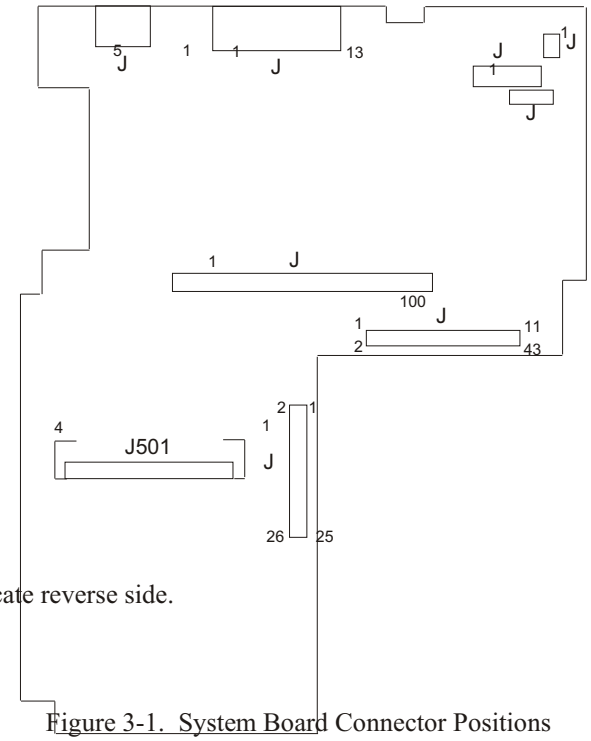
3 Connector Input/Output Definition

3.1 System Board Connector Definitions



Note: Dotted lines indicate reverse side.

Figure 3-1. System Board Connector Positions

Connector	Definition	Number of Pins
J1	Serial port (SIO 1)	9
J2	Parallel port (PIO)	25
J3	Backlight control to D/A inverter	3
J4	Power connector to AC adapter	7
J5	Battery connector to battery pack	4
J6	Board-to-board connector to VGA board	100
J7	Hard disk connector	44
J8	Floppy disk drive connector	26
J501	IC memory card connector	40

3.1.1

Serial Port (J1)

Pin	Signal	Description
1	CD	Carrier Detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indicator

3.1.2 Parallel Port (J2)

Pin	Signal	Description
1	Strobe	Indicates data at the parallel port is valid
2	Data bit 0	Parallel port data
3	Data bit 1	Parallel port data
4	Data bit 2	Parallel port data
5	Data bit 3	Parallel port data
6	Data bit 4	Parallel port data
7	Data bit 5	Parallel port data
8	Data bit 6	Parallel port data
9	Data bit 7	Parallel port data
10	ACK	Indicates printer has received data.
11	Busy	Indicates printer can't accept another character.
12	PE	Indicates when printer is out of paper.
13	SLCT	Indicates when printer is selected.
14	Auto feed XT	Signals the printer to automatically feed line after printing a line.
15	Error	Indicates when printer has detected an error.
16	INIT	Initializes the printer.
17	SLCT In	Selects the printer.
18 - 25	GND	

3.1.3 DC-AC Inverter (J3)

Pin	Signal	Description
1	Backlight/Adjust	Square-wave output control the brightness by adjusting the duty cycle.
2	GND	
3	+5V	Power supply for inverter

3.1.4 Power Connector (J4)

Connected to Rear Bracket

Pin	Signal	Description
1	ADINP	Output voltage of AC adapter
2	ADINP	Output voltage of AC adapter
3	ADINPGND	
4	ADINPGND	
5	QCHARGE	Signal AC adapter into fast-charge mode
6	+ISENSE	Signal AC adapter to supply constant current
7	–ISENSE	Signal AC adapter to supply constant current

Connected to AC Adapter

Pin	Signal	Description
1	ADINP	Output voltage of AC adapter
2	ADINP	Output voltage of AC adapter
3	ADINPGND	
4	ADINPGND	
5	QCHARGE	Signal AC adapter into fast-charge mode
6	+ISENSE	Signal AC adapter to supply constant current
7	–ISENSE	Signal AC adapter to supply constant current
8	NC	
9	NC	
10	NC	

