPS SYMBOL: 82288.SYM, 82288-6.SYM
PC-CARDS PART : 82288.PRT, 82288-6.PRT
PIN CONFIGURATION: DIP20

DYNAMIC RAM CONTROLLER
PC-CAPS SYMBOL: 8202A.SYM
PC-CARDS PART : 8202A.PRT
PIN CONFIGURATION: DIP40

64K DYNAMIC RAM CONTROLLER
PC-CAPS SYMBOL: 8203.SYM
PC-CARDS PART : 8203.PRT
PIN CONFIGURATION: DIP40

CMOS 64K DYNAMIC RAM CONTOLLER
PC-CAPS SYMBOL: 82C03.SYM
PC-CARDS PART : 82C03.PRT
PIN CONFIGURATION: DIP40

DYNAMIC RAM CONTROLLER
PC-CAPS SYMBOL: 8208.SYM
PC-CARDS PART : 8208.PRT
PIN CONFIGURATION: DIP48

ARITHMETIC PROCESSING UNIT
PC-CAPS SYMBOL: 8231A.SYM
PC-CARDS PART : 8231A.PRT
PIN CONFIGURATION: DIP24

PROGRAMMABLE INTERVAL TIMER
PC-CAPS SYMBOL: 8253.SYM, 8253-5.SYM,
8254.SYM
PC-CARDS PART : 8253.PRT, 8253-5.PRT,
8254.PRT
PIN CONFIGURATION: DIP24

PROGRAMMABLE PERIPHERAL INTERFACE
PC-CAPS SYMBOL: 8255A.SYM, 8255A-5.SYM
PC-CARDS PART : 8255A.PRT, 8255A-5.PRT
PIN CONFIGURATION: DIP40

MULTIFUNCTION UNIVERSAL ASYNCHRONOUS
RECEIVER-TRANSMITTER (MUART)
PC-CAPS SYMBOL: 8256AH.SYM
PC-CARDS PART : 8256AH.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE KEYBOARD/DISPLAY INTERFACE
PC-CAPS SYMBOL: 8279.SYM, 8279-5.SYM
PC-CARDS PART : 8279.PRT, 8279-5.PRT
PIN CONFIGURATION: DIP40

CLOCK GENERATOR AND READY INTERFACE FOR I/O COPROCESSORS
PC-CAPS SYMBOL: 82285.SYM
PC-CARDS PART : 82285.PRT
PIN CONFIGURATION: DIP18

PROGRAMMABLE FLOPPY DISK CONTROLLER
PC-CAPS SYMBOL: 8271.SYM, 8271-6.SYM
PC-CARDS PART : 8271.PRT, 8271-6.PRT
PIN CONFIGURATION: DIP40

SINGLE/DOUBLE DENSITY FLOPPY DISK CONTROLLER
PC-CAPS SYMBOL: 8272A.SYM
PC-CARDS PART : 8272A.PRT
PIN CONFIGURATION: DIP40

WINCHESTER DISK CONTROLLER
PC-CAPS SYMBOL: 82062.SYM
PC-CARDS PART : 82062.PRT
PIN CONFIGURATION: DIP40

UNIVERSAL PERIPHERAL INTERFACE 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8041A.SYM, 8641A.SYM, 8741A.SYM, 8042.SYM, 8742.SYM
PC-CARDS PART : 8041A.PRT, 8641A.PRT, 8741A.PRT, 8042.PRT, 8742.PRT
PIN CONFIGURATION: DIP40

INPUT/OUTPUT EXPANDER
PC-CAPS SYMBOL: 8243.SYM
PC-CARDS PART : 8243.PRT
PIN CONFIGURATION: DIP24

DOT MATRIX PRINTER CONTROLLER
PC-CAPS SYMBOL: 8295.SYM
PC-CARDS PART : 8295.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE COMMUNICATION INTERFACE
PC-CAPS SYMBOL: 8251A.SYM
PC-CARDS PART : 8251A.PRT
PIN CONFIGURATION: DIP28

PROGRAMMABLE HDLC/SDLC PROTOCOL CONTROLLER
PC-CAPS SYMBOL: 8273.SYM, 8273-4.SYM
PC-CARDS PART : 8273.PRT, 8273-4.PRT
PIN CONFIGURATION: DIP40

MULTI-PROTOCOL SERIAL CONTROLLER (MPSC)
PC-CAPS SYMBOL: 8274.SYM
PC-CARDS PART : 8274.PRT
PIN CONFIGURATION: DIP40

SERIAL COMMUNICATIONS CONTOLLER (SCC)
PC-CAPS SYMBOL: 82530.SYM, 82530-6.SYM
PC-CARDS PART : 82530.PRT, 82530-6.PRT
PIN CONFIGURATION: DIP40

ETHERNET SERIAL INTERFACE
PC-CAPS SYMBOL: 82501.SYM
PC-CARDS PART : 82501.PRT
PIN CONFIGURATION: DIP20

LOCAL AREA NETWORK COPROCESSOR
PC-CAPS SYMBOL: 82586.SYM
PC-CARDS PART : 82586.PRT
PIN CONFIGURATION: DIP48

GPIB TALKER/LISTENER
PC-CAPS SYMBOL: 8291A.SYM
PC-CARDS PART : 8291A.PRT
PIN CONFIGURATION: DIP40

GPIB CONTROLLER
PC-CAPS SYMBOL: 8292.SYM
PC-CARDS PART : 8292.PRT
PIN CONFIGURATION: DIP40

GPIB TRANSCEIVER
PC-CAPS SYMBOL: 8293.SYM
PC-CARDS PART : 8293.PRT
PIN CONFIGURATION: DIP28

DATA ENCRYPTION UNIT
PC-CAPS SYMBOL: 8294A.SYM
PC-CARDS PART : 8294A.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE CRT CONTROLLER
PC-CAPS SYMBOL: 8275.SYM
PC-CARDS PART : 8275.PRT
PIN CONFIGURATION: DIP40

SMALL SYSTEM CRT CONTROLLER
PC-CAPS SYMBOL: 8276.SYM
PC-CARDS PART : 8276.PRT
PIN CONFIGURATION: DIP40

GRAPHICS DISPLAY CONTROLLER
PC-CAPS SYMBOL: 82720.SYM
PC-CARDS PART : 82720.PRT
PIN CONFIGURATION: DIP40

VIDEO INTERFACE CONTROLLER
PC-CAPS SYMBOL: 82731.SYM
PC-CARDS PART : 82731.PRT
PIN CONFIGURATION: DIP40

SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8031AH.SYM, 8051AH.SYM
PC-CARDS PART : 8031AH.PRT, 8051AH.PRT
PIN CONFIGURATION: DIP40

SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8032AH.SYM, 8052AH.SYM
PC-CARDS PART : 8032AH.PRT, 8052AH.PRT
PIN CONFIGURATION: DIP40

SINGLE-COMPONENT 8-BIT MICROCOMPUTERS
PC-CAPS SYMBOL: 8751H.SYM, 8751H-11.SYM,
8751H-10.SYM, 8751H-8.SYM
PC-CARDS PART : 8751H.PRT, 8751H-11.PRT,
8751H-10.PRT, 8751H-8.PRT
PIN CONFIGURATION: DIP40

HIGH PERFORMANCE 8-BIT MICROCONTROLLER WITH
ON-CHIP SERIAL COMMUNICATION CENTER
PC-CAPS SYMBOL: 8044AH.SYM, 8344AH.SYM,
8744H.SYM
PC-CARDS PART : 8044AH.SYM, 8344AH.SYM,
8744H.SYM
PIN CONFIGURATION: DIP40

HMOS SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8048AH.SYM, 8748H.SYM,
8035AHL.SYM, 8049AH.SYM
8749H.SYM, 8039AHL.SYM,
8050AH.SYM, 8040AHL.SYM
PC-CARDS PART : 8048AH.PRT, 8748H.PRT,
8035AHL,PRT, 8049AH.PRT
8749H.PRT, 8039AHL.PRT,
8050AH.PRT, 8040AHL.PRT
PIN CONFIGURATION: DIP40

CHMOS SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 80C49-7.SYM, 80C39-7.SYM
PC-CARDS PART : 80C49-7.PRT, 80C39-7.PRT
PIN CONFIGURATION: DIP40

16K (2K X 8) ELECTRICALLY ERASABLE PROM
PC-CAPS SYMBOL: 2816A.SYM
PC-CARDS PART : 2816A.PRT
PIN CONFIGURATION: DIP24

16K (2K X 8) ELECTRICALLY ERASABLE PROM
PC-CAPS SYMBOL: 2817A.SYM
PC-CARDS PART : 2817A.PRT
PIN CONFIGURATION: DIP28

CONTROLLER FOR 1MBIT BPK 70A BUBBLE MEMORY SUBSYSTEM
PC-CAPS SYMBOL: 7220.SYM, 7220-1.SYM, 7220-4.SYM, 7220-5.SYM
PC-CARDS PART : 7220.PRT, 7220-1.PRT, 7220-4.PRT, 7220-5.PRT
PIN CONFIGURATION: DIP40

CONTROLLER FOR 4MBIT BPK 5V74 BUBBLE MEMORY SUBSYSTEM
PC-CAPS SYMBOL: 7224.SYM
PC-CARDS PART : 7224.PRT
PIN CONFIGURATION: DIP40

32K (4K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 2732A.SYM
PC-CARDS PART : 2732A.PRT
PIN CONFIGURATION: DIP24

1024 X 4 BIT STATIC RAM
PC-CAPS SYMBOL: 2114A.SYM, 2148H.SYM, 2149H.SYM
PC-CARDS PART : 2114A.PRT, 2148H.PRT, 2149H.PRT
PIN CONFIGURATION: DIP18

HIGH SPEED 1K X 1 BIT STATIC RAM
PC-CAPS SYMBOL: 2115A.SYM, 2125A.SYM
PC-CARDS PART : 2115A.PRT, 2125A.PRT
PIN CONFIGURATION: DIP16

HMOS HIGH SPEED 1K X 1 BIT STATIC RAM
PC-CAPS SYMBOL: 2115H.SYM, 2125H.SYM
PC-CARDS PART : 2115H.PRT, 2125H.PRT
PIN CONFIGURATION: DIP16

4K (512 X 8) NON-VOLATILE RANDOM ACCESS MEMORY
PC-CAPS SYMBOL: 2004.SYM
PC-CARDS PART : 2004.PRT
PIN CONFIGURATION: DIP28

64K (8K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 2764.SYM
PC-CARDS PART : 2764.PRT
PIN CONFIGURATION: DIP28

ADVANCED 64K (8K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 2764A.SYM
PC-CARDS PART : 2764A.PRT
PIN CONFIGURATION: DIP28

128K (16K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 27128.SYM
PC-CARDS PART : 27128.PRT
PIN CONFIGURATION: DIP28

ADVANCED 128K (16K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 27128A.SYM
PC-CARDS PART : 27128A.PRT
PIN CONFIGURATION: DIP28

65,536 X 1 BIT DYNAMIC RAM
PC-CAPS SYMBOL: 2164A.SYM
PC-CARDS PART : 2164A.PRT
PIN CONFIGURATION: DIP16

65,536 X 1 BIT CHMOS DYNAMIC RAM
PC-CAPS SYMBOL: 51C64.SYM
PC-CARDS PART : 51C64.PRT
PIN CONFIGURATION: DIP16

STATIC COLUMN CHMOS DYNAMIC RAM
PC-CAPS SYMBOL: 51C65.SYM
PC-CARDS PART : 51C65.PRT
PIN CONFIGURATION: DIP16

256K (32K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 27256.SYM
PC-CARDS PART : 27256.PRT
PIN CONFIGURATION: DIP28

8192 X 8 BIT INTEGRATED RAM
PC-CAPS SYMBOL: 2186A.SYM, 2186.SYM
PC-CARDS PART : 2186A.PRT, 2186.PRT
PIN CONFIGURATION: DIP28

8192 X 8 BIT INTEGRATED RAM
PC-CAPS SYMBOL: 2187A.SYM
PC-CARDS PART : 2187A.PRT
PIN CONFIGURATION: DIP28

iAPX 186 HIGH INTEGRATED 16-BIT MICROPROCESSOR
PC-CAPS SYMBOL: 80186.SYM
PC-CARDS PART : 80186.PRT
PIN CONFIGURATION: QUAD68

iAPX 188 HIGH INTEGRATED 8-BIT MICROPROCESSOR
PC-CAPS SYMBOL: 80188.SYM
PC-CARDS PART : 80188.PRT
PIN CONFIGURATION: QUAD68

