

QUICK REFERENCE

JUMPER SETTINGS (* : Initial Setting)

W1 - VCORE for Specific MPII Processors					
(233/266 MHz)	1-2	3-4	5-6	7-8	9-10
1.7V *	on	on	on	off	on

W9 - Flat Panel Power/ Interface Level	
3.3V Selection	1-2
5V Selection*	2-3

⚡ The W1 setting shown is for the core voltage of 233MHz and 266MHz only. Incorrect core voltage setting can damage the processor!

W10 - PanelLink Voltage Amplitude	
750mV *	1-2
250mV	2-3

W2 - Active SCSI Termination	
Controlled by Software	1-2
Board is Terminated *	2-3
No Termination	off

W11 - PanelLink Latch Select	
(Control and Data Signals)	1-2 3-4
Latch on Falling Edge Signals *	on
Latch on Rising Signals	off

W3 - User Definable Jumpers		
	on	off *
1-2	Not Used	Not Used *
3-4	Not Used	Not Used *
5-6	VT100 Mode	Standard Mode *
7-8	Reserved	Reserved *

W12 - IOCHK Signal: Source Selection	
Power Fail Output	1-2
Watchdog Output (Stage 1)	2-3
Disabled *	off

W4 - CompactFlash Disk (Secondary IDE)	
Master *	on
Slave	off

W13 - Battery Selection	
Onboard Battery	1-2
Offboard Battery	2-3
Battery Disconnected *	off

W5 - Onboard Video Controller	
Enable Onboard Video Controller *	on
Disable Onboard Video Controller	off

W14 - W15 - Serial Port 2 Termination		
RS-422/485 modes	W17	W18
With Termination Resistors	on	on
Without Termination Resistors *	off	off

W6 - Flat Panel Clock Polarity	
Non-inverted *	1-2
Inverted	2-3

W16 - PS/2 Connector Function	
PS/2 Keyboard	3-5, 4-6
PS/2 Mouse *	1-3, 2-4

W7 - Watchdog Timer	
Dual-Stage Watchdog	1-2
Single-Stage Watchdog *	2-3
Watchdog Disabled	off

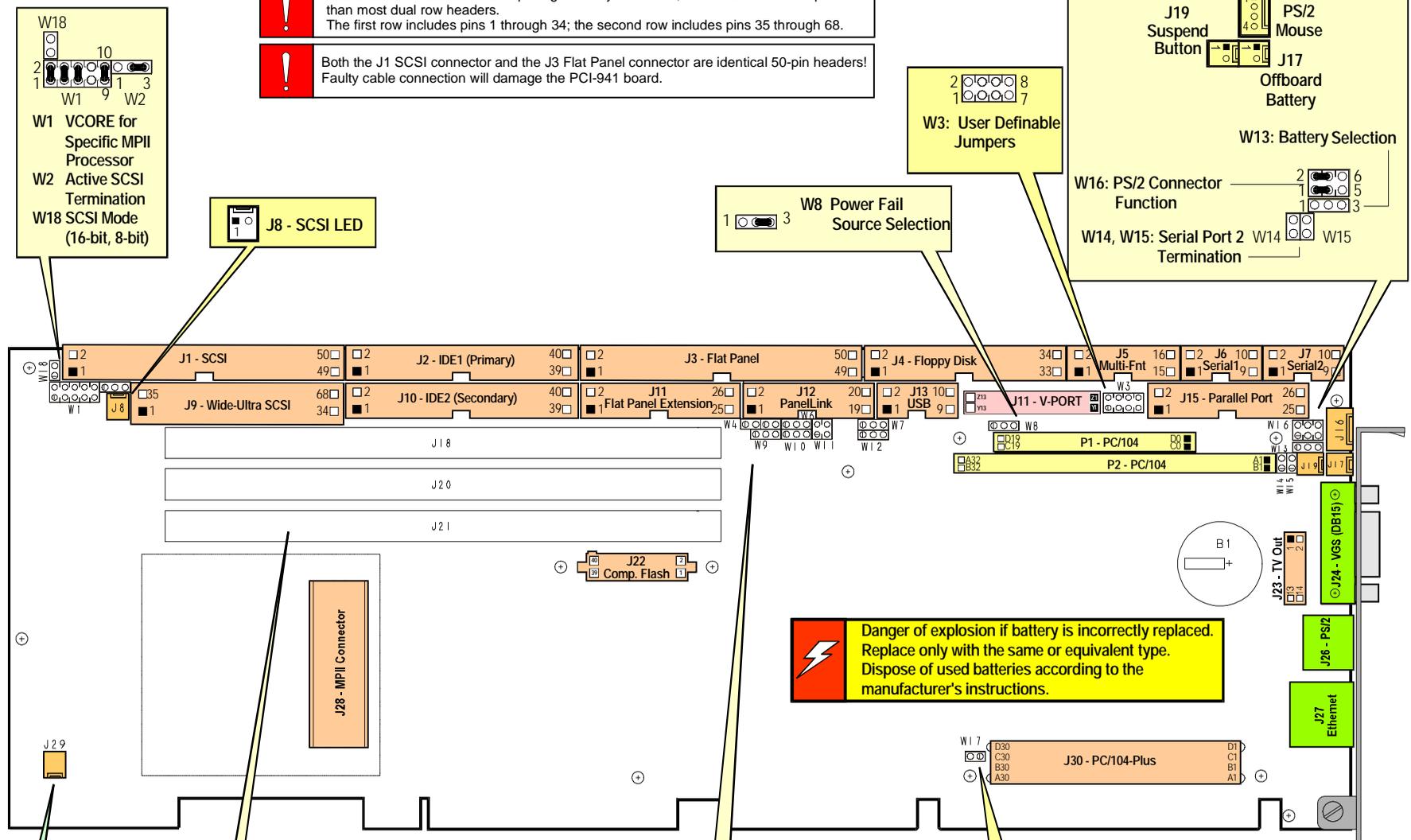
W17 - Video Controller: PCI Interrupt B	
Disabled *	on
Enabled	off

