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› Eluktronics HYDROC 16 G2 Gaming Laptop User Manual

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Model: HYDROC 16 G2

1. INTRODUCTION

This manual provides essential information for the setup, operation, and maintenance of your Eluktronics HYDROC 16 G2 Gaming Laptop. The HYDROC 16 G2 is a high-performance mobile workstation designed for demanding tasks such as gaming, content creation, and professional applications, featuring advanced liquid cooling capabilities.

2. WHAT'S IN THE BOX

Carefully unpack your Eluktronics HYDROC 16 G2 and ensure all components are present:

- Eluktronics HYDROC 16 G2 Laptop
- 420 Watt AC Adapter
- 140 Watt Type-C Charger
- External Liquid Cooler (LPP Gen 2)
- Liquid Cooler Hoses and Connectors



Image: Eluktronics HYDROC 16 G2 laptop alongside its retail packaging.

3. PRODUCT OVERVIEW

The Eluktronics HYDROC 16 G2 is engineered for peak performance and efficiency. Key features include:

3.1. Core Components

- **Processor:** Intel Core Ultra 9 275HX 24-Core (8 Performance, 16 Efficiency Cores, 32 Threads)
- **Graphics Card:** NVIDIA GeForce RTX 5080 with 16GB GDDR7 VRAM (up to 175 watts)
- **Memory:** 32GB DDR5 5600MHz RAM (2 Dimm slots, expandable)
- **Storage:** 1TB PCIe Gen 4 NVMe SSD (with one empty M.2 PCIe slot for expansion)

3.2. Display

- 16-inch QHD (2560 x 1600) 16:10 display
- 300Hz refresh rate
- 500-nit brightness

- Anti-Glare finish
- MUX Switch for direct GPU output
- 180° hinge for flexible viewing angles



Image: Front view of the Eluktronics HYDROC 16 G2 laptop, showcasing its display and keyboard.

3.3. Connectivity

- **Wireless:** Intel WiFi 7 & Bluetooth 5.4
- **Ports:**
 - 1x HDMI 2.1 (dGPU)
 - 1x Mini DP 2.1a 80GBPS (dGPU)
 - 1x Thunderbolt 4 (iGPU, supports power delivery up to 140 watts charging) Type-C
 - 1x USB-C 3.2 (iGPU DP 1.4 Gen 2)
 - 3x USB-A 3.2 (Gen 1)
 - SDXC 7.0 Card Reader
 - 2.5 Gigabit Ethernet RJ-45
 - 3.5mm combo audio jack
 - Kensington Lock slot



Image: Left side view of the laptop, showing USB-A, USB-C, and audio ports.



Image: Right side view of the laptop, showing additional USB-A and SD card reader ports.

3.4. User Interface

- **Keyboard:** Premium RGB per-key NKRO Membrane, 1.4mm key travel, 10-key numeric keypad
- **Touchpad:** Glass Microsoft Precision (PTP) Touchpad with multi-gesture & scrolling function
- **Webcam:** Full HD IR camera with dual digital microphones, physical privacy switch & dedicated IR sensor for Windows Hello Support
- **Audio:** Nahimic Audio with Smart Amp
- **Light Bar:** RGB LED

3.5. Power & Dimensions

- **Battery:** 4-Cell 99WHr Polymer
- **Dimensions:** 14.04 x 9.64 x 1.04 inches
- **Weight:** 5.48 lbs

4. INITIAL SETUP

4.1. Powering On

1. Connect the 420 Watt AC Adapter to the laptop's power input port and a wall outlet.
2. Open the laptop lid.
3. Press the power button, typically located above the keyboard or on the side.

4. Follow the on-screen instructions for initial Windows 11 Home setup.

4.2. External Liquid Cooling System (LCS) Setup

The HYDROC 16 G2 includes an external liquid cooling system for enhanced thermal performance. Follow these steps for proper setup:

1. **Prepare the LCS:** Ensure the external liquid cooler (LPP Gen 2) is placed on a stable, flat surface near the laptop.
2. **Fill the LCS:** Fill the liquid cooler's reservoir with distilled water as per the instructions provided with the cooler. Do not use tap water or other liquids.
3. **Connect Hoses:** Connect the two liquid cooling hoses from the external cooler to the dedicated ports on the rear of the laptop. Ensure a secure connection. The connectors are designed to be specific to each end (laptop vs. cooler).
4. **Power the LCS:** Connect the external liquid cooler to its power source (if separate) or ensure it's connected to the laptop via the designated port for power and control.
5. **Prime the System:** Once connected, power on the laptop. Use the Eluktronics control software to initiate the priming process for the liquid cooler. This will circulate the fluid and remove air bubbles. Add more distilled water to the reservoir if the level drops significantly during priming.



