TRENTON Technology Inc.
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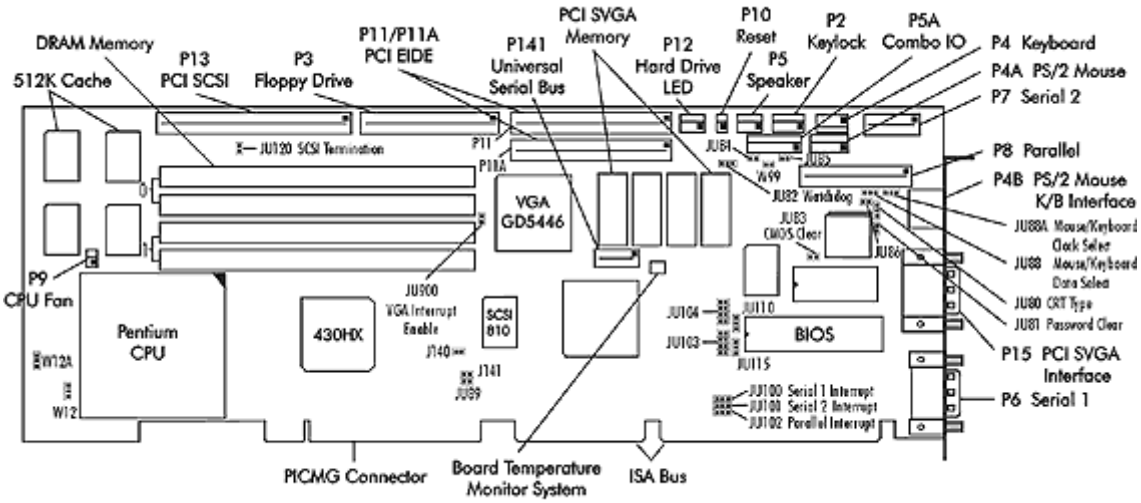
# Technical Information – Jumpers and Connectors
# T2V (5449-xxx) System Host Board

## 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), "RIGHT" is toward the bracket end of the board; "LEFT" is toward the memory sockets.

**JU80** **CRT TYPE SELECT**
TOP = Color *
BOTTOM = Monochrome

**JU81** **PASSWORD CLEAR**
INSTALL = Reset to null
REMOVE = Normal operation *

**JU82** **WATCHDOG TIMER**
LEFT = Normal reset *
RIGHT = Enable watchdog

**JU83** **CMOS CLEAR**
INSTALL = Clear CMOS
REMOVE = Operate *

**JU84** **P5A SPEAKER CONNECT**
INSTALL= Connect speaker data signal to pin 8 of Combo I/O connector (P5A) *
REMOVE= Disconnect

**JU85** **P5A RESET CONNECT**
INSTALL= Connect reset data signal to pin 1 of Combo I/O connector (P5A) *
REMOVE= Disconnect

**JU86** **INTERRUPT 12 (IRQ12) SELECT**
INSTALL = Dedicate IRQ12 to PS/2 mouse. *

REMOVE = Make IRQ12 available for system use.

**JU88 P4B PS/2 MOUSE/KEYBOARD INTERFACE DATA SELECT**

LEFT = Keyboard data
RIGHT = Mouse data *

**JU88A P4B PS/2 MOUSE/KEYBOARD INTERFACE CLOCK SELECT**

LEFT = Mouse clock *
RIGHT = Keyboard clock

**NOTE:** JU88 and JU88A must be set to the same function (either mouse or keyboard) for the peripheral to function properly.

**JU89 3.3V MONITOR ENABLE**

INSTALL = Enable 3.3V monitor.
REMOVE = Disable 3.3V monitor. *

**NOTE:** JU89 enables the 3.3 volt monitor, which monitors the 3.3V power plane of the backplane. This voltage is routed to the SBC via the PICMG® connector. The monitor generates a RESET to the SBC if 3.3V is below tolerance. If your system does *not* supply 3.3V to the backplane, this jumper *must* be removed (disabled).

