

## QUICK REFERENCE

### JUMPER SETTINGS (\* : Initial Setting)

● W1, W2 - HDOUT / EDOUT Signal Distribution (Configure jointly)			
W1: 2.88MB High Density Floppy, HDOUT Signal		W2: 2.88MB High Density Floppy, EDOUT Signal	
HDOUT left to software *	none	EDOUT left to software *	none
HDOUT to pin 33 (J2) ; GND to pin 27 (J2)	1-3 ; 2-4	EDOUT to pin 29 (J2) ; GND to pin 17 (J2)	1-3 ; 2-4
HDOUT to pin 27 (J2) ; GND to pin 33 (J2)	1-2 ; 3-4	EDOUT to pin 17 (J2) ; GND to pin 29 (J2)	1-2 ; 3-4

● W3, W12, W6A, W5A, W7A - CPU Setups																		
AMD	Type Spec.	W3	W12	W6A	W5A	W7A	INTEL	Type Spec.	W3	W12	W6A	W5A	W7A					
486DX2SV (3.3V)	Wr-Th/clk 2x	off	on	1-2	off	1-2	486DX4 (3.3V)	Wr-Th/clk 2x	off	on	1-2	off	1-2					
	Wr-Bk/clk 2x	off	on	2-3	on	2-3		Wr-Bk/clk 2x	off	on	2-3	on	2-3					
486DX4SV (3.3V)	Wr-Th/clk 2x	off	on	1-2	off	1-2	Wr-Th/clk 3x	off	off	1-2	off	1-2						
	Wr-Bk/clk 2x	off	on	2-3	on	2-3		Wr-Bk/clk 3x	off	off	2-3	on	2-3					
	Wr-Th/clk 3x	off	off	1-2	off	1-2		Wr-Bk/clk 3x	off	off	2-3	on	2-3					
5x86 or 486DX5 (133/3.3V)	Wr-Th/clk 3x	off	off	1-2	off	1-2	<table border="1"> <thead> <tr> <th colspan="2">● W3 - CPU Power</th> </tr> </thead> <tbody> <tr> <td>5V</td> <td>on</td> </tr> <tr> <td>3.3V</td> <td>off</td> </tr> </tbody> </table>						● W3 - CPU Power		5V	on	3.3V	off
	● W3 - CPU Power																	
	5V	on																
	3.3V	off																
Wr-Bk/clk 3x	off	off	2-3	on	2-3													
Wr-Th/clk 4x	off	on	1-2	off	1-2													
Wr-Bk/clk 4x	off	on	2-3	on	2-3													

**⚡ Careful attention should be taken when installing a processor: Faulty jumper settings may damage both your processor and your board.**

● W4, 7, 8, 9, 10 - Serial Port 2 Setup					
(configure jointly)	W4	W7	W8	W9	W10
RS-232 *	off	1-2	1-2	1-2	1-2
RS-422/485	on	2-3	2-3	2-3	2-3

● W15 - External CPU Bus Speed	
25MHz	3-4
33MHz	1-2

● W5, 6 - Serial Port 2 Signal Setup		
(RS-422/485 mode only)	Loopback	Normal *
W5: RTS2-CTS2	on	off
W6: DSR2-DTR2	on	off

