# AT8001

ATCA SHB, single Intel Xeon, PMC & HDD with Front Panel Gigabit Ethernet

kontron

Board Rev. 2

## QUICK REFERENCE

Document version 1.3

## CONNECTORS

| | | | |
|---|---|---|---|
| J1 | Gigabit Ethernet LAN B | J11 | 2.5" HDD connector (PATA) |
| J2 | Gigabit Ethernet LAN A | J13 | POST Code Connector |
| J3 | Ethernet Management | J21 | CompactFlash |
| J4 | USB 0 | J23 | ATCA Base & Fabric Interface |
| J5 | Serial Port 0 (COM1) (RJ-45) | J30 | ATCA RTM Connector |
| J6 | VGA | P10 | ATCA Power |
| J10 | Memory Socket DDRII-400 | JN1-JN3 | PMC Connectors |
| J12 | Memory Socket DDRII-400 | | |

## JUMPER SETTINGS ( ● Default Setting)

| JP1 - Spare Jumper | |
|---|---|
| ● Spare Jumper | in |

| JP2 - Clear CMOS | |
|---|---|
| Clear CMOS | in |
| ● Normal | out |

| JP3 - VT100 Mode | |
|---|---|
| Enabled | in |
| ● Disabled | out |

| JP4 - Video | |
|---|---|
| Disable Video | in |
| ● Normal | out |

| JP5 - Video Position | |
|---|---|
| ● Front | in |
| Rear | out |

| JP6 - Overide Function | |
|---|---|
| ShMC Activation Override | 1-2 |
| Reserved | 3-4 |

| JP7(1-2) - Postcode | |
|---|---|
| Postcode to IPMC | in |
| ● Postcode to BIOS | out |

| JP7(3-4) - IPMI Override | |
|---|---|
| Always On | in |
| ● Normal Mode | out |

| JP8 - FPGA Config | |
|---|---|
| ● User PROM | 1-2 |
| Factory PROM | 3-4 |

| JP9 - PMC PCI Max. Speed | 1-2 | 3-4 |
|---|---|---|
| ● PCI-X 66MHz | out | out |
| PCI 66MHz | out | in |
| PCI 33 MHz | in | in |