**JU100 ON-BOARD SERIAL PORT 1 INTERRUPT SELECT**

LEFT = IRQ3
RIGHT = IRQ4 *

**JU101 ON-BOARD SERIAL PORT 2 INTERRUPT SELECT**

LEFT = IRQ3 *
RIGHT = IRQ4

**JU102 ON-BOARD PARALLEL PORT INTERRUPT SELECT**

LEFT = IRQ5
RIGHT = IRQ7 *

**JU103 PARALLEL PORT DACK**

| | Pins |
|---|---|
| DACK #7 | 1-2 |
| DACK #6 | 3-4 |
| DACK #5 | 5-6 |
| DACK #3 | 7-8 |

**JU104 PARALLEL PORT DREQ**

| | Pins |
|---|---|
| DREQ #7 | 1-2 |
| DREQ #6 | 3-4 |
| DREQ #5 | 5-6 |
| DREQ #3 | 7-8 |

**JU110/115 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.

| | JU110 | JU115 |
|---|---|---|
| Program All (Boot and Main) | Bottom | Bottom |
| Normal PnP (Program Main Block) | Bottom * | Top * |
| Write Protect | Top | Top |

### JU120 SCSI TERMINATION

INSTALL= Disable on-board active termination for SCSI interface

REMOVE= Enable *

### JU900 VGA INTERRUPT ENABLE

INSTALL = Enable VGA interrupt
REMOVE = Disable *

### CPU SPEED JUMPERS

There are five jumpers (J140, J141, W12, W12A and W99) which must be set correctly to allow the SBC to take full advantage of the speed of the Pentium microprocessor. The jumper settings depend on the bare board revision level as indicated in the following charts.

**Bare Board Revision Levels Prior to L-A-09:**

| CPU | Synthesizer | Jumpers | | CPU Speed | | Bus Clock |
|---|---|---|---|---|---|---|
| Speed | Frequency | J140 | J141 | W12 | W12A | W99 |
| 233MHz | 66MHz | Out | In | Bottom | Bottom | In |
| 200MHz | 66MHz | Out | In | Bottom | Top | In |
| 166MHz | 66MHz | Out | In | Top | Top | In |
| 150MHz | 60MHz | In | Out | Top | Top | In |
| 133MHz | 66MHz | Out | In | Top | Bottom | In |
| 120MHz | 60MHz | In | Out | Top | Bottom | In |
| 100MHz | 66MHz | Out | In | Bottom | Bottom | In |
| 90MHz | 60MHz | In | Out | Bottom | Bottom | In |
| 75MHz | 50MHz | In | In | Bottom | Bottom | Out |

**Bare Board Revision Levels L-A-09 and Above:**

| CPU | Synthesizer | Jumpers | | CPU Speed | | Bus Clock |
|---|---|---|---|---|---|---|
| Speed | Frequency | J140 | J141 | W12 | W12A | W99 |
| 233MHz | 66MHz | Out | In | Top | Top | In |
| 200MHz | 66MHz | Out | In | Top | Bottom | In |
| 166MHz | 66MHz | Out | In | Bottom | Bottom | In |
| 150MHz | 60MHz | In | Out | Bottom | Bottom | In |
| 133MHz | 66MHz | Out | In | Bottom | Top | In |
| 120MHz | 60MHz | In | Out | Bottom | Top | In |
| 100MHz | 66MHz | Out | In | Top | Top | In |
| 90MHz | 60MHz | In | Out | Top | Top | In |

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# Connectors

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

### P2 - KEYLOCK CONNECTOR

5 pin single row header, Amp #640456-5

| PIN | SIGNAL |
|---|---|
| 1 | LED Power |
| 2 | Key |
| 3 | Gnd |
| 4 | Keylock Data |
| 5 | Gnd |

### P3 - FLOPPY DRIVE CONNECTOR

34 pin dual row header,
Robinson Nugent #IDH-34LP-S3-TR

| 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 |
| 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 |

### P9 - CPU FAN

2 pin header, Amp #640456-2

| PIN | SIGNAL |
|---|---|
| 1 | +12V |
| 2 | Gnd |

### P10 - EXTERNAL RESET CONNECTOR

2 pin header, Amp #640456-2

| PIN | SIGNAL |
|---|---|
| 1 | Negative External Reset |
| 2 | Gnd |

### P11 - PRIMARY IDE HARD DRIVE CONNECTOR

40 pin dual row header,
Robinson Nugent #IDH-40LP-S3-TR

| 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 |

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## Connectors (Continued)

### P4 - 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 |

### P4A - PS/2 MOUSE HEADER

6 pin single row header, Amp #640456-6

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

### P4B - PS/2 MOUSE/KEYBOARD CONNECTOR

6 pin mini DIN, Kycon #KMDG-6S-BS-PS

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

**NOTE:** The function of the PS/2 Mouse/Keyboard Connector is controlled by the settings of jumpers JU88 and JU88A. See the *Jumpers* section above for an explanation of the jumper settings.

