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Intel BX80635E52650V2

Intel Xeon E5-2650 v2 Processor User Manual

Model: BX80635E52650V2

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Intel Xeon E5-2650 v2 Eight-Core Processor. This retail package includes the processor and a compatible fan. Please read this manual thoroughly before proceeding with installation or use to ensure optimal performance and longevity of the product.

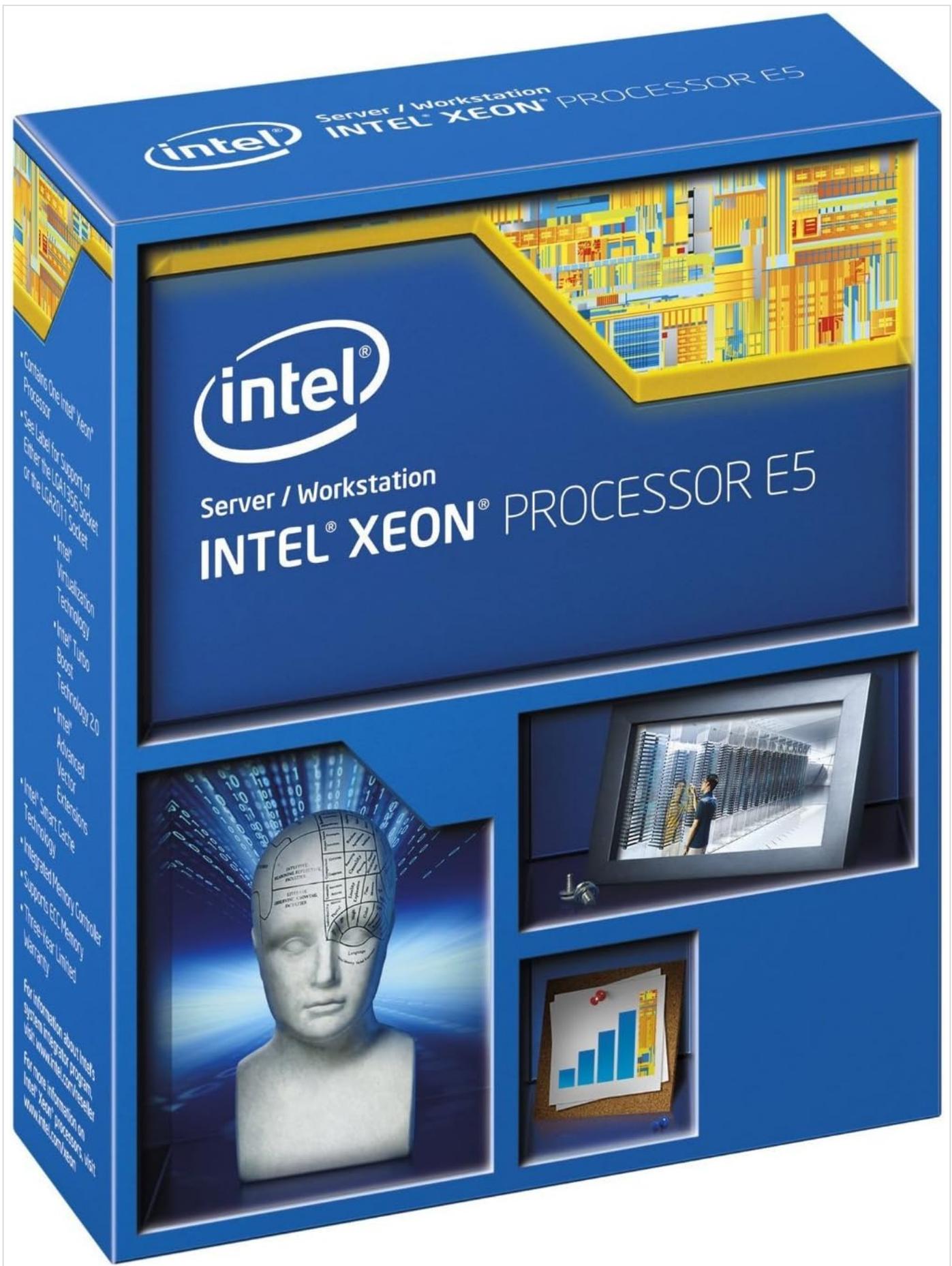


Image: Retail packaging for the Intel Xeon E5-2650 v2 Processor, showing the Intel logo and product name. The box highlights features like server/workstation compatibility, LGA 2011 socket support, and various Intel technologies.

PRODUCT OVERVIEW

The Intel Xeon E5-2650 v2 is an eight-core processor designed for server and workstation applications, offering high performance and reliability. It is built for the LGA 2011 socket and features Intel's advanced technologies. Key specifications include:

- **Model:** Intel Xeon Processor E5-2650 v2
- **Core Count:** 8 Cores
- **Clock Speed:** 2.6 GHz
- **Max Turbo Frequency:** 3.4 GHz
- **Cache:** 20 MB
- **Bus Speed:** 8.0 GT/s
- **Socket Type:** LGA 2011
- **Memory Type Supported:** DDR3 SDRAM (Supports ECC Memory)
- **Included:** Fan (with retail package)

INSTALLATION (SETUP)

Proper installation is crucial for the functionality and longevity of your processor. Always handle the processor by its edges to avoid touching the gold contacts or the top surface. Ensure you are working in an anti-static environment.

