

# P800

## CHARACTERISTICS

Microprocessor	Intel 80386
Clock	25 MHz
Architecture	MICROCHANNEL
Memory	The system board supports 16 MB installed in 4 banks: <ul style="list-style-type: none"> <li>- 2 banks of 4 MB on system board</li> <li>- 2 banks of 4 MB on expansion board <b>MEM 26-804</b></li> <li>- 2 banks of 4 MB on Proprietary memory <b>MEM 26-806</b></li> </ul> Modules that can be installed in memory banks are SIMM 1 MB x 9 <b>EXM 26-805</b> <b>MEM 26-806</b> is a Proprietary memory expansion module of 4 MB expandable to 8 MB with SIMM module kit <b>EXM 26-805</b>
Memory access	80 ns
Coprocessor	1) Intel 80387 2) Weitek 3167
Floppy Disk	1.2 MB 5.25" Panasonic JU 475-3 1.2 MB 5.25" Toshiba ND 08 DE 1.44 MB 3.5" Panasonic J-257 1.44 MB 3.5" Sony MP-F17 1.44 MB Mitsubishi MF355C
Hard Disk	150 MB Micropolis 1654-7 150 MB NEC D5655 300 MB Micropolis 1558
Streaming Tape	80 MB IRVIN 285
AT Expansion slots	8 Present 7 Available
Video adapter	Integrated on System Board - Super VGA 82C451
Floppy Disk controller	Integrated on System Board Floppy Disk controller: WD 57C65
Hard Disk controller	1) GO788 WD1007V - MC1 ESDI interface 2) GO525 ESDI interface 3) GO564 ESDI interface
Cache Controller	82385
Cache size	64 KB
Mouse	PS/2- and AT-compatible GRD 25-025
Keyboard	101/102-key ANK26-101 ANK26-102.

### SYSTEM BOARD

BA826

### BIOS

Last level:  
Rev. 1.07

### POWER SUPPLY

PS30B 220V Lev. 08 MI  
PS30B 110V Lev. 06 MIPS30/B1 220V  
Lev. 01 MIPS30/B1 110V  
Lev. 01 MIS.P.S.  
PS30C 220V Lev. 02 MIS.P.S.  
PS30C 110V Lev. 02 MI

### CONSOLE

IF 632  
Level: 02 MI

### HARD DISK CONTROLLER

GO788 ESDI  
Lev.: 01GO525 ESDI  
Lev.: 01 MIGO564 ESDI  
Lev.: NASC

**SYSTEM BOARD**

	LEVEL	D.R.S. CODE	ROM BIOS	NOTES
<b>BA826</b>	Lev. Nasc.	412636 L	ROM L PBZ4 - U118 ROM H PBZ5 - U119 Rev. 1.02	See the following table.
	Lev. 01 MI		ROM L PBZW ROM H PBZX Rev. 1.03	RETROFITTING
	Lev. 03 MI Lev. 0.2 does not exist		ROM L PPU8 ROM H PPU9 Rev. 1.05	<ul style="list-style-type: none"> <li>- Insertion of a <b>PAL GL1G Rev. 2</b> Pos. U129</li> <li>- Replacement of the PAL PLDM rev.1 with a <b>PAL GL1H Rev. 2</b>. Pos. U65</li> <li>- Replacement of the PAL PLDJ rev. 3 with a <b>PAL GL1J Rev. 4</b>. Pos. U159</li> </ul>
	Lev. 04 MI		ROM L PPJ0 ROM H PPJ1 Rev. 1.06	Cutting and trimming to solve the system crash problem after a manual reset
	Lev. 05 MI		Rev. 1.07	Solves the BIOS problems of the W.D. board
	Lev. 06 MI		Rev. 1.07	The RESET4 circuit has been modified to solve the system crash problems after a manual reset
	Lev. 07			A 70 ns PAL has been mounted at U129 to solve the problems concerning DOS 5.0 and WIN 3.1. Applied at field level only.

