

MS-Terminator B650M

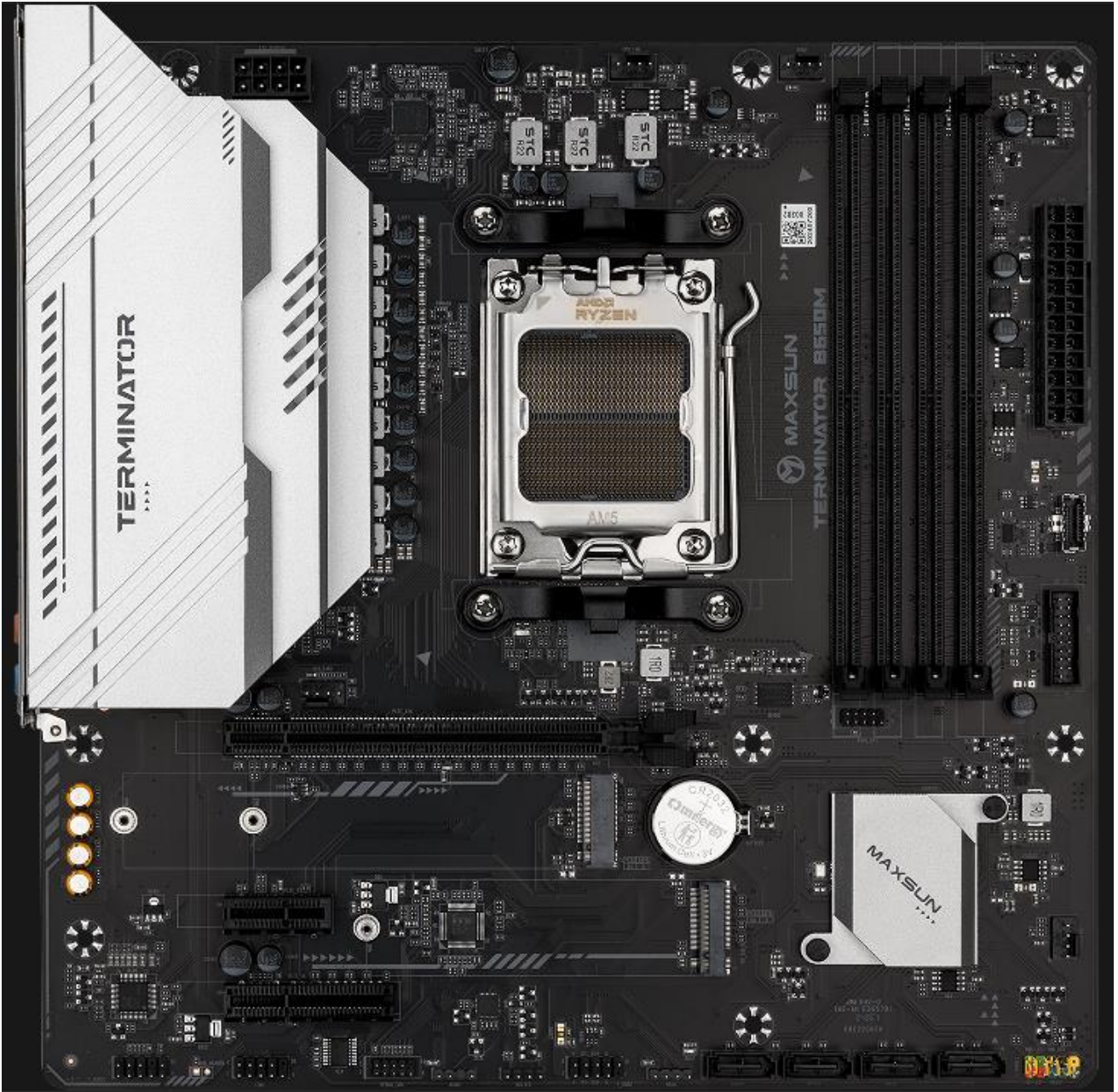
Manul

VER:A0

Edited on 2024/9/24

Editing Department: Technology Department

Part 1 Layout

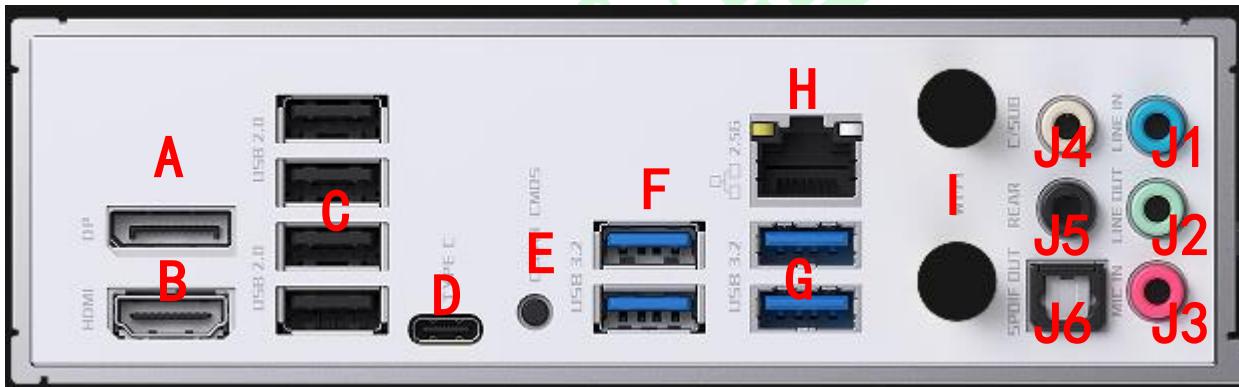


(This drawing is for reference only, some details will be adjusted according to the actual situation, please refer to the actual design, our company reserves the right to explain)

Part 2 Specification

Motherboard size	MicroATX(245*245mm)
CPU	Supports AM5 slots Ryzen7000, Ryzen8000, Ryzen9000 series processors TDP: 170W
Chipset	AMD®B650
Memory	4 DIMM DDR5 memory slots (Please insert the second and fourth slots first) Up to 192GB is supported Supports dual-channel memory technology Support 4800/5200/OC+ memory frequency
Display	Based on the display function of integrated graphics card processor, it adopts the shared display memory technology 1 HDMI1.4 port, up to 4096x2160@30Hz resolution (support HDCP2.2) 1 DP interface with a maximum resolution of 4096x2160@60Hz
Extension interface	1 PCIEX16 5.0 slot 1 PCIEX4 4.0 slot 1 PCIEX1 3.0 slot Supports AMD and NVidia independent graphics cards
Audio	Integrated REALTEK ALC897 sound card chip Support simultaneous output of front and rear channels (need to be set in the HD audio controller) The REAR is equipped with six audio ports: one rear onboard LINE IN port, one rear onboard LINE OUT port, one rear onboard MIC_IN microphone port, one rear onboard C/SUB port, one rear onboard rear port, and one rear onboard SPDIF_OUT optical fiber port. F_AUDIO pins: 1 set of front microphone pins, 1 set of front audio output pins (These two pins are F_Audio pins) 1 set of 4-pin horn Buzzer pins