W8 - Power Fail: Source Selection	
Offboard Battery	1-2
(User Defined Power Fail)	1-2
Onboard or Offboard Battery (depending on W13 Jumper) when less than 3V *	2-3

W18 - SCSI Mode (16-bit, 8-bit)	
16-bit: Wide-Ultra SCSI	on
8-bit: Fast SCSI II / Fast-20 SCSI II *	off

! The J9 SCSI connector is a 68-pin high density connector, which has a different pinout than most dual row headers. The first row includes pins 1 through 34; the second row includes pins 35 through 68.

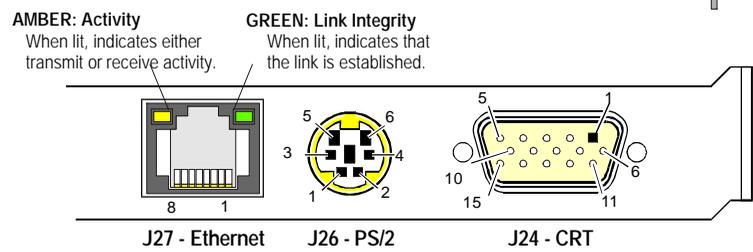
! Both the J1 SCSI connector and the J3 Flat Panel connector are identical 50-pin headers! Faulty cable connection will damage the PCI-941 board.



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

SDRAM:
 - Uses 64-bit or 72-bit DIMMs.
 - All combinations are allowed.
 - Supports 8MB to 384MB.

W4 CompactFlash Disk: Secondary IDE Master / Slave Selection
 W5 Enable / Disable Onboard Video Controller
 W6 Flat Panel: Clock Polarity
 W7 Watchdog Timer
 W9 Flat Panel Power Voltage and Interface Level
 W10 PanelLink Cable: Differential Voltage Amplitude
 W11 Latch Select for PanelLink Interface
 W12 IOCHK Signal: Source Selection



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 right connectors.
3. When using a flat panel, make sure the proper BIOS is installed.