INTEGRATED CONTROLLERS	INTEGRATED CONTROLLERS
<b>82385</b> <b>82C206</b>  <b>8042</b> <b>82C451</b> <b>16C552</b> <b>WD57C65</b> <b>CMOS RAM</b> <b>82C226</b>  <b>82C231 MCA controller</b>	<b>82C322 Memory Controller</b> Supports 256 KB - 1M DRAM Shadow RAM Supports up to 16 MB Programming of wait states <b>82C325 Data Buffer Controller</b> Bus Conversion and Bus Swapping function Generation and checking of parity errors in DRAM Contains POS register in MCA architecture <b>82C223 DMA Controller</b> Performs DMA operations 8 independent DMA channels Extended mode operations 16 MB memory addressing capacity DMA serial operations Supplies virtual DMA on channels 0 and 4

**BOARDS**

FUNCTION	DESCRIPTION	D.R.S. CODE	CHARACTERISTICS
CPU system board	BA826	412636 L	4 MB of memory
Console interface board	IF632	412637 M	
Memory board	ME937	412936 H	4 MB of on-board memory
Memory board	ME938	612102 W	4 MB of on-board memory
Power supply 220 V		412638 W	
Power supply 110 V		412639 X	
Hard disk controller	GO525	412814 F	ESDI controller
Hard disk controller	GO564	-	ESDI controller
Hard disk controller	GO788	412450 N	ESDI controller

**USER DISKETTE**

LEVEL	COMPATIBILITY
1.00 update 1	From BIOS 1.03
1.00 update 2	From BIOS 1.03 - Solves the faults of previous version
1.01 update 2	From BIOS 1.03 - Solves the Tecmar memory expansion board installation problems

**CONSOLE**

	LEVEL	D.R.S. CODE	ROM BIOS	COMPATIBILITY
IF632	Lev. Nasc.	412637 M	CSQ7 - U4 Rev: 1.3	Compatible with BIOS Rel. 1.03
	Lev. 01 MI			Cutting and trimming taken in and inversion of the signals on connector J2. This version is not compatible with the earlier version.
	Lev. 02 MI		CSQ6 Rev: 1.5	Solves the error message problems of the SPS.  Introduction of the label "Bar Code Traceability". This change does not modify the console level.

**HARD DISK CONTROLLER**

	LEVEL	D.R.S. CODE	ROM BIOS	COMPATIBILITY
GO788	Lev. Nasc.	412637 M	–	Compatible with BIOS 1.02
	Lev. 01		Rel. 7.11-05	Solves: - Crashes under OS/2 ver. 1.10 with 2 units installed. - Incorrect management or access to the alternative tracks
GO525	Lev. Nasc.	412814 F	Rel. 7.11-02	
GO564	Lev. Nasc.	–	–	Replaces GO525

**INSTALLABLE HARD DISKS AND BUS ARBITRATION LEVELS**

TYPE	CAPACITY	MODEL	CYL	T	LZ.	INT	ARBITRATION LEVEL
25	135 MB	Micropolis 1654-7	820	8	822	ESDI	3
24	135 MB	NEC D5655	1021	10	1023	ESDI	3
31	300 MB	Micropolis 1558	814	15	1	ESDI	3
	300 MB	CDC 94186-386				ESDI	3
	80 MB	CDC 94126-106				ESDI	3

