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› Protectli Vault FW2B Firewall Micro Appliance User Manual

Protectli FW2B

Protectli Vault FW2B Firewall Micro Appliance User Manual

Model: FW2B

1. INTRODUCTION

This manual provides essential information for the setup, operation, maintenance, and troubleshooting of your Protectli Vault FW2B Firewall Micro Appliance. The FW2B is a compact, fanless, and silent mini PC designed for network security applications such as firewalls, routers, and VPNs. It supports various open-source software solutions, offering flexibility for customized network configurations.

2. PRODUCT OVERVIEW

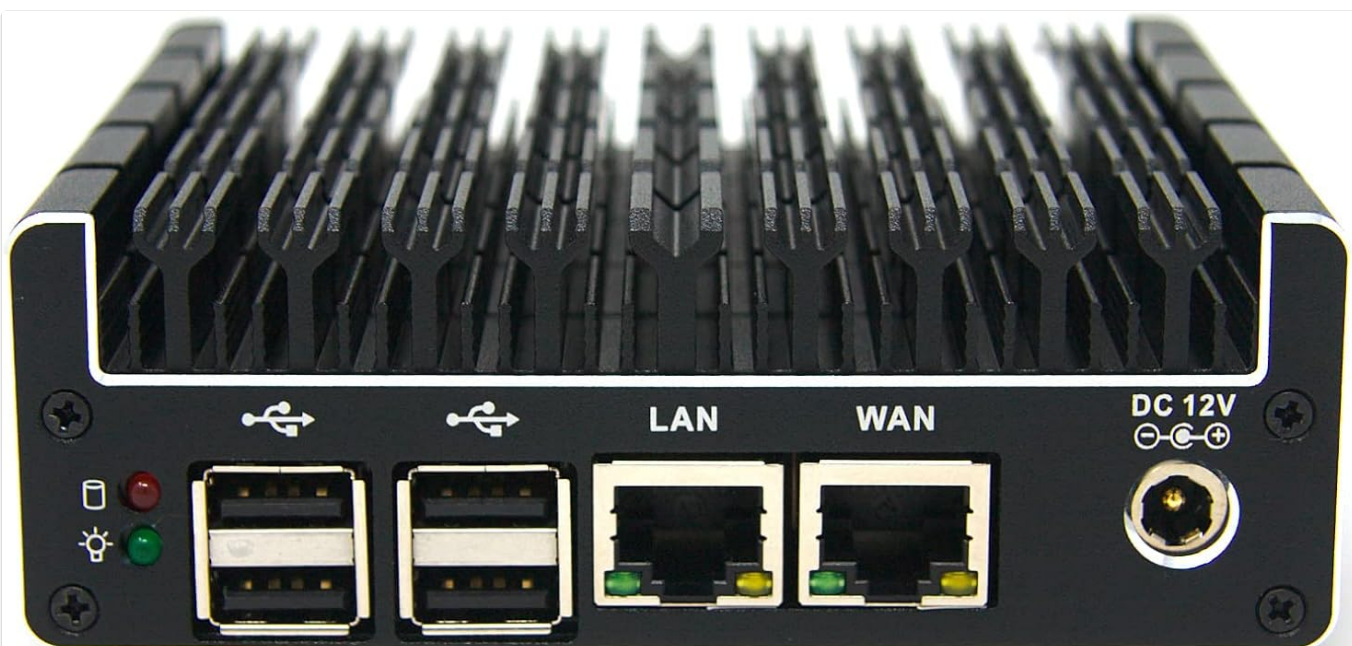


Figure 1: The Protectli Vault FW2B, a compact and fanless firewall micro appliance.

2.1 Key Features

- **CPU:** Intel Celeron J3060 Dual Core at 1.6 GHz (Turbo 2.48 GHz) with AES-NI hardware support.
- **Ports:** Two Intel Gigabit Ethernet NIC ports, four USB 2.0 ports, two USB 3.0 ports, one RJ-45 COM port, and two HDMI ports.
- **Design:** Compact, fanless, and silent operation.
- **Compatibility:** Tested with popular open-source software solutions including pfSense, Untangle, and OPNsense.
- **Customizability:** Barebones unit requiring user-supplied RAM and storage for maximum flexibility.

2.2 What's in the Box

The Protectli Vault FW2B package includes the following items:

- Protectli Vault FW2B Unit
- 12V Power Supply
- VESA Mount Kit
- Serial Console Cable
- Quick Start Guide



Vault FW2B

2x Intel 1GbE Ports

Dual Core CPU

DDR3L RAM (Max 8GB)

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mSATA SSD



Vault V1210

2x Intel 2.5GbE Ports

Quad Core CPU

4GB LPDDR4 RAM

32GB eMMC On-board

M.2 NVMe SSD

NEW

Figure 2: Included accessories, including the 12V power supply, VESA mount kit, serial console cable, and quick start guide. Note that the power supply plug may vary by region.

