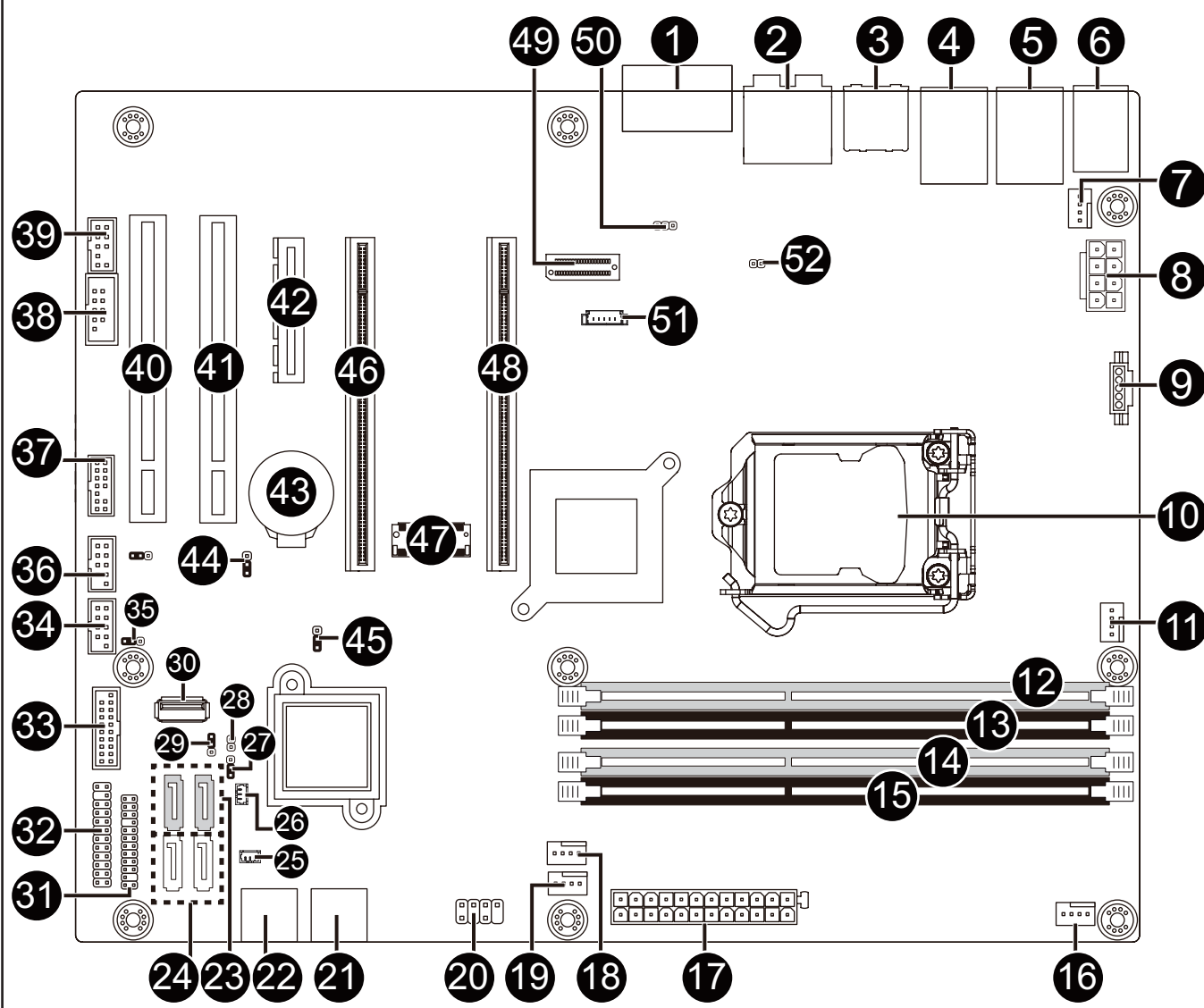


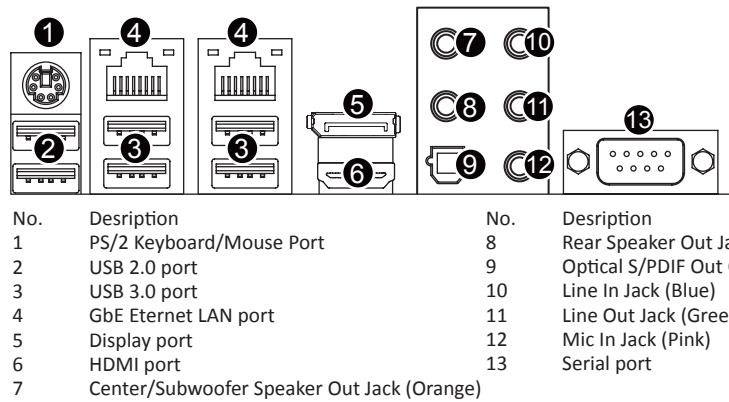
MW31-SP0 Quick Reference Guide/ 快速测试参考指南