1. **Prepare the Motherboard:** Ensure your motherboard supports the LGA 2011 socket and is compatible with Intel Xeon E5-2650 v2 processors. Refer to your motherboard's manual for specific instructions on preparing the CPU socket and updating BIOS/UEFI if necessary.
2. **Open the CPU Socket:** Carefully open the CPU socket retention mechanism on the motherboard. This typically involves releasing one or two levers.
3. **Align the Processor:** Locate the alignment notches or triangles on the processor and the socket. Gently place the processor into the socket, ensuring it sits flush without force. *Do not force the processor into the socket, as this can cause damage to the pins.*
4. **Secure the Processor:** Close the CPU socket retention mechanism, ensuring the processor is firmly seated and the levers are locked.
5. **Apply Thermal Paste:** If your cooler does not have pre-applied thermal paste, apply a small, pea-sized amount of high-quality thermal paste to the center of the processor's integrated heat spreader (IHS).
6. **Install CPU Cooler:** Mount the included CPU cooler (or a compatible aftermarket cooler) according to its specific instructions. Ensure proper contact between the cooler and the processor for effective heat dissipation.
7. **Connect Power:** Connect the CPU fan power cable to the appropriate "CPU_FAN" header on the motherboard.

For detailed visual guides, consult your motherboard's instruction manual or Intel's official support resources.

OPERATING CONSIDERATIONS

Once installed, the Intel Xeon E5-2650 v2 processor operates automatically within your system. Key operating considerations include:

- **BIOS/UEFI Configuration:** After initial installation, access your system's BIOS/UEFI settings to verify the processor is recognized correctly and to configure any necessary settings, such as memory profiles (e.g., XMP) or virtualization options (Intel VT-x).
- **Operating System:** Ensure your operating system is compatible with the Intel Xeon E5-2650 v2 processor and that all necessary chipset and system drivers are installed.
- **Cooling:** Maintain adequate airflow within your system chassis to prevent overheating. Monitor CPU temperatures

using system monitoring software to ensure they remain within safe operating limits.

- **Workload Management:** For optimal performance in server and workstation environments, ensure your applications and operating system are configured to utilize multi-core processors and Intel's advanced technologies effectively.

MAINTENANCE

Processors generally require minimal maintenance. However, periodic checks can help ensure continued optimal performance and system stability:

- **Dust Removal:** Periodically clean dust from the CPU cooler fins and system fans using compressed air. Excessive dust accumulation can impede airflow and lead to higher operating temperatures.
- **Thermal Paste:** If you remove the CPU cooler for any reason, it is recommended to clean off old thermal paste from both the CPU and the cooler base and apply new, high-quality thermal paste before re-installing the cooler.
- **BIOS/UEFI Updates:** Keep your motherboard's BIOS/UEFI firmware updated to ensure compatibility, access to the latest performance and stability improvements, and support for new features.

TROUBLESHOOTING

If you encounter issues with your Intel Xeon E5-2650 v2 processor or system, consider the following troubleshooting steps:

- **System Not Booting or No Display:**
 - Verify the processor is correctly seated in the LGA 2011 socket and the retention mechanism is locked.
 - Ensure all power cables (24-pin ATX and 8-pin/4-pin CPU power) are securely connected to the motherboard.
 - Check for bent pins on the CPU or in the socket. *This requires extreme care and can void warranty if damaged.*
 - Confirm your motherboard's BIOS/UEFI version supports the Intel Xeon E5-2650 v2 processor.
 - Test with a single stick of RAM in different slots.
- **Overheating Issues:**
 - Ensure the CPU cooler is properly installed and making firm, even contact with the processor's IHS.
 - Verify that thermal paste was applied correctly and evenly.
 - Check if the CPU fan is spinning and connected to the correct "CPU_FAN" header.
 - Improve case airflow by cleaning dust from fans and vents, and ensuring proper fan configuration (intake/exhaust).
- **System Instability or Crashes:**
 - Update motherboard BIOS/UEFI to the latest stable version.
 - Run memory diagnostic tools (e.g., MemTest86) to check for RAM errors.
 - Ensure your power supply unit (PSU) provides sufficient and stable power for all system components.
 - Check for driver conflicts or outdated drivers for other components.

If problems persist after attempting these steps, consult Intel's official support website or contact their technical support for further assistance.

SPECIFICATIONS

Feature	Detail
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Feature	Detail
Processor Model	Intel Xeon Processor E5-2650 v2
Item Model Number	BX80635E52650V2
Core Count	8 Cores
Clock Speed	2.6 GHz
Max Turbo Frequency	3.4 GHz
Cache	20 MB
Bus Speed	8.0 GT/s
Socket Type	LGA 2011
Memory Type Supported	DDR3 SDRAM
ECC Memory Support	Yes
Intel Technologies	Virtualization Technology, Turbo Boost Technology 2.0, Advanced Vector Extensions, Smart Cache, Integrated Memory Controller
Product Dimensions (LxWxH)	4.8 x 2 x 5.5 inches
Item Weight	4 ounces
Included in Retail Box	Processor, Fan

Note: Specifications are based on standard product information and may be subject to change. For the most current and detailed specifications, please refer to the official Intel product page for model BX80635E52650V2.

WARRANTY AND SUPPORT

The Intel Xeon E5-2650 v2 processor (Model BX80635E52650V2) typically comes with a **Three-Year Limited Warranty** from Intel. For specific warranty terms, conditions, and registration details, please refer to the documentation included with your product or visit the official Intel warranty information page.

For technical support, driver downloads, product documentation, and additional information, please visit the official Intel support website:

<https://www.intel.com/support>

For general information on Intel Xeon processors, you can visit: <https://www.intel.com/xeon>



