

# X9DR7-LN4F

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### Key Features

1. Dual socket R (LGA 2011) supports Intel® Xeon® processor E5-2600 and **E5-2600 v2** family†
2. Intel® C602 chipset; QPI up to 8.0GT/s
3. Up to 1TB ECC DDR3, up to 1866MHz; 16x DIMM slots
4. Expansion slots:  
2 PCI-E 3.0 x16 and 4 PCI-E 3.0 x8
5. Intel® i350 GbE controller (4 ports)
6. 8x SATA2 and 2x SATA3 ports
7. 8x SAS2 (6Gb/s) ports via LSI 2308
8. Integrated IPMI 2.0 and KVM with Dedicated LAN
9. 7x USB 2.0 ports  
(2 rear, 4 via header + 1 Type A)

## Links & Resources

- ▶ [Tested Memory List](#)
- ▶ [Tested HDD / SSD List](#)
- ▶ [Motherboard Manual](#)
- ▶ [Update Your BIOS](#)
- ▶ [IPMI Firmware](#)
- ▶ [Download the Latest Drivers and Utilities](#)
- ▶ [Download Driver CD](#)
- ▶ [Heat Sink Compatibility](#)
- ▶ [OS Compatibility](#)



### Specifications

| Product SKUs         |                                                                                                                                                                                                                                                                                             |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MBD-X9DR7-LN4F -O    | <ul style="list-style-type: none"><li>X9DR7-LN4F (Standard Retail Pack)</li></ul>                                                                                                                                                                                                           |
| MBD-X9DR7-LN4F -B    | <ul style="list-style-type: none"><li>X9DR7-LN4F (Bulk Pack)</li></ul>                                                                                                                                                                                                                      |
|                      |                                                                                                                                                                                                                                                                                             |
| Physical Stats       |                                                                                                                                                                                                                                                                                             |
| Form Factor          | <ul style="list-style-type: none"><li>Extended ATX</li></ul>                                                                                                                                                                                                                                |
| Dimensions           | <ul style="list-style-type: none"><li>12.1" x 13" (30.7cm x 33.2cm)</li></ul>                                                                                                                                                                                                               |
|                      |                                                                                                                                                                                                                                                                                             |
| Processor/Cache      |                                                                                                                                                                                                                                                                                             |
| CPU                  | <ul style="list-style-type: none"><li>Dual Socket R (LGA 2011)</li><li>Intel® Xeon® processor E5-2600 and <b>E5-2600 v2</b> family<sup>†</sup> (up to 135W TDP <b>**</b>)</li></ul>                                                                                                         |
| Note                 | <sup>†</sup> BIOS version 3.0 or above is required                                                                                                                                                                                                                                          |
| Note                 | <b>**</b> Motherboard supports this maximum TDP. Please verify your system can thermally support.                                                                                                                                                                                           |
| Cache                | <ul style="list-style-type: none"><li>Up to 30MB</li></ul>                                                                                                                                                                                                                                  |
| System Bus           | <ul style="list-style-type: none"><li>QPI up to 8 GT/s</li></ul>                                                                                                                                                                                                                            |
|                      |                                                                                                                                                                                                                                                                                             |
| System Memory        |                                                                                                                                                                                                                                                                                             |
| Memory Capacity      | <ul style="list-style-type: none"><li>16x 240-pin DDR3 DIMM slots</li><li>Up to 1TB DDR3 ECC LRDIMM</li><li>Up to 512GB DDR3 ECC RDIMM</li><li>Up to 128GB DDR3 ECC/non-ECC UDIMM</li></ul>                                                                                                 |
| Memory Type          | <ul style="list-style-type: none"><li>1866/1600/1333/1066/800MHz* ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs</li><li>Support ECC and non-ECC UDIMMs</li></ul> <p>* Maximum memory speed may be capped by CPU. Please verify that the chosen CPU can support desired memory speed.</p> |
| DIMM Sizes           | <ul style="list-style-type: none"><li>32GB, 16GB, 8GB, 4GB, 2GB, 1GB, 64GB LRDIMM</li></ul>                                                                                                                                                                                                 |
| Memory Voltage       | <ul style="list-style-type: none"><li>1.5 V, 1.35 V</li></ul>                                                                                                                                                                                                                               |
| Error Detection      | <ul style="list-style-type: none"><li>Corrects single-bit errors</li><li>Detects double-bit errors (using ECC memory)</li></ul>                                                                                                                                                             |
|                      |                                                                                                                                                                                                                                                                                             |
| On-Board Devices     |                                                                                                                                                                                                                                                                                             |
| Chipset              | <ul style="list-style-type: none"><li>Intel® C602 chipset</li></ul>                                                                                                                                                                                                                         |
| AHCI SATA            | <ul style="list-style-type: none"><li>SATA 2.0 3Gbps w/ith RAID 0, 1, 5, 10</li><li>SATA 3.0 6Gbps w/ith RAID 0, 1, 5, 10</li></ul>                                                                                                                                                         |
| SCU SATA             | <ul style="list-style-type: none"><li>SATA 2.0 3Gbps w/ith RAID 0, 1, 5, 10</li></ul>                                                                                                                                                                                                       |
| SAS                  | <ul style="list-style-type: none"><li>SAS2 (6Gb/s) via LSI 2308</li><li>SW RAID 0, 1, 10 support</li></ul>                                                                                                                                                                                  |
| IPMI                 | <ul style="list-style-type: none"><li>Support for Intelligent Platform Management Interface v.2.0</li><li>IPMI 2.0 w/ith virtual media over LAN and KVM-over-LAN support</li><li>Nuvoton WPCM450 BMC</li></ul>                                                                              |
| Network Controllers  | <ul style="list-style-type: none"><li>Intel® i350 Gigabit Ethernet (4 ports)</li><li>Virtual Machine Device Queues reduce I/O overhead</li><li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li><li>1x Realtek RTL8201N PHY (dedicated IPMI)</li></ul>                        |
| Video                | <ul style="list-style-type: none"><li>Matrox G200eW</li></ul>                                                                                                                                                                                                                               |
|                      |                                                                                                                                                                                                                                                                                             |
| Input / Output       |                                                                                                                                                                                                                                                                                             |
| AHCI SATA            | <ul style="list-style-type: none"><li>2x SATA 3.0 ports (6Gbps)</li><li>4x SATA 2.0 ports (3Gbps)</li></ul>                                                                                                                                                                                 |
| SCU SATA             | <ul style="list-style-type: none"><li>4x SATA 2.0 ports (3Gbps)</li></ul>                                                                                                                                                                                                                   |
| SAS                  | <ul style="list-style-type: none"><li>8 SAS2 ports (6Gb/s)</li></ul>                                                                                                                                                                                                                        |
| LAN                  | <ul style="list-style-type: none"><li>4 RJ45 Gigabit Ethernet LAN ports</li><li>1 RJ45 Dedicated IPMI LAN port</li></ul>                                                                                                                                                                    |
| USB                  | <ul style="list-style-type: none"><li>7 USB 2.0 ports total (2 rear + 4 via header + 1 Type A)</li></ul>                                                                                                                                                                                    |
| Video                | <ul style="list-style-type: none"><li>1 VGA port</li></ul>                                                                                                                                                                                                                                  |
| Serial Port / Header | <ul style="list-style-type: none"><li>2 Fast UART 16550 ports (1 rear, 1 header)</li></ul>                                                                                                                                                                                                  |
| DOM                  | <ul style="list-style-type: none"><li>1 DOM (Disk on Module) pow er connector</li></ul>                                                                                                                                                                                                     |
| TPM                  | <ul style="list-style-type: none"><li>1 TPM 1.2 20-pin Header</li></ul>                                                                                                                                                                                                                     |

