4th Generation Intel® Xeon® Scalable processors

Integrated Accelerators Boost **Network Processing Capacity and Lower Energy Consumption**

Flexible processors from Intel with built-in network accelerators offer a path for enterprises and communications service providers (CoSPs) to optimize network performance-per-watt, maximize performance from a given rack footprint, and lower total cost of ownership (TCO).

Cost-Efficient Processing Flexibility for Networking Workloads

To scale networks, CTOs and network architects must choose between adding cores or using accelerators. Intel has integrated the accelerators into the processor, eliminating the need to purchase discrete accelerators. This sophisticated approach can deliver more compute power with energy efficiency, reducing TCO and supporting sustainability.

The flexibility of network optimized 4th Gen Intel® Xeon® Scalable processors with Intel® Speed Select Technology (Intel® SST) enables users to dial up and dial down power, frequency, and core profiles to optimize performance for IT, general-purpose compute, or networking workloads.

The performance gains of 4th Gen Intel® Xeon® Scalable processors support networking workloads.

5G core user plane function (UPF)

5G virtualized radio access network (vRAN)

Secure access service edge (SASE)

Content delivery network (CDN)

Virtual cable modem termination system (vCMTS)

Up to 30%

performance increase compared to 3rd Gen Intel® Xeon® Scalable processors in the same thermal envelope[1]

5G Core UPF: Reliably Deliver High Throughput with Low Latency

Network-optimized 4th Gen Intel® Xeon® Scalable processors can help handle fast-expanding UPF data requirements with energy-efficient operation, high-density connections, and increased memory bandwidth.

Up to

1.88x **higher throughput with user plane functions in 5G wireless core networks[2]**

5G vRAN: Gain High Performance with Energy Efficiency

Optimized vRAN operation for massive MIMO pipelines with 4th Gen Intel® Xeon® Scalable processors provides high throughput and low latency that can help deliver high performance while reducing energy costs and supporting sustainability goals.

Up to

2x **capacity gains for vRAN workloads with Intel® AVX[3]**

SASE: Secure Distributed Services Deliver High Performance

SASE running on 4th Gen Intel® Xeon® Scalable processors enables monitoring of expanded attack surfaces and deployment of next-gen firewalls (NGFWs) to meet end-user expectations for high responsiveness and reduced TCO.

Up to

1.71x **higher throughput compared to the prior generation[4]**

CDN: Boost Cost Efficiency and Performance

Built-in accelerators of 4th Gen Intel® Xeon® Scalable processors improve load balancing to increase throughput and reduce latency for content delivery while freeing processor resources and reducing energy usage.

Up to

1.46x **higher live-linear throughput compared to the prior generation when using NGINX[5]**

vCMTS: Lower TCO, Greener Networks

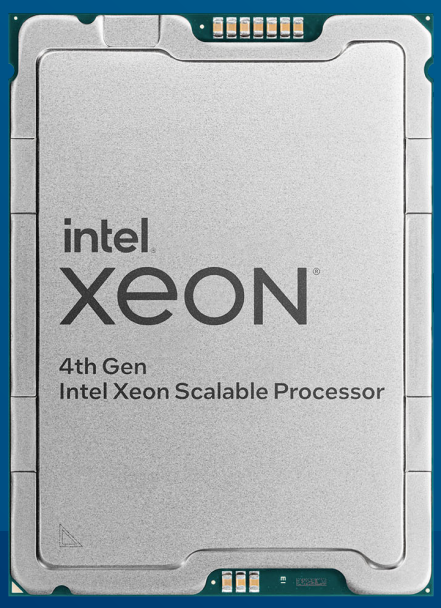
vCMTS offers cable networks and multi-system operators (MSOs) flexibility, scalability, and power efficiency to support cost containment and sustainability.

Up to

2x **better performance compared to the prior generation[6]**

About 4th Gen Intel® Xeon® Scalable processors

Our 4th Gen Intel® Xeon® Scalable processors are designed to power cloud-ready networks with integrated accelerators that deliver more compute power with energy efficiency that can lower costs and support sustainability.



Learn more at intel.com/4thgenxeon-network

1,2. See [N8] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.
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