# Jumpers and Headers Setting Guide

ASRock Industrial

## IMB-1245P-WV

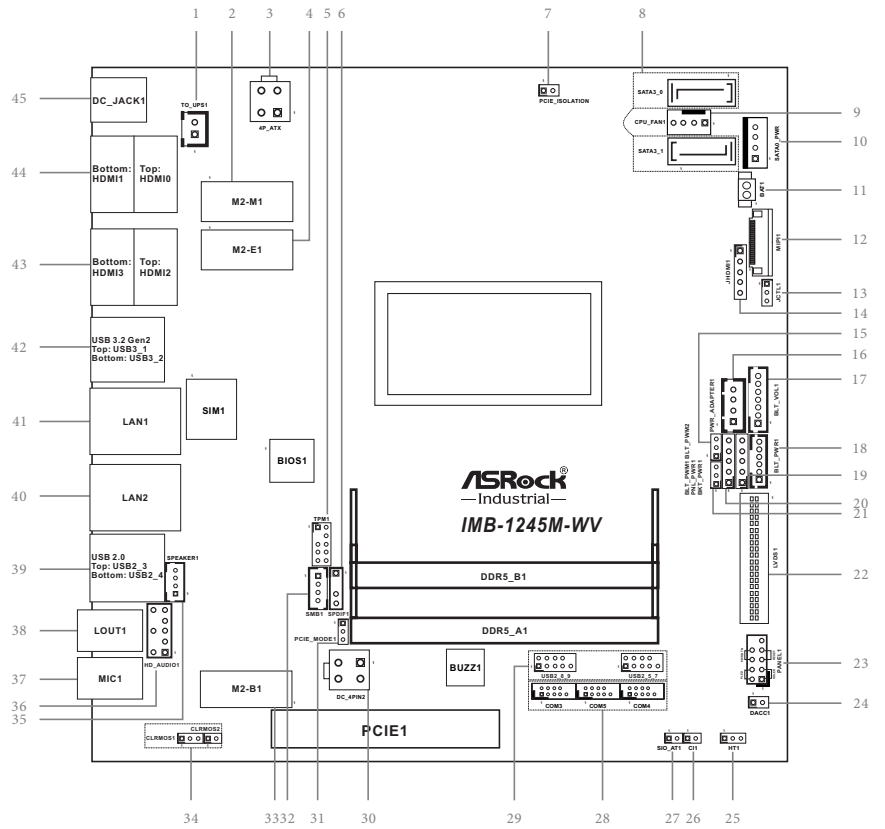
## IMB-1245M-WV

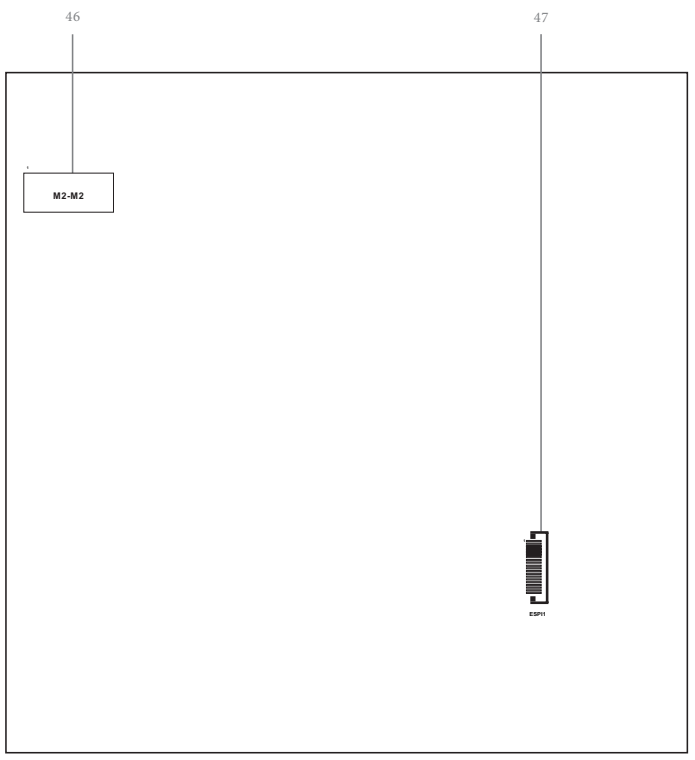


**Revision History**

| Date | Description |
|---|---|
| April 26, 2024 | Sixth Release |
| May 29, 2024 | Seventh Release |
| July 16, 2024 | Eighth Release |
| November 12, 2024 | Ninth Release |
| April 25, 2025 | Tenth Release |
| May 6, 2025 | Eleventh Release |

For earlier revisions, please contact technical support.