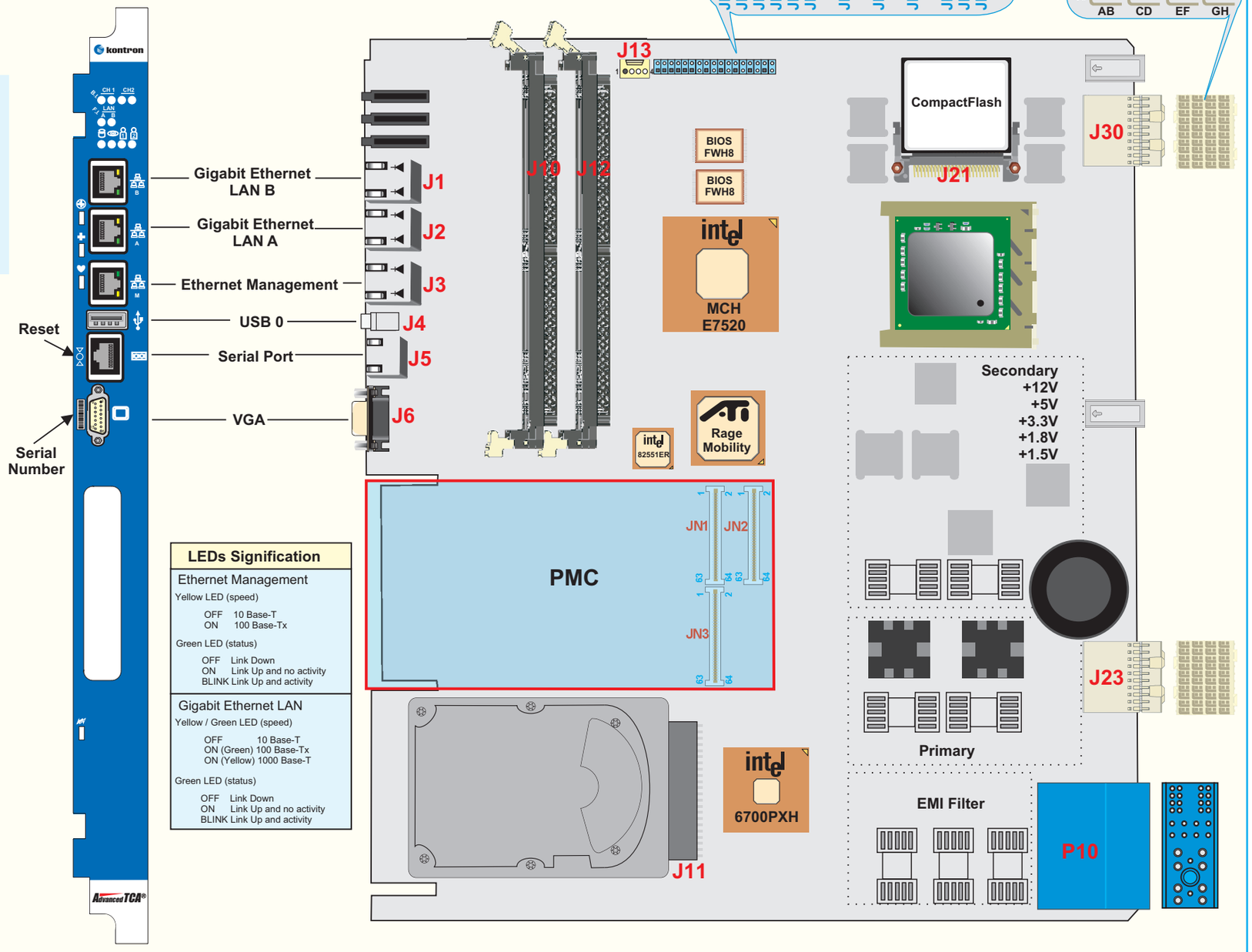
| JP10 - Test Mode | |
|---|---|
| Test Mode | in |
| ● Normal Mode | out |

| JP11 - Reserved | |
|---|---|
| Reserved | in |
| ● Reserved | out |

| JP12 - IDE 2.5" drive |
|---|
| See J11 pins 45 to 48 |

## Symbols Chart

- Out Of Service
- Hot Swap
- Hard Disk Activity
- Management Led (IPMC)
- VGA
- Serial Port
- Healthy
- Heart Beat
- User Led
- USB
- Ethernet




### LEDs Signification

**Ethernet Management**

Yellow LED (speed)

OFF 10 Base-T
ON 100 Base-Tx

Green LED (status)

OFF Link Down
ON Link Up and no activity
BLINK Link Up and activity

**Gigabit Ethernet LAN**

Yellow / Green LED (speed)

OFF 10 Base-T
ON (Green) 100 Base-Tx
ON (Yellow) 1000 Base-T

Green LED (status)

OFF Link Down
ON Link Up and no activity
BLINK Link Up and activity

# Connector Pinouts

# AT8001

Board Rev. 2

Document version 1.3

### J1, J2 - Ethernet
#### 10/100/1000 LAN B, LAN A

| | | | |
|---|---|---|---|
| 1 | DA+ | 5 | DC- |
| 2 | DA- | 6 | DB- |
| 3 | DB+ | 7 | DD+ |
| 4 | DC+ | 8 | DD- |

### J3 - Ethernet
#### 10/100 Management LAN M

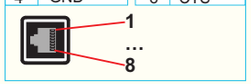
| | | | |
|---|---|---|---|
| 1 | TX+ | 5 | N.C. |
| 2 | TX- | 6 | RX- |
| 3 | RX+ | 7 | N.C. |
| 4 | N.C. | 8 | N.C. |