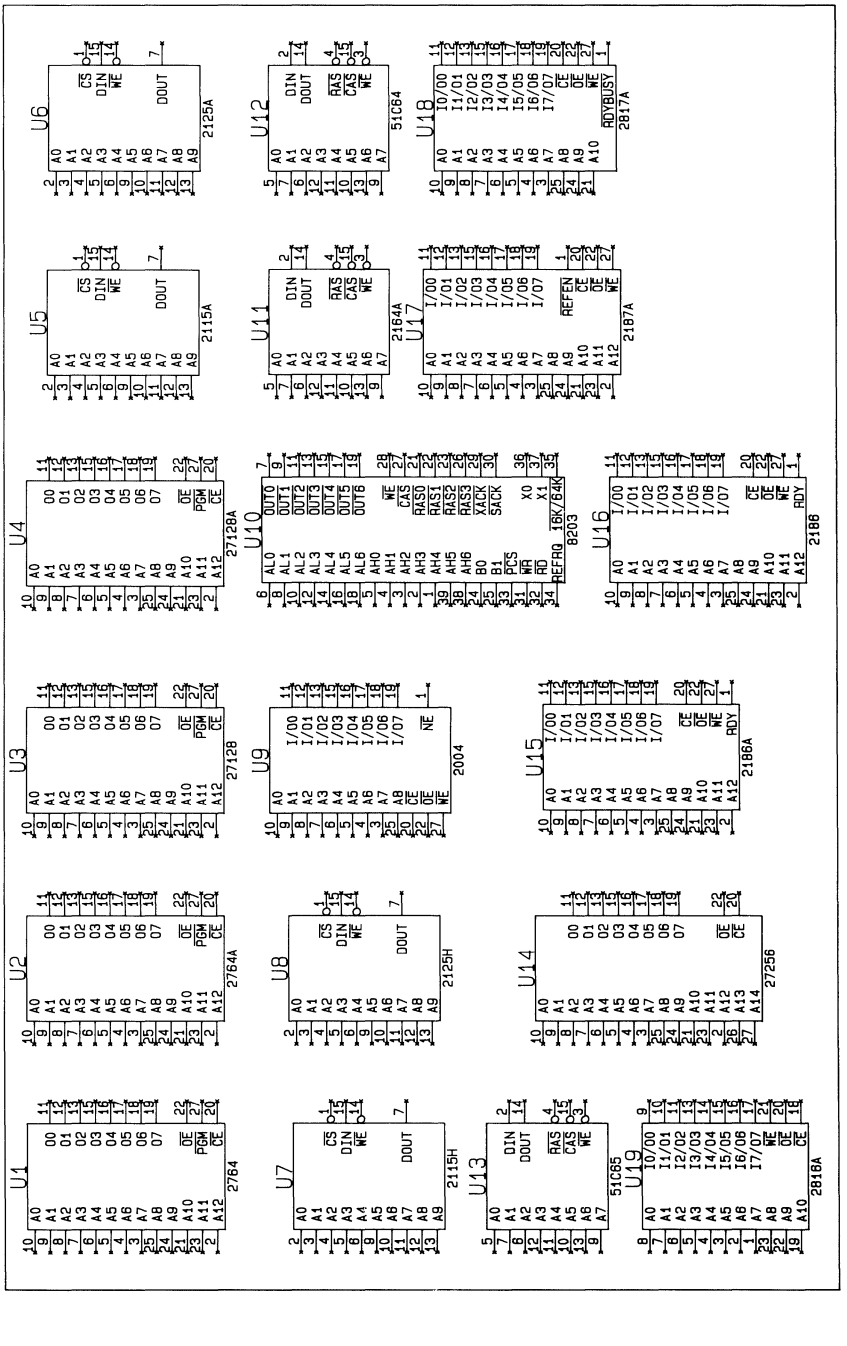
iAPX 286/10 HIGH PERFORMANCE MICROPROCESSOR WITH MEMORY MANAGEMENT AND PROTECTION
PC-CAPS SYMBOL: 80286.SYM
PC-CARDS PART : 80286.PRT
PIN CONFIGURATION: QUAD68

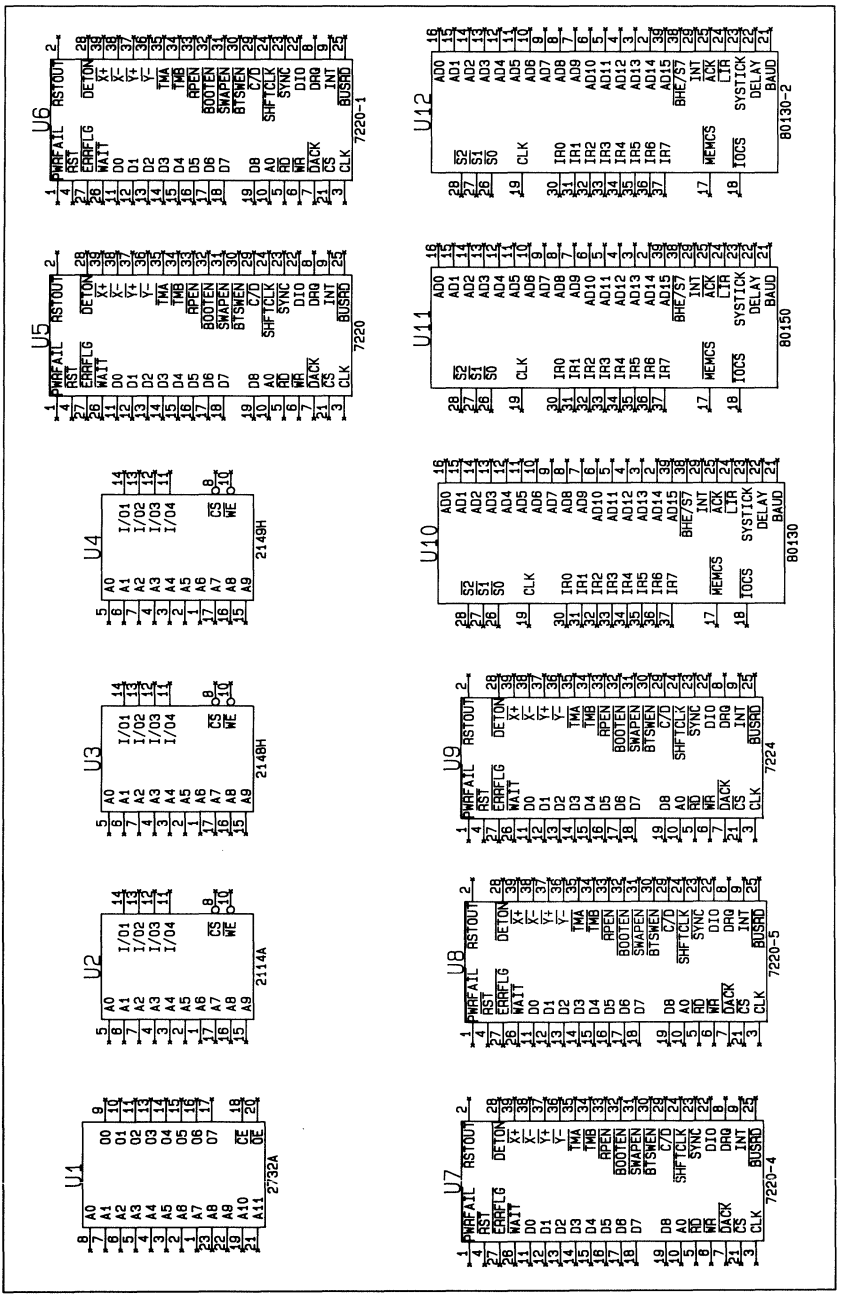
iAPX 186 HIGH INTEGRATED 16-BIT MICROPROCESSOR
PC-CAPS SYMBOL: 80186T.SYM
PC-CARDS PART : 80186T.PRT
PIN CONFIGURATION: QUAD68

iAPX 188 HIGH INTEGRATED 8-BIT MICROPROCESSOR
PC-CAPS SYMBOL: 80188T.SYM
PC-CARDS PART : 80188T.PRT
PIN CONFIGURATION: QUAD68

iAPX 286/10 HIGH PERFORMANCE MICROPROCESSOR
WITH MEMORY MANAGEMENT AND PROTECTION
PC-CAPS SYMBOL: 80286T.SYM
PC-CARDS PART : 80286T.PRT
PIN CONFIGURATION: QUAD68

COMPONENT PLOTS

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U8
7220-5
U9
7224
U10
80130
U11
80150
U12
80130-2

U1
80150-2
U2
80287
U3
8031AH
U4
8051AH
U5
8032AH
U6
8052AH
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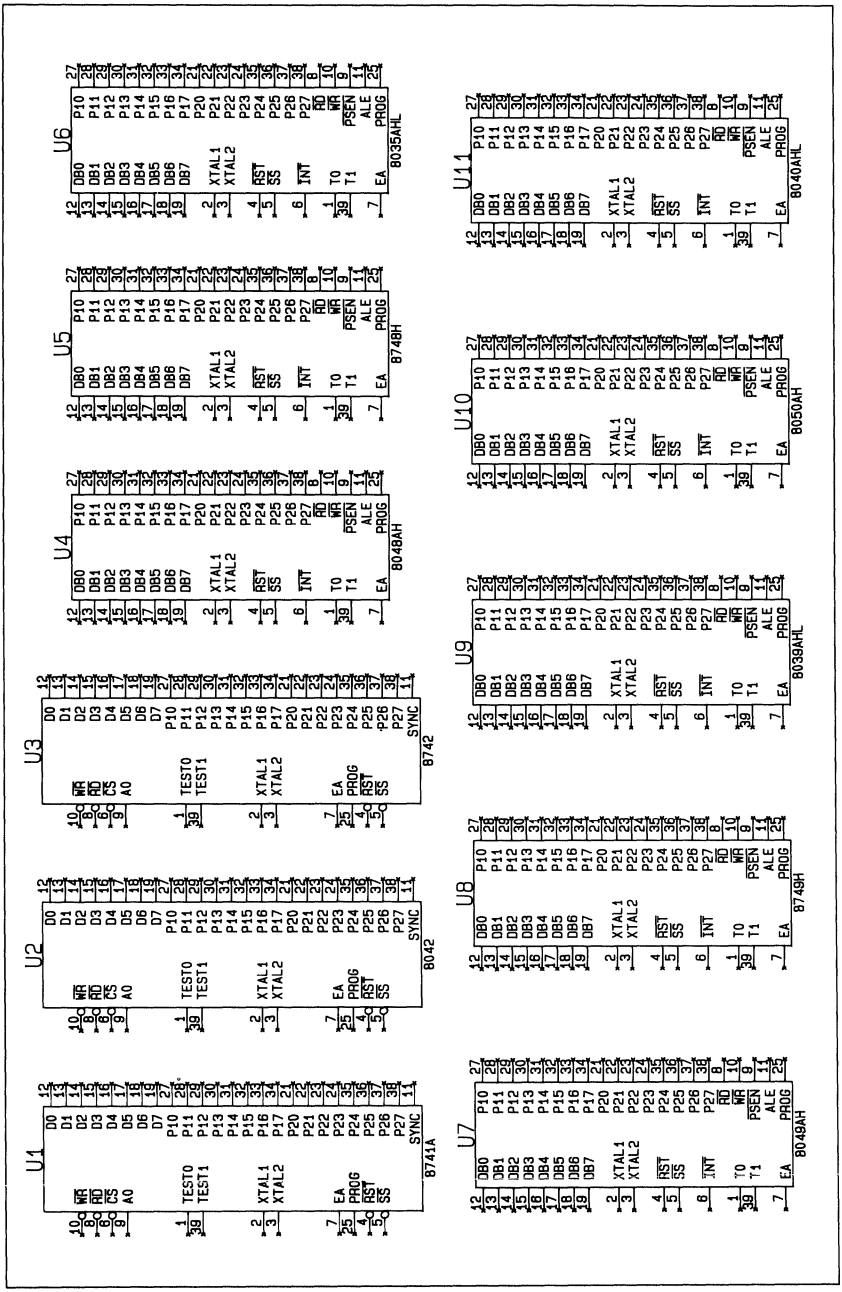
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U8
8748H
U9
8039AHL
U10
8050AH
U11
8040AHL

