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CWWK PC N100

CWWk N100 Six-Bay NAS Motherboard Instruction Manual

Model: N100

Brand: CWWK PC

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your CWWk N100/i3-N305 six-bay NAS motherboard. This motherboard is designed for network-attached storage (NAS) systems, featuring an Intel Alder Lake-N low-power processor, multiple storage interfaces, and high-speed networking capabilities.

2. SAFETY INFORMATION

- Always disconnect power before installing or removing components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.
- Handle the motherboard by its edges to avoid touching sensitive components.
- Ensure proper ventilation in your system to prevent overheating.
- Refer to the CPU and RAM manufacturer's guidelines for specific installation procedures.

3. PACKAGE CONTENTS

The CWWk N100 NAS Motherboard package typically includes:

- CWWk N100/i3-N305 Motherboard
- I/O Shield
- SATA Cables (quantity may vary)
- Mounting Screws
- (Optional) CPU Fan/Heatsink (if 'NAS Board-N100+Fan' variant)

**Note: Specific contents may vary based on the purchased variant and region.*

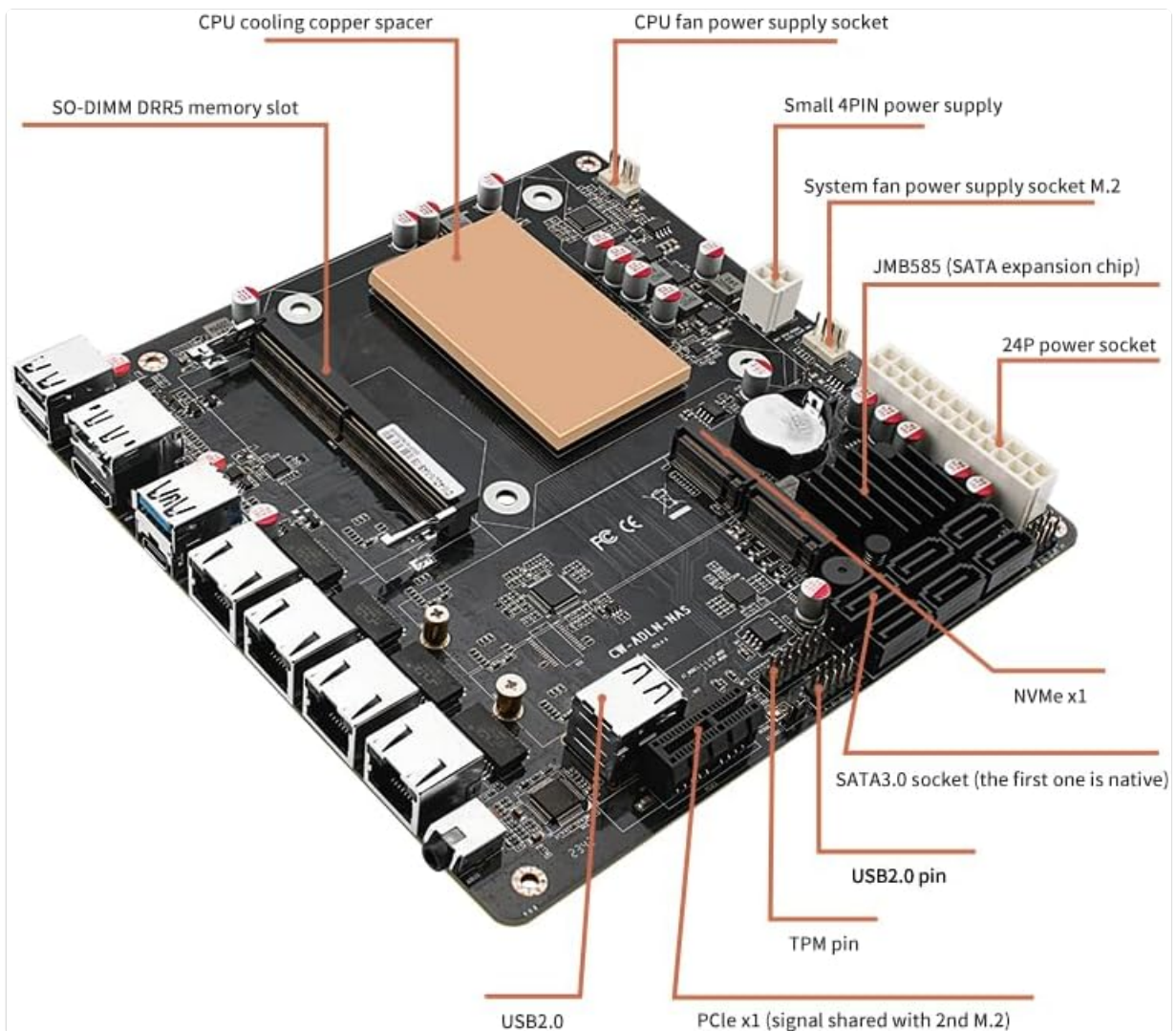
4. PRODUCT OVERVIEW AND FEATURES

The CWWk N100/i3-N305 motherboard is a Mini-ITX form factor board designed for robust NAS applications.

