

**EPIC SBC with Intel® Atom™ N270 1.6GHz, VGA/Dual LVDS,
Dual GbE, CF II, USB, SATA**

NANO-ATOM

Quick Installation Guide

Version 1.0

Sept. 23, 2008

Package Contents

NANO-ATOM package includes the following items:

- 1 x NANO-ATOM Single Board Computer
- 1 x KB/MS cable
- 2 x SATA cable
- 1 x Power cable
- 2 x RS-232 cable
- 1 x Mini Jumper Pack
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)



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Specifications

- CPU: On board Intel® Atom™ N270 1.6GHz/512KB L2 Cache FSB 533MHz
- System Chipset: Intel® 945GSE +ICH7M
- BIOS: AMI BIOS
- System memory: 1 x 200-pins 533/400MHz DDR2 SDRAM SO-DIMM (max. 2GB)
- Ethernet: Dual Realtek RTL8111CP GbE Controllers
- I/O Interface:
 - 2 x SATA
 - 6 x USB 2.0 (4 by header, 2 on rear side)
 - 1 x CF Type II
 - 3 x RS-232
 - 1 x RS-232/422/485
 - 1 x PS/2 KB/MS, 1 x KB/MS by 1x6 pins wafer-header
 - 1 x IDE
 - 1 x LPT
- Expansions:
 - 1 x PCI-104(PCI-BUS)
 - 1 x PCIe mini card slot
- Audio: Support by Audio Kit (AC'97 & HD)
 - 5.1 channel AC'97 Audio Kit with Realtek ALC655 codec
 - 7.1 channel HD Audio Kit with Realtek ALC883 codec support dual audio streams
- Digital I/O: 8-bit digital I/O, 4-bit input/ 4-bit output by super I/O
- IrDA: 1x Infrared Interface by super I/O
- Super I/O: ITE IT8718F
- Display Interface:
 - Analog CRT: Support for CRT Hot plug
 - 18/24-bit Dual-Channel LVDS by SDVO to LVDS Transmitter: Chronitel CH7308B
 - 18-bit Dual-Channel LVDS from Intel® 945GSE
 - Support HDTV resolution up to 1080i by component interface
- Watchdog timer:

Software programmable supports 1~255 sec. system reset

- Power Supply: +12V only, AT/ATX support
- Power Consumption:
12V@1.43A(DDR2 667MHz 1GB) (Windows® XP, 3D mark®2001)
- Humidity: Operation: 5% ~ 95%, non-condensing
- Temperature: 0 ~ 60°C(32 ~ 140°F)
- Dimension: 165 mm x 115 mm
- Weight: GW: 1100g; NW: 250g

Ordering Information

NANO-ATOM-N270-R10:

EPIC SBC with Intel® Atom™ N270 1.6G, VGA/LVDS, Dual GbE,CFII, USB, SATA

NANO-ATOMLVDS2-N270-R10:

EPIC SBC with Intel® Atom™ N270 1.6G, VGA/Dual LVDS, Dual GbE,CFII, USB, SATA

AC-KIT08R-R10: 5.1 channel AC'97 Audio Kit with Realtek ALC655 codec

AC-KIT883HD-R10: 7.1 channel HD Audio Kit with Realtek ALC883 codec support dual audio streams

32000-044300-RS: Dual port USB cable

32200-015100-RS: LPT cable

32200-026500-RS: RS-232/422/485 cable

32100-043403-RS: ATX Power Cable

32000-083701-RS: HDTV out Cable

32200-000009-RS: 44pin 2.5" IDE cable

32200-008800-RS: 44pin to 2.5"/3.5" IDE cable

32100-088600-RS: SATA Power Cable

32000-114000-RS: SATA 5V power output Cable Kit for NANO series

Jumpers setting

| LABEL | FUNCTION |
|-------------|--|
| J_CMOS1 | CMOS state setting |
| JP1 | COM2 Port Mode setting |
| J_VLVDS1 | LVDS1 Voltage Selection |
| J_VLVDS2 | LVDS2 Voltage Selection |
| JP2 | PCI-104 VIO Selector |
| JCF1 | CF Card setting |
| ATXCTL1 | AT Power Mode Setting |
| J_LCD_TYPE1 | LVDS1 & LVDS2 Panel Resolution Selection |

