

MS-Challenger B660M 2.5G

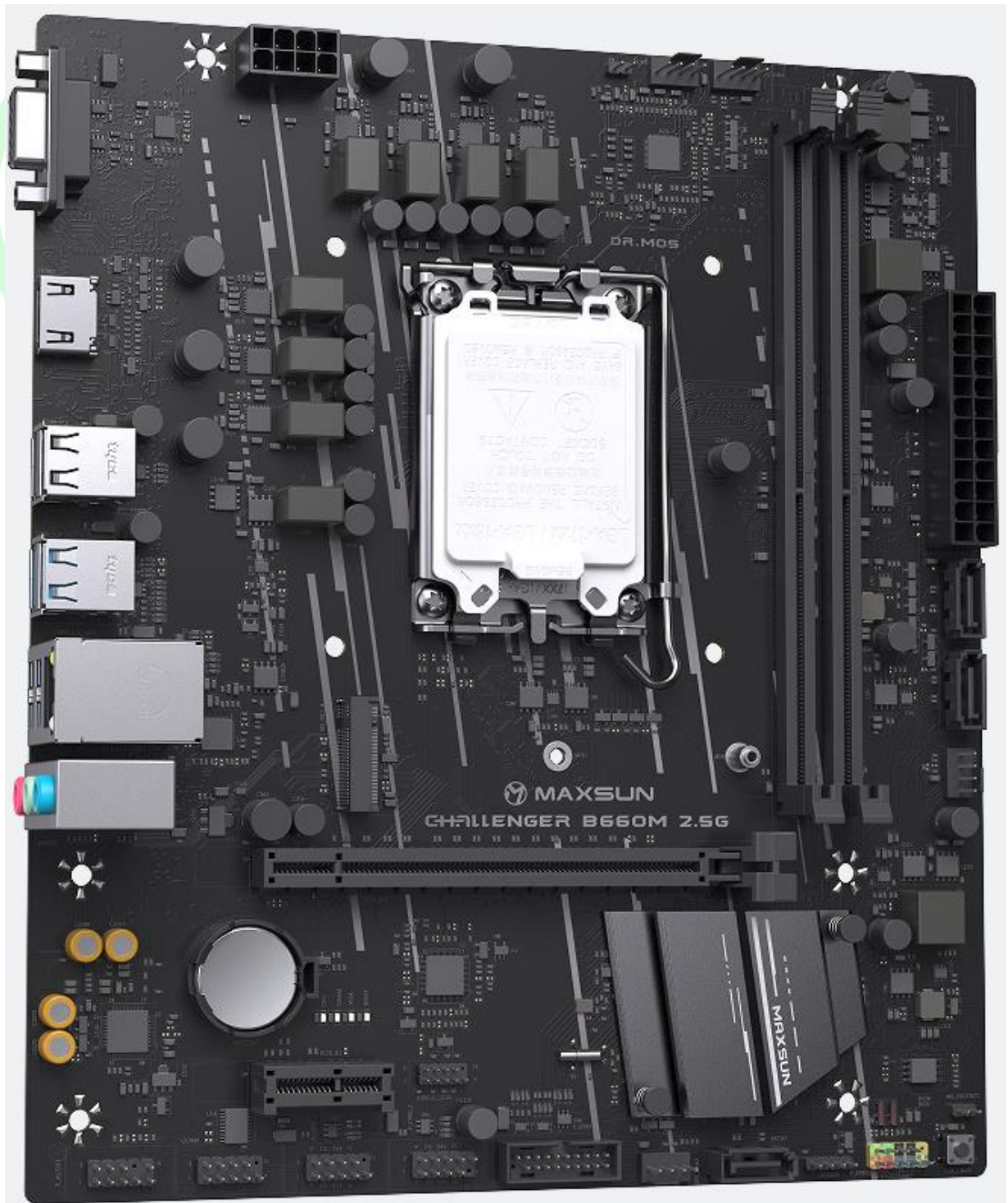
Manual

VER:A0

Edited on May 06, 2024

Editorial Department: Technology Department

Chapter I Motherboard Configuration Chart



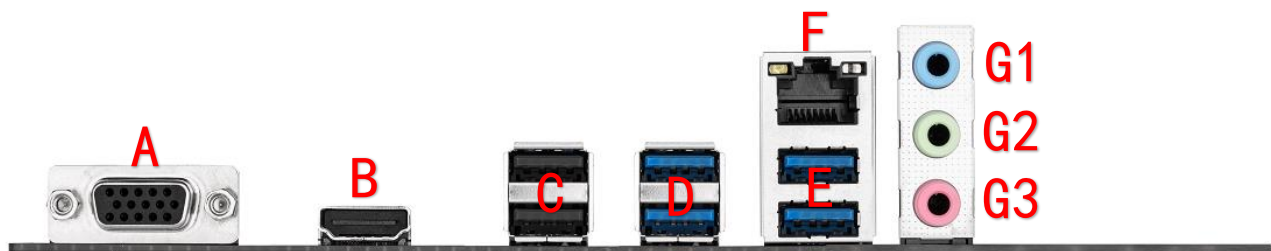
(This picture is for reference only, some details will be designed and adjusted according to the actual situation, please prevail in kind, our company reserves the right of interpretation)

Chapter II Specifications

2.1. Motherboard hardware specifications

Motherboard Size	MicroATX(225*195mm)
CPU	Supports LGA1700 slot 12th / 13th / 14th Gen processors (CPU overclocking not supported) TDP: 95W (6+1 phase power supply)
Chipset	Intel® B660 High Speed Chipset
RAM	2* DIMM DDR4 memory slots Supports up to 64GB Supports dual-channel memory technology Support 3200/2933/2666/2400/2133MHz/OC memory frequency
Display	1* HDMI port, supports up to 4096x2160@30Hz 1* VGA port, supports up to 1920*1080@60Hz
Extended Interface	1* PCIEX16 4.0 slot, 1* PCIEX1 3.0 slot Support for AMD and NVIDIA graphics cards Supports PCIe resizable bar technology
Audio	Integrated ALC897 sound chip Support front and rear channel outputs at the same time Rear audio interfaces: 1* rear onboard LINE IN connector, 1* rear onboard LINE OUT connector, 1* rear onboard MIC_IN microphone connector F_AUDIO pins: 1* front microphone pin, 1* front audio output pin 1* set of 4-pin speaker SPEAKER pins