2.3 Device Layout

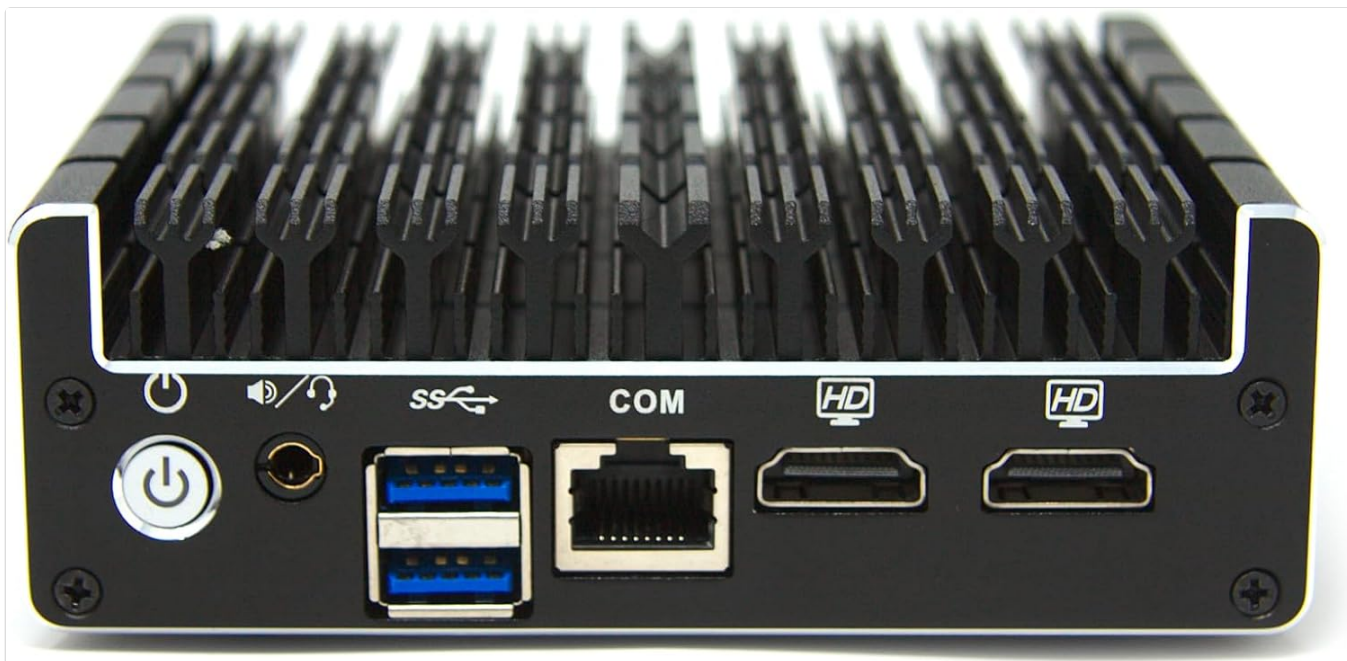


Figure 3: Front panel of the FW2B, featuring two Intel Gigabit Ethernet ports (LAN, WAN), four USB 2.0 ports, and the DC 12V power input. Status indicator lights are also visible.



Figure 4: Rear panel of the FW2B, including the power button, audio jack, two USB 3.0 ports, one RJ-45 COM port, and two HDMI ports.



* Country-specific plug will be shipped but the power supply may differ from pictured unit.

Figure 5: Dimensions of the Protectli Vault FW2B, measuring approximately 4.25 inches (107.5mm) in depth, 4.56 inches (115mm) in width, and 1.69 inches (39mm) in height.

3. SETUP INSTRUCTIONS

3.1 Hardware Installation (RAM & Storage)

The Protectli Vault FW2B is a barebones unit and requires the installation of RAM and storage (mSATA SSD) before use. Not all memory is compatible. It is crucial to research "Vault Hardware Compatibility" on the Protectli website or support resources to ensure you purchase compatible components.

1. **Open the Chassis:** Carefully remove the screws securing the bottom panel of the FW2B.
2. **Install RAM:** Insert the compatible DDR3L RAM module into the designated slot. Ensure it is seated correctly and secured by the clips.
3. **Install mSATA SSD:** Locate the mSATA slot and gently insert the mSATA SSD. Secure it with the provided screw. Note that there may be multiple slots, but only one will function as the primary boot drive.
4. **Close the Chassis:** Reattach the bottom panel and secure it with the screws.

3.2 Initial Connection

1. **Connect Display:** Connect a monitor to one of the HDMI ports.
2. **Connect Peripherals:** Connect a keyboard and mouse to the USB ports.
3. **Connect Power:** Plug the 12V power supply into the DC 12V port on the device and then into a power outlet.
4. **Power On:** Press the power button on the rear panel to start the device.