| J_CMOS1: Clear CMOS Setup | |
|---------------------------|------------------------------------|
| J_CMOS1 | DESCRIPTION |
| Short 1-2 (default)* | Keep CMOS Setup (Normal Operation) |
| Short 2-3 | Clear CMOS Setup |

| JP1: configure COM2 Mode | |
|--------------------------|-------------|
| JP1 | DESCRIPTION |
| Short 1-2 (default) | RS - 232 |
| Short 3-4 | RS - 422 |
| Short 5-6 | RS - 485 |

| J_VLVDS1: LVDS1 Voltage Selection | |
|-----------------------------------|-------------|
| J_VLVDS1 | DESCRIPTION |
| 1-2 | +3.3V LVDS |
| 2-3 | +5V LVDS |

| J_VLVDS2: LVDS 2 Voltage Selection | |
|------------------------------------|-------------|
| J_VLVDS2 | DESCRIPTION |
| 1-2 | +3.3V LVDS |
| 2-3 | +5V LVDS |

| JP2: PCI-104 VIO Voltage select | |
|---------------------------------|--------------|
| J2 | DESCRIPTION |
| Short 1-2 | VCC (+5V) |
| Short 2-3 | VCC3 (+3.3V) |

| JCF1: Configure CF Card type | |
|------------------------------|-------------|
| JCF1 | DESCRIPTION |
| Open (default) | Slave |
| Short 1-2 | Master |

| ATXCTL1: AT Power Mode Setting | |
|--------------------------------|----------------|
| ATXCTL1 | DESCRIPTION |
| 1-2 (default) | AT Power Mode |
| Open | ATX Power Mode |

| J_LCD_TYPE1 : LVDS1 Panel Resolution Selection | | |
|--|-----|---------------------------------------|
| 1-2 | 3-4 | LVDS1 |
| OFF | OFF | LVDS1 800X600 (18bit) |
| ON | OFF | LVDS1 1024 X 768 (18bit) |
| OFF | ON | LVDS1 1280X1024 (36bit) |
| ON | ON | LVDS1 1400X1050 (36bit) |

| J_LCD_TYPE1 : LVDS2 Panel Resolution Selection | | |
|--|-----|---------------------------------------|
| 5-6 | 7-8 | LVDS2 |
| OFF | OFF | LVDS2 1024 X 768 (18bit) |
| ON | OFF | LVDS2 1024 X 768 (24bit) |
| OFF | ON | LVDS2 1280X1024 (36bit) |
| ON | ON | LVDS2 1280X1024 (48bit) |

Table of Connectors

| LABEL | FUNCTION |
|----------------|---|
| VGA1 | VGA 15-pin Female Connector |
| USB_C45 | 2 Port USB Connector |
| LAN1 LAN2 | RJ45 LAN Connectors |
| KB_MS1 KB1 | PS/2 MOUSE & KEYBOARD Connectors |
| COM1 | COM Port Connector |
| COM2 | Internal Serial Port Connectors (RS-232/422/485) |
| COM3 COM4 | Internal Serial Port Connectors (RS-232) |
| LPT1 | Parallel Port Connector |
| USB01 USB23 | Internal 4 Port USB Connectors |
| J_AUDIO1 | Extend Audio Module Connector |
| SATA1 SATA2 | Serial ATA Connectors |
| IR1 | Infrared Interface Connector |
| CPU_FAN1 | Fan Connector |
| IDE1 | IDE Connector |
| TV1 | TV Out Connector |
| DIO1 | Digital I/O Connector |
| LVDS1 | LVDS Panel Connector |
| LVDS2 | LVDS Panel Connector |
| INVERTER1,2 | LVDS1,2 Panel Backlight +12V Power Source |
| F_PANEL1 | PWR & RST Buttons and Indicators |
| ATXCTL1 | ATX Power Control Connector |
| CN1 | +12V Main Power Input Connector |
| CN3 | +5V Power Output Connector |
| JSPI 1 | SPI flash connector |
| BAT1 | Battery connector |
| CF1 | Compact Flash Slot |
| PC104_PLUS1 | PCI-104 Plus Connector |
| CN4 | PCI-E Mini Card connector |