### 1 : 2-pin UPS Module Power Input Connector (TO_UPS1)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | DC Input |


### 2 : M.2 Key-M Socket (M2_M1)

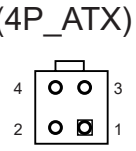
| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | GND | +3.3V | 2 |
| 3 | GND | +3.3V | 4 |
| 5 | PERn3 | NA | 6 |
| 7 | PERp3 | NA | 8 |
| 9 | GND | SATA_LED | 10 |
| 11 | PETn3 | +3.3V | 12 |
| 13 | PETp3 | +3.3V | 14 |
| 15 | GND | +3.3V | 16 |
| 17 | PERn2 | +3.3V | 18 |
| 19 | PERp2 | NA | 20 |
| 21 | GND | NA | 22 |
| 23 | PETn2 | NA | 24 |
| 25 | PETp2 | NA | 26 |
| 27 | GND | NA | 28 |
| 29 | PERn1 | NA | 30 |
| 31 | PERp1 | NA | 32 |
| 33 | GND | NA | 34 |
| 35 | PETn1 | NA | 36 |
| 37 | PETp1 | NA | 38 |
| 39 | GND | NA | 40 |
| 41 | PERn0 | NA | 42 |
| 43 | PERp0 | NA | 44 |
| 45 | GND | NA | 46 |
| 47 | PETn0 | NA | 48 |
| 49 | PETP0 | PERST# | 50 |
| 51 | GND | CLKREQ# | 52 |
| 53 | PEFCLKn | NA | 54 |
| 55 | PEFCLKp | NA | 56 |
| 57 | GND | NA | 58 |
| | | | |
| 67 | NA | NA | 68 |
| 69 | PEDET | +3.3V | 70 |
| 71 | GND | +3.3V | 72 |
| 73 | GND | +3.3V | 74 |
| 75 | GND | | |

### 4 : M.2 Key-E Socket (M2_E1)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | GND | +3.3V | 2 |
| 3 | USB_D+ | +3.3V | 4 |
| 5 | USB_D- | NA | 6 |
| 7 | GND | NA | 8 |
| 9 | CNV_WGR_D1- | CNV_RF_RESET | 10 |
| 11 | CNV_WGR_D1+ | NA | 12 |
| 13 | GND | MODEM_CLKREQ | 14 |
| 15 | CNV_WGR_D0- | NA | 16 |
| 17 | CNV_WGR_D0+ | GND | 18 |
| 19 | GND | NA | 20 |
| 21 | CNV_WGR_CLK- | CNV_BRI_RSP | 22 |
| 23 | CNV_WGR_CLK+ | | |
| | | | |
| 33 | GND | CNV_BGI_DT | 32 |
| 35 | PETp | CNV_RGI_RSP | 34 |
| 37 | PETn | CNV_BRI_DT | 36 |
| 39 | GND | NA | 38 |
| 41 | PERp | NA | 40 |
| 43 | PERn | NA | 42 |
| 45 | GND | NA | 44 |
| 47 | PEFCLKp | NA | 46 |
| 49 | PEFCLKn | NA | 48 |
| 51 | GND | SUSCLK | 50 |
| 53 | CLKREQ# | PERST0# | 52 |
| 55 | NA | W_DISABLE1# | 54 |
| 57 | GND | W_DISABLE2# | 56 |
| 59 | CNV_WT_D1- | NA | 58 |
| 61 | CNV_WT_D1+ | NA | 60 |
| 63 | GND | NA | 62 |
| 65 | CNV_WT_D0- | NA | 64 |
| 67 | CNV_WT_D0+ | NA | 66 |
| 69 | GND | NA | 68 |
| 71 | CNV_WT_CLK- | NA | 70 |
| 73 | CNV_WT_CLK+ | +3.3V | 72 |
| 75 | GND | +3.3V | 74 |

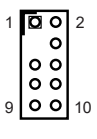
### 3 : 4-pin ATX PWR Connector (4P_ATX)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | GND |
| 3 | DC Input |
| 4 | DC Input |



