

CP486

CHARACTERISTICS

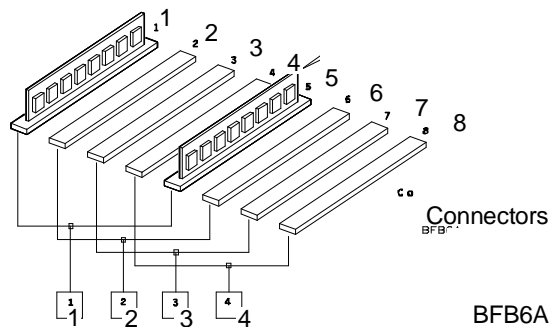
Microprocessor	INTEL 80486
Clock	25 MHz
Architecture	32-bit EISA (Extended Industry Standard Architecture)
Memory	2 or 4 MB on system board expandable up to 16 MB by: EXM 26-482 2 SIMM 1 MB x 9 100 ns EXM 26-484 2 SIMM 2 MB x 9 100 ns
Memory access time	80 ns
Coprocessor	1) Integrated in the INTEL 80486 2) Weitek 4167
Optional processor	INTEL i860
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 Wren V HH SCSI Micropolis 1674-7 300 MB Wren IV SCSI Seagate ST2383N 600 MB Maxtor XT - 8760S
Streaming Tape	Wangtek 150 MB SCSI
EISA slots	8 Present 6 Available
Video adapter	EISA EVC-1 board GO734 EISA EVC-1 board GO739
Hard Disk and Floppy disk controller	EISA ESC-1 board GO736 EISA ESC-1 board GO738 EISA ESC-1 board GO740
Cache Controller	Integrated in microprocessor
Cache size	8 KB integrated in microprocessor
Mouse	PS/2 and AT compatible
Keyboard	101/102-key ANK 26-101, ANK 26-102

MEMORY EXPANSION

WARNING: It is not essential to fill all the memory banks available. Starting from the basic 4 MB, it is thus possible to obtain the following memory configurations: 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64 MB.

The SIMM modules installable are:

EXM 26-484 4 MB
EXM 26-482 2 MB



SYSTEM BOARD

BA847 P1.25 - 2 MB
BA867 P1.7 - 4 MB

BIOS

BA847: 2.03
BA867: 2.03

VIDEO ADAPTER

GO734
GO739

HARD DISK - FLOPPY DISK CONTROLLER

GO736
GO738
GO740

CONSOLE

IF632 497860 X
1) Level: 01MI
2) Level: 02MI

POWER SUPPLY

PS30 B 220 V
Level: 0.8
PS30 B 110 V
Level: 0.6
SP30/B1 220 V
Level: 01
PS30/B1 110 V
Level: 02
PS30 C 220 V S.P.S.
Level: 02
PS30 C 110 V S.P.S.
Level: 02

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SYSTEM BOARD

	LEVEL	D.R.S. CODE	ROM BIOS	INTEGRATED CONTROLLERS / NOTES
BA847	Lev. Nasc.		ME9W 497352V Rev. 1.06	
	Lev. 01		ME9R 497416E Rev. 1.08.2 Rev. 1.08.2	- New BIOS to solve the interrupt 5, SCSI controller and configuration problems - PAL replaced to solve the Data Compare Error problem
	Lev. 02		ME8K 497450U Rev. 1.10.1	- New BIOS for management of INT13 and the power-on diagnostics - PAL replaced to allow management of the i860 processor and solve the DMA parity error and system lock problems
	Lev. 03			- ISP A2 without Piggyback introduced.
The modifications described from this point on have not been implemented in production but in the field only.				
BA847	Lev. 04		PPJ5 498060H Rev. 1.15	- New BIOS to solve the following problems: - Reset of 860 - Proteon P1344 - Format and auto slow with C3 82077 - Win386 - Matrox 1281 - Installation of NETWARE/386 on HDU
	Lev. 05 Lev. 06		Rev. 1.15 Rev. 1.15	- Two PAL changed to eliminate Panic error and parity error in SCO UNIX.
	Lev. 08		Rev. 1.15	- Cut to solve system hang problems on some TORUS (EISA) communication boards and serial port malfunctioning.
	Lev. 09		PPJF 498124J Rev. 2.0	- New BIOS for addition of following features: - Support for more than 2 HDU - Support for several ESC-1 boards - Support for PEM - Support for telediagnostic board - Support for ESDI HDU
	Lev. 10		Rev. 2.0	- Cut to solve system hang problems during P.O.D.
	Lev. 11		PPJR 498155Z Rev. 2.01	- New BIOS for management of the 300 MB ESDI Type 35 hard disk and solve the following problems: - BOOT with non-formatted ESDI HDU - BOOT from diskless system - Compatibility