| VGA1: 15-pin Female Connector | | | |
|--------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | RED | 2 | GREEN |
| 3 | BLUE | 4 | NC |
| 5 | GND | 6 | CRT_PLUG# |
| 7 | GND | 8 | GND |
| 9 | VCC | 10 | GND |
| 11 | NC | 12 | DDCDAT |
| 13 | HSYNC | 14 | VSYNC |
| 15 | DDCCLK | | |

| USB_C45: USB Connector | | | |
|-------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC (+5V) | 5 | VCC (+5V) |
| 2 | DATA4- | 6 | DATA5- |
| 3 | DATA4+ | 7 | DATA5+ |
| 4 | GROUND | 8 | GROUND |

| LAN1、LAN2: RJ45 LAN Connector | | | |
|--------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | MDIA3- | 5 | MDIA1+ |
| 2 | MDIA3+ | 6 | MDIA2+- |
| 3 | MDIA2- | 7 | MDIA0- |
| 4 | MDIA1- | 8 | MDIA0+ |

| KB_MS1: 6-pin Mini-DIN Keyboard Connector | |
|--|--------------------|
| PIN NO. | DESCRIPTION |
| 1 | Keyboard Data |
| 2 | Mouse Data |
| 3 | GND |
| 4 | VCC (+5V) |
| 5 | Keyboard Clock |
| 6 | Mouse Clock |

| KB1: 6-pin Mini-DIN Keyboard/Mouse Connector | |
|---|--------------------|
| PIN NO. | DESCRIPTION |
| 1 | VCC (+5V) |
| 2 | Mouse Data |
| 3 | Mouse Clock |
| 4 | Keyboard Data |
| 5 | Keyboard Clock |
| 6 | GND |

| COM1: Serial Port Connector | | |
|------------------------------------|---------------------|--------|
| PIN NO. | DESCRIPTION | |
| 1 | DATA CARRIER DETECT | (DCD)# |
| 2 | RECEIVE DATA | (RXD) |
| 3 | TRANSMIT DATA | (TXD) |
| 4 | DATA TERMINAL READY | (DTR)# |
| 5 | GND | (GND) |
| 6 | DATA SET READY | (DSR)# |
| 7 | REQUEST TO SEND | (RTS)# |
| 8 | CLEAR TO SEND | (CTS)# |
| 9 | RING INDICATOR | (RI)# |

| COM2 : Internal Serial Port Connector | | | |
|--|----------------------------|----------------|------------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | DATA CARRIER DETECT (DCD)# | 2 | DATA SET READY (DSR)# |
| 3 | RECEIVE DATA (RXD) | 4 | REQUEST TO SEND (RTS)# |
| 5 | TRANSMIT DATA (TXD) | 6 | CLEAR TO SEND (CTS)# |
| 7 | DATA TERMINAL READY (DTR)# | 8 | RING INDICATOR (RI)# |
| 9 | GND | 10 | N/C |
| 11 | TXD485+ | 12 | TXD485# |
| 13 | RXD485+ | 14 | RXD485# |

| COM3 & COM4 : Internal Serial Port Connectors | | | |
|--|----------------------------|----------------|------------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | DATA CARRIER DETECT (DCD)# | 2 | DATA SET READY (DSR)# |
| 3 | RECEIVE DATA (RXD) | 4 | REQUEST TO SEND (RTS)# |
| 5 | TRANSMIT DATA (TXD) | 6 | CLEAR TO SEND (CTS)# |
| 7 | DATA TERMINAL READY (DTR)# | 8 | RING INDICATOR (RI)# |
| 9 | GND | 10 | N/C |