Network	Integrated REALTEK8125BG NIC chip (100/1000/2500Mbit) 1 on-board RJ45 port 1 onboard M.2 E-Key PCI-E 2230 WIFI NIC port Support network wake up Supports PXE diskless boot and UEFI diskless boot
Storage	1 M.2 slot (2280/22110 PCIE X4/X2 channel SSD only) 1 M.2 slot (2280 PCIE X4/X2 channel SSD only) 4 SATA3.0 ports
USB	Onboard rear ports: 4 USB3.2 GEN1 ports, 4 USB2.0 ports, and 1 USB Type-C (10Gbps) port Board pins: 1 set (2) USB2.0 pins, 1 set (2) USB3.2 GEN1 pins, 1 front USB Type-C (10Gbps) port
In-board socket	1 24PIN motherboard ATX power supply port 1 8PIN motherboard ATX 12V power port with 12V input

	2system fan pins (for intelligent temperature control), one CPU fan pin (for intelligent temperature control), and one PUMP fan 1 set of front control panel pins (F_PANEL)
Power input	Voltage monitoring Temperature monitoring Fan monitoring Intelligent fan speed control (motherboard has been supported, intelligent fan speed control also needs fan support)
Hardware monitoring	Supports Windows10 64bit and Windows11 64bit Support Ubuntu 64bit
Operating system	Air discharge $\pm 8KV$ Class C $\pm 6KV$ Class B Contact discharge $\pm 6KV$ Class C $\pm 3KV$ Class B * Test when the whole machine is well grounded
ESD protection	One rear CLR_CMOS button TPM pins 1 set COM_A Pin group 1
Size & Weight	Box size: 289*280*65mm Board weight: 802.2g Net packing weight: 1167g Outer box size: 578*310*300mm FCL weight: 12.9kg



A: DP interface

Support the highest resolution of 4096x2160@60Hz, can support audio and image output at the same time.

