

Essential Performance, Business-Ready

Performance and Reliability, Intelligently Designed for Growth



82%
of small businesses
agree using new
technology effectively
is key to their company's
survival and growth¹

The demands of technology for small businesses and cloud hosting require intelligently designed solutions to fuel their growth

Business computing needs are growing in sophistication and complexity. Servers that are just a few years old are no longer sufficient to support the demands of today's workloads, which are increasing in capabilities to deliver business intelligence, acceleration, and agility. New business opportunities, customers and workloads drive the need for tools and technology that will help you win and stay ahead of the competition. With a wide range of solutions in the marketplace, it can be difficult to identify the right solution for your needs of today and prepare for a winning future.

At Intel, we appreciate these challenges and have worked to understand your needs and demands. We have partnered with industry leaders and solution providers to deliver you a professional-grade solution built from the ground-up with your needs in mind. Intel Xeon processors deliver trusted performance and proven innovation, starting with our entry Intel Xeon E processors. As your business grows and demands increase, so does the Intel Xeon processor portfolio with performance scale and capabilities that extend to our Intel Xeon Scalable processors.

On-premise servers and bare metal cloud services built on Intel Xeon E processors offer a foundation of essential capabilities to help protect and support your growing and changing business.



Server-Grade Solutions for Small Business

Get more from your business with an entry server hardware refresh

Small businesses are looking for cost-effective server solutions that deliver productivity, reliability, and hardware-enhanced security, while complementing other IT investment options such as cloud-based services. An on-premise server can help address a number of challenges, including the uncertainty for setup and ongoing cost of cloud services, support for legacy applications, regulatory compliance, and the need to protect sensitive customer data. A mix of cloud services and in-house solutions provides the flexibility to choose and mix the correct balance for your business needs.

Small businesses need technology that helps them run multi-user applications such as email, messaging, print servers, calendar programs, databases, Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and other software that facilitates data sharing and collaboration. An entry server built with the Intel Xeon E processor is a smart investment positioning you for growth while providing a reliable, always available solution to protect your data and host critical business software solutions. No matter the size of your business, the value of your data is enormous. Keep it accessible and better protected at all times with an affordable Intel Xeon E processor-based server like these.

\$82,220 to
\$256,000



Unplanned downtime cost for a single event reported by over 80% of small and medium businesses²

A dedicated, on-premise server delivers answers for a number of small business customers including:

- Bandwidth constraints, latency, or heavy data usage that cause performance issues
- Uncertainty and inability to plan for setup and ongoing cloud service costs
- Preference for up-front payment over extended payment schedule
- Some legacy applications cannot be migrated to the cloud
- Regulatory, compliance, or data sovereignty requirements mandate that data must be secured on-premises

Implementing a powerful server is also a smart investment in security and growth. You'll gain the power to support the features of modern operating systems, including the added peace of mind from timely security patches which help to keep your sensitive business and customer data steps ahead of evolving security threats. New hardware with a modern operating system can also help you more easily deploy new business-class applications and tools that can help you increase sales and improve margins. A server based on the Intel Xeon E processor lets you access your information fast and respond to customers quickly from any device on your network. Keep valuable business data safe, help you and your employees become more productive, and position your company for growth with a powerful and affordable small business server based on the Intel Xeon E processor.

Essential Hardware for Entry-Level Cloud Hosting and Security Services

For server applications and workloads which do not require the performance scale and advanced capabilities of Intel Xeon Scalable processors, Intel Xeon E processors offer a compelling alternative. Designed for single-processor server platforms, these power-efficient and cost-effective processors feature the essential server features and capabilities needed for entry-level hardware solutions, making them an excellent hardware option for bare metal cloud hosting services.

Like the latest Intel Xeon Scalable processors, Intel Xeon E processors also feature an advanced security technology, known as Intel® Software Guard Extensions (Intel® SGX). Software enhanced with Intel SGX helps protect application code and data from disclosure or modification. Developers can use Intel SGX to partition their application into protected areas of execution in memory known as processor-hardened enclaves to enhance security even on a platform that becomes compromised.

