



MS-Challenger H610M-R

Manual

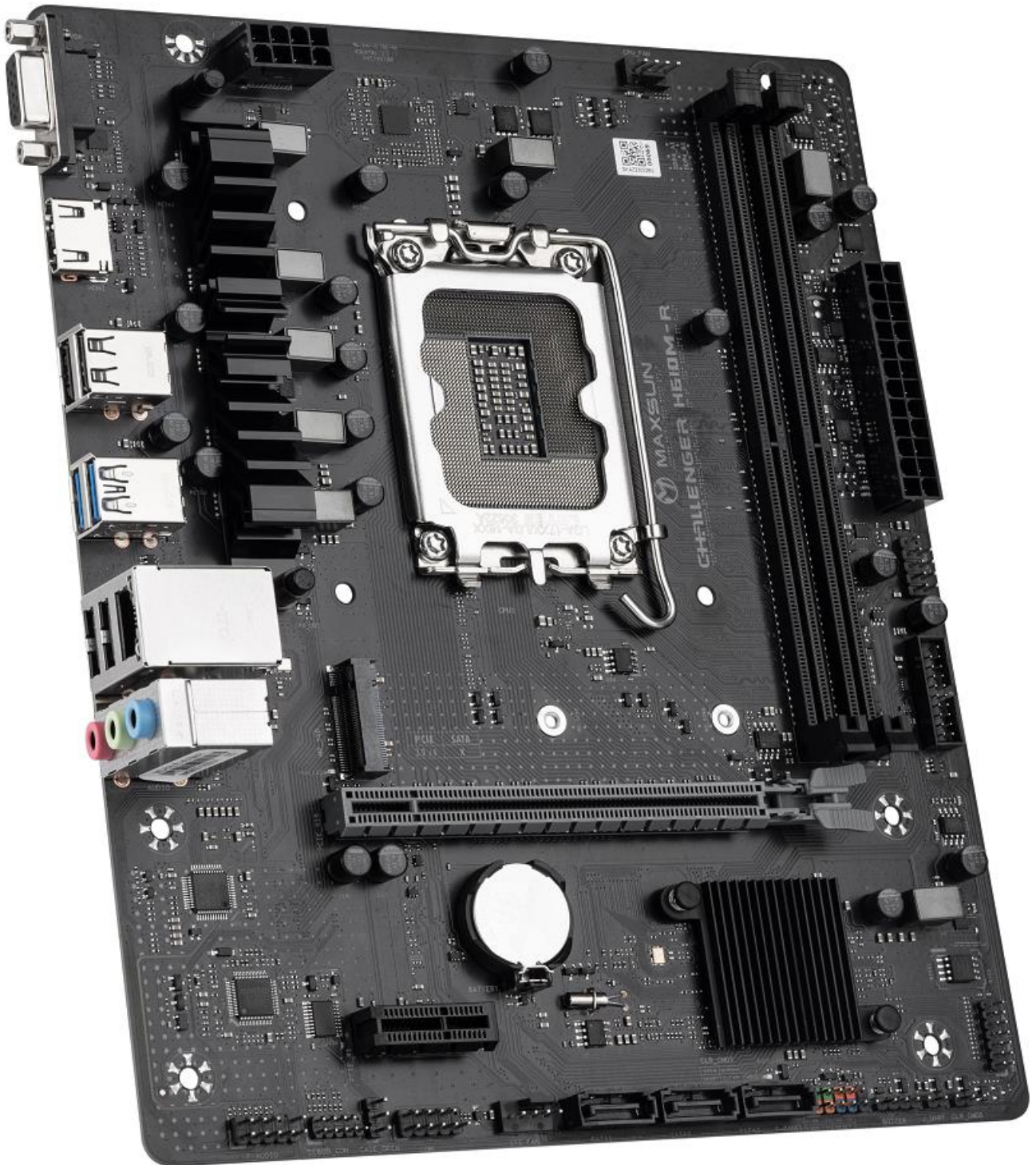
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SHANGKE GROUP

