

ATX Motherboard supports 14nm LGA1151 Intel® Xeon® E3 v5 series, Core™ i3,Pentium®/Celeron® processor per Intel® C236 , DDR4, Three Independent Displays VGA/ DVI-D / HDMI 2.0/, Dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI2.0 and RoHS

IMBA-C2360-i2

Quick Installation Guide

Version 1.0

Apr 07, 2016.

Package List

IMBA-C2360-i2 package includes the following items:

- 1 x IMBA-C2360-i2-R10 Single board computer
- 1 x I/O shielding
- 2 x SATA cable
- 1 x One Key Recovery CD
- 1 x QIG
- 1 x Utility CD



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Specifications

- CPU:
LGA1151 Intel® Xeon® E3 v5 series, Core™ i3, Pentium® /Celeron® processor supported
- System Chipset: Intel® C236
- Memory:
Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs support up to 64 GB
- BIOS: UEFI BIOS
- Graphic Engine:
Intel® HD Graphics Gen 9 engine with 16 low-power execution units, supports DX11/12, OpenGL 4.3/4.4 and OpenCL2.x, ES 2.0
- Display Output:
Triple independent display
1 x VGA (up to 1920x1200@60 Hz)
1 x DVI-D (up to 2560x1600@60Hz)
1 x HDMI 2.0 (up to 4096x2160@60Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 4096x2304@60Hz)
- Ethernet:
LAN1: Intel® I210 PCIe controller
LAN2: Intel® I219LM PCIe with Intel® AMT 11.0 support
- External I/O Interface:
2 x USB 2.0
4 x USB 3.0
- Internal I/O Interface:
1 x KB/MS (1x6 pin)
1 x LPT (2x13 pin, P=2.54)
1 x mSATA (colay SATA2)
2 x RS-232/422/485 (2x5 pin, P=2.54)
6 x SATA 6Gb/s (RAID 0/1/5/10 support)

- 1 x USB 3.0 (2x10 pin, P=2.0)
- 1 x USB 2.0 (Type A)
- 4 x USB 2.0 (2x4 pin, P=2.0)
- 4 x RS-232 (2x5 pin, P=2.54)
- SMBus: 1 x SMBus (1x4 pin)
- I²C: 1 x I²C (1x4 pin)
- TPM: 1 x TPM connector (2x10 pin)
- Audio:
 - Realtek ALC662 HD codec supports 5.1-channel
 - 3 x Audio jacks (line-out, line-in, mic-in) on rear IO
 - 1 x Front audio (2x5 pin)
- Front Panel:
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- LEN LED: 2 x LAN LED (1x2 pin)
- Expansion:
 - 1 x Full-size PCIe Mini card slot (support mSATA)
 - 2 x PCI slot
 - 2 x PCIe x 8 slot (Gen3)
 - 3 x PCIe x 4 slot (Gen3)
- iRIS Remote Management Module:
 - 1 x iRIS-2400 slot
- Watchdog Timer:
 - Software programmable support 1~255 sec. system reset
- Digital I/O: 8-bit digital I/O (2x5 pin)
- Fan Connector:
 - 1 x CPU smart fan connector (1x4 pin)
 - 2 x System smart fan connectors (1x3 pin)
- Chassis Open: 1 x Chassis intrusion (1x2 pin)
- Power supply: ATX/AT power supply
- Power Consumption:
 - 3.3V@0.8A, 5V@4.09A, 12V@5.56A, 5VSB@0A

(Intel Xeon E3-1225V5 3.3GHz 80W CPU with 32 GB (2133 MHz DDR4 memory 16GB*4))

- Operation Temperature: -20°C ~ 60°C
- Storage Temperature: -30°C ~ 70°C
- Operation Humidity: 10% ~ 95%, non-condensing
- Dimensions: 244mm x 305mm
- Weight: GW:1200g, NW: 700g