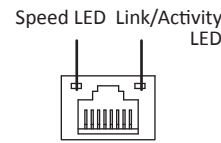
No.	Code	Description
1	COM1	Serial port
2	HD_AUDIO	Audio connectors
3	DP_HDMI	Display port port (top) / HDMI port (bottom)
4	USB_LAN1	LAN port #1 (top) / USB 3.0 ports (bottom)
5	USB_LAN2	LAN port #2 (top) / USB 3.0 ports (bottom)
6	PS2_USB2	PS/2 connector (top)/USB 2.0 ports (bottom)
7	SYS_FAN0	System fan connector#0
8	P2	8 pin power connector (for CPU)
9	PMBUS	PMBus connector
10	CPU0	Intel LGA1151 Socket H4
11	CPU0_FAN	CPU fan connector
12	DIMM_PO_A0	Channel 1 slot 0
13	DIMM_PO_A1	Channel 1 slot 1
14	DIMM_PO_B0	Channel 2 slot 0
15	DIMM_PO_B1	Channel 2 slot 1
16	SYS_FAN1	System fan connector#1
17	P1	24 pin main power connector
18	SYS_FAN2	System fan connector#2
19	SYS_FAN3	System fan connector#3
20	SATA_SGP1	SATA SGPIO header
21	SATA4_5	SATA 3 Gb/s connectors
22	SATA6_7	SATA 3 Gb/s connectors
23	SATA0/SATA1	SATA 3 Gb/s connectors (Supports SATA DOM)
24	SATA2/SATA3	SATA 3 Gb/s connectors
25	SATA_DOM1	SATA port 1 DOM power connector
26	SATA_DOM0	SATA port 0 DOM power connector

No.	Code	Description
27	BIOS_RCVR	BIOS recovery jumper
28	CASE_OPEN	Case open intrusion alert header
29	ME_RCVR	ME recovery jumper
30	USB_A1	Type A USB 2.0 connector
31	BP_1	HDD back plane board header
32	FP_1	Front panel header
33	F_USB3	USB 3.0 header
34	F_USB2	USB 2.0 header
35	BIOS_PWD	Clearing Supervisor Password jumper
36	F_USB1	USB 2.0 header
37	TPM	TPM module connector
38	COM2	Serial port cable connector
39	F_AUDIO	Front audio connector
40	PCI_1	PCI 32/33MHz slot
41	PCI_2	PCI 32/33MHz slot
42	PCI_E_1	PCI Express x4 slot
43	BAT	Battery socket
44	CLR_CMOS	Clear CMOS jumper
45	ME_UPDATE	ME update jumper
46	PCI_E_2	PCI Express x16 slot
47	M2_MKEY	M.2 slot (Dimension: 2280)
48	PCI_E_3	PCI Express x16 slot
49	MEZZ_1	Proprietary PCI Express x4 slot for Mezzanine Card
50	S/PDIF_IN	S/PDIF in header
51	TBT	Thunderbolt add-on card connector
52	S/PDIF_OUT	S/PDIF out header

Rear I/O Connector/ 后面板接口



The HDMI connector is HDCP compliant and supports Dolby True HD and DTS HD Master Audio formats. It also supports up to 192KHz/24bit 8-channel LPCM audio output. You can use this port to connect your HDMI-supported monitor. The maximum supported resolution is 4096x2160@24Hz or 2560x1600@60Hz, but the actual resolutions supported are dependent on the monitor being used.



