ENERGY STAR Computer Servers Product List - Families

List Current as of March 23, 2015

Below are currently qualified ENERGY STAR models available for sale in the U.S. and Canada

* Date Available on Market is not available for products qualified prior to January 1, 2011.

** Date Qualified is not available for products qualified prior to January 1, 2011.

The ENERGY STAR Computer Server Qualified Product List includes a limited amount of information on qualified computer server configurations. For more information on qualified models / configurations, please refer to the ENERGY STAR Power and Performance Data Sheet which is required to be provided on the manufacturer website where qualified product is displayed. This data sheet contains more detailed configuration information (e.g., information on installed I/O devices), performance information, and thermal characteristics of the Computer Server.

ENERGY STAR Partner	Brand	Model Name	Model Number	Model Number / Configuration ID		Product Type	Product Form Factor	Service Processor Installed (Y/N)	Available Processor Sockets	Number Of Installed Processors	Processor Brand	Processor Name	Processor Speed (GHz)		System Memory (GB)		Installed DIMMS		Number of Hard Drives		Total Installed Storage Capacity (GB)		Power Supply Rated Output (W)	Power Supplies Installed		Power Supplies Installed for Redundancy		Operating System Name Used for Testing	Available Power Saving Features	Enabled Power Saving Features	Power Supply Efficiency at 10% Load (%)	Power Supply Efficiency at 20% Load (%)	Power Supply Efficiency at 50% Load (%)	Power Supply Efficiency at 100% Load (%)
				Minimum Config.	Maximum Config.								Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.		Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.							

Power Factor at 10% Load	Power Factor at 20% Load	Power Factor at 50% Load	Power Factor at 100% Load	Idle Power Draw @ 230V (W)		Idle Power Draw @115V (W)		Idle Power Draw @100V (W)		Idle Power Draw @+/-53V DC (W)		Full Load Testing Voltage / Frequency		Full Power Load (W)		Date Available On Market*	Date Qualified**
				Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.	Minimum Config.	Maximum Config.		

Definitions for Servers Product Listing Column Headers

Column Header	Definition
ENERGY STAR Partner	An organization that signed a Partnership Agreement with EPA to manufacture or private label ENERGY STAR qualified products.
Brand	An identifier assigned by the manufacturer or private labeler to a product or family/series of products for sales and marketing purposes.
Model Name	An identifier assigned by the manufacturer or private labeler to a product or family/series of products for sales and marketing purposes.
Model Number	A distinguishing identifier, usually alphanumeric, assigned to a product by the manufacturer or private labeler.
Additional Model Information	This column includes for the qualified model or family, family members, additional model names, model numbers and other identifying information associated with a product or family/series of products for sales and marketing purposes. Other identifying information includes, but is not limited to, SKUs, UPC codes, retail numbers, and/or descriptions of models included/not included in the reported Model Family.
Product Type	The maximum number of sockets supported by the system.
Model Number / Configuration ID: Minimum Configuration	The model or configuration number for the minimum configuration of the qualified product family. It is defined as a minimally configured product that includes at least one hard drive and is currently available and sold in the marketplace (i.e., not under-configured). The Minimum Configuration typically has the minimum quantity of power supplies, minimum quantity of memory modules, a single hard drive, and a single integrated or add-in I/O device.
Model Number / Configuration ID: Maximum Configuration	The model or configuration number for the maximum configuration of the qualified product family. It is defined as a highly configured product that includes the combination of power supplies, memory, hard drives, I/O devices, etc. that results in the maximum possible power consumption within a product family.
Product Form Factor	The form factor describes the physical configuration of the product.
Service Processor Installed (Y/N)	Indicates whether the product has an installed service processor which may perform management and monitoring functions.

Column Header	Definition
Available Processor Sockets	The maximum number of processors the system can support.
Number of Installed Processors	The number of processors installed in the product's as-shipped configuration.
Processor Brand	The brand of the processor(s) installed in the product.
Processor Name	The model name or number of the processor(s) installed in the product.
Processor Speed (GHz) - Min and Max	A measure of the rate at which the processor executes instructions in GHz for the minimum and maximum configurations.
System Memory (GB) - Min and Max	The minimum and maximum amount of dynamic random-access memory the system can support, measured in GB.
Installed DIMMs - Min and Max	The number of dual in-line memory module installed in the product's minimum and maximum configurations.
Number of Hard Drives - Min and Max	The number of hard drives installed in the product's minimum and maximum configurations.
Total Installed Storage Capacity (GB) - Min and Max	The minimum and maximum amount of storage capacity the system can support, measured in GB.
Power Supply Rated Output (W)	The product of the current and voltage of the circuit at the maximum load the power supply is designed to support.
Power Supplies Installed - Min and Max	A power supply is defined as a self-contained component that converts a voltage input to one or more dc voltage outputs for the purpose of powering the server. The input voltage may be from an ac source or a dc source. A computer server PSU is separable from the main computer board and connects to the system via a removable or hard-wired male/female electrical connection, cable, cord or other wiring (i.e. separate from, and not integrated with, the system motherboard).
Power Supplies Installed for Redundancy - Min and Max	The number of additional power supply units that are installed explicitly for power redundancy in the product's minimum and maximum configurations.
Operating System Name Used for Testing	The name of the as-shipped operating system and/or representative operating system installed for testing.
Available Power Saving Features	All of the power savings features (e.g., power management) available for the product that may or may not be enabled in the as-shipped default configuration.
Enabled Power Saving Features	The enabled power savings features (e.g., power management) in the product's as-shipped default configuration.