	LEVEL	D.R.S. CODE	ROM BIOS	INTEGRATED CONTROLLERS / NOTES
BA847	Lev. 12		Rev. 2.01	- Changes to solve interrupt noise problem of serial port when i486 microprocessor non D0 is installed on motherboard
	Lev. 13		Rev. 2.01	- Keyboard controller 8.01 introduced to replace the 8.0
	Lev. 14		Rev. 2.03	- New BIOS to solve problems of the previous release: <ul style="list-style-type: none"> - Memory over 16 MB - Boot of 720 KB floppy drives - ADAPTEC EISA Controller - MYLEX SCSI Controller
BA867	Lev. Nasc.	612164 T	PPJ5 498060H Rev. 1.15	- New layout level for recovering cutting and trimming and solve problems of previous board. Board with 4 MB of memory.
	Lev. 01		PPJF 498124J Rev. 2.0	- New BIOS for addition of following features: <ul style="list-style-type: none"> - Support for more than 2 HDU - Support for several ESC-1 boards - Support for PEM - Support for telediagnostic board - Support for ESDI HDU
	Lev. 02		Rev. 2.0	- Cuts and wirings to solve problem of system locks during the P.O.D. when there are several EISA boards on the BUS
	Lev. 03		PPJR 498155Z Rev. 2.01	- New BIOS for management of the 300 MB ESDI Type 35 hard disk and solve the following problems: <ul style="list-style-type: none"> - BOOT with non-formatted ESDI HDU - BOOT from diskless system - Compatibility
	Lev. 04		Rev. 2.01	- Serial port problems due to noise on interrupts when using an i486 processor not step D now solved. - Signal BCLK improved
	Lev. 06		Rev. 2.01	- New keyboard controller 8.01 introduced - New 80486-25-D0 introduced to replace the 80486-26-B6 WD component 16C552 Mask D used to replace the previous component.

	LEVEL	D.R.S. CODE	ROM BIOS	INTEGRATED CONTROLLERS / NOTES
BA867	Lev. 07	612164 T	Rev. 2.01	<ul style="list-style-type: none"> - Allows introduction of step A2 of the EBC 82358 component replacing step A1 - Improved BCLK EISA BUS signal and EBC HCLKCPU signals - New BIOS to solve problems of the previous release <ul style="list-style-type: none"> - Memory over 16 MB - Boot of 720 KB floppy drives - ADAPTEC EISA Controller - MYLEX SCSI Controller

INTEGRATED CONTROLLERS

CONTROLLER	FUNCTION
82537 ISP	DMA Controller Interrupt Controller 5 Timers I/O Ports
XL2865	EEPROM Configuration
DS1287	Real Time Clock/Timer
8042/8742	Keyboard and Mouse Controller
WD16C552	Serial and Parallel Port Controller
82358 EBC	EISA BUS Controller

WARNING: If hardware or firmware changes should occur on system board, hardware and firmware for hard disk and video controller boards must also be changed if necessary. See table below