Intel Xeon Scalable processors and Intel Xeon E processors with Intel SGX can be used in concert with existing data center infrastructure, to help protect the most sensitive portions of an application or data being used in a workload or service. For smaller capacity workloads enabled for Intel SGX, including encryption Key Management Services, Intel Xeon E processors offer entry-level support for more secure cloud services.

Learn more about Intel Xeon processors with Intel Software Guard Extensions and secure enclaves at www.intel.com/sgx.



Introducing Intel Xeon E-2300 Processors

Intel Xeon E-2300 processors offer 10 new processor varieties, including options with 4, 6, or 8 cores, and thermal design points (TDPs) ranging from 65W up to 95W. With Intel® Turbo Boost Technology frequencies as high as 5.1 GHz, and memory speeds up to 23 percent faster than the prior generation, these new processors outperform the prior Intel Xeon E processor by up to 17 percent.³ And when coupled with Intel® C250 Series Chipsets, this platform offers more I/O bandwidth and speed across options including new PCIe 4.0, more lanes of PCIe 3.0, USB 3.2 with new 2x2 (20 Gb), and SATA 3.0 support. This platform is also validated for compatibility with the latest server operating systems, including Windows Server 2022.

Intel Xeon E-2300 Processor Details

Maximum Core Count Supported	Up to 8 Cores
Maximum Base Frequency Supported	3.7 GHz
Maximum Intel Turbo Boost Technology 2.0 Frequency Supported	5.1 GHz
Processor Cache Memory Support	Up to 16 MB Intel Smart Cache
Processor Performance Support	Intel Turbo Boost 2.0 Technology, Intel® Hyper-Threading Technology
Maximum Number of Processor Sockets Supported	One Socket
Thermal Design Point (TDP)	Up to 95 Watts
Socket Type	Socket H5 (LGA-1200) Socket
System Memory Support	2 channels of DDR4 ECC Up to 3200 MT/s 2 DPC, UDIMMs only
Maximum System Memory Supported	Up to 128 GB
Supported Chipset	Intel® C252 or C256 Chipsets
I/O	PCI Express 4.0 – Up to 20 lanes (CPU) PCI Express 3.0 – Up to 24 lanes (PCH) USB 3.2 Gen2x2 (20G) – Up to 3 ports USB 3.2 Gen2x1 (10G) – Up to 10 ports SATA 3.0 – Up to 8 ports DMI – 8 lanes, Gen 3
Intel® Manageability Engine (Intel® ME)	Intel ME v15 with Intel® AMT and Intel SPS 6.0
Display Support	Gen12 graphics, 1 digital display (HDMI or DP) with up to 4K resolution
Intel SGX	512 MB memory enclave capacity
Intel® VROC	SATA RAID Non-VMD NVMe RAID
Support for Intel® Ethernet	1 GbE i210 (LOM/AIC) 2.5 GbE i225 (AIC) 10 GbE x550 (AIC)
Processor Manufacturing Process	Intel's 14nm process technology

Please contact your hardware or equipment manufacturer for a full list of supported features and capabilities.

