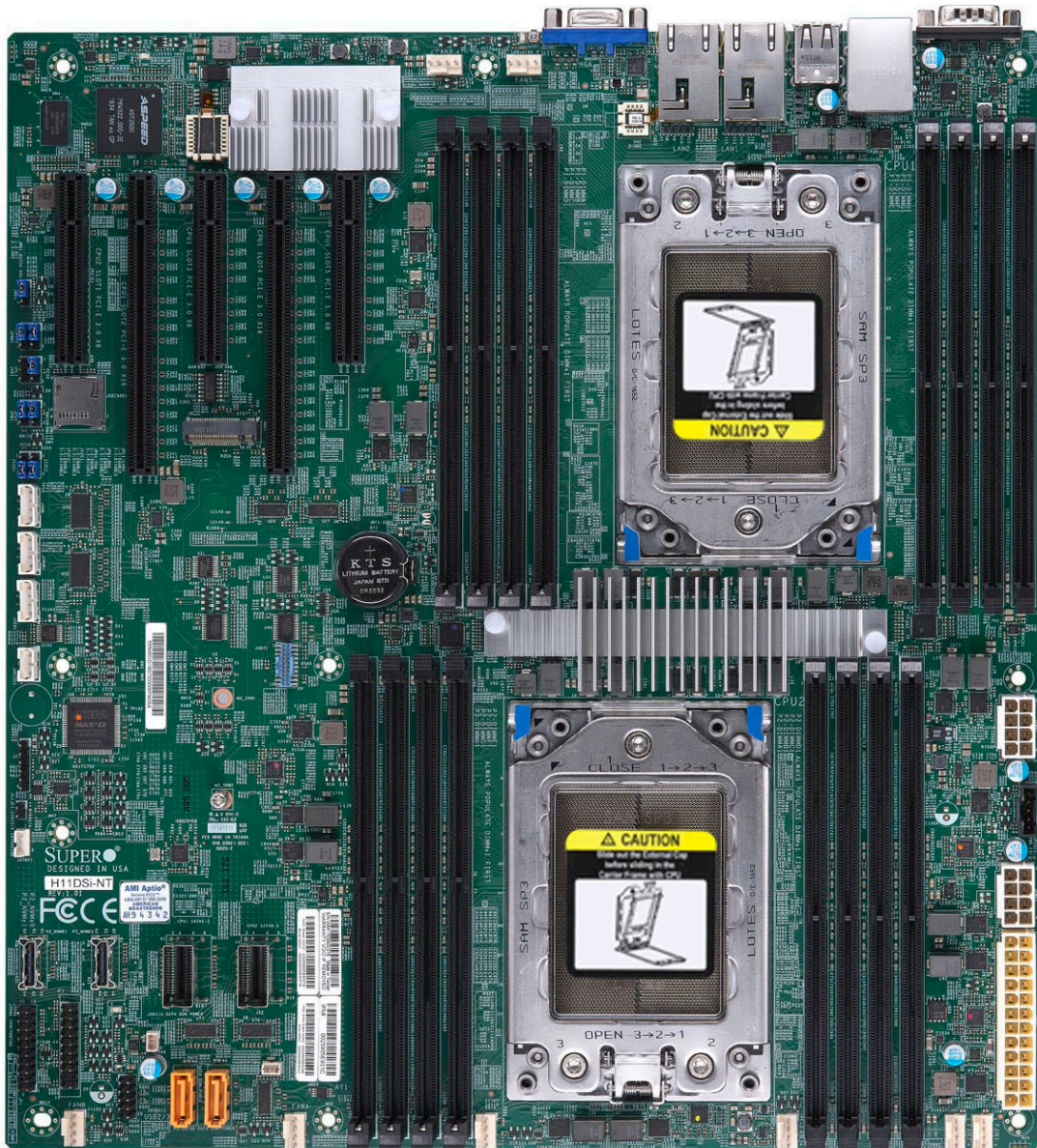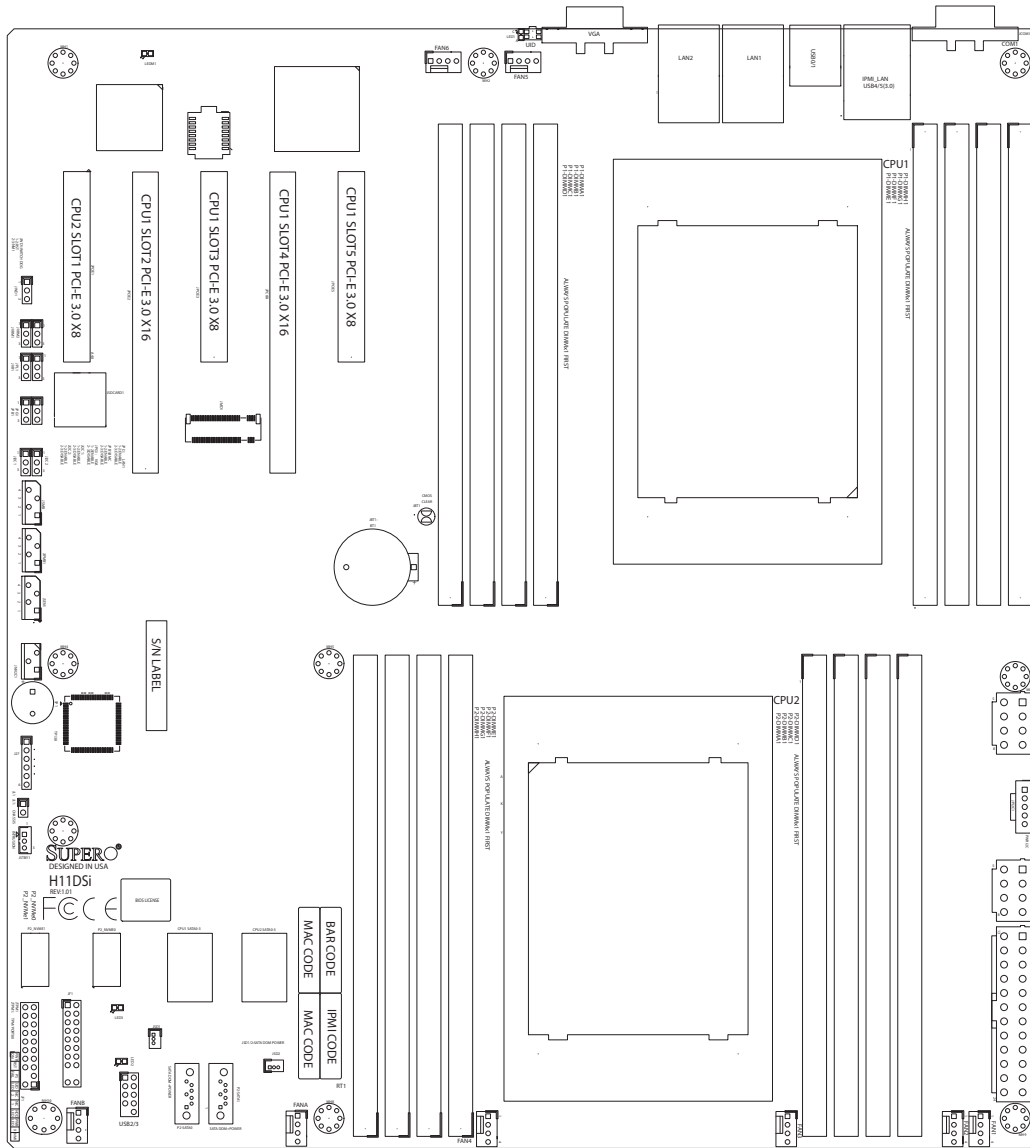**Figure 