U1
DB0 P10
DB1 P11
DB2 P12
DB3 P13
DB4 P14
DB5 P15
DB6 P16
DB7 P17
P20
XTAL1 P21
XTAL2 P22
P23
RST P24
SS P25
P26
INT P27
RD
T0 WR
T1 PSEN
ALE
EA PROG
80C49-7
U2
DB0 P10
DB1 P11
DB2 P12
DB3 P13
DB4 P14
DB5 P15
DB6 P16
DB7 P17
P20
XTAL1 P21
XTAL2 P22
P23
RST P24
SS P25
P26
INT P27
RD
T0 WR
T1 PSEN
ALE
EA PROG
80C39-7
U3
D0 A0
D1 A1
D2 A2
D3 A3
D4 A4
D5 A5
D6 A6
D7 A7
A8
A9
A10
A11
PHSE1 A12
PHSE2 A13
A14
A15
WR
DBIN
RST SYNC
RDY WAIT
HOLD HLDA
INT INTE
8080A
U4
D0 A0
D1 A1
D2 A2
D3 A3
D4 A4
D5 A5
D6 A6
D7 A7
A8
A9
A10
A11
PHSE1 A12
PHSE2 A13
A14
A15
WR
DBIN
RST SYNC
RDY WAIT
HOLD HLDA
INT INTE
8080A-1
U5
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A11
PHSE1 A12
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A15
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DBIN
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HOLD HLDA
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CLK D0
CKM D1
RST D2
D3
NPRD D4
NPWR D5
NPS1 D6
NPS2 D7
D8
CMD1 D9
CMD0 D10
D11
CLK286 D12
S1 D13
S0 D14
CODINTA D15
HLDA BUSY
RDY ERROR
PEACK PEREQ
80287-3
U7
AD0 A8
AD1 A9
AD2 A10
AD3 A11
AD4 A12
AD5 A13
AD6 A14
AD7 A15
X2 IOM
X1 S1
TRAP S0
RST7.5 ALE
RST6.5 WR
RST5.5 RD
RDY CLK
HOLD HLDA
RSTIN RSTOUT
SID SOD
INTR INTA
8085AH
U8
AD0 A8
AD1 A9
AD2 A10
AD3 A11
AD4 A12
AD5 A13
AD6 A14
AD7 A15
X2 IOM
X1 S1
TRAP S0
RST7.5 ALE
RST6.5 WR
RST5.5 RD
RDY CLK
HOLD HLDA
RSTIN RSTOUT
SID SOD
INTR INTA
8085AH-2
U9
AD0 A8
AD1 A9
AD2 A10
AD3 A11
AD4 A12
AD5 A13
AD6 A14
AD7 A15
X2 IOM
X1 S1
TRAP S0
RST7.5 ALE
RST6.5 WR
RST5.5 RD
RDY CLK
HOLD HLDA
RSTIN RSTOUT