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Editorial Department: Technology Department of Shangke Group

Chapter 1 Motherboard Configuration Diagram



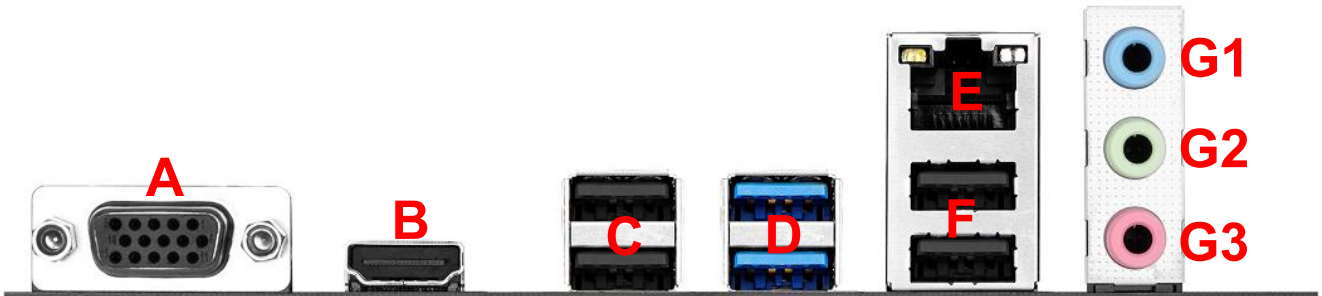
(This figure is for reference only, some details will be adjusted according to the actual design, please prevail in kind, our company reserves the right of interpretation)

Chapter 2 Specifications

2.1, Motherboard hardware specifications

Motherboard Size	Micro ATX(225*185mm)
CPU	Support LGA1700 slot 12 th /13 th /14 th generation processors (no support for CPU overclocking technology) TDP: 65W
Chipset	Intel® H610 High Speed Chipset
Memory	2x DIMM DDR4 memory slots Supports up to 64GB total Supports dual-channel memory technology Support 3200/2933/2666/2400/2133MHz
Display	Based on the display function with integrated graphics processor, using shared display memory technology 1x HDMI port, supporting up to 4096x2160@30Hz resolution 1x VGA port, supporting up to 1920 * 1080 @ 60Hz resolution
Extended port	1x PCIE X16 4.0 slot, 1x PCIE X13.0 slot Support AMD and NVIDIA discrete graphics cards Supports PCIE resizable bar technology (requires simultaneous CPU and graphics card support)
Audio	Integrated ALC897 sound card chip Support front and rear channel output simultaneously Rear audio port: 1 rear on-board LINE IN port, 1x rear on-board LINE OUT port, 1x rear on-board MIC_IN microphone port F_AUDIO pins: 1 set of front microphone pins, 1 set of front audio output pins (these 2 pins are the F_Audio pin set) 1x set of 4pin speaker SPEAKER pins
Network	Integrated Realtek 8111H/8111M NIC chip (10/100/1000Mbit) 1x on-board RJ45 connector Support network wake-up Support PXE diskless and UEFI diskless boot
Storage	1x M.2 X4 3.0 slot (tight support for 2242/2280 PCIE X4/X2 channel SSD) 3x SATA 3.0 ports
USB	On-board rear port: 2 USB3.2 GEN1 ports, 4 USB2.0 ports On-board pins: 1 set (2) USB2.0 pins, 1 set (2) USB3.2 GEN1 pins
In-board sockets	1x 24-PIN motherboard ATX power supply connector 1x 8-PIN motherboard ATX 12V power connector with 12V input 1x COM_A pin 1x sets of system fan pins, 1 sets of CPU fan pins (which support intelligent fan adjustment) 1x set of CLR_CMOS buttons 1x Debug pin 1x Bios burn-in pin

	1x set of chassis front control panel pins (F_PANEL)
Hardware Monitoring	Voltage monitoring Temperature monitoring Fan Monitoring Intelligent fan speed control (the motherboard has been made to support, intelligent fan speed control also requires fan support)
Operating System	Support UEFI Windows 10 64bit, UEFI Windows 11 64bit Ubuntu 64bit support
ESD protection	Air discharge $\pm 8KV$ Class C $\pm 6KV$ Class B Contact discharge $\pm 6KV$ Class C $\pm 3KV$ Class B * Tested with the whole machine well grounded



A:VGA port

Supports up to 1920x1080@60Hz resolution for display connection.