Ordering Information

- **IMBA-C2360-i2-R10:**
ATX Motherboard supports 14nm LGA1151 Intel® Xeon® E3 v5 series, Core™ i3, Pentium®/Celeron® processor per Intel® C236, DDR4, Three Independent Displays VGA/ DVI-D / HDMI 2.0/, Dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI2.0 and RoHS
- **iRIS-2400-R10:**
IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
- **PCIES-2PIMSATA-R10:**
Peripheral card for flexible I/O, 2 x PCIe Mini, 2 x mSATA expansion
- **PCIES-USB3-R10:**
Peripheral card for flexible I/O, USB 3.0 expansion
- **19800-000049-RS:** LPT flat cable, 280mm
- **19800-000075-RS:** PS/2 KB/MS Y-cable with bracket, 220mm
- **19800-003100-300-RS:** Dual-port USB cable with bracket
- **19800-010500-200-RS:** USB 3.0 cable 457mm with bracket
- **32102-000100-200-RS:**
SATA power cable, MOLEX 5264-4P to SATA15P
- **32205-000702-100-RS:** Serial port cable, P=2.54, 230mm
- **CF-1156A-RS-R11:**
High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W

- **CF-1156C-RS:**
LGA1155/1156 kit, 1U chassis compatible, 45W
- **CF-1156D-RS:**
LGA1155/1156 kit, 1U chassis compatible, 65W
- **CF-1156E-R11:**
High-performance LGA1155/1156 cooler kit, 95W
- **DP-DP-R10:**
DisplayPort to DisplayPort converter board (For iEi IDP connector)
- **DP-DVI-R10:**
DisplayPort to DVI-D converter board (For iEi IDP connector)
- **DP-HDMI-R10:**
DisplayPort to HDMI converter board (For iEi IDP connector)
- **DP-LVDS-R10:**
DisplayPort to 24 bit dual channel LVDS converter board
(For iEi IDP connector)
- **DP-VGA-R10:**
DisplayPort to VGA converter board (For iEi IDP connector)
- **TPM-IN01-R11:** 20-Pin Infineon TPM module, software management tool, firmware V3.17

Jumpers setting and connectors

| LABEL | FUNCTION |
|--|---|
| J_CMOS1 | Clear CMOS button |
| SW_BIOS1_2 | Switch BIOS1 or BIOS2 (option function) |
| Flexibility I/O | Flexibility for PCIE_2 Slot & PCIE_3 slot (option function) |
| J_ATX_AT1 | AT/ATX Power Mode Setting |
| USB SW1 Power USB SW2 Power | USB Power Setting |
| J_FLASH1 | Flash Descriptor Security Override |
| F_PANEL1 | PWR & RST Buttons and indicators |
| VIDEO1 | VGA 15-pin Female Connector |
| VIDEO1 | DVI-D Connector |
| HDMI1 | HDMI Connector (support HDMI2.0) |
| DP1 | Display Port Connector |
| LAN1_USB1 | RJ-45 LAN and USB 3.0 Connector |
| LAN2_USB2 | RJ-45 LAN and USB 3.0 Connector |
| K/M_USB1 | Keyboard & Mouse And USB 2.0 Connector |
| KBMS1 | 6 Pin-header Keyboard & Mouse Connector |
| USB1, USB2 | Internal USB 2.0 Connectors |
| USB3-1 | Internal USB3.0 Connector |
| COM1, COM2 COM3, COM4 | Internal Serial Port Connectors |
| COM5, COM6 | Internal Serial Port RS232/RS-422/RS-485 Connector |
| AUDIO_CV1 | HD Audio Connector |
| FRONT_PANEL1 | Front Panel Audio Connector |
| SATA1, SATA2 SATA3, SATA4 SATA5, SATA6 | Serial ATA 3.0 Connectors |
| MPCIE1 | Mini PCI-E Card Connector |
| CPU_FAN1 | CPU Fan Connector |
| SYS_FAN1, SYS_FAN2 | System Fan Connectors |
| DIO1 | Digital I/O Connector |
| ATX1 | 24-Pin ATX Power Source Connector |

| | |
|----------|------------------------------------|
| CPU12V1 | +12V Power Source Connector |
| ATXPWR1 | PCI-E Power Connector |
| TPM1 | TPM Connector |
| CN1 | EC Debug Port Connector |
| JSPI1 | Flash SPI ROM |
| JSPI2 | Flash EC ROM |
| SMB1 | SMBUS Connector |
| I2C1 | I2C Connector (to EC) |
| LED_LAN1 | LAN1 LINK LED Connector |
| LED_LAN2 | LAN2 LINK LED Connector |
| CHASSIS1 | Chassis Status Connector |
| IPMI1 | Collocation IPMI Module(iRIS-2400) |