LAN	Integrated REALTEK8125BG NIC chip (10/100/1000/2500Mbit) 1* on-board RJ45 port Supports Wake-on-LAN Support PXE diskless, UEFI diskless boot
SSD	1* M.2 4.0 slot (supports 2242/2280 PCIe X4/X2 channel SSDs only) 3* SATA3.0 ports
USB	Onboard rear ports: 4* USB3.2 GEN1 ports, 2* USB2.0 ports On-board pins: 2* sets (4) of USB2.0 pins, 1* set (2) of USB3.2 GEN1 pins
In-board sockets	1* 24-PIN motherboard ATX power connector 1* 8-PIN Motherboard ATX 12V Supply Connector, 12V Input 1* COM_A pin 2* system fan pins, 1* CPU fan pin, 1* PUMP fan pin (all except PUMP pins support intelligent fan adjustment) 1* group CLR_CMOS button 1* Debug Pin 1* ME protection pin 1* set of chassis front control panel pins (F_PANEL)

Hardware monitoring	Voltage monitoring Temperature monitoring Fan monitoring Intelligent fan speed control (supported by motherboard, intelligent fan speed control also requires fan support)
Operating system	Support Windows 10 64bit, Windows 11 64bit Ubuntu 64bit support
ESD protection	Air discharge $\pm 8\text{KV}$ Class C $\pm 6\text{KV}$ Class B Contact discharge $\pm 6\text{KV}$ Class C $\pm 3\text{KV}$ Class B *Tested with the whole machine well grounded



A: VGA port

Supports up to 1920x1080@60Hz resolution for connecting to a monitor.

B: HDMI port

Supports up to 4096x2160@30Hz resolution for connecting to a monitor.