Where: CYL: No. of disk cylinders

INT: Interface

LZ: Head parking cylinder number

T: No. of disk heads

WPC: Precompensation cylinder number

**PS30B POWER SUPPLY UNIT**

POWER SUPPLY	LEVEL	NOTES
PS30B 220/110 V	Lev. Nasc.	Solves power up criticality problems Modifications to structure, no change in functions Modification made in order to acquire larger margins on MOS voltage. Solves: - Power up random failure problems - + 12 V auxiliary voltage out of specs problems - + 5 V auxiliary diode breakage
PS30B 220/110 V	Lev. 01 MI	
PS30B 220/110 V	Lev. 02 MI	
PS30B 220/110 V	Lev. 03 MI	
PS30B 220/110 V	Lev. 04 MI	
PS30B 220/110 V	Lev. 05 MI	
PS30B 220V only	Lev. 06 MI	
PS30B 220V only	Lev. 07 MI	
PS30B 220V	Lev. 08 MI	Changes due to telediagnosis (cable through)
PS30B 110V	Lev. 06 MI	Changes due to telediagnosis (cable through)
PS30/B1	Lev. Nasc.	New power supply unit to conform with Northern Countries safety rules (see CP486)
	Lev.: 0.1 MI	Changes due to PEM

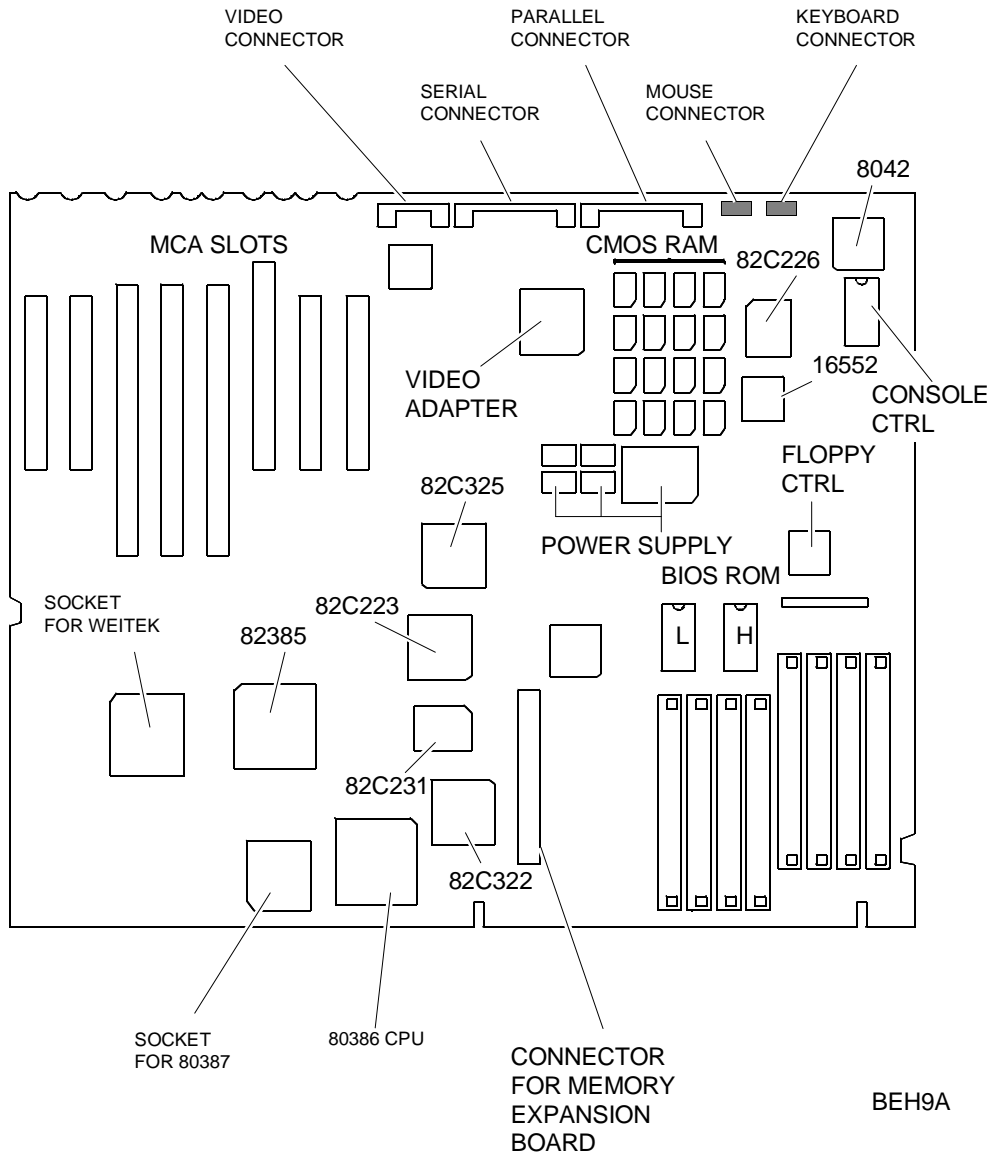
**PS30C S.P.S.**

LEVEL	NOTES
Lev. Nasc. Lev. 01 MI Lev. 02 MI	Solves the output voltage problem that, in previous level, was at tolerance limit.

**COMPATIBILITY NOTES**

BOARD OR HW/SW DEVICE	DESCRIPTION
Console Firmware 1.5	Solves problems of error messages displayed on the console when the SPS is installed
ROM BIOS 1.03	Solves: <ul style="list-style-type: none"> <li>- Diagnostic problems</li> <li>- Messages on screen</li> </ul>
ROM BIOS 1.05	Solves: <ul style="list-style-type: none"> <li>- Disables all memory banks (except for bank 0) when one is found faulty.</li> <li>- Error signalled during the "Parallel Port Test" when an Olivetti parallel printer is connected.</li> <li>- Control of hard disk controller ID during initialization</li> </ul>
BIOS GO525	Solves: <ul style="list-style-type: none"> <li>- System crashes when working in OS/2 ver 1.1 with 2 units installed.</li> <li>- Incorrect management of access to the alternative tracks</li> </ul>
LOW LEVEL FORMAT diskette ver. 1.20	Solves the problem of version 1.10 in which it was not possible to format the entire hard disk if a power failure occurred during formatting.
