TRENTON Technology Inc.
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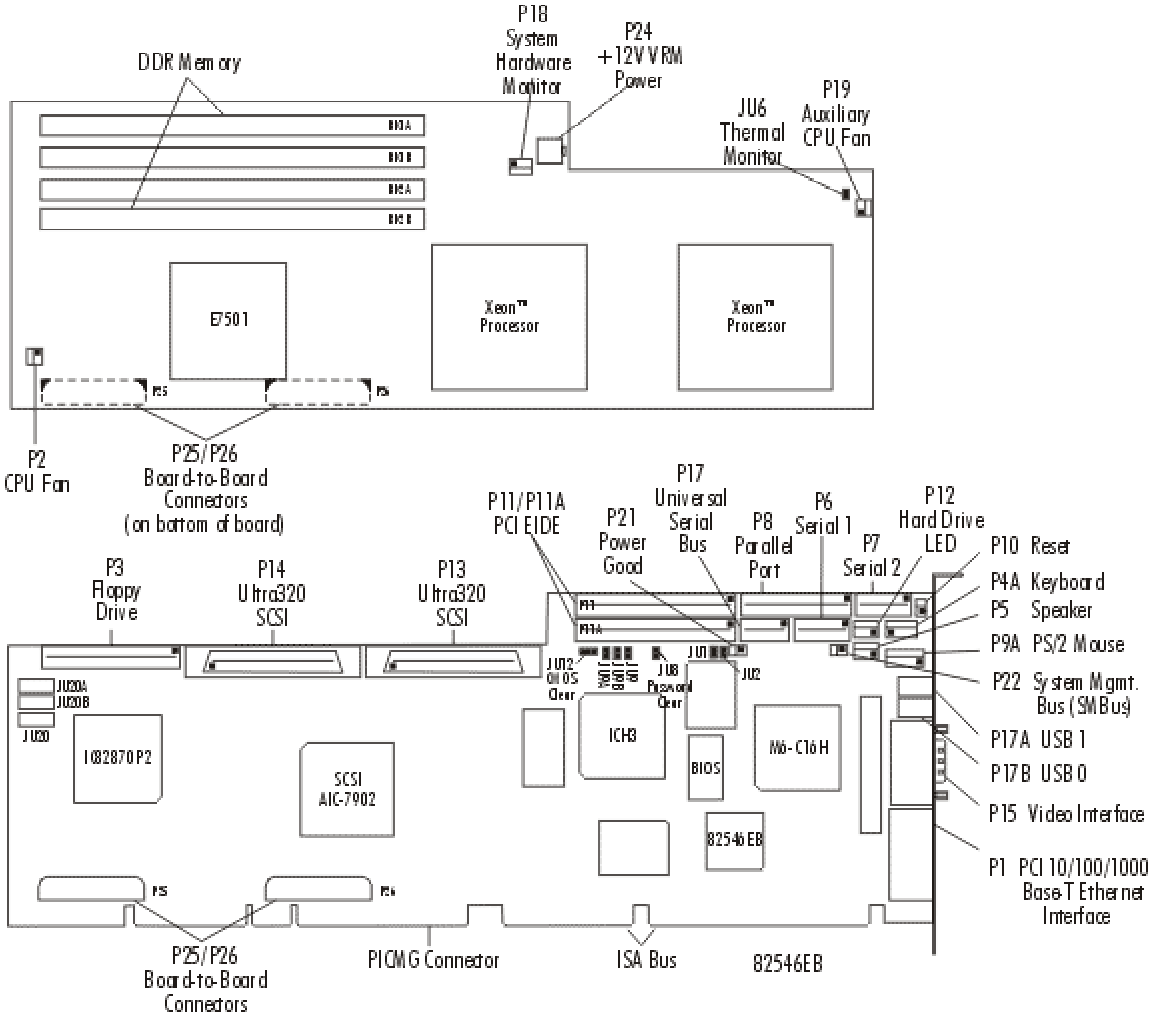
Technical Information – Jumpers, Connectors and Memory
XPT (6090-xxx) System Host Board

Layout Diagram



NOTE: P9 - PS/2 Mouse/Keyboard connector is located on the I/O bracket.