| LPT1 : Parallel Port Connector | | | |
|---------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | STROBE# | 14 | AUTO FORM FEED # |
| 2 | DATA0 | 15 | ERROR# |
| 3 | DATA1 | 16 | INITIALIZE# |
| 4 | DATA2 | 17 | PRINTER SELECT LN# |
| 5 | DATA3 | 18 | GND |
| 6 | DATA4 | 19 | GND |
| 7 | DATA5 | 20 | GND |
| 8 | DATA6 | 21 | GND |
| 9 | DATA7 | 22 | GND |
| 10 | ACKNOWLEDGE# | 23 | GND |
| 11 | BUSY | 24 | GND |
| 12 | PAPER EMPTY | 25 | GND |
| 13 | PRINTER SELECT | 26 | N/C |

| USB01, USB23: Internal USB Connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC(+5V) | 2 | GND |
| 3 | DATA- | 4 | DATA+ |
| 5 | DATA+ | 6 | DATA- |
| 7 | GND | 8 | VCC(+5V) |

| J_AUDIO1 : Audio Source Connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | AC97_SYNC | 2 | AC97_BITCLK |
| 3 | AC97_SDOUT | 4 | AC97_PCBEEP |
| 5 | AC97_SDIN | 6 | AC97_RST# |
| 7 | AC97_VCC | 8 | AC97_GND |
| 9 | AC97_12V | 10 | AC97_GND |

| SATA1 & SATA2 : Serial ATA Connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 5 | RX- |
| 2 | TX+ | 6 | RX+ |
| 3 | TX- | 7 | GND |
| 4 | GND | 8 | N/C |

| IR1: Infrared Interface connector | |
|--|--------------------|
| PIN NO. | DESCRIPTION |
| 1 | VCC |
| 2 | NC |
| 3 | IR-RX |
| 4 | GND |
| 5 | IR-TX |

| CPU_FAN1 : CPU Fan Connector | |
|-------------------------------------|--------------------|
| PIN NO. | DESCRIPTION |
| 1 | Ground |
| 2 | +12V (PWM) |
| 3 | FANIO1 |

| IDE1 : IDE Interface Connector | | | |
|---------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 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 | N/C |
| 21 | IDE DRQ | 22 | GND |
| 23 | IOW# | 24 | GND |
| 25 | IOR# | 26 | GND |
| 27 | IDE CHRDY | 28 | BALE – DEFAULT |
| 29 | IDE DACK | 30 | GND |
| 31 | INTERRUPT | 32 | N/C |
| 33 | SA1 | 34 | PDIAG# |
| 35 | SA0 | 36 | SA2 |
| 37 | HDC CS0# | 38 | HDC CS1# |
| 39 | HDD ACTIVE# | 40 | GND |
| 41 | VCC | 42 | VCC |
| 43 | GND | 44 | N/C |

| TV1: Video output for television | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 2 | AGREEN_Y |
| 3 | GND | 4 | ARED_C |
| RCA Connector (only video signal) | | | |
| 5 | GND | 6 | ABLUE_CVBS |

| DIO1 : Digital Input / Output Connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | Ground | 2 | VCC |
| 3 | Output 3 | 4 | Output 2 |
| 5 | Output 1 | 6 | Output 0 |
| 7 | Input 3 | 8 | Input 2 |
| 9 | Input 1 | 10 | Input 0 |

| LVDS1: LVDS Connector (18-bit) | | | |
|---------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND1 | 2 | GND2 |
| 3 | A_Y0 | 4 | A_Y0# |
| 5 | A_Y1 | 6 | A_Y1# |
| 7 | A_Y2 | 8 | A_Y2# |
| 9 | A_CK | 10 | A_CK# |
| 11 | NC | 12 | NC |
| 13 | GND3 | 14 | GND4 |
| 15 | B_Y0 | 16 | B_Y0# |
| 17 | B_Y1 | 18 | B_Y1# |
| 19 | B_Y2 | 20 | B_Y2# |
| 21 | B_CK | 22 | B_CK# |
| 23 | NC | 24 | NC |
| 25 | GND5 | 26 | GND6 |
| 27 | VCC_LCD | 28 | VCC_LCD |
| 29 | VCC_LCD | 30 | VCC_LCD |