| J_CMOS1: Clear CMOS button | |
|-----------------------------------|------------------------------------|
| PIN NO. | DESCRIPTION |
| NC (default) | Keep CMOS Setup (Normal Operation) |
| Press button | Clear CMOS Setup |

| SW_BIOS1_2: Switch BIOS1 or BIOS2 (option function) | |
|--|--------------------|
| PIN NO. | DESCRIPTION |
| Short 1 - 2(Right) | BIOS1 (default) |
| Short 2 - 3(Left) | BIOS2 |

| USB SW1 Power, USB SW2 Power: USB power setting | |
|---|-------------------|
| USB SW1 | DESCRIPTION |
| +5V DUAL | 5V DUAL (Default) |
| +5V | +5V |

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Chipset

| | | |
|-----------------------------|-----------------|-------|
| Auto Power Button Status | [Disabled(ATX)] | |
| Restore AC Power Loss | [Last State] | ----- |
| > PCI Express Configuration | | |
| > PCI Azalia Configuration | | |
| Power Saving Function(ERP) | [Disabled] | |
| PCIEX16 Power | [1 x16 PCIE] | |
| USB SW1 Power | [+5V DUAL] | |
| USB SW2 Power | [+5V DUAL] | |

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| F_PANEL1: PWR & RST buttons and indicators | | | | | |
|--|-----|-------------|-----|--------------|----------|
| | PIN | DESCRIPTION | PIN | DESCRIPTION | |
| PWR LED | 1 | +5V | 2 | BEEP_PWR | SPKR |
| | 3 | NC | 4 | IPMI ID_LED+ | IPMI LED |
| | 5 | GND | 6 | IPMI ID_LED- | |
| PWR BTN | 7 | PWRBTN_SW# | 8 | PC_BEEP | SPKR |
| | 9 | GND | 10 | NC | |
| HDD LED | 11 | +5V | 12 | EXTRST- | RESET |
| | 13 | SATA_LED# | 14 | GND | |

| VIDEO1 : 15-pin Female Connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| V1 | RED | V2 | GREEN |
| V3 | BLUE | V4 | NC |
| V5 | GND | V6 | Hot plug detect |
| V7 | GND | V8 | GND |
| V9 | VCC | V10 | GND |
| V11 | NC | V12 | DDCDA |
| V13 | HSYNC | V14 | VSYNC |
| V15 | DDCCLK | | |

| VIDEO1: DVI-I(Dual Link)+CRT | | | |
|-------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| C1 | RED | 10 | DVI_DATA1 |
| C2 | GREEN | 11 | GND |
| C3 | BLUE | 12 | N/C |
| C4 | HS | 13 | N/C |
| C5 | GND | 14 | +5V |
| C6 | NC | 15 | GND |
| 1 | DVI_DATA2# | 16 | HPDET |
| 2 | DVI_DATA2 | 17 | DVI_DATA0# |
| 3 | GND | 18 | DVI_DATA0 |
| 4 | N/C | 19 | GND |
| 5 | N/C | 20 | N/C |
| 6 | DDC CLK | 21 | N/C |
| 7 | DDC DATA | 22 | N/C |
| 8 | VS | 23 | DVI_CLK |
| 9 | DVI_DATA1# | 24 | DVI_CLK# |

| HDMI1: HDMI Connector (support HDMI2.0) | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | HDMI_DATA2 | 13 | N/C |
| 2 | GND | 14 | N/C |
| 3 | HDMI_DATA2# | 15 | HDMI_SCL |
| 4 | HDMI_DATA1 | 16 | HDMI_SDA |
| 5 | GND | 17 | GND |
| 6 | HDMI_DATA1# | 18 | +5V |
| 7 | HDMI_DATA0 | 19 | HDMI_HPD |
| 8 | GND | 20 | HDMI_GND |
| 9 | HDMI_DATA0# | 21 | HDMI_GND |
| 10 | HDMI_CLK | 22 | HDMI_GND |
| 11 | GND | 23 | HDMI_GND |
| 12 | HDMI_CLK# | | |

| DP1: Display port connector (support 2K resolution) | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | +5V | 11 | AUXP |
| 2 | LANE1N | 12 | AUXN |
| 3 | LANE1P | 13 | GND |
| 4 | GND | 14 | LANE2P |
| 5 | LANE3N | 15 | LANE2N |
| 6 | LANE3P | 16 | GND |
| 7 | GND | 17 | LANE0P |
| 8 | AUX_CTRL_DET_D | 18 | LANE0N |
| 9 | GND | 19 | +3.3V |
| 10 | HPD | | |