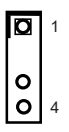

### 5 : TPM Header (TPM1)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | TPM PWR | RST# | 2 |
| 3 | | CS# | 4 |
| 5 | IRA | MOSI | 6 |
| 7 | MISO | GND | 8 |
| 9 | CLK | GND | 10 |




### 6 : SPDIF Header (SPDIF1)

| Pin | Signal Name |
|---|---|
| 1 | +5V |
| 2 | |
| 3 | SPDIF OUT |
| 4 | GND |



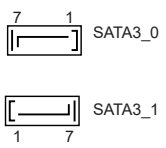

### 7 : PCIE_ISOLATION1

| Pin | Signal Name |
|---|---|
| 1 | PSON# |
| 2 | GND |


* Connect to PCIE_ISOLATION_1 header on VGA-PWR card.

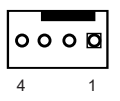
### 8 : SATA3 Connectors (SATA3_0, SATA3_1)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | SATA-A+ |
| 3 | SATA-A- |
| 4 | GND |
| 5 | SATA-B- |
| 6 | SATA-B+ |
| 7 | GND |



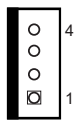

### 9 : CPU FAN Connector (+12V) (CPU_FAN1)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | +12V |
| 3 | CPU_FAN_SPEED |
| 4 | FAN_SPEED_CONTROL |



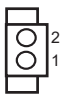

### 10 : SATA Power Output Connector (SATA0_PWR1)

| Pin | Signal Name |
|---|---|
| 1 | +5V |
| 2 | GND |
| 3 | GND |
| 4 | +12V |



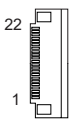

### 11 : Battery Connector (BAT1)

| Pin | Signal Name |
|---|---|
| 1 | BAT+ |
| 2 | GND |




### 12 : MIPI Connector (MIPI1)

| Pin | Signal Name |
|---|---|
| 1 | +3V |
| 2 | I2C0_SDA |
| 3 | I2C0_SCL |
| 4 | GND |
| 5 | N/A |
| 6 | N/A |
| 7 | GND |
| 8 | CSI_E_D3_DP |
| 9 | CSI_E_D3_DN |
| 10 | GND |
| 11 | CSI_E_D2_DP |
| 12 | CSI_E_D2_DN |
| 13 | GND |
| 14 | CSI_E_CK_DP |
| 15 | CSI_E_CK_DN |
| 16 | GND |
| 17 | CSI_E_D1_DP |
| 18 | CSI_E_D1_DN |
| 19 | GND |
| 20 | CSI_E_D0_DP |
| 21 | CSI_E_D0_DN |
| 22 | GND |




### 13 : JCTL1 (Default 1-2)

| Pin | Signal Name |
|---|---|
| 1 | REMOTE_CTL_ATX |
| 2 | REMOTE_CTL |
| 3 | REMOTE_CTL_SP |
| 1&2 | ATX PWR |
| 2&3 | Special PWR |




### 14 : JHDMI1

| Pin | Signal Name |
|---|---|
| 1 | +5V |
| 2 | GND |
| 3 | GPP_V23 |
| 4 | GPP_V22 |
| 5 | GPP_C8 |


* Only used by ASRockInd design card HDMI-MIPI.

### 15 : CON_LBKLT_CTL Voltage Level (BLT_PWM2)

1-2 : 3V Level (Default)

2-3 : 5V Level


### 16 : Power Adapter (PWR_ADAPTER1)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | 5VA_CONTROL |
| 3 | 5VA |
| 4 | GND |

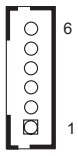



### 17 : Backlight Volume Control (BLT_VOL1)

| Pin | Signal Name |
|---|---|
| 1 | GPIO_VOL_UP |
| 2 | GPIO_VOL_DW |
| 3 | PWRDN |
| 4 | BLT_UP |
| 5 | BLT_DW |
| 6 | GND |
| 7 | GND |


### 18 : Inverter Power Control Wafer (BLT_PWR1)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | GND |
| 3 | CON_LBKLT_CTL |
| 4 | CON_LBKLT_EN |
| 5 | LCD_BLT_VCC |
| 6 | LCD_BLT_VCC |




### 19 : Backlight Power Select (LCD_BLT_VCC) (BKT_PWR1)

1-2: LCD_BLT_VCC: +5V (Default)

2-3: LCD_BLT_VCC: +12V

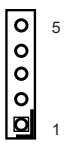
4-5: LCD_BLT_VCC: DC_IN


### 20 : Panel Power Select (LCD_VCC) (PNL_PWR1)

1-2: LCD_VCC : +3V (Default)

2-3: LCD_VCC : +5V

4-5: LCD_VCC : +12V




### 21 : Brightness Control Mode (BLT_PWM1)

1-2 : From eDP PWM to CON_LBKLT_CTL

2-3 : From LVDS PWM to CON_LBKLT_CTL (Default)

* Please set to 1-2 when adjusting brightness by Brightness Control bar under OS.

