

DIY-APE H610 KING

Manual

VER:A0

SHANGKE GROUP

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Chapter I Motherboard configuration diagram



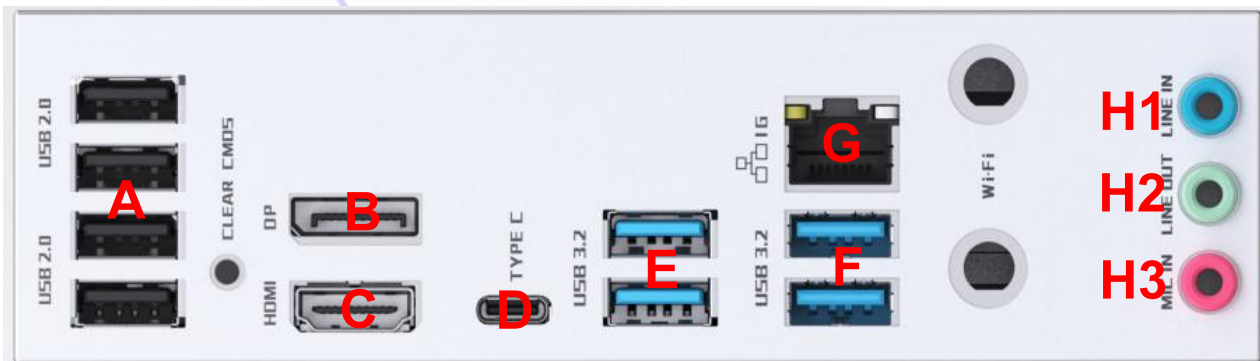
(This figure is for reference only, some details will be designed and adjusted according to the actual situation, please refer to the actual object, our company reserves the right to explain)

Chapter II Specifications

2.1, Motherboard hardware specifications

Motherboard size	Micro-YTX (245*175mm)
CPU	Support for LGA1700 slots 12th-generation processor, 13th-generation processor (CPU overclocking technology is not supported) TDP: 95W
Chipset	Intel®H610 chipset
Memory	2x DIMM DDR4 memory slots Up to a total of 64GB is supported Dual-channel memory technology is supported Support for 3200/2933/2666/2400/2133 MHZ frequency memory
Display	Based on the display function of integrated graphics card processor, using shared display memory technology 1x HDMI interface, up to 4096x2160@30Hz resolution (HDMI 1.4) 1x DP port, up to 4096x2160@60Hz resolution
Expansion interface	1x PCIE X16 4.0 slot Support for AMD and NVIDIA graphics PCIE resizable bar technology is supported
Audio	Integrated Realtek ALC897 sound card chip Rear audio interface: 1x rear on-board LINE IN interface, 1x rear on-board LINE OUT interface, and 1x rear on-board MIC_IN microphone interface F_AUDIO pins: 1x set of front microphone pins, 1x set of front audio output pins 1x set of 4-pin horn BUZZER pins
Networking	Integrated Intel 219-V network card chip (10/100/1000Mbit) 1x on-board RJ45 port Support for network wake-up Supports PXE diskless and UEFI diskless boot
Storage	2x M.2 3.0 slots (M2_SSD_A tightly supports 2242/2280 PCIE X4/X2 channels, M2_SSD_B supports 2242/2280/22110 PCIE X4/X2 channel SSDS) 4x SATA3.0 ports 1x M.2 WIFI port (tight CNVI support)
USB	Onboard rear ports: 4x USB3.2 GEN1 ports, 4x USB2.0 ports, 1 TYPE-C 2.0 port On-board pins: 1x set (2) USB2.0 pins, 1x set (2) USB3.2 GEN1 pins, 1x TYPE-C USB3.2 GEN2 port
In-board socket	1x 24-PIN motherboard ATX power supply port 1x 8-PIN motherboard ATX 12V power port with 12V input 1x COM_A pin 3x sets of system fan pins, 1x set of CPU fan pins, and 1x set of CLR_CMOS button 1x Debug pin

	2x 5V ARGB pins 1x 12V NRGB pin 1x set of chassis front control panel pins (F_PANEL)
Hardware monitoring	Voltage monitoring Temperature monitoring Fan monitoring Intelligent fan speed control (motherboard has been supported, intelligent fan speed control also needs fan support)
Operating system	Support for Windows10 64bit, Windows11 64bit Support for Ubuntu 64bit
ESD protection	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



A: Dual layer USB2.0 TYPE A interface

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

B: DP port

Supports up to 4096x2160@60Hz resolution for connecting monitors.

C:HDMI port

Support the highest resolution 4096x2160@30Hz (HDMI2.0 and HDCP2.2), used to connect the monitor.

D: TYPE-C interface

Supports the USB2.0 standard up to the maximum, can be backward compatible with the USB1.1 standard.Used to connect USB TYPE C devices.

E: Dual layer USB3.2 GEN1 TYPE A interface

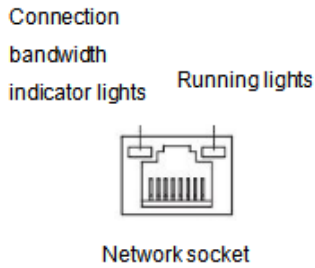
Supports up to theoretical 5Gb speed transfers and is backward compatible with the USB1.1 standard for connecting USB TYPE A devices.