Jumpers & LEDs

The setup of the configuration jumpers on the SHB is described below. An asterisk (*) indicates the default value of each jumper.

NOTE: For two-position jumpers (3-post), "RIGHT" is toward the bracket end of the board; "LEFT" is toward the memory sockets.

XPT PROCESSOR BOARD

JU6 **Thermal Throttling LED**

If the processor core gets to a critical temperature, it slows itself down to half its normal speed. This jumper sets the way in which the LED displays in response to this self-limiting mode.

Install for real-time activity. The LED lights only when the processor is operating in slow-power

mode.*

Remove for latched activity. The LED lights and stays on once the processor has gone into slow-power mode.

NOTE: Critical temperature is determined by the processor and cannot be altered by the user.

XPT I/O BOARD

JU1/2 **System Flash ROM Operational Modes**

The Flash ROM has two programmable sections: the Boot Block for "flashing" in the BIOS and the Main Block for the executable BIOS and PnP parameters. Normally only the Main Block is updated when a new BIOS is flashed into the system.

	JU1	JU2
All Blocks Write Enabled	Remove *	Remove *
Boot Block Write Protected	Install	Remove
Block 2-16 Write Protected	Remove	Install

JU8 **Password Clear**

Install for one power-up cycle to reset the password to the default (null password).
Remove for normal operation. *

JU9/9A/9B **SCSI Termination - CHANNEL 0**

These three jumpers may be used to enable or disable on-board active termination for the Ultra320 SCSI interface - Channel 0.

	JU9	JU9A	JU9B
Enable active termination	Install *	Install*	Remove*
Disable active termination	Remove	Remove	Remove
Enable upper byte only	Remove	Install	Remove
Control via SCSI BIOS Utility	Remove	Remove	Install

JU20/20A/20B **SCSI Termination - CHANNEL 1**

These three jumpers may be used to enable or disable on-board active termination for the Ultra320 SCSI interface - Channel 1.

	JU20	JU20A	JU20B
Enable active termination	Install *	Install*	Remove*
Disable active termination	Remove	Remove	Remove
Enable upper byte only	Remove	Install	Remove
Control via SCSI BIOS Utility	Remove	Remove	Install

JU12 **CMOS Clear**

Install on the RIGHT to clear.
Install on the LEFT to operate. *

NOTE: The CMOS Clear jumper works on power-up. To clear the CMOS, power down the system, install the jumper, then turn the power back on. Wait for at least two seconds and turn the power off. Then remove the jumper and turn the power on. When AMIBIOS displays the "CMOS Settings Wrong" message, press F1 to go into the BIOS Setup Utility, where you may reenter your desired BIOS settings, load optimal defaults or load failsafe defaults.

NOTE: If the CMOS settings are cleared, the processor may reset to the safe mode, resulting in a reduction in execution speed which affects overall system performance. After clearing CMOS, you should always check the operating speed and reset it if necessary. To reset the SBC to the correct operating speed, use the CPU Ratio CMOS Setting option on the CPU Configuration screen. See the Advanced Setup chapter of this manual for further details.

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Connectors

NOTE:
Pin 1 on the connectors is indicated by the square pad on the PCB.

XPT PROCESSOR BOARD

P2 - CPU Fan

3 pin single row header, Molex #22-23-2031

PIN	SIGNAL
1	Gnd
2	+12V
3	Fan Tach

P18 - SYSTEM HARDWARE MONITOR CONNECTOR

4 pin single row header, Amp #640456-4

PIN	SIGNAL
1	Gnd
2	GPO (General Purpose Output)
3	CI (Chassis Intrusion Input)
4	OVT (Over Temperature)