| LAN1_USB1: Ethernet and USB 3.0 connectors | | | |
|---|--------------------|----------------|--------------------|
| USB1: External USB 3.0 connectors | | | |
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC | 10 | VCC |
| 2 | USB_DATA- | 11 | USB_DATA- |
| 3 | USB_DATA+ | 12 | USB_DATA+ |
| 4 | GND | 13 | GND |
| 5 | USB3_RX- | 14 | USB3_RX- |
| 6 | USB3_RX+ | 15 | USB3_RX+ |
| 7 | GND | 16 | GND |
| 8 | USB3_TX- | 17 | USB3_TX- |
| 9 | USB3_TX+ | 18 | USB3_TX+ |
| LAN1: RJ-45 LAN connector | | | |
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 20 | LAN1_MDI0P | 24 | LAN1_MDI2P |
| 21 | LAN1_MDI0N | 25 | LAN1_MDI2N |
| 22 | LAN1_MDI1P | 26 | LAN1_MDI3P |
| 23 | LAN1_MDI1N | 27 | LAN1_MDI3N |

| LAN2_USB2: Ethernet and USB 3.0 connectors | | | |
|---|--------------------|----------------|--------------------|
| USB2: External USB 3.0 connectors | | | |
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC | 10 | VCC |
| 2 | USB_DATA- | 11 | USB_DATA- |
| 3 | USB_DATA+ | 12 | USB_DATA+ |
| 4 | GND | 13 | GND |
| 5 | USB3_RX- | 14 | USB3_RX- |
| 6 | USB3_RX+ | 15 | USB3_RX+ |
| 7 | GND | 16 | GND |
| 8 | USB3_TX- | 17 | USB3_TX- |
| 9 | USB3_TX+ | 18 | USB3_TX+ |
| LAN2: RJ-45 LAN connector | | | |
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 20 | LAN1_MDI0P | 24 | LAN1_MDI2P |
| 21 | LAN1_MDI0N | 25 | LAN1_MDI2N |
| 22 | LAN1_MDI1P | 26 | LAN1_MDI3P |
| 23 | LAN1_MDI1N | 27 | LAN1_MDI3N |

| K/M_USB1: Keyboard & Mouse And USB 2.0 Connector | | | |
|---|--------------------|----------------|--------------------|
| USB1: External USB2.0 Connector | | | |
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC | 5 | VCC |
| 2 | USB_DATA- | 6 | USB_DATA- |
| 3 | USB_DATA+ | 7 | USB_DATA+ |
| 4 | GND | 8 | GND |
| KB_MS1: Keyboard / Mouse Connector | | | |
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 9 | GND | 12 | VCC |
| 10 | KEYBOARD DATA | 13 | KEYBOARD CLOCK |
| 11 | MOUSE DATA | 14 | MOUSE CLOCK |

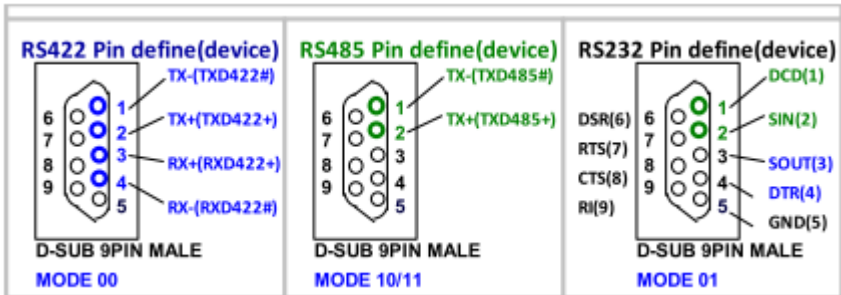
| KB_MS1: 6-pin header Keyboard/Mouse Connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC | 2 | Mouse Data |
| 3 | Mouse Clock | 4 | Keyboard Data |
| 5 | Keyboard Clock | 6 | GND |

| USB1, USB2: Internal USB 2.0 connectors | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC | 2 | GND |
| 3 | USB_DATA- | 4 | USB_DATA+ |
| 5 | USB_DATA+ | 6 | USB_DATA- |
| 7 | GND | 8 | VCC |