Image: The Eluktronics HYDROC 16 G2 laptop connected to its external liquid cooling unit.



Image: Rear view of the laptop showing the liquid cooling hoses securely attached to the dedicated ports.

5. OPERATING YOUR LAPTOP

5.1. Keyboard and Touchpad

- The keyboard features per-key RGB backlighting. Customize lighting effects through the pre-installed control software.
- The glass precision touchpad supports multi-touch gestures for navigation. Refer to Windows settings for gesture customization.

5.2. Port Usage

Utilize the various ports for connecting peripherals, external displays, and storage devices. Note the specific capabilities of each port:

- **HDMI 2.1 & Mini DP 2.1a:** For connecting external monitors, driven by the dedicated NVIDIA GPU.
- **Thunderbolt 4 (Type-C):** Supports high-speed data transfer, display output (via integrated GPU), and power delivery (up to 140W charging).
- **USB-C 3.2 (Gen 2):** Supports data transfer and DisplayPort 1.4 output (via integrated GPU).
- **USB-A 3.2 (Gen 1):** For standard USB devices.
- **SDXC 7.0 Card Reader:** For high-speed memory card access.

- **RJ-45 Ethernet:** For wired network connections.

5.3. Webcam Privacy

The Full HD IR webcam includes a physical privacy switch. Slide the switch to cover the camera lens when not in use to ensure privacy.

6. MAINTENANCE

6.1. General Laptop Care

- Keep the laptop clean by wiping surfaces with a soft, dry cloth. Avoid abrasive cleaners.
- Ensure ventilation grilles are clear of dust and obstructions to maintain optimal airflow.
- Avoid exposing the laptop to extreme temperatures, direct sunlight, or high humidity.

6.2. Liquid Cooling System Maintenance

- Regularly check the liquid level in the external cooler's reservoir. Refill with distilled water as needed.
- Inspect hoses and connectors for any signs of leaks or damage.
- Periodically clean the external cooler's fan and radiator fins to prevent dust buildup, which can impede cooling performance.

6.3. Software and Drivers

- Keep your operating system (Windows 11 Home) updated to ensure security and performance.
- Download and install the latest drivers for your NVIDIA GPU and other components from the official Eluktronics support website or component manufacturers' websites.

7. TROUBLESHOOTING

If you encounter issues with your HYDROC 16 G2, consider the following basic troubleshooting steps:

- **No Power:** Ensure the AC adapter is securely connected to both the laptop and a working power outlet. Try a different outlet.
- **No Display:** If the laptop powers on but the screen remains black, try connecting an external monitor to verify if the issue is with the laptop's display. Ensure the MUX switch setting is appropriate for your use case.
- **Overheating:** Verify that the external liquid cooler is properly connected, filled, and operating. Check for obstructions in the laptop's and cooler's ventilation. Ensure control software is set to an appropriate cooling profile.
- **Peripheral Not Detected:** Ensure the peripheral is correctly connected to the appropriate port. Try a different port or restart the laptop. Update drivers for the peripheral if necessary.
- **Liquid Cooler Flow State Error:** If the liquid cooler displays a flow state error, ensure hoses are securely connected and the reservoir has sufficient fluid. Re-prime the system through the control software. If the issue persists, contact technical support.

For more complex issues, refer to the Eluktronics support website or contact technical support.

8. SPECIFICATIONS

Feature	Specification
Model Name	HYDROC 16 G2
Processor	Intel Core Ultra 9 275HX (24 Cores, 32 Threads)
RAM	32GB DDR5 5600MHz
Hard Drive	1TB PCIe Gen 4 NVMe SSD
Graphics Coprocessor	NVIDIA GeForce RTX 5080
Graphics Card RAM Size	16GB GDDR7
Screen Size	16 Inches
Screen Resolution	2560 x 1600 pixels (QHD)
Max Screen Resolution	2560x1600 Pixels
Refresh Rate	300Hz
Brightness	500-nit
Operating System	Windows 11 Home
Wireless Type	Intel WiFi 7, Bluetooth 5.4
Battery	4-Cell 99WHr Polymer
Product Dimensions	14.04 x 9.64 x 1.04 inches
Item Weight	5.48 lbs
Color	Black
Special Features	Backlit Keyboard, Numeric Keypad, Liquid Cooling Support

9. WARRANTY AND SUPPORT

Your Eluktronics HYDROC 16 G2 laptop comes with a **One Year Warranty**. Eluktronics also provides **lifetime USA-based technical support** for your product. For assistance, please visit the official Eluktronics support website or contact their customer service.