

Pin Assignments

B.1 CRT (VGA) Connector

The pin assignment of the VGA connector is as follows:

No	PIN ASSIGNMENT(by: sort)	DESCRIPTION
1	RED Video_5 :O (analog)	Red this DAC analog output drives the CRT interface.
2	GREEN Video_5 :O (analog)	Green this DAC analog output drives the CRT interface.
3	BLUE Video_5 :O (analog)	Blue this DAC analog output drives the CRT interface.
4	Monitor ID Bit 2 :	Option
5	GROUND :	Ground
6	RED Return (ground) :	Ground
7	GREEN Return (ground) :	Ground
8	BLUE Return (ground) :	Ground
9	KEY (no connector) :	VCC
10	SYNC Return (ground) :	Ground
11	MONITOR ID Bit 0_5 :	Monitor Sense Indicator
12	MONITOR ID Bit 1_5 :I	DDC monitor data
13	HORIZONTAL SYNC_5 :O (t/s)	CRT Horizontal Sync this output is The Horizontal sync pulse for the CRT Monitor.
14	VERTICAL SYNC_5 :O (t/s)	CRT Vertical Sync this output is the Vertical sync pulse for the CRT Monitor.
15	MONITOR ID Bit 3_5 :I/O	DDC monitor clock

Absolute Maximum Conditions

The following parameters are maximum ratings for VGA. Permanent device damage may occur if these rating are exceeded. Extended exposure to these ratings may also cause device failure.

PARAMETER	MIN	MAX	UNIT
I/O VOLTAGE	-0.5	+6.00V	V
OUTPUT CURRENT		-12mA(source) +24mA(sink)	m A

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B.2 Serial Port Connector

The pin assignment of the serial (COM1) port connector is as follows:

No	PIN ASSIGNMENT (by: sort)	DESCRIPTION
1	DCDA#_T:I	Active low Data Carrier Detect inputs for the serial port.
2	SINA_T:I	Receiver serial data input for port 1.
3	SOUTA_12:O	Transmit serial data output for port 1.
4	DTRA#_6:O	Active low Data Terminal Ready outputs for the serial port.
5	GND	Ground
6	DSRA#_T:I	Active low Data Set Ready inputs for the serial port.
7	RTSA#_6:O	Active low Request to Send Outputs for the serial port.
8	CTSA#_T:I	Active low Clear to Send inputs for the serial port.
9	RI#_T:I	Active low Ring Indicator inputs for the serial port.

B.3 Parallel Port Connector

The pin assignment of the parallel/printer (LPT1) port connector is as follows:

No	PIN ASSIGNMENT(by: sort)	Description
1	STB#/DS0#_D14/_P14/_D12:O	An active low pulse on this output is used to strobe the printer data into the printer. The STROBE output is the complement of Bit 0 of the printer control register. Refer to parallel port description for use of this pin in ECP and EPP mode. Active low outputs select driver 0
2	PD0/INDEX3#_P14/_S:IO/I	Port data 0 This active low Schmidt trigger input senses from the disk drive that the head is positioned over the beginning of a track as marked by an index hole.
3	PD1/TRK0#_P14/_S:IO/I	Port data 1 This active low Schmidt trigger input senses from the disk drive that the head is positioned over the outermost track.
4	PD2/WRTPR#_P14/_S:IO/I	Port data 2 This active low Schmidt trigger input senses from the disk drive that a disk is write protected. Any write command is ignored.
5	PD3/RDATA#_P14/_S:IO/I	Port data 3 Raw serial bit stream from the disk drive, low active. Each falling edge represents a flux transition of the encoded data.
6	PD4/DSKCHG_P14/_S:IO/I	Port data 4 This input senses that the driver door is open or that the diskette has possibly been changed since the last drive selection.
7	PD5_P14:IO	Port data 5
8	PD6/MTR0#_P14/_D12:IO/O	Port data 6 This active low outputs select motor drives 0.
9	PD7_P14:IO	Port data 7
10	ACK#/DS1#_T_D12:I/O	A low active output from the printer indicating that it has received the data and is ready to accept new data. Bit 6 of the printer status register reads the ACK# Input. Refer to parallel port description for use of this pin in ECP and EPP mode.
11	BUSY/MRT1#_T/_D12:_I/O	This is a status output from the printer, a high indicating that the printer is not ready to receive new data.