| USB3-1 : Internal USB 3.0 Connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | VCC | 11 | USB_DATA+ |
| 2 | USB3_RX- | 12 | USB_DATA- |
| 3 | USB3_RX+ | 13 | GND |
| 4 | GND | 14 | USB3_TX+ |
| 5 | USB3_TX- | 15 | USB3_TX- |
| 6 | USB3_TX+ | 16 | GND |
| 7 | GND | 17 | USB3_RX+ |
| 8 | USB_DATA- | 18 | USB3_RX- |
| 9 | USB_DATA+ | 19 | VCC |
| 10 | NC | | |

| COM1,COM2,COM3,COM4: Internal RS-232 serial port connectors | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | DCD | 2 | DSR |
| 3 | RXD | 4 | RST |
| 5 | TXD | 6 | CTS |
| 7 | DTR | 8 | RI |
| 9 | GND | 10 | GND |

| COM5,COM6:Internal RS-232/RS-422/RS-485 serial port connectors | | | |
|--|-------------|---------|-------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | DCD | 2 | DSR |
| 3 | RXD | 4 | RST |
| 5 | TXD | 6 | CTS |
| 7 | DTR | 8 | RI |
| 9 | GND | 10 | GND |



| AUDIO_CV1 : Audio Line-In/Out MIC Connector | |
|---|---|
| PIN NO. | DESCRIPTION |
| Line_In (Blue) | CD/DVD or other audio source input port |
| Line_Out (Green) | Connect this port to headphone or speaker |
| Microphone (Pink) | Connect this port to microphone |

| FRONT-PANEL1 : Audio Source Connector | | | |
|---------------------------------------|-------------|---------|-------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | LMIC2-L | 2 | AUD_GND |
| 3 | LMIC2-R | 4 | PRESENCE# |
| 5 | LLINE2-R | 6 | MIC2-JD |
| 7 | FRONT-IO | 8 | NC |
| 9 | LLINE2-L | 10 | LINE2-JD |

| SATA1, SATA2, SATA5: Serial ATA 3.0 connectors | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 5 | SATA_RX- |
| 2 | SATA_TX+ | 6 | SATA RX+ |
| 3 | SATA_TX- | 7 | GND |
| 4 | GND | 8 | N/C |

| SATA3, SATA4: Serial ATA 3.0 Connector or PCIEX4_3 Slot | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 5 | SATA_RX- |
| 2 | SATA_TX+ | 6 | SATA RX+ |
| 3 | SATA_TX- | 7 | GND |
| 4 | GND | 8 | N/C |

| SATA6: Serial ATA 3.0 Connector or mSATA (MPCIE1) | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 5 | SATA_RX- |
| 2 | SATA_TX+ | 6 | SATA RX+ |
| 3 | SATA_TX- | 7 | GND |
| 4 | GND | 8 | N/C |

| CN2: M-SATA card connector | | | |
|-----------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | PCIE_WAKE# | 2 | +3.3V |
| 3 | N/C | 4 | GND |
| 5 | N/C | 6 | 1.5V |
| 7 | N/C | 8 | N/C |
| 9 | GND | 10 | N/C |
| 11 | MSATA_CLK# | 12 | N/C |
| 13 | MSATA_CLK | 14 | N/C |
| 15 | GND | 16 | N/C |
| 17 | PLTRST_N | 18 | GND |
| 19 | N/C | 20 | +3.3V |
| 21 | GND | 22 | PLTRST_N |
| 23 | SATA_RX+ | 24 | +3.3V |
| 25 | SATA_RX- | 26 | GND |
| 27 | GND | 28 | 1.5V |
| 29 | GND | 30 | SMB_CLK |
| 31 | SATA_TX- | 32 | SMB_DATA |
| 33 | SATA_TX+ | 34 | GND |
| 35 | GND | 36 | USB_DATA- |
| 37 | GND | 38 | USB_DATA+ |
| 39 | +3.3V | 40 | GND |
| 41 | +3.3V | 42 | N/C |
| 43 | +3.3V | 44 | N/C |
| 45 | CLINK_CLK | 46 | N/C |
| 47 | CLINK_DATA | 48 | 1.5V |
| 49 | CLINK_RST# | 50 | GND |
| 51 | MSATA_DET | 52 | +3.3V |

