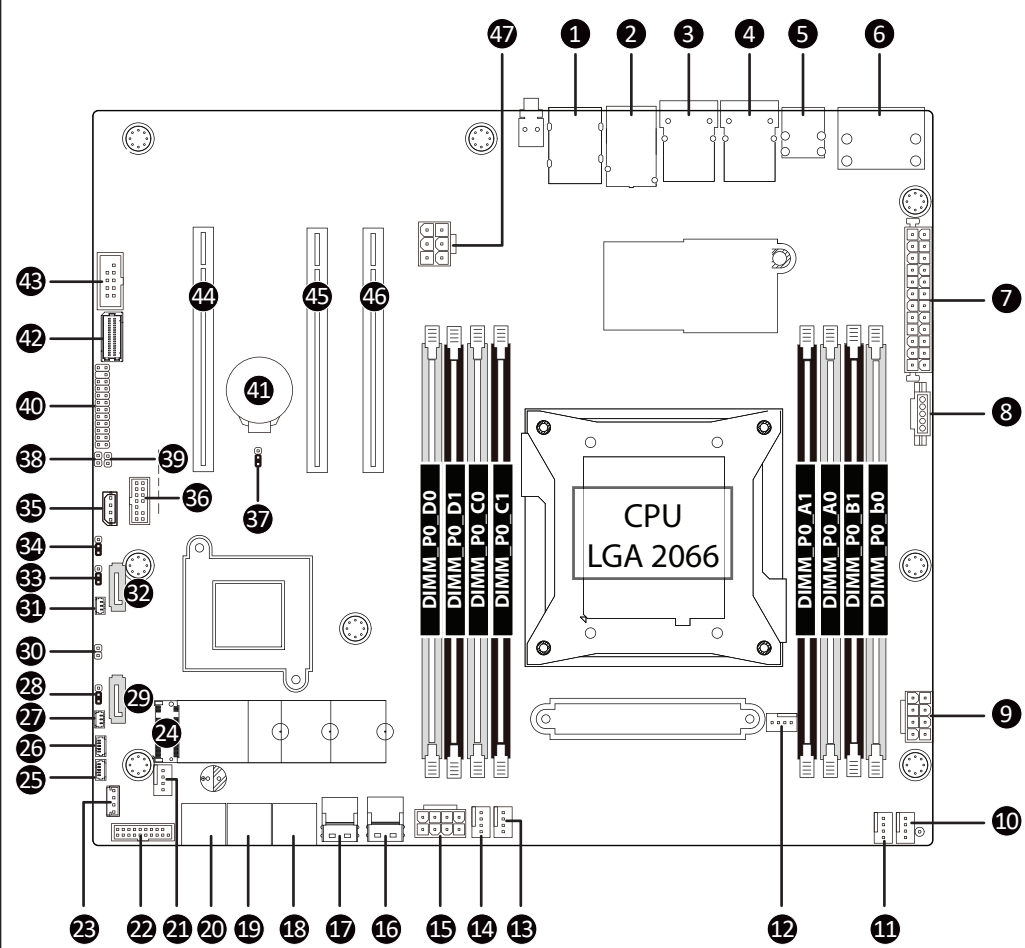


MF51-ES0 / MF51-ES1 / MF51-ES2 Quick Reference Guide/ 快速测试参考指南



No.	Code	Description
1	USB3_MLAN	Management LAN port (top) / USB 3.0 ports (bottom)
2	LAN1_2	GbE LAN port #1 (top) / GbE LAN port #2 (bottom)
3	LAN3	GbE LAN port #3
4	LAN4	GbE LAN port #4
5	USB2_1	USB 2.0 ports
6	COM1_VGA	Serial port #1 (top) / VGA port (bottom)
7	ATX	2x12 Pin 12V power connector (for CPU & DDR 12V input)
8	PMBUS	PMBus connector
9	P12V_AUX1	2x4 Pin 12V power connector (For CPU & DDR 12V input)
10	SYS_FAN2	System fan connector #2
11	SYS_FAN1	System fan connector #1
12	CPU0_FAN	CPU fan connector
13	SYS_FAN3	System fan connector #3
14	SYS_FAN4	System fan connector #4
15	P12V_AUX2	2x4 Pin 12V power connector (For CPU & DDR 12V input)
16	U2_0	Slimline SAS Connector #0
17	U2_1	Slimline SAS Connector #1
18	SATA_2_3	SATA 6b/s connectors
19	SATA_4_5	SATA 6b/s connectors
20	SATA_6_7	SATA 6b/s connectors
21	SYS_FAN5	System fan connector #5
22	F_USB3_1	Front USB 3.0 header
23	SW_RAID	SATA RAID upgrade key
24	M2_M	M.2 slot (PCIe Gen3 x4, Support NGFF-2210, M-Key)
25	SATA_SGP1	SATA SGPIO connector #1
26	SATA_SGP2	SATA SGPIO connector #2
27	SATA_DOM0	SATA DOM support jumper for SATA port #0
28	BIOS_PWD	Clear supervisor password jumper
29	SATA0	SATA 6Gb/s connector #0 (SATA DOM Support)
30	CASE_OPEN	Case open intrusion alert header
31	SATA_DOM1	SATA DOM support jumper for SATA port #1
32	SATA1	SATA 6Gb/s connector #1 (SATA DOM Support)
33	BIOS_RCVR	BIOS recovery jumper
34	ME_UPDATE	Force ME update jumper
35	IPMB	IPMB connector
36	TPM	TPM connector
37	CLR_CMOS	Clear CMOS jumper
38	LAN3_ACT	LAN3 Active LED connector
39	LAN4_ACT	LAN4 Active LED connector

No.	Code	Description
