KAMRUI AM21

KAMRUI AM21 Mini Gaming PC User Manual

Model: AM21

1. PRODUCT OVERVIEW

The KAMRUI AM21 is a high-performance mini gaming PC designed for demanding tasks, including gaming, content creation, and multitasking. It features an AMD Ryzen 7 8745HS processor, integrated Radeon 780M graphics, 32GB DDR5 RAM, and a 1TB M.2 NVMe PCIe 4.0x4 SSD. This compact desktop computer supports quad 4K displays and offers extensive connectivity options.

Image: Front and rear view of the KAMRUI AM21 Mini PC, showcasing its compact design and various ports.

2. WHAT'S IN THE BOX

Verify that all items are present in the package:

- KAMRUI AM21 Mini Computer AMD Ryzen 7 8745HS
- 1 x HDMI Cable
- 1 x VESA Mount
- 1 x Power Adapter
- 1 x User Manual

3. SETUP AND INSTALLATION

3.1 VESA Mount Installation

The KAMRUI AM21 Mini PC can be mounted to the back of a compatible display using the included VESA mount. This allows for a clutter-free workspace.

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Video: This video demonstrates the process of installing the KAMRUI AM21 Mini PC using the VESA mount to attach it to the back of a monitor. It covers preparing tools, attaching the bracket to the display, and securing the mini PC to the bracket.

3.2 Operating System Installation

To install an operating system, you will need a USB flash drive with the desired OS image. Follow these steps:

1. Download the ISO image file of the required operating system and place it in the root directory of the USB flash drive.
2. Insert the USB flash drive into the mini PC.
3. Press the power-on button and simultaneously press F7 to enter the boot interface.
4. Select the USB flash drive device from the boot menu.
5. Follow the on-screen instructions to complete the OS installation.
6. After confirming that the settings are correct, click the "Start" or "Write" button and wait for the completion of the making process.
7. Unplug the USB flash drive and wait for the computer to enter the user interface.

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Video: This video guides you through the process of installing an operating system on the KAMRUI AM21 Mini PC using a USB flash drive, including accessing the boot menu and initiating the installation.

4. OPERATING THE MINI PC

4.1 Multi-Screen Display Configuration

The KAMRUI AM21 supports up to four 4K displays simultaneously, enhancing productivity and entertainment experiences. Connect your monitors using the available USB 4, USB 3.2 Type-C, and HDMI 2.1 ports.

4K Ultra HD
Quad Display Support

Unlimited Productivity, Immersive Entertainment

HDMI 2.1 × 2
4K@120Hz support
for ultra-smooth visuals

USB4 × 1
40Gbps bandwidth
with DisplayPort 1.4 support

USB3.2 Type-C × 1
10Gbps with DisplayPort
1.4 alternate mode

Image: The KAMRUI AM21 Mini PC connected to four monitors, demonstrating its quad 4K display capability for enhanced productivity.

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Video: This video illustrates the multi-screen 4K display capabilities of the KAMRUI AM21 Mini PC, showing various content across multiple connected monitors.

4.2 Connectivity

The mini PC offers robust connectivity options:

- **Wireless:** Equipped with WiFi 6 for high-speed internet and Bluetooth 5.2 for connecting peripherals.

- **Wired:** Features 2x Ethernet ports (1x 2.5Gbps, 1x 1Gbps) for stable network connections.
- **USB Ports:** Includes 2x USB Type-C (USB 4 with 40Gbps transfer/DP1.4/PD output, and USB3.2 Gen2 Type-C with 10Gbps transfer/DP1.4/PD output) and 4x USB3.2 Type-A ports.
- **Display Ports:** 2x HDMI 2.1 ports for high-resolution display output.
- **Audio:** 1x 3.5mm Audio Jack.