B: HDMI port

Support the highest resolution of 4096x2160@30Hz, can support audio and image output at the same time.

C: indicates A Layer 4 USB2.0 TYPE A interface

It supports the USB2.0 standard and is backward compatible with the USB1.1 standard. It is used to connect USB TYPE A devices.

D: Type-C interface

Supports up to 10Gbps data transfer speed, does not support fast charge function, does not support display function.

E: CLR_CMOS button

To restore the default BIOS initialization Settings of the mainboard, clear the BIOS function Settings with one click.

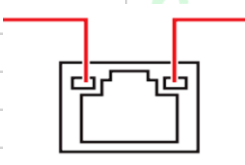
F: Double-layer USB3.2 GEN1 interface

Up to support theoretical 5Gb speed transmission, backward compatible with USB1.1, USB2.0 standards, for connecting USB TYPE A devices.

G: Dual-layer USB3.2 GEN1 interface

Up to support theoretical 5Gb speed transmission, backward compatible with USB1.1, USB2.0 standards, for connecting USB TYPE A devices.

H: RJ45 network cable interface, used to access the network cable to connect the host system to the network, the maximum bandwidth 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

I: WIFI interface

WIFI interface, supporting PCIE_M.2 WIFI devices.

J1: Audio-in interface (blue)

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

J2: Audio-out interface (light green)

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

J3: Audio- Microphone interface (pink)

It is used to access audio input devices such as microphones.

J4: C/SUB- Heavy bass interface (yellow)

The onboard sound card supports heavy bass device access at 5.1 or 7.1 channels.

J5: REAR- Rear surround channel port (black)

When the onboard sound card supports 5.1 or 7.1 channels, insert the rear device connector that surrounds the left and right channels.

J6: SPDIF OUT- SONY Philips Digital Audio Output interface (fiber port)

It is used to access the digital audio playback output that supports fiber output.

MS-Terminator B650M

使用手册

VER:A0

编辑时间：2024 年 9 月 24 日

编辑部门：商科集团产品部

第一章 主板配置图



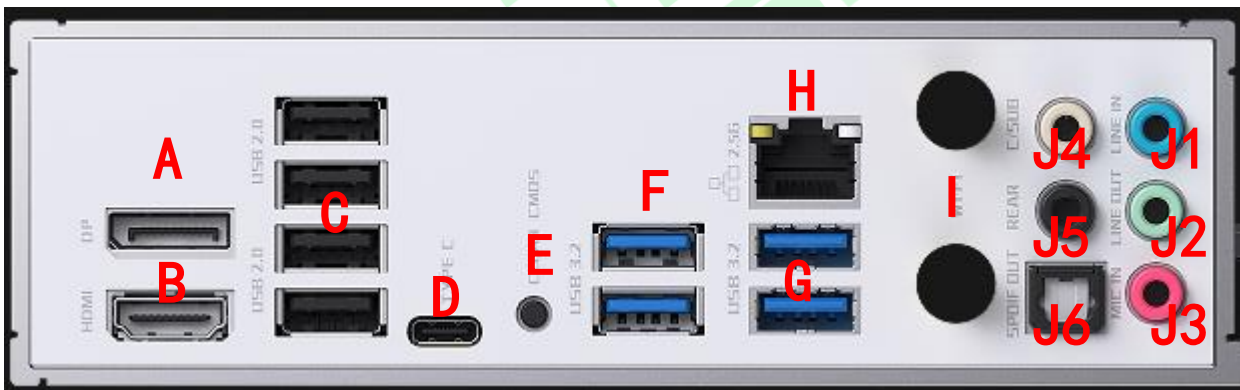
(此图仅供参考，部分细节会根据实际情况设计调整，请以实物为准，我司保留解释权)

