



Intel's Most Sustainable Data Center Processor

4th Gen Intel® Xeon® Scalable processors feature built-in accelerators to help drive power efficiency and performance.

Jan. 10, 2023 — Today, Intel took a major step toward helping organizations reach their sustainability and carbon reduction goals by launching its most sustainable data center processor. In addition to built-in accelerators that help improve performance per watt for select workloads, 4th Gen Intel® Xeon® Scalable processors have a range of features for managing power and performance and are manufactured with 90%+ renewable electricity.

Built-in Accelerators Help Drive Power Efficiency

As the demands on compute grow, it's critical for organizations to get the most performance from their power budget. Built-in acceleration is an alternative, more efficient way to achieve higher workload performance than growing the CPU core count. 4th Gen Intel Xeon Scalable processors have the most built-in accelerators offered in an Intel processor and are designed to deliver performance per watt improvements.

The latest Intel® Accelerator Engines and software optimizations help improve power efficiency across AI, data analytics, networking and storage. Organizations can achieve a 2.9x average performance per watt efficiency improvement for targeted workloads utilizing built-in accelerators compared with the previous generation.¹ This leads to more efficient CPU utilization, lower electricity consumption and higher return on investment, while helping businesses achieve their sustainability and carbon reduction goals.

Advanced Power Controls and Telemetry

4th Gen Intel Xeon Scalable processors also have power management tools to enable more control and greater operational savings. For example, new Optimized Power Mode in the platform BIOS can deliver up to 20% socket power savings with a less than 5% performance impact for selected workloads.²

Organizations can make dynamic adjustments to save electricity as computing needs fluctuate. Intel Xeon Scalable processors have built-in telemetry tools that provide vital data and AI capabilities to help intelligently monitor and manage CPU resources, build models that help predict peak loads on the data center or network, and tune CPU frequencies to reduce electricity use when demand is lower. This opens the door to greater electricity savings, the ability to selectively increase workloads when renewable energy sources are available and an opportunity to lower the carbon footprint of data centers.

In addition, only Intel offers processor SKUs optimized for liquid-cooled systems, with an immersion cooling warranty rider available, helping organizations further advance their sustainability goals.



Eco-Conscious Manufacturing

Intel's vision is to accelerate sustainable computing, from manufacturing to products to solutions, for a sustainable future. Organizations can reduce their scope 3 GHG emissions by choosing 4th Gen Intel Xeon Scalable processors, which are manufactured with 90-100% renewable energy at sites with state-of-the-art water reclamation facilities that in 2021 recycled 2.8 billion gallons of water.

To help organizations meet their goals for sustainable procurement, Intel will continue to focus its sustainability efforts across product design, manufacturing and supply chain partnerships, and ecosystem collaboration on standards and scalable solutions.

About Intel

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¹ See [E1] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.

² See [E6] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.

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