1-1. H11DSi-NT Motherboard Image**
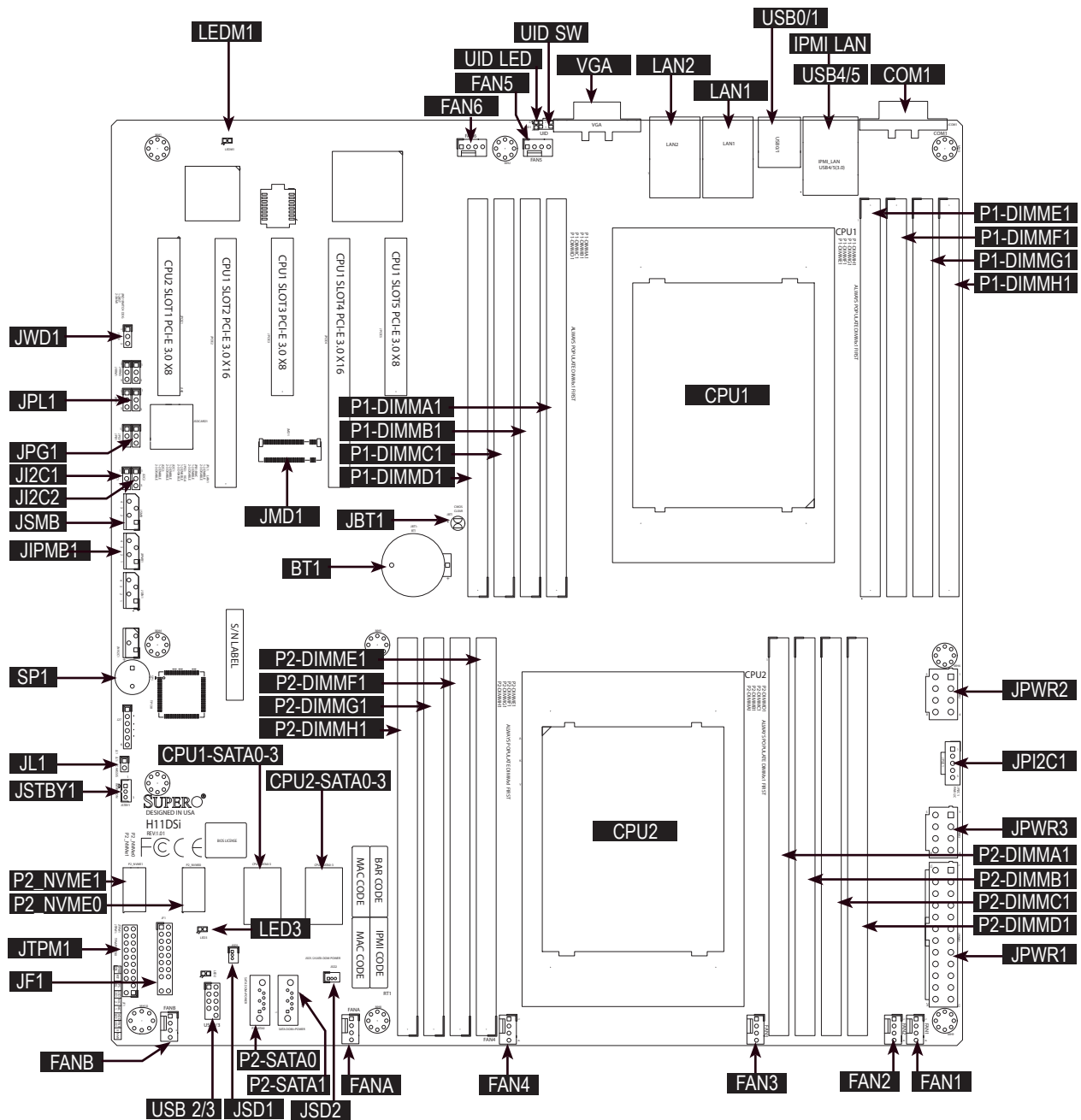


