

HP GT22-3090

HP OMEN 45L Gaming Desktop User Manual

Model: GT22-3090 (Item Model Number: B91WJAA#ABA)

Brand: HP

1. PRODUCT OVERVIEW

The HP OMEN 45L Gaming Desktop is engineered for extreme performance, featuring an Intel Core Ultra 9 285K processor, NVIDIA GeForce RTX 5090 graphics, and a revolutionary OMEN CRYO CHAMBER cooling system. This desktop is designed with a focus on upgradeability and customization, utilizing an industry-standard form factor and tool-less access for components. It comes equipped with Windows 11 Pro and Microsoft Copilot for an optimized user experience.





Figure 1.1: Front-right view of the HP OMEN 45L Gaming Desktop, showcasing its illuminated front fans and tempered glass side panel.

2. UNBOXING AND INITIAL SETUP

2.1 What's in the Box

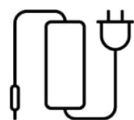
Upon opening the packaging, verify that all components are present:

- OMEN by HP 45L Gaming Desktop GT22-3090
- 1200 W 80 Plus Gold certified ATX power supply
- Setup instructions
- Information regarding 3 free months of PC Game Pass

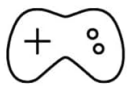
WHAT'S IN THE BOX



OMEN 45L GAMING DESKTOP



1200 W 80 Plus Gold certified
ATX power supply



3 free months of
PC Game Pass⁴



Setup
instructions

Figure 2.1: Illustration of the HP OMEN 45L Gaming Desktop and its included accessories: power supply, setup instructions, and PC Game Pass information.

2.2 Connecting Your Desktop

Follow these steps to set up your HP OMEN 45L Gaming Desktop:

1. **Placement:** Position the desktop on a stable, flat surface with adequate ventilation around all sides. Ensure the rear ports are easily accessible.
2. **Power Connection:** Connect the provided power cable to the power supply unit (PSU) at the rear of the desktop and then to a grounded electrical outlet.
3. **Monitor Connection:** Connect your monitor(s) to the graphics card ports (DisplayPort or HDMI) located at the rear of the desktop. Ensure the monitor is also connected to power.
4. **Peripherals:** Connect your keyboard, mouse, and any other USB devices (e.g., external hard drives, webcams) to the available USB ports. Refer to the 'Connectivity' section for port types.
5. **Network Connection:** For a wired connection, connect an Ethernet cable from your router or modem to the RJ-45 port on the desktop. For wireless, ensure your Wi-Fi network is available during initial setup.
6. **Audio:** Connect speakers or headphones to the appropriate audio jacks.
7. **Power On:** Press the power button on the front of the desktop. The system will boot up, and you will

be guided through the Windows 11 Pro initial setup process.