3.1.5 Battery Connector (J5)

Pin	Signal	Description
1	+BAT	Output voltage of battery
2	+BAT	Output voltage of battery
3	BATGND	
4	BATGND	

3.1.6 Board-to-board Connector (J6)

Pin	Signal	Description	Pin	Signal	Description
1	SA0	Address line from system	31	XBHE/	Data bus high-byte enable
2	XA2	Address line from system	32	XIOR/	I/O read
3	XA4	Address line from system	33	SMEMW/	Memory write
4	XA6	Address line from system	34	GND	
5	XA8	Address line from system	35	GND	
6	XA10	Address line from system	36	TMROUT2	Timer 2 output
7	XA12	Address line from system	37	8042CS/	Select 8042
8	XA14	Address line from system	38	KBIRQ	IRQ from keyboard controller
9	XA16	Address line from system	39	STDBY/	Singal to drive Suspend LED
10	XA18	Address line from system	40	475RS2	Reset drive to RAMDAC
11	GND		41	PF1/	Indicates battery low
12	GND		42	STDBYBTM	Signal to toggle Suspend/Resume system
13	REF/	System in DRAM refresh cycle	43	LCDVR1	Pin of variable resistor to control voltage of LCD (-)
14	GND		44	+BATTERY	Voltage supply from Li-battery
15	SD2	Data bus from system bus	45	LCD5V	Voltage supply to LCD (+)
16	SD4	Data bus from system bus	46	+5V	Voltage supply to VGA board
17	SD6	Data bus from system bus	47	+5V	
18	SD8	Data bus from system bus	48	VCC1	Voltage supply to VGA board in Suspend mode
19	SD10	Data bus from system bus	49	VCC1	
20	SD12	Data bus from system bus	50	GND	
21	SD14	Data bus from system bus	51	XA1	Address line from system
22	GND		52	XA3	Address line from system
23	XD0	Data bus from X-bus	53	XA5	Address line from system
24	XD2	Data bus from X-bus	54	XA7	Address line from system
25	XD4	Data bus from X-bus	55	XA9	Address line from system
26	XD6	Data bus from X-bus	56	XA11	Address line from system
27	IRQ1	IRQ from keyboard	57	XA13	Address line from system
28	IRQ12	IRQ from PS/2 mouse	58	XA15	Address line from system
29	RESET4	Reset drive from system	59	A17	Address line from system
30	ALE	Address latch enable	60	A19	Address line from system

(To be continued)

Pin	Signal	Description	Pin	Signal	Description

61	GND		81	AEN	DMA access enable
62	GND		82	XIOW/	I/O write
63	GND		83	SMEMR/	Memory read
64	SD0	Data bus from system bus	84	MEMCS16/	Signal 16-bit memory access
65	SD1	Data bus from system bus	85	GND	
66	SD3	Data bus from system bus	86	GND	
67	SD5	Data bus from system bus	87	BIOCHRDY	Signal I/O access ready
68	SD7	Data bus from system bus	88	SPKDATA	Speaker data
69	SD9	Data bus from system bus	89	IKBDEN/	Select internal keyboard
70	SD11	Data bus from system bus	90	GATEA20	Signal to gate CPU address line 20
71	SD13	Data bus from system bus	91	CRT/LCD/	Select CRT or LCD output
72	SD15	Data bus from system bus	92	HDDLED	Signal to active HDD LED
73	GND		93	POWERSW/	Signal to toggle system power
74	XD1	Data bus from X-bus	94	LCDBIASPWR/	Signal to gate the voltage of LCD (-)
75	XD3	Data bus from X-bus	95	LCDVR2	Pin of variable resister
76	XD5	Data bus from X-bus	96	+5V	Power supply for VGA board
77	XD7	Data bus from X-bus	97	–30V	Power supply for LCD (-)
78	IRQ9	IRQ from VGA	98	–30VGND	
79	RESET2/	Warm reset from keyboard controllerin Suspend	99	VCC1	Power supply for VGA board
80	EALE/	Early address latch enable	100	GND	

