**HUNSN HUNSN RJ35**

# HUNSN RJ35 Micro Firewall Appliance User Manual

Model: HUNSN RJ35

Brand: HUNSN

## 1. INTRODUCTION

The HUNSN RJ35 is a compact, fanless micro firewall appliance designed for various networking applications, including VPN, routing, and general mini PC use. This barebone system requires the user to install system memory, a storage drive, and an operating system to become fully functional. It features an Intel 12th Gen Core i3 N305 processor and multiple 2.5GbE network interfaces, making it suitable for demanding network environments.

## 2. WHAT'S IN THE BOX

Upon unboxing your HUNSN RJ35, please ensure all the following items are present:

- HUNSN RJ35 firewall appliance
- Power supply (DC100-240V AC/50-60hz, 12V5A)
- Power cord
- Warranty card

## 3. PRODUCT OVERVIEW

The HUNSN RJ35 features a robust aluminum chassis with a fanless design for silent operation. Below are images illustrating the device and its various ports and controls.

***Figure 3.1:*** *Top-down view of the HUNSN RJ35 Micro Firewall Appliance, showcasing its fanless aluminum chassis design.*



***Figure 3.2:*** *Front panel of the HUNSN RJ35. From left to right: Power ON/OFF button, G (indicator light), ON/OFF (indicator light), CLR CMOS button, two USB 3.0 ports (blue), four USB 2.0 ports (black), and a TF (MicroSD) slot. Two small holes for antennas are also visible.*



***Figure 3.3:*** *Rear panel of the HUNSN RJ35. From left to right: Two USB 3.0 ports (blue), HDMI 2.1 port, DisplayPort 1.4, four 2.5GbE LAN ports (ETH0, ETH1, ETH2, ETH3), and the DC-12V power input jack.*

## 4. SPECIFICATIONS

| Feature | Description |
| --- | --- |
| Model Number | HUNSN RJ35 |
| Chassis | Aluminum with knockout hole |
| CPU | Intel Core i3-N305 Processor (6M Cache, up to 3.80 GHz) |

| AES-NI Supported | Yes |
|---|---|
| Memory | 1 x SO DIMM DDR5 4800 MT/s, up to 32GB |
| Storage | 1 x M.2 2280 NVME x4 SSD, 1 x M.2 WiFi adaptor board for M.2 2280 NVME x1 SSD / 1 x 2.5 Inch SATA SSD/HDD (2 choose 1) |
| Network Card | Intel 2.5GbE I226-V, UDE built-in filter connector |
| I/O Interface | Power ON/OFF, GPIO, Auto Power Key, CLR CMOS, 2 x USB3.0, 6 x USB2.0, TF Slot, HDMI2.1, DP1.4, 4 x LAN, DC_IN |
| Expansion | 1. M.2 Key-E WiFi slot for NVME SSD (remove M.2 NVME adapter board if using M.2 WiFi slot). 2. SATA3.0 socket and WiFi socket signal (2 choose 1, signal auto-switches). 3. Support to expand 4 x M.2 x1/mSATA/SATA (contact HUNSN for customization). |
| Power | DC100-240V AC/50-60hz, 12V5A |
| Operating Temperature | -10°c ~ 70°c |
| Storage Temperature | 0°c ~ 70°c |
| Relative Humidity | 5% ~ 85% non-condensing |
| TDP | 15W |
| Cooling System | Fanless, 80 x 80mm holes, support to add 8010 fan, 2 x small 4pin fan sockets support temperature-control |
| Size | 145.6 x 135 x 53.6mm (5.73 x 5.31 x 2.11 inches) |
| Weight | 1.3 kgs (4.4 pounds) |
| Function | Supports hardware auto power on enabled default, network wake-up, system power management, temperature management |
| System Compatibility | 5.10.x and above core-based freebsd router systems, linux distros, or win.os supported. UEFI support only. Compatible with pfSense Plus, OPNsense, and other popular open-source software solutions. |

## 5. SETUP GUIDE

The HUNSN RJ35 is a barebone system, meaning it requires additional components to be fully operational. Follow these steps for initial setup:

1. **Install System Memory (RAM):** Locate the SO DIMM DDR5 slot inside the chassis. Carefully insert a compatible DDR5 4800 MT/s SO DIMM module (up to 32GB) into the slot until it clicks into place.

2. **Install Storage Drive:**

    - For M.2 NVME SSD: Insert an M.2 2280 NVME x4 SSD into the designated M.2 slot.