| Chassis (Optimized for X9DR7-LN4F)    |                                                                                                                                                                                                                                                                        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2U Chassis                            | <ul style="list-style-type: none"><li>▪ <a href="#">CSE-825TQ-R920LPB</a></li><li>▪ CSE-826BA-R1K28LPB</li><li>▪ CSE-826BA-R920LPB</li><li>▪ CSE-826BE16-R1K28LPB</li><li>▪ CSE-826BE16-R920LPB</li><li>▪ CSE-826BE26-R1K28LPB</li><li>▪ CSE-826BE26-R920LPB</li></ul> |
| 3U Chassis                            | <ul style="list-style-type: none"><li>▪ <a href="#">CSE-835TQ-R920B</a></li><li>▪ CSE-836BA-R1K28B</li><li>▪ <a href="#">CSE-836BA-R920B</a></li><li>▪ <a href="#">CSE-836BE16-R1K28B</a></li><li>▪ CSE-836BE26-R1K28B</li></ul>                                       |
| Important Chassis Notes               | <ul style="list-style-type: none"><li>▪ To support the new generation Intel® Xeon® processor-based motherboards, <a href="#">Revision M</a> chassis is recommended. Please talk to your sales representative for details.</li></ul>                                    |
| Expansion Slots                       |                                                                                                                                                                                                                                                                        |
| PCI-Express                           | <ul style="list-style-type: none"><li>▪ 2x PCI-E 3.0 x16 slots</li><li>▪ 4x PCI-E 3.0 x8 slots</li></ul> <p>(Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram for details.)</p>                         |
| System BIOS                           |                                                                                                                                                                                                                                                                        |
| BIOS Type                             | <ul style="list-style-type: none"><li>▪ 128Mb SPI Flash EEPROM w with AMI BIOS</li></ul>                                                                                                                                                                               |
| BIOS Features                         | <ul style="list-style-type: none"><li>▪ Plug and Play (PnP)</li><li>▪ APM 1.2</li><li>▪ PCI 2.3</li><li>▪ ACPI 1.0 / 2.0 / 3.0 / 4.0</li><li>▪ USB Keyboard support</li><li>▪ SMBIOS 2.7.1</li><li>▪ UEFI 2.3.1</li></ul>                                              |
| Management                            |                                                                                                                                                                                                                                                                        |
| Software                              | <ul style="list-style-type: none"><li>▪ <a href="#">SuperDoctor® III</a></li><li>▪ Watch Dog</li><li>▪ NMI</li><li>▪ Optional IPMI 1.5 / 2.0</li></ul>                                                                                                                 |
| Power Configurations                  | <ul style="list-style-type: none"><li>▪ ACPI / APM Power Management</li><li>▪ Power-on mode for AC power recovery</li></ul>                                                                                                                                            |
| PC Health Monitoring                  |                                                                                                                                                                                                                                                                        |
| Voltage                               | <ul style="list-style-type: none"><li>▪ Monitors for CPU Cores, +1.1V, +1.5V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory Voltages.</li><li>▪ 5+1 Phase-sw itching voltage regulator</li></ul>                                                          |
| FAN                                   | <ul style="list-style-type: none"><li>▪ 8x 4-pin fan headers (up to 8 fans)</li><li>▪ 8x fans with tachometer monitoring</li><li>▪ Status monitor for speed control</li><li>▪ Pulse Width Modulated (PWM) fan connectors</li></ul>                                     |
| Temperature                           | <ul style="list-style-type: none"><li>▪ Monitoring for CPU and chassis environment</li><li>▪ CPU thermal trip support</li><li>▪ Thermal Control for 8x Fan Connectors</li><li>▪ Thermal Monitor 2 (TM2) support</li><li>▪ PECI</li></ul>                               |
| LED                                   | <ul style="list-style-type: none"><li>▪ CPU / System Overheat LED</li><li>▪ Suspend static indicator LED</li><li>▪ UID/Remote UID</li></ul>                                                                                                                            |
| Other Features                        | <ul style="list-style-type: none"><li>▪ Chassis intrusion detection</li><li>▪ Chassis intrusion header</li><li>▪ RoHS, Halogen Free</li></ul>                                                                                                                          |
| Operating Environment                 |                                                                                                                                                                                                                                                                        |
| Operating Temperature Range           | <ul style="list-style-type: none"><li>▪ 10°C - 35°C (50°F - 95°F)</li></ul>                                                                                                                                                                                            |
| Non-Operating Temperature Range       | <ul style="list-style-type: none"><li>▪ -40°C - 70°C (-40°F - 158°F)</li></ul>                                                                                                                                                                                         |
| Operating Relative Humidity Range     | <ul style="list-style-type: none"><li>▪ 8% - 90% (non-condensing)</li></ul>                                                                                                                                                                                            |
| Non-Operating Relative Humidity Range | <ul style="list-style-type: none"><li>▪ 5% - 95% (non-condensing)</li></ul>                                                                                                                                                                                            |