SID SOD
INTR INTA
8085AH-1
U10
AD0 A8
AD1 A9
AD2 A10
AD3 A11
AD4 A12
AD5 A13
AD6 A14
AD7 A15
X2 IOM
X1 S1
TRAP S0
RST7.5 ALE
RST6.5 WR
RST5.5 RD
RDY CLK
HOLD HLDA
RSTIN RSTOUT
SID SOD
INTR INTA
8085A
U11
AD0 A8
AD1 A9
AD2 A10
AD3 A11
AD4 A12
AD5 A13
AD6 A14
AD7 A15
X2 IOM
X1 S1
TRAP S0
RST7.5 ALE
RST6.5 WR
RST5.5 RD
RDY CLK
HOLD HLDA
RSTIN RSTOUT
SID SOD
INTR INTA
8085A-2
U12
AD0
AD1 A19/S6
AD2 A18/S5
AD3 A17/S4
AD4 A16/S3
AD5
AD6 BHE/S7
AD7 RD
AD8
AD9
AD10 S2
AD11 S1
AD12 S0
AD13
AD14
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RDY QS1
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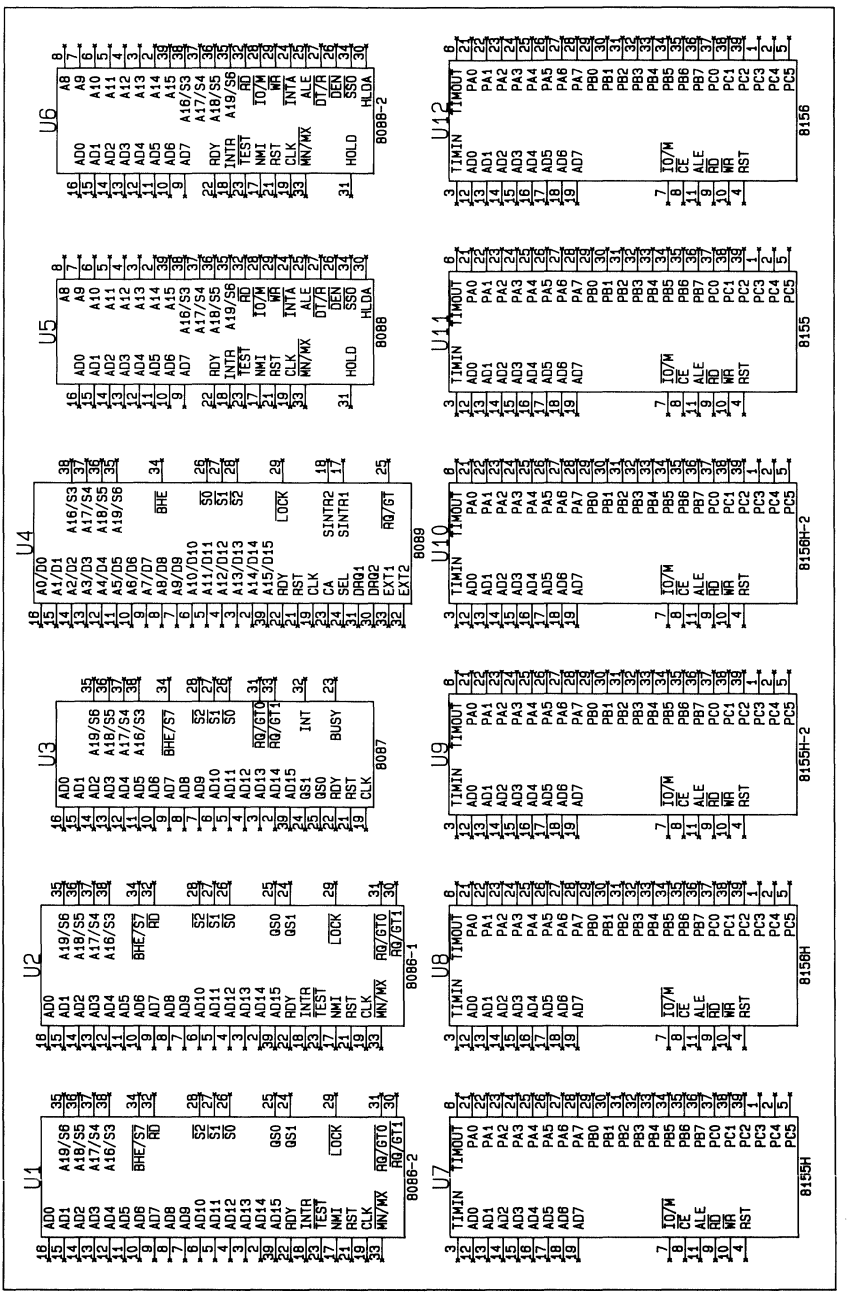
TEST
NMI LOCK
RST
CLK
MN/MX RQ/GT0
RQ/GT1
8086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U6
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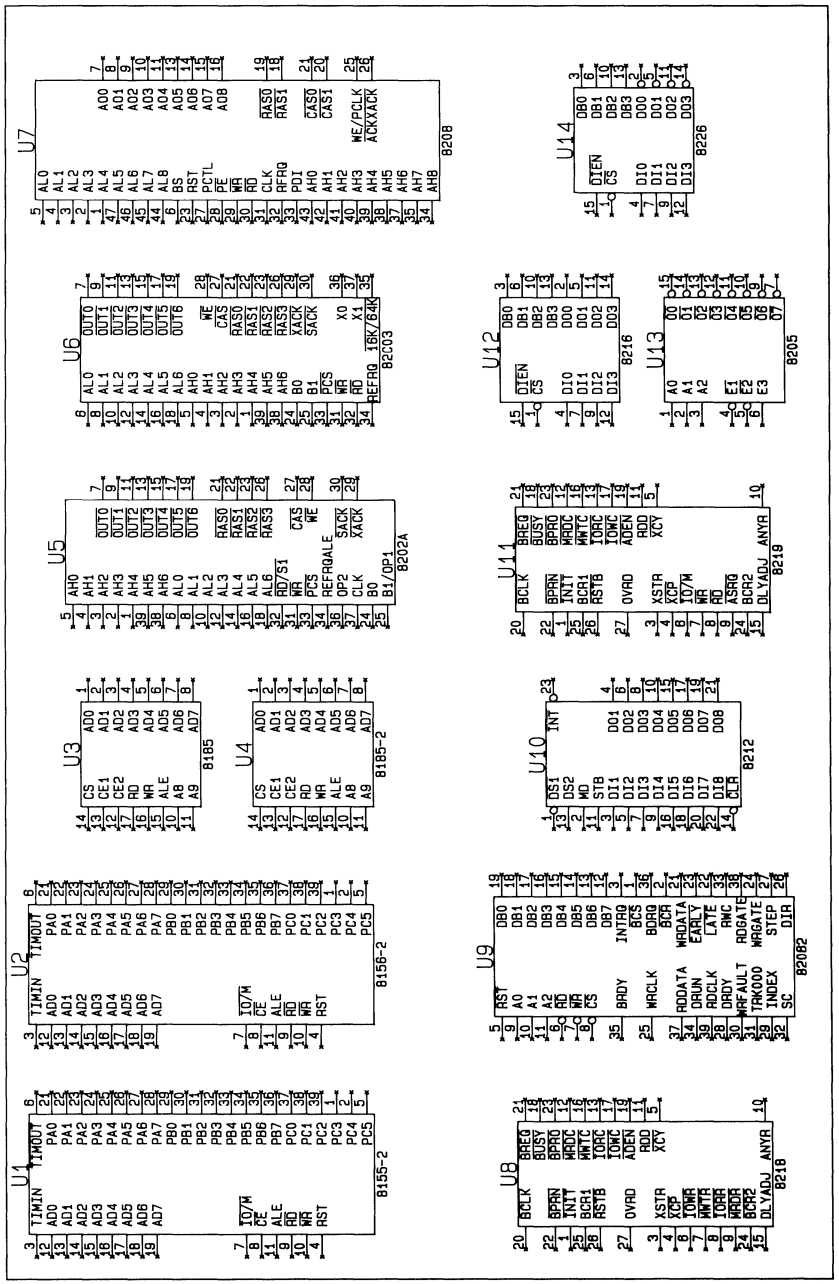
U12
8156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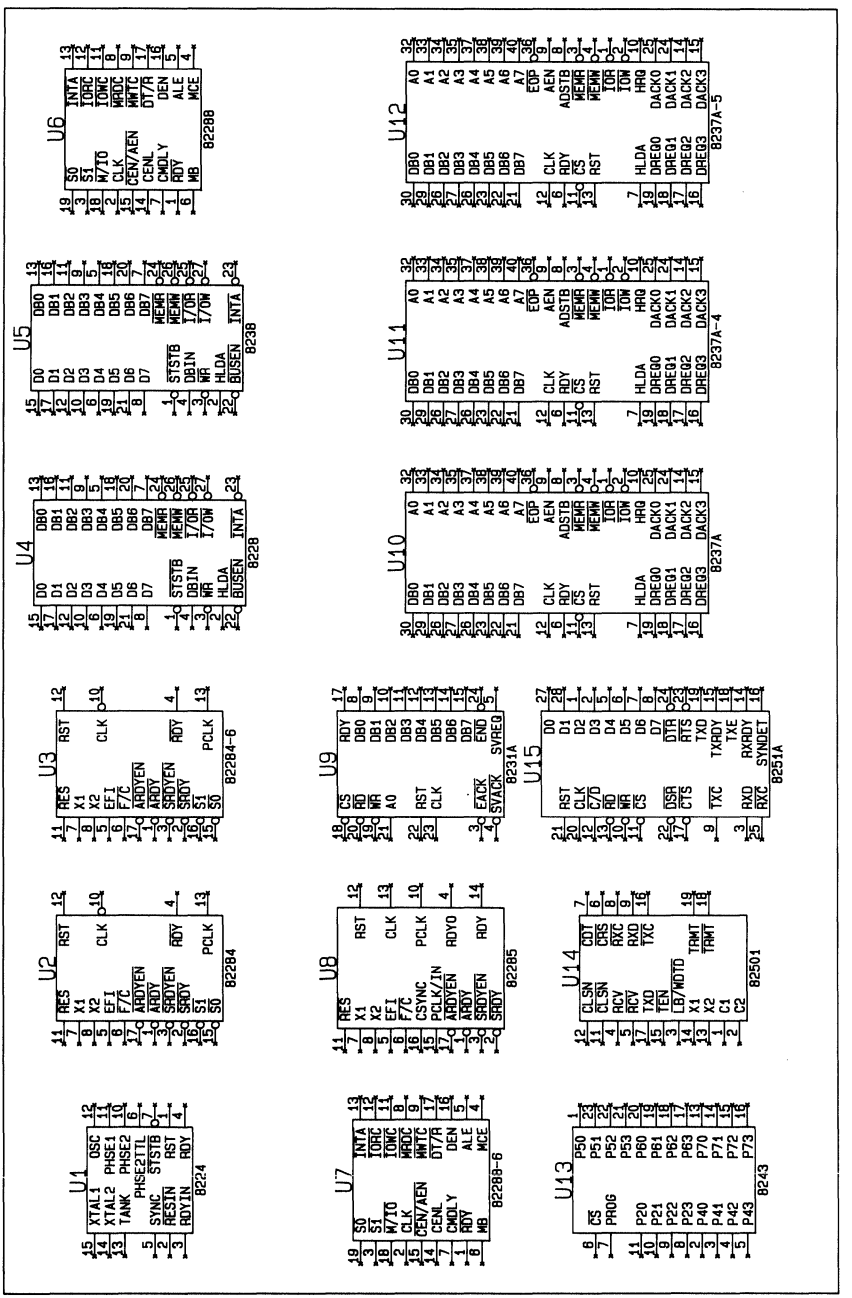
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82285
U9
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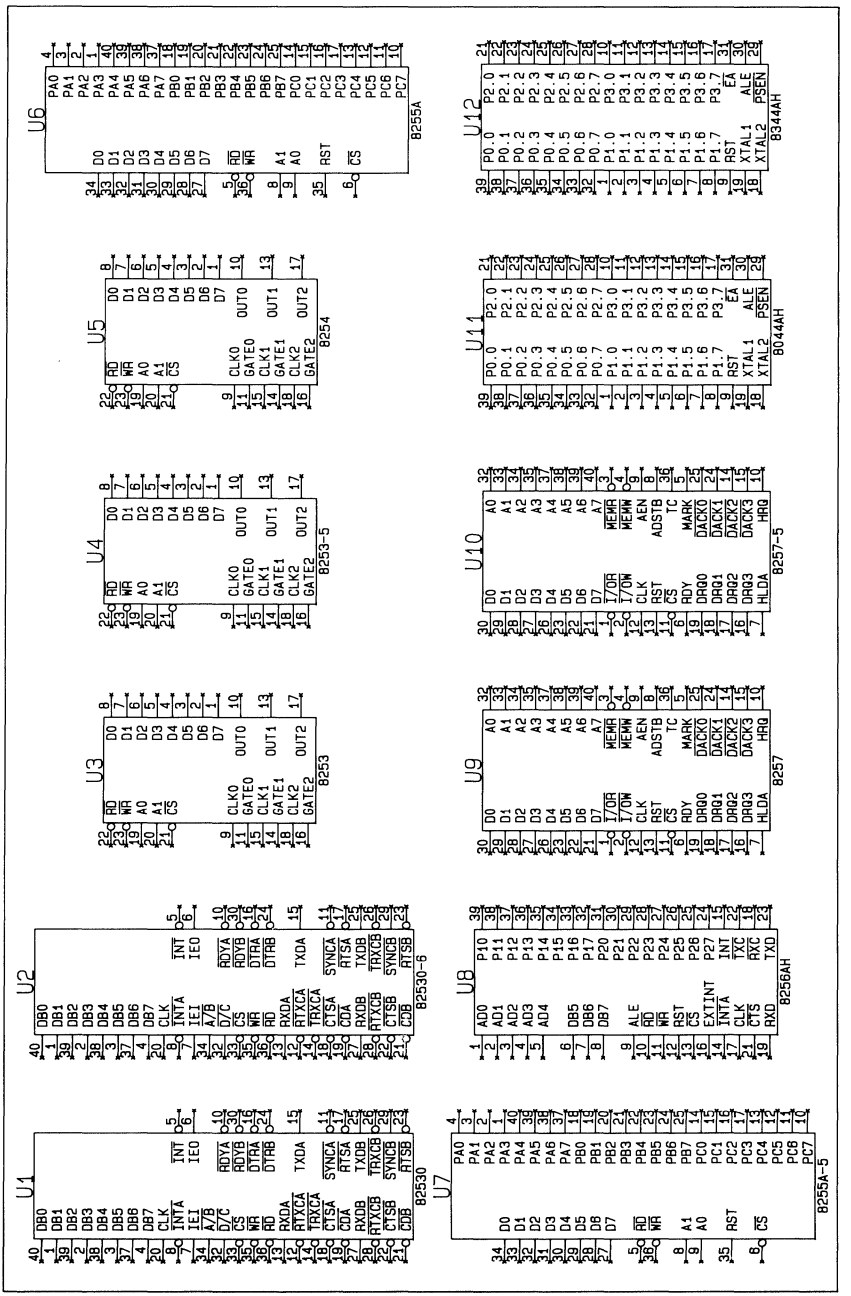
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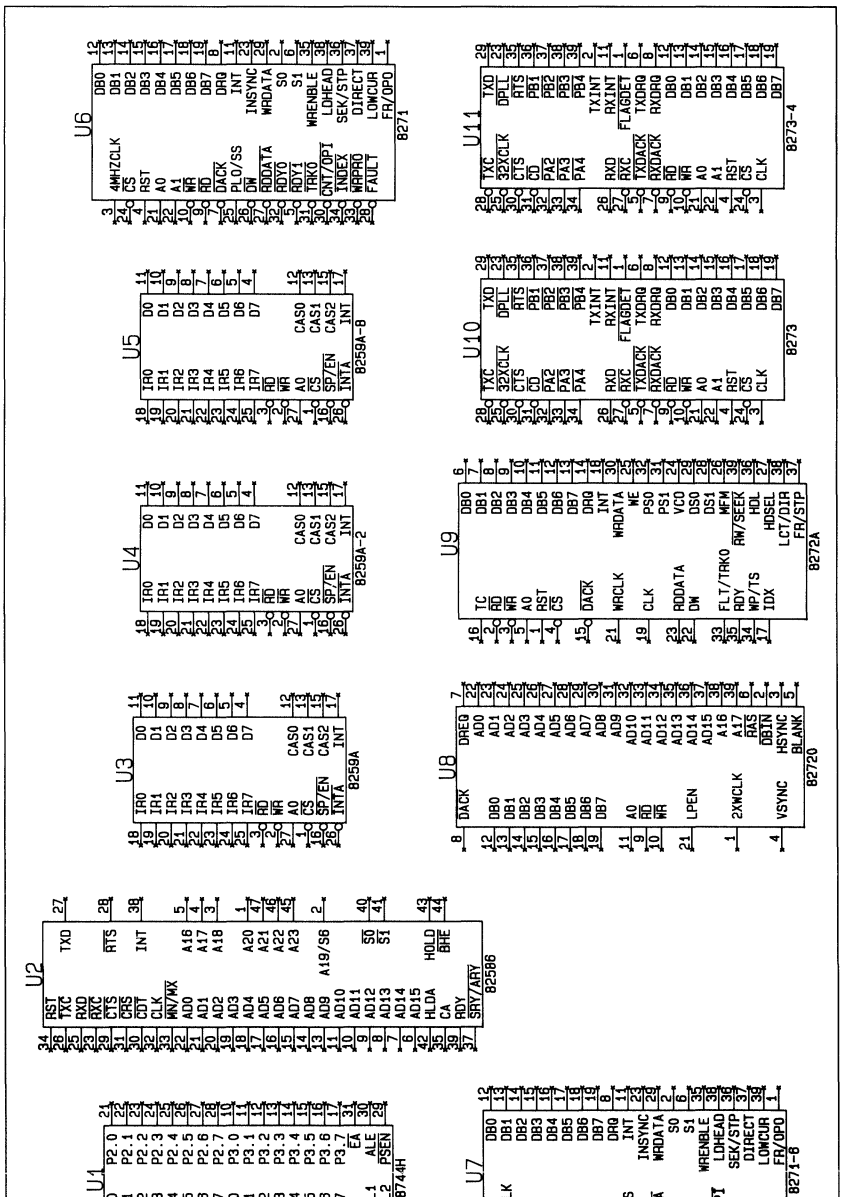
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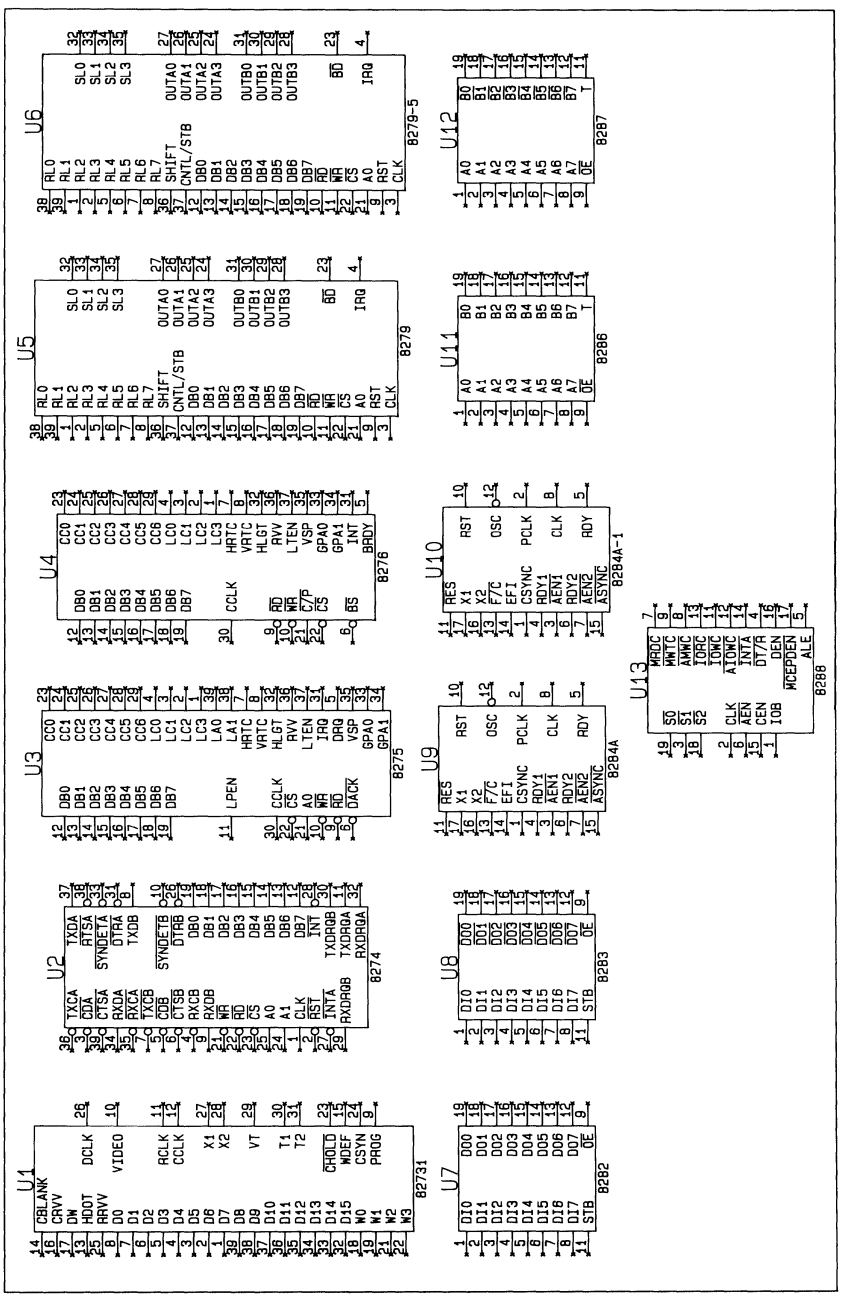
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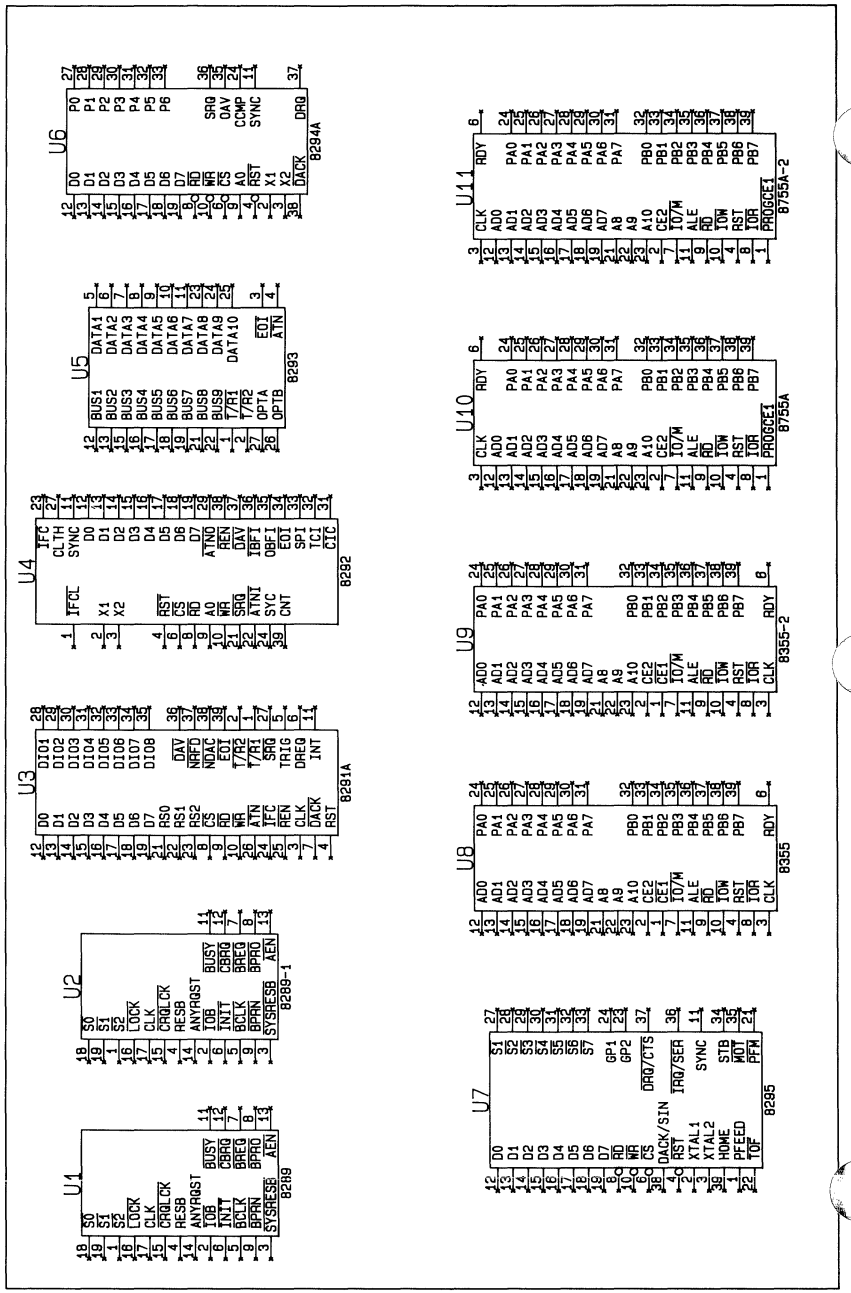
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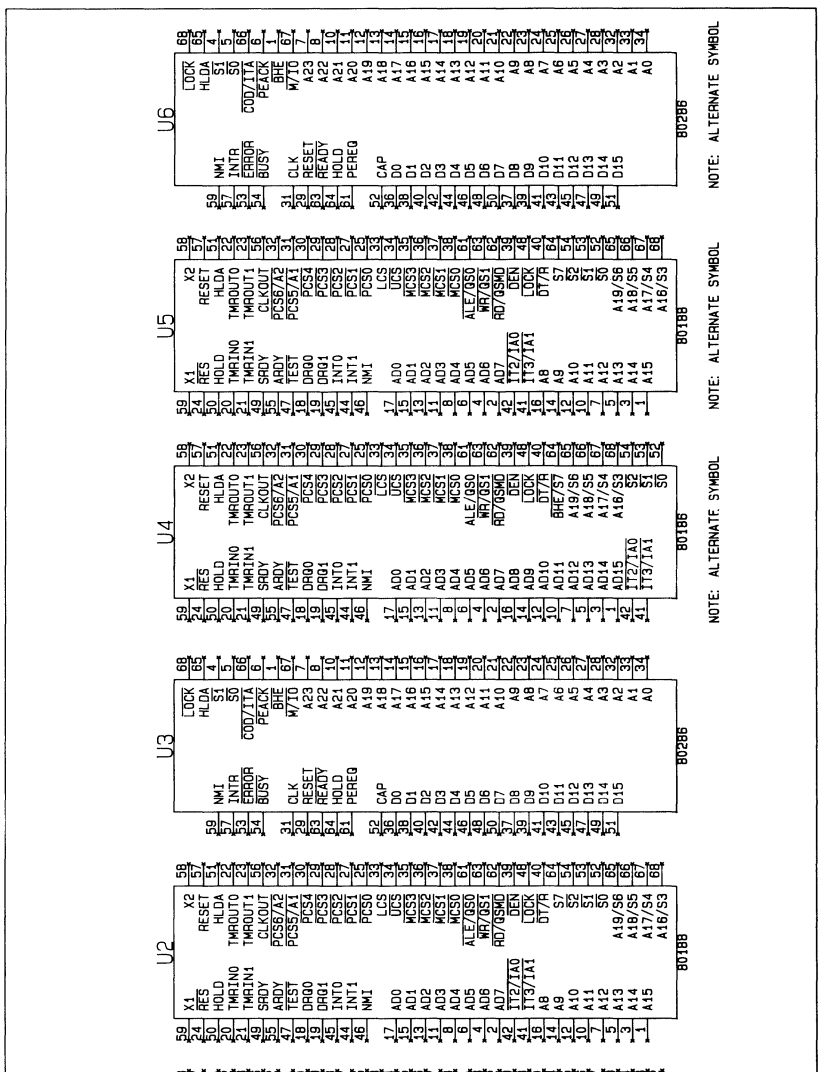
8289-1
U3
8291A
U4
8292
U5
8293
U6
8294A
U7
8295
U8
8355
U9
8355-2
U10
8755A
U11
8755A-2