First Level Debugging

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

CONNECTOR PINOUTS

◆ J1 - Fast SCSI Interface				* Active Low Signal			
Odd Pin Number	Even Pin Number	32	SATN *	42	SMSG *		
1-21; Gnd	2-16 [SD0-SD7] *	34	Gnd	44	SSEL *		
29-49	18 SDP *	36	SBSY *	46	SCD *		
23-27	Not Conn.	20-24; 28-30	Gnd	38	SACK *	48	SREQ *
		26	Term Power	40	SRST *	50	SIO *

◆ J2 - Enhanced IDE (Primary)				* Active Low Signal			
Odd Pin Number	25	IOR *		39	IDEACTP *	30	Gnd
1	RESET *	27	IORDY	Even Pin Number	32	Not Connected	
3-17 [HD7-HD0]	29	DACK 0 *		2; 22-26	Gnd	34	Gnd
19	Gnd	31	IRQ14	4-18 [HD8-HD15]	36	ADD 2	
21	DRQ 0	33; 35	ADD 1; ADD 0	20	Not Conn.	38	CS 3P *
23	IOW *	37	CS 1P *	28	PRIM.PDI ¹	40	Gnd

¹ 470 ohm pull-down

◆ J3 - Flat Panel				* Active Low Signal			
Odd Pin Number	29	FP24		Even Pin Number	24	FP18	
1	FP2	31	GP1	2	FP3	26	FPDE
3	FP4	33; 37	FPVEE	4	FP5	28; 32-36	Gnd
5	FP8	35	LLCLK	6	FP9	30	GP0
7	FP10	39	FP0	8-10	FP11; FP12	38; 48	FPVCC (Enable VCC; 3.3/5V Select)
9	FP13	41	STNDBY *	12	FP6		
11	FP7	43	FP19	14	FP16		
13	FP17	45	ACT1	16	FP14	40	GP2
15	FP15	47	FPVCC (3.3/5V Select)	18	FPVDCK	42-44	FP30; FP31
17-21; 25-27	Gnd			20	FP25	46	FPDECTL
23	FP1	49	+12V	22	LFS	50	+12V

◆ J4 - Floppy Disk				* Active Low Signal			
Odd Pin Number	8	INDEX *		22	WRITE DATA *		
1-15; 19-25	Gnd	10	MOTOR ON 0.1 *	24	WRITE ENABLE *		
17; 27	Not Conn.	12	DRIVE SEL. B *	26	TRACK 0 *		
39	FLOPPY DETECT	14	DRIVE SEL. A *	28	WRITE PROTECT *		
Even Pin Number	16	MOTOR ON 2 *		30	READ DATA *		
2	DRV DENS.SEL.0	18	DIR CONTROL *	32	HEAD SELECT *		
4; 6	Not Conn.	20	STEP *	34	DSKCHG *		

◆ J5 - Multi-Function				* Active Low Signal			
Odd Pin Number	5	VCC (+5V)		11	PWRBT *	Even Pin Number	
1	KBCLK	7	SPEAKER	13	PBRES *	2-4; 10-14	Gnd
3	KDATA	9	Not Used	15	ACTIVE *	6-8; 16	VCC (+5V)

◆ J6/J7 - Serial Port 1/2 - RS-232		◆ J6 - Serial Port 2 - RS-422/RS-485		◆ J8 - SCSI LED	
DCD *	1	2	DSR *	1	+5V
RXD *	3	4	RTS *	2	SCLED *
TXD	5	6	CTS *		
DTR *	7	8	RI *		
Gnd	9	10	Not Conn.		

* Active Low Signal

◆ J9 - Wide-Ultra SCSI				* Active Low Signal			
First Row (1-34)	Second Row (35-68)	49-50; 54; 56	Gnd	58	SACK *		
1-16; 20-34	Gnd	35-38	SDP *	51-52	Term Power	59	SRST *
17		39	[SD12-SD15]	53	Not Conn.	60	SMSG *
18		40-47; 65-68	[SD0-SD11]	55	SATN *	61-62	SSEL*; SCD*
19	Not Conn.	48	SDPH *	57	SBSY *	63-64	SREQ*; SIO*