PORTS

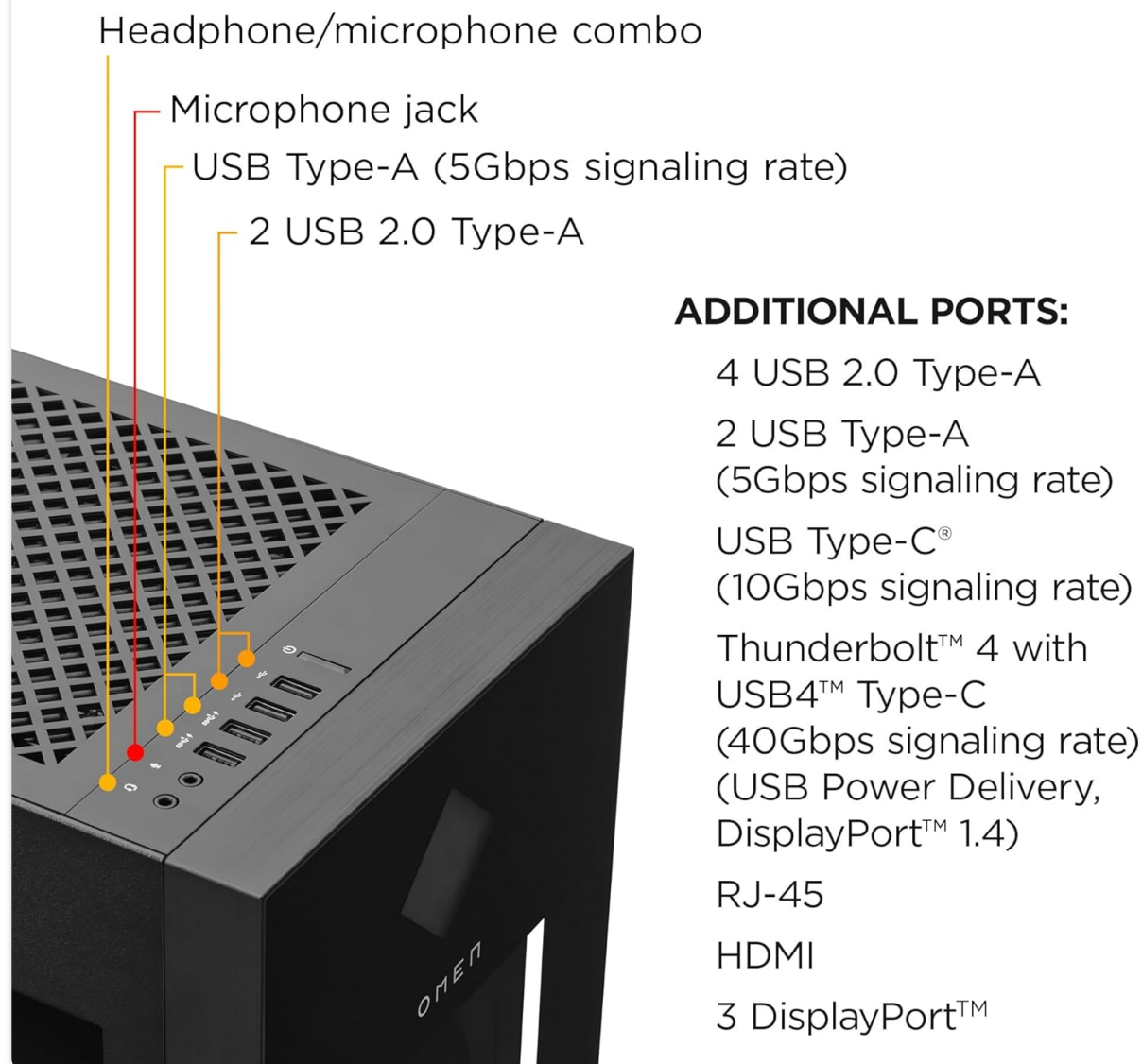


Figure 2.2: Detailed diagram illustrating the various ports available on the HP OMEN 45L Gaming Desktop, including USB Type-A, USB Type-C, Thunderbolt, HDMI, DisplayPort, and audio jacks.

3. OPERATING INSTRUCTIONS

3.1 Windows 11 Pro

Your OMEN 45L Desktop comes pre-installed with Windows 11 Pro. This operating system provides a modern interface, enhanced security features, and improved performance for gaming and productivity. Utilize Microsoft Copilot, an AI assistant integrated into Windows, to boost productivity and creativity.

3.2 OMEN Gaming Hub

The OMEN Gaming Hub (OGH) is a centralized software suite designed to enhance your gaming experience. It provides tools for:

- **System Monitoring:** View real-time performance metrics such as CPU and GPU usage, temperatures, and network bandwidth.

- **Performance Control:** Optimize system settings, including intelligent overclocking, fan control, and RAM frequency adjustments.
- **Lighting Control:** Customize the RGB lighting effects on your desktop's fans and other compatible components.
- **Game Management:** Access and launch your game library, and discover new titles.

Launch OMEN Gaming Hub from the Windows Start Menu to personalize your desktop's performance and aesthetics.



PERSONALIZE YOUR WAY

Tweak every last detail from intelligent overclocking, to SW-based fan control, BIOS access, RAM frequency and RGB. Monitor sold separately.

Figure 3.1: The OMEN Gaming Hub interface, showing system performance monitoring and customization options, displayed on a monitor connected to the OMEN 45L Desktop.

3.3 DTS:X Ultra Technology

This technology provides authentic, spatially accurate 3D sound, enhancing the immersion for games, movies, and music. It offers specially tuned audio modes for different entertainment types, accessible through the DTS:X Ultra application.

4. HARDWARE FEATURES

4.1 Processor and Graphics

The OMEN 45L Desktop is equipped with an Intel Core Ultra 9 285K processor, designed for powerful and efficient AI performance, gaming, and content creation. Graphics are handled by the NVIDIA GeForce RTX 5090 GPU with 32 GB GDDR7 dedicated memory, leveraging the NVIDIA Blackwell architecture for advanced AI capabilities and realistic visuals.



GAME CHANGER

Powered by the NVIDIA Blackwell architecture and 32 GB of super-fast GDDR7 memory.²



Figure 4.1: Visual highlighting the NVIDIA GeForce RTX 5090 GPU, emphasizing its role as a 'Game Changer' in performance.

