MiiEIAOD X86-P5

MiiEIAOD X86-P5 Router N100 Minicomputer User Manual

Model: X86-P5

1. Introduction

The MiiEIAOD X86-P5 is a compact and efficient minicomputer designed for various networking and computing tasks. It features an Intel Alder Lake-N N100 processor and dual Gigabit network ports, making it suitable for applications such as routing, network security, and edge computing. This manual provides detailed instructions for setting up, operating, and maintaining your X86-P5 minicomputer.

Key Features

- Supports Intel Alder Lake-N (N100) Processor
- Single-channel SO-DIMM DDR5 4800MHz, Max 16GB RAM
- Dual HDMI display output (up to 3840x2160 resolution)
- Dual Intel I226-V Gigabit Network Interface Controllers (NICs)
- Multiple USB ports: 2x USB3.2 Gen2 (10Gbps), 4x USB2.0
- Storage options: M.2 M Key (SATA and PCIeX2), M.2 E Key (2230) for Wi-Fi/Bluetooth
- DC 12V power supply

Figure 1: X86-P5 Motherboard with functional features and specifications overview.

2. Package Contents

Verify that all items are present in the package:

- 1 x MiiElAOD X86-P5 Minicomputer (N100 No Memory/No Hard Drive variant)

3. Product Overview

Familiarize yourself with the external interfaces and internal components of the X86-P5 minicomputer.

External Interfaces

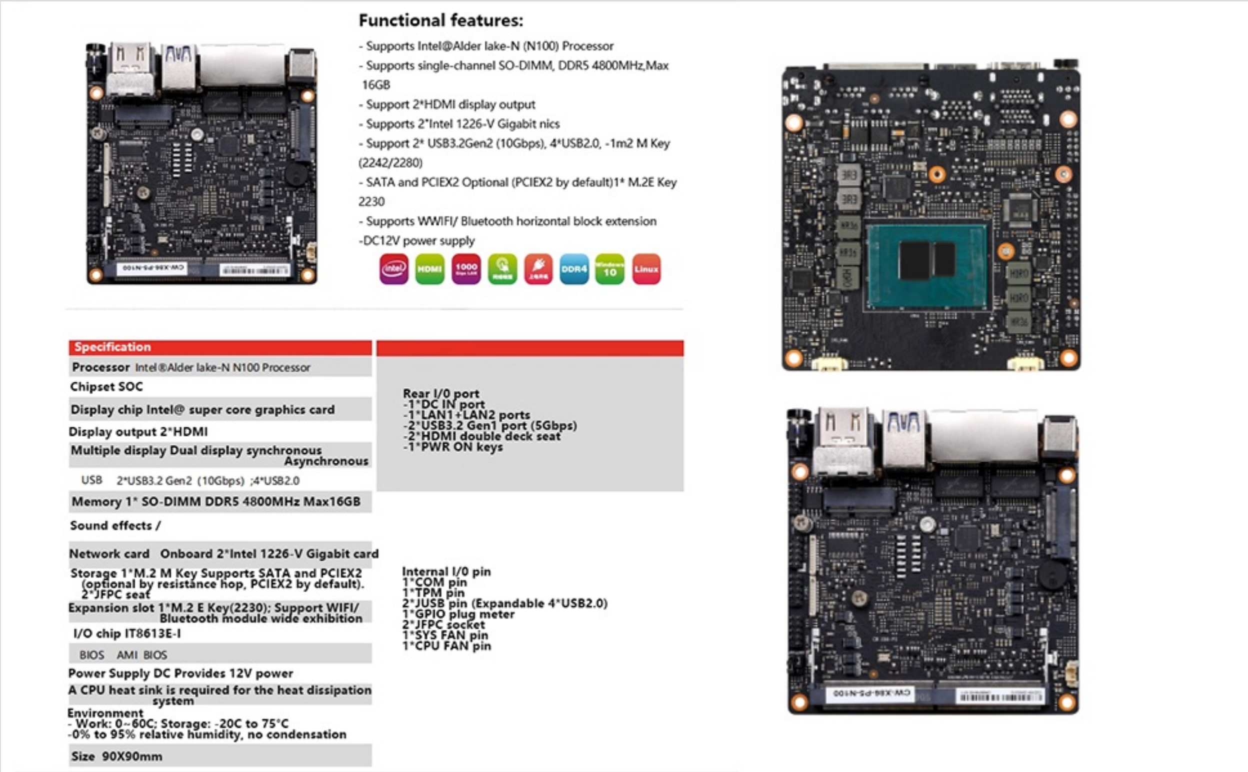

Figure 2: Front and Rear Panel Interfaces.