U1
U2
U3
U4
U5
U6
B0186
B0188
B0286
B0288
NOTE: ALTERNATE SYMBOL
NOTE: ALTERNATE SYMBOL
NOTE: ALTERNATE SYMBOL

COMPONENT PIN SEQUENCES

2764:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	CE'	PGM'
	OE'	O7	O6
	O5	O4	O3
	O2	O1	O0
2764A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	CE'	PGM'
	OE'	O7	O6
	O5	O4	O3
	O2	O1	O0
27128:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	CE'	PGM'
	OE'	O7	O6
	O5	O4	O3
	O2	O1	O0
27128A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	CE'	PGM'
	OE'	O7	O6
	O5	O4	O3
	O2	O1	O0

2115A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	DOUT	WE'
	DIN	CS'	
2125A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	DOUT	WE'
	DIN	CS'	
2115H:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	DOUT	WE'
	DIN	CS'	
2125H:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	DOUT	WE'
	DIN	CS'	
2004:	A0	A1	A2
	A3	A4	A5
	A6	A7	CE'
	OE'	WE'	NE'
	I/O7	I/O6	I/O5
	I/O4	I/O3	I/O2
	I/O1	I/O0	A8

8203:	AL0	AL1	AL2
	AL3	AL4	AL5
	AL6	AH0	AH1
	AH2	AH3	AH4
	AH5	AH6	B0
	B1	PCS'	WR'
	RD'	REFRQ	16K/64K'
	X1	X0	SACK'
	XACK'	RAS3'	RAS2'
	RAS1'	RAS0'	CAS'
	WE'	OUT6'	OUT5'
	OUT4'	OUT3'	OUT2'
	OUT1'	OUT0'	
2164A:	A0	A1	A2
	A3	A4	A5
	A6	A7	WE'
	CAS'	RAS'	DOUT
	DIN		
51C64:	A0	A1	A2
	A3	A4	A5
	A6	A7	WE'
	CAS'	RAS'	DOUT
	DIN		
2187A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	WE'	OE'
	CE'	REFEN'	I/O7
	I/O6	I/O5	I/O4
	I/O3	I/O2	I/O1
	I/O0		

2817A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	I7/O7
	I6/O6	I5/O5	I4/O4
	I3/O3	I2/O2	I1/O1
	I0/O0	CE'	OE'
	WE'	RDYBUSY'	
51C65:	A0	A1	A2
	A3	A4	A5
	A6	A7	WE'
	CAS'	RAS'	DOUT
	DIN		
2816A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	CE'
	OE'	WE'	I7/O7
	I6/O6	I5/O5	I4/O4
	I3/O3	I2/O2	I1/O1
	I0/O0		
27256:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	A14
	CE'	OE'	O7
	O6	O5	O4
	O3	O2	O1
	O0		

2186A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	RDY	WE'
	OE'	CE'	I/O7
	I/O6	I/O5	I/O4
	I/O3	I/O2	I/O1
	I/O0		
2186:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	RDY	WE'
	OE'	CE'	I/O7
	I/O6	I/O5	I/O4
	I/O3	I/O2	I/O1
	I/O0		
2732A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	OE'	CE'	O7
	O6	O5	O4
	O3	O2	O1
	O0		
2114A:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	WE'	CS'
	I/O4	I/O3	I/O2
	I/O1		

2148H:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	WE'	CS'
	I/O4	I/O3	I/O2
	I/O1		
2149H:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	WE'	CS'
	I/O4	I/O3	I/O2
	I/O1		
7220:	PWRFAIL'	RST'	WAIT'
	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	A0	RD'	WR'
	DACK'	CS'	CLK
	BUSRD'	INT	DRQ
	DIO	SYNC'	SHFTCLK'
	C/D'	BTSWEN'	SWAPEN'
	BOOTEN'	RPEN'	TMB'
	TMA'	Y-'	Y+'
	X-'	X+'	DETON'
	RSTOUT'	ERRFLG'	

7220-1:	PWRFAIL'	RST'	WAIT'
	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	A0	RD'	WR'
	DACK'	CS'	CLK
	BUSRD'	INT	DRQ
	DIO	SYNC'	SHFTCLK'
	C/D'	BTSWEN'	SWAPEN'
	BOOTEN'	RPEN'	TMB'
	TMA'	Y-'	Y+'
	X-'	X+'	DETON'
	RSTOUT'	ERRFLG'	

7220-4:	PWRFAIL'	RST'	WAIT'
	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	A0	RD'	WR'
	DACK'	CS'	CLK
	BUSRD'	INT	DRQ
	DIO	SYNC'	SHFTCLK'
	C/D'	BTSWEN'	SWAPEN'
	BOOTEN'	RPEN'	TMB'
	TMA'	Y-'	Y+'
	X-'	X+'	DETON'
	RSTOUT'	ERRFLG'	

7220-5:	PWRFAIL'	RST'	WAIT'
	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	A0	RD'	WR'
	DACK'	CS'	CLK
	BUSRD'	INT	DRQ
	DIO	SYNC'	SHFTCLK'
	C/D'	BTSWEN'	SWAPEN'
	BOOTEN'	RPEN'	TMB'
	TMA'	Y-'	Y+'
	X-'	X+'	DETON'
	RSTOUT'	ERRFLG'	

7224:	PWRFAIL'	RST'	WAIT'
	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	A0	RD'	WR'
	DACK'	CS'	CLK
	BUSRD'	INT	DRQ
	DIO	SYNC'	SHFTCLK'
	C/D'	BTSWEN'	SWAPEN'
	BOOTEN'	RPEN'	TMB'
	TMA'	Y-'	Y+'
	X-'	X+'	DETON'
	RSTOUT'	ERRFLG'	

80130:	CLK	IR0	IR1
	IR2	IR3	IR4
	IR5	IR6	IR7
	MEMCS'	IOCS'	BAUD
	DELAY	SYSTICK	LIR'
	ACK'	INT	BHE/S7'
	AD15	AD14	AD13
	AD12	AD11	AD10
	AD9	AD8	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0	S2'	S1'
	S0'		

80150:	CLK	IR0	IR1
	IR2	IR3	IR4
	IR5	IR6	IR7
	MEMCS'	IOCS'	BAUD
	DELAY	SYSTICK	LIR'
	ACK'	INT	BHE/S7'
	AD15	AD14	AD13
	AD12	AD11	AD10
	AD9	AD8	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0	S2'	S1'
	S0'		

80130-2:	CLK	IR0	IR1
	IR2	IR3	IR4
	IR5	IR6	IR7
	MEMCS'	IOCS'	BAUD
	DELAY	SYSTICK	LIR'
	ACK'	INT	BHE/S7'
	AD15	AD14	AD13
	AD12	AD11	AD10
	AD9	AD8	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0	S2'	S1'
	S0'		

80150-2:	CLK	IR0	IR1
	IR2	IR3	IR4
	IR5	IR6	IR7
	MEMCS'	IOCS'	BAUD
	DELAY	SYSTICK	LIR'
	ACK'	INT	BHE/S7'
	AD15	AD14	AD13
	AD12	AD11	AD10
	AD9	AD8	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0	S2'	S1'
	S0'		

80287:	CLK	CKM	RST
	NPRD'	NPWR'	NPS1'
	NPS2	CMD1	CMD0
	CLK286	S1'	S0'
	CODINTA'	HLDA	RDY'
	PEACK'	ERROR'	BUSY'
	D15	D14	D13
	D12	D11	D10
	D9	D8	D7
	D6	D5	D4
	D3	D2	D1
	D0	PEREQ	

8031AH:

P0.0	P0.1	P0.2
P0.3	P0.4	P0.5
P0.6	P0.7	P1.0
P1.1	P1.2	P1.3
P1.4	P1.5	P1.6
P1.7	RST	XTAL1
XTAL2	PSEN'	ALE
EA'	P3.7	P3.6
P3.5	P3.4	P3.3
P3.2	P3.1	P3.0
P2.7	P2.6	P2.5
P2.4	P2.3	P2.2
P2.1	P2.0	