BOARDS, DIAGNOSTIC BIOS AND DRIVERS COMPATIBILITY

SYSTEM BOARD			HDU CTRL			VIDEO CTRL			DIAGNOSTIC		DRIVER	
BDS	BIOS	LEV.	ESC 1	FW	LEV.	EVC 1	FW	LEV.	S.T.	U.D.	OEM	EVC
847	1.06	Na	736	1.10	01	734	1.02	01	1.20 05	1.10 02	4.08 1.3	1.01
847	1.06	Na	738	1.10	Na	734	1.02	01	1.20 05	1.10 02	4.08 1.3	1.01
847	1.08.2	01	738	1.13	01	734	1.02	02	1.20 1	1.20 04	4.08 1.4	2.01
847	1.08.2	01	738	1.13	03	734	1.02	02	1.20 1	1.10 04	4.08 1.4	2.01
847	1.10.1	02	738	1.22	04/05	734	1.02	03	1.20 1	1.20 01	4.08 1.4 2	2.01 3
847	1.10.1	03	738	1.22	04/05	734	1.02	03	1.20 1	1.20 01	4.08 1.4 2	2.01 3
847	1.10.1	03	738	1.22	08	734	1.02	03	1.20 1	1.20 01	4.08 1.4 2	2.01 3
847	1.10.1	03	740	1.35	Na	734	1.02	03	1.50	1.20 01	4.08 1.4 2	2.01 3
847	1.15	04	738	1.35	09	734	1.03	04	1.50	1.20 01	4.08 1.4 2	2.01 3
867	1.15	Na	740	1.35	Na	739	1.03	Na	1.50	1.20 01	4.08 1.4 2	3.0
867	2.0	01	740	1.42	01	739	1.03	Na	1.50	1.20 01	4.08 1.4 2	4.0 1.3
867	2.01	03	740	1.43	02	739	1.03	Na	1.50	1.20 01	4.08 1.4 2	5.0
867	2.03	07	750	1.43	02	739	1.03	Na	1.50	1.20.01	4.08 1.4 2	5.0

REFURBISHING KITS

These KITS allow system board BA847 to be increased to level 05/06, and hard disk controller board GO738 of CP486 to be increased to level 08.

INITIAL LEVEL		KIT TO BE USED
SYSTEM BOARD	HDU CONTROLLER	
BA847 Level Nasc.	GO736 Lev. 01	KIT003-03 code 977732 S KIT003-04 code 977733 T Composition: Material for BA847 change HDU controller board GO740 Starter kit floppy 3.5" KIT003, floppy 5.25" KIT004
BA847 Level Nasc.	GO738	KIT003-01 code 977730 C KIT003-02 code 977731 Z Composition: Material for BA847 change HDU controller board GO738 Starter kit floppy 3.5" KIT001, floppy 5.25" KIT002
BA847 Level 02/03	GO738 Lev. 04	KIT003-06 code 977803 T Composition: Material for BA847 change Material for GO738 change
BA847 Level 02/03	GO738 Lev. 05	KIT003-06 code 977800 C Composition: Material for BA847 change Material for GO738 change

BA847 I/O DEVICES

DEVICE	TYPE	LOCATION
Asynchronous communication element	WD16C552	U10
Keyboard and mouse controller	8742AH	U13
Flash EPROM	28F010	U14
Configuration EEPROM	XL2865A	U15
Real time clock	DS1287	U16
PAL CPU reset counter	16R6	U17
I/O controller 3	20L8	U24
PAL keyboard intercept	22V10	U25
I/O controller 2	EP1800	U26
I/O controller 1	EP1800	U27
EISA BUS controller	82358-25	U35
EISA integrated system peripherals		U36
Address decode PAL	20L8	U37
Even RAS driver	16L8	U39
Odd RAS driver	16L8	U40
PAL, Address translation	16L8	U44
PAL, RAM map control	16L8	U46
PAL, AEN(x) generation	22V10	U47
PAL, parity error control	20V8	U69
PAL, Snoop Stroke control	16R4	U70
PAL, Burst address generation	20R4	U74
Odd CAS driver	16L8	U75
Even CAS drive	16L8	U76
PAL, Byte-enable control	16L8	U80
PAL, EISA buffer control	16L8	U81
PAL, host access control	20R6	U82
PAL, latch address control	16L8	U83
PAL, system reset control	16R8	U84
PAL, Burst control	16R4	U85
PAL, CAS control	16R4	U87
PAL, EISA access control	20L8	U96
PAL, RAS control	16R4	U97
PAL, CPU control	20R6	U203
PAL, numeric coprocessor address control	20L8	U204
PAL, numeric coprocessor control	16R8	U205
PAL, BUS arbitration	16R6	U206
PAL, BUS control	20R6	U207
PAL, parity error detection	20L8	U208
PAL2, numeric coprocessor addresses	20L8	U218
PAL3, numeric coprocessor addresses	20L8	U219
PAL1, numeric coprocessor addresses	20L8	U220
WEITEK coprocessor	WTL4167	U232
Microprocessor	I486	U233
Optional microprocessor	I860	U241