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		Bit 7 of the Printer status register is the complement Of the BUSY input. Refer to parallel port description for use of this pin in ECP and EPP mode. This active low outputs select motor Drives 1.
12	PE/WDATA#_T/_D12:I/O	Another status output from the printer, a high indicating that printer is out of paper. Bit 5 of the printer status register reads the PE input. Refer to parallel port description for use of this pin in ECP and EPP mode. This active low high current driver provide the encoded data to the disk drive. Each falling edge cause a flux transfer on the media.
13	SLCT/WGATE#_T/_D12:I/O	This high active output from the printer indicates that it has power on. Bit 4 of the printer status register read the SLCT input. Refer to parallel port description for use of this pin in ECP and EPP mode. This active low high current driver allows current to flow through the write head. It become active just prior to writing to the diskette.
14	AFD#/DSB#_D14,_P14/_D12:O,O/O	This output goes low to cause the printer to automatically feed one line after each line is printed. The AFD# output is the complement of bit 1 of the printer control register. Refer to parallel pot description for use of this pin in ECP and EPP mode.
15	ERR#/HSEL_T/D12:I/O	A low on this input from the printer indicates that there is a error condition at the printer. Bit 3 of the printer status register reads the ERR# input. Refer to parallel port description for use of this pin in ECP and EPP mode. This high current output selects the floppy disk side for reading or writing. A logic "1" on this pin means side 0 will be accessed while a logic "0" means side 1 will be accessed.
16	INIT#/DIR#_D14,_P14/D12:O,O/O	This output is bit 2 of the printer control register. This is used to initiate the printer when low. Refer to parallel port description for use of this pin in ECP and EPP mode. This high current low active output determines the direction of the head movement. A logic "1" on this pin means outward motion, while a logic "0" means inward motion.
17	SLIN#/STEP#_D14,_P14/_D12:O,O/O	This active low output selects the printer. This is the complement of bit 3 of the printer control register. Refer to parallel port description for use of this pin in ECP and EPP mode. This active low high current driver issues s low pulse for each track to track movement of the head.
18	GND:	Ground
19	GND:	Ground
20	GND:	Ground
21	GND:	Ground
22	GND:	Ground
23	GND:	Ground
24	GND:	Ground
25	GND:	Ground

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B.4 PS/2 Mouse / Ext. Keyboard MiniDIN Connector

Following is the pin assignment of the PS/2 connector:

No	Signal	Description	Type
1	MOUSE_CLK	External clock for mouse or keyboard	I/O
2	EKB_CLK	External clock for mouse or keyboard	I/O
3	+5vs	5v power supply	O
4	Gnd	Ground	I
5	EKB_DATA	External data for mouse or keyboard	I/O
6	MOUSE_DATA	External data for mouse or keyboard	I/O

B.5 USB Connector

The pin assignment of the USB port connector is as follows:

No	Signal	Description	Type
1, 5, 9, 10, 11, 12	GND	Ground	O
2	USBP0+	USB port0 bus signal	O
3	USBP0-	USB port0 bus signal	O
4	+5VS	USB port0 power	
6	USBP1+	USB port1 bus signal	
7	USBP1-	USB port1 bus signal	
8	+5VS	USB port1 power	

B.6 CD-ROM IDE Connector

The following is the pin assignment for the CD-ROM IDE connector:

NO.	Signal	Description	Type
5	CDROMRESET#	Reset secondary disk	O
33	RSDA0	Secondary disk address 0	O
31	RSDA1	Secondary disk address 1	O
34	RSDA2	Secondary disk address 2	O
21	RSDD0	Secondary disk data 0	I/O
19	RSDD1	Secondary disk data 1	I/O
17	RSDD2	Secondary disk data 2	I/O
15	RSDD3	Secondary disk data 3	I/O
13	RSDD4	Secondary disk data 4	I/O
11	RSDD5	Secondary disk data 5	I/O
9	RSDD6	Secondary disk data 6	I/O
7	RSDD7	Secondary disk data 7	I/O
6	RSDD8	Secondary disk data 8	I/O
8	RSDD9	Secondary disk data 9	I/O
10	RSDD10	Secondary disk data 10	I/O
12	RSDD11	Secondary disk data 11	I/O
14	RSDD12	Secondary disk data 12	I/O
16	RSDD13	Secondary disk data 13	I/O
18	RSDD14	Secondary disk data 14	I/O
20	RSDD15	Secondary disk data 15	I/O
35	RSDCS1#	Secondary disk chip select for 100 range	O
36	RSDCS3#	Secondary disk chip select for 300 range	O
28	RSDDACK#	Secondary DMA acknowledge	O
22	RSDDREQ	Secondary DMA request	I