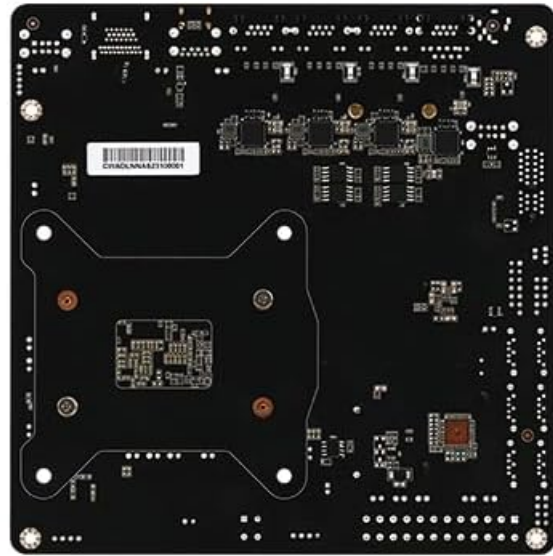
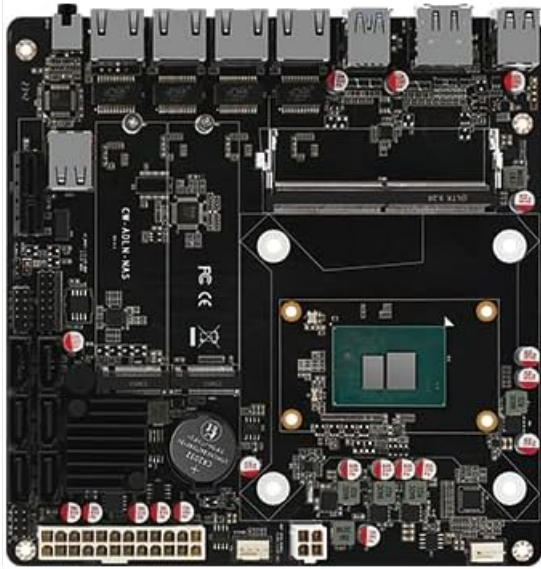
4.1 Key Features

- Intel 12th generation Alder Lake-N low-power processor, standard 17x17 Mini-ITX form factor, compatible with market 115X series radiators.
- Dual M.2 NVMe x1 signal (PCIe3.0) 2280 size, 6 SATA3.0 onboard (JMB585 chip) 6Gbps high-speed hard disk interface.
- 4 Intel i226-V 2.5G network card chips; 1 SO-DIMM DDR5 4800 memory slot compatible with 5200/5600MHz.
- HDMI2.1+DP1.4b supports dual display 4K@60Hz; 1 USB3.0+2 USB2.0+1 USB-C 2.0 signal.
- 1 Realtek-ALC897 two-in-one 3.5mm audio interface; 1 PCIe x1 slot, supports expansion card (shares signal with the second M.2).

4.2 Motherboard Layout



This diagram illustrates the various ports and connectors on the CWWk N100 motherboard, including CPU cooling copper spacer, CPU fan power socket, SO-DIMM DDR5 memory slot, 4PIN power supply, system fan power socket, JMB585 (SATA expansion chip), 24P power socket, NVMe x1, SATA3.0 socket (the first one is native), USB2.0 pin, TPM pin, and PCIe x1 slot.



The rear I/O panel features 2x USB 2.0, 1x DP1.4b, 1x HDMI 2.1, 1x Type-C (2.0 rate), 1x USB 3.0, 4x RJ45 2.5G network ports, and an audio port.

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This video provides a visual overview of the CWWk N100 motherboard, showcasing its various features and ports.

5. SETUP GUIDE

Follow these steps for initial setup of your CWWk N100 motherboard.

5.1 CPU Installation

Important Safety Warning: Incorrect CPU installation can permanently damage the motherboard and CPU. Returns will not be accepted in such cases.