* Please set to 2-3 when adjusting brightness by BLT_VOL1.




### 22* : LVDS Panel Connector (LVDS1)

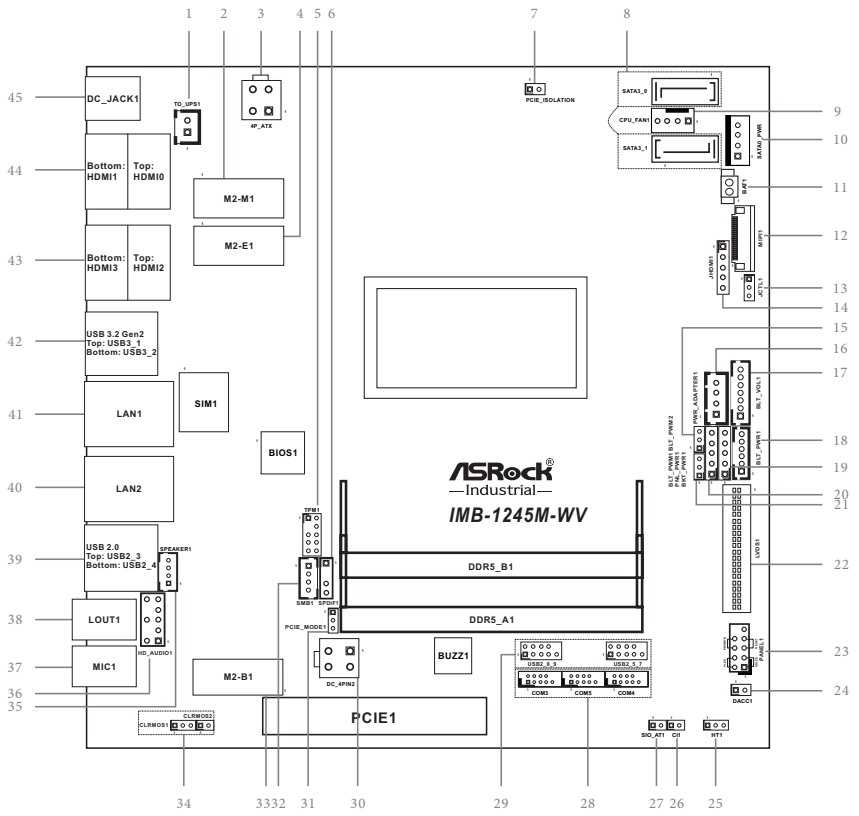
| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | LCD_VCC | LCD_VCC | 2 |
| 3 | +3.3V | N/A | 4 |
| 5 | N/A | LVDS_A_DATA0# | 6 |
| 7 | LVDS_A_DATA0 | PD (Panel Detection) | 8 |
| 9 | LVDS_A_DATA1# | LVDS_A_DATA1 | 10 |
| 11 | GND | LVDS_A_DATA2# | 12 |
| 13 | LVDS_A_DATA2 | GND | 14 |
| 15 | LVDS_A_DATA3# | LVDS_A_DATA3 | 16 |
| 17 | GND | LVDS_A_CLK# | 18 |
| 19 | LVDS_A_CLK | GND | 20 |
| 21 | LVDS_B_DATA0# | LVDS_B_DATA0 | 22 |
| 23 | GND | LVDS_B_DATA1# | 24 |
| 25 | LVDS_B_DATA1 | GND | 26 |
| 27 | LVDS_B_DATA2# | LVDS_B_DATA2 | 28 |
| 29 | DPLVDD_EN | LVDS_B_DATA3# | 30 |
| 31 | LVDS_B_DATA3 | GND | 32 |
| 33 | LVDS_B_CLK# | LVDS_B_CLK | 34 |
| 35 | GND | CON_LBKLT_EN | 36 |
| 37 | CON_LBKLT_CTL | LCD_BLT_VCC | 38 |
| 39 | LCD_BLT_VCC | LCD_BLT_VCC | 40 |