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24	RSDIOR#	Secondary disk IO read	O
25	RSDIOW#	Secondary disk IO write	O
27	RSIRDY	Secondary disk IO channel ready	I
29	IRQ15	Secondary disk interrupt	I
50	NC		NC
49	NC		NC
37	CDROMLED#	CDROM access indicator	O
2	CD_R	CDROM sound right signal	O
4	GND	Ground	I
1	CD_L	CDROM sound left signal	O
3	CD_RGND	Left Ground	I
39,41,38,40,42	+5Vs	+5V power supply	I
23,43,44,45,46,48	Gnd	Ground	O
47	CSEL	SELECT MASTER OR SLAVE	I

B.7 DC-IN Jack Pin Assignment

The pin assignment of the DC-IN connector is as follows:

No	Signal	Description	Type
1	ADAPV+	Adapter input voltage	I
2	Gnd	Ground	O

B.8 LCD Connector Pin Assignment

The pin assignment of the LCD connector is as follows:

NO.	Signal	Description	Type
22	INVENA	Flat panel backlight signal control the LCD backlight.	O
2	LCDID0	LCD type bit0	I
4	LCDID1	LCD type bit1	I
6	LCDID2	LCD type bit2	I
8	LCDID3	LCD type bit3	
20	BRIGHTNESS	LCD brightness adjust voltage	O
23	TXOUTU0-		O
21	TXOUTU0+		O
17	TXOUTU1-		O
15	TXOUTU1+		O
11	TXOUTU2-		O
9	TXOUTU2+		O
5	TXCLK-		O
3	TXCLK+		O
16	MAIL LED		
10	LED GREEN		
12	LED AMBER		
14	LED CHG		
46,48,50	+3V		
24,26,28,30,32	+5V		
1,7,13,19,25,31,37,43,49,34,36,38,40,42,44	GND		
18	NC		

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B.9 FDD Connector

The pin assignment for the FDD connector is as follows:

NO.	Signal	Description	Type
24	RDATA#	Read disk data. Raw serial bit stream from the disk drive, low active. Each falling edge represents a flux transition of the encoded data.	I
18	WGATE#	Write gate. This active low high current driver allows current to flow through the write head . It becomes active just prior to writing to the diskette.	O
16	WDATA#	Write data. This active low high current driver provides the encoded data to the disk drive. Each falling edge causes a flux transition on the media.	O
26	HDSEL#	Head select. The high current select the floppy disk side for reading or writing. A logic "1" on the pin means side 0 will be accessed, while a logic "0" means side 1 will be accessed.	O
12	DIR#	Direction control. This high current low active output determines the direction of the head movement. A logic "1" on this pin means outward motion , while a logic "0" means inward motion.	O
14	STEP#	Step pulse. The active low high current driver issues a low pules for each track-to-track movement of the head.	O
6	DSKCHG#	Disk change. This input senses that the drive door is open or that the diskette has possibly been changed since the last drive selection. This input is inverted and read via bit 7 of I/O address 3F7H. The DSKCHG# bit also depends upon the state of the Force Disk Change bits in the Force FDD Status Change configuration register.	I
4	DS0#	Drive select 0. Active low outputs select drives 0.	O
10	MOTR0	Motor on. These active low output motor on.	O
13	3MODE	3 Mode FDD select.	O
22	WRTPRT#	Write protected. This active low Schmitt trigger input senses from the disk drive that a disk is write protected.	I
20	TRK0#	Track 00. This active low Schmitt trigger input senses from the disk drive that the head is positioned over the outermost track.	I
2	INDEX#	This active low Schmitt Trigger input senses from the disk drive that head is positioned over the beginning of a track , as marked by an index hole.	I
7,8,9	NC		
25,23,21,19,17,15	Gnd	Ground	I
11,5,3,1	+5Vs	+5V power supply	O

B.10 HDD Pin Assignment

The pin assignment of the internal HDD is as follows:

NO.	Signal	Description	Type
1	HDDRESET#	Reset primary disk	O
35	RPDA0	Primary disk address 0	O
33	RPDA1	Primary disk address 1	O
36	RPDA2	Primary disk address 2	O
17	RPDD0	Primary disk data 0	I/O
15	RPDD1	Primary disk data 1	I/O
13	RPDD2	Primary disk data 2	I/O
11	RPDD3	Primary disk data 3	I/O
9	RPDD4	Primary disk data 4	I/O
7	RPDD5	Primary disk data 5	I/O
5	RPDD6	Primary disk data 6	I/O
3	RPDD7	Primary disk data 7	I/O

