

## AOOSTAR GEM12+ PRO 8845HS

# AOOSTAR GEM12 + PRO 8845HS Mini PC User Manual

Your comprehensive guide to setup, operation, and maintenance.

## 1. INTRODUCTION

Welcome to the user manual for your AOOSTAR GEM12 + PRO 8845HS Mini PC. This powerful and compact computing solution is designed for a wide range of applications, from gaming and video editing to office productivity and professional workstations. This manual provides essential information to help you set up, operate, and maintain your device for optimal performance and longevity.

## 2. PRODUCT OVERVIEW

The AOOSTAR GEM12 + PRO 8845HS Mini PC is engineered for high performance in a small form factor. Key features include:

- **Powerful Processor:** Equipped with the AMD Ryzen 7 PRO 8845HS processor (8 Cores/16 Threads, up to 5.1GHz) and AMD Radeon 780M Graphics, ideal for demanding tasks and gaming.
- **Ample Memory & Storage:** Features 32GB DDR5 5600MHz RAM (expandable up to 64GB) and a 1TB NVMe SSD, with dual M.2 2280 PCIe 3.0/4.0 slots supporting up to 8TB expansion.
- **OCuLink Port:** A high-bandwidth (64 Gbps) Oculink port for connecting high-performance external GPUs with minimal performance loss.
- **Rich Connectivity:** Includes 2x USB3.2 Gen2, 2x USB4, 2x 2.5G LAN ports, HDMI2.1, DP1.4, and built-in WIFI6 and Bluetooth 5.2. Supports quad-screen 4K display.
- **Advanced Cooling:** Dual Cooling System with CPU Fan + Vapor Chamber for efficient heat dissipation, ensuring stable performance under high loads.
- **Customizable Display & Security:** DIY display for real-time monitoring of system data (CPU/GPU/RAM) and customizable background images. Integrated fingerprint recognition for secure access.

## Product Visuals and Features



Figure 2.1: The AOOSTAR GEM12+ PRO Mini PC, showcasing its compact design and front panel with ports and customizable display.

AMD Ryzen PRO  
**PRO 8845HS**  
8C/16T  
**5.1Ghz**  
Max Clock Frequency  
**70W BIOS**

12CoreGPURadeon-780M  
**RDNA3**  
Support AV1 hardware decoding,  
AI arithmetic power 16TOPS

Stand-alone Channel  
**OCuLink**  
Does not occupy M.2 slot



Display for real-time monitoring of GEM12 PC parameters (PRO version only)



**Support Fingerprint  
Unlocking**  
Security upgrades

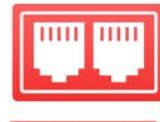
**VC Radiator  
Releases 75W Bios**



Dual channel DDR5  
**5600MHz**  
Single channel support up to 64Gb



2280 PCIe 4.0 x4  
**2\* M.2 slots**



1226V  
**2.5G x2**

**HDMI 2.1**



**USB4**



**DP 1.4**



Full-featured  
**TYPE-C**



Support 4-screen 4K@120HZ Display

Figure 2.2: An infographic detailing the key specifications of the GEM12+ PRO, including the AMD Ryzen PRO 8845HS processor, RDNA3 graphics, OCuLink interface, dual-channel DDR5 5600MHz RAM, dual M.2 slots, and various I/O ports.



# Monitor Your Computer Data At All Times

It needs to be used with AOOSTAR's self-developed on-screen application, which will be regularly upgraded to include more applications.



(Customized Albums)



(Customized Backgrounds)



(Time & Date Display)

Figure 2.3: Illustration of the customizable DIY display feature on the GEM12+ PRO, showing real-time monitoring of CPU, SSD, TDP, RAM, and network data, along with options for customized albums, backgrounds, and time/date display.