BA867 I/O DEVICES

DEVICE	TYPE	LOCATION
Asynchronous communication element	WD16C552	U10
Keyboard and mouse controller	8742AH	U13
Flash EPROM	28F010	U14
Configuration EEPROM	XL2865A	U15
Real time clock	DS1287	U16
PAL CPU reset counter	16R6	U17
I/O controller 3	20L8	U24
PAL keyboard intercept	22V10	U25
I/O controller 2	EP1800	U26
I/O controller 1	EP1800	U27
EISA BUS controller	82358-33	U35
EISA integrated system peripherals		U36
Address decode PAL	20L8	U37
Even RAS driver	16L8	U39
Odd RAS driver	16L8	U40
PAL, addresses translation	16L8	U44
PAL, RAM map control	16L8	U46
PAL, AEN(x) generation	22V10	U47
PAL, ISA Master Buffer-Swap	16L8	U56
PAL, parity error control	20V8	U70
PAL, EISA access control	20L8	U71
PAL, Burst address generation	20R4	U72
Odd CAS driver	16L8	U73
Even CAS driver	16L8	U74
PAL, CAS-enable control	20V10	U77
PAL, EISA buffer control	16V8	U78
PAL, host access control	20R8	U79
PAL, latch address control	16L8	U80
PAL, system reset control	16R8	U81
PAL, Snoop control	16R4	U82
PAL, RAS control	16R4	U83
PAL, CAS control	16R4	U84
PAL, CPU control	20R6	U203
PAL, numeric coprocessor address control	20V8	U204
PAL, numeric coprocessor control	16R8	U205
PAL, BUS arbitration	16R6	U206
PAL, BUS control	20R4	U207
PAL, parity error detection	20L8	U208
PAL2, numeric coprocessor addresses	20L8	U218
PAL3, numeric coprocessor addresses	20L8	U219
PAL1, numeric coprocessor addresses	20L8	U220
WEITEK coprocessor	WTL4167	U232
Microprocessor	I486	U233
Optional microprocessor	I860	U241

VIDEO ADAPTER BOARD

	LEVEL	D.R.S. CODE	ROM BIOS	INTEGRATED CONTROLLERS
G0734	Lev. Nasc.	412783 Q	PBZ2 Rev. 1.01 497534C	82C452 super VGA RAM Video - VRAM 100 ns 256 Kx4 Dual-ported - New firmware to solve EVC's DAM test error problem - Cuts and wirings to solve overheating and emission out of VDE - FCC/B limitations problems - Improvement of performances - Solved problem of 1023rd pixel mixing. - Replaced component I74F374 in U36 to improve clock frequency circuit - New firmware to support mode 79H function This modification is implemented in field only, not in production.
	Lev. 01 MI		PPVC Rev. 1.02 497346X	
	Lev. 02 MI		PPVC Rev. 1.02 497346X	
	Lev. 03 MI		PPVC Rev. 1.02 497346X	
	Lev. 04 MI		PBZY Rev. 1.03 497461K	
G0739	Lev. Nasc.		PBZY Rev. 1.03 497461K	New printed circuit to remove cuts and wirings

POWER SUPPLY UNITS

POWER SUPPLY UNIT	LEVEL	NOTES
PS30 B 220/110 V	Lev. Nasc.	
PS30 B 220/110 V	Lev. 01	
PS30 B 220/110 V	Lev. 02	
PS30 B 220/110 V	Lev. 03	
PS30 B 220/110 V	Lev. 04	Solves criticality problems at power on
PS30 B 220/110 V	Lev. 05	Frame changes, no change in functions
PS30 B 220/110 V		
PS30 B 220 V only	Lev. 06	Modification made in order to acquire better margins on the MOS voltage.
PS30 B 220 V only	Lev. 07	Solves: Power on random failure problems +12 V auxiliary voltage out of specs problems +5 V auxiliary diode failure problems
PS30 B 220 V only	Lev. 08	Changes due to telediagnosis (cable through)
PS30 B 110 V only	Lev. 06	Changes due to telediagnosis (cable through)
PS30/B1 220/110 V	Lev. Nasc.	New power supply unit to conform with Northern Countries safety rules. Allows PEM device to be installed.
PS30/B1 220/110 V	Lev. 01	Frame change to clear passage for PEM device cable
PS30 C 220/110 V	Lev. Nasc.	S.P.S. device
PS30 C 220/110 V	Lev. 01	
PS30 C 220/110 V	Lev. 02	Changes to improve the output voltage level that is at tolerance limit