Note: For optimized or compatible chassis, additional parts may be required, please check with Supermicro sales rep.

## Parts List

| Parts List (retail) |                  |     |                                                      |
|---------------------|------------------|-----|------------------------------------------------------|
|                     | Part Number      | Qty | Description                                          |
| X9DR7-LN4F          | MBD-X9DR7-LN4F   | 1   | X9DR7-LN4F Motherboard                               |
| I/O Cables          | CBL-0044L        | 2   | SATA CABLE 61CM FLAT S-S PBF                         |
| I/O Cables          | CBL-0097L-03     | 2   | 30AWG 50CM Ipass to 4 SATA, W/50cm SB, S             |
| I/O Shield          | MCP-260-00042-0N | 1   | STD I/O shield for X9 socket R server MB with Gasket |

| Optional Parts List                             |                                                                |     |                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------|
|                                                 | Part Number                                                    | Qty | Description                                                                                  |
| Heat Sink<br>(optional, not included)           | -                                                              | -   | <a href="#">CPU Heat Sink reference</a>                                                      |
| TPM security module<br>(optional, not included) | <a href="#">AOM-TPM-9655V</a><br><a href="#">AOM-TPM-9655H</a> | -   | TPM module w/ Infineon 9655, RoHS/REACH,PBF;<br>Vertical or Horizontal depends on the server |
| SuperDOM                                        | -                                                              | -   | Supermicro SATA DOM Solutions <a href="#">[Details]</a>                                      |