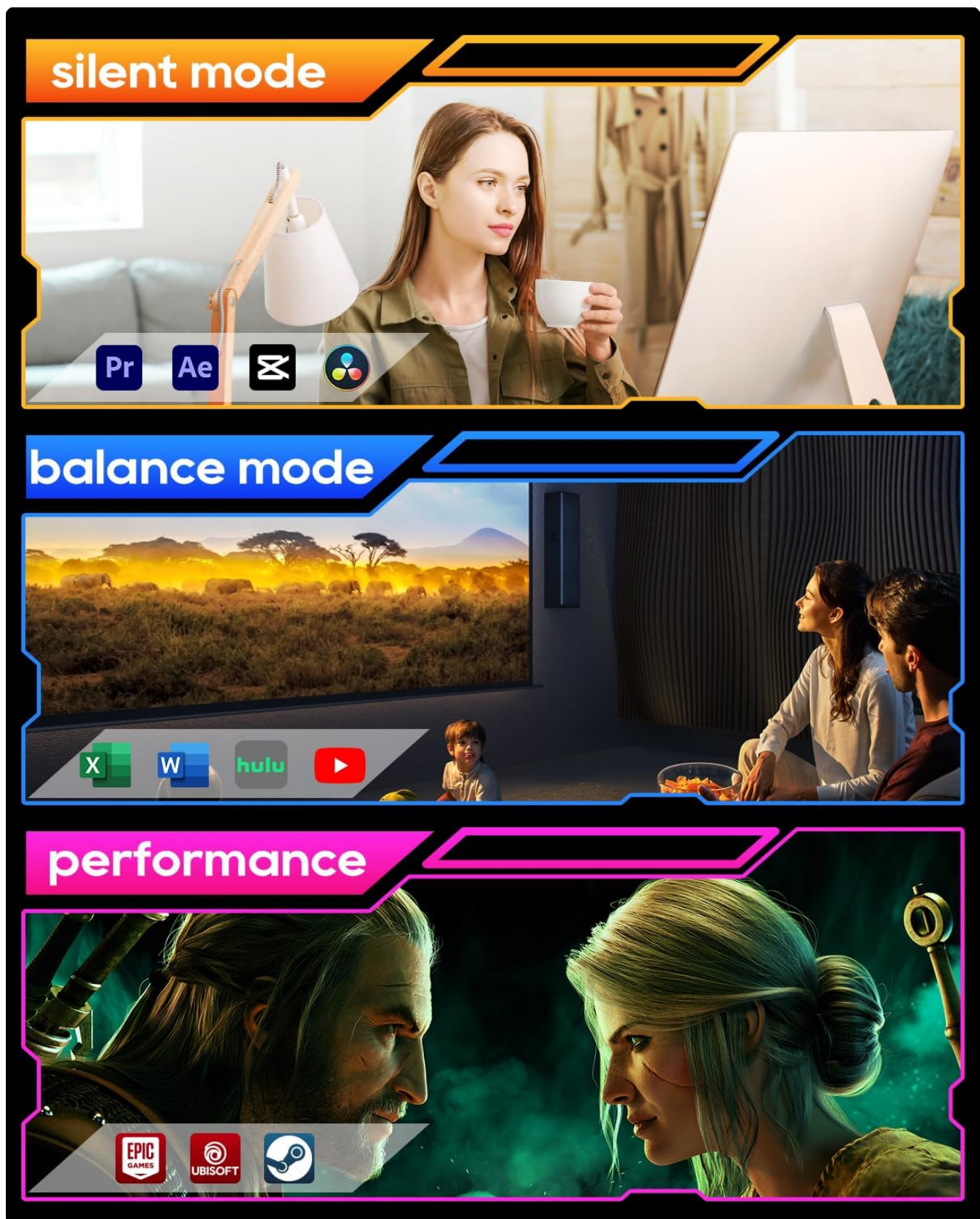


Figure 2.4: Visual representation of the three adjustable BIOS modes: Silent Mode for quiet operation (e.g., office work), Balanced Mode for general use (e.g., media consumption), and Performance Mode for demanding tasks like gaming.

## Official Product Videos

Your browser does not support the video tag.

Video 2.1: "AooSTAR GEM12 8845HS 32+1T" - This video provides a general overview of the AOOSTAR GEM12 8845HS Mini PC, highlighting its features and capabilities, including its compact size and powerful specifications.

Your browser does not support the video tag.

Video 2.2: "AOOSTAR GEM10 GEM12 Series Application Scenarios" - This video demonstrates various real-world applications for

the AOOSTAR GEM10 and GEM12 series mini PCs, showcasing their versatility in home, office, and professional environments.