Column Header	Definition
Power Supply Efficiency @ 10% Load (%)	The power supply's measured efficiency at 10% of the nameplate output current.
Power Supply Efficiency @ 20% Load (%)	The power supply's measured efficiency at 20% of the nameplate output current.
Power Supply Efficiency @ 50% Load (%)	The power supply's measured efficiency at 50% of the nameplate output current.
Power Supply Efficiency @ 100% Load (%)	The power supply's measured efficiency at 100% of the nameplate output current.
Power Factor @ 10% Load	The measured ratio of the active, or real, power (P) consumed in watts to the apparent power (S) drawn in volt-amperes at 10% of the power supply's nameplate output current.
Power Factor @ 20% Load	The measured ratio of the active, or real, power (P) consumed in watts to the apparent power (S) drawn in volt-amperes at 20% of the power supply's nameplate output current.
Power Factor @ 50% Load	The measured ratio of the active, or real, power (P) consumed in watts to the apparent power (S) drawn in volt-amperes at 50% of the power supply's nameplate output current.
Power Factor @ 100% Load	The measured ratio of the active, or real, power (P) consumed in watts to the apparent power (S) drawn in volt-amperes at 100% of the power supply's nameplate output current.
Idle Power Draw @ 230V (W) - Min and Max	The measured power during the state when the product is operational, but not processing any useful workpower for the minimum and maximum configurations. Reported if the power supply type is Ac-Dc Single-output or is an Ac-Dc Multi-output supply capable of operating at 230 V output.
Idle Power Draw @115V (W) - Min and Max	The measured power during the state when the product is operational, but not processing any useful workpower for the minimum and maximum configurations. Reported if supply type is Ac-Dc Multi-output supply capable of operating at 115 V output.
Idle Power Draw @100V (W) - Min and Max	The measured power during the state when the product is operational, but not processing any useful workpower for the minimum and maximum configurations. May be reported if the server is shipped to the Japanese market.
Idle Power Draw @+/-53V DC (W) - Min and Max	The measured power during the state when the product is operational, but not processing any useful workpower for the minimum and maximum configurations. Reported if the power supply type is Dc-Dc.
Full Load Testing Voltage / Frequency - Min and Max	The frequency and voltage of the unit under test at full load in the minimum and maximum configurations.

Column Header	Definition
Full Power Load (W) - Min and Max	The measured power at full load in the minimum and maximum configurations.
Date Available on Market	The date that the model is available for purchase.
Date Qualified	The date on which the product was confirmed to meet the ENERGY STAR specification.

Key Efficiency Criteria

Qualified models meet all ENERGY STAR requirements as listed in the Version 1.1 ENERGY STAR Program Requirements for Servers that are effective as of May 15, 2009.

A. Power Supply Efficiency Requirements

Efficiency Requirements for Computer Server Power Supplies				
Power Supply Type	**Rated Output Power**	**10% Load**	**20% Load**	**50% Load**
Multi-Output (AC-DC & DC-DC)	All Output Levels	N/A	82%	85%
Single-Output (AC-DC & DC-DC)	<= 500 watts	70%	82%	89%
	> 500–1,000 watts	75%	85%	89%
	> 1,000 watts	80%	88%	92%
	Efficiency Requirements for Computer Server Power Supplies			
Power Supply Type	**Rated Output Power**	**10% Load**	**20% Load**	**50% Load**
DC-DC All	All Output Levels	N/A	N/A	N/A
AC-DC Multi-Output	All Output Levels	N/A	0.80	0.90
AC-DC Single-Output	<= 500 watts	N/A	0.80	0.90
	> 500–1,000 watts	0.65	0.80	0.90
	> 1,000 watts	0.80	0.90	0.90

Note: Power factor requirements pertain to all loading conditions where the output power is greater than or Manufacturers are still required to measure and report power factor values for loading conditions less than ENERGY STAR.

B. Active Power Requirements

Single and Dual Processor Socket Computer Servers (1S & 2S)	
Base System Idle Power Requirements	
Computer Server System Type	**Id**
Category A: Standard Single Installed Processor (1P) Servers	
Category B: Managed Single Installed Processor (1P) Servers	
Category C: Standard Dual Installed Processor (2P) Servers	
Category C: Standard Dual Installed Processor (2P) Servers	

Additional Idle Power Allowances for Extra Components	
System Characteristic	**Additional**

	100% Load
	82%
	85%
	85%
	88%

	100% Load
	N/A
	0.95
	0.95
	0.95
	0.95

equal to 75 watts.
75 watts to qualify for

le Power Limit
55.0 watts
65.0 watts
100.0 watts
150.0 watts

Idle Power Allowances

Additional Power Supplies	20.0 watts per Power
Additional Hard Drives	8.0 watts per Hard Dri
Additional Memory	2.0 watts per GB
Additional I/O Devices	1Gbit No Allowance

Computer Servers with Greater than Two Processor Sockets (3S & 4S)
Systems must be shipped with power management functionality enabled on the system BIOS and/or a management co processor.
All processors must be able to reduce power consumption in times of low utilization by either: - Reducing voltage and/or frequency through Dynamic Voltage and Frequency Scaling (DVFS), or - Using processor or core reduced power states when a core or socket is not being used.

Supply
ve
ntroller of service