

acer ANV17-41-R75F

Acer Nitro V 17 AI Gaming Laptop User Manual

Model: ANV17-41-R75F

1. OVERVIEW

The Acer Nitro V 17 AI Gaming Laptop (ANV17-41-R75F) is engineered for high-performance gaming and AI-driven tasks. It combines a powerful AMD Ryzen 7 260 processor with an NVIDIA GeForce RTX 5070 Laptop GPU, a vibrant 17.3-inch Full HD 144Hz display, 32GB DDR5 memory, and a 1TB Gen 4 SSD. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your device.



Figure 1: Acer Nitro V 17 AI Gaming Laptop in an illuminated setting.


2. PRODUCT FEATURES


- **AI-Powered Performance:** Equipped with an AMD Ryzen 7 260 CPU, delivering up to 38 AI Overall TOPS for gaming, AI tasks, and 4K HDR streaming.
- **NVIDIA GeForce RTX 5070 Laptop GPU:** Features NVIDIA Blackwell architecture with 798 AI TOPS, fourth-gen RT Cores, and fifth-gen Tensor Cores for realistic ray tracing and advanced neural rendering.
- **DLSS 4 Technology:** Utilizes AI to boost FPS, reduce latency, and improve image quality with Multi Frame


Generation, enhanced Ray Reconstruction, and Super Resolution.


- **Vibrant Smooth Display:** A 17.3-inch Full HD (1920 x 1080) display with a 144Hz refresh rate for clear, fluid visuals.
- **Internal Specifications:** 32GB DDR5 5600MHz memory (expandable up to 32GB across 2 slots) and a 1TB PCIe Gen 4 SSD (with 1 available M.2 slot).
- **Advanced Connectivity:** Features fast Wi-Fi 6E, Killer Ethernet E2600, and a powerful USB4 port for charging, data transfer, and video display.
- **Dual-Fan Cooling System:** Optimized with dual-fan, quad intake, and quad-exhaust architecture for efficient heat dissipation during intense use.
- **Intelligent Control:** NitroSense and AI-powered Experience Zone 2.0 allow customization of audio, visual, and environmental settings, including PurifiedView and PurifiedVoice.

In the world of high-stakes digital realms, the Acer Nitro V 17 AI is more than a machine—it's a gateway to boundless creativity and gaming precision. With AI-driven insights that adjust to every demand, this device blends raw power with intuitive control, taking you from intense battles to endless creative flow without missing a beat. The Acer Nitro V 17 AI is built for gaming on the move with an AMD Ryzen™ 7 260 processor and NVIDIA® GeForce RTX™ 5070 Laptop GPU.

 Windows 11

 AMD RYZEN

 NVIDIA GEFORCE RTX

 PC GAME PASS

AI-Powered Performance

The AMD Ryzen™ 7 260 CPU powers the Nitro V 17 AI, offering up to 38 AI Overall TOPS to deliver cutting-edge performance for gaming and AI-driven tasks, along with 4K HDR streaming, making it the perfect choice for gamers and content creators seeking unparalleled performance and entertainment.

Windows 11 Home <small>Operating System</small>	AMD Ryzen™ 7 260 <small>Processor</small>	<small>Up to</small> 38 TOPS <small>AI engine</small>	8 Cores, 16 Threads <small>16MB of Cache</small>
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Figure 2: Illustration of the AMD Ryzen 7 260 CPU's AI-powered performance.



Figure 3: Overview of NVIDIA GeForce RTX 50 Series Laptop GPUs.

Vibrant Smooth Display

Experience exceptional clarity and vibrant detail with the 17.3" Full HD 1920 x 1080 display. Boasting a 144Hz refresh rate, it minimizes motion blur, delivering smoother, more fluid animations for an enhanced gaming experience, even during fast-paced action.



Figure 4: The laptop's 17.3-inch Full HD 144Hz display.

3. SETUP

3.1 Initial Power-On

1. Unpack the laptop and all accessories from the box.
2. Connect the 135W AC adapter to the DC-in port on the laptop and then to a power outlet.
3. Open the laptop lid and press the power button, usually located above the keyboard or on the side.
4. Follow the on-screen instructions to complete the initial Windows 11 Home setup.

