



# CONNECTOR PINOUTS

◆ J1 - Enhanced IDE		* Active Low Signal			
Odd Pin Number (Primary)		29	DMA ACK *	20	N.C.
1	RESET *	31	IRQ14	28	BALE
3-17	[HD7-HD0]	33 ; 35	SA1 ; SA0	30	GND
19	GND	37	CS1 *	32	IOCS16 *
21	DMA REQ	39	ACTIVE *	34	GND
23	IOW *	<b>Even Pin Number (Primary)</b>		36	SA2
25	IOR *	2 ; 22-26	GND	38	CS3 *
27	IOCHRDY	4-18	[HD8-HD15]	40	GND

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

◆ J3 - Keyboard/Speaker		* Active Low Signal				◆ P3 - Regulator *	
Odd Pin Number		7	SPKR OUT	15	HDACT *	Even Pin Number	
1	KBCLK	9	KBDINH *	2-4 ; 10-14	GND	1	VCC (+5V)
3	KBDATA	11	DOWNLD *	6-8 ; 16	VCC (+5V)	2	VCC (+5V)
5	VCC (+5V)	13	PBRES *			3	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 *
RXD 2 *	3	4	RTS 2 *	RX(-)	3	4	RX(+)
TXD 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.

\* Active Low Signal

◆ J5 - Parallel Port (Std Mode)		◆ J7 - V-Port					
Odd Pin Number		Even Pin Number		GND	Z1-3	Z13	VACT1
STROBE *	1	2	AUTOFD *	I2C_DATA	Z4	Y1-8	VPC0-7
[D0-D7]	3-17	4	ERROR *	VP_VSYNC	Z5	Y9	I2C_CLK
ACK *	19	6	INIT *	ENCAM *	Z6	Y10	VP_HSYNC *
BUSY	21	8	SELECTIN *	VCC	Z7	Y11	VP_IO_1
PE	23	10-18	Gnd	GND	Z8-11	Y12	VP_IO_2
SELECT	25	20-26	Gnd	ZVPCLK	Z12	Y13	GND

\* Active Low Signal

◆ J6 - Flat Panel		◆ J8 - Flat Panel				* Active Low Signal	
1	FP20	2	GND	1-4	FP2-FP5	30, 31	GP0, GP1
3	FP21	4	FPVAR	5-8	FP8-FP11	33, 38	FPVCC
5	FP22	6	GND	9, 10, 11, 12	FP13, 12, 7, 6	35	LLCLK
7	FP23	8	FP26	13-16	FP17-FP14	36	GND
9	GND	10	FP27	17	GND	37	FPVEE
11	FP28	12	GND	18	FPVDCLK	39	FP0
13	FP29	14	FP31	19, 21, 25	GND	40	GP2
15	GND	16	FP33	20	FP25	41	STANDBY *
17	FPVAR	18	FP34	22	LFS	42, 43	FP30, FP19
19	GND	20	FP35	23	FP1	44	FP31
				24	FP18	45	ACTI
				26	FPDE	46	FPDECTL
				27, 28, 32, 34	GND	47, 48	FPVAR
				29	FP24	49, 50	+12V

◆ J9 - Serial Port 1			
DCD 1	1	2	DSR 1
RXD1	3	4	RTS 1
TXD 1	5	6	CTS 1
DTR 1	7	8	RI 1
GND	9	10	N.C.

◆ J10 - External Power (B)	
1 ; 4 ; 5	2 ; 3
VCC (+5V)	GND

◆ J11 - External Power (A)			
1	VCC (+5V)	4	+12V
2	GND	5	-12V
3	GND	6	Power Fail Detect

◆ J12 - CompactFlash			
1	D11	2	GND
3	D12	4	D3
5	D13	6	D4
7	D14	8	D5
9	D15	10	D6
11	CS3 *	12	D7
13	DMA ACK *	14	CS1 *
15	DMA REQ	16	IOW *
17	IORDY	18	IOW *
19	IRQx	20	VCC
21	VCC	22	VCC
23	GND	24	GND
25	RESET *	26	GND
27	GND	28	A2
29	A1	30	ACT *
31	A0	32	N.C.
33	D0	34	D8
35	DD1	36	D9
37	DD2	38	D10
39	IOCS16 *	40	GND

◆ J7 - CPU Fan			
1	+12V	2	GND

◆ J14 - PS/2 Mouse			
1	MCLK	3	MDATA
2	GND	4	VCC (+5V)

◆ J13 - CRT SVGA			
1	RED	6-8	A_GND
2	GREEN	12	N.C.
3	BLUE	13	HSYNC
4; 9; 11	N.C.	14	VSYSN
5; 10	GND	15	N.C.

◆ J15 - Ethernet 10/100Base-TX			
1	TX+	5	N.C.
2	TX-	6	RX-
3	RX+	7	N.C.
4	N.C.	8	N.C.