XPT I/O BOARD

P1 - 10/100/1000Base-T Ethernet Connectors - LAN1/LAN2

Dual RJ-45 connector, Amp/Tyco #1116353-4

PIN	SIGNAL	PIN	SIGNAL
1	TRP1+	5	TRP3-
2	TRP1-	6	TRP2-
3	TRP2+	7	TRP4+
4	TRP3+	8	TRP4-

P3 - FLOPPY DRIVE CONNECTOR

34 pin right angle connector, SAMTEC #ASP-104496-01

PIN	SIGNAL	PIN	SIGNAL
1	Gnd	2	N-RPM
3	Gnd	4	NC
5	Gnd	6	D-Rate0
7	Gnd	8	P-Index
9	Gnd	10	N-Motoron 1

P19 - Auxiliary CPU Fan

3 pin single row header, Molex #22-23-2031

PIN	SIGNAL
1	Gnd
2	+12V
3	Fan Tach

P24 - CPU VRM POWER INPUT

4 pin header, Molex #39-29-3046

PIN	SIGNAL
1	Gnd
2	Gnd
3	+12V
4	+12V

P12 - HARD DRIVE LED CONNECTOR

4 pin single row header, Amp #640456-4

PIN	SIGNAL
1	LED +
2	LED -
3	LED -
4	LED +

P13 - SCSI CONNECTOR

68 pin "D" right angle connector, Amp/Tyco #3-174682-7

PIN	SIGNAL	PIN	SIGNAL
1	SCD12	35	SCD#12
2	SCD13	36	SCD#13
3	SCD14	37	SCD#14
4	SCD15	38	SCD#15
5	SCDPH	39	SCDPH#
6	SCD0	40	SCD#0
7	SCD1	41	SCD#1

11	Gnd	12	N-Drive Sel2
13	Gnd	14	N-Drive Sel1
15	Gnd	16	N-Motoron 2
17	Gnd	18	N-Dir
19	Gnd	20	N-Stop Step
21	Gnd	22	N-Write Data
23	Gnd	24	N-Write Gate
25	Gnd	26	P-Track 0
27	Gnd	28	P-Write Protect
29	Gnd	30	N-Read Data
31	Gnd	32	N-Side Select
33	Gnd	34	Disk Chng

Connectors (Continued)

P4A - KEYBOARD HEADER

5 pin single row header, Amp #640456-5

PIN	SIGNAL
1	Kbd Clock
2	Kbd Data
3	Key
4	Kbd Gnd
5	Kbd Power (+5V fused) with self-resetting fuse

P5 - SPEAKER PORT CONNECTOR

4 pin single row header, Amp #640456-4

PIN	SIGNAL
1	Speaker Data
2	Key
3	Gnd
4	+5V

P6 - SERIAL PORT 1 CONNECTOR

10 pin dual row header, Amp #103308-1

PIN	SIGNAL	PIN	SIGNAL
1	Carrier Detect	2	Data Set Ready-I

7	SCD1	41	SCD#1
8	SCD2	42	SCD#2
9	SCD3	43	SCD#3
10	SCD4	44	SCD#4
11	SCD5	45	SCD#5
12	SCD6	46	SCD#6
13	SCD7	47	SCD#7
14	SCDPL	48	SCDPL#
15	Gnd	49	Gnd
16	DIFSENSE	50	Gnd
17	TERMPWR	51	TERMPWR
18	TERMPWR	52	TERMPWR
19	NC	53	NC
20	Gnd	54	Gnd
21	SCATN	55	SCATN#
22	Gnd	56	Gnd
23	SCBSY	57	SCBSY#
24	SCACK	58	SCACK#
25	SCRST	59	SCRST#
26	SCMSG	60	SCMSG#
27	SCSEL	61	SCSEL#
28	SCCD	62	SCCD#
29	SCREQ	63	SCREQ#
30	SCIO	64	SCIO#
31	SCD8	65	SCD#8
32	SCD9	66	SCD#9
33	SCD10	67	SCD#10
34	SCD11	68	SCD#11

P14 - SCSI CONNECTOR

68 pin "D" right angle connector, Amp/Tyco #3-174682-7

PIN	SIGNAL	PIN	SIGNAL
1	SCD12	35	SCD#12
2	SCD13	36	SCD#13
3	SCD14	37	SCD#14

3	Receive Data-I	4	Request to Send-O
5	Transmit Data-0	6	Clear to Send-I
7	Data Terminal Ready-0	8	Ring Indicator-I
9	Signal Gnd	10	NC

