March 9, 2015

intel.

Intel Packs Power, Intelligence of Xeon® Processor Into System-on-Chip Offering to Target New, Growing Network Opportunities

First 14nm Intel Xeon Product Family Delivers Server-Class Capabilities in a Dense, Low- Power System-on-Chip Optimized for Cloud, Telco Service Providers and Web Hosters

SANTA CLARA, Calif.--(BUSINESS WIRE)-- Intel Corporation today announced the Intel® Xeon® processor D product family, the company's first Intel Xeon processor-based system-on-chip (SoC). Built on Intel's industry-leading 14nm process technology, the Intel Xeon processor D product family combines the performance and advanced intelligence of Intel Xeon processors with the size and power savings of an SoC.

Intel® Xeon® processor D product family (Photo: Business Wire)

The rapid proliferation of connected devices is driving exponential growth in data traffic, increasing the demands on the data center and network infrastructure for cloud and telecommunication service providers. As these customers look to efficiently scale their network infrastructure and seek to rapidly deliver new, revenue generating services, they are moving to standard Intel architecture to provide both the technology solutions and consistency required across the data center and network.

The Intel Xeon processor D product family offers new options for addressing the growing need for low-power, high density infrastructure solutions, extending Intel technology from the edge of data centers to the network. This provides customers with enhanced intelligence and greater agility to rapidly deliver new services at a lower total cost of ownership (TCO). Also, with server-class reliability, availability and serviceability (RAS) features now available in an ultra-dense, low-power device, telecommunication service providers will be able to deliver intelligent edge networks.

"The growth of connected devices and demand for more digital services has created new opportunities for information and communication technology," said Diane Bryant, senior vice president and general manager of the Data Center Group at Intel. "By bringing Intel Xeon processor performance to a low-power SoC, we're delivering the best of both worlds and enabling our customers to deliver exciting new services."

News Facts

- The Intel Xeon processor D product family is the first Intel Xeon SoC, and Intel's third

- generation of 64-bit SoC for microserver, storage, network and the Internet of Things (IoT).

- Products deliver up to 3.4x faster performance per node[1] and up to 1.7x better performance per watt[2] when compared to the Intel® Atom™ processor C2750, part of Intel's second-generation 64-bit SoC product family.

- Launching 4- and 8-core microserver optimized SoCs today, with a more comprehensive portfolio of network, storage and IoT SoCs targeted for availability in the second half of this year.

- Initial products are optimized for hosters and cloud service providers for a variety of workloads such as dedicated web hosting, memory caching, dynamic web serving and warm storage. Future storage and network optimized products will target usages such as entry SAN and NAS appliances, edge routers and wireless base stations, as well as industrial IoT devices.

- There are more than 50 systems currently in design. Approximately 75 percent are network, storage and IoT designs. System providers currently designing microservers based on the Intel Xeon processor D family include: Cisco*, HP*, NEC*, Quanta Cloud Technology*, Sugon* and Supermicro*.

- Combines industry standard x86 cores, the industry's most widely deployed data center processor microarchitecture, with two ports of integrated 10GbE Intel® Ethernet and integrated I/Os (PCIe, USB, SATA and other general purpose I/Os) on a single package. It operates at a thermal design point near 20 watts and supports up to 128GB of addressable memory.

- Delivers advanced server-class reliability, availability and serviceability (RAS) features, including support for error-correcting code memory, combined with enhanced hardware-based Intel® Virtualization Technology and Intel® Advanced Encryption Standard-New Instructions (AES-NI).

"As the largest web hosting provider in Europe, technology innovation is critical to the company's success," said Robert Hoffmann, CEO 1&1 Internet AG. "As part of our broad technology collaboration with Intel, we are evaluating the new Intel Xeon processor D-based server platforms to help deliver a unique combination of performance and efficiency obtained from this first Intel Xeon SoC solution."

Supporting Resources

- Intel Xeon processor D product family page: www.intel.com/xeond
- Intel Xeon processor D product brief: www.intel.com/xeondbrief
- Customer video: www.intel.com/1and1
- Intel blog: http://intel.ly/xeondblog

Pricing[3] & Availability

- Intel Xeon Processor D-1520 (4-core) $199.00

- Intel Xeon Processor D-1540 (8-core) $581.00

The products are available today. The extended Intel Xeon processor D product family including microserver, network, storage and IoT optimized SoCs is expected to be available in the second half of this year.

About Intel

Intel (NASDAQ:INTC) is a world leader in computing innovation. The company designs and builds the essential technologies that serve as the foundation for the world's computing devices. As a leader in corporate responsibility and sustainability, Intel also manufactures the world's first commercially available "conflict-free" microprocessors. Additional information about Intel is available at newsroom.intel.com and blogs.intel.com, and about Intel's conflict-free efforts at conflictfree.intel.com.

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Results have been measured by Intel based on software, benchmark or other data of third parties and are provided for informational purposes only. Any difference in system hardware or software design or configuration may affect actual performance. Intel does not control or audit the design or implementation of third party data referenced in this document. Intel encourages all of its customers to visit the websites of the referenced third parties or other sources to confirm whether the referenced data is accurate and reflects performance of systems available for purchase.

[1] Up to 3.4x better performance on Dynamic Web Serving Intel® Xeon Processor D-based reference platform with one Pre-Production Xeon Processor D (8C, 1.9GHz, 45W, V1-stepping, ES2), Turbo Boost Enabled, Hyper-Threading enabled, 64GB memory (4x16GB DDR4-2133 RDIMM ECC), 2x10GBase-T X552, 3x S3700 SATA SSD, Fedora* 20 (3.17.8-200.fc20.x86_64, Nginx* 1.4.4, Php-fpm* 15.4.14, memcached* 1.4.14, Simultaneous users=43844 Supermicro SuperServer* 5018A-TN4 with one Intel Atom Processor C2750 (8C, 2.4GHz, 20W), Turbo Boost Enabled, 32GB memory (4x8GB DDR3-1600 SO-DIMM ECC), 1x10GBase-T X520, 2x S3700 SATA SSD, Ubuntu* 14.10 (3.16.0-23 generic), Nginx* 1.4.4, Php-fpm* 15.4.14, memcached* 1.4.14, Simultaneous users=12896.

[2] Up to 1.7x (estimated) better performance per watt on Dynamic Web Serving Intel® Xeon Processor D-based reference platform with one Pre-Production Xeon Processor D (8C, 1.9GHz, 45W, V1-stepping, ES2), Turbo Boost Enabled, Hyper-Threading enabled, 64GB memory (4x16GB DDR4-2133 RDIMM ECC), 2x10GBase-T X552, 3x S3700 SATA SSD,

Fedora* 20 (3.17.8-200.fc20.x86_64, Nginx* 1.4.4, Php-fpm* 15.4.14, memcached* 1.4.14, Simultaneous users=43843, Estimated wall power based on microserver chassis, power=90W, Perf/W=487.15 users/W Supermicro SuperServer* 5018A-TN4 with one Intel Atom Processor C2750 (8C, 2.4GHz,20W), Turbo Boost Enabled, 32GB memory (4x8GB DDR3-1600 SO-DIMM ECC), 1x10GBase-T X520, 2x S3700 SATA SSD, Ubuntu* 14.10 (3.16.0-23 generic), Nginx* 1.4.4, Php-fpm* 15.4.14, memcached* 1.4.14, Simultaneous users=12896. Maximum wall power =46W, Perf/W=280.3 users/W

[3] Estimated MSRP. Actual prices may vary.

Photos/Multimedia Gallery Available:
http://www.businesswire.com/multimedia/home/20150309005167/en/

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Source: Intel Corporation