| LVDS2: LVDS Connector (18/24-bit) | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND1 | 2 | GND2 |
| 3 | A_Y0 | 4 | A_Y0# |
| 5 | A_Y1 | 6 | A_Y1# |
| 7 | A_Y2 | 8 | A_Y2# |
| 9 | A_CK | 10 | A_CK# |
| 11 | A_Y3 | 12 | A_Y3# |
| 13 | GND3 | 14 | GND4 |
| 15 | B_Y0 | 16 | B_Y0# |
| 17 | B_Y1 | 18 | B_Y1# |
| 19 | B_Y2 | 20 | B_Y2# |
| 21 | B_CK | 22 | B_CK# |
| 23 | B_Y3 | 24 | B_Y3# |
| 25 | GND5 | 26 | GND6 |
| 27 | VCC_LCD | 28 | VCC_LCD |
| 29 | VCC_LCD | 30 | VCC_LCD |

| INVERTER1, 2 : 5-pin Header Inverter Connector | |
|---|--------------------|
| PIN NO. | DESCRIPTION |
| 1 | LCD_BKLTCTL |
| 2 | GROUND |
| 3 | +12V |
| 4 | GROUND |
| 5 | BACKLIGHT ENABLE |

| F_PANEL1 : PWR & RST Buttons and Indicators panel | | | | | |
|--|------------|--------------------|------------|--------------------|-----------|
| | PIN | DESCRIPTION | PIN | DESCRIPTION | |
| PWRBTN | 1 | PWRBTSW- | 2 | VCC | Power LED |
| | 3 | GROUND | 4 | GROUND | |
| HDD LED | 5 | VCC | 6 | SYSRST- | RESET |
| | 7 | -HDLED | 8 | Ground | |

| ATXCTL1 : ATX Power Control Connector | |
|--|--------------------|
| PIN NO. | DESCRIPTION |
| 1 | GND |
| 2 | PS_ON# |
| 3 | 5VSB |

| CN1: +12V MAIN POWER Input Connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 2 | GND |
| 3 | +12V | 4 | +12V |

| CN3 : +5V Power Output Connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC (+5V) | 2 | GND |

| JSPI1 : SPI flash Connector | | | |
|------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | SPI_VCC (+3.3V) | 5 | GND |
| 2 | SPI_CS# | 6 | SPI_CLK |
| 3 | SPI_MISO | 7 | SPI_MOSI |
| 4 | N/C | 8 | N/C |

| BAT1 : +3V Battery Connector | | | |
|-------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | BAT (+3V) | 2 | GND |

| CF1 : CF Card Interface Slot | | | |
|-------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 26 | CD1# |
| 2 | D3 | 27 | D11 |
| 3 | D4 | 28 | D12 |
| 4 | D5 | 29 | D13 |
| 5 | D6 | 30 | D14 |
| 6 | D7 | 31 | D15 |
| 7 | CE# | 32 | CE2# |
| 8 | A10 | 33 | VS1# |
| 9 | OE# | 34 | IOR# |
| 10 | A9 | 35 | IOW# |
| 11 | A8 | 36 | WE# |
| 12 | A7 | 37 | IRQ |
| 13 | VCC | 38 | VCC |
| 14 | A6 | 39 | CSEL# |
| 15 | A5 | 40 | VS2# |
| 16 | A4 | 41 | RESET# |
| 17 | A3 | 42 | WAIT# |
| 18 | A2 | 43 | INPACK# |
| 19 | A1 | 44 | REG# |
| 20 | A0 | 45 | BVD2 |
| 21 | D0 | 46 | BVD1 |
| 22 | D1 | 47 | D8 |
| 23 | D2 | 48 | D9 |
| 24 | IOCS16# | 49 | D10 |
| 25 | CD2# | 50 | GND2 |