Hard disk NEC D5655	Incompatibility between hard disk controller GO788 and hard disk NEC D5655 in cases where the hard disk mounts a G8ATE circuit board. There are no problems where the hard disk has a G8ATA board.
Insertion and replacement of PAL's and cutting and trimming made. Lev. 03 System Board	Solve random system crashes during execution of the self-test or during use of the FLIGHT SIMULATOR program.
Level 0.1 of power supply PS30/B1	Change due to PEM introduction on CP486 that uses the same power supply unit
82C451 C&T component Video Controller	Step "C" of this component can be installed on Personal Computer P800. This replacement is to be made in case of failure and is not implemented at the factory by Olivetti.

### SYSTEM BOARD COMPONENTS, JUMPERS



**SOFTWARE COMPATIBILITY**

<b>OPERATING SYSTEMS</b>	<b>NOTES</b>
IBM DISK Operating System, Ver. 4.01  IBM Operating System/2, Ver. 1.10 IBM Operating System/2 Extended Edition, Ver. 1.1 and Ver. 1.10 Olivetti's Microsoft OS/2, Ver. 1.10	During installation on hard disk, a formatted DSDD disk is required.

**HARDWARE COMPATIBILITY**

<b>MODEMS</b>	<b>I/O INTERFACE PRODUCTS</b>
Hayes Smartmodem 1200P Hayes Smartmodem 2400P IBM PS/2 300/1200 Internal Modem/A (6450349)	FUTURE DOMAIN HOST ADAPTER (MCS-350) IBM PS/2 Dual Async Adapter/A (6450347)
<b>EXPANSION MEMORIES</b>	<b>MOUSE</b>
IBM PS/2 80386 2-6 MB Exp. Memory Option IBM PS/2 80386 2-8 MB Exp. Memory Option Olivetti Memory Expansion board MEM 26-503 Profit System Elite 16/2	IBM PS/2 Mouse (6450350) Microsoft Serial Mouse MSC PC Mouse PS/2 Olivetti New Advanced Mouse (GRD 25-025)
<b>DISPLAY UNITS</b>	<b>NETWORKS &amp; LAN PRODUCTS</b>
IBM PS/2 Monochrome Display 8503 IBM PS/2 Color Display 8512 IBM PS/2 Color Display 8513 IBM PS/2 Color Display 8514	IBM PC Network IBM PC Network (Baseband Adapter) IBM Token Ring Network Novell Advanced network Ver.2.12 3COM Network (Ethernet) 10NET Network
<b>GRAPHICS PRODUCTS</b>	<b>OTHER PRODUCTS</b>
IBM PS/2 Display Adapter 8514/A MATROX PG2 - 1281 HI-RES Graphics Controller	SOFTWARE SECURITY Parallel Port Block