3.1.7 Hard Disk Connector (J7)

Pin	Signal	Pin	Signal
1	RESET/	23	IOW/
2	GND	24	GND
3	SD7	25	IOR/
4	SD8	26	GND
5	SD6	27	NC
6	SD9	28	ALE
7	SD5	29	NC
8	SD10	30	GND
9	SD4	31	IRQ14
10	SD11	32	IOCS16/
11	SD3	33	SA1
12	SD12	34	NC
13	SD2	35	SA0
14	SD13	36	SA2
15	SD1	37	CS0/
16	SD14	38	CS1/
17	SD0	39	HDDLED
18	SD15	40	GND
19	GND	41	DRV5V
20	NC	42	DRV5V
21	NC	43	GND
22	GND	44	+5V

Note: See Section 6.2.2 for descriptions.

3.1.8 Floppy Disk Drive Connector (J8)

Pin	Signal	Pin	Signal
1	DRV5V	14	STEP/
2	INDEX/	15	GND
3	DRV5V	16	WDATA/
4	DK0/	17	GND
5	DRV5V	18	WGATE/
6	DR1/	19	GND
7	NC	20	TRK0/
8	DSKCHG	21	GND
9	NC	22	WRTPRT
10	WTRO/	23	GND
11	NC	24	RDATA/
12	DIR	25	GND
13	NC	26	HDSEL

Note: See Section 6.1.2 for descriptions.

3.1.9 IC Memory Card Connector (J501)

Pin	Signal	Description	Pin	Signal	Description
1	GND		11	GND	
2	MD3	Data for memory bus byte of bank 0 in IC card	12	CAS01/	CAS control signal for high
3	MD4	Data for memory bus	13	NC	
4	MD5	Data for memory bus in IC card	14	RAS1/	RAS control signal for bank 1
5	MD6	Data for memory bus	15	WE/	Write enable
6	MD7	Data for memory bus byte of bank 0 in IC card	16	CAS00/	CAS control signal for low
7	MD8	Data for memory bus	17	NC	
8	MD9	Data for memory bus in IC card	18	RAS0/	RAS control signal for bank 0
9	MD10	Data for memory bus	19	EA9	Address for memory bus
10	EA8	Address for memory bus	20	VCC1	Power supply to IC card

(To be continued)

Pin	Signal	Description	Pin	Signal	Description
21	VCC1	Power supply to IC card	31	EA0	Address for memory bus

22	EA7	Address for memory bus	32	MD0	Data for memory bus
23	EA6	Address for memory bus	33	MD1	Data for memory bus
24	EA5	Address for memory bus	34	MD2	Data for memory bus
25	EA4	Address for memory bus	35	MD11	Data for memory bus
26	EA3	Address for memory bus	36	MD12	Data for memory bus
27	EA2	Address for memory bus	37	MD13	Data for memory bus
28	EA1	Address for memory bus	38	MD14	Data for memory bus
29	CAS11/	CAS control singal for high byte of bank 1 in IC card	39	MD15	Data for memory bus
30	CAS10/	CAS control singal for low byte of bank 1 in IC card	40	GND	