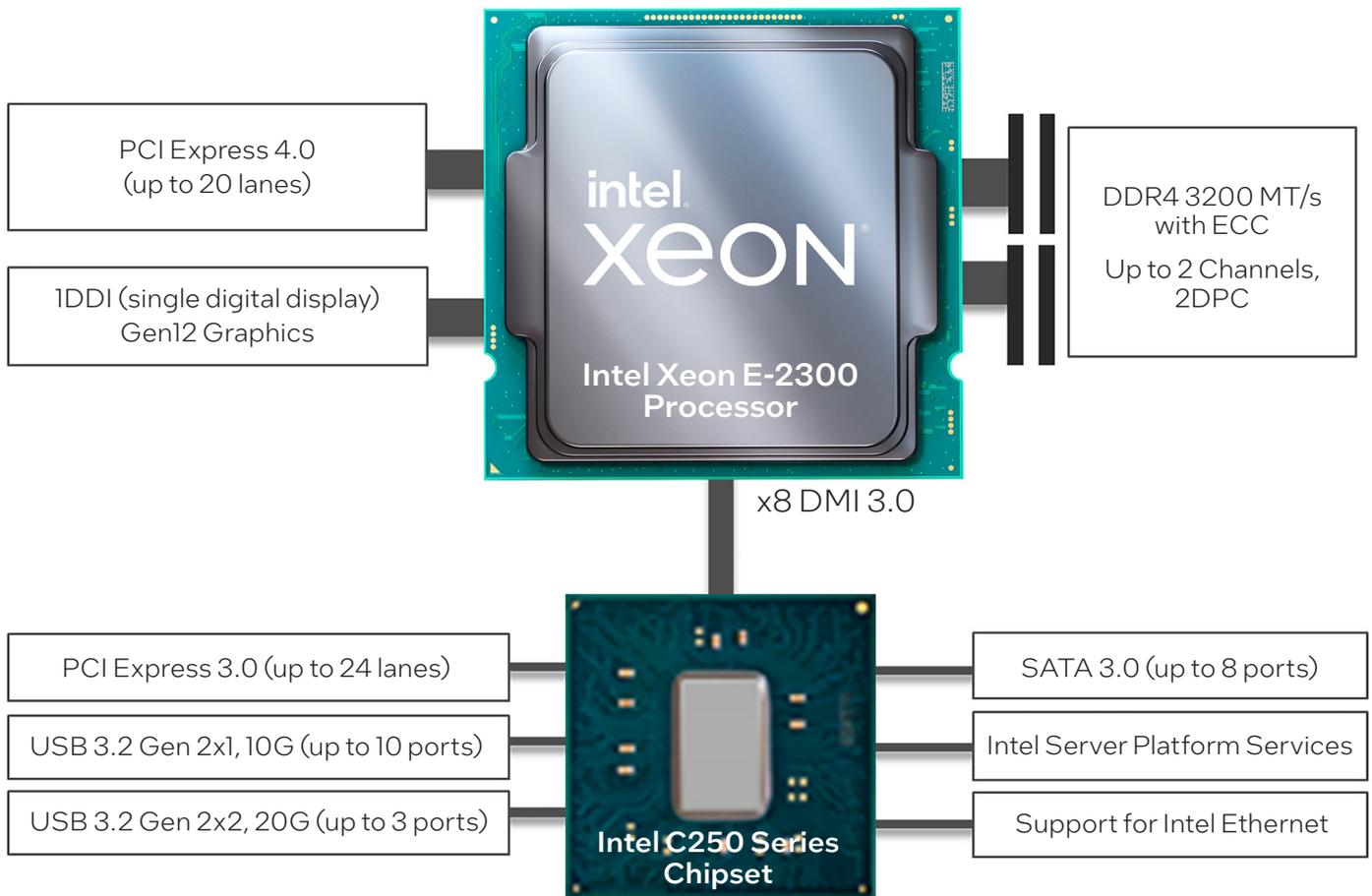
Platform Reliability, Availability, and Serviceability

Intel Xeon E-2300 processors include support for the following hardware-enhanced reliability features, including:



- **ECC Memory Support:** Avoid business interruptions with automatic data checking for errors, providing increased reliability for the storage of your business data and execution of your critical workloads. Intel Xeon E-2300 processors support DDR4 memory speeds up to 3200 MT/s.
- **Intel® Server Platform Services (Intel® SPS):** Designed for managing rack-mount servers, Intel SPS provides a suite of tools to control and monitor power, thermal and resource utilization, with support for Intel Node Manager.
- **Intel® Active Management Technology (Intel® AMT):** Using integrated platform capabilities paired with popular third-party management and security applications, Intel AMT allows IT or managed service providers to better discover, repair, and protect their networked computing assets.

Typical Intel Xeon E-2300 Platform Configuration for Servers



Available in single-socket configuration only.

Processors, chipset, and diagram provided for illustration purposes only. Not comprehensive of all features and capabilities.