◆ J10 - Enhanced IDE (Secondary)				* Active Low Signal			
Odd Pin Number	25	IOR *		39	IDEACTS *	30	Gnd
1	RESET *	27	IORDY	Even Pin Number	32	Not Connected	
3-17 [HD7-HD0]	29	DACK 1 *		2; 22-26	Gnd	34	SDIAG *
19	Gnd	31	IRQ15	4-18 [HD8-HD15]	36	ADD 2	
21	DRQ 1	33; 35	ADD 1; ADD 0	20	Not Conn.	38	CS 3S *
23	IOW *	37	CS 1S *	28	SEC. PDI ¹	40	Gnd

¹ 470 ohm pull-down

◆ J11 - Flat Panel Extension		◆ J12 - PanelLink	
Odd Pin Number	20-22	FPVCC (3.3/5V Select)	Even Pin Number
1-23 [FP20-FP35]		24	Contrast Ctrl Out (0-3.85V)
25	Contrast Ctrl Pot. Hi ¹	26	Contrast Ctrl Pot. Lo ¹
Even Pin Number	2	2	2
2-18	Gnd	1-5	[GP0-GP2]
		7; 11	VCC; VCC3
		9	TXC-
		13-17	[TX0-TX2-]
		19	FPVCC (3.3/5V Select)
		14-18	[TX0-TX2+]
		20	PD (Pwr Dwn)

¹ Variable voltage output used for adjusting contrast

◆ J13 - USB				◆ J14 - V-POR			
+5V-USB0	1	2	+5V-USB1	Y1-Y8	[VPC0-VPC7]		
USB0-	3	4	USB1-	Y9	I2C_CLK		
USB0+	5	6	USB1+	Y10	VP_HSYNC *		
Gnd-USB0	7	8	Gnd-USB1	Y11	VP_OUT		
Shield Gnd	9	10	Shield Gnd	Y12	VP_IN		

◆ J15 - Parallel Port /Standard			
STROBE *	1	2	AUTOFD *
[PD0-PD7]	3-17	4	ERROR *
ACK *	19	6	INIT *
BUSY	21	8	SELECTIN*
PE	23	10-18	Gnd
SELECT	25	20-26	Gnd

* Active Low Signal

◆ J16 - PS/2 Mouse		◆ J17 - External Battery		◆ J19 - Suspend Button	
1	MCLK	1	EXTBAT	1	PWRBT *
2; 4	Gnd	2	Gnd	2	Gnd
3	MDATA				

* Active Low Signal

◆ J22 - CompactFlash IDE				* Active Low Signal			
Odd Pin Number		31	DA0				
1-9	[DD11-DD15]	33-37	[DD0-DD2]				
11	CS3 *		Even Pin Number				
13-15; 39	Not Connected	2; 24-26; 40	Gnd				
17	SDIAG *	4-12	[DD3-DD7]				
19	IRQ15	14	CS1 *				
21	VCC	16	IOR *				
23	Gnd	18	IOW *				
25	RESET *	20-22	VCC				
27	W4 Jumper Selection	28	DA2				
29	DA1	30	ACTIVE *				
		32	Not Connected				

◆ J23 - TV-OUT				◆ J24 - CRT VGA Interface			
Odd Pin No.	11	NTSC_PAL		Row One (1-5)	9	Not Conn.	
1	RED	13	HSYNC	1	RED	10	Gnd
3	GREEN	Even Pin No.		2	GREEN	Row 3 (11-15)	
5	BLUE	2-6	DAC Gnd	3	BLUE	11	Not Conn.
7	CSYNC	8-12	Gnd	4	Not Conn.	12	I2CDATA
9	TVON	14	VSYSNC	5	Gnd	13	RHSYNC
				Row 2 (6-10)	14	RVSYSNC	
				6	A_Gnd	15	I2CCLK

◆ J26 - PS/2				◆ J27 - Ethernet			
1	DATA ¹	4	VCC	1	TX+	5	RJ1 ¹
2	Not Conn.	5	CLK ¹	2	TX-	6	RX-
3	Gnd	6	Gnd	3	RX+	7	RJ2 ¹
				4	RJ1 ¹	8	RJ2 ¹