40	FP_1	Front panel header
41	BAT	Battery socket
42	BP_1	HDD back plane board header
43	COM2	Serial port cable connector #2
44	PCIE_2	PCIe x16 slot #2
45	PCIE_4	PCIe x16 slot #4
46	PCIE_5	PCIe x8 slot #5 (PCIe x8 signal)
47	P12V_AUX3	2x3 Pin 12V power connector (For CPU & DDR 12V input)

Front Panel Header #1/ 前面板

No.	Pin Define	No.	Pin Define
1	Power LED+	2	5V Standby
3	No Pin	4	ID LED+
5	Power LED-	6	ID LED-
7	HDD LED+	8	System Status LED+
9	HDD LED-	10	System Status LED-
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	GND	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 Gate
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	No Connect	14	No Connect
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

ATX Power/ 电源

No.	Pin Define	No.	Pin Define
1	3.3V	16	PS_ON
2	3.3V	17	GND
3	GND	18	GND
4	+5V	19	GND
5	GND	20	-5V
6	+5V	21	+5V
7	GND	22	+5V
8	Power Good	23	+5V
9	5VSB	24	GND
10	+12V		
11	+12V		
12	3.3V		
13	3.3V		
14	-12V		
15	GND		

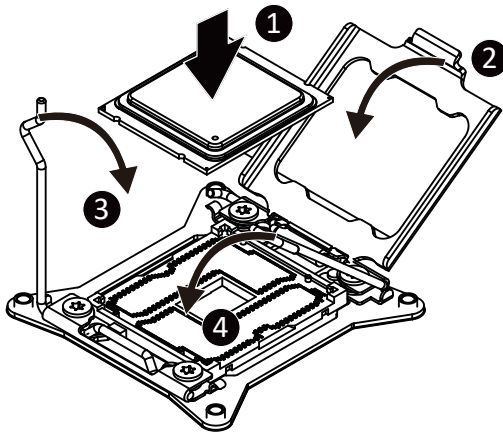
CPU/System FAN/ 风扇

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

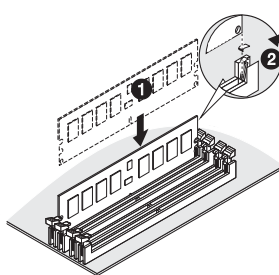
PMBUS

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

Installing CPU/ 安装 CPU



Memory Population Configuration/ 安装内存



Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)	Speed (MT/s); Voltage (V) Slot Per Channel (SPC) DIMM Per Channel (DPC)		
			1 Slot per Channel		2 Slot per Channel
		DIMM Density	1DPC	1DPC	2DPC
RDIMM	SRx4	8Gb	16GB		
RDIMM	SRx8	4GB	8GB		
RDIMM	DRx8	8GB	16GB	2666	2666
RDIMM	DRx4	16GB	32GB		
LRDIMM	QRx4	32GB	64GB		

- NOTE!
- DIMM must be populated in sequential alphabetic order, starting with bank A.
 - When only one DIMM is used, it must be populated in memory slot A0.