3.2 Connecting Peripherals

Utilize the various ports available for connecting external devices:

- **USB Type-C (USB4):** For high-speed data transfer (up to 40 Gbps), DisplayPort over USB-C, USB charging, and power delivery (up to 65W).
- **USB 3.2 Gen 2 Ports:** Two ports, one supporting power-off charging for devices.
- **USB 3.2 Gen 1 Port:** One standard USB port.
- **HDMI 2.1 Port:** Connect to external displays, supporting up to 10K resolution.
- **Ethernet (RJ-45):** For wired network connections.
- **Headphone/Speaker/Line-out Jack:** For audio peripherals.



Figure 5: Left side of the laptop showing USB 3.2 ports, Kensington lock, Ethernet (RJ-45) port, MicroSD card slot, and Headset jack.



Figure 6: Rear of the laptop showing DC-in jack, HDMI 2.1, and Type-C USB4 port.

4. OPERATING

4.1 Using NitroSense and Experience Zone 2.0

NitroSense and Experience Zone 2.0 are pre-installed software tools that allow you to monitor and customize your laptop's performance. You can adjust fan speeds, power modes, and lighting, as well as optimize audio and visual settings like PurifiedView and PurifiedVoice for an enhanced experience.

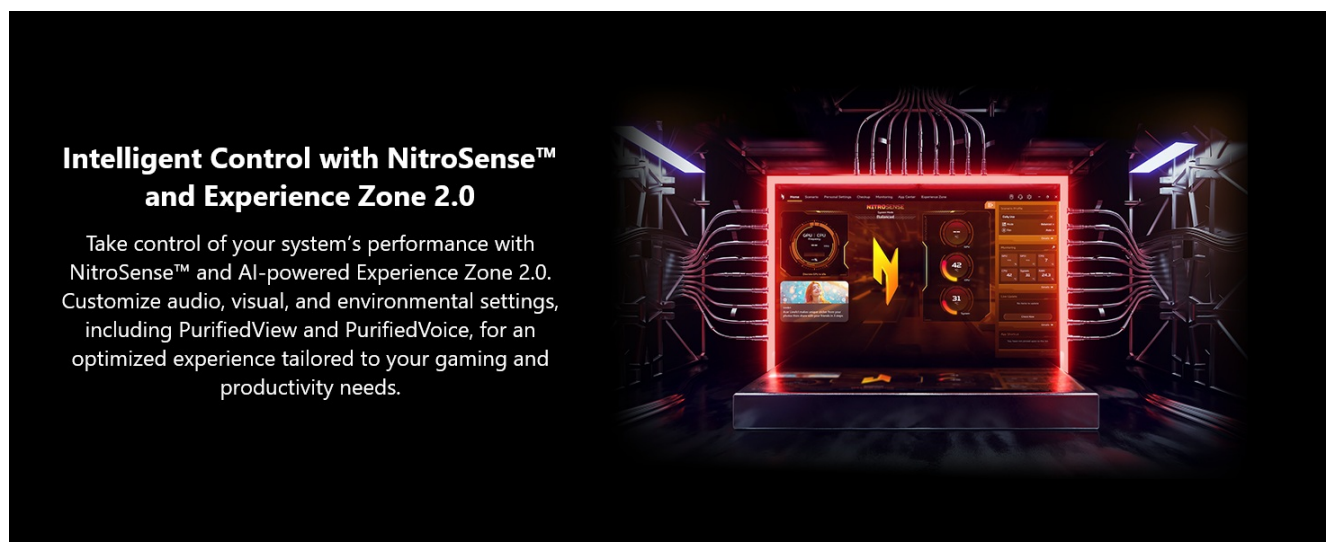


Figure 7: Screenshot of the NitroSense and Experience Zone 2.0 interface for system control.

4.2 Display Settings

The 17.3-inch Full HD display offers a 144Hz refresh rate. You can adjust display settings through Windows settings or your graphics card control panel to optimize for gaming or productivity. Ensure your games are configured to utilize the 144Hz refresh rate for the smoothest experience.