- Carefully align the CPU with the socket. The CPU has a notch that corresponds to a bump on the CPU base.
- Ensure the CPU triangle logo is aligned with the #1 position of the motherboard's CPU chassis silkscreen.
- Do not force the CPU into the socket. If it does not seat easily, re-check alignment.

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This video demonstrates the correct CPU installation process, emphasizing proper alignment to prevent damage.

5.2 RAM (Memory) Installation

- Insert DDR5 SO-DIMM memory modules into the memory slot in a perpendicular orientation.

- Ensure the RAM module is fully seated and the clips on both sides lock into place.

5.3 Power Connections

- Connect the 24-pin ATX power connector from your power supply to the motherboard.
- Connect the 8-pin CPU power connector to the motherboard. Both 24-pin and 8-pin connectors must be connected simultaneously for proper operation.

5.4 Peripheral Connections

- Connect your keyboard, mouse, and monitor to the appropriate ports on the rear I/O panel.
- For initial testing, it is recommended to leave hard drives unconnected.

5.5 Initial Boot-up

- After connecting all necessary components, install the CPU fan.
- To power on the motherboard, short circuit pins 6 and 8 on the JFP1 header (Power Switch pins). Refer to the motherboard manual or silkscreen for exact pin layout.
- The first boot may take 3-5 minutes as the motherboard reads RAM information. Please wait patiently.
- If the boot screen does not appear, refer to the Troubleshooting section.

6. OPERATING INSTRUCTIONS

Once the system successfully boots, you can proceed with operating system installation and configuration.

- **Operating System Compatibility:** Compatible with Microsoft Windows 10/11 64-bit and Linux distributions.
- **BIOS Access:** Typically, press DEL or F2 during boot-up to enter the BIOS/UEFI setup.
- **Storage Configuration:** Utilize the 6x SATA 3.0 ports and 2x M.2 NVMe slots for your storage needs.
- **Network Configuration:** The 4x Intel i226-V 2.5G RJ45 network ports provide high-speed connectivity. Ensure appropriate drivers are installed for your chosen operating system.

7. MAINTENANCE

- **Dust Removal:** Regularly clean dust from the CPU heatsink, fan, and motherboard components using compressed air.
- **BIOS Updates:** Check the CWWK PC website for the latest BIOS updates to ensure optimal performance and compatibility.
- **Cable Management:** Ensure cables are neatly routed to improve airflow and prevent interference.

8. TROUBLESHOOTING

If your system fails to boot or encounters issues, consider the following:

- **No Boot Screen:**
 - Check if the CPU is correctly installed (refer to Section 5.1).
 - Verify that the RAM gold fingers are not oxidized and the memory slot is free of dust.
 - Ensure both the 24-pin and 8-pin power connectors are securely connected.
 - If the motherboard emits an alarm without RAM installed, it indicates the motherboard itself is likely

functional, suggesting a RAM compatibility issue.

- **RAM Compatibility:** The motherboard can be particular about RAM. It is recommended to use first-tier brands like Samsung, Crucial, KingBank, or KLEV.
- **First Boot Delay:** The initial boot may take 3-5 minutes to read RAM information. Be patient.
- **Display Output:** For the very first boot, some users report that the BIOS exclusively uses the DisplayPort. Try connecting your monitor via DisplayPort initially.
- **CPU Fan:** Ensure the CPU fan is rotating to confirm proper power delivery and cooling.

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This video provides a comprehensive guide on how to boot and troubleshoot the NAS motherboard, including common issues and solutions.

9. SPECIFICATIONS

Feature	Detail
Manufacturer	CWWK
Model Number	N100
Compatible Processors	Intel Alder Lake-N N100, N305
RAM Memory Technology	DDR5
Memory Clock Speed	5600 GHz
Max Memory Capacity	32 GB
Storage Interfaces	6x SATA3.0, 2x M.2 NVMe
Network	4x Intel i226-V 2.5G RJ45
Graphics	Integrated Intel UHD Graphics (N100: 24EU, N305: 32EU)
Video Output	HDMI 2.1 (4K@60Hz), DP1.4b (4K@60Hz)
USB Ports	1x USB3.0, 2x USB2.0, 1x Type-C (2.0 rate)
Audio	1x Realtek-ALC897 3.5mm
PCIe Slot	1x PCIe x1 (shared with 2nd M.2)
Form Factor	MINI-ITX (17CM*17CM)
Compatible OS	Microsoft Windows 10/11 64-bit, Linux

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official CWWK PC website or contact your retailer. Protection plans are available for purchase separately.

Visit the [CWWK PC Store](#) for more products and support.

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