SATA Connector/SATA DOM

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

SATA SGPIO Connector

No.	Pin Define
1	SGPIO_DATAOUT
2	GND
3	SGPIO_DATAIN
4	SGPIO_LOAD
5	SGPIO_CLOCK

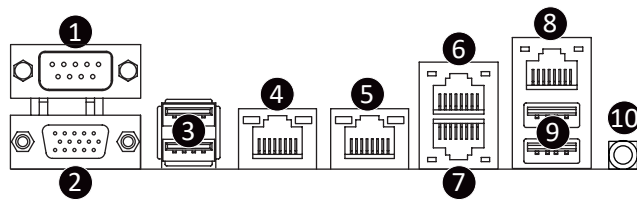
TPM Connector/ 可信平台模块

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

LAN Active Connector

No.	Pin Define
1	LAN Active LED
2	P_3V3_AUX

Rear I/O Connector/ 后面板接口



No.	Description	No.	Description
1	COM port	6	GbE LAN port #1
2	VGA port	7	GbE LAN port #2
3	USB 2.0 ports	8	Management LAN port
4	GbE LAN port #4	9	USB 3.0 ports
5	GbE LAN port #3	10	SW ID switch

USB 3.0 Header

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

IPMB Connector

No.	Pin Define
1	Clock
2	GND
3	Data
4	VCC

Serial Port Cable Connector

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

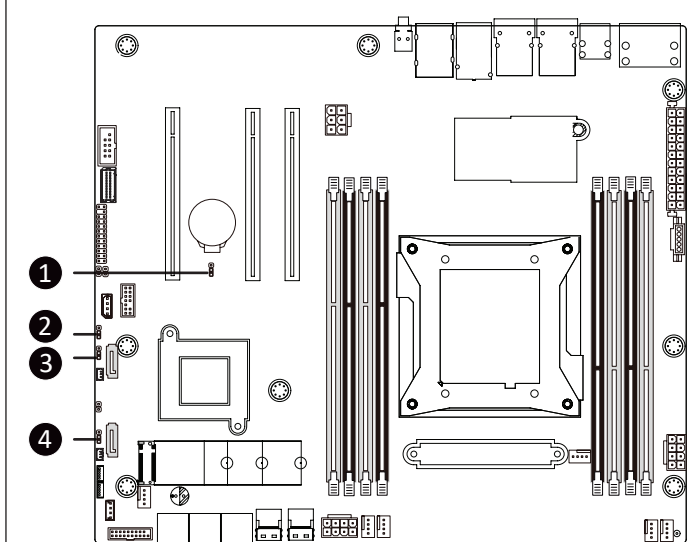
Software RAID Upgrade Key

No.	Pin Define
1	GND
2	P_3V3_AUX pull high
3	GND
4	RAID_KEY

Case Open Intrusion Header

- Open: Normal operation.
- Closed: Active chassis intrusion alert.

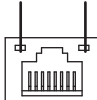
Jumper Settings/ 跳线设置



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

10/100/1000/10000 LAN LED

Speed LED Link/Activity LED



State	Description
Speed LED: Green On Link/Activity LED: Green On	10Gbps data rate
Speed LED: Yellow On Link/Activity LED: Blinking	1Gbps data rate
Speed LED: Green On Link/Activity LED: Blinking	100Mbps data rate
Speed LED Green: Off Link/Activity LED: Blinking	10Mbps data rate



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.

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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.

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WARNING:
This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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Incorrectly installing a battery or using incompatible battery may increase the risk of ifre 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, heatgenerating appliance, can or exhaust vent. Heating battery cells to temperatures above 65oC (149oF) 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。

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产品中有毒有害物质或元素的名称及含量 Hazardous Substances Table						
部件名称(Parts)	铅(Pb)	汞(Hg)	镉(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	×	○	○	○	○	○
芯片及其他主动零件 Chip and other Active components	×	○	○	○	○	○
连接器 Connectors	×	○	○	○	○	○
被动电子元器件 Passive Components	×	○	○	○	○	○
线材 Cables	○	○	○	○	○	○
焊接金属 Soldering metal	○	○	○	○	○	○
助焊剂、散热膏、标签及其他耗材 Flux, Solder Paste, Label and other Consumable Materials	○	○	○	○	○	○
○:表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。 Indicates that this hazardous substance contained in all homogenous materials of this part is below the limit requirement SJ/T 11363-2006						
×:表示该有毒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。 Indicates that this hazardous substance contained in at least one of the homogenous materials of this part is above the limit requirement in SJ/T 11363-2006						
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