### J4 - USB PORT

| | |
|---|---|
| 1 | VCC |
| 2 | DATA - |
| 3 | DATA+ |
| 4 | GND |

### J5 - RS-232

| | | | |
|---|---|---|---|
| 1 | RTS | 5 | GND |
| 2 | DTR | 6 | RXD |
| 3 | TXD | 7 | DSR |
| 4 | GND | 8 | CTS |



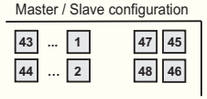

### J6 - Video (SVGA)

| Row 1 (1-8) | | Row 2 (9-15) | |
|---|---|---|---|
| 1 | RED | 9 | N.C. |
| 2 | GREEN | 10 | GND |
| 3 | BLUE | 11 | N.C. |
| 4 | N.C. | 12 | SDATA |
| 5-8 | GND | 13 | HSYNC |
| | | 14 | VSYNC |
| | | 15 | SCLK |

### J11 - 2.5" IDE HDD

| | | | |
|---|---|---|---|
| 45 | JP12 pin 3* | 46 | JP12 pin 4* |
| 47 | JP12 pin 1* | 48 | JP12 pin 2* |
| 49 | N.C. | 50 | N.C. |
| 1 | RESET# | 2 | GND |
| 3 | DD7 | 4 | DD8 |
| 5 | DD6 | 6 | DD9 |
| 7 | DD5 | 8 | DD10 |
| 9 | DD4 | 10 | DD11 |
| 11 | DD3 | 12 | DD12 |
| 13 | DD2 | 14 | DD13 |
| 15 | DD1 | 16 | DD14 |
| 17 | DD0 | 18 | DD15 |
| 19 | GND | 20 | KEY |
| 21 | DMARQ | 22 | GND |
| 23 | DIOW# | 24 | GND |
| 25 | DIOR# | 26 | GND |
| 27 | IORDY | 28 | CSEL# |
| 29 | DMACK# | 30 | GND |
| 31 | INTRQ | 32 | RSV |
| 33 | DA1 | 34 | PDIAG# |
| 35 | DA0 | 36 | DA2 |
| 37 | CS0# | 38 | CS1# |
| 39 | DASP# | 40 | GND |
| 41 | VCC | 42 | VCC |
| 43 | GND | 44 | RSV |

* Consult HDD specification for Master / Slave configuration




### J13 - POST CODE

| | |
|---|---|
| 1 | VCC3 |
| 2 | DATA |
| 3 | CLOCK |
| 4 | GND |

### J21 - COMPACT FLASH

| | | | |
|---|---|---|---|
| 1 | GND | 2 | DD3 |
| 3 | DD4 | 4 | DD5 |
| 5 | DD6 | 6 | DD7 |
| 7 | CS0# | 8 | GND |
| 9 | ATA_SEL#(GND) | 10 | GND |
| 11 | GND | 12 | GND |
| 13 | VCC3 | 14 | GND |
| 15 | GND | 16 | GND |
| 17 | GND | 18 | DA2 |
| 19 | DA1 | 20 | DA0 |
| 21 | DD0 | 22 | DD1 |
| 23 | DD2 | 24 | IOCS16#(N.C.) |
| 25 | CD2#(N.C.) | 26 | CD1#(N.C.) |
| 27 | DD11 | 28 | DD12 |
| 29 | DD13 | 30 | DD14 |
| 31 | DD15 | 32 | CS1# |
| 33 | VS1#(N.C.) | 34 | DIOR# |
| 35 | DIOW# | 36 | WE# (VCC3) |
| 37 | INTRQ | 38 | VCC3 |
| 39 | CSEL#(GND) | 40 | VS2#(N.C.) |
| 41 | RESET# | 42 | IORDY |
| 43 | DMARQ | 44 | DMACK# |
| 45 | DASP# | 46 | PDIAG# |
| 47 | DD8 | 48 | DD9 |
| 49 | DD10 | 50 | GND |