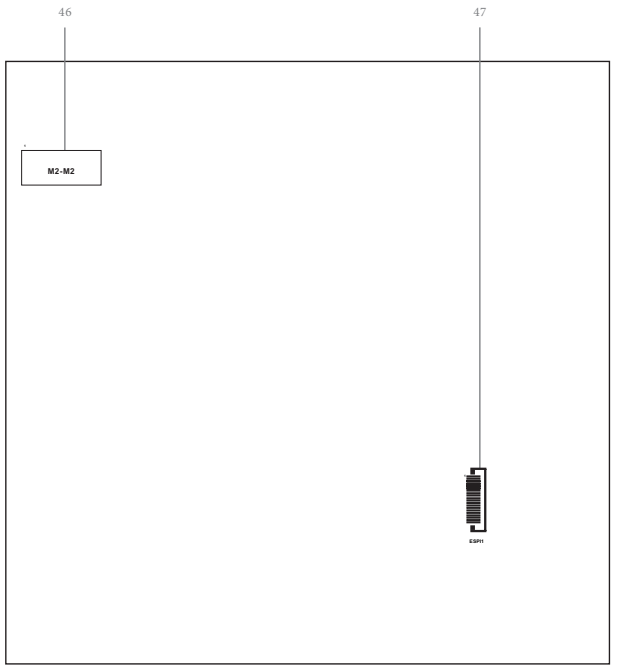
* PD (Panel Detection):
Connect this pin to LVDS Panel's Ground pin to detect Panel detection.



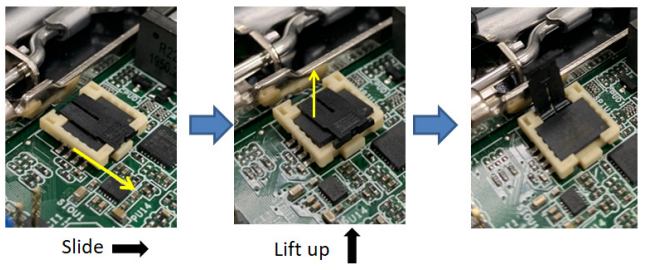

*eDP by pass mode (switch by BIOS)

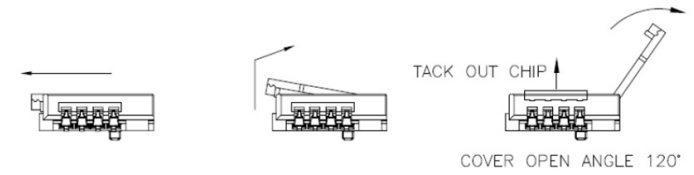
| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | LCD_VCC | LCD_VCC | 2 |
| 3 | +3V | N/A | 4 |
| 5 | N/A | N/A | 6 |
| 7 | eDP_HPD | GND | 8 |
| 9 | eDP_TX1- | eDP_TX1+ | 10 |
| 11 | GND | eDP_TX0- | 12 |
| 13 | eDP_TX0+ | GND | 14 |
| 15 | N/A | N/A | 16 |
| 17 | GND | eDP_AUX- | 18 |
| 19 | eDP_AUX+ | GND | 20 |
| 21 | N/A | N/A | 22 |
| 23 | GND | N/A | 24 |
| 25 | N/A | GND | 26 |
| 27 | N/A | N/A | 28 |
| 29 | LVDD_EN | N/A | 30 |
| 31 | N/A | GND | 32 |
| 33 | N/A | N/A | 34 |
| 35 | GND | CON_LBKLT_EN | 36 |
| 37 | CON_LBKLT_CTL | +LCD_BLT_VCC | 38 |
| 39 | +LCD_BLT_VCC | +LCD_BLT_VCC | 40 |



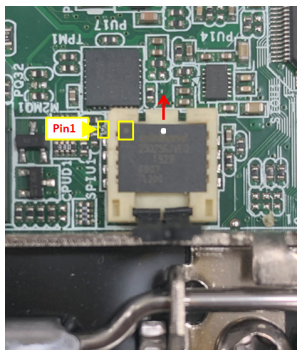




## Installation of ROM Socket




- Do not apply force to the actuator cover after ic inserted.
- Do not apply force to actuator cover when it is opening over 120 degree, Otherwise, the actuator cover may be broken.