Connectors (Continued)

P7 - SERIAL PORT 2 CONNECTOR

10 pin dual row header, Amp #103308-1

PIN	SIGNAL	PIN	SIGNAL
1	Carrier Detect	2	Data Set Ready-I
3	Receive Data-I	4	Request to Send-O
5	Transmit Data-0	6	Clear to Send-I
7	Data Terminal Ready-0	8	Ring Indicator-I
9	Signal Gnd	10	NC

P8 - PARALLEL PORT CONNECTOR

26 pin dual row header, Amp #103308-6

PIN	SIGNAL	PIN	SIGNAL
1	Strobe	2	Auto Feed XT
3	Data Bit 0	4	Error
5	Data Bit 1	6	Init
7	Data Bit 2	8	Slct In
9	Data Bit 3	10	Gnd
11	Data Bit 4	12	Gnd
13	Data Bit 5	14	Gnd
15	Data Bit 6	16	Gnd
17	Data Bit 7	18	Gnd
19	ACK	20	Gnd
21	Busy	22	Gnd
23	Paper End	24	Gnd
25	Slct	26	NC

4	SCD15	38	SCD#15
5	SCDPH	39	SCDPH#
6	SCD0	40	SCD#0
7	SCD1	41	SCD#1
8	SCD2	42	SCD#2
9	SCD3	43	SCD#3
10	SCD4	44	SCD#4
11	SCD5	45	SCD#5
12	SCD6	46	SCD#6
13	SCD7	47	SCD#7
14	SCDPL	48	SCDPL#
15	Gnd	49	Gnd
16	DIFSENSE	50	Gnd
17	TERMPWR	51	TERMPWR
18	TERMPWR	52	TERMPWR
19	NC	53	NC
20	Gnd	54	Gnd
21	SCATN	55	SCATN#
22	Gnd	56	Gnd
23	SCBSY	57	SCBSY#
24	SCACK	58	SCACK#
25	SCRST	59	SCRST#
26	SCMSG	60	SCMSG#
27	SCSEL	61	SCSEL#
28	SCCD	62	SCCD#
29	SCREQ	63	SCREQ#
30	SCIO	64	SCIO#
31	SCD8	65	SCD#8
32	SCD9	66	SCD#9
33	SCD10	67	SCD#10
34	SCD11	68	SCD#11

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Connectors (Continued)

P9 - PS/2 MOUSE AND KEYBOARD CONNECTOR
6 pin mini DIN, Singatron #2MJ-204-16000

PIN	SIGNAL
1	Ms Data
2	Kbd Data
3	Gnd
4	Power (+5V fused) with self-resetting fuse
5	Ms Clock
6	Kbd Clock

P9A - PS/2 MOUSE HEADER
6 pin single row header, Amp #640456-6

PIN	SIGNAL
1	Ms Data
2	Reserved
3	Gnd
4	Power (+5V fused) with self-resetting fuse
5	Ms Clock
6	Reserved

P10 - External Reset Connector
2 pin single row header, Amp #640456-2

PIN	SIGNAL
1	External Reset In (Low Active)
2	Gnd

P11 - Primary IDE Hard Drive Connector
40 pin dual row header, 3M #30340-6002HB

PIN	SIGNAL	PIN	SIGNAL
1	Reset	2	Gnd
3	Data 7	4	Data 8
5	Data 6	6	Data 9
7	Data 5	8	Data 10

P15 - VIDEO INTERFACE CONNECTOR
15 pin HD15 connector, Amp #1-1470250-3

PIN	SIGNAL	PIN	SIGNAL	PIN	SIGNAL
1	Red	6	Gnd	11	NC
2	Green	7	Gnd	12	EEDI
3	Blue	8	Gnd	13	HSYNC
4	NC	9	+5V	14	VSYNC
5	Gnd	10	Gnd	15	EECS

P17 - UNIVERSAL SERIAL BUS (USB) CONNECTOR
8 pin dual row header, Molex #702-46-0821
(+5V fused with self-resetting fuses)