8051AH:

P0.0	P0.1	P0.2
P0.3	P0.4	P0.5
P0.6	P0.7	P1.0
P1.1	P1.2	P1.3
P1.4	P1.5	P1.6
P1.7	RST	XTAL1
XTAL2	PSEN'	ALE
EA'	P3.7	P3.6
P3.5	P3.4	P3.3
P3.2	P3.1	P3.0
P2.7	P2.6	P2.5
P2.4	P2.3	P2.2
P2.1	P2.0	

8032AH:	P0.0	P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	

8052AH:	P0.0	3P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	

8751H:	P0.0	P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	

8751H-11:	P0.0	P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	

8751H-10:	P0.0	P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	

8751H-8:	P0.0	P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	

8041A:	WR'	RD'	CS'
	A0	TEST0	TEST1
	XTAL1	XTAL2	EA
	PROG	RST'	SS'
	SYNC	P27	P26
	P25	P24	P23
	P22	P21	P20
	P17	P16	P15
	P14	P13	P12
	P11	P10	D7
	D6	D5	D4
	D3	D2	D1
	D0		

8641A:	WR'	RD'	CS'
	A0	TEST0	TEST1
	XTAL1	XTAL2	EA
	PROG	RST'	SS'
	SYNC	P27	P26
	P25	P24	P23
	P22	P21	P20
	P17	P16	P15
	P14	P13	P12
	P11	P10	D7
	D6	D5	D4
	D3	D2	D1
	D0		

8741A:	WR'	RD'	CS'
	A0	TEST0	TEST1
	XTAL1	XTAL2	EA
	PROG	RST'	SS'
	SYNC	P27	P26
	P25	P24	P23
	P22	P21	P20
	P17	P16	P15
	P14	P13	P12
	P11	P10	D7
	D6	D5	D4
	D3	D2	D1
	D0		

8042:	WR'	RD'	CS'
	A0	TEST0	TEST1
	XTAL1	XTAL2	EA
	PROG	RST'	SS'
	SYNC	P27	P26
	P25	P24	P23
	P22	P21	P20
	P17	P16	P15
	P14	P13	P12
	P11	P10	D7
	D6	D5	D4
	D3	D2	D1
	D0		

8742:	WR'	RD'	CS'
	A0	TEST0	TEST1
	XTAL1	XTAL2	EA
	PROG	RST'	SS'
	SYNC	P27	P26
	P25	P24	P23
	P22	P21	P20
	P17	P16	P15
	P14	P13	P12
	P11	P10	D7
	D6	D5	D4
	D3	D2	D1
	D0		
8048AH:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8748H:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8035AHL:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8049AH:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8749H:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8039AHL:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8050AH:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

8040AHL:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

80C49-7:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PS'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		

80C39-7:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	XTAL1
	XTAL2	RST'	SS'
	INT'	T0	T1
	EA	PROG	ALE
	PSEN'	WR'	RD'
	P27	P26	P25
	P24	P23	P22
	P21	P20	P17
	P16	P15	P14
	P13	P12	P11
	P10		
8080A:	D0	D1	D2
	D3	D4	D5
	D6	D7	RST
	RDY	HOLD	INT
	INTE	HLDA	WAIT
	SYNC	DBIN	WR'
	A15	A14	A13
	A12	A11	A10
	A9	A8	A7
	A6	A5	A4
	A3	A2	A1
	A0	PHSE1	PHSE2
8080A-1:	D0	D1	D2
	D3	D4	D5
	D6	D7	RST
	RDY	HOLD	INT
	INTE	HLDA	WAIT
	SYNC	DBIN	WR'
	A15	A14	A13
	A12	A11	A10
	A9	A8	A7
	A6	A5	A4
	A3	A2	A1
	A0	PHSE1	PHSE2

8080A-2:	D0	D1	D2
	D3	D4	D5
	D6	D7	RST
	RDY	HOLD	INT
	INTE	HLDA	WAIT
	SYNC	DBIN	WR'
	A15	A14	A13
	A12	A11	A10
	A9	A8	A7
	A6	A5	A4
	A3	A2	A1
	A0	PHSE1	PHSE2
80287-3:	CLK	CKM	RST
	NPRD'	NPWR'	NPS1'
	NPS2	CMD1	CMD0
	CLK286	S1'	S0'
	CODINTA'	HLDA	RDY'
	PEACK'	ERROR'	BUSY'
	D15	D14	D13
	D12	D11	D10
	D9	D8	D7
	D6	D5	D4
	D3	D2	D1
	D0	PEREQ	
8085AH:	X2	X1	TRAP
	RST7.5	RST6.5	RST5.5
	RDY	HOLD	SID
	INTR	INTA'	SOD
	RSTOUT	HLDA	CLK
	RD'	WR'	ALE
	S0	S1	IOM'
	A15	A14	A13
	A12	A11	A10
	A9	A8	AD0
	AD1	AD2	AD3
	AD4	AD5	AD6
	AD7	RSTIN'	

8085AH-2:	X2	X1	TRAP
	RST7.5	RST6.5	RST5.5
	RDY	HOLD	SID
	INTR	INTA'	SOD
	RSTOUT	HLDA	CLK
	RD'	WR'	ALE
	S0	S1	IOM'
	A15	A14	A13
	A12	A11	A10
	A9	A8	AD0
	AD1	AD2	AD3
	AD4	AD5	AD6
	AD7	RSTIN'	

8085AH-1:	X2	X1	TRAP
	RST7.5	RST6.5	RST5.5
	RDY	HOLD	SID
	INTR	INTA'	SOD
	RSTOUT	HLDA	CLK
	RD'	WR'	ALE
	S0	S1	IOM'
	A15	A14	A13
	A12	A11	A10
	A9	A8	AD0
	AD1	AD2	AD3
	AD4	AD5	AD6
	AD7	RSTIN'	

8085A:	X2	X1	TRAP
	RST7.5	RST6.5	RST5.5
	RDY	HOLD	SID
	INTR	INTA'	SOD
	RSTOUT	HLDA	CLK
	RD'	WR'	ALE
	S0	S1	IOM'
	A15	A14	A13
	A12	A11	A10
	A9	A8	AD0
	AD1	AD2	AD3
	AD4	AD5	AD6
	AD7	RSTIN'	

8085A-2:	X2	X1	TRAP
	RST7.5	RST6.5	RST5.5
	RDY	HOLD	SID
	INTR	INTA'	SOD
	RSTOUT	HLDA	CLK
	RD'	WR'	ALE
	S0	S1	IOM'
	A15	A14	A13
	A12	A11	A10
	A9	A8	AD0
	AD1	AD2	AD3
	AD4	AD5	AD6
	AD7	RSTIN'	

8086:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	AD8
	AD9	AD10	AD11
	AD12	AD13	AD14
	AD15	RDY	INTR
	TEST'	NMI	RST
	CLK	MN/MX'	RQ/GT1'
	LOCK'	QS1	QS0
	RD'	BHE/S7'	A16/S3
	A17/S4	A18/S5	A19/S6
	S2'	S1'	S0'
	RQ/GT0'		

8086-2:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	AD8
	AD9	AD10	AD11
	AD12	AD13	AD14
	AD15	RDY	INTR
	TEST'	NMI	RST
	CLK	MN/MX'	RQ/GT1'
	LOCK'	QS1	QS0
	RD'	BHE/S7'	A16/S3
	A17/S4	A18/S5	A19/S6
	S2'	S1'	S0'
	RQ/GT0'		

8086-1:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	AD8
	AD9	AD10	AD11
	AD12	AD13	AD14
	AD15	RDY	INTR
	TEST'	NMI	RST
	CLK	MN/MX'	RQ/GT1'
	LOCK'	QS1	QS0
	RD'	BHE/S7'	A16/S3
	A17/S4	A18/S5	A19/S6
	S2'	S1'	S0'
	RQ/GT0'		

8087:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	AD8
	AD9	AD10	AD11
	AD12	AD13	AD14
	AD15	QS1	QS0
	RDY	RST	CLK
	BUSY	INT	RQ/GT0'
	S0'	S1'	S2'
	BHE/S7'	A16/S3	A17/S4
	A18/S5	A19/S6	RQ/GT1'

8089:	A0/D0	A1/D1	A2/D2
	A3/D3	A4/D4	A5/D5
	A6/D6	A7/D7	A8/D8
	A9/D9	A10/D10	A11/D11
	A12/D12	A13/D13	A14/D14
	A15/D15	RDY	RST
	CLK	CA	SEL
	DRQ1	DRQ2	EXT1
	EXT2	RQ/GT'	SINTR1
	SINTR2	LOCK'	S2'
	S1'	S0'	BHE'
	A19/S6	A18/S5	A17/S4
	A16/S3		

8088:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	RDY
	INTR	TEST'	NMI
	RST	CLK	HOLD
	HLDA	SSO'	DEN'
	DT/R'	ALE	INTA'
	WR'	IO/M'	RD'
	A19/S6	A18/S5	A17/S4
	A16/S3	A15	A14
	A13	A12	A11
	A10	A9	A8
	MN/MX'		

8088-2:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	RDY
	INTR	TEST'	NMI
	RST	CLK	HOLD
	HLDA	SSO'	DEN'
	DT/R'	ALE	INTA'
	WR'	IO/M'	RD'
	A19/S6	A18/S5	A17/S4
	A16/S3	A15	A14
	A13	A12	A11
	A10	A9	A8
	MN/MX'		

8155H:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8156H:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8155H-2:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8156H-2:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8155:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8156:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8155-2:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8156-2:	ALE	RD'	WR'
	RST	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	TIMIN
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	TIMOUT'
	IO/M'	CE'	

8185:	CS	CE1	CE2
	RD	WR	ALE
	A8	A9	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0		

8185-2:	CS	CE1	CE2
	RD	WR	ALE
	A8	A9	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0		
8202A:	AH0	AH1	AH2
	AH3	AH4	AH5
	AH6	AL0	AL1
	AL2	AL3	AL4
	AL5	AL6	RD/S1'
	WR'	PCS'	REFRQALE
	OP2	CLK	B0
	B1/OP1	XACK'	SACK'
	WE'	CAS'	RAS3'
	RAS2'	RAS1'	RAS0'
	OUT6'	OUT5'	OUT4'
	OUT3'	OUT2'	OUT1'
	OUT0'		
82C03:	AL0	AL1	AL2
	AL3	AL4	AL5
	AL6	AH0	AH1
	AH2	AH3	AH4
	AH5	AH6	B0
	B1	PCS'	WR'
	RD'	REFRQ	16K/64K'
	X1	X0	SACK'
	XACK'	RAS3'	RAS2'
	RAS1'	RAS0'	CAS'
	WE'	OUT6'	OUT5'
	OUT4'	OUT3'	OUT2'
	OUT1'	OUT0'	

8208:	AL0	AL1	AL2
	AL3	AL4	AL5
	AL6	AL7	AL8
	BS	RST	PCTL
	PE'	WR'	RD'
	CLK	RFRQ	PDI
	AH0	AH1	AH2
	AH3	AH4	AH5
	AH6	AH7	AH8
	ACKXACK'	WE/PCLK	CAS1'
	CAS0'	RAS1'	RAS0'
	AO8	AO7	AO6
	AO5	AO4	AO3
	AO2	AO1	AO0
8218:	BCLK'	BPRN'	INIT'
	BCR1	RSTB'	OVRD
	XSTR	XCP'	IOWR'
	MWTR'	IORR'	MRDR'
	BCR2'	DLYADJ	ANYR
	XCY'	RDD	ADEN'
	IOWC'	IORC'	MWTC'
	MRDC'	BPRO'	BUSY'
	BREQ'		
82062:	RST'	A0	A1
	A2	RD'	WR'
	CS'	BRDY	WRCLK
	RDDATA	DRUN	RDCLK
	DRDY	WRFAULT	TRK000
	INDEX	SC	DIR
	STEP	WRGATE	RDGATE
	RWC	LATE'	EARLY'
	BCR'	BDRQ	BCS'
	INTRQ	DB7	DB6
	DB5	DB4	DB3
	DB2	DB1	DB0
	WRDATA		

8212:	DS1'	DS2	MD
	STB	DI1	DI2
	DI3	DI4	DI5
	DI6	DI7	DI8
	CLR'	DO8	DO7
	DO6	DO5	DO4
	DO3	DO2	DO1
	INT'		
8219:	BCLK'	BPRN'	INIT'
	BCR1	RSTB'	OVRD
	XSTR	XCP'	DLYADJ
	ANYR	XCY'	RDD
	ADEN'	IOWC'	IORC'
	MWTC'	MRDC'	BPRO'
	BUSY'	BREQ'	IO/M'
	WR'	RD'	ASRQ'
	BCR2		
8216:	DIEN'	CS'	DI0
	DI1	DI2	DI3
	DO3	DO2	DO1
	DO0	DB3	DB2
	DB1	DB0	
8205:	A0	A1	A2
	E1'	E2'	E3
	O7'	O6'	O5'
	O4'	O3'	O2'
	O1'	O0'	
8226:	DIEN'	CS'	DI0
	DI1	DI2	DI3
	DO3	DO2	DO1
	DO0	DB3	DB2
	DB1	DB0	