PC104_PLUS1: PC/104-Plus Connector (120-pin PCI bus)

| PIN | Description | PIN | Description | PIN | Description | PIN | Description |
|------------|--------------------|------------|--------------------|------------|--------------------|------------|--------------------|
| A1 | GND | B1 | RESERVED1 | C1 | +5V | D1 | AD0 |
| A2 | VIO1 | B2 | AD2 | C2 | AD1 | D2 | +5V |
| A3 | AD5 | B3 | GND | C3 | AD4 | D3 | AD3 |
| A4 | CBE0- | B4 | AD7 | C4 | GND | D4 | AD6 |
| A5 | GND | B5 | AD9 | C5 | AD8 | D5 | GND |
| A6 | AD11 | B6 | VIO2 | C6 | AD10 | D6 | M66EN |
| A7 | AD14 | B7 | AD13 | C7 | GND | D7 | AD12 |
| A8 | +3V | B8 | CBE1- | C8 | AD15 | D8 | +3V |
| A9 | SERR- | B9 | GND | C9 | SBO- | D9 | PAR |
| A10 | GND | B10 | PERR- | C10 | +3V | D10 | SDONE |
| A11 | STOP- | B11 | +3V | C11 | LOCK- | D11 | GND |
| A12 | +3V | B12 | TRDY- | C12 | GND | D12 | DEVSEL- |
| A13 | FRAME- | B13 | GND | C13 | IRDY- | D13 | +3V |
| A14 | GND | B14 | AD16 | C14 | +3V | D14 | CBE2- |
| A15 | AD18 | B15 | +3V | C15 | AD17 | D15 | GND |
| A16 | AD21 | B16 | AD20 | C16 | GND | D16 | AD19 |
| A17 | +3V | B17 | AD23 | C17 | AD22 | D17 | +3V |
| A18 | IDSEL0 | B18 | GND | C18 | IDSEL1- | D18 | IDSEL2 |
| A19 | AD24 | B19 | CBE3- | C19 | VIO4 | D19 | IDSEL3 |
| A20 | GND | B20 | AD26 | C20 | AD25 | D20 | GND |
| A21 | AD29 | B21 | +5V | C21 | AD28 | D21 | AD27 |
| A22 | +5V | B22 | AD30 | C22 | GND | D22 | AD31 |
| A23 | REQ0- | B23 | GND | C23 | REQ1- | D23 | VIO5 |
| A24 | GND | B24 | REQ2- | C24 | +5V | D24 | GNT0- |
| A25 | GNT1- | B25 | VIO3 | C25 | GNT2- | D25 | GND |
| A26 | +5V | B26 | PCICLK0 | C26 | GND | D26 | PCICLK1 |
| A27 | PCICLK2 | B27 | +5V | C27 | PCICLK3 | D27 | GND |
| A28 | GND | B28 | INTD- | C28 | +5V | D28 | PCIRST- |
| A29 | +12V | B29 | INTA- | C29 | INTB- | D29 | INTC- |
| A30 | -12V | B30 | RESERVED2 | C30 | RESERVED3 | D30 | GND |

| CN4: PCI-E Mini Card Connector | | | |
|---------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | PCIE_WAKE# | 2 | VCC3 |
| 3 | N/C | 4 | GND |
| 5 | N/C | 6 | 1.5V |
| 7 | CLKREQ# | 8 | LFRAME# |
| 9 | GND | 10 | LAD3 |
| 11 | CLK- | 12 | LAD2 |
| 13 | CLK+ | 14 | LAD1 |
| 15 | GND | 16 | LAD0 |
| 17 | PCIRST# | 18 | GND |
| 19 | LPC | 20 | VCC3 |
| 21 | GND | 22 | PCIRST# |
| 23 | PERN2 | 24 | 3VDual |
| 25 | PERP2 | 26 | GND |
| 27 | GND | 28 | 1.5V |
| 29 | GND | 30 | SMBCLK |
| 31 | PETN2 | 32 | SMBDATA |
| 33 | PETP2 | 34 | GND |
| 35 | GND | 36 | USB- |
| 37 | N/C | 38 | USB+ |
| 39 | N/C | 40 | GND |
| 41 | N/C | 42 | N/C |
| 43 | N/C | 44 | RF_LINK# |
| 45 | N/C | 46 | BLUELED# |
| 47 | N/C | 48 | 1.5V |
| 49 | N/C | 50 | GND |
| 51 | N/C | 52 | VCC3 |

Board Layout: Jumper and Connector Locations