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**SYSTEM MEMORY MAP**

<b>ADDRESS</b>	<b>SIZE</b>	<b>FUNCTION</b>	<b>CACHE</b>
00000000 - 0007FFFF	512 KB	System DRAM	YES
00080000 - 0009FFFF	128 KB	I/O RAM	YES
000A0000 - 000BFFFF	128 KB	Video adapter RAM	NO
000C0000 - 000DFFFF	128 KB	I/O ROM	NO
000E0000 - 000FFFFFF	128 KB	BIOS (SHADOW RAM)	YES
00100000 - 00FFFFFF	15 MB	System RAM	YES
01000000 - BFFFFFFF	15 MB	System RAM	YES
C0000000 - C1FFFFFF		Weitek Coprocessor	UNIMPORTANT
C2000000 - FFFDFFFF	15 MB	System RAM	YES
FFFE0000 - FFFFFFFF	128 KB	ROM BIOS	YES

**DMA CHANNELS**

CHANNEL	FUNCTION	CHANNEL	FUNCTION
0	Reserved	4	Reserved
1	Available for use	5	Available for use
2	Floppy disk	6	Available for use
3	Available for use	7	Available for use

**I/O ADDRESS MAP**

ADDRESS	FUNCTION	ADDRESS	FUNCTION
000- 01F	DMA controller (channels 0-3)	096 - 097	POS, Connector selection
020-021	First interrupt controller 8259A	0A0 - 0A1	Second interrupt controller 8259A
022	System Setup Indexing registers	0C0 - 0DF	DMA controller (4 - 7)
023	System Setup Data registers	0E0	Split address register
040-047	System Timer	0E1	Memory map register
060	Auxiliary device	0E2	Cache control register
061	System Port B controller	0E3 - 0E7	Channel restore registers
064	Auxiliary device	0F0 - 0FF	Coprocessor
070 - 071	RT/CMOS and NMI mask	100 - 107	Programmable option selection
074 - 076	8 KB CMOS RAM expansion Configuration registers 68B50 registers	1F0 - 1F8	Hard disk adapter
081 - 087	DMA registers pages 0 - 3	278 - 27B	Parallel port 3
089 - 08F	DMA registers pages 4 - 7	2F8 - 2FF	Serial port 2 (RS-232-C)
090	Central arbitration control port	378 - 37B	Parallel port 2
091	Response from board selected	3BC - 3BF	Parallel port 1
092	System Port A controller	3B4 - 3C5	Video subsystem
093	Reserved	3CE - 3DA	Video subsystem
094	Boards enable	3C6 - 3C9	Video DAC, Bt471
		3F0 - 3F7	Floppy disk controller
		3F8 - 3FF	Serial port 1 (RS- 232-C)

**INTERRUPT LEVELS**

LEVEL	FUNCTION	LEVEL	FUNCTION
RQ0	Channel 0 of timer output	RQ8	Real Time Clock
IRQ1	Keyboard interface	IRQ9	Redirected via software to IRQ2
IRQ2	Interrupt from PIC2	IRQ10	Available
IRQ3	Optional serial port	IRQ11	Available
IRQ4	Primary serial port	IRQ12	Mouse
IRQ5	Available	IRQ13	Coprocessor
IRQ6	Floppy disk controller	IRQ14	Hard disk controller
IRQ7	Parallel port	IRQ15	Available