- For 2.5 Inch SATA SSD/HDD: Connect a 2.5-inch SATA drive to the SATA socket. Note that the M.2 WiFi adaptor board and 2.5-inch SATA share signals; only one can be used at a time.

3. **Install Operating System:** The system supports 5.10.x and above core-based FreeBSD router systems, various Linux distributions, and Windows operating systems. It supports UEFI boot only. Prepare a bootable USB drive with your chosen OS and connect it to a USB port.

4. **Connect Peripherals:** Connect a display via HDMI or DisplayPort, a keyboard, and a mouse to the available USB ports.

5. **Connect Network Cables:** Connect your network cables to the 2.5GbE LAN ports (ETH0-ETH3) as required by your network configuration.

6. **Connect Power:** Plug the power supply into the DC_IN port and then into a power outlet.

# 6. OPERATING INSTRUCTIONS

Once the hardware is installed and connected, you can proceed with operating your HUNSN RJ35:

- **Power On:** Press the Power ON/OFF button on the front panel. The indicator lights will illuminate.

- **BIOS/UEFI Access:** During startup, press the appropriate key (usually **DEL** or **F2**) to enter the BIOS/UEFI settings for initial configuration or boot order adjustment.

- **Operating System Installation:** Follow the on-screen prompts to install your chosen operating system.

- **Auto Power On:** The device supports hardware auto power on by default, meaning it can automatically power on after a power outage. This feature can typically be configured in the BIOS/UEFI settings.

- **Network Wake-up:** The device supports network wake-up (Wake-on-LAN), allowing it to be powered on remotely via the network. This feature also requires configuration in the BIOS/UEFI and your network settings.

- **System Power Management:** Utilize your operating system's power management features for efficient energy use.

# 7. MAINTENANCE

The HUNSN RJ35 is designed for low maintenance due to its fanless construction.

- **Fanless Design:** The aluminum chassis acts as a large heatsink, eliminating the need for internal fans. This reduces dust accumulation and noise, contributing to a longer lifespan and silent operation (0.00dB noise).

- **Temperature Management:** While fanless, ensure the device is placed in a well-ventilated area to allow for proper heat dissipation. Avoid blocking the heatsink fins. The operating temperature range is -10°C to 70°C.

- **Cleaning:** Periodically wipe the exterior of the device with a soft, dry cloth to remove dust. Do not use liquid cleaners directly on the device.

- **Optional Fan Installation:** The chassis includes 80x80mm holes and two small 4-pin fan sockets, allowing for the addition of an 8010 fan if active cooling is desired for specific high-load scenarios or extreme environments. This is an advanced option and not typically required for standard operation.

# 8. TROUBLESHOOTING

If you encounter issues with your HUNSN RJ35, consider the following troubleshooting steps:

- **No Power:**

  - Ensure the power adapter is securely connected to both the device and a working power outlet.

- Verify the power outlet is functional.
- Check the power cord for any damage.

- **No Display Output:**

  - Ensure the HDMI or DisplayPort cable is securely connected to both the device and the monitor.
  - Verify the monitor is powered on and set to the correct input source.
  - If using a new RAM module, ensure it is properly seated.

- **Operating System Not Booting:**

  - Confirm that a compatible operating system is installed on a recognized storage drive.
  - Check the boot order in the BIOS/UEFI settings to ensure the correct drive is prioritized.
  - Ensure the OS installation media (USB drive) is properly created and connected.

- **Network Connectivity Issues:**

  - Verify network cables are securely connected to the LAN ports.
  - Check network settings within your operating system.
  - Ensure your router/switch is functioning correctly.

- **CLR CMOS Button:** If you experience persistent boot issues or incorrect BIOS settings, press the CLR CMOS button on the front panel (usually requires a paperclip or similar thin object) while the device is powered off and disconnected from power. This will reset BIOS settings to default.

# 9. SYSTEM COMPATIBILITY

The HUNSN RJ35 is designed for broad compatibility with various operating systems and networking software:

- **Operating Systems:** Supports 5.10.x and above core-based FreeBSD router systems, various Linux distributions, and Windows operating systems.
- **Boot Mode:** UEFI support only.
- **Firewall/Router Software:** Fully compatible with popular open-source software solutions such as pfSense Plus, OPNsense, and others.

# 10. WARRANTY AND SUPPORT

Your HUNSN RJ35 Micro Firewall Appliance comes with a warranty. Please refer to the included warranty card for specific terms and conditions, including warranty period and coverage details. For technical support or further inquiries, please refer to the contact information provided on your warranty card or the official HUNSN website.