



News Fact Sheet

Creating an Open, Flexible, Secure Network

SAN FRANCISCO, Sept. 8, 2014 – Today, Intel introduced the Intel® Xeon® processor E5-2600 v3 series and supporting technologies, including the Intel® Communications Chipset 89xx Series and Intel® Ethernet Controller XL710 Family for enterprise, communications infrastructure and cloud service providers. By providing intelligent, standardized technologies, Intel is accelerating the transformation to an open, flexible and more cost-effective network that helps users keep up with the pace of traffic and deliver new services.

Intel® Xeon® Processor E5-2600 v3 Series for Communications Infrastructure

The Intel Xeon processor E5-2600 v3 series enables the consolidation of multiple communications workloads on a single, standardized architecture designed to provide fast innovation, optimized network capacity and a consistent user experience.

The Intel Xeon processor E5-2600 v3 series offers a 12-core option for excellent performance. This platform also offers [Intel® Advanced Vector Extensions \(Intel® AVX\) 2.0²](#), DDR4, and cache monitoring and allocation that helps with network performance and latency. Platform Storage Extensions (PSEs) are also integrated with the platform which helps eliminate the need for costly discrete storage components.

Recognizing the wide variety of workloads running on today's networks, the Intel Xeon processor E5-2600 v3 series family for communications contains nine new SKUs ranging from six cores (12 threads) to 12 cores (24 threads), and containing frequencies up to 2.6 GHz, and thermal design point (TDP) ranging from 52 watts to 120 watts. Low-power and robust thermal profile processor options are also included in this mix for smaller form factor applications with thermal constraints.

Intel® Communications Chipset 89xx Series

The [Intel Communications Chipset 89xx Series](#) with Intel® QuickAssist Technology, when paired with the Intel® Xeon® E5 v3 product family, offers hardware-assisted acceleration for workload optimization. Applications that use Intel QuickAssist Technology help increase workload efficiency by offloading servers from having to handle compute-intensive security, compression and packet operations. The Intel Communication Chipset Series 89xx along with the Intel® PCIe QuickAssist Adapter Card support Intel® QuickAssist Service virtualization for software defined networking (SDN) and network functions virtualization (NFV) initiatives.

Intel® Ethernet Controller XL710 Family

The Intel Ethernet Controller XL710 provides unfettered network connectivity by providing a flexible 10/40 gigabit Ethernet connection that enables much fast deployment of network services. When compared to the previous generation controller, the Intel Ethernet Controller XL710 delivers twice the bandwidth, while consuming only half the power¹.

The Intel Ethernet Controller XL710 is the primary networking connection for the Intel Xeon processor E5-2600 v3 platform and includes new hardware offloads and accelerators to

maximize the performance of virtualized networks. It is also optimized for the Intel® Data Plane Development Kit which enables efficient packet processing for network function virtualization (NFV) applications such as firewalls and load balancers.

This offering features Intel® Ethernet Flow Director, an advanced traffic steering capability that intelligently routes application flows to the appropriate CPU core. Servers, network and storage appliances, and telecommunications equipment are ideal applications for the Intel Ethernet Controller XL710.

Building a Complete Networking Solution

The Intel® Open Network Platform Server (Intel® ONP Server) is a reference architecture to enable a broad ecosystem of high performance SDN and NFV solutions that are built using open source software ingredients and open standards on Intel® architecture based servers. The reference architecture is designed for optimal usage with the new Intel Xeon E5-2600 v3 processors, the Intel® Communications Chipset 89xx Series and the Intel Ethernet Controller XL710 in combination with open source software ingredients including OpenStack, OpenDaylight, Open vSwitch, the Intel® Data Plane Development Kit, and Intel® QuickAssist Technology Drivers. Solutions based on the Intel® ONP Server can help increase service agility by enabling rapid deployment and scale of applications and services, improve capex by the utilization of industry standard servers, and help network efficiency resulting in reduced opex. The Intel ONP reference architecture is available at www.01.org.

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The cost reduction scenarios described in this document are intended to enable you to get a better understanding of how the purchase of a given Intel product, combined with a number of situation-specific variables, might affect your future cost and savings. Nothing in this document should be interpreted as either a promise of or contract for a given level of costs.

¹ Source as of Aug 2014: Calculated Gb/Watt for 2@ Intel Ethernet CNA X520-DA2 Dual-port Twinax Typical Power 11.6W 2: 1@ Intel Ethernet CNA X710-DA4 Quad-port Twinax Typical Power 3.4W for a 222% increase in Gb/Watt (Typical).

² AVX has the following disclaimer: Intel® Advanced Vector Extensions (Intel® AVX)* provides higher throughput to certain processor operations. Due to varying processor power characteristics, utilizing AVX instructions may cause a) some parts to operate at less than the rated frequency and b) some parts with Intel® Turbo Boost Technology 2.0 to not achieve any or maximum turbo frequencies. Performance varies depending on hardware, software, and system configuration and you can learn more at <http://www.intel.com/go/turbo>.