B: HDMI port

Supports up to 4096x2160@30Hz resolution for display connection.

C: Rear USB2.0 TYPE A port

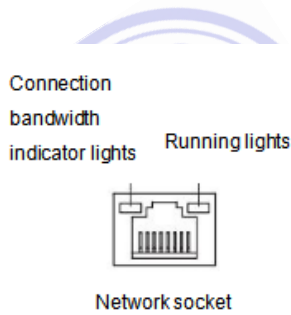
Supports up to USB 2.0 standard and is backward compatible with USB 1.1 standard. For connecting USB TYPE A devices.

D: Rear USB3.2 GEN1 TYPE A port

Support up to theoretical 5Gb speed transfer, backward compatible with USB1.1 standard, for connecting USB TYPE A devices.

E: RJ45 port

Network cable port for accessing the network cable to link the host system to the network with a maximum bandwidth of 1000Mbps.



Connection bandwidth indicator	
Bandwidth	Lamp Status
No connection	extinguish
10Mbps	Green always on
100Mbps	Green always on
1000Mbps	Orange always on

Operation indicator	
No data transfer	extinguish
In data transmission	Blinking

F: Rear USB2.0 TYPE A port

Supports up to USB 2.0 standard and is backward compatible with USB 1.1 standard. For connecting USB TYPE A devices.

G1: LINE IN connector (blue)

Used to receive audio input devices, such as cell phone audio input.

G2: LINE OUT connector (light green)

Used to access audio output devices, such as headphones, speakers and other external amplification devices.

G3: Audio-microphone port (pink)

For accessing audio input devices, such as microphones and other radio devices.