SCSI CONTROLLER BOARD

	LEVEL	D.R.S. CODE	ROM BIOS	INTEGRATED CONTROLLERS
G0736	Lev. 0.1	412784 R	PPUA 497327L PPUB 497328U Rev. 1.10	Processor 80186 - Local CPU BIMIC 82355 - EISA Bus Master controller 82077 - Floppy disk controller
	Lev. Nasc.		PPUA 497327L PPUB 497328V Rev. 1.10	80186 CPU - Local CPU BIMIC 82355 - EISA Bus Master controller 82077 - Floppy disk controller
G0738	Lev. 01 MI		PPUD 497366T PPUE 497367U Rev. 1.13	- New firmware to enhance performance - Replaced chip 82355 A1 with 82355 A2 - Replaced FDU controller 82077 C3 with 82077 C4
	Lev. 03 MI		Rev. 1.13	- New 82355 chip to solve timing problems.
	Lev. 04 MI		PPKB 497486D PPKC 497487E Rev. 1.22	- New firmware to support Conner HDUs. - Replaced two PALs to solve noise problems in two components. Implemented on 32 MHz BMIC board It allows use of a 40 MHz oscillator in place of the 32 MHz one
	Lev. 05 MI		Rev. 1.22	- New firmware to support Conner HDUs - Replaced two PALs to solve noise problems in two components. Implemented on 40 MHz BMIC board
	Lev. 08 MI		Rev. 1.22	- Modifications of components, cuts and wirings to solve the "Data Compare Error" during HDU's tests
	Lev. 09 MI		PPKD 497488P PPKE 497489Q Rev. 1.35	- New firmware to manage Olivetti and DEC IDs
	Lev. 10		PPJD 498122Q PPJE 498123R Rev. 1.42	- New firmware to solve the following problems: - AT environment NOVELL DOS driver - 200 MB CONNER and 600 MB MAXTOR HDUs problems - AT mode PEM support
	Lev. 11		PPJP PPJQ Rev. 1.43	- New firmware to solve CONNER HDUs problems
	Lev. 12			New floppy disk controller 82077 CSFM replaces 82077 step C4

	LEVEL	D.R.S. CODE	ROM BIOS	INTEGRATED CONTROLLERS
GO740	Lev. Nasc.		PPKD 497488P PPKE 497489Q Rev. 1.35	New printed circuit to remove cuts and wirings
	Lev. 01		PPJD 498122Q PPJE 498123R Rev. 1.42	- New firmware to solve the following problems: - AT mode NOVELL DOS driver - 200 MB CONNER and 600 MB MAXTOR HDUs problems - AT mode PEM support
	Lev. 02		PPJP PPJQ Rev. 1.43	- New firmware to solve CONNER HDU problems
	Lev. 03		PPJP PPJQ Rev. 1.43	New BMIC (82355-B0) to replace current 82355 A2. This component can also be installed on the GO738 board.
	Lev. 04		PZDS PZDT Rev. 1.45	Solves some of the faults of the previous version
	Lev. 05			New floppy disk controller 82077 CSFM replaces 82077 step C4

USER DISKETTE

LEVEL	COMPATIBILITY
1.00	BIOS 1.02 (not in field)
1.10 upd 2	BIOS 1.06
1.10 upd 4	BIOS 1.08 and subsequent releases
1.20 upd 1	BIOS 1.10 and subsequent releases
1.30 upd 2	BIOS 1.15 and subsequent releases