● W16 - BIOS Boot	
Emergency	on
Normal *	off

● W11 - IOCHRDY	
To IDE Interface	on
Disabled *	off

● W17 - Watchdog	
Enabled *	on
Disabled	off

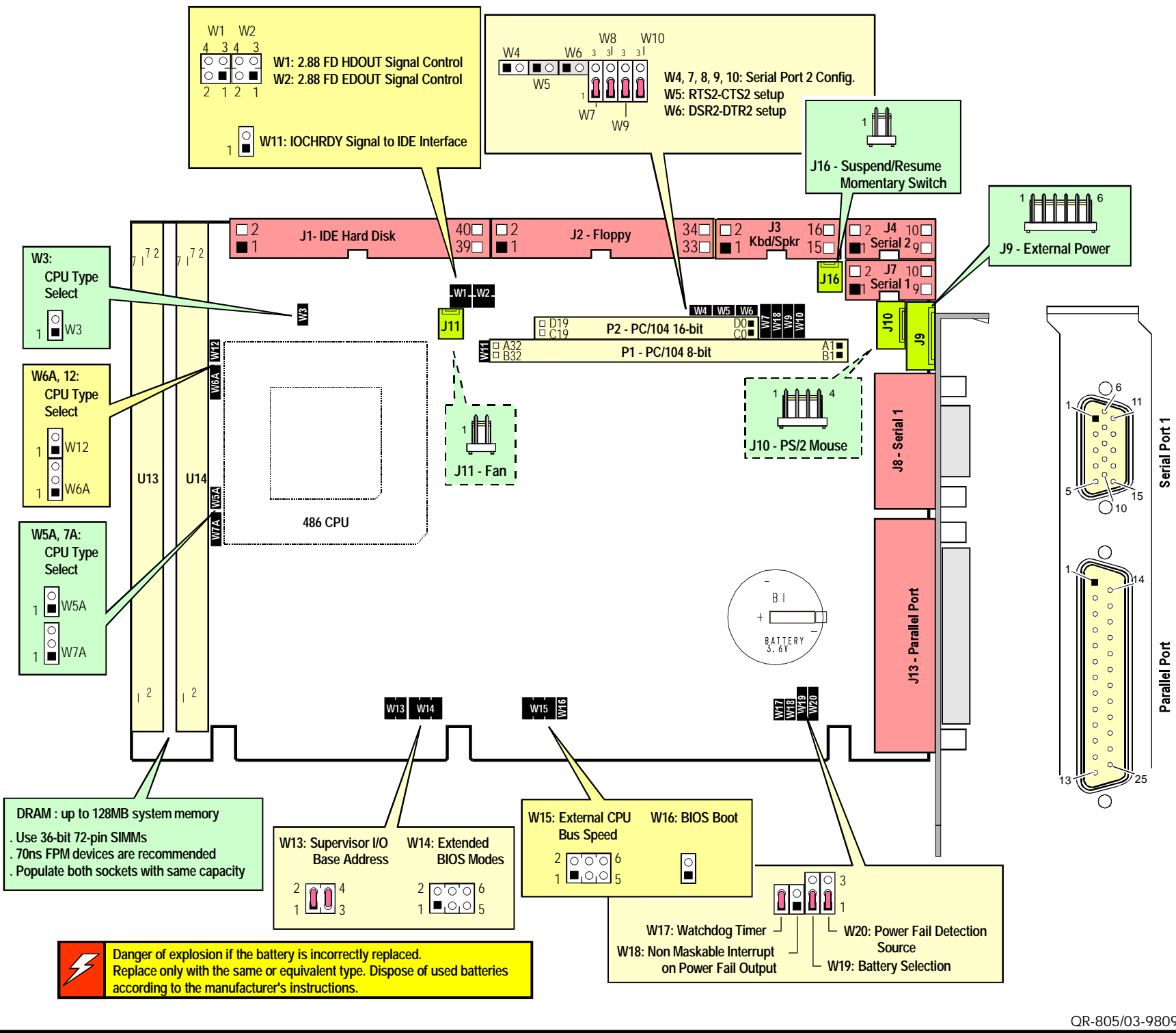
● W13 - Supervisor I/O Base Address			
190H *	1-2 ; 3-4	390H	3-4
290H	1-2	390H	none

● W18 - Non Maskable Interrupt Setup	
On Power Fail Output	on
Disabled *	off

● W14 - Extended BIOS Modes	
on	off *
1-2 Serial Download Mode	Normal Mode
3-4 VT100 Mode	Standard Mode
5-6 Disable TEK. Extension	Enable TEK. Extension

● W19 - Battery Selection	
Internal Battery *	1-2
External Battery	2-3

● W20 - Power Fail Detection Source	
External Power Fail Input to pin 6 of J9 *	1-2
Internal/External battery when less than 3V	2-3



**⚡ Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to the manufacturer's instructions.**

# CONNECTOR PINOUTS

◆ J1 - IDE Hard Disk		* Active Low Signal			
Odd Pin Number (Primary)					
1	RESET *	29	N.C.	20	N.C.
3-17	[HD7-HD0]	31	IRQ14	28	BALE
19	GND	33 ; 35	SA1 ; SA0	30	GND
21	N.C.	37	CS0 *	32	IOCS16 *
23	IOW *	39	ACTIVE *	34	N.C.
25	IOR *	<b>Even Pin Number (Primary)</b>		36	SA2
27	IOCHRDY	2 ; 22-26	GND	38	CS1 *
		4-18	[HD8-HD15]	40	GND