- The yellow dot (Pin1) on the ROM must be installed at pin1 position of the socket (white arrow area).
- Make sure the white dot on the ROM is installed outwards of the socket.
- For further details of how to install ROM, please refer to ASRI website.

**Warning: If the installation does not follow as the picture, then it may cause severe damage to chipset & MB.**

## 23 : System Panel Header (PANEL1)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | HDLED+ | PLED+ | 2 |
| 3 | HDLED- | PLED- | 4 |
| 5 | GND | PWRBTN# | 6 |
| 7 | RESET# | GND | 8 |
| 9 | GND | | 10 |




## 24 : DACC1

Open: no ACC
Short: ACC (Default)


* Auto clear CMOS when system boot improperly.

## 25 : Heater header (HT1)

| Pin | Signal Name |
|---|---|
| 1 | Heater_PWR (5V/1A) |
| 2 | GND |
| 3 | NTC (Negative Temperature Coefficient) thermistors |


* The 10k Ohm NTC thermistors is suggested.
* Deep mode is not supported when the preheat function is enabled.

## 26 : Chassis Intrusion Header (CI1)

CI1
Open : Normal (Default)
Short : Active Case Open


## 27 : ATX/AT Mode Jumper (SIO_AT1)

Open: ATX Mode (Default)
Short: AT Mode


## 28 : COM Port Headers (COM3~5) (RS232/422/485) *


* This motherboard supports RS232/422/485 on COM3, 4 and 5 ports. Please refer to the table below for the pin definition. In addition, COM3, 4 and 5 ports (RS232/422/485) can be adjusted in BIOS setup utility > Advanced Screen > Super IO Configuration. You may refer to our user manual for details.

**COM3, 4 and 5 Ports Pin Definition**

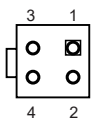
| Pin | RS232 | RS422 | RS485 |
|---|---|---|---|
| 1 | DCD | TX- | RTX- |
| 2 | RXD | TX+ | RTX+ |
| 3 | TXD | RX+ | N/A |
| 4 | DTR | RX- | N/A |
| 5 | GND | GND | GND |
| 6 | DSR | N/A | N/A |
| 7 | RTS | N/A | N/A |
| 8 | CTS | N/A | N/A |
| 9 | PWR | PWR | PWR |

## 29 : USB 2.0 Headers (USB2_5_7, USB2_8_9)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | USB_PWR | USB_PWR | 2 |
| 3 | P- | P- | 4 |
| 5 | P+ | P+ | 6 |
| 7 | GND | GND | 8 |
| 9 | DUMMY | | 10 |


## 30 : 4-pin ATX PWR Connector (DC_4PIN2)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | GND |
| 3 | PCIE_EXT_+12V |
| 4 | PCIE_EXT_+12V |




* Only use with VGA-PWR card

## 31 : PCIE_PWR_MODE (PCIE_MODE1)

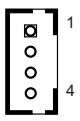
1-2: LOW_PWR_MODE (Default)
2-3: HIGH_PWR_MODE

* Only set to HIGH_PWR_Mode (pin 2-3) when using VGA-PWR CARD..




## 32 : SMB1

| Pin | Signal Name |
|---|---|
| 1 | GPP_D03 |
| 2 | SMB_CLK_MAIIN |
| 3 | SMB_DATA_MAIN |
| 4 | GND |




## 33 : M.2 Key-B Socket (M2_B1)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | NA | +3.3V | 2 |
| 3 | GND | +3.3V | 4 |
| 5 | GND | FuLL_Card_Power_off | 6 |
| 7 | USB_D+ | DISABLE1_N | 8 |
| 9 | USB_D- | N/A | 10 |
| 11 | GND | | |
| | | | |
| | | NA | 20 |
| 21 | GND | NA | 22 |
| 23 | NA | NA | 24 |
| 25 | NA | DISABLE2_N | 26 |
| 27 | GND | NA | 28 |
| 29 | USB3_RX_N | UIM_RESET | 30 |
| 31 | USB3_RX_P | UIM_CLK | 32 |
| 33 | GND | UIM_DATA | 34 |
| 35 | USB3_TX_N | UIM_PWR | 36 |
| 37 | USB3_TX_P | NA | 38 |
| 39 | GND | NA | 40 |
| 41 | PERn0 | NA | 42 |
| 43 | PERp0 | NA | 44 |
| 45 | GND | NA | 46 |
| 47 | PETn0 | NA | 48 |
| 49 | PETP0 | PERST# | 50 |
| 51 | GND | CLKREQ# | 52 |
| 53 | PEFCLKn | NA | 54 |
| 55 | PEFCLKp | NA | 56 |
| 57 | GND | NA | 58 |
| 59 | NA | NA | 60 |
| 61 | NA | NA | 62 |
| 63 | NA | NA | 64 |
| 65 | NA | SIM DETECT | 66 |
| 67 | NA | NA | 68 |
| 69 | PEDET | +3.3V | 70 |
| 71 | GND | +3.3V | 72 |
| 73 | GND | +3.3V | 74 |
| 75 | NA | | |

