For more than a decade, AMD and HP have collaborated to deliver an outstanding technology portfolio – from the desktop to the datacenter – that continues to grow more robust every year. Today, HP is a leading provider of servers based on AMD Opteron™ processors. Its product line now features an ever-broadening portfolio of trusted systems based on the entire family of AMD processors, including rack-mount servers, server blades, MicroServer, desktops and notebooks. Together, we’re delivering forward-thinking computing solutions for businesses of all sizes.

HP ProLiant servers based on AMD Opteron processors offer industry-leading performance, while at the same time help to reduce power and cooling requirements. AMD innovations like Direct Connect Architecture 2.0, hardware-based AMD Virtualization™ (AMD-V™) 2.0 technology and AMD-P 2.0 improve CPU performance, increase I/O performance within a virtual machine, and enable customers to monitor, control, and reduce power consumption. Together, HP and AMD deliver technology solutions to help businesses address the ever changing demands and challenges in the datacenter.
**AMD Opteron™ Platforms**

*Processors delivering performance, value, and compatibility*

### The AMD Opteron 6000 Series Platform

The AMD Opteron 6000 Series platform is the server platform you can count on as real-world workloads become increasingly complex and demanding. Based on the next-generation AMD Direct Connect Architecture 2.0 with up to 48 total cores in a 4P configuration, AMD Opteron 6100 Series processors more than double the memory bandwidth¹, and provide nearly 2x the I/O bandwidth of previous generation 2P and 4P servers², helping your business tackle complex jobs with greater throughput, exceptional value and readiness to scale.

### The AMD Opteron 4000 Series Platform

The AMD Opteron 4100 Series processor, part of the AMD Opteron 4000 Series platform, is the world's lowest power per core server processor³, setting the foundation for cloud workloads and affordability for mainstream infrastructure servers. AMD has leapfrogged its own leading-edge power efficient server processor designs by being the first to break the six watt/core barrier – allowing you to double the number of servers within the same power budget, compared to previous generations.³⁴

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### HP ProLiant G7 Servers Featuring AMD Opteron 6100 Series Processors

Since 1996, HP and AMD have been delivering superior quality, variety and value in computing technology. This collaboration provides end customers with technology innovation and performance-per-watt competitiveness while helping to drive a balanced computing market. The addition of HP ProLiant G7 servers powered by AMD Opteron 6100 Series processor technology extends this collaboration with affordable, energy-efficient solutions designed to give businesses of all sizes a competitive advantage.

HP’s next-generation ProLiant G7 servers with AMD Opteron 6100 Series processors help customers improve business efficiency and consolidate many servers down to one.⁵ HP provides unique capabilities and technologies such as Thermal Logic, Common Power Supplies, Smart Arrays and HP ProLiant Insight Control to deliver servers that meet customers’ ever-changing business demands. HP ProLiant G7 servers based on AMD Opteron 6100 Series processors deliver the key technology advancements that customers need to take control of their business. And with an ROI payback in as little as 30 days, it’s time to upgrade to the newest HP ProLiant G7 servers with AMD Opteron 6100 Series processors.⁵
HP ProLiant G7
Rack-Mount Servers

HP ProLiant DL165 G7 Server
The HP ProLiant DL165 G7 is a high-performance, low-cost, ultra-dense rack server designed for memory-intensive high-performance computing (HPC) environments, web serving and memory-intensive applications.

• Form factor: 2P; 1U rack optimized
• Powered by up to two (2) eight- or twelve-core AMD Opteron 6100 Series processors
• (24) DIMM sockets – Up to 256GB of DDR3 memory

HP ProLiant DL385 G7 Server
The HP ProLiant DL385 G7 is designed with virtualization in mind with up to 24 DIMMs and 4 NIC ports, yet flexible and expandable to support any business need in many environments from corporate datacenters to sophisticated SMBs.

• Form factor: 2P; 2U rack optimized
• Powered by up to two (2) eight- or twelve-core AMD Opteron 6100 Series processors
• (24) DIMM sockets – Up to 256GB of DDR3 memory
• ROI payback in as little as two months

HP ProLiant DL585 G7 Server
The HP ProLiant DL585 G7 server provides outstanding performance and reliability as well as industry-leading management solutions, making it an ideal solution for virtualization/consolidation environments and corporate datacenter infrastructure.

• Form factor: 4P; 4U rack optimized
• Powered by up to four (4) eight- or twelve-core AMD Opteron 6100 Series processors
• (48) DIMM sockets – Up to 512GB of DDR3 memory
• ROI payback in as little as 30 days

HP ProLiant G7 Server Blades

HP ProLiant G7 server blades feature the latest eight- and twelve-core AMD Opteron 6100 Series processors, integrated HP Virtual Connect FlexFabric architecture, and HP Integrated Lights-Out 3 (iLO3) remote management, helping to simplify network connections, minimize infrastructure costs, and deliver the performance that you expect for demanding application workloads.

These enhanced server blades come with an HP Smart Array Controller, support for hot-plug drives, double the memory over previous generations and Virtual Connect FlexFabric networking. The servers deliver an ideal combination of performance, networking capability and memory capacity – all while providing good value for your money – giving you and your business a competitive advantage.

HP ProLiant BL465c G7 Server Blade
The HP ProLiant BL465c G7 has the processing power needed to drive virtualization and mainstream business applications with up to 16 DIMMs and two 10Gb Ethernet ports with converged network support.