◆ J2 - Floppy Disk		* Active Low Signal			
Odd Pin Number					
1-15; 19-25; 31	GND	8	INDEX *	22	WDATA *
17; 27; 29; 33	N.C. by default (or see W1/W2 setups)	10	MOTOR ON 0, 1 *	24	WENABLE *
		12	DRIVE SEL. B *	26	TRACK 0 *
		14	DRIVE SEL. A *	28	WPROTECT *
		16	MOTOR ON 2 *	30	RDATA *
2	DRVEND 0 *	18	DIR CONTROL *	32	HEAD SELECT *
4 ; 6	N.C.	20	STEP *	34	DSKCHG

◆ J3 - Keyboard		* Active Low Signal			
Odd Pin Number					
1	KBCLK	7	SPKR OUT	15	HDACT *
3	KBDATA	9	N.C.	<b>Even Pin Number</b>	
5	VCC (+5V)	11	DOWNLD *	2-4 ; 10-14	GND
		13	PBRES *	6-8 ; 16	VCC (+5V)

◆ J4 - Serial Port 2 (RS-232)				◆ J4 - Serial Port 2 (RS-422/485)			
DCD 2	1	2	DSR 2	DCD 2	1	2	DSR 2
RX 2	3	4	RTS 2	RX(-)	3	4	RX(+)
TX 2	5	6	CTS 2	TX(-)	5	6	TX(+)
DTR 2	7	8	RI 2	DTR 2	7	8	RI 2
GND	9	10	N.C.	GND	9	10	N.C.

◆ J7 - Serial Port 1				◆ J8 - RS-232 (DB9)			
DCD 1	1	2	DSR 1	DCD 1	1	6	DSR 1
RX 1	3	4	RTS 1	RX 1	2	7	RTS 1
TX 1	5	6	CTS 1	TX 1	3	8	CTS 1
DTR 1	7	8	RI 1	DTR 1	4	9	RI 1
GND	9	10	N.C.	GND	5		

▶ I/O MAPPING			
000-00F	DMA controller 1	190-197	TEKNOR Control Port (optional: 290-297 or 390-397)
020-03F	Interrupt Controller 1		
040-043	Counter/Timers	1F0-1F7 ; 3F6-3F7	IDE Hard Disk
060-064	Keyboard (8742)	3F0-3F7	Floppy Disk (opt.: 370-377)
070-071	Real Time Clock - NMI Mask	378-37A	Parallel Port (opt.: 3BC-3BE or 278-27A)
080-09F	DMA Page Register	3F8-3FF (Serial P. 1)	COM1 by default (opt.: 2F8-2FF/COM2 or 3E8-3EF/COM3 or 2E8-2EF/COM4)
0A0-0BF	Interrupt Controller 2		
0C0-0DF	DMA Controller 2	2F8-2FF (Serial P. 2)	COM2 by default (opt.: 3F8-3FF/COM1 or 3E8-3EF/COM3 or 2E8-2EF/COM4)
0EC-0EF	Configuration Registers		
0F0-0FF	Math Coprocessor / Config. Reg.	3C0-3CF ; 3D0-3DF ; 3B0-3BB	Graphics Controller

◆ J9 - External Power	
1	VCC (+5V)
2	GND
3	GND
4	+12V
5	-12V
6	Power Fail Detection

◆ J10 - PS/2 Mouse	
1	MCLK
2	GND
3	MDATA
4	VCC (+5V)

◆ J11 - CPU Fan	
1	+12V
2	GND

◆ J16 - Suspend / Resume	
1	VCC (+5V)
2	Switch

◆ J13 - Parallel Port (Standard Mode)			
STROBE *	1	14	AUTOFD *
[D0-D7]	2-9	15	ERROR *
ACK *	10	16	INIT *
BUSY	11	17	SELECTIN *
PE	12	18-21	GND
SELECT	13	22-25	GND

\* Active Low Signal

◆ P2/P1 - PC/104				
	ROW A	ROW B	ROW C	ROW D
0			GND	GND
1	IOCHK*	GND	SBHE*	MEMCS16 *
2	SD7	RESET DRV	SA23	IOCS16 *
3	SD6	VCC (+5V)	SA22	IRQ10
4	SD5	IRQ9	SA21	IRQ11
5	SD4	-5V	SA20	IRQ12
6	SD3	DRQ2	SA19	IRQ15
7	SD2	-12V	SA18	IRQ14
8	SD1	0WS*	SA17	DACK0 *
9	SD0	+12V	MEMR *	DRQ0
10	IOCHRDY	N.C.	MEMW *	DACK5 *
11	AEN	SMEMW *	SD8	DRQ5
12	SA19	SMEMR *	SD9	DACK6 *
13	SA18	IOW *	SD10	DRQ6
14	SA17	IOR *	SD11	DACK7 *
15	SA16	DACK3 *	SD12	DRQ7
16	SA15	DRQ3	SD13	VCC (+5V)
17	SA14	DACK1 *	SD14	MASTER *
18	SA13	DRQ1	SD15	GND
19	SA12	REFRESH *	N.C.	GND
20	SA11	SYSCLK		
21	SA10	IRQ7		
22	SA9	IRQ6		
23	SA8	IRQ5		
24	SA7	IRQ4		
25	SA6	IRQ3		
26	SA5	DACK2 *		
27	SA4	T/C		
28	SA3	BALE		
29	SA2	VCC (+5V)		
30	SA1	OSC		
31	SA0	GND		
32	GND	GND		