◆ J6 - Flat Panel			
1	SBV0	2	SBV1
3	SBD0-	4	SBD1-
5	SBD0+	6	SBD1+
7	GND	8	GND
9	GND	10	GND

◆ P2/P1 - PC/104					* Active Low Signal			
	ROW A	ROW B	ROW C	ROW D				
0					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	OWS *	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						

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.

MEMORY MAPPING			
00000-9FFFF	0-640KB DRAM	D8000-FFFFF	System DRAM
A0000-BFFFF	Video DRAM	100000 to Top	System DRAM
C0000-CBFFF	Video BIOS		
Optional: D4000-D7FFF = TEK. BIOS Extens. ; D0000-D3FFF = Flash Window			

I/O MAPPING			
000-01F	DMA controller 1	1F0-1F7 ; 3F6	Primary IDE
020-03F	Interrupt Controller 1	170-177 ; 376	Secondary IDE
040-05F	Timers	3F0-3F7	Floppy Disk (opt.: 370-377)
060-06F	Keyboard	378-37A	Parallel Port (opt.: 3BC-3BE or 278-27A)
070-07F	Real Time Clock	3F8-3FF	COM1 by default (opt.: 2F8-2FF/COM2 or 3E8-3EF/COM3 or 2E8-2EF/COM4)
080-09F	DMA Page Register		
0A0-0BF	Interrupt Controller 2	2F8-2FF	COM2 by default (opt.: 3F8-3FF/COM1 or 3E8-3EF/COM3 or 2E8-2EF/COM4)
0C0-0DF	DMA Controller 2		
0F0-0FF	Math Coprocessor	3C0-3CF ;	Graphics Controller
190-197	TEKNOR Control Port (opt.: 290-297 or 390-397)	3D0-3DF ;	(I2C Port)
		3B0-3BB	

**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

# VIPer821 TECHNICAL SPECIFICATIONS

- CPU TYPE & SPEED**  
Pentium 133, and 166MHz ; Pentium MMX 166, 200, and 233MHz
- SYSTEM MEMORY**  
DRAM: 8 to 256MB FPM or EDO with parity / non-parity and ECC support ; on two 72-pin SIMMs  
L2 Cache: 512KB pipelined burst  
CompactFlash Module: up to 24MB ; unique silicon serial number ; 4KB user EEPROM
- BUS INTERFACE**  
PC/AT bus or stand-alone operation ; compatibility: 100% IBM PC/AT ; PC/104 ; PCI Rev2.1 (internal)
- DATA PATH**  
64-bit on CPU bus ; 64-bit on video bus ; 16-bit on ISA bus ; 32-bit on PCI bus (internal)
- VIDEO**  
Cirrus Logic GD7555 video processor chip with PCI local bus interface ; 2MB EDO video DRAM  
Flat panel supports for monochrome, S/S and D/D STN, EL and TFT disp lays  
CRT to 1024x768x256 colors or 1280x1024x16 colors ; direct support of 1024x768XGA panels  
GUI and video acceleration ; Simultaneous CRT/flat panel support ; 24-bit flat panel  
V-Port interface ; compatible with TEK-380 VIPerVision Real-Time digital video module
- I/O**  
SMC FDC37C932 Ultra I/O ; PnP compatible  
SERIAL: two RS-232 ports (COM1-4) with RS-422/485 available on COM2 (BIOS configurable)  
PARALLEL: one bi-directional port (LPT1) with nibble, byte, EPP and ECP modes  
HARD DISK: one Enhanced IDE interface supporting up to two drives  
FLOPPY DISK: one interface for two 1.44 or 2.88MB floppy drives  
USB: two Universal Serial Bus port  
ETHERNET: PCI 10/100Base-TX interface, PCI rev. 2.1 compliant bus master  
COMPACTFLASH: supported by all OS ; IDE compatible w/o driver ; bootable ; upgradable

- BIOS FEATURES**  
AWARD BIOS in Boot Block Flash ; auto configuration and extended setup ; PnP peripheral support  
Programmable CPU and memory wait states ; BIOS shadowing in RAM  
Extension for diskless, keyboardless and videoless operations  
Advanced Power Management ; CPU Thermal management

- SUPERVISOR UTILITIES**  
Watchdog timer ; Power Failure / low battery detection ; CPU temp. sensor / alarm

POWER SUPPLY					
Proc. Speed	133	166	166MMX	200MMX	233MMX
ICC typ.: 5V	2.50A	2.86A	3.14A	3.42A	4.02A
ICC Susp.: 5V	1.52A	1.54A	1.59A	1.75A	1.92A
Setup	8MB DRAM ; 512KB Cache ; 2MB Video DRAM ; Ethernet				

- OPERATING CONDITIONS**  
0°C to 62°C with airflow ; R.H. : 5% to 95% ; MTBF : > 100,000 hours (MIL-HDBK-217F)

- ELECTRICAL / MECHANICAL**  
Board dimensions : 4.8 in. x 7.1 in. (122 mm x 181 mm)  
Conforms to IEEE P996 PC/AT bus electrical and mechanical specifications

**Contact TEKNOR INC. for Technical Support**

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