Intel Xeon E-2300 Processor SKUs

Processor Number	Base Clock Speed (GHz)	Max Intel Turbo Boost Technology 2.0 Frequency (GHz)	Cores/Threads	Cache (MB)	PCI Express 4.0 and 3.0 Lanes (CPU + Chipset)	Memory Support	Thermal Design Power (TDP)	Socket (LGA)
Intel Xeon E-2388G Processor	3.2	5.1	8/16	16 MB Smart-Cache	44	Two channels DDR4-3200	95W	1200
Intel Xeon E-2378G Processor	2.8	5.1	8/16	16 MB Smart-Cache	44	Two channels DDR4-3200	80W	1200
Intel Xeon E-2378 Processor	2.6	4.8	8/16	16 MB Smart-Cache	44	Two channels DDR4-3200	65W	1200
Intel Xeon E-2386G Processor	3.5	5.1	6/12	12 MB Smart-Cache	44	Two channels DDR4-3200	95W	1200
Intel Xeon E-2356G Processor	3.2	5.0	6/12	12 MB Smart-Cache	44	Two channels DDR4-3200	80W	1200
Intel Xeon E-2336 Processor	2.9	4.8	6/12	12 MB Smart-Cache	44	Two channels DDR4-3200	65W	1200
Intel Xeon E-2374G Processor	3.7	5.0	4/8	8 MB Smart-Cache	44	Two channels DDR4-3200	80W	1200
Intel Xeon E-2334 Processor	3.4	4.8	4/8	8 MB Smart-Cache	44	Two channels DDR4-3200	65W	1200
Intel Xeon E-2324G Processor*	3.1	4.6	4/4	8 MB Smart-Cache	44	Two channels DDR4-3200	65W	1200
Intel Xeon E-2314 Processor*	2.8	4.5	4/4	8 MB Smart-Cache	44	Two channels DDR4-3200	65W	1200

*Intel Xeon E-2324G and E-2314 processors do not support Intel® Hyper-Threading Technology



For more information on Intel Xeon E processors, visit [intel.com/xeone](https://www.intel.com/xeone).

Results have been estimated or simulated.

Performance varies by use, configuration, and other factors. Learn more at www.intel.com/PerformanceIndex.

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See below for configuration details. No product or component can be absolutely secure.

¹ Source: <https://www.smb-gr.com/wp-content/uploads/2019/07/23-Jul-Digital-Transformation-V2.pdf>

² Source: <https://www.carbonite.com/globalassets/files/white-papers/carb-idc-smb-cloud-growth-opportunity-report.pdf>

³ Up to a 17% performance improvement compared to the prior generation¹: Configurations: Baseline: 1x Intel Xeon E-2278G Processor, Platform: Intel Mehlow Platform, #Sockets: 1, #Cores per Socket: 8, #Logical Processors: 16, 4 X 16GB 3200 MT/s (2dpc configured as 2666Mhz) total memory, uCode 0xc6, HT on (SPECcpu2017), off (others), Turbo on, OS: Centos 8.4, Kernel: 4.18.0-305.3.1.el8.x86_64, BIOS: CNLSE2R1.R00.X188.B43.2101080746, SSD: 1x S4610 SSD 1.92T, SPECcpu2017 (est) (ic2021.1), Stream Triad (ic19), test by Intel on 6/24/2021. New - 1x Intel Xeon E-2378G Processor, Platform: Intel Tatlow Platform, #Sockets: 1, #Cores per Socket: 8, #Logical Processors: 16, 4 X 16GB 3200 MT/s (2dpc configured as 2933Mhz) total memory, uCode 0x44, HT on (SPECcpu2017), off (others), Turbo on, OS: Centos 8.4, Kernel: 4.18.0-305.3.1.el8.x86_64, BIOS: RKLSE211.R00.2122.A81.2106030805, SSD: 1x S4610 SSD 960G, SPECcpu2017 (est) (ic2021.1), Stream Triad (ic19), test by Intel on 6/29/2021.

Your costs and results may vary.

Intel technologies may require enabled hardware, software, or service activation.

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