▶ MEMORY MAPPING	
00000-9FFFF	0-640KB DRAM
A0000-BFFFF	Video DRAM
C0000-C7FFF	Video BIOS
C8000-CBFFF	TEK. BIOS Exten.
CC000-CFFFF	Flash Window
D8000-DFFFF	System DRAM
E0000-FFFFF	System BIOS
100000 to Top	System DRAM
Optional: D4000-D7FFF = TEK. BIOS Exten. D0000-D3FFF = Flash Window	

The Technical Reference Manual can be downloaded from the TEKNOR Web Site at [www.teknor.com](http://www.teknor.com)  
To order a hard copy of the Technical Reference Manual, contact Customer Service at **(450) 437-5682**

## First Level Debugging

1. Remove all peripheral boards from the backplane. Only keep the SBC.
2. Remove all cables from the SBC except the video cable
3. Make sure the memory is properly inserted and good working



## Before Powering ON the Board

1. Ensure the power supply connector is connected properly (+5V, +12V, -12V)
2. Make sure all cables are connected to the adequate connector
3. When using a flat panel, make sure the proper video BIOS is installed

# VIPer805 TECHNICAL SPECIFICATIONS

★ **CPU TYPE & SPEED**  
5x86 @133MHz ; 486DX4 @100MHz ; 486DX2 @ 66MHz

★ **SYSTEM MEMORY**  
DRAM: up to 128MB using two 72-pin SIMMs  
Cache: 8/16KB internal ; 4KB EEPROM for Plug and Play support  
Flash: 0, 2 or 4MB surface mounted

★ **BUS INTERFACE**  
PC/AT bus or stand-alone operation ; 100% IBM PC/AT compatible ; PC/104 compatible

★ **DATA PATH**  
32-bit on CPU bus ; 16-bit on ISA bus

★ **I/O**  
SERIAL: two serial ports, configurable as RS-232 (COM1-4) with RS-485 available on COM2  
PARALLEL: 1 bi-directional port (LPT 1) with PC/XT, AT, PS/2, EPP and ECP modes  
HARD DISK: local bus IDE interface  
FLOPPY DISK: interface for two 1.44 or 2.88MB floppy drives

★ **BIOS FEATURES**  
AMI BIOS in Flash EPROM ; Auto configuration and extended setup  
Programmable CPU and memory wait states ; BIOS shadowing in RAM  
Extension for diskless, keyboardless and videless operations ; Power management support  
MS-DOS and application bootstrap from Flash EPROM  
Plug and Play Ultra I/O support

★ **SUPERVISOR UTILITIES**  
Watchdog timer ; Power Failure / low battery detection

★ **POWER SUPPLY**  
VOLTAGE : +5V ±5% ; +12V ±5%

	CURRENT		
Proc. Speed	5x86	DX4	DX2
ICC typ.: 5V	1.5A	1.7A	1.5A
ICC Susp.: 5V	0.3A	0.3A	0.7A
IPP: +12V/-12V	5/14mA	5/14mA	5/14mA
Setup	4MB DRAM ; 2MB Flash EPROM		

★ **OPERATING CONDITIONS**  
0°C to 70°C with airflow ; R.H. : 5% to 95% ; MTBF : > 55,000 hours (MIL-HDBK-217F)

★ **ELECTRICAL / MECHANICAL**  
Board dimensions : 4.8 in. x 7.125 in. (121 mm x 181 mm)  
Conforms to IEEE P996 PC/AT bus electrical and mechanical specifications



## Contact TEKNOR INC. for Technical Support

- |                         |  |
|-------------------------|--|
| 1. Tel : (800) 354-4223 | 3. Internet : <a href="http://www.teknor.com">www.teknor.com</a>       |
| 2. Fax : (450) 437-8053 | 4. E-Mail : <a href="mailto:support@teknor.com">support@teknor.com</a> |