### 3. SETUP GUIDE

Follow these steps to set up your AOOSTAR GEM12 + PRO 8845HS Mini PC:

1. **Unpack the Box:** Carefully remove the Mini PC, power supply, HDMI cable, VESA mount, mounting screws, and SSD Cooling Pad from the packaging.
2. **Connect to Power:** Connect the power supply to the DC port on the rear of the Mini PC and plug it into a power outlet.
3. **Connect to Display:** Use the provided HDMI cable or a DisplayPort (DP1.4) cable to connect your monitor(s) to the corresponding ports on the Mini PC. The device supports up to four 4K displays via HDMI2.1, 2x USB4, and DP1.4.
4. **Connect Peripherals:** Plug in your keyboard, mouse, and other USB devices into the available USB3.2 Gen2 or USB2.0 ports.
5. **Network Connection:** For wired internet, connect an Ethernet cable to one of the two 2.5G LAN ports. For wireless, the device supports WIFI6 and Bluetooth 5.2.
6. **Power On:** Press the power button on the front of the Mini PC. The system comes with Windows 11 Pro pre-installed.
7. **Initial Setup:** Follow the on-screen instructions to complete the Windows 11 Pro setup, including language, region, and user account creation.

### 4. OPERATING INSTRUCTIONS

Your AOOSTAR GEM12 + PRO Mini PC offers various features to enhance your computing experience:

- **BIOS Performance Modes:** The device features three adjustable BIOS modes to optimize performance and power consumption:
  - **Silent Mode (45W-54W):** Ideal for light tasks and quiet operation.
  - **Balanced Mode (54W-65W):** Suitable for general use and moderate workloads.
  - **Performance Mode (65W-70W):** Maximizes CPU and GPU performance for demanding applications and gaming.

You can adjust these settings in the BIOS. Refer to your system's documentation or contact support for specific instructions on accessing and modifying BIOS settings.

- **DIY Display Customization:** Install the dedicated screen software to customize the integrated display. You can monitor real-time CPU, GPU, RAM, and other data, or personalize it with custom background images and albums.
- **Fingerprint Recognition:** Utilize the integrated fingerprint recognition for quick and secure login to your system, eliminating the need for password entry.
- **Multi-Display Setup:** Leverage the HDMI2.1, DP1.4, and two USB4 ports to connect up to four 4K displays simultaneously, enhancing your productivity or gaming setup.



## 5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Mini PC:

- **Cooling System:** The GEM12+ PRO features a dual cooling system with a CPU fan and vapor chamber. Ensure proper airflow around the device and keep vents clear of obstructions.
- **Storage Expansion:** The Mini PC supports dual M.2 2280 PCIe 3.0/4.0 slots for SSD expansion up to 8TB. When installing or replacing SSDs, ensure the device is powered off and disconnected from power. Use the provided SSD Cooling Pad for optimal thermal management.
- **Cleaning:** Regularly clean the exterior of the Mini PC with a soft, dry cloth. For internal cleaning (e.g., fan dust removal), it is recommended to consult a professional or refer to specific guides.

### CPU Fan Replacement Guide

Your browser does not support the video tag.

Video 5.1: "How to Replace GEM12 CPU Fan" - This video demonstrates the process of replacing the CPU fan in the GEM12 Mini PC. This procedure may be necessary for maintenance or upgrades and should be performed with care.

## 6. TROUBLESHOOTING

If you encounter issues with your AOOSTAR GEM12 + PRO Mini PC, consider the following common troubleshooting steps:

- **No Power:**
  - Ensure the power adapter is securely connected to both the Mini PC and a working power outlet.
  - Verify the power outlet is functional by plugging in another device.
- **No Display:**
  - Check that the HDMI or DisplayPort cable is securely connected to both the Mini PC and the monitor.
  - Ensure the monitor is powered on and set to the correct input source.
  - Try connecting to a different display or using a different cable to rule out display or cable issues.
- **System Slowdown/Overheating:**
  - Ensure the Mini PC is placed in a well-ventilated area and that its vents are not blocked.
  - Check the BIOS performance mode; switching to a lower power mode (e.g., Silent or Balanced) might reduce heat.
  - Close unnecessary applications running in the background.
- **Peripheral Not Detected:**
  - Try connecting the peripheral to a different USB port.
  - Ensure the peripheral's drivers are installed and up to date.
- **Network Connectivity Issues:**
  - For wired connections, check the Ethernet cable and router status.
  - For Wi-Fi, ensure the Wi-Fi adapter is enabled and you are connected to the correct network with the

correct password.

