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Supermicro X11DAI-N

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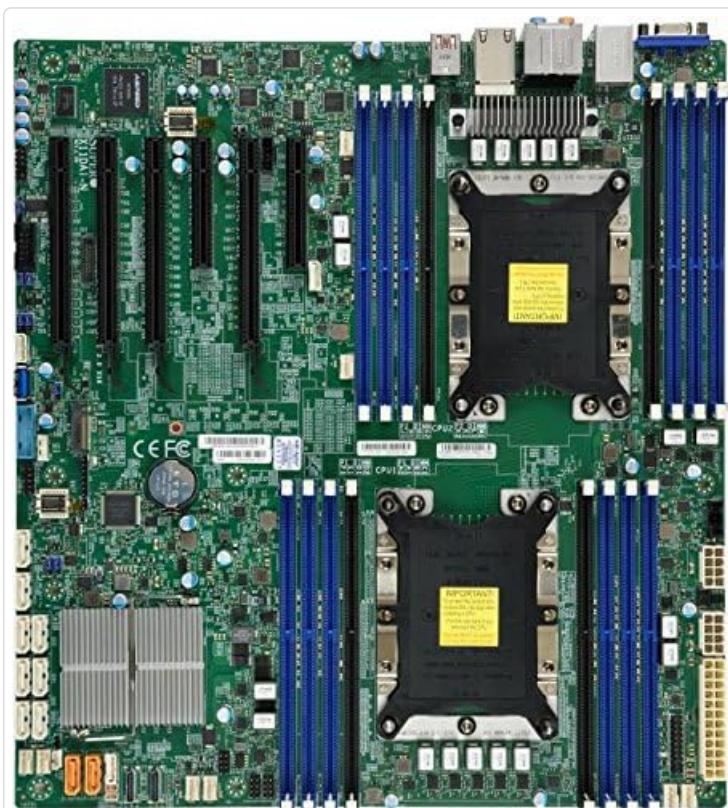
Model: X11DAI-N

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Supermicro X11DAI-N Dual LGA 3647 Sockets Motherboard. Designed for high-performance computing, this motherboard supports Intel Xeon Scalable Processors and offers extensive expandability.

Key features include dual Socket P (LGA 3647) support, up to 2TB 3DS ECC RDIMM and DDR4-2666MHz memory in 16 DIMM slots, multiple PCI-E 3.0 x16 and x8 slots, M.2 interface with PCIe 3.0 x4, 10 SATA3 (6 Gbps) ports with RAID support, and dual GbE LAN.

PRODUCT OVERVIEW



An overhead view of the Supermicro X11DAI-N motherboard, showcasing its dual CPU sockets, multiple DIMM slots, PCIe slots, and various connectors. This image provides a visual reference for component placement and identification during installation.

The Supermicro X11DAI-N is a robust motherboard designed for demanding server and workstation applications. It features two LGA 3647 sockets for Intel Xeon Scalable Processors, providing significant processing power. The board is equipped with numerous expansion slots and connectivity options to support a wide range of peripherals and storage solutions.

SETUP AND INSTALLATION

Proper installation is crucial for the stable operation of your motherboard. Please follow these guidelines carefully.

1. Component Compatibility

- **Processors:** Supports Intel Xeon Scalable Processors with a TDP up to 205W. Ensure your CPUs are compatible with the LGA 3647 socket.
- **Memory:** Supports up to 2TB 3DS ECC RDIMM and LRDIMM DDR4-2666MHz across 16 DIMM slots. Refer to the official Supermicro QVL (Qualified Vendor List) for tested memory modules.
- **Storage:** Compatible with SATA3 (6 Gbps) drives and M.2 NVMe SSDs.

2. Physical Installation Steps

1. **Prepare the Chassis:** Ensure your server chassis is compatible with the motherboard form factor and has adequate cooling. Install standoffs in the chassis according to the motherboard's mounting holes.
2. **Install CPUs:** Carefully align and install the Intel Xeon Scalable Processors into the dual LGA 3647 sockets. Apply thermal paste and install the appropriate CPU coolers/heatsinks.
3. **Install Memory:** Insert DDR4 DIMMs into the designated memory slots. Ensure they are fully seated. For optimal performance, populate DIMM slots according to the motherboard's memory configuration guidelines (refer to the full manual for specific channel configurations).
4. **Mount Motherboard:** Gently place the motherboard into the chassis, aligning it with the standoffs. Secure it with screws.
5. **Install Expansion Cards:** Insert PCI-E 3.0 x16 and x8 expansion cards (e.g., GPUs, network cards) into the available slots. Secure them with retaining clips or screws.
6. **Install M.2 Drives:** If using M.2 SSDs, insert them into the M.2 slots and secure them with the provided screw.
7. **Connect Storage Devices:** Connect SATA data cables from your storage drives to the SATA3 ports on the motherboard.
8. **Connect Power:** Connect the main 24-pin ATX power connector and the CPU 8-pin (or 4+4-pin) power connectors from your power supply unit (PSU) to the motherboard. Ensure all power connections are secure.
9. **Connect Front Panel Cables:** Connect the chassis front panel connectors (power button, reset button, USB ports, audio jacks, LEDs) to the corresponding headers on the motherboard. Refer to the motherboard diagram for correct pin assignments.
10. **Connect Peripherals:** Connect USB devices, keyboard, mouse, and display to the appropriate ports.

OPERATING INSTRUCTIONS

Once all components are installed and connected, you can power on your system.

- **Initial Boot:** Press the power button on your chassis. The system should power on and display the Supermicro splash screen.

