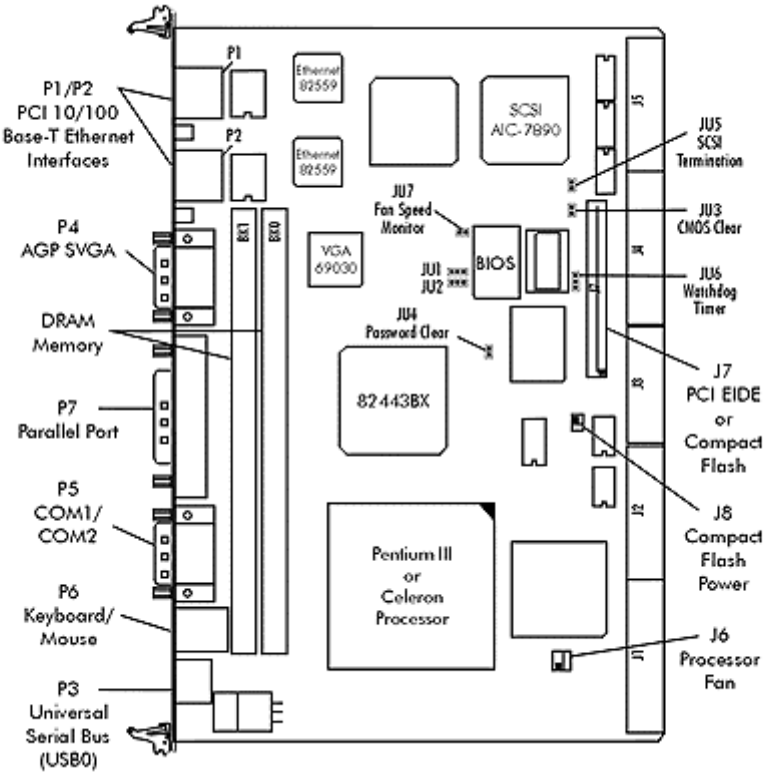
TRENTON Technology Inc.
2350 Centennial Drive • Gainesville, Georgia 30504
Sales (800) 875-6031 • Phone (770) 287-3100 • Fax (770) 287-3150

Technical Information – Jumpers, Connectors and Memory
CPBI(5814-xxx) System Host Board

Layout Diagram



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), "LEFT" is toward the bracket end of the board; "RIGHT" is toward the connectors.

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.

	JU10	JU11
Write Protect	Left	Right
Normal PnP (Program Main Block)	Right *	Right*
Program All (Boot and Main)	Right	Left

JU3 CMOS Clear

INSTALL = Clear CMOS
REMOVE = 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. CMOS is cleared during the POST routines. Then power down the

system again and remove the jumper before the next power-up.

JU4 Password Clear

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

JU5 SCSI TERMINATION ENABLE

(Not available on BASIC model)

INSTALL= Enable on-board active termination for SCSI interface

REMOVE= Disable *

JU6 WATCHDOG TIMER

BOTTOM = Normal reset *
TOP = Enable watchdog

JU7 FAN SPEED MONITOR

INSTALL = Enable processor fan monitor
REMOVE = Disable *

ETHERNET LEDS AND CONNECTORS

The Ethernet interface has two LEDs for status indication and an RJ-45 network connector.

LED/Connector		Description
Link/Activity LED		Green LED which indicates the link status.
	Off =	The Ethernet interface did not find a valid link on the network connection. Transmit and receive are not possible.
	On = (solid)	The Ethernet interface has a valid link on the network connection and is ready for normal operation. The Speed LED identifies connection speed.
	On = (flashing)	Indicates network transmit or receive activity.
Speed LED		Amber LED which identifies connection speed.
	Off =	Indicates a 10Mb/s connection.
	On =	Indicates a 100Mb/s connection.
RJ-45 Network Connector		The RJ-45 network connector requires a category 5 (CAT5) unshielded twisted-pair (UTP) 2-pair cable for a 100-Mb/s network connection or a category 3 (CAT3) or higher UTP 2-pair cable for a 10-Mb/s network connection.