C: Dual-layer USB2.0 TYPE A connector

Supports up to USB2.0 standard and is backward compatible with USB1.1 standard. For connecting USB TYPE A devices.

D: Dual-layer USB3.2 GEN1 TYPE A connector

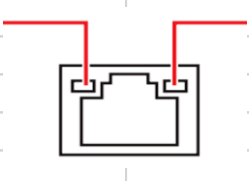
Supports up to 5Gb theoretical transfer speed and is backward compatible with USB1.1 standard for connecting USB TYPE A devices.

E: Dual-layer USB3.2 GEN1 TYPE A connector

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

F: RJ45 port

Network cable interface for accessing a network cable to link the host system to the network with a maximum bandwidth of 2500Mbps.

Activity Link LED			Speed LED	
Status	Description		Status	Description
Off	No link		Off	10Mbps connection
Yellow	Linked		Green	100Mbps connection
Blinking	Data activity		Orange	1000Mbps/2.5Gbps connection

G1: LINE IN connector (blue)

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

G2: Audio-out connector (light green)

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

G3: Audio-Microphone connector (pink)

Used to access audio input devices, such as microphones and other radio devices.

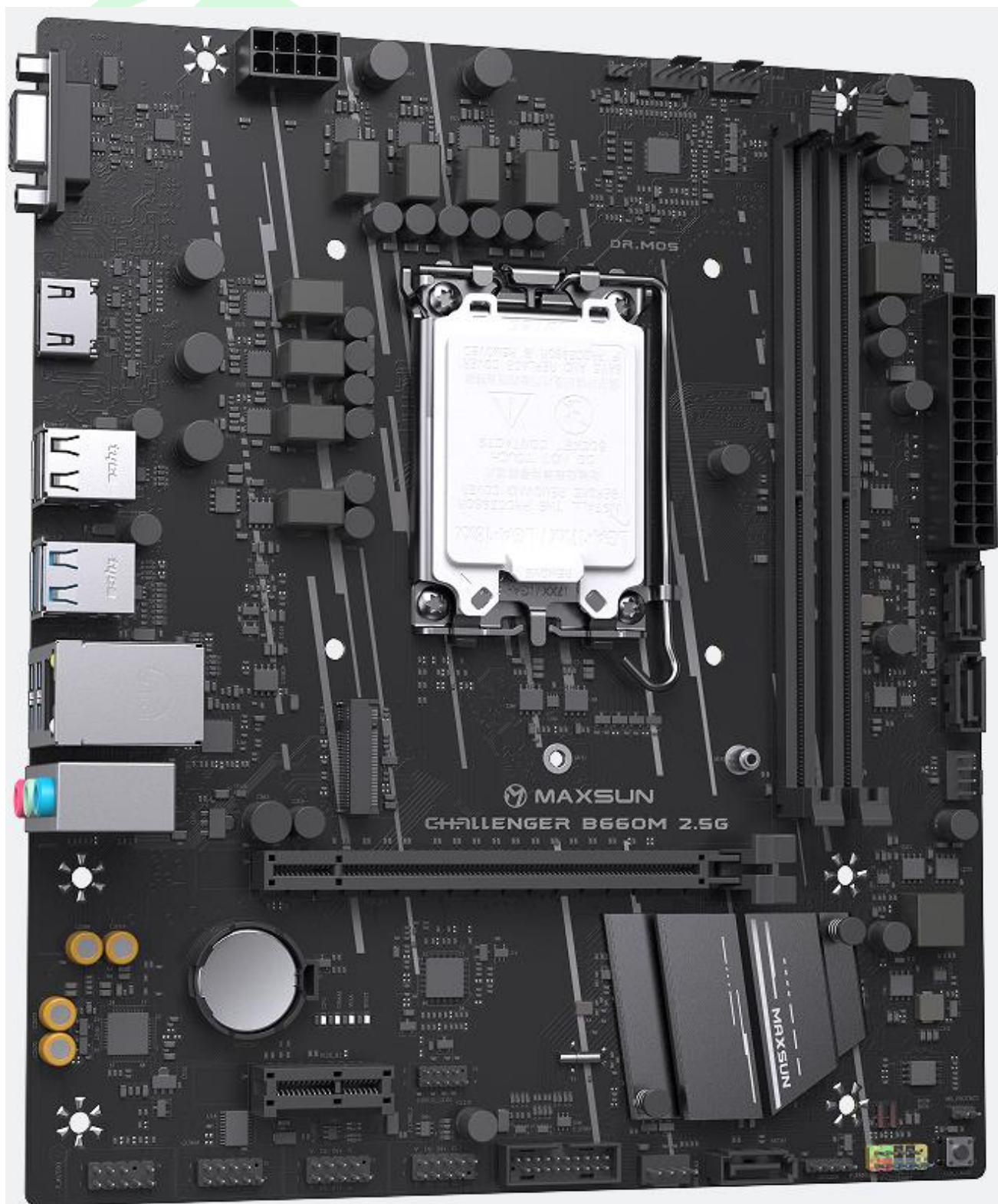
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使用手册