F: Dual layer USB3.2 GEN1 TYPE A interface

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

G: RJ45 port

Network cable interface, used to access the network cable to connect the host system to the network, maximum bandwidth 1000Mbps.



Connection bandwidth indicator	
Bandwidth	Light State
Unconnected	destroy
10Mbps	Steady green
100Mbps	Steady green
1000Mbps	Steady orange

Running indicator	
No data transfer	destroy
Data in transit	Flicker

H1: LINE IN interface (blue)

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

H2: Audio-out interface (light green)

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

H3: Audio- Microphone interface (pink)

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

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使用手册

VER:A0

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第一章 主板配置图



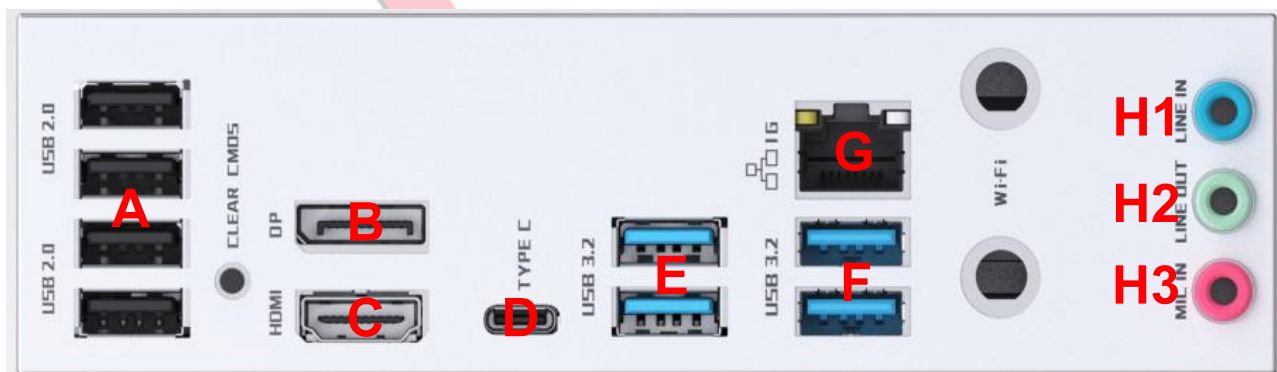
(此图仅供参考，部分细节会根据实际情况设计调整，请以实物为准，我司保留解释权)

第二章 规格

2.1、主板硬件规格

主板尺寸	Micro-YTX (245*175mm)
CPU	支持 LGA1700 插槽 第 12 代处理器、第 13 代处理器 (不支持 CPU 超频技术) TDP: 95W
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/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 (HDMI1.4) 1 个 DP 接口, 最高支持 4096x2160@60Hz 分辨率
扩展接口	1 个 PCIEX16 4.0 插槽 支持 AMD 和 NVidia 独立显卡 支持 PCIE resizable bar 技术
音频	集成 REALTEK ALC897 声卡芯片 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: 含 1 组前置麦克风插针和 1 组前置音频输出插针 1 组 4pin 喇叭 BUZZER 插针
网络	集成 INTEL I219-V 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	2 个 M.2 3.0 插槽 (M2_SSD_A 紧支持 2242/2280 PCIE X4/X2 通道 , M2_SSD_B 紧支持 2242/2280/22110 PCIE X4/X2 通道 SSD) 4 个 SATA3.0 接口 1 个 M.2 WIFI 接口 (紧支持 CNVI)
USB	板载后置接口: 4 个 USB3.2 GEN1 接口, 4 个 USB2.0 接口 ,1 个 TYPE-C 2.0 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 TYPE-C USB3.2 GEN2 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 1 个 COM_A 插针 3 组系统风扇插针、1 组 CPU 风扇插针、1 组 CLR_CMOS 按钮 1 个 Debug 插针 2 个 5V ARGB 插针 1 个 12V NRGB 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 ±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: 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。

B: DP 接口

最高支持 4096x2160@60Hz 分辨率，用于连接显示器。

C:HDMI 接口

最高支持 4096x2160@30Hz 分辨率（HDMI2.0 版本及 HDCP2.2），用于连接显示器。

D: TYPE-C 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 C 设备。

E: 双层 USB3.2 GEN1 TYPE A 接口

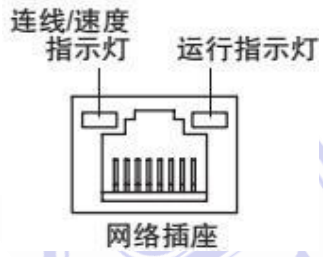
最高支持理论 5Gb 速度传输，可向下兼容 USB1.1 标准,用于连接 USB TYPE A 设备。

F: 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。

G: 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

H1: LINE IN 接口(蓝色)
用于接收音频输入设备，如手机音频输入。

H2: 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。

H3: 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。