| CPU_FAN1: CPU fan connector | | | |
|------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 2 | +12V |
| 3 | FANIO | 4 | PWM |

| SYS_FAN1, SYS_FAN2: System fan connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | FANIO | 2 | +12V (PWM) |
| 3 | GND | | |

| DIO1 : Digital Input / Output Connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 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 |

| ATX1: 24-pin ATX power source connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | +3.3V | 13 | +3.3V |
| 2 | +3.3V | 14 | -12V |
| 3 | GND | 15 | GND |
| 4 | +5V | 16 | PS_ON |
| 5 | GND | 17 | GND |
| 6 | +5V | 18 | GND |
| 7 | GND | 19 | GND |
| 8 | Power good | 20 | -5V |
| 9 | 5VSB | 21 | +5V |
| 10 | +12V | 22 | +5V |
| 11 | +12V | 23 | +5V |
| 12 | +3.3V | 24 | GND |

| CPU12V1: +12V power source connector | | | |
|---|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 2 | GND |
| 3 | +12V | 4 | +12V |

| ATXPWR1: PCI-E Power Connector | | | |
|---------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | +5V | 2 | GND |
| 3 | GND | 4 | +12V |

| TPM1: Trusted Platform Module Connector | | | |
|--|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | LCLK | 2 | GND |
| 3 | LFRAME# | 4 | KEY |
| 5 | LRERST# | 6 | +5V |
| 7 | LAD3 | 8 | LAD2 |
| 9 | +3.3V | 10 | LAD1 |
| 11 | LAD0 | 12 | GND |
| 13 | SCL | 14 | SDA |
| 15 | SB3V | 16 | SERIRQ |
| 17 | GND | 18 | GLKRUN# |
| 19 | LPCPD# | 20 | LDRQ# |

| CN1: EC debug connector | | | |
|--------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | EC_EPP_STB# | 2 | EC_EPP_AFD# |
| 3 | EC_EPP_PD0 | 4 | NC |
| 5 | EC_EPP_PD1 | 6 | EC_EPP_INIT# |
| 7 | EC_EPP_PD2 | 8 | EC_EPP_SLIN# |
| 9 | EC_EPP_PD3 | 10 | GND |
| 11 | EC_EPP_PD4 | 12 | NC |
| 13 | EC_EPP_PD5 | 14 | EC_EPP_BUSY |
| 15 | EC_EPP_PD6 | 16 | EC_EPP_KSI5 |
| 17 | EC_EPP_PD7 | 18 | EC_EPP_KSI4 |

| JSPI1: Flash SPI ROM connector | | | |
|---------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | +3.3V | 2 | SPI_CS# |
| 3 | SPI_SO | 4 | NC |
| 5 | GND | 6 | SPI_CLK |
| 7 | SPI_SI | 8 | NC |

| JSPI2: Flash EC ROM connector | | | |
|--------------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | +3.3V | 2 | SPI_CS# |
| 3 | SPI_SO | 4 | NC |
| 5 | GND | 6 | SPI_CLK |
| 7 | SPI_SI | 8 | NC |

| SMB1: SMBUS connector | | | |
|------------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 2 | SMB_DATA |
| 3 | SMB_CLK | 4 | +5V |

| I2C1: I2C connector | | | |
|----------------------------|--------------------|----------------|--------------------|
| PIN NO. | DESCRIPTION | PIN NO. | DESCRIPTION |
| 1 | GND | 2 | PCH_GP38 |
| 3 | PCH_GP39 | 4 | +5V |

| LED_LAN1: LAN Link LED Connector | | | |
|---|--------------------|------------|--------------------|
| PIN | DESCRIPTION | PIN | DESCRIPTION |
| 1 | +3.3V | 2 | LAN1_LED_LNK#_ACT |

| LED_LAN2: LAN Link LED Connector | | | |
|---|--------------------|------------|--------------------|
| PIN | DESCRIPTION | PIN | DESCRIPTION |
| 1 | +3.3V | 2 | LAN2_LED_LNK#_ACT |

| CHASSIS1: Chassis Status Connector | | | |
|---|--------------------|------------|--------------------|
| PIN | DESCRIPTION | PIN | DESCRIPTION |
| 1 | +3.3VSB | 2 | CHASSIS OPEN |