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Connectors

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

J6 - PROCESSOR FAN

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

PIN	SIGNAL
1	Gnd
2	+12V
3	FanTach

J7 - PCI EIDE OR COMPACT FLASH 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
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	Gnd
35	Add 0	36	Add 2
37	CS 1P	38	CS 3P
39	IDEACTP	40	Gnd

J8 - COMPACT FLASH POWER

2 pin header, Amp #640456-2

P6 - KEYBOARD/MOUSE CONNECTOR

Stacked dual 6 pin right angle mini DIN, Amp #440173-3

Keyboard Connector:

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

PS/2 Mouse Connector:

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

P7 - PARALLEL PORT CONNECTOR

25 pin D, Amp #747846-4

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

PIN	SIGNAL
1	Gnd
2	+3.3V
13	Slct

Connectors (Continued)

P1 - PCI 10/100BASE-T ETHERNET CONNECTOR

8 pin shielded RJ-45 connector, Molex #43202-8110

PIN	SIGNAL
1	TD+
2	TD-
3	RX+
4	NC
5	NC
6	RX-
7	NC
8	NC

P2 - PCI 10/100BASE-T ETHERNET CONNECTOR

8 pin shielded RJ-45 connector, Molex #43202-8110

PIN	SIGNAL
1	TD+
2	TD-
3	RX+
4	NC
5	NC
6	RX-
7	NC
8	NC

P3 - UNIVERSAL SERIAL BUS (USB0) CONNECTOR

Right angle single port, Amp #787616-1 (+5V fused with self-resetting fuses)

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

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Memory

The DRAM interface consists of two dual in-line memory module (DIMM) sockets and supports auto detection of memory up to 512MB of Synchronous DRAM (SDRAM). Minimum memory size is 8MB. The System BIOS automatically detects memory type, size and speed.

The SBC uses industry standard 64-bit or 72-bit wide gold finger DIMM DRAM in two 168-pin DIMM sockets.

NOTE: Memory can be installed in one or both DIMM sockets. If only one DIMM module is used, it must be populated in Bank 0 (BK0) if it is an 8MB or 16MB DIMM module; single DIMMs of all other sizes must be populated in Bank 1 (BK1). If two modules are used, they must be the same DIMM type, but may be different sizes (see table below). EDO DIMMs are not supported. All DIMMs must have gold contacts.

The SBC supports DIMM memory modules which are PC-100 compliant and have the following features:

- 168-pin DIMMs with gold-plated contacts
- 100MHz SDRAM
- Non-ECC (64-bit) or ECC (72-bit) memory
- 3.3 volt only
- Single or double-sided DIMMs in the sizes listed below
- Buffered or Registered configuration

DIMM Size	DIMM Type	Non-ECC	ECC
8 MB	Unbuffered	1M x 64	1M x 72
16 MB	Unbuffered	2M x 64	2M x 72
32 MB	Unbuffered	4M x 64	4M x 72
64 MB	Unbuffered	8M x 64	8M x 72
128 MB	Unbuffered	16M x 64	16M x 72
256 MB	Registered or Unbuffered	32M x 64	32M x 72

NOTE: DIMM modules must not exceed 1.2" in height.
256MB unbuffered DIMMs must be based on 128Mbit SDRAM chips.

All memory components and DIMMs used with the SBC must be PC-100 compliant, which means that they comply with Intel's PC SDRAM specifications. These include the PC SDRAM Specification (memory component specific), the PC Unbuffered DIMM Specification, the PC Registered DIMM Specification and the PC Serial Presence Detect Specification.

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Pin Assignments

J1 and J2 comprise the 32-bit/33MHz CompactPCI Bus as defined by the CompactPCI Specification.

Connectors J3, J4 and J5 of the CompactPCI Bus are utilized by the SBC for connection to the Rear Transition Module (RTM). The SBC and RTM are designed so that the signals on J3, J4 and J5 must be routed *only* through those connectors between the SBC and RTM. No other connection of those signals should be made on the backplane. Specifically, this SBC must not be used in conjunction with a backplane that has signals on J3, J4 or J5 bussed to the SBC slot, i.e., some H.110 backplanes.

The pin assignments for the J3, J4 and J5 connectors are defined in the tables below.

NOTE: rJ3, rJ4 and rJ5 are designations used on the RTM10.

