

# ENERGY STAR® Power and Performance Data Sheet

[TS300-E7/PS4]



## System Characteristics

Form Factor	Stand alone
Available Processor Sockets	1
Available DIMM Slots / Max Memory Capacity	4 / 32 GB
ECC and/or Fully Buffered DIMMs	YES, ECC and Un-Buffered DIMMs
Available Expansion Slots	Up to 6 slots (3 PCI-E and 3 PCI-X)
Minimum and Maximum # of Hard Drives	0 to 4 Hot Swap 3.5" HDD
Redundant Power Supply Capable?	NO
Power Supply Make and Model	AcBel, model PCA013
Power Supply Output Rating* (watts)	500W 80+ Bronze Single Power Supply
Minimum and Maximum # of Power Supplies	1
Input Power Range (AC or DC)	AC100-240V
Power Supply Efficiency at Specified Loadings*	77.8%@10%, 83.9%@20%, 86.9%@50%, 82.6%@100%
Power Supply Power Factor at Specified Loadings*	0.818@10%, 0.884@20%, 0.932@50%, 0.978@100%
Operating Systems Supported	Windows® Server 2008 R2 Windows® Server 2008 Enterprise 32/64-bit
Installed Operating System for Testing	Windows® Server 2008 Enterprise SP1

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

## System Configurations

Processor Information	Intel® Xeon® E3-1230 3.2GHz
Memory Information	4G (2G x 2)
Internal Storage	500G x 2, Seagate ST3500413AS
I/O Devices	4 x Intel® 82574L + 1 x Mgmt LAN
Power Supply Number and Redundancy Configuration	1, Not Redundancy
Management Controller or Service Processor Installed?	YES
Other Hardware Features / Accessories	3 3.5" media bays (Options: No Device / DVD-RW)

## Power Data

Idle Category (1S and 2S only)	Category A: Standard Single Installed Processor (1P) Servers
ENERGY STAR Idle Power Allowance (1S and 2S only)	63
Measured Idle Power (watts)	44.9
Power at Full Load* (watts)	117.2
Benchmark / Method Used for Full Load Test	SiSoftware Sandra Lite 2011 SP3
Test Voltage and Frequency for Idle and Full Load Test	230
Range of Total Estimated Energy Usage ** (kWh/year)	0,786 to 2,053
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

Benchmark #1	Benchmark Used and Type of Workload	SiSoftware Sandra Lite 2011 SP3
	Avg. Power Measured During Benchmark Run	117.2
	Benchmark Performance Score	129GIPS
	Power Performance Ratio (perf score/avg. power)	0.908GIPS/watt
	Link to Full Benchmark Report (Where Available)	<u>N/A</u>

## Power and Performance for Benchmark #2 (optional)

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)	

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## Power Saving Features

	Enabled on Shipment	End-User Enabling Required
Processor Dynamic Voltage and Frequency Scaling	YES	
Processor or Core Reduced Power States	YES	
Power Capping	NO	YES
Variable Speed Fan Control Based on Power or Thermal Readings	YES	
Low Power Memory States	NO	YES
Low Power I/O States	NO	
Liquid Cooling Capability	NO	
Other1:		
Other2:		
Other3:		
Other4:		

## Power and Temperature Measurement and Reporting

Input Power Available & Accuracy?	YES, +/-10% under the operating power range
Input Air Temp Available & Accuracy?	YES, +/- 3°C
Processor Utilization Available?	YES
Other Data Measurements Available & Accuracy?	N/A
Compatible Protocols for Data Collection	IPMI
Averaging method and time period	Linear Average

## Thermal Information \*

	Minimum	Typical	Maximum
Reference Configurations		1xXeon E3-1230, 2x2GB DDR3 UDIMM RAM, 2x500GB SATAIII HDD, 1x500W PS	
Total Power Dissipation (watts)		117.2	
Delta Temperature at Exhaust at Peak Temp. (°C)		4.0	
Airflow at Maximum Fan Speed (CFM) at Peak Temp.		181.0	
Airflow at Nominal Fan Speed (CFM) at Nominal Temp.		67.9	

\* Thermal information is provided for the minimum, typical and maximum configurations for the model line  
 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](http://www.spec.org/power_ssj2008).