MS-挑战者 H610M-R

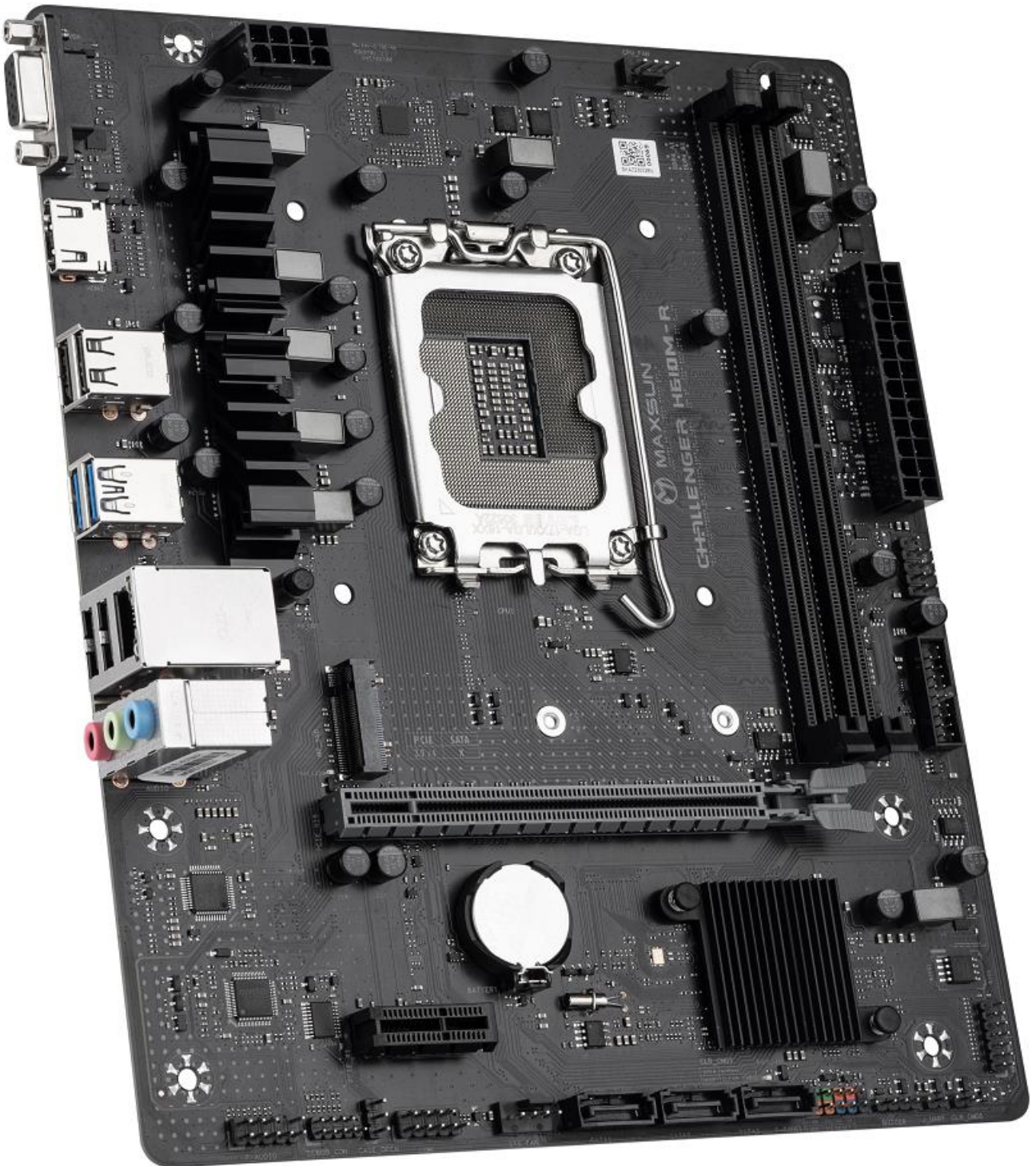
使用手册

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SHANGKE GROUP

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第一章 主板配置图



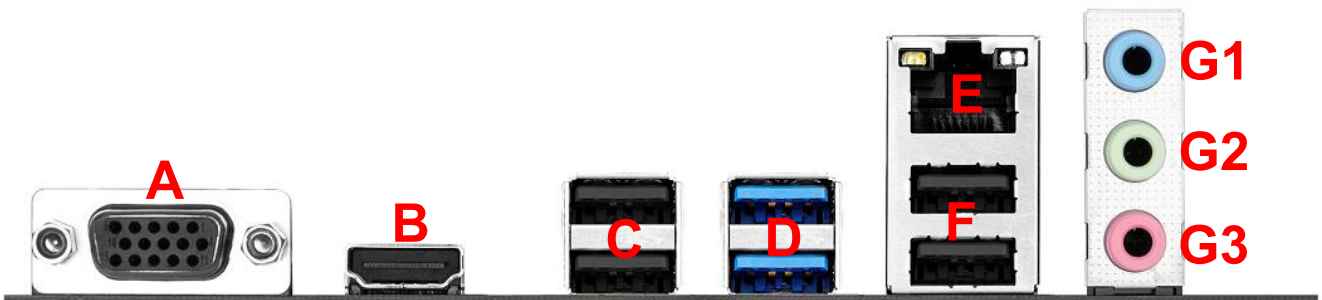
(此图仅供参考，部分细节会根据实际情况设计调整，请以实物为准，我司保留解释权)