The front and rear panels provide access to essential ports:

- **On-off key:** Power button for the device.
- **HDMI 1.4:** Video output ports.
- **USB 3.0 (USB3.2 Gen2):** High-speed USB ports.
- **Gigabit Network Ports (ETH0, ETH1):** Dual RJ45 ports for network connectivity.
- **DC-12V Interface:** Power input port.

Internal Components (Motherboard)

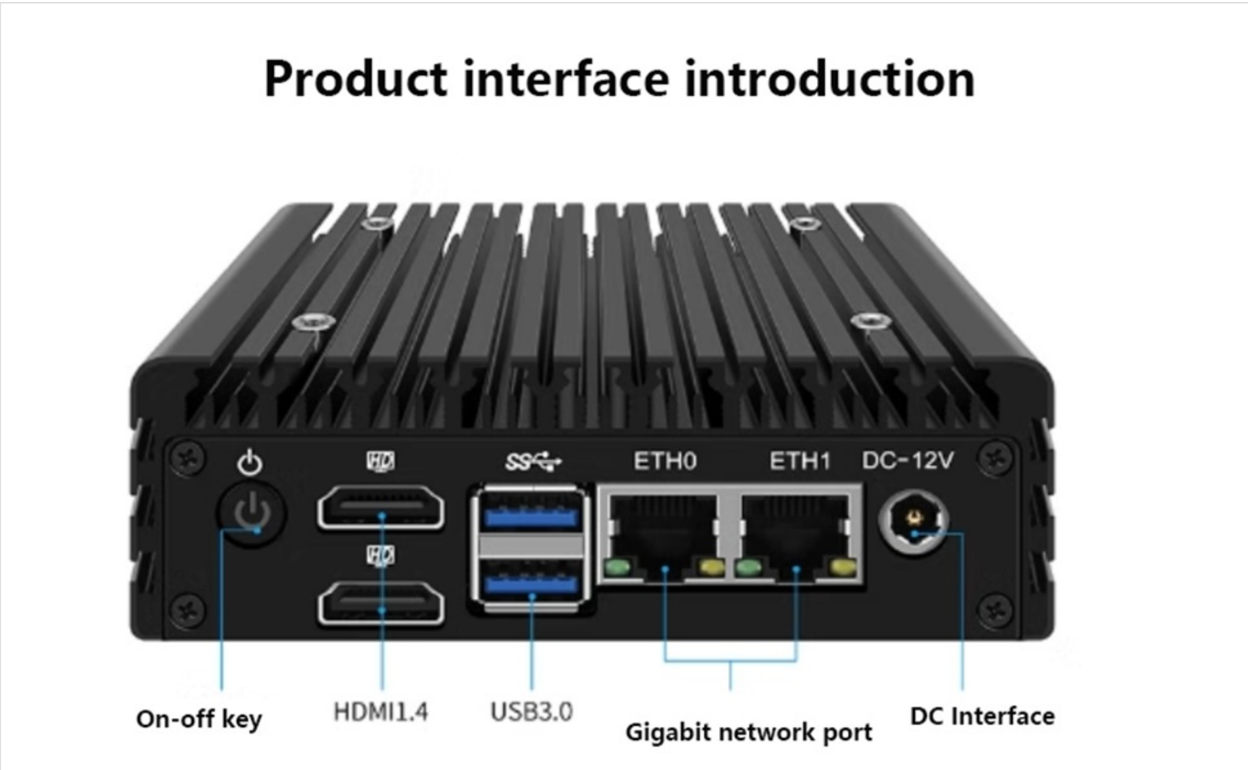

Figure 3: X86-P5 Motherboard Layout.

The motherboard includes slots for memory and storage expansion:

- **SO-DIMM Slot:** For DDR5 RAM modules.
- **M.2 M Key Slot:** Supports SATA and PCIeX2 storage devices.
- **M.2 E Key Slot:** Supports 2230 type Wi-Fi/Bluetooth modules.

4. Setup

Follow these steps to set up your X86-P5 minicomputer.