J3/rJ3

PIN	F	E	D	C	B	A
19	GND		SIRQ	SIORDY		SRESET
18	GND	SDACK#			CSIP#	CS3P#
17	GND	SDREQ	SDD12	SDD13	SDD14	SDD15
16	GND		SDD8	SDD9	SDD10	SDD11
15	GND		SDA2	VCC	SDA1	SDA0
14	GND	SDIOW#	SDD4	SDD5	SDD6	SDD7
13	GND	SDIOR#	SDD0	SDD1	SDD2	SDD3
12	GND	WDATA#	INDEX#	MTR0#	DRVDEN1	DRV0#
11	GND	RDATA#	DRVDEN0	MTR1#	DSKCHG	DRV1#
10	GND	STEP#	TRKO#	DIR#	HDSEL#	WP#
9	GND	USB+	BUSY	AFD#	ERR#	WGATE#
8	GND	USB-	STB#	VCC	SLIN#	PE
7	GND	INIT#	PPD4	PPD5	PPD6	PPD7
6	GND	ACK#	PPD0	PPD1	PPD2	PPD3
5	GND	SLCT	KBDATA	SPKR	MSDATA	
4	GND	RXDI	KBCLK	VCC	MSCLK	PBRST#
3	GND	TXD1	DCD1	DSR1	RTS1	CTS1
2	GND	RXD2	DTR1	RI1	DTR2	RI2
1	GND	TXD2	DCD2	DSR2	RTS2	CTS2

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J4/rJ4

PIN	F	E	D	C	B	A
25	GND					
24	GND					
23	GND					
22	GND					
21	GND					
20	GND					
19	GND					
18	GND					
17	GND					
16	GND					
15	GND					
14						
13			KEY			
12						
11	GND	MON_FAN2	MON_CI			MON_RST#
10	GND	MON_FAN1	MON_GPO			
9	GND					
8	GND					
7	GND		PIRQ	PIORDY		PRESET
6	GND	PDACK#			CS1P#	CS3P#
5	GND	PDREQ	PDD12	PDD13	PDD14	PDD15
4	GND		PDD8	PDD9	PDD10	PDD11
3	GND		PDA2		PDA1	PDA0
2	GND	PDIOR#	PDD4	PDD5	PDD6	PDD7
1	GND	PSIOW#	PDD0	PDD1	PDD2	PDD3

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J5/rJ5

PIN	F	E	D	C	B	A
22	GND	SPDLED1	GND	LAN1RX-	GND	LAN1TX+
21	GND	ACTLED1	GND	LAN1RX+	GND	LAN1TX-
20	GND	LNKLED1	GND	GND	GND	GND
19	GND	SPDLED2	GND	LAN2RX-	GND	LAN2TX+
18	GND	ACTLED2	GND	LAN2RX+	GND	LAN2TX-
17	GND	LNKLED2	GND	GND	GND	GND
16	GND	TRMPWR	SCD#15	SCD#14	SCD#13	SCD#12
15	GND	TRMPWR	SCD15	SCD14	SCD13	SCD12
14	GND	TRMPWR	SCD#2	SCD#1	SCD#0	SCDPH#
13	GND	TRMPWR	SCD2	SCD1	SCD0	SCDPH
12	GND	TRMPWR	SCD#6	SCD#5	SCD#4	SCD#3
11	GND	TRMPWR	SCD6	SCD5	SCD4	SCD3
10	GND	SCLED#	GND	SCATN#	SCDPL#	SCD#7
9	GND	DIFSENSE	GND	SCATN	SCDPL	SCD7
8	GND	VGASCK	GND	SCRST#	SCACK#	SCBSY#
7	GND	VGASDA	GND	SCRST	SCACK	SCBSY
6	GND	HSYNC	GND	SCCD#	SCSEL#	SCMSG#
5	GND	VSYNC	GND	SCCD	SCSEL	SCMSG
4	GND	GND	GND	SCD#8	SCIO#	SCREQ#
3	GND	RED	GND	SCD8	SCIO	SCREQ
2	GND	GREEN	GND	SCD#11	SCD#10	SCD#9
1	GND	BLUE	GND	SCD11	SCD10	SCD9