4.2 Memory and Storage

The system features 64 GB of DDR5 RAM (Kingston FURY 64 GB DDR5-5600 MT/s XMP RGB Heatsink RAM, 4x16 GB) for high bandwidth and performance. Storage is provided by a 2 TB PCIe Gen4 NVMe M.2 solid-state drive, ensuring fast boot times and efficient data access.

4.3 Cooling System

The patented OMEN CRYO CHAMBER cooling system is a key feature, designed to channel fresh, cold air from the surrounding environment directly to the liquid cooler radiator, effectively cooling the CPU. This system, combined with a 360 MM LCD liquid cooler, ensures optimal heat dissipation and allows for dynamic LCD lighting effects through OMEN Gaming Hub.

4.4 Chassis Design

The desktop features tempered glass panels and a full-metal frame, providing both aesthetic appeal and durability. The design allows for tool-less entry, simplifying component access and upgrades. The chassis adheres to industry-standard form factors for broad compatibility with aftermarket parts.



BEAUTY, MEET BEAST

Tempered glass panels, a full-metal frame with toolless entry, and complete RGB control.

Figure 4.2: Front view of the OMEN 45L Desktop, highlighting its tempered glass panels and robust full-metal frame, designed for both aesthetics and functionality.

5. TECHNICAL SPECIFICATIONS

OMEN 45L GAMING DESKTOP



Intel® Core™
Ultra 9 285K processor¹



Kingston FURY 64 GB
DDR5-5600 MT/s XMP RGB
Heatsink RAM (4x16 GB)



2 TB PCIe® Gen4
NVMe™ M.2 SSD²



NVIDIA® GeForce RTX™
5090 graphics (32 GB GDDR7
dedicated memory)³



Figure 5.1: Overview of the HP OMEN 45L Gaming Desktop's core specifications, including processor, RAM, SSD, and graphics card details.

Feature	Specification
Processor	Intel Core Ultra 9 285K (5.7 GHz)
RAM	64 GB DDR5 (5600 MHz)
Storage	2 TB PCIe Gen4 NVMe M.2 SSD
Graphics Coprocessor	NVIDIA GeForce RTX 5090 (32 GB GDDR7 dedicated)
Operating System	Windows 11 Pro
Wireless Connectivity	802.11ax (Wi-Fi 6E), Bluetooth 5.3
Power Supply	1200 W 80 Plus Gold certified ATX
Item Model Number	B91WJAA#ABA

Feature	Specification
Product Dimensions (LxWxH)	8.03 x 18.5 x 21.85 inches
Item Weight	49.8 pounds

