

**Comments on Draft 4 ENERGY STAR® Program Requirements for Computer Servers
Fujitsu Siemens Computers
18/3/2009**

Page	Line	Requirement / Definition	Comment
9	435 - 442	<u>T. Product Family:...</u> <ul style="list-style-type: none"> • Use the same model and quantity of processor(s), with identical specifications (e.g., speed, cache size, core count, etc.), and • Incorporate the same model base components listed below (the relative numbers of these components may vary within the family): <ul style="list-style-type: none"> - Power supply(s) - Memory DIMM(s) - Hard drive(s) - I/O Device(s) 	<p>A fixed relation between “Product Family” and processor type does not make sense. Usually different customers order different CPU speeds and core sizes according to their specific needs. To create a separate server model for each of these variants would lead to a lot of confusion at the customer.</p> <p>On the other hand the influence of the number of DIMMs, HDDs and I/O devices on the power consumption is much bigger than the CPU Frequency or cache size.</p>

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10	449 - 464	<p>Note: EPA understands the concerns raised by manufacturers in regards to testing every possible configuration for ENERGY STAR qualification. While EPA recognizes the challenges that manufacturers face if asked to test multiple configurations, this concern must be balanced with the assurance that all configurations promoted as ENERGY STAR meet the specification requirements. To strike this balance, EPA is allowing Partners to test the most and least consumptive configurations within a Product Family as long as the configurations possess similar efficiency characteristics and predictable variances in energy consumption. To ensure that all configurations within a product family meet the ENERGY STAR requirements, EPA has specified that product families include the same quantity and same model of motherboards and processors. Quantities of other system components may vary as long as the components are all the same model with identical attributes. All configurations qualified under a Product Family must meet the specification requirements. As indicated in Section 4.C below, if non-qualifying configurations exist within a Product Family, Partners must use a unique identifier in the model name/number to clearly indicate which configurations are qualified. This Product Family approach offers Partners increased flexibility in qualifying a number of configurations under one ENERGY STAR submission. This approach also provides end users with a range of performance for the ENERGY STAR qualified product family.</p>	<p>This procedure would lead to a lot of different configuration ranges, which will fulfil the label requirements, and others which won't. With these definitions there is no way to create a homogenous model policy which can be understood by the customer.</p>

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10	466 - 477	<p>U. <u>Maximum Configuration</u>: The highest performance system within a Product Family. The Maximum Configuration represents the highest configuration of power supplies, memory, hard drives, and I/O Devices, etc. available in the Product Family. The Maximum Configuration must represent the maximum power consumption possible within the Product Family.</p> <p>V. <u>Minimum Configuration</u>: A base-model within a Product Family that is minimally configured. Such a system would typically have the minimum number of power supplies, the least amount of system memory, a single hard drive, and a single I/O Device (either integrated or add-in). The Minimum Configuration must be currently available and sold in the marketplace (i.e. the system should be minimally configured but not under configured to a point which is unreasonable). The Minimum Configuration should represent the lowest power consumption possible among shipping configurations within the Product Family.</p>	<p>The definitions for minimum and maximum configurations will not result in exactly one minimum and one maximum configuration per server, but in a whole bunch of such configurations.</p>
15	732 - 740	<p>EPA is confident that Computer Servers with other capabilities for which additional allowances have been requested (e.g., RAID controllers) will still be able to qualify under this specification because the base system requirements and/or adders proposed in this Draft 4 were developed from a data set that includes models containing these features. For example, the incremental power required by a RAID controller is likely to have affected the higher power level for Managed Systems and additional hard drives since these products are more likely to contain this capability. In addition, EPA has not proposed an additional allowance for redundant fan capability. Using intelligent designs for redundancy and enabling technologies such as variable speed fan control, Computer Servers should be able to qualify for this specification with redundant cooling capability.</p>	<p>There are different RAID implementations in the field. For an onboard approach, usually a simple RAID 1 functionality integrated in a chipset, we can follow EPA's argumentation. Other RAID solutions, e.g. RAID 5, which have been designed to reduce the number of required HDDs within a server, will need an additional RAID controller, which typically consumes about 10W of power, but saves the need for one or more HDDs. For this reason there should be an additional power allowance of 10W for an additional RAID controller card.</p>