4 10/100/1000 LAN LED:

State	Description
Yellow On	1Gbps data rate
Green On	100Mbps data rate
Off	10Mbps data rate

ATX Power/ 电源

No.	Pin Define	No.	Pin Define
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

CPU/System FAN/ 风扇

No.	Pin Define
1	GND
2	+12V
3	Sense
4	Speed Control

PMBUS

No.	Pin Define
1	PMBus Clock
2	PMBus Data
3	PMBus Alert
4	GND
5	3.3V Sense

Front Panel Header/ 前面板

No.	Pin Define	No.	Pin Define
1	Power LED+	2	5V Standby
3	No Pin	4	No Connect
5	Power LED-	6	No Connect
7	HDD LED+	8	No Connect
9	HDD LED-	10	No Connect
11	Power Button	12	LAN1 Active LED+
13	GND	14	LAN1 Link LED-
15	Reset Button+	16	SMBus Data
17	GND	18	SMBus Clock
19	No Connect	20	Case Open
21	No Connect	22	LAN2 Active LED
23	NMI Switch-	24	LAN2 Link LED-

HDD Back Plane Board Header/ 硬盘背板排针

No.	Pin Define	No.	Pin Define
1	No Connect	2	No Connect
3	No Connect	4	FAN_SGP_GLD
5	No Connect	6	GND
7	Key Pin	8	Reset
9	GND	10	BP_LED_A_N
11	BP_LED_G_N	12	GND
13	NC	14	NC
15	GND	16	SMB_BP_DATA
17	GND	18	SMB_BP_CLK
19	P_3V3_AUX	20	No Connect
21	P_3V3_AUX	22	No Connect
23	GND	24	Key Pin
25	BP_PRESENSE	26	GND

SATA Connector/SATA 接口

No.	Pin Define	No.	Pin Define
1	GND	5	RXN
2	TXP	6	RXP
3	TXN	7	GND
4	GND		

SATA SGPIO Header/ 串行 GPIO

No.	Pin Define	No.	Pin Define
1	No Connect	5	GND
2	No Pin	6	Load
3	Data Out	7	No Connect
4	GND	8	Clock

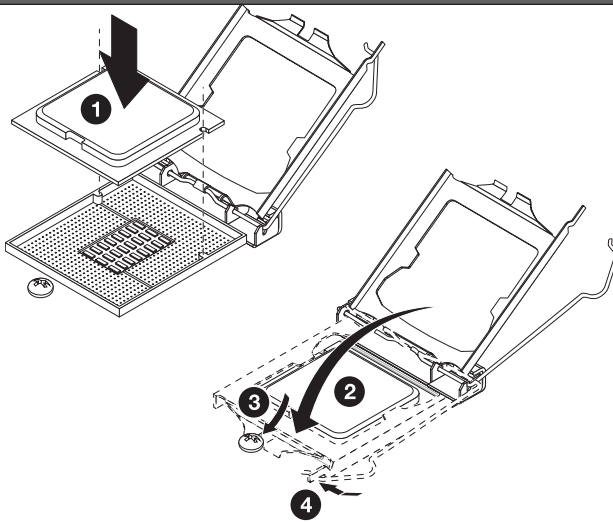
TPM Connector/ 可信平台模块

No.	Pin Define	No.	Pin Define
1	Clock	5	LPC_LAD0
2	P_3V3_AUX	6	IRQ_SERIAL
3	LPC_RST	7	LPC_LAD1
4	P3V3	8	No Connect
5	LPC_LAD0	9	LPC_LAD2
6	IRQ_SERIAL	10	No Pin
7	LPC_LAD1	11	LPC_LAD3
8	No Connect	12	GND
9	LPC_LAD2	13	LPC_FRAME_N
10	No Pin	14	GND

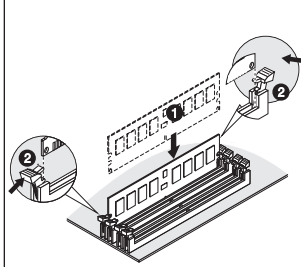
Front Audio Connector/ 前置音频

No.	Pin Define	No.	Pin Define
1	MIC2_L	2	NC
2	MIC2_R	3	P3V3
3	MC2_R	4	LINE2_R
4	P3V3	5	MIC2_JD
5	LINE2_R	6	F_Audio_Sense
6	MIC2_JD	7	No Pin
7	F_Audio_Sense	8	LINE2_L
8	No Pin	9	LINE2_L
9	LINE2_L	10	LINE2_JD
10	LINE2_JD		