¹ Keyboard or Mouse depending on W16 jumper setting

◆ J29 - CPU Fan			
1	+5V		
2	Gnd		

¹ Lines terminated with 75 ohm resistors

▶ I/O MAPPING			
000-01F	DMA Controller 1	278-27A	Parallel Port (option)
020-03F	Interrupt controller 1	290-297	TEKNOR Ctrl Port (option)
040-05F	Timer	2E8-2EF	COM4
060-06F	Keyboard	2F8-2FF	COM2
070-07F	Real Time Clock	370-377	Floppy Disk (option)
080-09F	DMA Page Register	378-37A	Parallel Port (LPT1)
0A0-0BF	Interrupt controller 2	390-397	TEKNOR Ctrl Port (option)
0C0-0DF	DMA controller 2	3BC-3BE	Parallel Port (option)
0F0-0FF	Math Coprocessor	3E8-3EF	COM3
190-197	Teknor Control Port	3F0-3F7	Floppy Disk
170-177; 376	Secondary IDE	3F8-3FF	COM1
1F0-1F7	Primary IDE	3C0-3CF	Graphics Controller
3F6		3D0-3DF	
		3B0-3BB	

◆ J30 - PC/104-Plus				* Active Low Signal			
	ROW A	ROW B	ROW C	ROW D			
1	5V_KEY	Not Conn.	+5V	+5V	AD0		
2	VI/O (5V)	AD2	AD1	AD1	+5V		
3	AD5	Gnd	AD4	AD3	AD3		
4	C/BE0 *	AD7	Gnd	AD6	AD6		
5	Gnd	AD9	AD8	GND	GND		
6	AD11	VI/O	AD10	MM66EN	AD12		
7	AD14	AD13	Gnd	AD15	+3.3V		
8	+3.3V	C/BE1 *	AD15	SB0 *	PAR		
9	SERR *	Gnd	SB0 *	SDONE	Gnd		
10	Gnd	PERR *	+3.3V	LOCK *	Gnd		
11	STOP *	+3.3V	Gnd	DEVSEL *	+3.3V		
12	+3.3V	TRDY *	Gnd	IRDY *	+3.3V		
13	FRAME *	Gnd	+3.3V	C/BE2 *	Gnd		
14	Gnd	AD16	AD17	Gnd	AD19		
15	AD18	+3.3V	Gnd	AD21	AD20		
16	AD21	AD20	Gnd	AD22	AD22		
17	+3.3V	AD23	AD22	AD22	+3.3V		
18	IDSEL0	Gnd	IDSEL1	IDSEL2	IDSEL2		
19	AD24	C/BE3 *	VI/O	IDSEL3	Gnd		
20	Gnd	AD26	AD25	Gnd	AD27		
21	AD29	+5V	AD28	AD27	AD31		
22	+5V	AD30	Gnd	REQ1 *	VI/O		
23	REQ0 *	Gnd	REQ2 *	GNT0 *	Gnd		
24	Gnd	REQ2 *	+5V	GNT2 *	Gnd		
25	GNT1 *	VI/O	GND	CLK1	Gnd		
26	+5V	CLK0	GND	RST *	Gnd		
27	CLK	+5V	CLK3	INTC *	3.3V_KEY		
28	Gnd	INTD *	+5V	Not Conn.	Not Conn.		
29	+12V	INTA *	INTB *				
30	-12V	Not Conn.	Not Conn.				

◆ P2/P1 - PC/104				* Active Low Signal			
	ROW A	ROW B	ROW C	ROW D			
0			GND	GND			
1	IOCHK*	GND	SBHE*	MEMCS16*			
2	SD7	RESET DRV	LA23	IOCS16*			
3	SD6	VCC (+5V)	LA22	IRQ10			
4	SD5	IRQ9	LA21	IRQ11			
5	SD4	-5V	LA20	IRQ12			
6	SD3	DRQ2	LA19	IRQ15			
7	SD2	-12V	LA18	IRQ14			
8	SD1	0WS*	LA17	DACK0*			
9	SD0	+12V	MEMR*	DRQ0			
10	IOCHRDY	Not Conn.	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*	Not Conn.	GND			
20	SA11	SYSCLK					
21	SA10	IRQ7					
22	SA9	IRQ6					