VER: A0

编辑时间：2024 年 05 月 06 日
编辑部门：商科集团技术部

第一章 主板配置图



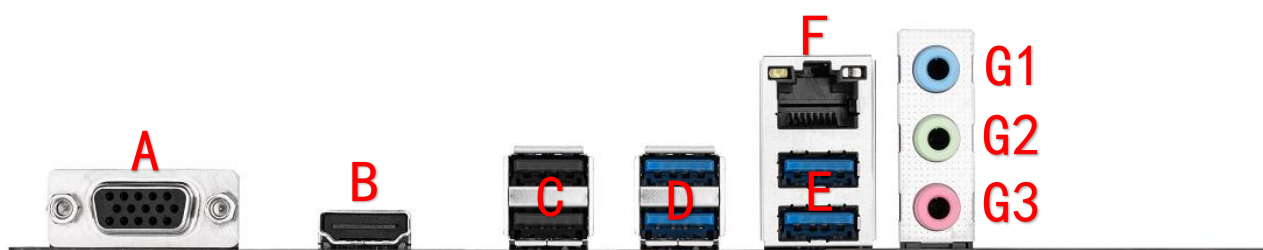
(此图仅供参考，部分细节会根据实际情况设计调整，请以实物为准，我司保留解释权)

第二章 规格

2.1、主板硬件规格

主板尺寸	MicroATX (225*195mm)
CPU	支持 LGA1700 插槽 第 12 代处理器、第 13 代处理器、第 14 代处理器 (不支持 CPU 超频技术) TDP: 95W (6+1 相供电)
芯片组	Intel®B660 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/OC Memeroy 内存频率
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 支持 PCIe resizable bar 技术
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 REALTEK8125BG 网卡芯片 (10/100/1000/2500Mbit) 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 4.0 插槽 (仅支持 2242/2280 PCIe X4/X2 通道 SSD) 3 个 SATA3.0 接口
USB	板载后置接口: 4 个 USB3.2 GEN1 接口, 2 个 USB2.0 接口 板内插针: 2 组 (4 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 2 组系统风扇插针、1 组 CPU 风扇插针、1 组 PUMP 风扇插针 (除 PUMP 插针外都支持智能风扇调节) 1 组 CLR_CMOS 按钮 1 个 Debug 插针

	1 个 ME 保护插针 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 Windows10 64bit, Windows11 64bit 支持 Ubuntu 64bit
ESD 防护	空气放电 $\pm 8KV$ C 级 $\pm 6KV$ B 级 接触放电 $\pm 6KV$ C 级 $\pm 3KV$ 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

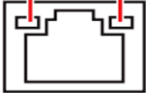
最高支持理论 5Gb 速度传输, 可向下兼容 USB1.1 标准, 用于连接 USB TYPE A 设备。

E: 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。

F: 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 2500Mbps。

运行指示灯			速度指示灯	
状态	描述		状态	描述
关闭	无链接		关闭	10Mbps 连接
黄色	已链接		绿色	100Mbps 连接
闪烁	数据传输		橙色	1000Mbps/2.5Gbps 连接

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: Audio-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。