Level up network and edge scalability with high design density of Efficient-cores

Intel® Xeon® 6 processors with E-cores

Intel® Xeon® 6 processors with Efficient-cores (E-cores) help you achieve higher performance-per-watt vs. the 2nd Gen Intel® Xeon® processor[1] with up to 144 cores per socket. Built-in accelerators[2] give a targeted boost to important tasks, while built-in security capabilities help safeguard distributed and service-based architectures.

Intel® Xeon® 6700 series

Compute performance

Up to
3.6x
higher integer throughput performance with Intel Xeon 6780E vs. 2nd Gen Intel Xeon 8280 processors[3]

Up to
2.3x
higher integer throughput performance/watt (socket power) with Intel Xeon 6780E vs. 2nd Gen Intel Xeon 8280 processors[3]

5G User Plane Function (UPF)

Up to
4.2x
higher 5G UPF performance and
2.7x
higher performance/watt (socket power) with Intel Xeon 6780E vs. 2nd Gen Intel Xeon 6252N processors[4]

Next Gen Firewall

Up to
5.8x
higher NGFW performance and
3.5x
higher performance/watt (socket power) with Intel Xeon 6780E vs. 2nd Gen Intel Xeon 6252N processors on Next Gen Firewall solutions[5]

Enhancements for performance, confidential computing, and ROI

Deploy an optimal platform design with high core density

Up to 144 E-cores deliver performance for highly task-parallel workloads that scale with greater core count. Built-in Intel® QuickAssist Technology[2] (Intel® QAT) speeds up encryption and decryption of cryptographic processing compression.

The trust and confidentiality you need for next-gen workloads

Core density supports higher performance for next-gen firewalls (NGFWs), suitable for SASE. Intel® Trust Domain Extensions (Intel® TDX) and Intel® Software Guard Extensions (Intel® SGX) drive VM and application isolation to help secure data for distributed and service-based architectures.

Ensure more successful deployments with edge- and networking-optimized solutions

Address the unique needs of network and edge computing with a platform that's built and tested for scale. Designed to help maximize uptime with GPU, IPU, and other accelerators[2], supported by an ecosystem of Intel®-optimized software and tools, Intel Xeon 6 processors help businesses derive more value from their investments.

Step up your network and edge scalability and capability with Intel® Xeon® 6 processors

Telecommunications

Enhance security and capacity in the service mesh with higher performance-per-watt[1], and core density to help 5G core networks achieve more capacity, higher throughput and energy efficiency.

Stand-alone 5G core networks, control plane (CP), and user plane functions (UPF)

Enterprise

Support more devices, users, and key capabilities such as real-time threat detection.

Network security appliances, secure access service edge (SASE), next-gen firewall (NGFW), real-time deep packet inspection, antivirus, intrusion prevention and detection, and SSL/TLS inspection

Media and Entertainment

Increased performance per watt[1] and denser deployments contribute to low TCO for content delivery network (CDN) workloads.

Media processing, video on demand (VOD) and content delivery networks

Industrial/Energy

Building data-driven grids for greater visibility, insight, and faster decision making help to reduce operational costs of automation and control systems.

Digitalization of automation, protection, and control

Accelerate network and edge transformation today.

Learn more about Intel® Xeon® 6 processors with E-cores at

https://www.intel.com/content/www/us/en/products/docs/processors/networking-and-edge/xeon6.html

For more complete information about performance and benchmark results, visit intel.com/PerformanceIndex.

[1] See [7G1] at intel.com/processorclaims: Intel Xeon 6. Results may vary.

[2] Availability of accelerators varies depending on SKU. Visit the Intel® Product Specifications page for additional product details.

[3] See [7G1] at intel.com/processorclaims:Intel Xeon 6. Results may vary.

[4] See [7N1] at intel.com/processorclaims:Intel Xeon 6. Results may vary.

[5] See [7N2] at intel.com/processorclaims:Intel Xeon 6. Results may vary.

Notices & Disclaimers

Performance varies by use, configuration and other factors. Learn more on the Performance Index site.

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

Not all features are available on all SKUs. Not all features are supported in every operating system.

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

Your costs and results may vary.

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