Product overview

Product description and front, rear, and inside views

ThinkSystem V2 architecture overview

The Lenovo ThinkSystem V2 four-socket (4S) server is equipped with 3rd Generation Intel Xeon Scalable processors (formerly codenamed Cooper Lake or CPX6), which are based on the Intel Cedar Island platform.

Intel Xeon Scalable processor platform comparison

Scroll down for more information

Items	1st Gen Intel Xeon Scalable processor	2nd Gen Intel Xeon Scalable processor	3rd Gen Intel Xeon Scalable processor
Platform code name	Purley	Purley	Cedar Island
Processor code name	Skylake (SKL)	Cascade Lake (CLX)	Cooper Lake (CPX6)
CPU TDP (with IVR)	70 to 205 watts	85 to 205 watts	150 to 250 watts
Socket	Socket P (LGA 3647)	Socket P (LGA 3647)	Socket P+ (LGA 4189)
Scalability	2S, 4S, 8S	2S, 4S, 8S	2S, 4S, 8S
Cores	Up to 28 cores with Intel HT Technology	Up to 28 cores with Intel HT Technology	Up to 28 cores with Intel HT Technology
Memory	• Six channels DDR4 per CPU, two DIMMs per channel (2DPC) • RDIMM, LRDIMM, 3DS RDIMM • Memory speed: 2133, 2400, 2666 MHz • No support for Persistent Memory	• Six channels DDR4 per CPU, 2DPC • RDIMM, 3DS RDIMM • Memory speed: 2133, 2400, 2666, 2933 MHz • Support for Persistent Memory (PMem, formerly named DCPMM)	• Six channels DDR4 per CPU, 2DPC • RDIMM, 3DS RDIMM • Memory speed: 2666, 2933, 3200 MHz • 3200 MHz only supports 1DPC • Support for Persistent Memory

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Intel UPI	• Two to three UPI links per CPU • UPI speed: 9.6 to 10.4 GT/s	• Two to three UPI links per CPU • UPI speed: 9.6 to 10.4 GT/s	• Six UPI links per CPU • UPI speed: 10.4 GT/s
PCIe	• PCIe 3.0 (2.5, 5.0, 8.0 GT/s) • 48 lanes per CPU	• PCIe 3.0 (2.5, 5.0, 8.0 GT/s) • 48 lanes per CPU	• PCIe 3.0 (2.5, 5.0, 8.0 GT/s) • 48 lanes per CPU
PCH	Intel C620 series (Lewisburg, LBG)	Intel C620 series (Lewisburg, LBG)	• Intel C620A series (Lewisburg, LBG-R) • No Integrated 10 GbE/1 GbE ports

Cedar Island platform technologies

The Intel Cedar Island platform supports the following technologies:

- Up to 28 cores, six DDR4 memory channels, 48 PCIe 3.0 lanes, six Ultra Path Interconnects (UPIs)
- Thermal design power (TDP) up to 250 watts
- 16 GB-based DDR4 DIMM up to 3200 MT/s
- Intel Advanced Vector Extensions 512 (Intel AVX-512), for better HPC performance
- Intel Deep Learning Boost (Intel DL Boost), enhanced with bfloat16 for AI acceleration
- Intel Platform Firmware Resilience (PFR), protects your server at the hardware level
- Intel QuickAssist Technology (Intel QAT) by Add-in-Card (AIC), boosts security and performance
- Intel Security Libraries for Data Center
- Intel Security Essentials
- Intel Speed Select Technology
- Intel Optane Persistent Memory 200 Series (PMem)
- Intel Infrastructure Management Technologies
- Intel Virtual RAID on CPU (VROC), PCH SATA and NVMe RAID
- Intel Volume Management Device (VMD), Intel driver for NVMe SSDs