### P10 - Power

| | | | |
|---|---|---|---|
| 1 | N.P. | 2 | N.P. |
| 3 | N.P. | 4 | N.P. |
| 5 | HA0 | 6 | HA1 |
| 7 | HA2 | 8 | HA3 |
| 9 | HA4 | 10 | HA5 |
| 11 | HA6 | 12 | HA7/P |
| 13 | SCL_A | 14 | SDA_A |
| 15 | SCL_B | 16 | SDA_B |
| 17 | MT1_TIP(N.C.) | 18 | MT2_TIP(N.C.) |
| 19 | RING_A(N.C.) | 20 | RING_B(N.C.) |
| 21 | MT1_RING(N.C.) | 22 | MT2_RING(N.C.) |
| 23 | RRTN_A(N.C.) | 24 | RRTN_B(N.C.) |
| 25 | **SHELF_GND** | 26 | **LOGIC_GND** |
| 27 | ENABLE_B | 28 | VRTN_A |
| 29 | VRTN_B | 30 | EARLY_A |
| 31 | EARLY_B | 32 | ENABLE_A |
| 33 | -48V_A | 34 | -48V_B |

### J30 - ATCA I/O

| | ROW A | AB | ROW B | ROW C | CD | ROW D | ROW E | EF | ROW F | ROW G | GH | ROW H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | USB1_VCC(N.C.) | GND | USB0_VCC | PS2_CLK | GND | PS2_DAT | LAN_DA- | GND | LAN_DA+ | SATA0_RX-(N.C.) | GND | SATA0_RX+(N.C.) |
| 2 | BRD_RESET# | GND | TEST_SPKR# | KBD_CLK | GND | KBD_DAT | LAN_DB- | GND | LAN_DB+ | SATA0_TX-(N.C.) | GND | SATA0_TX+(N.C.) |
| 3 | +5V | GND | 3.3V_SUS | SMB_SCL | GND | SMB_SDA | LAN_DC- (N.C.) | GND | LAN_DC+ (N.C.) | SATA1_RX-(N.C.) | GND | SATA1_RX+(N.C.) |
| 4 | JTAG_CFG(N.C.) | GND | TEST_ON# | POST_CLK | GND | POST_DAT | LAN_DD- (N.C.) | GND | LAN_DC- (N.C.) | SATA1_TX-(N.C.) | GND | SATA1_TX+(N.C.) |
| 5 | JTAG_TDO | GND | TEST_JIG# | LPC_CLK | GND | LPC_HINIT# | LAN_SPD | GND | LAN_ACT/L# | SATA2_RX-(N.C.) | GND | SATA2_RX+(N.C.) |
| 6 | JTAG_TDI | GND | 3.3V | LPC_FRAME# | GND | LPC_RESET# | LAN_CT (GND) | GND | +12V | SATA2_TX-(N.C.) | GND | SATA2_TX+(N.C.) |
| 7 | JTAG_TCK | GND | TEST_FWH | LPC_AD2 | GND | LCP_AD3 | VGA_SCL | GND | VGA_SDA | SATA3_RX-(N.C.) | GND | SATA3_RX+(N.C.) |
| 8 | JTAG_TMS | GND | JTAG_TRST#(N.C.) | LPC_AD0 | GND | LPC_AD1 | VGA_BLUE | GND | SMB_ALERT# | SATA3_TX-(N.C.) | GND | SATA3_TX+(N.C.) |
| 9 | SP0_RI | GND | SP0_DTR | SP0_CTS | GND | SP0_TX# | VGA_GREEN | GND | VGA_VSYNC | USB0_D- | GND | USB0_D+ |
| 10 | SP0_RTS | GND | SP0_RX# | SP0_DSR | GND | SP0_DCD | VGA_RED | GND | VGA_HSYNC | USB1_D-(N.C.) | GND | USB1_D+(N.C.) |