3.3 Operating System Installation

The FW2B does not come with a pre-installed operating system. It is compatible with various open-source software solutions such as pfSense, Untangle, and OPNsense. You will need to create a bootable USB drive with your chosen operating system installer.

1. **Prepare Bootable USB:** Download the desired OS image and create a bootable USB drive using appropriate software (e.g., Rufus, Etcher).
2. **Connect Bootable USB:** Insert the bootable USB drive into a USB port on the FW2B.
3. **Access BIOS:** During startup, repeatedly press the **DEL** key (or as indicated on screen) to enter the BIOS/UEFI settings.
4. **Configure Boot Order:** Navigate to the boot menu and set the USB drive as the primary boot device. Save changes and exit.
5. **Install OS:** Follow the on-screen instructions to install your chosen operating system.

For advanced configuration or troubleshooting during OS installation, the included serial console cable can be used to connect to the RJ-45 COM port and access the device's console.

4. OPERATING THE DEVICE

4.1 Basic Operation

Once the operating system is installed and configured, the Protectli Vault FW2B functions as a dedicated network appliance. Its fanless design ensures silent operation, making it suitable for various environments.

- **Power On/Off:** Use the power button on the rear panel for normal power cycles. For graceful shutdowns, always use the operating system's shutdown function first.
- **Network Connections:** Connect your WAN (Internet) cable to the designated WAN port and your LAN (internal network) cable to the LAN port. Further configuration will depend on your chosen operating system.

4.2 Power Consumption

The on-mode power consumption of the Protectli Vault FW2B is approximately 16 watts, making it an energy-efficient solution for continuous operation.

5. MAINTENANCE

5.1 General Care

- Keep the device in a well-ventilated area, away from direct sunlight and heat sources.
- Ensure the device is clean and free from dust accumulation, especially on the heatsink fins, to maintain optimal passive cooling.
- Avoid exposing the device to moisture or extreme temperatures.

5.2 Software Updates

Regularly update the operating system and any installed software packages to ensure optimal performance, security, and access to the latest features. Refer to the documentation of your specific operating system for update procedures.

6. TROUBLESHOOTING

6.1 Common Issues and Solutions

- **Device does not power on:**
 - Ensure the 12V power supply is securely connected to both the device and a working power outlet.
 - Verify that the power button has been pressed.
- **No display output:**
 - Check HDMI cable connections to both the device and the monitor.
 - Ensure the monitor is powered on and set to the correct input source.
- **Device does not boot (after RAM/SSD installation):**
 - Confirm that RAM and mSATA SSD are correctly installed and seated firmly.
 - Verify that the installed RAM and SSD are compatible with the FW2B model. Refer to "Vault Hardware Compatibility" resources.
 - Ensure the boot order in BIOS is correctly configured to boot from your installation media or installed OS.
- **Network performance issues:**
 - Verify network cable integrity and connections.
 - Check the configuration of your operating system's network interfaces.
 - Ensure that any hardware offload options in your OS are configured appropriately for your specific setup.

If you encounter persistent issues, refer to the Protectli Knowledge Base or contact customer support for assistance.

7. SPECIFICATIONS

Feature	Specification
Model Name	Vault FW2B
CPU Model	Intel Celeron J3060 Dual Core
CPU Speed	1.6 GHz (Turbo 2.48 GHz)
Graphics Coprocessor	Intel HD Graphics 500
Ethernet Ports	2x Intel Gigabit Ethernet NIC
USB Ports	4x USB 2.0, 2x USB 3.0 (Total 6)
Video Output	2x HDMI (Resolution 1920x1080)
Serial Port	1x RJ-45 COM
Memory Type (User Supplied)	DDR3L (Max 8GB, 1600 MHz)
Storage Type (User Supplied)	mSATA SSD
Operating System	OS Agnostic (No OS pre-installed)
Product Dimensions	4.25 x 4.56 x 1.69 inches (107.5 x 115 x 39 mm)
Item Weight	2.92 pounds

Feature	Specification
On-mode Power Consumption	16 watts
Batteries	1 CR2 battery (included)

8. WARRANTY AND SUPPORT

8.1 Warranty Information

The Protectli Vault FW2B comes with a 30-day money-back guarantee. For specific warranty terms and conditions, please refer to the official Protectli website or contact their customer service.

8.2 Customer Support

Protectli offers US-based customer support to assist with any questions or issues you may encounter. They provide responsive and helpful assistance.

For detailed technical documentation, guides, and troubleshooting articles, please visit the official Protectli Knowledge Base:

[Protectli Knowledge Base](#)

You can also reach out to their support team directly for personalized assistance.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question