4.1 Hardware Installation

1. **Install RAM:** If your unit did not come with pre-installed RAM, carefully insert a DDR5 SO-DIMM module into the designated slot on the motherboard. Ensure it is seated firmly.
2. **Install Storage:** If your unit did not come with pre-installed storage, install an M.2 SSD (SATA or NVMe PCIeX2 compatible) into the M.2 M Key slot. Secure it with the provided screw. For Wi-Fi/Bluetooth functionality, install a compatible M.2 E Key (2230) module.
3. **Connect Peripherals:**
   - Connect a monitor to one of the HDMI ports.
   - Connect a keyboard and mouse to the USB ports.
   - Connect an Ethernet cable from your router or network switch to one of the Gigabit network ports (ETH0 or ETH1).
4. **Connect Power:** Plug the DC 12V power adapter into the DC-12V interface on the minicomputer, then plug the adapter into a power outlet.

4.2 Initial Boot and Operating System Installation

Since this model is shipped without memory or hard drive, you will need to install an operating system.

1. **Power On:** Press the On-off key on the front panel. The power indicator should illuminate.
2. **BIOS/UEFI Setup:** During startup, press the designated key (usually Del, F2, or F10) to enter the BIOS/UEFI settings. Configure boot options to install your preferred operating system (e.g., Windows, Linux).
3. **Operating System Installation:** Follow the on-screen instructions to install your operating system from a bootable USB drive or other media.

5. Operating Instructions

5.1 Power On/Off

- **Power On:** Press the On-off key.
- **Power Off:** Perform a proper shutdown through your operating system. Alternatively, press and hold the On-off key for 5 seconds to force a shutdown (not recommended for regular use).

5.2 Network Configuration

Once the operating system is installed, configure your network settings. The dual Gigabit Ethernet ports allow for flexible network setups, such as routing or firewall applications.

5.3 Display Output

The X86-P5 supports dual HDMI output. You can connect two monitors simultaneously and configure display settings within your operating system for extended or mirrored desktop modes.

6. Maintenance

Proper maintenance ensures the longevity and optimal performance of your minicomputer.

6.1 Cleaning

- Regularly clean the exterior of the device with a soft, dry cloth.
- Use compressed air to clear dust from the ventilation grilles to ensure proper airflow and heat dissipation.

6.2 Heat Dissipation

The X86-P5 features a passive cooling design with a ribbed aluminum casing acting as a heat sink. Ensure the device is placed in a well-ventilated area and that the heat sink fins are not obstructed.

Figure 4: Optional fan installation for enhanced cooling.

For scenarios requiring additional cooling, an optional fan can be installed on top of the unit (as shown in Figure 4). Refer to the fan's specific installation guide if applicable.

6.3 Software Updates

Keep your operating system, drivers, and BIOS/UEFI firmware updated to ensure stability, security, and optimal performance.

7. Troubleshooting

This section addresses common issues you might encounter.

7.1 No Power

- Ensure the power adapter is securely connected to both the device and a working power outlet.
- Verify the power outlet is functional by testing it with another device.
- Check the power adapter for any visible damage.

7.2 No Display Output

- Ensure the HDMI cable is securely connected to both the minicomputer and the monitor.
- Verify the monitor is powered on and set to the correct input source (HDMI).
- Try a different HDMI cable or monitor if available.
- Ensure RAM is properly installed.

7.3 Network Connectivity Issues

- Check that Ethernet cables are securely connected to both the minicomputer and your network device (router/switch).
- Verify that your network device is functioning correctly.
- Check network settings within your operating system.
- Ensure network drivers are installed and up to date.

8. Specifications

Detailed technical specifications for the MiiEIAOD X86-P5 minicomputer.

Component	Specification
Processor	Intel Alder Lake-N N100 (4800 MHz)
RAM	DDR5 SO-DIMM, 4800 MHz, Max 16GB
Graphics	Intel UHD Graphics (Integrated), Dedicated Card Description
Display Output	2 x HDMI (Max Resolution: 3840x2160)
Network	2 x Intel I226-V Gigabit Ethernet Ports
USB Ports	2 x USB3.2 Gen2 (10Gbps), 4 x USB2.0
Storage Interface	1 x M.2 M Key (SATA/PCIeX2), 1 x M.2 E Key (2230)
Wireless	Supports Wi-Fi/Bluetooth (via M.2 E Key module)
Power Supply	DC 12V
Operating Environment	0°C to 60°C, 0-95% relative humidity (non-condensing)
Dimensions	90mm x 90mm (approximate)
Item Weight	2.2 pounds

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the seller, ElecMii, directly. Keep your proof of purchase for warranty claims.
Seller: ElecMii

First Available Date: July 27, 2023