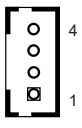
## 34 : Clear CMOS Headers

CLRMOS1
1-2 : Normal (Default)
2-3 : Clear CMOS
CLRMOS2
Open : Normal (Default)
Short : Auto Clear CMOS When AC Power On



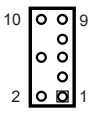
## 35 : 3W Audio AMP Output Wafer (SPEAKER1)

| Pin | Signal Name |
|---|---|
| 1 | OUTLN |
| 2 | OUTLP |
| 3 | OUTRP |
| 4 | OUTRN |




## 36 : Front Panel Audio Header (HD_AUDIO1)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | MIC2_L | GND | 2 |
| 3 | MIC2_R | | 4 |
| 5 | OUT2_R | MIC_RET | 6 |
| 7 | J_SENSE | | 8 |
| 9 | OUT2_L | OUT_RET | 10 |




## 37 : Mic In (MIC1)
## 38 : Line Out (LOUT1)
## 39 : USB 2.0 Ports (USB2_3_4)
## 40 : RJ45 LAN Port (LAN2)
## 41 : RJ45 LAN Port (LAN1)
## 42 : USB 3.2 Gen2 Ports (USB3_1_2)
## 43 : HDMI Ports (HDMI2_3)
## 44 : HDMI Ports (HDMI0_1)
## 45 : DC_JACK1

Back Side :

## 46 : ESPI Header (ESPI1)

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | ESPI_CLK |
| 3 | GND |
| 4 | ESPI_CS0# |
| 5 | ESPI_RESET# |
| 6 | GND |
| 7 | +3V |
| 8 | ESPI_CS1# |
| 9 | SMBus_CLK |
| 10 | SMBus_DATA |
| 11 | ESPI_IO0 |
| 12 | ESPI_IO1 |
| 13 | ESPI_IO2 |
| 14 | ESPI_IO3 |
| 15 | ESPI_ALERT1# |
| 16 | +3VSB |
| 17 | Internal Use |
| 18 | +5VSB |
| 19 | ESPI_ALERT0# |
| 20 | GND |


## 47 : M.2 Key-M Socket (M2_M2)

| Pin | Signal Name | Signal Name | Pin |
|---|---|---|---|
| 1 | GND | +3.3V | 2 |
| 3 | GND | +3.3V | 4 |
| 5 | PERn3 | NA | 6 |
| 7 | PERp3 | NA | 8 |
| 9 | GND | SATA_LED | 10 |
| 11 | PETn3 | +3.3V | 12 |
| 13 | PETp3 | +3.3V | 14 |
| 15 | GND | +3.3V | 16 |
| 17 | PERn2 | +3.3V | 18 |
| 19 | PERp2 | NA | 20 |
| 21 | GND | NA | 22 |
| 23 | PETn2 | NA | 24 |
| 25 | PETp2 | NA | 26 |
| 27 | GND | NA | 28 |
| 29 | PERn1 | NA | 30 |
| 31 | PERp1 | NA | 32 |
| 33 | GND | NA | 34 |
| 35 | PETn1 | NA | 36 |
| 37 | PETp1 | NA | 38 |
| 39 | GND | NA | 40 |
| 41 | PERn0 | NA | 42 |
| 43 | PERp0 | NA | 44 |
| 45 | GND | NA | 46 |
| 47 | PETn0 | NA | 48 |
| 49 | PETP0 | PERST# | 50 |
| 51 | GND | CLKREQ# | 52 |
| 53 | PEFCLKn | NA | 54 |
| 55 | PEFCLKp | NA | 56 |
| 57 | GND | NA | 58 |
| | | | |
| 67 | NA | NA | 68 |
| 69 | PEDET | +3.3V | 70 |
| 71 | GND | +3.3V | 72 |
| 73 | GND | +3.3V | 74 |
| 75 | GND | | |