DIMENSIONS

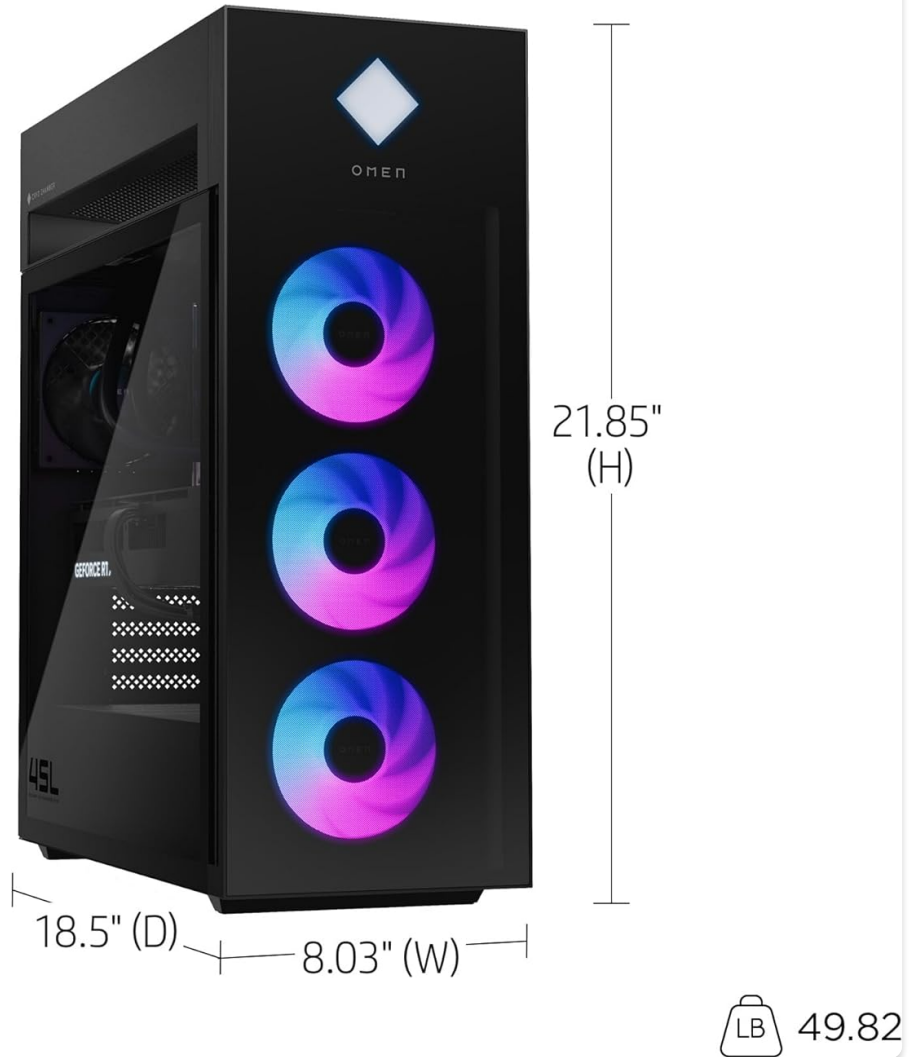


Figure 5.2: Dimensional diagram of the HP OMEN 45L Gaming Desktop, indicating its height, depth, and width, along with its approximate weight.

6. MAINTENANCE AND CARE

Proper maintenance ensures the longevity and optimal performance of your HP OMEN 45L Gaming Desktop.

6.1 Cleaning

- **Exterior:** Use a soft, lint-free cloth slightly dampened with water or a mild cleaning solution to wipe down the exterior surfaces. Avoid abrasive cleaners.

- **Dust:** Regularly use compressed air to clear dust from ventilation grilles, fan openings, and internal components. Ensure the system is powered off and unplugged before cleaning.
- **Tempered Glass:** Clean the tempered glass panels with a glass cleaner and a microfiber cloth to avoid streaks.

6.2 Software Updates

Keep your operating system, drivers (especially graphics drivers), and OMEN Gaming Hub software updated to ensure stability, security, and performance improvements. Windows Update will handle OS updates, while graphics drivers can be updated via NVIDIA's official software.

6.3 Environmental Considerations

Operate the desktop in a well-ventilated area to prevent overheating. Avoid placing it in direct sunlight or near heat sources. The OMEN 45L Gaming Desktop is responsibly manufactured using post-consumer recycled plastic and water-based paint, and is EPEAT Gold with Climate+ and ENERGY STAR certified.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your desktop.

7.1 No Power / System Not Starting

- **Check Power Connections:** Ensure the power cable is securely connected to both the desktop's PSU and the electrical outlet. Try a different outlet.
- **Power Strip/UPS:** If using a power strip or UPS, ensure it is turned on and functioning correctly.
- **Internal Connections:** If comfortable, and after unplugging the system, briefly check that internal power cables (e.g., 24-pin ATX, CPU power) are seated correctly.

7.2 No Display Output

- **Monitor Connection:** Verify that the video cable (HDMI/DisplayPort) is securely connected to both the graphics card on the desktop and the monitor.
- **Input Source:** Ensure your monitor is set to the correct input source (e.g., HDMI 1, DisplayPort).
- **Graphics Card Seating:** If the issue persists, and you are comfortable, power off and unplug the system, then gently re-seat the graphics card in its PCIe slot.

7.3 System Overheating

- **Ventilation:** Ensure the desktop has ample space around it for airflow. Do not block air vents.
- **Dust Buildup:** Clean dust from fans and heatsinks using compressed air.
- **Fan Operation:** Check if all fans (CPU, GPU, case fans) are spinning correctly.
- **OMEN Gaming Hub:** Use OGH to monitor temperatures and adjust fan curves if necessary.

7.4 Peripheral Not Detected

- **Try Different Port:** Connect the peripheral to a different USB port.
- **Restart:** Restart the computer.
- **Drivers:** Ensure necessary drivers for the peripheral are installed. Check the manufacturer's

website.

8. WARRANTY AND SUPPORT

Your HP OMEN 45L Gaming Desktop comes with a 1-year limited hardware warranty and 1-year limited technical support for software and initial setup from HP.

8.1 Contacting Support

For technical assistance or warranty claims, please visit the official HP support website or contact HP customer service. Have your product model number (GT22-3090) and item model number (B91WJAA#ABA) ready when contacting support.

You may also consider additional protection plans for extended coverage:

- 3-Year Protection Plan
- Complete Protect: One plan covers all eligible past and future purchases

For more information on these plans, refer to your purchase documentation or the retailer's website.