**Note:** All graphics shown in this manual were based upon the latest PCB revision available at the time of publication of the manual. The motherboard you received may or may not look exactly the same as the graphics shown in this manual.

# Figure 1-2. H11DSi-NT Motherboard Layout

# Quick Reference



**Notes:**

- See Chapter 2 for detailed information on jumpers, I/O ports, and JF1 front panel connections.

- Jumpers/LED indicators not indicated are used for testing only.

- Use only the correct type of onboard CMOS battery as specified by the manufacturer. Do not install the onboard battery upside down to avoid possible explosion.

# Quick Reference Table

| Jumper | Description | Default Setting |
|---|---|---|
| UID SW | Unit ID Switch (push-button toggle switch ON/OFF) | Off |
| JI2C1 / JI2C2 | PCI-E Slot SMB (System Management Bus) Enable/Disable | Pins 2-3 (Disabled) |
| JBT1 | CMOS Clear | Open (Normal) |
| JPG1 | VGA Enable/Disable | Pins 1-2 (Enabled) |
| JPL1 | LAN Enable/Disable | Pins 1-2 (Enabled) |
| JWD1 | Watch Dog | Pins 1-2 (Reset) |

| LED | Description | Status |
|---|---|---|
| UID LED | Unit ID LED | Solid Blue: UID Switched to ON |
| LED3 | Onboard Power LED | Off: Sytem Off, Solid Green: System ON |
| LEDM1 | BMC Heartbeat LED | Blinking Green: Normal |

| Connector | Description |
|---|---|
| JIPMB1 | System Management Bus Header |
| COM1 | COM Port |
| FANA, FANB, FAN1~FAN6 | 4-pin System/CPU Fan Headers |
| P2-SATA0, P2-SATA1 | SATA 3.0 Ports for SATA/DOM with integrated power |
| CPU1-SATA0-3, CPU2-SATA0-3 | Connectors for SATA0~3, use iPass breaklout cable (4 ports each) |
| JF1 | Front Control Panel Header 1 |
| JL1 | Chassis Intrusion Header |
| LAN1/LAN2 | RJ45 LAN Port |
| IPMI LAN | Gigabit LAN (RJ45) Port for IPMI |
| JPWR1 | 24-pin Main Power Connector |
| JPWR2/JPWR3 | 8-pin Auxilliary Power Connectors |
| JSD1/JSD2 | SATA DOM (Device on Module) power connectors 1/2 |
| JMD1 | M.2 Connector with integrated SATA/PCIe signals |
| JTPM1 | Trusted Platform Module/Port 80 Connector |
| USB0/1, USB4/5 | Back Panel USB Type A Ports for USB0/USB1 (2.0) and USB4/USB5 (3.0) |
| USB2/3 | Front Panel USB Header for USB2/USB3 (2.0). |
| P2-NVME0/1 | Processor 2 NVMe Ports 0/1 for NVMe Hard Disk Drives |
| JSTBY1 | Stand-by Power Header |
| SP1 | Internal Audio Speaker/Buzzer |
| BT1 | On-board CMOS Backup Battery |
| VGA | Legacy VGA video port |