### J23 - ATCA I/O  ATCA 3.1

| | ROW A | AB | ROW B | ROW C | CD | ROW D | ROW E | EF | ROW F | ROW G | GH | ROW H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Tx2[2]+(N.C.) | GND | Tx2[2]-(N.C.) | Rx2[2]+(N.U.) | GND | Rx2[2]-(N.U.) | Tx3[2]- | GND | Tx3[2]- | Rx3[2]+ | GND | Rx3[2]- |
| 2 | Tx0[2]+ | GND | Tx0[2]- | Rx0[2]+ | GND | Rx0[2]- | Tx1[2]+ | GND | Tx1[2]- | Rx1[2]+ | GND | Rx1[2]- |
| 3 | Tx2[1]+(N.C.) | GND | Tx2[1]-(N.C.) | Rx2[1]+(N.U.) | GND | Rx2[1]-(N.U.) | Tx3[1]+ | GND | Tx3[1]- | Rx3[1]+ | GND | Rx3[1]- |
| 4 | Tx0[1]+ | GND | Tx0[1]- | Rx0[1]+ | GND | Rx0[1]- | Tx1[1]+ | GND | Tx1[1]- | Rx1[1]+ | GND | Rx1[1]- |
| 5 | BI_DA1+ | GND | BI_DA1- | BI_DB1+ | GND | BI_DB1- | BI_DC1+ | GND | BI_DC1- | BI_DD1+ | GND | BI_DD1- |
| 6 | BI_DA2+ | GND | BI_DA2- | BI_DB2+ | GND | BI_DB2- | BI_DC2+ | GND | BI_DC2- | BI_DD2+ | GND | BI_DD2- |
| 7 | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV |
| 8 | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV |
| 9 | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV |
| 10 | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV | RSV | GND | RSV |

### JN1

| | | | |
|---|---|---|---|
| 1 | TCK(N.U.) | 2 | -12V |
| 3 | GND | 4 | INTA# |
| 5 | INTB# | 6 | INTC# |
| 7 | BUSMODE1# | 8 | 5V |
| 9 | INTD# | 10 | PCI-RSV |
| 11 | GND | 12 | 3V3_AUX(N.C.) |
| 13 | CLK | 14 | GND |
| 15 | GND | 16 | GNT# |
| 17 | REQ# | 18 | 5V |
| 19 | VIO | 20 | AD31 |
| 21 | AD28 | 22 | AD27 |
| 23 | AD25 | 24 | GND |
| 25 | GND | 26 | C/BE3# |
| 27 | AD22 | 28 | AD21 |
| 29 | AD19 | 30 | 5V |
| 31 | VIO | 32 | AD17 |
| 33 | FRAME# | 34 | GND |
| 35 | GND | 36 | IRDY# |
| 37 | DEVSEL# | 38 | 5V |
| 39 | PCIXCAP | 40 | LOCK# |
| 41 | PCI-RSV | 42 | PCI-RSV |
| 43 | PAR | 44 | GND |
| 45 | VIO | 46 | AD15 |
| 47 | AD12 | 48 | AD11 |
| 49 | AD9 | 50 | 5V |
| 51 | GND | 52 | C/BE0# |
| 53 | AD6 | 54 | AD5 |
| 55 | AD4 | 56 | GND |
| 57 | VIO | 58 | AD3 |
| 59 | AD2 | 60 | AD1 |
| 61 | AD0 | 62 | 5V |
| 63 | GND | 64 | REQ64# |