8224:	XTAL1	XTAL2	TANK
	SYNC	RESIN'	RDYIN
	RDY	RST	STSTB'
	OSC	PHSE2TTL	PHSE2
	PHSE1		
82284:	RES'	X1	X2
	EFI	F/C'	ARDYEN'
	ARDY'	SRDYEN'	SRDY'
	S1'	S0'	PCLK
	CLK	RST	RDY'
82284-6:	RES'	X1	X2
	EFI	F/C'	ARDYEN'
	ARDY'	SRDYEN'	SRDY'
	S1'	S0'	PCLK
	CLK	RST	RDY'
8228:	D0	D1	D2
	D3	D4	D5
	D6	D7	DBIN
	WR'	HLDA	INTA'
	I/OW'	I/OR'	MEMW'
	MEMR'	DB7	DB6
	DB5	DB4	DB3
	DB2	DB1	DB0
	STSTB'	BUSEN'	
8238:	D0	D1	D2
	D3	D4	D5
	D6	D7	DBIN
	WR'	HLDA	INTA'
	I/OW'	I/OR'	MEMW'
	MEMR'	DB7	DB6
	DB5	DB4	DB3
	DB2	DB1	DB0
	STSTB'	BUSEN'	

82288:	S0'	S1'	CLK
	CEN/AEN'	CENL	CMDLY
	RDY'	MB	MCE
	ALE	DEN	DT/R'
	MWTC'	MRDC'	IOWC'
	IORC'	INTA'	M/IO'
82288-6:	S0'	S1'	CLK
	CEN/AEN'	CENL	CMDLY
	RDY'	MB	MCE
	ALE	DEN	DT/R'
	MWTC'	MRDC'	IOWC'
	IORC'	INTA'	M/IO'
82285:	RES'	X1	X2
	EFI	F/C'	CSYNC
	PCLK/IN	ARDYEN'	ARDY'
	SRDYEN'	SRDY'	RDY
	RDYO	PCLK	CLK
	RST		
8231A:	CS'	RD'	WR'
	A0	RST	CLK
	EACK'	SVACK'	SVREQ
	END'	DB7	DB6
	DB5	DB4	DB3
	DB2	DB1	DB0
	RDY		

8237A:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	CLK
	RDY	CS'	RST
	HLDA	DREQ0	DREQ1
	DREQ2	DREQ3	DACK3
	DACK2	DACK1	DACK0
	HRQ	IOW'	IOR'
	MEMW'	MEMR'	ADSTB
	AEN	EOP'	A7
	A6	A5	A4
	A3	A2	A1
	A0		

8237A-4:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	CLK
	RDY	CS'	RST
	HLDA	DREQ0	DREQ1
	DREQ2	DREQ3	DACK3
	DACK2	DACK1	DACK0
	HRQ	IOW'	IOR'
	MEMW'	MEMR'	ADSTB
	AEN	EOP'	A7
	A6	A5	A4
	A3	A2	A1
	A0		

8237A-5:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	CLK
	RDY	CS'	RST
	HLDA	DREQ0	DREQ1
	DREQ2	DREQ3	DACK3
	DACK2	DACK1	DACK0
	HRQ	IOW'	IOR'
	MEMW'	MEMR'	ADSTB
	AEN	EOP'	A7
	A6	A5	A4
	A3	A2	A1
	A0		
8243:	CS'	PROG	P20
	P21	P22	P23
	P40	P41	P42
	P43	P73	P72
	P71	P70	P63
	P62	P61	P60
	P53	P52	P51
	P50		
82501:	CLSN	CLSN'	RCV
	RCV'	TXD	X1
	X2	C1	C2
	TRMT	TXC'	RXD
	RXC'	CRS'	TRMT'
	CDT'	TEN'	LB/WDTD'
8251A:	RST	CLK	C/D'
	RD'	WR'	CS'
	DSR'	CTS'	RXD
	RXC'	SYNDET	RXRDY
	TXE	TXRDY	TXD
	RTS'	DTR'	D7
	D6	D5	D4
	D3	D2	D1
	D0	TXC'	

82530:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	CLK
	INTA'	IEI	A/B'
	D/C'	CS'	WR'
	RD'	RXDA	RTXCA'
	TRXCA'	CTSA'	CDA'
	RXDB	RTXCB'	CTSB'
	CDB'	RTSB'	SYNCB'
	TRXCB'	TXDB	RTSA'
	SYNCA'	TXDA	DTRB'
	DTRA'	RDYB'	RDYA'
	IEO	INT'	

82530-6:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	CLK
	INTA'	IEI	A/B'
	D/C'	CS'	WR'
	RD'	RXDA	RTXCA'
	TRXCA'	CTSA'	CDA'
	RXDB	RTXCB'	CTSB'
	CDB'	RTSB'	SYNCB'
	TRXCB'	TXDB	RTSA'
	SYNCA'	TXDA	DTRB'
	DTRA'	RDYB'	RDYA'
	IEO	INT'	

8253:	RD'	WR'	A0
	A1	CS'	CLK0
	GATE0	CLK1	GATE1
	CLK2	GATE2	OUT2
	OUT1	OUT0	D7
	D6	D5	D4
	D3	D2	D1
	D0		

8253-5:	RD'	WR'	A0
	A1	CS'	CLK0
	GATE0	CLK1	GATE1
	CLK2	GATE2	OUT2
	OUT1	OUT0	D7
	D6	D5	D4
	D3	D2	D1
	D0		
8254:	RD'	WR'	A0
	A1	CS'	CLK0
	GATE0	CLK1	GATE1
	CLK2	GATE2	OUT2
	OUT1	OUT0	D7
	D6	D5	D4
	D3	D2	D1
	D0		
8255A:	D0	D1	D2
	D3	D4	D5
	D6	D7	RD'
	WR'	A1	A0
	RST	CS'	PC7
	PC6	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	

8255A-5:	D0	D1	D2
	D3	D4	D5
	D6	D7	RD'
	WR'	A1	A0
	RST	CS'	PC7
	PC6	PC5	PC4
	PC3	PC2	PC1
	PC0	PB7	PB6
	PB5	PB4	PB3
	PB2	PB1	PB0
	PA7	PA6	PA5
	PA4	PA3	PA2
	PA1	PA0	
8256AH:	AD0	AD1	AD2
	AD3	AD4	DB5
	DB6	DB7	ALE
	RD'	WR'	RST
	CS'	EXTINT	INTA'
	CLK	CTS'	RXD
	TXD	RXC'	TXC'
	INT	P27	HHP26
	P25	P24	P23
	P22	P21	P20
	P17	P16	P15
	P14	P13	P12
	P11	P10	

8257:	D0	D1	D2
	D3	D4	D5
	D6	D7	I/OR'
	I/OW'	CLK	RST
	CS'	RDY	DRQ0
	DRQ1	DRQ2	DRQ3
	HLDA	HRQ	DACK3'
	DACK2'	DACK1'	DACK0'
	MARK	TC	ADSTB
	AEN	MEMW'	MEMR'
	A7	A6	A5
	A4	A3	A2
	A1	A0	

8257-5:	D0	D1	D2
	D3	D4	D5
	D6	D7	I/OR'
	I/OW'	CLK	RST
	CS'	RDY	DRQ0
	DRQ1	DRQ2	DRQ3
	HLDA	HRQ	DACK3'
	DACK2'	DACK1'	DACK0'
	MARK	TC	ADSTB
	AEN	MEMW'	MEMR'
	A7	A6	A5
	A4	A3	A2
	A1	A0	

8044AH:

P0.0	P0.1	P0.2
P0.3	P0.4	P0.5
P0.6	P0.7	P1.0
P1.1	P1.2	P1.3
P1.4	P1.5	P1.6
P1.7	RST	XTAL1
XTAL2	PSEN'	ALE
EA'	P3.7	P3.6
P3.5	P3.4	P3.3
P3.2	P3.1	P3.0
P2.7	P2.6	P2.5
P2.4	P2.3	P2.2
P2.1	P2.0	

8344AH:

P0.0	P0.1	P0.2
P0.3	P0.4	P0.5
P0.6	P0.7	P1.0
P1.1	P1.2	P1.3
P1.4	P1.5	P1.6
P1.7	RST	XTAL1
XTAL2	PSEN'	ALE
EA'	P3.7	P3.6
P3.5	P3.4	P3.3
P3.2	P3.1	P3.0
P2.7	P2.6	P2.5
P2.4	P2.3	P2.2
P2.1	P2.0	

8744H:	P0.0	P0.1	P0.2
	P0.3	P0.4	P0.5
	P0.6	P0.7	P1.0
	P1.1	P1.2	P1.3
	P1.4	P1.5	P1.6
	P1.7	RST	XTAL1
	XTAL2	PSEN'	ALE
	EA'	P3.7	P3.6
	P3.5	P3.4	P3.3
	P3.2	P3.1	P3.0
	P2.7	P2.6	P2.5
	P2.4	P2.3	P2.2
	P2.1	P2.0	
82586:	RST	TXC'	RXD
	RXC'	CTS'	CRS'
	CDT'	CLK	MN/MX'
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	AD8
	AD9	AD10	AD11
	AD12	AD13	AD14
	AD15	HLDA	CA
	RDY	SRY/ARY'	BHE'
	HOLD	S1'	S0'
	A19/S6	A23	A22
	A21	A20	A18
	A17	A16	INT
	RTS'	TXD	
8259A:	IR0	IR1	IR2
	IR3	IR4	IR5
	IR6	IR7	RD'
	WR'	A0	SP/EN'
	INTA'	INT	CAS2
	CAS1	CAS0	D7
	D6	D5	D4
	D3	D2	D1
	D0	CS'	

8259A-2:	IR0	IR1	IR2
	IR3	IR4	IR5
	IR6	IR7	RD'
	WR'	A0	SP/EN'
	INTA'	INT	CAS2
	CAS1	CAS0	D7
	D6	D5	D4
	D3	D2	D1
	D0	CS'	

8259A-8:	IR0	IR1	IR2
	IR3	IR4	IR5
	IR6	IR7	RD'
	WR'	A0	SP/EN'
	INTA'	INT	CAS2
	CAS1	CAS0	D7
	D6	D5	D4
	D3	D2	D1
	D0	CS'	

8271:	4MHZCLK	CS'	RST
	A0	A1	WR'
	RD'	PLO/SS	RDDATA'
	RDY0'	RDY1'	TRK0'
	CNT/OPI'	INDEX'	FAULT'
	LOWCUR	DIRECT	SEK/STP
	LDHEAD	WRENBLE	WRDATA
	INSYNC	INT	DRQ
	DB7	DB6	DB5
	DB4	DB3	DB2
	DB1	DB0	DACK'
	DW'	S1	S0
	FR/OPO	WRPRO'	

8271-6:	4MHZCLK	CS'	RST
	A0	A1	WR'
	RD'	PLO/SS	RDDATA'
	RDY0'	RDY1'	TRK0'
	CNT/OPI'	INDEX'	FAULT'
	LOWCUR	DIRECT	SEK/STP
	LDHEAD	WRENBLE	WRDATA
	INSYNC	INT	DRQ
	DB7	DB6	DB5
	DB4	DB3	DB2
	DB1	DB0	DACK'
	DW'	S1	S0
	FR/OPO	WRPRO'	
82720:	DACK'	DB0	DB1
	DB2	DB3	DB4
	DB5	DB6	DB7
	A0	RD'	WR'
	LPEN	2XWCLK	VSYNC
	BLANK	HSYNC	DBIN'
	RAS'	A17	A16
	AD15	AD14	AD13
	AD12	AD11	AD10
	AD9	AD8	AD7
	AD6	AD5	AD4
	AD3	AD2	AD1
	AD0	DREQ	

8272A:	TC	RD'	WR'
	A0	RST	DACK'
	WRCLK	CLK	RDDATA
	DW	RDY	WP/TS
	IDX	FLT/TRK0	FR/STP
	LCT/DIR	HDSEL	HDL
	RW/SEEK'	MFM	DS1
	DS0	VCO	PS1
	PS0	WE	WRDATA
	INT	DRQ	DB7
	DB6	DB5	DB4
	DB3	DB2	DB1
	DB0	CS'	

8273:	TXC'	32XCLK'	CTS'
	CD'	RXD	RXC'
	TXDACK'	RXDACK'	RD'
	WR'	A0	A1
	RST	CS'	CLK
	DB7	DB6	DB5
	DB4	DB3	DB2
	DB1	DB0	RXDRQ
	TXDRQ	FLAGDET'	RXINT
	TXINT	RTS'	DPLL'
	TXD	PA2'	PA3'
	PA4'	PB4'	PB3'
	PB2'	PB1'	