- **BIOS/UEFI Access:** During boot-up, press the **DEL** key (or F2, F10, F12 depending on configuration) to enter the BIOS/UEFI setup utility. Here you can configure boot order, system settings, and monitor hardware status.
- **Operating System Installation:** Install your preferred operating system. The motherboard is compatible with **Windows 10** and various Linux distributions. Ensure you install the latest drivers for optimal performance, which can be found on the Supermicro website.
- **RAID Configuration:** If you plan to use RAID, configure it through the Intel C621 controller's utility, typically accessible during boot or within the BIOS/UEFI.

MAINTENANCE

Regular maintenance helps ensure the longevity and stable performance of your motherboard.

- **Dust Removal:** Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS/Firmware Updates:** Check the Supermicro website for the latest BIOS and firmware updates. Updating the BIOS can improve compatibility, stability, and performance. Follow the instructions provided by Supermicro carefully when performing updates.
- **Driver Updates:** Keep your system drivers (chipset, LAN, storage controllers) updated to ensure optimal performance and compatibility with new software.

TROUBLESHOOTING

If you encounter issues with your Supermicro X11DAI-N motherboard, consider the following troubleshooting steps:

- **No Power/No Boot:**
 - Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and PSU.
 - Ensure the PSU is switched on and functioning correctly.
 - Check front panel power button connection to the motherboard.
- **No Display:**
 - Ensure the monitor is connected to the correct video output (VGA port on motherboard or dedicated GPU).
 - Reseat memory modules and expansion cards.
 - Test with a single memory module if multiple are installed.
- **Component Recognition Issues (e.g., HDD, SSD, USB):**
 - Check all data and power cables for storage devices.
 - Ensure M.2 drives are properly seated and secured.
 - Verify USB devices are connected to functional ports. Some USB ports might require specific drivers or BIOS settings.
 - Update chipset drivers from the Supermicro website.
- **System Instability/Crashes:**
 - Check CPU and system temperatures to ensure adequate cooling.
 - Verify memory modules are compatible and properly installed. Run memory diagnostic tools.
 - Ensure PSU provides sufficient and stable power to all components.
- **BIOS Reset:** If system settings become unstable, you may need to clear the CMOS. Refer to the full motherboard manual for the exact procedure (usually involves a jumper or removing the CMOS battery).

For more complex issues, consult the detailed Supermicro X11DAI-N manual available on the official Supermicro support website or contact Supermicro technical support.

SPECIFICATIONS

Feature	Detail
Brand	Supermicro
Model Name	X11DAI-N
CPU Socket	Dual LGA 3647
Compatible Processors	Intel Xeon Scalable Processors (up to 205W TDP)
Chipset Type	Intel C621
Memory Slots	16 DIMM slots
Memory Type	3DS ECC RDIMM and LRDIMM DDR4-2666MHz
Max Memory Capacity	Up to 2TB
PCI-E Slots	4 x PCI-E 3.0 x16, 2 x PCI-E 3.0 x8
M.2 Interface	PCIe 3.0 x4 (2260, 2280, 22110 form factors, M-Key)
SATA Ports	10 x SATA3 (6 Gbps) with RAID 0, 1, 5, 10 support
LAN	Dual GbE from C621
Video Output	1 x VGA port
Compatible Platform	Windows 10
Item Weight	25 pounds
Package Dimensions	20 x 16 x 6 inches
Date First Available	August 2, 2017

WARRANTY AND SUPPORT

For detailed warranty information, please refer to the official Supermicro warranty policy available on their website. Supermicro provides technical support for their products.

If you require further assistance or have questions not covered in this manual, please visit the official Supermicro support portal or contact their customer service directly. Have your motherboard model number (X11DAI-N) and serial number ready when contacting support.

Manufacturer: Supermicro

Related Documents - X11DAI-N

 USER'S MANUAL Version 1.0	<p>Supermicro X11DAi-N User's Manual</p> <p>This user's manual provides comprehensive information for the installation and use of the Supermicro X11DAi-N motherboard, including features, specifications, troubleshooting, and BIOS setup.</p>
 X11DPT-B (For SuperServer Only)	<p>Supermicro X11DPT-B Motherboard Technical Specifications</p> <p>Detailed technical specifications for the Supermicro X11DPT-B motherboard, including processor support, memory capacity, expansion slots, and management features.</p>
	<p>Supermicro X10SLM+/X10SLL+ Quick Reference Guide</p> <p>Quick reference guide for Supermicro X10SLM+(-F)(-LN4F) and X10SLL+-F motherboards, detailing layout, features, jumpers, connectors, LED indicators, memory support, and installation.</p>
	<p>Supermicro X9DR3/I-LN4F+ Quick Reference Guide</p> <p>A quick reference guide for the Supermicro X9DR3/I-LN4F+ motherboard, detailing layout, features, jumpers, connectors, LED indicators, memory support, and installation instructions.</p>
 USER'S MANUAL Version 1.0	<p>Supermicro X13DEG-OA User's Manual: Installation and Technical Guide</p> <p>Comprehensive user manual for the Supermicro X13DEG-OA server motherboard, detailing installation, configuration, technical specifications, and troubleshooting for Intel Xeon Scalable processors and DDR5 memory.</p>
	<p>Supermicro SuperServer 1029U-E1CR4T: Specifications and Features</p> <p>Detailed specifications and key features of the Supermicro SuperServer 1029U-E1CR4T, a high-end enterprise server designed for virtualization and cloud computing.</p>