第二章 规格

2.1、主板硬件规格

主板尺寸	MicroATX(245*245mm)
CPU	支持 AM5 插槽 Ryzen7000、Ryzen8000、Ryzen9000 系列处理器 TDP: 170W
芯片组	AMD®B650 高速芯片组
内存	4 个 DIMM DDR5 内存槽(请优先插第二、第四两条插槽) 最高支持共 192GB 支持双通道内存技术 支持 4800/5200/OC+ 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 HDMI1.4 接口, 最高支持 4096x2160@30Hz 分辨率 (支持 HDCP2.2) 1 个 DP 接口, 最高支持 4096x2160@60Hz 分辨率
扩展接口	1 个 PCIEX16 5.0 插槽 1 个 PCIEX4 4.0 插槽 1 个 PCIEX1 3.0 插槽 支持 AMD 和 NVidia 独立显卡
音频	集成 REALTEK ALC897 声卡芯片 支持前后声道同时输出 (需要高清音频控制器中设置) 后置配备 6 个音频接口: 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, 1 个后置板载 C/SUB 接口, 1 个后置板载 REAR 接口, 1 个后置板载 SPDIF_OUT 光纤接口。 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 Buzzer 插针
网络	集成 REALTEK8125BG 网卡芯片(100/1000/2500Mbit) 1 个板载 RJ45 接口 1 个板载 M.2 E-Key PCI-E 2230 WIFI 网卡接口 支持网络唤醒 支持 PXE 无盘、UEFI 无盘引导
存储	1 个 M.2 插槽 (仅支持 2280/22110 PCIE X4/X2 通道 SSD) 1 个 M.2 插槽 (仅支持 2280 PCIE X4/X2 通道 SSD) 4 个 SATA3.0 接口
USB	板载后置接口: 4 个 USB3.2 GEN1 接口, 4 个 USB2.0 接口, 1 个 USB Type-C (10Gbps) 接口 板内插针: 1 组 (2 个) USB2.0 插针, 1 组 (2 个) USB3.2 GEN1 插针, 1 个前置 USB Type-C (10Gbps) 接口
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 2 组系统风扇插针 (支持智能温控调节)、1 组 CPU 风扇插针 (支持智能温控调节)、一组

	PUMP 风扇 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 ±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
其他	后置 CLR CMOS 按钮一个 TPM 插针 1 组 COM_A 插针 1 组 1 个 12V NRGB 插针, 2 个 5V ARGB 插针
包装尺寸及重量	彩盒尺寸: 289*280*65mm 单板重量: 802.2g 单片彩包重量: 1167g 外箱尺寸: 578*310*300mm 整箱重量: 12.9kg



A: DP 接口

最高支持 4096x2160@60Hz 分辨率, 可支持声像同时输出。

B: HDMI 接口

最高支持 4096x2160@30Hz 分辨率, 可支持声像同时输出。

C: 四层 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: Type-C 接口

最高支持 10Gbps 的数据传送速度, 不支持快充功能, 不支持显示功能。

E: CLR_CMOS 按钮

一键清除主板 BIOS 功能设置，还原主板 BIOS 默认初始化设置。

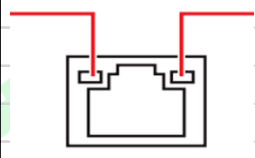
F: 双层 USB3.2 GEN1 接口

最高支持理论 5Gb 速度传输，可向下兼容 USB1.1、USB2.0 标准,用于连接 USB TYPE A 设备。

G: 双层 USB3.2 GEN1 接口

最高支持理论 5Gb 速度传输，可向下兼容 USB1.1、USB2.0 标准,用于连接 USB TYPE A 设备。

H: RJ45 网线接口，用于接入网线将主机系统连接到网络，最高带宽 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

I: WIFI 接口

WIFI 接口，支持 PCIE_M.2 WIFI 设备。

J1: Audio-in 接口(蓝色)

用于接收音频输入设备，如手机音频输入。

J2: 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。

J3: 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。

J4: C/SUB-重低音接口（黄色）

板载声卡支持 5.1 或 7.1 声道时的重低音设备接入口。

J5: REAR-后置环绕声道接口（黑色）

板载声卡支持 5.1 或 7.1 声道时，插入后置环绕左右声道的设备接入口。

J6: SPDIF OUT-索尼飞利浦数字音频输出接口（光纤口）

用于接入支持光纤输出的数字音频播放输出。