Introducing:
Intel® Xeon® Processor D
Product Family
Extending Intelligence to the Edge

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Optimization Notice

Intel's compilers may or may not optimize to the same degree for non-Intel microprocessors for optimizations that are not unique to Intel microprocessors. These optimizations include SSE2, SSE3, and SSE3 instruction sets and other optimizations. Intel does not guarantee the availability, functionality, or effectiveness of any optimization on microprocessors not manufactured by Intel.

Microprocessor-dependent optimizations in this product are intended for use with Intel microprocessors. Certain optimizations not specific to Intel microarchitecture are reserved for Intel microprocessors. Please refer to the applicable product User and Reference Guides for more information regarding the specific instruction sets covered by this notice.

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Today's News

Intel® Xeon® Processor D-1500 now in production
1st ever Xeon SoC - 3rd generation 64-bit SoC

Up to 3.4x\(^1\) more performance vs. Intel® Atom™ Processor C2750

Foundation for extending intelligence beyond core data center

>50 systems in design

Network, Storage, IoT, Microservers

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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, 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

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.
Rise of Digital Services Economy
The Explosion of Devices, Data, and Digital Services

Devices

50B Devices by 2020

10x

Data

44 Zetabytes by 2020

10x

Services

$450B in Digital Services Revenue

2x

Underlying infrastructure needs to scale

1 Source: IDC.
2 IMC/EDC: The Digital Universe of Opportunities.
3 Source: iDATA /Digiworld, 2013.
Barriers to Efficient Scaling

Telecommunication Service Providers
- Monetize infrastructure
- Rapidly provision
- Deliver edge analytics

Cloud Service Providers
- Scale faster
- Service more users
- Space / power constraints
Announcing the Intel® Xeon® Processor D-1500
Utilizing 20 Years of Data Center Experience

IN PRODUCTION

Intelligent
Xeon performance and features
RAS, Intel® Virtualization Tech,
Platform Storage Extensions, Intel® AES-NI

Dense
Integrated Intel® Ethernet & I/Os
~20 – 45 W

Agile
IA Software Compatible
Software scalability across platforms

System on a Chip (SoC)
Intel 14nm process technology
Extending Intelligence to the Edge

Intel® Xeon® Processor D Product Family

Today's Focus

2nd Half of 2015

WARM STORAGE
MEMORY CACHING
DEDICATED HOSTING
DYNAMIC WEB SERVING
ENTRY SAN/NAS
NETWORK & SECURITY APPLIANCES
WIRELESS BASE STATIONS
EDGE ROUTERS

Intel® Xeon® Processor E5 Product Family
Introducing: Intel® Xeon® Processor D-1540 and D-1520

Two Optimized SoCs Available Today
- D-1540 (8c/16t, 2GHz, 45W)
- D-1520 (4c/8t, 2.2GHz, 45W)

Intel® Xeon® Processor Performance
- Up to 3.4x better performance
- Up to 1.7x better performance/watt

Integrated 2 x 10GbE Intel® Ethernet, I/Os
- Up to 5x better network bandwidth
- Integrated I/Os (24x PCIe 3, 8x PCIe 2, 6x SATA3, 4x USB etc.)

Enhanced Memory Architecture
- DDR4 DIMMs, up to 12MB L3 cache
- 128 GB addressable memory

Compared to Intel Atom™ C2750
1 Up to 3.4x better performance and perf/watt on Dynamic Web Serving
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2 Calculated bandwidth – 1 Gbps x 4 for Atom C2750. 10 Gbps x 2 for Xeon D-1540 = 5x increase in bandwidth.
Over 50 Intel® Xeon® Processor D based system designs

Network & IoT
- 43%
- 32%
- 25%

Microserver

Storage

Intel® Xeon® Processor D-1500 Microserver Systems

More details on Storage, Network, and IoT optimized SoCs and OEMs in 2H’15
Broad Intel Architecture (IA) Ecosystem

Deep enabling relationships w/ software and solution providers
- 7K+ software ISVs worldwide
- 1K+ downstream channel partners

Significant Intel investments in software capabilities and expertise
- 100+ million person hours spent optimizing applications on IA

Intel: The #1 contributor to Linux open source
Source: Feb 2015 Linux Foundation Report

1 - Based on Intel estimates
Recapping Today's News

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