ENERGY STAR® Power and Performance Data Sheet

HA8000 SS10xL : EL and FL model (with Dual core CPU)

System Characteristics

Form Factor	Pedestal
Available Processor Sockets	1
Available DIMM Slots / Max Memory Capacity	4slots / 16GB
ECC and/or Fully Buffered DIMMs	ECC DIMMs
Available Expansion Slots	3slots
Minimum and Maximum # of Hard Drives	Min 1, Max 4
Redundant Power Supply Capable?	No redundancy
Power Supply Make and Model	Tiger Power TG10-0250-01
Power Supply Output Rating* (watts)	250
Minimum and Maximum # of Power Supplies	1
Input Power Range (AC or DC)	AC 100V(for market condition)
Power Supply Efficiency at Specified Loadings*	85.05@20%, 88.48@50%, 85.90@100%
Power Supply Power Factor at Specified Loadings*	0.97@20%, 0.99@50%, 1.00@100%
Operating Systems Supported	Microsoft Windows Server® 2003, 2008 and 2008 R2
Installed Operating System for Testing	Microsoft Windows Server® 2008 R2 Standard

*** Note: Power supply information is for a single power supply only**

System Configurations	Minimum	Typical	Maximum
Configuration ID	GQ*S10FL-*******	GQ*S10EL-*******	GQ*S10EL-*******
Processor Information	Pentium G620	Pentium G620	Pentium G620
Memory Information	1GBx1=1GB	2GBx2=4GB	4GBx4=16GB
Internal Storage	250GBx1	250GBx2	2TBx4
I/O Devices	On board 1G x2port	On board 1G x2port, Add-in card 1G LAN x2port x1	On board 1G x2port, Add-in card 1G LAN x2port x3
Power Supply Number and Redundancy Configuration	1 / No redundancy	1 / No redundancy	1 / No redundancy
Management Controller or Service Processor Installed?	Yes	Yes	Yes
Other Hardware Features / Accessories	DVD-ROM	DVD-ROM	DVD-ROM, RDX

Power Data	Minimum	Typical	Maximum
Idle Category (1S and 2S only)	Category A: Standard Single Installed Processor (1P) Servers		
ENERGY STAR Idle Power Allowance (1S and 2S only)	55 W	67W	99 W
Measured Idle Power (watts)	30.12 W	37.05 W	50.73 W
Power at Full Load* (watts)	41.08 W	48.70 W	62.55 W
Benchmark / Method Used for Full Load Test	Sandra 2011 Engineer		
Test Voltage and Frequency for Idle and Full Load Test	115V / 60Hz		
Range of Total Estimated Energy Usage ** (kWh/year)	0,528 to 0,720	0,649 to 0,853	0,889 to 1,096
Link to Detailed Power Calculator (if available)			

*** Note: Full load power represents the sustained, average power at 100% load of the given workload, and does not necessarily represent the absolute peak power or the highest average, sustained power possible for other workloads.**

**** Note: Estimated kWh/year gives the absolute range of energy use a user could expect from continuous operation (24x7x365) and ranges from 100% Idle usage to 100% full load operation. The calculation also includes typical data center overhead at a ratio of 1 watt of overhead to every 1 watt of IT load (corresponding to a PUE of 2.0). Closer approximations may be found by using established power calculators and specific information about the intended operating environment (e.g., average time at Idle, data center PUE, etc.).**

Power and Performance for Benchmark #1		Minimum	Typical	Maximum
Benchmark #1	Benchmark Used and Type of Workload	Sandra 2011 Engineer		
	Avg. Power Measured During Benchmark Run	41.08 W	48.70 W	62.55 W
	Benchmark Performance Score	**6.00 MPixel/s**	**6.00 MPixel/s**	**6.00 MPixel/s**
	Power Performance Ratio (perf score/avg. power)			
	Link to Full Benchmark Report (Where Available)	N/A	N/A	N/A

Power and Performance for Benchmark #2 (optional)		Minimum	Typical	Maximum
Benchmark #2	Benchmark Used and Type of Workload			
	Avg. Power Measured During Benchmark Run			
	Benchmark Performance Score			
	Power Performance Ratio (perf score/avg. power)			
	Link to Full Benchmark Report (Where Available)			

ENERGY STAR Power and Performance Data Sheet

HA8000 SS10xL : EL and FL model (with Dual core CPU)

Power Saving Features	***Enabled on Shipment***	***End-User Enabling Required***
Processor Dynamic Voltage and Frequency Scaling	**Yes**	
Processor or Core Reduced Power States	**Yes (C1)**	
Power Capping		
Variable Speed Fan Control Based on Power or Thermal Readings	**Yes**	
Low Power Memory States		
Low Power I/O States		
Liquid Cooling Capability		
Other1:		
Other2:		
Other3:		
Other4:		

Power and Temperature Measurement and Reporting

Input Power Available & Accuracy?	N/A
Input Air Temp Available & Accuracy?	N/A
Processor Utilization Available?	N/A
Other Data Measurements Available & Accuracy?	N/A
Compatible Protocols for Data Collection	N/A
Averaging method and time period	N/A

Thermal Information*	***Minimum***	***Typical***	***Maximum***
Total Power Dissipation (watts)	41.08 W	48.70 W	62.55 W
Delta Temperature at Exhaust at Peak Temp. (˚C)			
Airflow at Maximum Fan Speed (CFM) at Peak Temp.			
Airflow at Nominal Fan Speed (CFM) at Nominal Temp.			

* References: ASHRAE Extended Environmental Envelope Final August 1, 2008
Thermal Guidelines for Data Processing Environments, ASHRAE, 2004, ISBN 1-931862-43-5
Peak temperature is defined as 35 ˚C, Nominal Temperature is defined as 18 - 27 ˚C

Notes

1. SPECpower_ssj2008 is a registered trademark of the Standard Performance Evaluation Corporation (SPEC). Benchmark results stated above reflect results published on XX/XX/XX. For the latest SPECpower_ssj2008 benchmark results, visit http://www.spec.org/power_ssj2008.

ENERGY STAR Qualified Configurations

Include specific information on ENERGY STAR Qualified SKUs or configurations

All configurations of HA8000 SS10 EL model, and SS10 FL model with Dual Core Processor
(Configuration ID : GQ*S10EL-*******, GQ*S10FL-*******)

ENERGY STAR Power and Performance Data Sheet

HA8000 SS10xL : EL and FL model (with Dual core CPU)

ENERGY STAR Qualified Configurations (Continued)

Include specific information on ENERGY STAR Qualified SKUs or configurations