8273-4:	TXC'	32XCLK'	CTS'
	CD'	RXD	RXC'
	TXDACK'	RXDACK'	RD'
	WR'	A0	A1
	RST	CS'	CLK
	DB7	DB6	DB5
	DB4	DB3	DB2
	DB1	DB0	RXDRQ
	TXDRQ	FLAGDET'	RXINT
	TXINT	RTS'	DPLL'
	TXD	PA2'	PA3'
	PA4'	PB4'	PB3'
	PB2'	PB1'	
82731:	CBLANK	CRVV	DW
	HDOT	RRVV	D0
	D1	D2	D3
	D4	D5	D6
	D7	D8	D9
	D10	D11	D12
	D13	D14	D15
	W0	W1	W2
	W3	PROG	CSYN
	WDEF	CHOLD'	T2
	T1	VT	X2
	X1	CCLK	RCLK
	VIDEO	DCLK	

8274:	TXCA	CDA'	RXDA
	RXCA'	TXCB'	CDB'
	CTSB'	RXCB	RXDB
	WR'	RD'	CS'
	A0	A1	CLK
	RST'	INTA'	RXDRQB
	TXDRQA	TXDRQB	INT'
	DB7	DB6	DB5
	DB4	DB3	DB2
	DB1	DB0	TXDB
	DTRA'	SYNDETA'	SYNDETB'
	RTSA'	TXDA	DTRB'
	CTSA'	RXDRQA	

8275:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	LPEN
	CCLK	CS'	A0
	WR'	RD'	DACK'
	GPA1	GPA0	VSP
	DRQ	IRQ	LTEN
	RVV	HLGT	VRTC
	HRTC	LA1	LA0
	LC3	LC2	LC1
	LC0	CC6	CC5
	CC4	CC3	CC2
	CC1	CC0	

8276:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	CCLK
	RD'	WR'	C/P'
	CS'	BS'	BRDY
	INT	GPA1	GPA0
	VSP	LTEN	RVV
	HLGT	VRTC	HRTC
	LC3	LC2	LC1
	LC0	CC6	CC5
	CC4	CC3	CC2
	CC1	CC0	

8279:	RL0	RL1	RL2
	RL3	RL4	RL5
	RL6	RL7	SHIFT
	CNTL/STB	DB0	DB1
	DB2	DB3	DB4
	DB5	DB6	DB7
	RD'	WR'	CS'
	A0	RST	CLK
	IRQ	BD'	OUTB3
	OUTB2	OUTB1	OUTB0
	OUTA3	OUTA2	OUTA1
	OUTA0	SL3	SL2
	SL1	SL0	

8279-5:	RL0	RL1	RL2
	RL3	RL4	RL5
	RL6	RL7	SHIFT
	CNTL/STB	DB0	DB1
	DB2	DB3	DB4
	DB5	DB6	DB7
	RD'	WR'	CS'
	A0	RST	CLK
	IRQ	BD'	OUTB3
	OUTB2	OUTB1	OUTB0
	OUTA3	OUTA2	OUTA1
	OUTA0	SL3	SL2
	SL1	SL0	

8282:	DI0	DI1	DI2
	DI3	DI4	DI5
	DI6	DI7	STB
	OE'	DO7	DO6
	DO5	DO4	DO3
	DO2	DO1	DO0

8283:	DI0	DI1	DI2
	DI3	DI4	DI5
	DI6	DI7	STB
	OE'	DO7'	DO6'
	DO5'	DO4'	DO3'
	DO2'	DO1'	DO0'
8284A:	RES'	X1	X2
	F/C'	EFI	CSYNC
	RDY1	AEN1'	RDY2
	AEN2'	ASYNC'	RDY
	CLK	PCLK	RST
	OSC		
8284A-1:	RES'	X1	X2
	F/C'	EFI	CSYNC
	RDY1	AEN1'	RDY2
	AEN2'	ASYNC'	RDY
	CLK	PCLK	RST
	OSC		
8286:	A0	A1	A2
	A3	A4	A5
	A6	A7	OE'
	T	B7	B6
	B5	B4	B3
	B2	B1	B0
8287:	A0	A1	A2
	A3	A4	A5
	A6	A7	OE'
	T	B7'	B6'
	B5'	B4'	B3'
	B2'	B1'	B0'

8288:	S0'	S1'	S2'
	CLK	AEN'	CEN
	IOB	ALE	MCEPDEN'
	DEN	DT/R'	INTA'
	AIOWC'	IOWC'	IORC'
	AMWC'	MWTC'	MRDC'
8289:	S0'	S1'	S2'
	LOCK'	CLK	CRQLCK'
	RESB	ANYRQST	IOB'
	INIT'	BCLK'	BPRN'
	SYSRESB'	AEN'	BPRO'
	BREQ'	BUSY'	CBRQ'
8289-1:	S0'	S1'	S2'
	LOCK'	CLK	CRQLCK'
	RESB	ANYRQST	IOB'
	INIT'	BCLK'	BPRN'
	SYSRESB'	AEN'	BPRO'
	BREQ'	BUSY'	CBRQ'
8291A:	D0	D1	D2
	D3	D4	D5
	D6	D7	RS0
	RS1	RS2	CS'
	RD'	WR'	ATN'
	IFC'	REN'	CLK
	DACK'	RST	INT
	DREQ	TRIG	SRQ'
	T/R1'	EOI'	NDAC'
	NRFD'	DAV'	DIO8
	DIO7	DIO6	DIO5
	DIO4	DIO3	DIO2
	DIO1	T/R2'	

8292:	IFCL'	X1	X2
	RST'	CS'	RD'
	A0	WR'	SRQ'
	ATNI'	SYC	CNT
	CIC'	TCI	SPI
	OBFI	IBFI'	DAV'
	REN'	ATNO'	D7
	D6	D5	D4
	D3	D2	D1
	D0	SYNC	CLTH
	IFC'	EOI'	
8293:	BUS1	BUS2	BUS3
	BUS4	BUS5	BUS6
	BUS7	BUS8	BUS9
	T/R1'	T/R2'	OPTA
	OPTB	ATN'	EOI'
	DATA10	DATA9	DATA8
	DATA7	DATA6	DATA5
	DATA4	DATA3	DATA2
	DATA1		
8294A:	D0	D1	D2
	D3	D4	D5
	D6	D7	RD'
	WR'	CS'	A0
	RST'	X1	X2
	DACK'	DRQ	SYNC
	CCMP	OAV	SRQ
	P6	P5	P4
	P3	P2	P1
	P0		

8295:	D0	D1	D2
	D3	D4	D5
	D6	D7	RD'
	WR'	CS'	DACK/SIN
	RST'	XTAL1	XTAL2
	HOME	PFEED	TOF'
	PFM'	MOT'	STB
	SYNC	IRQ/SER'	DRQ/CTS'
	GP2	GP1	S7'
	S6'	S5'	S4'
	S3'	S2'	S1'
8355:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	A8
	A9	A10	CE2
	CE1'	IO/M'	ALE
	RD'	IOW'	RST
	IOR'	CLK	RDY
	PB7	PB6	PB5
	PB4	PB3	PB2
	PB1	PB0	PA7
	PA6	PA5	PA4
	PA3	PA2	PA1
	PA0		
8355-2:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	A8
	A9	A10	CE2
	CE1'	IO/M'	ALE
	RD'	IOW'	RST
	IOR'	CLK	RDY
	PB7	PB6	PB5
	PB4	PB3	PB2
	PB1	PB0	PA7
	PA6	PA5	PA4
	PA3	PA2	PA1
	PA0		

8755A:	CLK	AD0	AD1
	AD2	AD3	AD4
	AD5	AD6	AD7
	A8	A9	A10
	CE2	ALE	RD'
	IOW'	RST	IOR'
	PB7	PB6	PB5
	PB4	PB3	PB2
	PB1	PB0	PA7
	PA6	PA5	PA4
	PA3	PA2	PA1
	PA0	RDY	IO/M'
	PROGCE1'		

8755A-2:	CLK	AD0	AD1
	AD2	AD3	AD4
	AD5	AD6	AD7
	A8	A9	A10
	CE2	ALE	RD'
	IOW'	RST	IOR'
	PB7	PB6	PB5
	PB4	PB3	PB2
	PB1	PB0	PA7
	PA6	PA5	PA4
	PA3	PA2	PA1
	PA0	RDY	IO/M'
	PROGCE1'		

80186:

X1	HOLD	TMRIN0
TMRIN1	SRDY	ARDY
TEST'	DRQ0	DRQ1
INT0	INT1	NMI
AD0	AD1	AD2
AD3	AD4	AD5
AD6	AD7	AD8
AD9	AD10	AD11
AD12	AD13	AD14
AD15	IT2/IA0'	IT3/IA1'
S0'	S1'	S2'
A16/S3	A17/S4	A18/S5
A19/S6	BHE/S7'	DT/R'
LOCK'	DEN'	RD/QSMD'
WR/QS1'	ALE/QS0	MCS0'
MCS1'	MCS2'	MCS3'
UCS'	LCS'	PCS0'
PCS1'	PCS2'	PCS3'
PCS4'	PCS5/A1'	PCS6/A2'
CLKOUT	TMROUT1	TMROUT0
HLDA	RESET	X2
RES'		

80188:

X1	RES'	HOLD
TMRIN0	TMRIN1	SRDY
ARDY	TEST'	DRQ0
DRQ1	INT0	INT1
NMI	AD0	AD1
AD2	AD3	AD4
AD5	AD6	AD7
IT2/IA0'	IT3/IA1'	A8
A9	A10	A11
A12	A13	A14
A15	A16/S3	A17/S4
A18/S5	A19/S6	S0'
S1'	S2'	S7
DT/R'	LOCK'	DEN'
RD/QSMD'	WR/QS1'	ALE/QS0'
MCS0'	MCS1'	MCS2'
MCS3'	UCS'	LCS
PCS0'	PCS1'	PCS2'
PCS3'	PCS4'	PCS5/A1'
PCS6/A2'	CLKOUT	TMROUT1
TMROUT0	HLDA	RESET
X2		

80286:

NMI	INTR	ERROR'
BUSY'	CLK	RESET
HOLD	PEREQ	CAP
D0	D1	D2
D3	D4	D5
D6	D7	D8
D9	D10	D11
D12	D13	D14
D15	A0	A1
A2	A3	A4
A5	A6	A7
A8	A9	A10
A11	A12	A13
A14	A15	A16
A17	A18	A19
A20	A21	A22
A23	M/IO'	BHE'
PEACK'	COD/ITA'	S0'
S1'	HLDA	LOCK'
READY'		

80186T:

X1	HOLD	TMRIN0
TMRIN1	SRDY	ARDY
TEST'	DRQ0	DRQ1
INT0	INT1	NMI
AD0	AD1	AD2
AD3	AD4	AD5
AD6	AD7	AD8
AD9	AD10	AD11
AD12	AD13	AD14
AD15	IT2/IA0'	IT3/IA1'
S0'	S1'	S2'
A16/S3	A17/S4	A18/S5
A19/S6	BHE/S7'	DT/R'
LOCK'	DEN'	RD/QSMD'
WR/QS1'	ALE/QS0	MCS0'
MCS1'	MCS2'	MCS3'
UCS'	LCS'	PCS0'
PCS1'	PCS2'	PCS3'
PCS4'	PCS5/A1'	PCS6/A2'
CLKOUT	TMROUT1	TMROUT0
HLDA	RESET	X2
RES'		

80188T:

X1	RES'	HOLD
TMRIN0	TMRIN1	SRDY
ARDY	TEST'	DRQ0
DRQ1	INT0	INT1
NMI	AD0	AD1
AD2	AD3	AD4
AD5	AD6	AD7
IT2/IA0'	IT3/IA1'	A8
A9	A10	A11
A12	A13	A14
A15	A16/S3	A17/S4
A18/S5	A19/S6	S0'
S1'	S2'	S7
DT/R'	LOCK'	DEN'
RD/QSMD'	WR/QS1'	ALE/QS0'
MCS0'	MCS1'	MCS2'
MCS3'	UCS'	LCS
PCS0'	PCS1'	PCS2'
PCS3'	PCS4'	PCS5/A1'
PCS6/A2'	CLKOUT	TMROUT1
TMROUT0	HLDA	RESET
X2		

80286T:

NMI	INTR	ERROR'
BUSY'	CLK	RESET
HOLD	PEREQ	CAP
D0	D1	D2
D3	D4	D5
D6	D7	D8
D9	D10	D11
D12	D13	D14
D15	A0	A1
A2	A3	A4
A5	A6	A7
A8	A9	A10
A11	A12	A13
A14	A15	A16
A17	A18	A19
A20	A21	A22
A23	M/IO'	BHE'
PEACK'	COD/ITA'	S0'
S1'	HLDA	LOCK'
READY'		