Installing CPU/ 安装 CPU



Memory Population Configuration/ 安装内存



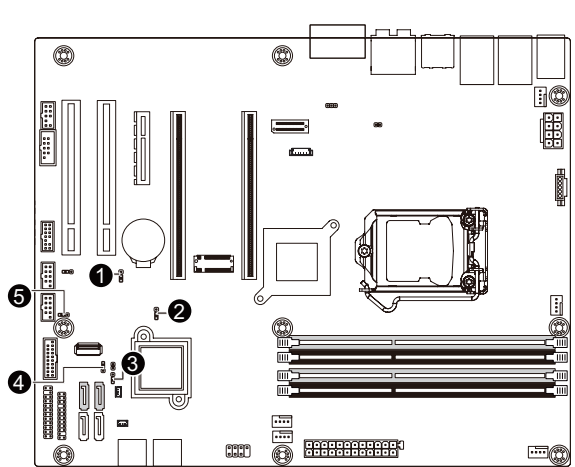
Type	Ranks Per DIMM and Data Width	Supported Voltage	Speed (MT/s): Slot Per Channel (SPC) and DIMM Per Channel (DPC)	
			2 Slot Per Channel	
			1DPC	2DPC
UDIMM Unbuffered DDR4 ECC	SR	1.2V	2133	2133
UDIMM Unbuffered DDR4 non-ECC	DR	1.2V	2133	2133

- All channels in system run at the fastest common frequency.
- Mixing ECC and non-ECC UDIMMs anywhere on the platform is not supported.
- 1 and 2 DPC is supported at 2133MHz.
- 所有通道模式以最快的频率速度运行。
- 此主板不支持 ECC 与非 ECC 内存混用。
- 1 与 2 DPC 均支持 2133MHz 速度。

USB 3.0 Header

No.	Pin Define	No.	Pin Define
1	Power	5	IntA_P1_SSTX+
2	IntA_P1_SSRX-	6	IntA_P1_SSTX+
3	IntA_P1_SSRX+	7	GND
4	GND	8	IntA_P1_D-
5	IntA_P1_SSTX-	9	IntA_P1_D+
6	IntA_P1_SSTX+	10	NC
7	GND	11	IntA_P2_D+
8	IntA_P1_D-	12	IntA_P2_D-
9	IntA_P1_D+	13	GND
10	NC	14	IntA_P2_SSTX+
11	IntA_P2_D+	15	IntA_P2_SSTX-
12	IntA_P2_D-	16	GND
13	GND	17	IntA_P2_SSRX+
14	IntA_P2_SSTX+	18	IntA_P2_SSRX-
15	IntA_P2_SSTX-	19	Power
16	GND	20	No Pin

Jumper Settings/ 跳线设置



No.	Description
1	Clear CMOS Jumper 1-2 Close: Normal operation (Default setting) 2-3 Close: Clear CMOS data.
2	ME Update Jumper 1-2 Close: Normal operation (Default setting) 2-3 Close: ME update mode.
3	BIOS Recovery Jumper 1-2 Close: Normal operation, (Default setting) 2-3 Close: BIOS recovery mode.
4	ME Recovery Jumper 1-2 Close: Normal operation, (Default setting) 2-3 Close: ME recovery mode.
5	Clearing Supervisor Password Jumper 1-2 Close: Normal operation, (Default setting) 2-3 Close: Skip supervisor password.

SATA DOM Power Connector

No.	Pin Define	No.	Pin Define
1	5V for SATA DOM		
2	GND		
3	No Connect		

COM2 Connector

No.	Pin Define	No.	Pin Define
1	NDCCD	6	NDSR
2	NSIN	7	NRTS
3	NSOUT	8	NCTS
4	NDTR	9	NRI
5	GND	10	No Pin

S/PDIF In/Out Header

No.	Pin Define	No.	Pin Define
1	S/PDIF In	1	P_5V_AUX
2	S/PDIF Out	2	SPDIF-IN
3	S/PDIF Out	3	GND
4	S/PDIF Out	4	GND
5	S/PDIF Out	5	SPDIF-OUT
6	S/PDIF Out	6	GND

USB 2.0 Header

No.	Pin Define	No.	Pin Define
1	Power (SV)	6	USB DY+
2	Power (SV)	7	GND
3	USB DX-	8	GND
4	USB DY-	9	No Pin
5	USB DX+	10	No Connect

Thunderbolt Add-On Card Header

No.	Pin Define	No.	Pin Define
1	GPIOA	5	GND
2	GPIOB		
3	SLP_S3		
4	SLP_S5		
5	GND		

Case Open Intrusion Header

No.	Pin Define
1	GPIOA
2	GPIOB
3	SLP_S3
4	SLP_S5
5	GND

NVIDIA SLI – System BIOS setting

To get best SLI performance, it is recommended by NVIDIA to disable VT-d. Please follow below instructions to disable VT-d function.