3.2 VGA Board Connector Definitions

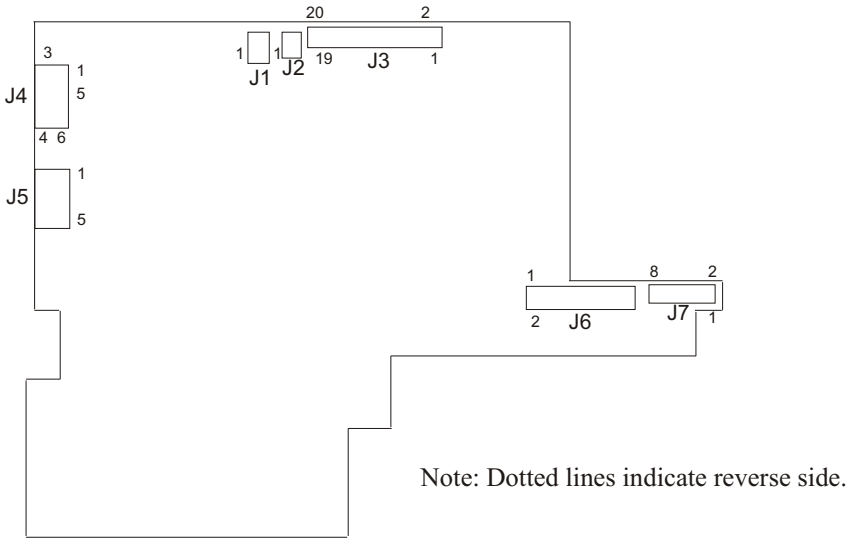


Figure 3-2. VGA Board Connector Positions

Connector	Definition	Number of Pins
J1	Speaker connector	2
J2	Lithium battery connector	2
J3	LCD connector	20
J4	Auxiliary device port (Mini DIN-6)	6
J5	Analog video port (DB-15)	15
J6	Scan lines from keyboard encoder to keyboard	16
J7	Keyboard matrix to keyboard encoder	8

3.2.1 Speaker Connector (J1)

Pin	Signal	Description
1	SPK1	Speaker signal
2	SPK2	Speaker signal

3.2.2 Lithium Battery Connector (J2)

Pin	Signal	Description
1	+BATTERY	Power supply from Li-battery
2	GND	

3.2.3 LCD Connector (J3)

Pin	Signal	Pin	Signal
1	LCD5V	11	UD0
2	GND	12	UD1
3	-VEE	13	UD2
4	BCLK	14	UD3
5	NC	15	LD0
6	NC	16	LD1
7	BCLK	17	LD2
8	BLFS	18	LD3
9	VDCLK	19	ENI
10	NC	20	ENO

Note: See Section 6.3.2 for descriptions.

3.2.4 Auxiliary Device Port (J4)

Pin	Signal	Description
1	KBCLK	Clock to synchronous KBDATA
2	NC	
3	GND	
4	+5V	Power supply to AUX device
5	KBDATA	Serial data to and from AUX device
6	NC	

3.2.5 Analog Video Port (J5)

Pin	Signal	Pin	Signal	Description
1	Red	9	NC	
2	Green	10	GND	
3	Blue	11	MS(0)	
4	MS(2)	12	MS(1)	
5	GND	13	BHSYNC	Horizontal Sync. output
6	GND	14	BVSYNC	Vertical Sync. output
7	GND	15	NC	
8	GND			

3.2.6 Internal Keyboard Matrix 1 (J6)

Pin	Signal	Description	Pin	Signal
1	SCAN0	Scan line of keyboard matrix	9	SCAN8
2	SCAN1		10	SCAN9
3	SCAN2		11	SCAN10
4	SCAN3		12	SCAN11
5	SCAN4		13	SCAN12
6	SCAN5		14	SCAN13
7	SCAN6		15	SCAN14
8	SCAN7		16	SCAN15

3.2.7 Internal Keyboard Matrix 2 (J7)

Pin	Signal	Description	Pin	Signal
1	KBMT0	Output line of keyboard matrix 5	KBMT4	
2	KBMT1		6	KBMT5
3	KBMT2		7	KBMT6
4	KBMT3		8	KBMT7

3.2.8 Board-to-board Connector (J501)

See Section 3.1.6.

3.3 DC-AC Inverter Connector Definitions

3.3.1 Input Connector (CN1)

Pin	Signal	Description
1	Backlight	Square wave input control the brightness by adjusting the duty cycle
2	GND	
3	+5V	Power supply from system

3.3.2 Output Connector (CN2)

Pin	Signal	Description
1	OUT1 (HV)	High AC voltage output
2	NC	
3	NC	
4	NC	
5	OUT2 (HV)	Ground