### P5 - SPEAKER PORT CONNECTOR

4 pin single row header, Amp #640456-4

| PIN | SIGNAL |
|---|---|

### P11A - SECONDARY IDE HARD DRIVE CONNECTOR

40 pin dual row header,
Robinson Nugent #IDH-40LP-S3-TR

| 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 |
| 27 | IORDY | 28 | SELPDS |
| 29 | DACK 1 | 30 | Gnd |
| 31 | IRQ15 | 32 | NC |
| 33 | Add 1 | 34 | Gnd |
| 35 | Add 0 | 36 | Add 2 |
| 37 | CS 1S | 38 | CS 3S |
| 39 | IDEACTS | 40 | Gnd |

### P12 - HARD DRIVE LED CONNECTOR

4 pin single row header, Amp #640456-4

| PIN | SIGNAL |
|---|---|
| 1 | +5V Pullup |
| 2 | Light |
| 3 | Light |
| 4 | +5V Pullup |

| | |
|---|---|
| 1 | Speaker Data |
| 2 | Key |
| 3 | Gnd |
| 4 | +5V |

## Connectors (Continued)

### P5A - COMBO I/O CONNECTOR

8 pin single row header, Amp #640456-8

| PIN | SIGNAL |
|---|---|
| 1 | Reset (See JU18 in *Configuration Jumpers* above.) |
| 2 | Gnd |
| 3 | NC |
| 4 | Kbd Clock |
| 5 | Kbd Data |
| 6 | Kbd Lock Data |
| 7 | Kbd Power (+5V fused) with self-resetting fuse |
| 8 | Speaker Data |

### P6 - SERIAL PORT 1 CONNECTOR

9 pin D, Foxconn International #UDBA11S2LA

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

### P7 - SERIAL PORT 2 CONNECTOR

10 pin dual row header,
Robinson Nugent #IDH-10LP-S3-TR

| 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 |
| | | 10 | NC |

### P13 - PCI SCSI CONTROLLER CONNECTOR

50 pin dual row header,
Robinson Nugent #IDH-50LP-S3-TR

| PIN | SIGNAL | PIN | SIGNAL |
|---|---|---|---|
| 1 | Gnd | 2 | SCZDB0 |
| 3 | Gnd | 4 | SCZDB1 |
| 5 | Gnd | 6 | SCZDB2 |
| 7 | Gnd | 8 | SCZDB3 |
| 9 | Gnd | 10 | SCZDB4 |
| 11 | Gnd | 12 | SCZDB5 |
| 13 | Gnd | 14 | SCZDB6 |
| 15 | Gnd | 16 | SCZDB7 |
| 17 | Gnd | 18 | SCZDBP |
| 19 | Gnd | 20 | Gnd |
| 21 | Gnd | 22 | Gnd |
| 23 | Gnd | 24 | Gnd |
| 25 | NC | 26 | TERMPWR |
| 27 | Gnd | 28 | Gnd |
| 29 | Gnd | 30 | Gnd |
| 31 | Gnd | 32 | SCZATN |
| 33 | Gnd | 34 | Gnd |
| 35 | Gnd | 36 | SCZBSY |
| 37 | Gnd | 38 | SCZACK |
| 39 | Gnd | 40 | SCZRST |
| 41 | Gnd | 42 | SCZMSG |
| 43 | Gnd | 44 | SCZSEL |
| 45 | Gnd | 46 | SCZCD |
| 47 | Gnd | 48 | SCZREQ |
| 49 | Gnd | 50 | SCZIO |

### P15 - PCI SVGA INTERFACE CONNECTOR

15 pin VGA connector, Amp #748390-5

| PIN | SIGNAL | PIN | SIGNAL | PIN | SIGNAL |
|---|---|---|---|---|---|
| 1 | Red | 6 | Gnd | 11 | NC |
| 2 | Green | 7 | Gnd | 12 | EEDI |
| 3 | Blue | 8 | Gnd | 13 | HSYNC |

| | | | |
|---|---|---|---|
| 9 | Signal Gnd | 10 | NC |

## P8 - PARALLEL PORT CONNECTOR

26 pin dual row header,
Robinson Nugent #IDH-26LP-S3-TR

| 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 |

## P10 - EXTERNAL RESET CONNECTOR

2 pin header, Amp #640456-2

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

| | | | | | |
|---|---|---|---|---|---|
| 4 | NC | 9 | +5V | 14 | VSYNC |
| 5 | Gnd | 10 | Gnd | 15 | EECS |

## P141 - 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 |