

Power Draw @ 1-23V DC (W)	Full Load Testing Voltage / Frequency	Full Power Load (W)	Date Available on Market	Date Qualified**
			12/15/2013	12/16/2013
			12/15/2013	12/16/2013
			12/26/2013	12/10/2013
			12/15/2013	12/22/2013
			11/13/2013	11/13/2013
			2/1/2014	6/23/2014
			3/1/2014	8/1/2014
			9/1/2012	2/9/2015
			2/1/2014	10/24/2014
			2/1/2014	10/24/2014
			12/1/2013	4/18/2014
			7/1/2014	12/3/2014
			4/1/2014	5/6/2014
			9/1/2014	11/7/2014
			2/1/2014	8/19/2014
			10/12/2011	1/13/2014
			2/28/2011	12/17/2013
			7/7/2010	12/17/2013
			3/15/2010	12/11/2013
			3/1/2011	12/20/2013
			4/15/2014	6/22/2014
			10/6/2013	1/13/2014
			10/6/2013	1/13/2014
			3/6/2012	12/20/2013
			3/6/2012	12/20/2013
			3/6/2012	12/20/2013
			3/5/2012	11/27/2013
			6/5/2012	1/13/2014
			6/5/2012	1/13/2014
			6/5/2012	11/27/2013
			6/26/2012	12/17/2013
			6/26/2012	12/17/2013
			3/29/2012	12/16/2013
			4/18/2014	4/22/2014
			9/3/2014	9/11/2014
			9/3/2014	9/11/2014
			6/30/2013	12/9/2014
			12/5/2014	11/25/2014
			12/4/2014	12/9/2014
			5/22/2012	12/25/2013
			5/22/2012	12/25/2013
			3/6/2012	12/25/2013
			9/18/2013	9/19/2013
			3/6/2012	12/30/2013
			12/5/2014	11/27/2014
			12/5/2014	11/26/2014
			12/5/2014	11/27/2014
			6/26/2012	12/25/2013
			6/26/2012	5/19/2014
			12/2/2014	11/6/2014
			12/2/2014	11/18/2014
			9/1/2014	8/14/2014
			12/2/2014	11/18/2014
			9/2/2014	8/20/2014
			3/24/2014	3/24/2014
			11/14/2013	9/10/2014
			9/27/2013	3/19/2014
			3/15/2012	6/27/2014
			3/6/2012	5/27/2014
			3/6/2012	4/24/2014
			3/6/2012	5/15/2014
			3/6/2012	5/27/2014
			3/6/2012	4/22/2014
			7/13/2012	5/27/2014
			3/15/2012	2/19/2014

Power Draw @ +/-5V DC (W)	Full Load Testing Voltage/Frequency	Full Power Load (W)	Date Available on Market*	Date Qualified**
			3/6/2012	4/24/2014
			3/6/2012	2/20/2014
			3/6/2012	7/23/2014
			9/15/2014	1/28/2015
			3/6/2012	7/23/2014
			3/6/2012	7/23/2014
			9/15/2014	1/14/2015
			9/15/2014	2/9/2015
			9/15/2014	2/16/2015
			9/15/2014	2/9/2015
			9/20/2013	9/16/2013
			10/6/2013	7/11/2014
			1/28/2014	7/24/2014
			1/28/2014	7/31/2014
			3/3/2014	1/8/2015
			3/6/2014	1/8/2015
			12/19/2014	1/8/2015
			10/30/2014	1/8/2015
			11/26/2014	1/7/2015
			8/21/2014	1/13/2015
			8/12/2014	1/8/2015
			5/19/2013	8/7/2014
			5/19/2014	1/7/2015
			6/5/2014	1/8/2015
			7/29/2014	1/13/2015
			2/19/2014	10/10/2014
			9/30/2013	11/26/2013
			10/31/2013	7/21/2014
			10/28/2013	12/3/2013
			1/20/2014	2/18/2014
			6/4/2011	1/31/2014
			12/13/2013	5/12/2014
			9/18/2013	11/25/2013
			9/18/2013	12/6/2013
			9/18/2013	11/25/2013
			9/18/2013	11/25/2013
			2/5/2013	5/16/2014
			4/28/2014	7/10/2014
			4/28/2014	7/10/2014
			4/11/2012	10/10/2014
			9/10/2013	10/1/2013
			2/20/2013	8/15/2013
			2/20/2013	8/15/2013
			3/15/2013	8/15/2013
			3/15/2013	8/15/2013
			10/20/2014	1/20/2015
			10/30/2014	1/20/2015
			1/16/2015	2/9/2015
			11/19/2014	2/11/2015
			1/6/2014	11/22/2013
			3/13/2014	2/17/2015
			4/3/2014	2/11/2015

Power Draw @ +/-5V DC (W)	Full Load Testing Voltage/Frequency	Full Power Load (W)	Date Available on Market*	Date Qualified**
			1/6/2014	11/22/2013
			10/21/2013	10/16/2013
			9/14/2014	8/25/2014
			10/21/2013	10/16/2013
			9/14/2014	8/25/2014
			9/14/2014	8/25/2014
			12/15/2014	12/2/2014
			12/15/2014	12/2/2014
			10/25/2013	12/12/2013
			10/25/2013	12/12/2013
			10/25/2013	12/12/2013
			7/26/2013	12/9/2013
			9/13/2013	1/8/2014
			9/13/2013	12/9/2013
			1/16/2014	3/12/2014
			1/16/2014	3/20/2014
			1/16/2014	2/19/2014
			1/16/2014	2/19/2014
			7/31/2014	7/9/2014
			7/31/2014	7/10/2014
			7/31/2014	7/15/2014
			7/31/2014	7/10/2014
			9/29/2014	3/5/2015
			9/29/2014	3/5/2015
			11/1/2014	1/23/2015
			1/1/2015	8/14/2014

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.
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.
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)	A measure of the rate at which the processor executes instructions in GHz.
System Memory (GB)	The amount of dynamic random-access memory the system can support, measured in GB.

Column Header	Definition
Number of Hard Drives	The number of hard drives installed in the product.
Total Installed Storage Capacity (GB)	The 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	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	The number of additional power supply units that are installed explicitly for power redundancy in the product.
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.
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.

Column Header	Definition
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)	The measured power during the state when the product is operational, but not processing any useful workpower. 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)	The measured power during the state when the product is operational, but not processing any useful workpower. Reported if supply type is Ac-Dc Multi-output supply capable of operating at 115 V output.
Idle Power Draw @100V (W)	The measured power during the state when the product is operational, but not processing any useful workpower. May be reported if the server is shipped to the Japanese market.
Idle Power Draw @+/-53V DC (W)	The measured power during the state when the product is operational, but not processing any useful workpower. Reported if the power supply type is Dc-Dc.
Full Load Testing Voltage / Frequency	The frequency and voltage of the unit under test at full load.
Full Power Load (W)	The measured power at full load.
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

Idle 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	4.0 watts per I/O Device

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 controller 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
Controller of service