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4	RPDD8	Primary disk data 8	I/O
6	RPDD9	Primary disk data 9	I/O
8	RPDD10	Primary disk data 10	I/O
10	RPDD11	Primary disk data 11	I/O
12	RPDD12	Primary disk data 12	I/O
14	RPDD13	Primary disk data 13	I/O
16	RPDD14	Primary disk data 14	I/O
18	RPDD15	Primary disk data 15	I/O
37	RPDCS1#	Primary disk chip select for 100 range	O
38	RPDCS3#	Primary disk chip select for 300 range	O
29	RPDDACK#	Primary DMA acknowledge	O
21	RPDDREQ	Primary DMA request	I
25	RPDIOR#	Primary disk IO read	O
23	RPDIOW#	Primary disk IO write	O
27	RPIORDY	Primary disk IO channel ready	I
31	IRQ14	Primary disk interrupt	I
39	HDDLED#	HDD access indicator	O
2,19,22,24,26,28,30,40,43	Gnd	Ground	I
41,42	+5Vs	+5v power supply	O

B.11 Internal Keyboard FPC Connector

The pin assignment of the internal keyboard connector is as follows:

No	Signal	Description	Type
1,25	X15	Keyboard matrix column 15	I
2,26	X14	Keyboard matrix column 14	I
3,27	X13	Keyboard matrix column 13	I
4,28	X12	Keyboard matrix column 12	I
5,29	X11	Keyboard matrix column 11	I
6,30	X10	Keyboard matrix column 10	I
7,31	X9	Keyboard matrix column 9	I
8,32	X8	Keyboard matrix column 8	I
9,33	X7	Keyboard matrix column 7	I
10,34	X6	Keyboard matrix column 6	I
11,35	X5	Keyboard matrix column 5	I
12,36	XY7	Keyboard matrix row 7	O
13,37	XY6	Keyboard matrix row 6	O
14,38	XY5	Keyboard matrix row 5	O
15,39	XY4	Keyboard matrix row 4	O
16,40	X4	Keyboard matrix column 4	I
17,41	X3	Keyboard matrix column 3	I
18,42	XY3	Keyboard matrix row 3	O
19,43	XY2	Keyboard matrix row 2	O
20,44	XY1	Keyboard matrix row 1	O
21,45	XY0	Keyboard matrix row 0	O
22,46	X2	Keyboard matrix column 2	I
23,47	X1	Keyboard matrix column 1	I
24,48	X0	Keyboard matrix column 0	I

B.12 Battery Connector

The pin assignment for the battery connector is as follows:

No	Signal	Description	Type
1	Gnd	Ground	-
2	B_PMU5V		I
3	BAT+	Battery output/input voltage	I/O

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4	CLK	SMBus clock signal	I/O
5	DTA	SMBus data signal	I/O
6	TH1	THERMAL	O
7	BIN1		O
8	GND	GROUND	-

B.13 Audio Jack

The audio jack comprises of the headphone jack, line-out jack, and microphone jack:

SPDIF & Headphone Jack

The pin assignment of the headphone jack is as follows:

No	Signal	Description	Type
4	GND	Ground	I
2	HP_L	Headphone left sound	O
3	HP_R	Headphone right sound	O
5	SPDIFDET	SPDIF insert detect	I
1	HPDET	Headphone insert detect	I
8	SPDIF PWR	SPDIF power	O
7	SPDIF	SPDIF signal	O
9	GND	Ground	I

Line-In Jack

The pin assignment of the line-in jack is as follows:

No	Signal	Description	Type
1	GND	Ground	I
2	LINEINL	Line in left sound	I
3	LINEINR	Line in right sound	I
4	GND	Ground	I
5	GND	Ground	I

Microphone Jack

The pin assignment of the microphone jack is as follows:

No	Signal	Description	Type
1	GND	Ground	I
2	MICIN	External Microphone input signal	I
3	GND	Ground	I
4	EXTMICDET	EXTERNAL MIC detect	I
5	GND	Ground	I

B.14 Internal Microphone Connector

The pin assignment of the internal microphone is as follows:

No	Signal	Description	Type
1	MICIN	External Microphone input signal	
2	GND	Ground	