| Connector | Description |
|---|---|
| P1-DIMMA1~P1-DIMMH1 | DIMM sockets for CPU1 |
| P2-DIMMA1~P2-DIMMH1 | DIMM sockets for CPU2 |
| CPU2 SLOT 1 | X8 PCIE 3.0 Slot via CPU2 |
| CPU1 SLOT 2, SLOT 4 | X16 PCIE 3.0 Slot via CPU1 |
| CPU1 SLOT 3, SLOT 5 | X8 PCIE 3.0 Slot via CPU1 |

**Note:** Jumpers, connectors, switches, and LED indicators that are not described in the preceding tables are for manufacturing testing purposes only, and are not covered in this manual.

## Motherboard Features

| Motherboard Features |
|---|
| **CPU** |
| • Dual EPYC 7000 series processor, in Socket SP3 sockets |
| **Memory** |
| • Up to 2 TB of ECC DDR4 2667 MHz speed, RDIMM/LRDIMM/3DS/NVDIMM memory in Sixteen (16) slots |
| **DIMM Size** |
| • Up to 128GB size at 1.2V |
| **Chipset** |
| • System on Chip |
| **Expansion Slots** |
| • 2 x PCI-E 3.0 x16<br>• 3 x PCI-E 3.0 x8<br>• 2 x Internal NVMe Ports (PCI-E 3.0 x4)<br>• 1x M.2 Connector (PCI-E 3.0 x2) |
| **Network** |
| • Dual RJ45 LAN Ports (Intel X550-BT2 / I350-BT2)<br>• ATEN IPMI from ASPEED AST 2500 BMC for gigabit RJ45 port |
| **Graphics** |
| • ASPEED AST2500 BMC chip with one (1) VGA port |

| **I/O Devices** | |
|---|---|
| • COM Port | • One (1) COM connector on rear I/O panel |
| • SATA/NVMe Ports | • Eight (8) SATA 3.0 ports (iPASS)<br>• Two (2) SATA-DOM ports<br>• Two (2) internal NVMe ports |

| **Peripheral Devices** |
|---|
| • Two (2) USB 3.0 "Type A" ports on the rear I/O panel (USB 4/5)<br>• Two (2) USB 2.0 "Type A" ports on the rear I/O panel (USB 0/1)<br>• One (1) USB 2.0 header for front control panel (USB 2/3) |

**Note:** The table above is continued on the next page.

| Motherboard Features |
|---|
| **BIOS** |
| • 128Mb SPI AMI BIOS® SM Flash UEFI BIOS |
| • ACPI 5.1, SMBIOS 3.1.1, Plug-and-Play (PnP), BIOS rescue hot-key, RTC (Real Time Clock) wakeup, Riser Card Auto-Detection Support |
| **Power Management** |
| • ACPI power management (S5) |
| • Power button override mechanism |
| • Power-on mode for AC power recovery |
| **System Health Monitoring** |
| • Onboard voltage monitoring for 3.3V, +5V, +/- 12V, +3.3V Standby, +5V Standby, Memory, HT, Memory, CPU Temperature, System Temperature, and Memory Temperature |
| • CPU switching phase voltage regulator |
| • CPU Thermal Trip support |
| **Fan Control** |
| • Dual cooling zones |
| • Low-noise fan speed control |
| • Pulse Width Modulation (PWM) fan control |
| **System Management** |
| • Trusted Platform Module (TPM) support |
| • System resource alert via SuperDoctor® 5 |
| • Power Supply Monitoring (JP1$^2$C1) |
| • SuperDoctor® 5, Watch Dog |
| • Chassis intrusion header and detection (JL1) |
| • QA2, SUM-InBand, SUM-OOB, IPMICFG, IPMIVIew, SMCIPMITOOL |
| **LED Indicators** |
| • CPU/Overheating |
| • Fan Failure |
| • LAN activity |
| **Dimensions** |
| • 13.05" (L) x 12.00" (W) (331 mm x 305 mm) |