4.3 Connectivity

Your laptop supports Wi-Fi 6E for high-speed wireless internet and Killer Ethernet E2600 for stable wired connections. The USB4 port provides versatile connectivity for various modern peripherals.

NVIDIA Powers the World's AI. And Yours.

Upgrade to advanced AI with NVIDIA GeForce RTX™ GPUs and accelerate your gaming, creating, productivity, and development. Thanks to built-in AI processors, you get world-leading AI technology powering your Windows PC.



Figure 8: NVIDIA's AI capabilities enhancing gaming, creativity, and productivity.

5. MAINTENANCE

5.1 Cooling System Care

The dual-fan, quad intake, and quad-exhaust cooling system is crucial for maintaining performance. Regularly clean the vents to prevent dust buildup, which can impede airflow and lead to overheating. Avoid placing the laptop on soft surfaces that can block the vents.

Advanced Dual-Fan Cooling System

Stay cool under pressure with dual-fan, quad-intake, and quad-exhaust cooling architecture. Optimized to push heat out efficiently, this system maintains stable performance even during extended gaming marathons and intense multitasking.



Figure 9: Illustration of the laptop's advanced dual-fan cooling system.

5.2 Software Updates

Keep your operating system (Windows 11 Home), drivers (especially graphics drivers), and Acer utilities (like NitroSense) updated to ensure optimal performance, security, and compatibility with the latest games and applications.

6. TROUBLESHOOTING

- **Performance Issues:** Ensure the laptop is plugged into power and set to 'Performance' mode in NitroSense. Check for background applications consuming resources.
- **Overheating:** Clean cooling vents. Consider using a laptop cooling pad. Ensure the laptop is on a hard, flat surface.
- **Display Problems:** Verify display settings for refresh rate. Update graphics drivers. If using an external monitor,

check cable connections.

- **Connectivity Problems:** For Wi-Fi, restart your router and laptop. For wired connections, check the Ethernet cable. Ensure drivers for network adapters are up to date.
- **Audio/Microphone Issues:** Check volume levels and ensure correct audio output/input devices are selected in Windows settings. Use PurifiedVoice 2.0 for noise reduction during calls.

7. SPECIFICATIONS

Component	Detail
Model Name	Nitro V 17 AI (ANV17-41-R75F)
Processor	AMD Ryzen 7 260 (3.8 GHz ryzen_7, 8 Processors)
Graphics Coprocessor	NVIDIA GeForce RTX 5070 (8 GB RAM)
Display	17.3 Inches, Full HD (1920 x 1080 pixels), 144Hz
RAM	32GB DDR5 5600MHz (2 DDR5 Slots Total, Max 32GB)
Storage	1TB PCIe Gen 4 SSD (2 x PCIe M.2 Slots 1 Slot Available)
Operating System	Windows 11 Home
Wireless Type	802.11ax (Wi-Fi 6E), Bluetooth
Ports	1x USB Type-C (USB4, DisplayPort, Power Delivery), 2x USB 3.2 Gen 2 (1x Power-off Charging), 1x USB 3.2 Gen 1, 1x HDMI 2.1, 1x Headphone/Speaker/Line-out, 1x Ethernet (RJ-45), DC-in
Item Weight	5.97 pounds
Product Dimensions	15.78 x 0.94 x 10.85 inches

8. WHAT'S IN THE BOX

Your Acer Nitro V 17 AI Gaming Laptop package includes:

- Acer Nitro V 17 AI Gaming Laptop
- 135W AC Adapter
- Power Cord

9. WARRANTY AND SUPPORT

The Acer Nitro V 17 AI Gaming Laptop comes with a One-Year International Travelers Limited Warranty (ITW). For detailed warranty information, technical support, or service inquiries, please refer to the official Acer support website or contact their customer service. Keep your purchase receipt for warranty validation.

10. PRODUCT VIDEOS

Acer Nitro 16S AI AN16S-61 Product Video

This video provides an overview of the Acer Nitro 16S AI, showcasing its design and key features. While the model number differs slightly, it represents the Nitro series' capabilities.

Acer Nitro V ANV16-72 Video

A detailed video highlighting the features and design of the Acer Nitro V ANV16-72, which shares many characteristics with the ANV17-41-R75F model.