#1 Blade: HP ProLiant BL2x220c G6 takes lead on power performance
HP Server Blades reign with top energy efficiency

- #1 blade SPECpower_ssj2008 performance record

## HP performance brief

### Benchmark:
**SPECpower_ssj2008**

### Top performing

With the outstanding energy efficient performance result of 2,113 overall ssj_ops/watt, the HP ProLiant BL2x220c G6 earned the #1 spot for server blades on the SPECpower_ssj2008 benchmark.

### Only HP blades

Only HP blades have proven their power performance prowess on the SPECpower_ssj2008 benchmark. There are no competitive blade results on this benchmark from Dell or IBM.

### Thermal Logic adds value

HP’s Thermal Logic, with its portfolio of embedded technologies for an energy-efficient data center, enables customers to:

- REDUCE total energy consumption.
- RECLAIM trapped data center power and cooling resources without sacrificing performance with HP ProLiant servers using HP Dynamic Power Capping.
- EXTEND the life of the data center by utilizing HP Energy Efficiency Services that includes Assessment and Design Services for Data Center Transformation, exceptional designs, and partnering with facilities management providers.

More information about SPECpower_ssj2008 results can be found at the following web page: [http://www.spec.org](http://www.spec.org). HP results accepted 11-04-09. Software availability: July 2009; hardware availability: November 2009

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ProLiant 2x220c G6 Server Blade

The HP ProLiant BL2x220c G6 combines outstanding compute performance and energy efficiency to give customers the ability to make the most of their datacenter.

![Figure 1: With this SPECpower_ssj2008 result, the ProLiant BL2x220c G6 is top blade server for power performance.](image)

**Figure 1:** With this SPECpower_ssj2008 result, the ProLiant BL2x220c G6 is top blade server for power performance.

What are the customer benefits of using HP ProLiant server blades with SPECpower_ssj2008?

This measurement provides a way to compare the power/performance or energy efficiency of servers. As with its previous benchmark world records, HP demonstrates that its ProLiant server blade family, built upon the latest industry-standard technology, is an industry leader in energy efficiency.
The HP ProLiant BL2x220c G6 is the latest generation of the industry’s only 2-in-1 server blade, offering excellent power efficiency in a dense form factor to help scale-out and cluster computing environments efficiently utilize their infrastructure resources.

With support of up to 32 server nodes per enclosure and two Quad-Core CPUs per node, the BL2x220c G6 expands to provide up to 1024 cores in a 42U rack. Also, the BL2x220c G6 has a large memory footprint with 96GB of DDR3 memory per server node.

<table>
<thead>
<tr>
<th>HP ProLiant BL2x220c G6</th>
<th>Overall ssj_ops/watt</th>
<th>Availability</th>
<th>Database/OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(32 nodes, 2 x Quad-Core Intel Xeon L5520 2.27GHz per node)</td>
<td>2,113</td>
<td>November 2009</td>
<td>Microsoft Windows Server 2008 x64 Enterprise Edition SP2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HP ProLiant BL280c G6</th>
<th>Overall ssj_ops/watt</th>
<th>Availability</th>
<th>Database/OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(16 nodes, 2 x Quad-Core Intel Xeon L5520 2.27GHz per node)</td>
<td>1,877</td>
<td>August 2009</td>
<td>Microsoft Windows Server 2008 x64 Enterprise Edition SP2</td>
</tr>
</tbody>
</table>

HP customers who utilize HP BladeSystem servers can realize a substantial increase in performance and better energy efficiency, according to this test outcome.

HP ProLiant BL2x220c G6 configuration

Each HP ProLiant BL2x220c G6 server was configured with 2 x 2.27GHz Quad-Core Intel Xeon L5520 processors, with 8MB I+D L3 cache, and 8GB (4 x 2048MB PC3-10600E) memory. The servers were running Microsoft Windows Server 2008 x64 Enterprise Edition SP2 operating system. Each ProLiant BL2x220c G6 also utilized 1 x 32GB Small Form Factor SSD SATA drive.

HP blades and reducing energy consumption

The HP ProLiant G6 server line, which delivers double the performance of previous generations, enables customers to get more value out of every IT dollar.

The HP ProLiant G6 line’s advances in energy efficiency, virtualization, and automation, make it ideal for all customers.

Customers get a feature set focused on power savings and improving efficiency with the ProLiant BL2x220c server blade.

The HP ProLiant BL2x220c G6 also offers excellent power efficiency in a dense form factor to help scale-out and cluster computing environments efficiently utilize their infrastructure resources. The combination of outstanding compute performance and energy savings gives customers the ability to make the most of their datacenter.

What SPECpower_ssj2008 measures

Currently, many vendors report some energy-efficiency figures, but these are often not directly comparable due to differences in workload, configuration, test environment, etc. SPEC defines server power measurement standards with the same keen attention to detail it has applied to performance. This benchmark provides a means to measure power in conjunction with a performance metric, enabling IT managers to consider power characteristics to increase the efficiency of data centers. Being a Standard Performance Evaluation Corporation (SPEC) benchmark, SPECpower_ssj2008 is a peer-reviewed benchmark that provides a way for server vendors to compare benchmark results in a fair manner.

Technology for better business outcomes

To learn more, visit ProLiant BL2x220c G6: www.hp.com/servers/proliantbl2x220cg6
SPECpower_ssj2008 details: http://www.spec.org/benchmarks.html

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