Premium Multi-Interface Design

Front

- Power Button ×1
- Audio Jack ×1
- USB3.2 Gen2 Type-A ×2 (10Gbps)
- USB3.2 Gen2 Type-C ×1 (10Gbps/PD/DP1.4)

Rear

- 1.0Gbps RJ45 ×1
- 2.5Gbps RJ45 ×1
- USB3.2 Gen1 Type-A ×2 (5Gbps)
- USB4 Type-C ×1 (40Gbps/PD/DP1.4)
- DC ×1
- HDMI 2.1 ×2 (4K@120Hz)

Connect All Your Devices

HDTV | Projector | Headphones | Monitor | Keyboard | Printer

Image: Detailed view of the front and rear ports of the KAMRUI AM21 Mini PC, highlighting USB, HDMI, Ethernet, and audio connections.

Image: Illustration of USB4 capabilities, emphasizing 40Gbps transfer speed and expansion possibilities with the KAMRUI AM21 Mini PC.

Image: Visual representation of the Dual LAN and WiFi 6 features, highlighting high-speed wired and wireless connectivity for the KAMRUI AM21 Mini PC.

5. HARDWARE UPGRADES AND MAINTENANCE

5.1 SSD and DDR Memory Replacement

The KAMRUI AM21 Mini PC supports expansion of its storage and memory. It comes with 32GB DDR5 5600MHz RAM (up to 96GB supported) and a 1TB M.2 2280 NVMe PCIe SSD (up to 4TB supported). Note that M.2 SATA SSDs are not supported.

Video: This video demonstrates how to replace or upgrade the SSD and DDR memory in the KAMRUI AM21 Mini PC, showing the steps for opening the device and installing new components.

5.2 Cooling System

The mini PC features a premium cooling system with a 4500 RPM high-speed silent fan and an all-metal cooling design with dual air inlets. This ensures stable operation and prevents overheating during intensive use.

Image: An exploded view of the KAMRUI AM21 Mini PC, illustrating its internal components and the efficient heat dissipation design with dual air intakes.

6. SPECIFICATIONS

Feature	Detail
Processor	AMD Ryzen 7 8745HS (up to 4.9 GHz, 8 Cores, 16 Threads)
Graphics Coprocessor	AMD Radeon 780M (2600MHz, 12 units, RDNA3 architecture)
RAM	32GB DDR5 5600MHz (2x16GB Dual Channel, supports up to 96GB)
Storage	1TB M.2 2280 NVMe PCIe 4.0x4 SSD (2 slots, supports up to 4TB NVMe PCIe 3.0/4.0 SSD, M.2 SATA SSD not supported)
Operating System	OS PRO
Display Support	Quad 4K Display (2x HDMI 2.1, 1x USB 4, 1x USB3.2 Gen2 Type-C)
Wireless Connectivity	WiFi 6 (802.11ax), Bluetooth 5.2
Wired Connectivity	1x 2.5Gbps Ethernet, 1x 1Gbps Ethernet
USB Ports	1x USB 4 (40Gbps/DP1.4/PD), 1x USB3.2 Gen2 Type-C (10Gbps/DP1.4/PD), 4x USB3.2 Type-A
Audio	1x 3.5mm Audio Jack
Item Weight	2.7 pounds
Package Dimensions	6.97 x 6.89 x 3.94 inches

7. TROUBLESHOOTING

If you encounter any issues with your KAMRUI AM21 Mini PC, please refer to the following general troubleshooting steps:

- **No Power:** Ensure the power adapter is securely connected to both the mini PC and a working power outlet.
- **No Display:** Verify that the HDMI or USB-C display cables are correctly connected to both the mini PC and the monitor. Check that the monitor is powered on and set to the correct input source.
- **Peripheral Not Detected:** Try connecting the peripheral to a different USB port. Ensure drivers are installed if required by the peripheral.
- **Slow Performance:** Check for background applications consuming resources. Ensure sufficient free storage space. Consider updating drivers or performing a system scan for malware.
- **Overheating:** Ensure the mini PC's vents are not obstructed and it is placed in a well-ventilated area.

For further assistance, please contact customer support.

8. WARRANTY AND SUPPORT

The KAMRUI AM21 Mini PC comes with a 12-month warranty. For any technical support or warranty claims, please contact KAMRUI customer service.

- **Customer Support:** 24 Hours Customer Support
- **Email:** support@kamrui.com