- Restart your router/modem.

If these steps do not resolve your issue, please refer to the [Warranty and Support](#) section for further assistance.

## 7. SPECIFICATIONS

Feature	Detail
Brand	AOOSTAR
Model Number	GEM12+ PRO 8845HS
Processor	AMD Ryzen 7 PRO 8845HS (8 Cores/16 Threads, up to 5.1GHz)
Graphics	AMD Radeon 780M Graphics (Integrated)
RAM	32GB DDR5 5600MHz (2x SO-DIMM slots, max 64GB)
Storage	1TB NVMe SSD (Dual M.2 2280 PCIe 3.0/4.0 slots, max 8TB)
Operating System	Windows 11 Pro
Front Ports	1x Switch, 1x Audio Interface, 2x USB3.2 Gen2, 1x OCULINK, 2x USB4
Rear Ports	2x 2.5G LAN (INTEL I226V), 1x DC port, 1x DP1.4, 1x HDMI2.1, 2x USB2.0
Wireless Connectivity	WIFI6, Bluetooth 5.2
Display Support	4-screen 4K display (HDMI2.1 + 2x USB4 + DP1.4)
Cooling System	CPU Fan + Vapor Chamber
Special Features	DIY Display, Fingerprint Recognition, OCulink Port
Item Weight	3.24 pounds
Package Dimensions	6.75 x 6.75 x 5 inches

## 8. WARRANTY AND SUPPORT

Your AOOSTAR GEM12 + PRO 8845HS Mini PC comes with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or visit the official AOOSTAR website.

**Return Policy:** This product is eligible for a 30-day return/replacement policy from the date of purchase.

**Technical Support:** For technical assistance, troubleshooting beyond the scope of this manual, or warranty claims, please contact AOOSTAR-US customer support. You can typically find contact information on the seller's page on




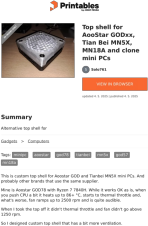



Amazon or on the official AOOSTAR website.

**Online Resources:** Check the AOOSTAR official website for updated drivers, software, and additional support resources.

© 2025 AOOSTAR. All rights reserved. Information in this manual is subject to change without notice.

Related Documents - GEM12+ PRO 8845HS

	<p><a href="#">AOOSTAR GEM12 Max Mini PC User Manual &amp; Specifications</a></p> <p>Comprehensive user manual for the AOOSTAR GEM12 Max Mini PC (R7 8845HS). This guide provides detailed information on unpacking, product interfaces, operating environment, important precautions, troubleshooting slow boot issues, and warranty terms.</p>
	<p><a href="#">AOOSTAR MN78 Mini PC User Manual</a></p> <p>Comprehensive user manual for the AOOSTAR MN78 Mini PC, covering setup, operation, environment, installation, and warranty information.</p>
	<p><a href="#">AOOSTAR MACO Mini PC User Manual and Specifications</a></p> <p>User manual and technical specifications for the AOOSTAR MACO Mini PC, including operation instructions, installation guide, warranty information, and FCC compliance.</p>
	<p><a href="#">Custom 3D Printable Top Shell for AooStar and Tian Bei Mini PCs</a></p> <p>Enhance the cooling performance of your AooStar GODxx, Tian Bei MN5X, MN18A, and clone mini PCs with this custom 3D printable top shell. Designed to improve ventilation and reduce thermal throttling, it offers various height and cutout options for optimal airflow and quieter operation.</p>
	<p><a href="#">Aoostar T8 Mini-PC im Test: Kompakter Rechner mit Intel N100</a></p> <p>Umfassender Testbericht zum Aoostar T8 Mini-PC. Erfahren Sie mehr über die kompakte Bauweise, die Ausstattung und die Leistung des Intel N100 Prozessors.</p>