第二章 规格

2.1、主板硬件规格

主板尺寸	MicroATX(225*185mm)
CPU	支持 LGA1700 插槽 第 12 代、第 13 代、第 14 代处理器 (不支持 CPU 超频技术) TDP: 65W
芯片组	Intel®H610 高速芯片组
内存	2 个 DIMM DDR4 内存槽 最高支持共 64GB 支持双通道内存技术 支持 3200/2933/2666/2400/2133MHz
显示	基于具备集成显卡处理器的显示功能, 采用共享显示内存技术 1 个 HDMI 接口, 最高支持 4096x2160@30Hz 分辨率 1 个 VGA 接口, 最高支持 1920*1080@60Hz 分辨率
扩展接口	1 个 PCIEX16 4.0 插槽, 1 个 PCIEX1 3.0 插槽 支持 AMD 和 NVidia 独立显卡、DG1 独立显卡 支持 PCIe resizable bar 技术 (需 CPU 和显卡同步支持)
音频	集成 ALC897 声卡芯片 支持前后声道同时输出 后置音频接口: 1 个后置板载 LINE IN 接口, 1 个后置板载 LINE OUT 接口, 一个后置板载 MIC_IN 麦克风接口 F_AUDIO 插针: 1 组前置麦克风插针, 1 组前置音频输出插针 (此 2 个插针为 F_Audio 插针组) 1 组 4pin 喇叭 SPEAKER 插针
网络	集成 Realtek8111H/8111M 网卡芯片(10/100/1000Mbit) 1 个板载 RJ45 接口 支持网络唤醒 支持 PXE 无盘、UEFI 无盘引导
存储	1 个 M.2 X4 3.0 插槽 (紧支持 2242/2280 PCIE X4/X2 通道 SSD) 3 个 SATA3.0 接口
USB	板载后置接口: 2 个 USB3.2 GEN1 接口, 4 个 USB2.0 接口 板内插针: 1 组 (2 个) USB2.0 插针, 1 组 (2 个) USB3.2 GEN1 插针
板内插座	1 个 24PIN 主板 ATX 供电接口 1 个 8PIN 主板 ATX 12V 供电接口, 12V 输入 1 个 COM_A 插针 1 组系统风扇插针、1 组 CPU 风扇插针 (都支持智能风扇调节) 1 组 CLR_CMOS 按钮 1 个 Debug 插针 1 个 Bios 烧录插针 1 组机箱前置控制面板插针 (F_PANEL)
硬件监控	电压监测

	温度监测 风扇监测 智能风扇控速（主板已作支持，智能风扇控速也需风扇支持）
操作系统	支持 UEFI Windows10 64bit, UEFI Windows11 64bit 支持 Ubuntu 64bit
ESD 防护	空气放电 ±8KV C 级 ±6KV B 级 接触放电 ±6KV C 级 ±3KV B 级 *整机接地良好的情况下测试



A:VGA 接口

最高支持 1920x1080@60Hz 分辨率，用于连接显示器。

B: HDMI 接口

最高支持 4096x2160@30Hz 分辨率，用于连接显示器。

C: 双层 USB2.0 TYPE A 接口

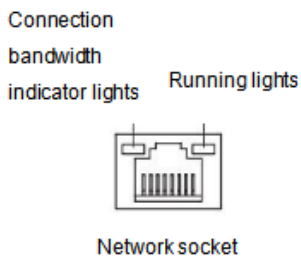
最高支持 USB2.0 标准，可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

D: 双层 USB3.2 GEN1 TYPE A 接口

最高支持理论 5Gb 速度传输，可向下兼容 USB1.1 标准,用于连接 USB TYPE A 设备。

E: RJ45 接口

网线接口，用于接入网线将主机系统链接到网络，最高带宽 1000Mbps。



连接带宽指示灯	
带宽	灯状态
无连接	灭
10Mbps	绿色常亮
100Mbps	绿色常亮
1000Mbps	橙色常亮

运行指示灯	
无数据传输	灭
数据传输中	闪烁

F: 双层 USB2.0 TYPE A 接口

最高支持 USB2.0 标准, 可向下兼容 USB1.1 标准。用于连接 USB TYPE A 设备。

G1: LINE IN 接口(蓝色)

用于接收音频输入设备, 如手机音频输入。

G2: LINE OUT 接口(浅绿色)

用于接入音频输出设备, 如耳机、音箱等外放设备。

G3: Audio-麦克风接口(粉红色)

用于接入音频输入设备, 如麦克风等收音设备。