### JN2

| | | | |
|---|---|---|---|
| 1 | +12V | 2 | TRST#(N.U.) |
| 3 | TMS(N.U.) | 4 | TDO(N.U.) |
| 5 | TDI(N.U.) | 6 | GND |
| 7 | GND | 8 | PCI-RSV |
| 9 | PCI-RSV | 10 | PCI-RSV |
| 11 | BUSMODE2# | 12 | 3V3 |
| 13 | RST# | 14 | BUSMODE3# |
| 15 | 3V3 | 16 | BUSMODE4# |
| 17 | PME#(N.U.) | 18 | GND |
| 19 | AD30 | 20 | AD29 |
| 21 | GND | 22 | AD26 |
| 23 | AD24 | 24 | 3V3 |
| 25 | IDSEL | 26 | AD23 |
| 27 | 3V3 | 28 | AD20 |
| 29 | AD18 | 30 | GND |
| 31 | AD16 | 32 | C/BE2# |
| 33 | GND | 34 | PMC-RSV |
| 35 | TRDY# | 36 | 3V3 |
| 37 | GND | 38 | STOP# |
| 39 | PERR# | 40 | GND |
| 41 | 3V3 | 42 | SERR# |
| 43 | C/BE1# | 44 | GND |
| 45 | AD14 | 46 | AD13 |
| 47 | M66EN | 48 | AD10 |
| 49 | AD8 | 50 | 3V3 |
| 51 | AD7 | 52 | PMC-RSV |
| 53 | 3V3 | 54 | PMC-RSV |
| 55 | PMC-RSV | 56 | GND |
| 57 | PMC-RSV | 58 | PMC-RSV |
| 59 | GND | 60 | PMC-RSV |
| 61 | ACK64# | 62 | 3V3 |
| 63 | GND | 64 | PMC-RSV |

### JN3

| | | | |
|---|---|---|---|
| 1 | PCI-RSV | 2 | GND |
| 3 | GND | 4 | C/BE7 |
| 5 | C/BE6# | 6 | C/BE5 |
| 7 | C/BE4# | 8 | GND |
| 9 | VIO | 10 | PAR64 |
| 11 | AD63 | 12 | AD62 |
| 13 | AD61 | 14 | GND |
| 15 | GND | 16 | AD60 |
| 17 | AD59 | 18 | AD58 |
| 19 | AD57 | 20 | GND |
| 21 | VIO | 22 | AD56 |
| 23 | AD55 | 24 | AD54 |
| 25 | AD53 | 26 | GND |
| 27 | GND | 28 | AD52 |
| 29 | AD51 | 30 | AD50 |
| 31 | AD49 | 32 | GND |
| 33 | GND | 34 | AD48 |
| 35 | AD47 | 36 | AD46 |
| 37 | AD45 | 38 | GND |
| 39 | VIO | 40 | AD44 |
| 41 | AD43 | 42 | AD42 |
| 43 | AD41 | 44 | GND |
| 45 | GND | 46 | AD40 |
| 47 | AD39 | 48 | AD38 |
| 49 | AD37 | 50 | GND |
| 51 | GND | 52 | AD36 |
| 53 | AD35 | 54 | AD34 |
| 55 | AD33 | 56 | GND |
| 57 | VIO | 58 | AD32 |
| 59 | PCI-RSV | 60 | PCI-RSV |
| 61 | PCI-RSV | 62 | GND |
| 63 | GND | 64 | PCI-RSV |

VIO is fixed to 3.3V

**LAN LED Speed:**

**Off: 10Mb**
**Green: 100Mb**
**Amber: 1000Mb**

*The Technical Reference Manual and the Quick Reference can be downloaded from Kontron Web site at:*
*http://www.kontron.com*
*Or from Kontron FTP site at:*
*ftp://ftp.kontron.ca/Support/*

**N.C. = Not Connected**
**N.P. = Not Populated**
**N.U. = Not Used**
**RSV = Reserved**
**# = Active Low**


For Technical Support please contact:

1 . Internet : www.kontron.com
2 . E-Mail : support@ca.kontron.com
3. Fax : (450) 437-8053
4. Tel : (800) 354-4223



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