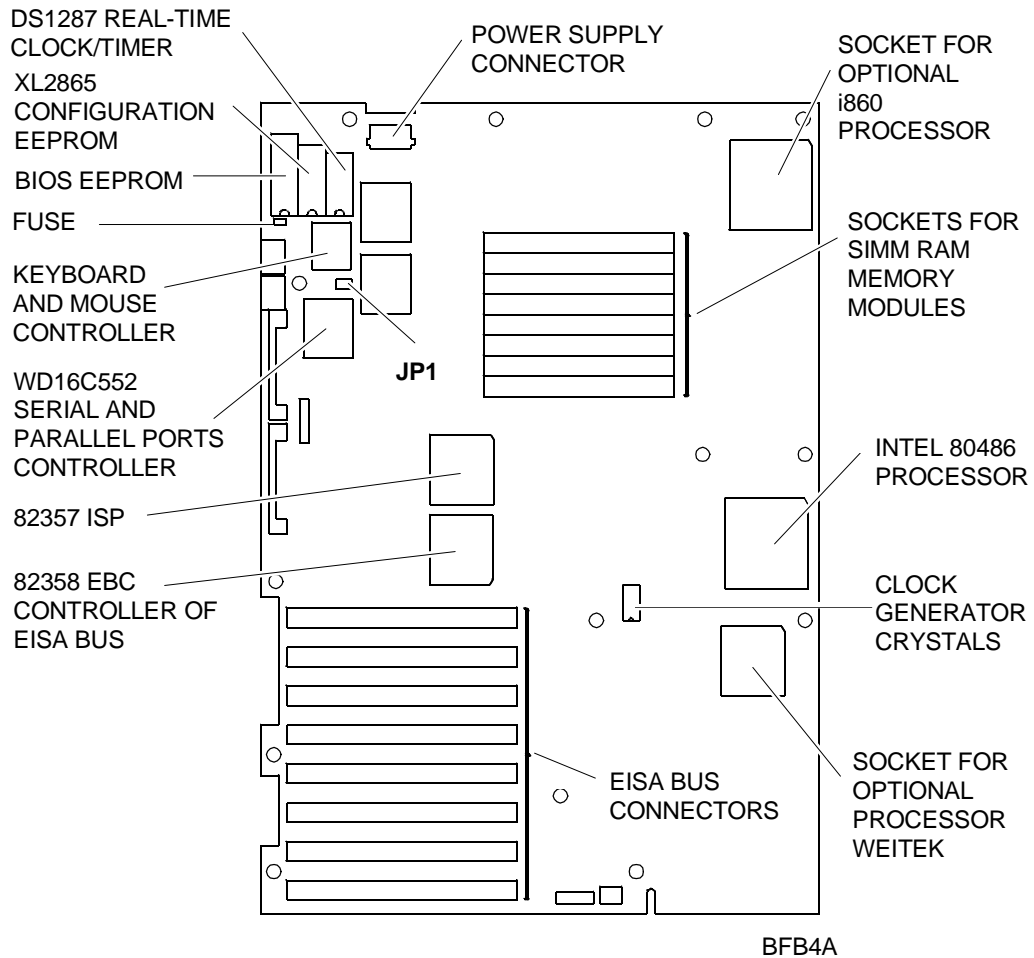
SYSTEM TEST

LEVEL	COMPATIBILITY
1.20 upd 5	BIOS 1.06
1.20 upd 1	BIOS 1.08.2 and subsequent releases
1.50	BIOS 1.10 upd 1 and subsequent releases

