Overview

Intel Xeon W5580, 3.20GHz, 8MB L3, 1333MHz Memory, 130W	NF154AA
Intel Xeon W5590, 3.33GHz, 8MB L3, 1333MHz Memory, 130W	VB047AA

Introduction

Intel's latest-generation microarchitecture represents the next step in unprecedented processor performance and dynamic scalability. Designed from the ground up to take advantage of hafnium-based Intel® 45nm hi-k metal gate silicon technology, Intel® Microarchitecture (Nehalem) unleashes parallel processing performance enabled by Intel® QuickPath technology providing an integrated memory controller and high-speed interconnect per independent processing core.

Performance and Features

Maximum multitasking performance Intel® Microarchitecture (Nehalem) offers the latest in processor innovation, including:

- Dynamic scalability, managed cores, threads, cache, interfaces, and power for energy-efficient performance on demand.
- Design and performance scalability for servers, workstations, notebooks and desktops with support for 2-8+ cores and up to 16+ threads with Intel® Hyper-Threading Technology (Intel® HT Technology), and scalable cache sizes, system interconnects, and integrated memory controllers.
- Intel® Turbo Boost Technology delivers additional performance automatically when needed by taking advantage of the processor's power and thermal headroom. This enables increased performance of both multi-threaded and single-threaded workloads.
- Intel Hyper-Threading Technology brings high-performance applications into mainstream computing with 1-16+ threads optimized for a new generation multi-core processor architecture.
- Scalable shared memory of Intel® QuickPath technology features memory distributed to each processor with integrated memory controllers and high-speed point-to-point interconnects to unleash the performance of future versions of next-generation Intel® multi-core processors.
- Multi-level shared cache improves performance and efficiency by reducing latency to frequently used data.

Turbo Boost Technology

This technology, now built into Xeon 5500 processors, will increase the speed of your processor on demand (from OS) if the CPU is operating below power / thermal specifications:

- Benefit of Turbo Boost (how much CPU speed up) depends on number of active cores.
- Likelihood of Turbo Boost operation increases when fewer cores are active.
- Likelihood of Turbo Boost operation increases when dynamic power mgt is enabled.

Technical Specifications

Processor Model	Speeds
Xeon W5590	3.33GHz

Overview