PIN	SIGNAL	PIN	SIGNAL
1	+5V - USB0	2	+5V - USB1
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	Gnd - USB0	8	Gnd - USB1

P17A - UNIVERSAL SERIAL BUS (USB) CONNECTOR
USB vertical connector, Molex #67-329-0000
(+5V fused with self-resetting fuses)

PIN	SIGNAL
1	+5V - USB1
2	USB1-
3	USB1+
4	Gnd - USB1

P17B - UNIVERSAL SERIAL BUS (USB) CONNECTOR
USB vertical connector, Molex #67-329-0000
(+5V fused with self-resetting fuses)

PIN	SIGNAL
1	+5V - USB0
2	USB0-
3	USB0+
4	Gnd - USB0

P21 - POWER GOOD LED
2 pin single row header, Amp #640456-2

9	Data 4	10	Data 11
11	Data 3	12	Data 12
13	Data 2	14	Data 13
15	Data 1	16	Data 14
17	Data 0	18	Data 15
19	Gnd	20	NC
21	DRQ 0	22	Gnd
23	IOW	24	Gnd
25	IOR	26	Gnd
27	IORDY	28	SELPDP
29	DACK 0	30	Gnd
31	IRQ 14	32	NC
33	Add 1	34	PCBL DET*
35	Add 0	36	Add 2
37	CS 1P	38	CS 3P
39	IDEACTP	40	Gnd

* For ATA/66 and ATA/100 drives, which should be set for Cable Select for proper speed operation. If other Drives are detected, pin definition is Gnd.

P11A - Secondary IDE Hard Drive Connector

40 pin dual row header, Amp #1-1761610-3

PIN	SIGNAL	PIN	SIGNAL
1	Reset	2	Gnd
3	Data 7	4	Data 8
5	Data 6	6	Data 9
7	Data 5	8	Data 10
9	Data 4	10	Data 11
11	Data 3	12	Data 12
13	Data 2	14	Data 13
15	Data 1	16	Data 14
17	Data 0	18	Data 15
19	Gnd	20	NC
21	DRQ 1	22	Gnd
23	IOW	24	Gnd
25	IOR	26	Gnd

PIN	SIGNAL
1	LED -
2	LED +

P22 - SYSTEM MANAGEMENT BUS CONNECTOR

2 pin single row header, Amp #640456-2

PIN	SIGNAL
1	SMB Clock
2	SMB Data

27	IORDY	28	SELPDS
29	DACK 1	30	Gnd
31	IRQ 15	32	NC
33	Add 1	34	SCBL DET*
35	Add 0	36	Add 2
37	CS 1S	38	CS 3S
39	IDEACTS	40	Gnd

* For ATA/66 and ATA/100 drives, which should be set for Cable Select for proper speed operation. If other Drives are detected, pin definition is Gnd.

Memory

The Double Data Rate (DDR) memory interface consists of two channels, each terminating at a pair of DIMM sockets, providing a total of four memory sockets. The SBC supports auto detection of up to 8GB of memory. The System BIOS automatically detects memory type, size and speed.

The SBC uses industry standard 72-bit wide gold finger PC1600 or PC2100 memory modules in four 184-pin sockets.

NOTE: The four memory sockets on the SBC must be installed in pairs, beginning with the sockets in Bank 1 (i.e., BK1A and BK1B), and must contain ECC registered PC1600 or PC2100 DIMMs. All DIMMs must be the same speed (PC1600 or PC2100). The modules within a pair must be the same size; however, if two pairs are used, each pair can contain a different size module. DIMM sizes can range from 128MB to 2GB each. All memory modules must have gold contacts.

The SBC supports DIMMs which are PC1600/PC2100 compliant and have the following features:

- 184-pin with gold-plated contacts
- ECC (72-bit) memory
- Registered configuration

The following DIMM sizes are supported:

DIMM Size	DIMM Type	ECC
128MB	Registered	16M x 72
256MB	Registered	32M x 72
512MB	Registered	64M x 72
1GB	Registered	128M x 72
2GB	Registered	256M x 72