• Form factor: 2P half-height server blade
• Powered by up to two (2) eight- or twelve-core AMD Opteron 6100 Series processors
• (16) DIMM sockets – Up to 256GB of DDR3 memory

HP ProLiant BL685c G7 Server Blade
The HP ProLiant BL685c G7 is a dense four-processor server blade with the processing power needed to drive virtualization and compute-intensive database workloads with up to 32 DIMMs and four 10Gb Ethernet ports with converged network support.

• Form factor: 4P full-height server blade
• Powered by up to four (4) eight- or twelve-core AMD Opteron 6100 Series processors
• (32) DIMM sockets – Up to 512GB of DDR3 memory
Driven by business growth, scale-out computing is gaining momentum with businesses striving to build economics into their datacenters. The all-new HP ProLiant SL6500 Scalable System is designed for such scale-out deployments. It comes with a highly flexible s6500 chassis, which enables reduced overall IT expenses and enhanced power efficiency by adopting a shared power and cooling architecture. The HP ProLiant SL6500 Scalable System is designed for service providers and high-performance computing. The HP ProLiant SL6000 family is optimized for scale-out customers to greatly reduce costs and maximize power efficiency by sharing power supplies and fans, and maintain total flexibility.

**HP ProLiant SL335s G7**

The HP ProLiant SL335s G7 server is part of the HP ProLiant SL6500 family, optimized for scale-out customers and designed to greatly reduce costs and maximize power efficiency while providing an infrastructure that is easy to access and service. The HP ProLiant SL335s G7 server is ideal for environments needing high-density compute at a low cost such as Web hosting and Web front end.

- Form factor: 2P, 1U half-width tray. Up to eight independent HP ProLiant SL335s G7 servers go into the 4U HP ProLiant SL6500 chassis
- Powered by up to two (2) six-core AMD Opteron 4100 Series processors
- (12) DIMM slots – up to 128GB of DDR3 memory; 12MB L3 cache

**HP ProLiant SL165s G7**

The HP ProLiant SL165s G7 server is part of the HP ProLiant SL6500 family, optimized for scale-out customers and designed to greatly reduce costs, maximize power efficiency (by sharing power supplies and fans), and maintain total flexibility. The HP ProLiant SL165s G7 is optimized for applications needing large amounts of memory and I/O expansion such as scale-out, Web 2.0, and high-performance computing (HPC) environments.

- Form factor: 2P, 1U full-width tray node. Four independent HP ProLiant SL165s G7 servers go into the 4U HP ProLiant s6500 chassis
- Powered by up to two (2) eight- or twelve-core AMD Opteron 6100 Series processors
- (24) DIMM slots – Up to 256GB of DDR3 memory; 12MB L3 cache

**HP ProLiant SL165z G7 Server**

The HP ProLiant SL165z G7 is optimized for applications needing large amounts of memory and I/O expansion. The HP ProLiant SL165z G7 server is part of the HP ProLiant SL6000 family, optimized for scale-out customers to greatly reduce costs, maximize power efficiency, by sharing power supplies and fans, and maintain total flexibility.

- Form factor: 2P; 1U. Two independent HP ProLiant SL165z G7 servers go into the 2U HP ProLiant z6000 chassis
- Powered by up to two (2) eight- or twelve-Core AMD Opteron 6100 Series processors
- (24) DIMM sockets – Up to 288GB of DDR3 memory

For more information visit www.amd.com/hp

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1. Based on quad channel DDR3-1333 for AMD Opteron 6100 Series processor vs. dual channel DDR2-800 for Six-Core AMD Opteron processor.
2. I/O comparison based on 3x HyperTransport™ technology links @ up to 4.8 GT/s (up to 14.4 GT/s total bandwidth) for Six-Core AMD Opteron processor vs. 4x HyperTransport™ technology links @ up to 6.4 GT/s (up to 25.6 GT/s total bandwidth) for AMD Opteron 6100 Series processor.
4. Based on AMD internal measurements as of March 15, 2010, comparing of Supermicro 2021M-UR with 2x Quad-Core AMD Opteron processor Model P280, 500GB WD5000ABPS, 6x2GB RDRA25610480D DIMMs vs. Tyen 8228 with 2x AMD Opteron Processor Model 4162 EE (pre-production EVT). 128 GB MMCRE28G5MXP-GV8 SATA SSD, 4x 4GB 1 5v RDRA3 1066 DIMMs. running server-side java business operations at 100% load point. Power measurements taken at the wall. Any difference in system hardware or software design or configuration may affect actual performance.
5. 30 day ROI based on HP calculations assuming consolidation from more than 100 HP ProLiant DL380 G4 servers each with 2x 1-core 3.8GHz Intel Xeon processors at 20% utilization to one $12,482 HP ProLiant DL585 G7 with 4x 12-core AMD Opteron™ processor model 6174 at 60% utilization. $800 per year per server licensing fees. Actual ROI may vary.
6. Two month ROI based on HP calculations assuming consolidation from 34 HP ProLiant DL380 G4 servers each with 2x 1-core 3.8GHz Intel Xeon processors at 30% utilization to one $5,747 HP ProLiant DL385 G7 with 2x 12-core AMD Opteron™ processor model 6174 at 60% utilization. $800 per year per server licensing fees. Actual ROI may vary.

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