COMPATIBILITY NOTES

BOARD OR HW/SW DEVICE	DESCRIPTION
Console IF632	Level 01MI with console controller CSQ7 13.497118K (U4) does not manage the SPS device. The problem is solved with level 02MI with console controller CSQ6 1.5
OEMM386	Level 4.06 does not acknowledge this Personal Computer. For CP486 use version 4.08 rev. 1.40
ROM BIOS 1.06	Solves: <ul style="list-style-type: none"> - 300 MB hard disk problems - NVRAM SETUP problem - 1.2 and 1.44 MB floppy disk problem
ROM BIOS 1.08.2	Solves: 600 MB hard disk problem
ROM BIOS 1.10.1	This change on board BA847 is to be simultaneously applied with the GO738 changes which increase its level to 04 MI
Board GO734 (EVC - 1)	When the EVC-1 board operates with direct video access, a VGA compatible controller can be installed on the BUS.
Power supply unit PS30/B1 220 V version	Can be approved at 33 A on +5 (full load) and can comply with the safety norms applied in northern countries
ROM BIOS 1.10.1	Solves: <ul style="list-style-type: none"> - COMPAQ compatibility - Hard disk IRQ13 problems - Power up selftest problems
SCSI GO738 controller with Firmware 1.20	Via this BIOS it can support CONNER CP486 hard disks
Power supply unit PS30/B	Can not support PEM device. The new power supply unit PS30/B1 can handle this option.
i860 processor	Customer test diskette does not correctly handle the installation of this processor. Possibly new customer test release should handle it.
486 microprocessor	i486 B6 microprocessor is no longer produced. It is replaced by i486 D0 microprocessor that has the same functionalities. On BA847 motherboard, use of a microprocessor different from version D0 causes problems on the parallel port that were solved with level 12.
GO738 (ESC-1)	On hard disk and floppy disk GO738 controller, component 82355 A2 (BMIC) is replaced with component 82355B0 that is functionally compatible with it. This operation is only to be executed in case of malfunctioning in field, board level is not changed.
WD component 16C552 step D	Step D of the WD 16C552 component can be introduced on the BA847 board. Board level is not changed.
EBC component 82358	Step A2 of the EBC 82358 component can be introduced on the BA847 board to replace step A1. Board level does not change.

SYSTEM BOARD COMPONENTS, JUMPERS



JUMPER JP1

- Disables the system password
 - Cancels the configuration
- If the system is badly configured take the following action:
- 1) Switch off the PC.
 - 2) Move jumper JP1.
 - 3) Switch PC on again. This is the default configuration.
 - 4) Switch off the PC.
 - 5) Put jumper JP1 back to its initial position.
 - 6) Switch the system on and reconfigure with the User Diskette.

Only board
BA847
BA859
BA860

FUSE F1

Keyboard and Mouse Fuse 2 A 5 V.

SOFTWARE COMPATIBILITY

OPERATING SYSTEMS	NOTES
IBM DISK Operating System, Ver. 3.30 IBM DISK Operating System, Ver. 4.01 IBM Operating System/2, Ver. 1.10 and 1.20 IBM Operating System/2 Extended Edition, Ver. 1.10 INTERACTIVE 386/ix, Ver. 2.02 Olivetti's Microsoft Disk Operating System, Ver. 3.30a Olivetti's Microsoft Disk Operating System, Ver. 4.01 Olivetti's Microsoft OS/2, Ver. 1.10 and 1.20 SCO UNIX System V/386, Rev. 3.2 SCO XENIX 386, Rev. 2.3	During installation on hard disk, a formatted DSDD disk is required. PS/2 type mouse not recognised PS/2 type mouse not recognised

HARDWARE COMPATIBILITY

MODEMS	I/O INTERFACE PRODUCTS
Hayes Smartmodem 1200B Hayes Smartmodem 2400B Telenetics Expressdata 24i (24i-12i) Ven-tel PC Modem Half-Card (PCM-XT) Hayes Smartmodem 1200	FUTURE DOMAIN HOST ADAPTER (TMC-830) IBM Asynchronous COM. CARD (1502074) IBM PRINTER ADAPTER (1505200) IBM SERIAL/PARALLEL
MULTIPOINT	MOUSE
Anvil Stallion Intelligent 16 Port Controller Chase MSC Connect/AT8 Intelligent 8 Port Computone System Intelliport 16 Port AT16 Computone System Intelliport 16 Port EISA ECC Consensus Powerports 8 Port Intelligent Ctr. Digiboard Digichannel COM/xi Intelligent 8 Port Specialix Si Intelligent I/O Controller	IBM PS/2 Mouse (6450350) Logitech Bus Mouse (PF-3F) Microsoft Bus Mouse, Rev. C Microsoft Serial-PS2 Mouse Microsoft Serial Mouse MSC PC Mouse PS/2 Olivetti Bus Mouse (GRD 25-019) Olivetti New Advanced Mouse (GRD 25-025)
GRAPHICS PRODUCTS	NETWORKING & LAN PRODUCTS
AST RESEARCH AST - 3G PLUS AST RESEARCH AST - VGA PLUS ATI EGA WONDER HERCULES GRAPHICS CARD (GB102) HERCULES INCOLOR CARD (GB222) IBM MONO Display/Printer Adapter (1504900) MATROX PG - 1281 ORCHID PRODESIGNER VGA PLUS PARADISE EGA 480 PARADISE VGA PRO CARD QUADRAM QUAD EGA PLUS (QC 8601) TECMAR VGA AD VIDEO - 7 VEGA DELUXE	CARD (6450215) AT&T Starlan Network IBM OS/2 Lan Server/Requester IBM PC Network IBM Token Ring Network MADGE Token-Ring Network MS OS/2 Lan Manager Novell Advanced netware Ver.2.15 Novell Netware 386 with ISA Adapter Novell Netware 386 with EISA Adapter PROTEON Token Ring Network 3COM 3 + Network /Ethernet) 3COM 3 + Open Lan Manager IONET Network
DISPLAY UNITS	OTHER PRODUCTS
JVC QUAD-SYNC Color (GD-H6116VFW) NEC Multisync Monitor (APC-H431) OLIVETTI HIRES Color (DSM 26-115) PRINCETON RGB Monitor (HX-12) ZENITH RGB/COMPOSITE Monitor (ZVM-135)	OLIVETTI OD-810 WORM (WRM 25-810) PLUS Development 20MB Hardcard SOFTWARE SECURITY Parallel Port Block WELCH-ALLYN Barcode Reader (HBD-100, R. A)