1. Press "DEL" to enter BIOS setup menu
2. Select Chipset > VT-d [Enabled] > VT-d [Disabled]

P/N:12QM1-MW31S0-00R



Regulatory Notices

WEEE Symbol Statement



The symbol shown below is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local government office, your household waste disposal service or where you purchased the product for details of environmentally safe recycling.

- When your electrical or electronic equipment is no longer useful to you, "take it back" to your local or regional waste collection administration for recycling.
- If you need further assistance in recycling, reusing in your "end of life" product, you may contact us at the Customer Care number listed in your product's user's manual and we will be glad to help you with your effort.

Restriction of Hazardous Substances (RoHS) Directive Statement

GIGABYTE products have not intended to add and safe from hazardous substances (Cd, Pb, Hg, Cr+6, PBDE and PBB). The parts and components have been carefully selected to meet RoHS requirement. Moreover, we at GIGABYTE are continuing our efforts to develop products that do not use internationally banned toxic chemicals.

限制使用有害物质 (RoHS) 指令声明

GIGABYTE产品未故意添加和使用有害物质(Cd、Pb、Hg、Cr+6、PBDE和PBB)。所有部件和元件均经过严格挑选,符合RoHS要求。此外,我们GIGABYTE一直致力于开发不使用国际上禁止的有毒化学品的产品。

California Proposition 65 Warning

WARNING:

This product contains a chemical, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, please visit: <http://www.p65warnings.ca.gov/>



Battery Warning:

Incorrectly installing a battery or using incompatible battery may increase the risk of fire explosion. Replace the battery only with the same or equivalent type.

- Do not disassemble, crush, puncture batteries.
- Do not store or place your battery pack next to or in a heat source such as a fire, heat-generating appliance, car or exhaust vent. Heating battery cells to temperatures above 650C (1490F) can cause explosion or fire.
- Do not attempt to open or service batteries. Do not dispose of batteries in a fire or with household waste.

电池警告：

电池安装不当或使用不兼容的电池会增加火灾爆炸风险。更换电池时，只可使用相同或同等类型的电池。

- 请勿拆解、挤压、刺破电池。
- 请勿将电池存放或放置在热源中或旁边，如火源、产生热的设备、罐体或排气口。电池温度升至65oC (149oF)以上可能导致爆炸或火灾。
- 请勿尝试打开或维修电池。电池废弃时，请勿投入火中或者作为家庭废弃物进行处理。

中华人民共和国电子信息产品中有毒有害物质或元素的名称及含量标识格式

依照中华人民共和国的有毒有害物质的限制要求(China RoHS)提供以下的表格：



关于符合中国《电子信息产品污染控制管理办法》的声明
Management Methods on Control of Pollution from Electronic Information Products
(China RoHS Declaration)

产品中有毒有害物质或元素的名称及含量

部件名称(Parts)	有害物质清单(Hazardous Substances)					
	铅(Pb) (Pb)	汞(Hg) (Hg)	镉(Cd) (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
PCB板	○	○	○	○	○	○
PCB	○	○	○	○	○	○
结构件及风扇	×	○	○	○	○	○
Mechanical parts and Fan	×	○	○	○	○	○
芯片及其他主动器件	×	○	○	○	○	○
Chip and other Active components	×	○	○	○	○	○
连接器	×	○	○	○	○	○
Connectors	×	○	○	○	○	○
被动电子元件	×	○	○	○	○	○
Passive Components	×	○	○	○	○	○
线材	○	○	○	○	○	○
Cables	○	○	○	○	○	○
焊接金属	○	○	○	○	○	○
Soldering metal	○	○	○	○	○	○
助焊剂、散粉、标签及其他耗材	×	○	○	○	○	○
Flux,Solder Paste,Label and other Consumable Materials	×	○	○	○	○	○

○ :表示该有害物质在该部件所有均质材料中的含量均出在SJ/T11363-2006标准规定的限量要求以下。
 × :表示该有害物质在该部件所有均质材料中的含量均超出SJ/T11363-2006标准规定的限量要求。以上表格如有这些物质存在至少有一项的均质材料中是超过SJ/T11363-2006标准规定的限量要求。

× :表示该有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。这说明了该有害物质存在于至少有一项的均质材料中是超过SJ/T11363-2006标准规定的限量要求。

对产品之所有受售产品，本表是我公司供应链的电子信息产品可能包含哪些物质，注意：在所售产品中可能存在也可能不会含有所有列出的部件。

This table above shows where these substances may be found in the supply chain of our electronic information products, as of the date of the sale of the enclosed products, Note that some of the component types listed above may or may not be a part of the enclosed product.