INTERRUPT LEVELS

LEV.	NAME	CTRL	FUNCTION
1	IRQ0	1	Channel 0 timer OUT
2	IRQ1	1	Keyboard
3 -10	IRQ2	1	Interrupt to Controller1 from Controller2
3	IRQ8	2	Real time clock
4	IRQ9	2	Available
5	IRQ10	2	Available
6	IRQ11	2	Available
7	IRQ12	2	Available
8	IRQ13	2	Coprocessor
9	IRQ14	2	Hard Disk controller
10	IRQ15	2	Available
11	IRQ3	1	Serial port 2
12	IRQ4	1	Serial port 1
13	IRQ5	1	Parallel port 2
14	IRQ6	1	Floppy Disk Controller
15	IRQ7	1	Parallel port 1

I/O ADDRESS MAP

ADDRESS	FUNCTION	ADDRESS	FUNCTION
60 h	Keyboard	03F8 - 03FF	COM1 Serial port
70 h	Real time clock. Bit 7 of the real time clock is in the 82357 for NMI	02F8 - 02FF	COM2 Serial port
71 h	Real time clock read/write register	0C00 - 0C05	Configuration registers
92 h	Port A20	0C20 - 0C3F	EEPROM addressing
278 - 2FF	LPT3 Parallel port	0C80 - 0C84	System ID codes
378 - 3FF	LPT2 Parallel port	0CF8 - 0CFF	Console interface
3BC - 3BF	LPT1 Parallel port	0100 - 03FF	Address space for ISA expansion boards

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SYSTEM MEMORY MAP

ADDRESS	SIZE	FUNCTION	CACHE
0000 0000 - 000A 0000	640 KB	System RAM	YES
0000 000A - 000C 0000	128 KB	Video memory	NO
000C 0000 - 000E 0000	128 KB	EISA/ISA BUS ROM	YES
000E 0000 - 0010 0000	128 KB	ROM BIOS (copied into the shadow RAM)	YES
00E0 0000 - 0100 0000	13 MB	System RAM	YES
0010 0000 - 00E0 0000	2 MB	Direct video buffer access (location 2)	NO
0100 0000 - 0400 0000	48 MB	System RAM (Maximum memory on system board)	YES
0400 0000 - 1000 0000	192 MB	System RAM (Maximum memory that can be fitted in the cache)	YES
1000 0000 - C000 0000	32 MB	System RAM	YES
C000 0000 - C200 0000	32 MB	Weitek Coprocessor	NO
C200 0000 - D000 0000	224 MB	System RAM	YES
D000 0000 - E000 0000	256 MB	Direct video buffer access (location 1)	NO
E000 0000 - F000 0000	286 MB	SRAM	NO
F000 0000 - FFFE 0000	268 MB	System RAM	YES
FFFE 0000 - 10000 0000	128 KB	ROM BIOS	YES

