

Transitional Methods of Measurement for Servers and Data Storage Products Ecodesign Regulation (EUR) 2019/424

Context

This document outlines the transitional methods of measurement intended to support Commission Regulation 2019/424 (EUR 2019/424), which sets ecodesign requirements for servers and data storage products.

This document is intended for the use of persons responsible for the compliance or verification of compliance with the requirements in EUR 2019/424.

The intention is that the transitional methods of measurement set out in this document will be used for the measurements and calculations required by EUR 2019/424 until the relevant designated standards are available to underpin the regulation.

Transitional Methods for EUR 2019/424

- [Table 1: references and qualifying notes for servers](#)
- [Table 2: references and qualifying notes for data storage products](#)

Table 1

References and qualifying notes for servers

Parameter	Source	Reference Test Method / Title	Notes
Server efficiency and server performance in active state	ETSI	ETSI EN 303 470:2019	<p>General notes on the testing with EN 303 470: 2019:</p> <p>a. Testing shall be conducted at an appropriate EU voltage and frequency (e.g. 230v, 50Hz).</p> <p>b. Similar to the provision on expansion APA cards under point 2 of Annex III of Regulation (EU) 2019/424, the unit under test shall be tested with other types of add-in cards (for which no allowance is provided and not exercised in SERT testing) removed, when measuring the idle state power, the active state efficiency and server performance in active state¹.</p> <p>c. In the case of servers which</p> <p>i. are not declared as being part of a server product family;</p> <p>ii. are as-shipped in a configuration without all memory channels populated with the same dual in-line memory modules (DIMMs) a configuration with all memory channels populated with the same DIMMs shall be tested².</p>
Idle state power (P _{idle})	ETSI	ETSI EN 303 470:2019	
Maximum power	ETSI	ETSI EN 303 470:2019	

¹ This is necessary because of the wide variation of APA cards in the market and the fact that the SERT tool does not include any worklets which exercise APAs. Therefore, SERT efficiency results for servers with the expansion APA cards or other add-in cards would not be representative of the performance/power capability of the server.

² In the case of servers which are declared as being part of a server product family, point 1 of Annex IV to Regulation (EU) 2019/424 foresees that the market surveillance authorities can test the low-end performance configuration or the high-end performance configuration and, as per definitions 21 and 22 of Annex I to Regulation (EU) 2019/424, these configurations shall have all memory channels populated with the same DIMM raw card design and capacity.

Parameter	Source	Reference Test Method / Title	Notes
Idle state power at the higher boundary temperature of the declared operating condition class	The Green Grid	Simplified high temperature idle power reporting for (EU) 2019/424 sert collection	The test shall be conducted at a temperature corresponding to the highest allowable temperature for the specific operating condition class (A1, A2, A3 or A4).
Power Supply Efficiency	EPRI and Ecova	Generalized Test Protocol for Calculating the Energy Efficiency of Internal AC-DC and DC-DC Power Supplies Revision 6.7	Testing shall be conducted at an appropriate EU voltage and frequency (e.g. 230v, 50Hz).
Power Supply Power Factor	EPRI and Ecova	Generalized Test Protocol for Calculating the Energy Efficiency of Internal AC-DC and DC-AC Power Supplies Revision 6.7	
Operating condition class		The manufacturer has to declare the product operating condition class: A1, A2, A3 or A4. The unit under test is placed at a temperature corresponding to the highest allowable temperature for the specific operating condition class (A1, A2, A3 or A4), which the model is declared to be compliant with. The unit shall be tested with SERT (Server Efficiency Rating Tool) and run test cycle(s) for a duration of 16 hours. The unit shall be considered to comply with the declared operating condition, if SERT reports valid results (i.e. if the unit under test is in its operational state for the whole duration of the 16 hours test).	The unit under test shall be placed in a temperature chamber which is then elevated in temperature to the highest allowable temperature for the specific operating condition class (A1, A2, A3 or A4) at a maximum rate of change of 0.5 degrees C per minute. The unit under test shall be left in an idle state for 1 hour to attain a state of temperature stability prior to the start of testing.
Firmware availability		Not available	

Secure data deletion	NIST	Guidelines for Media Sanitization, NIST Special Publication 800-88 - Revision 1	
Ability of the server to be disassembled		Not available	
Critical raw material (CRM) content		EN 45558:2019	

Table 2

References and qualifying notes for data storage products

Parameter	Source	Reference Test Method / Title	Notes
Power Supply Efficiency	EPRI and Ecova	Generalized Test Protocol for Calculating the Energy Efficiency of Internal AC-DC and DC -DC Power Supplies Revision 6.7	Testing shall be conducted at an appropriate EU voltage and frequency (e.g. 230v, 50Hz).
Power Supply Power Factor	EPRI and Ecova	Generalized Test Protocol for Calculating the Energy Efficiency of Internal AC-DC and DC -DC Power Supplies Revision 6.7	
Operating condition class	The Green Grid	'Operating condition class of data storage products'	The manufacturer, importer or authorised representative has to declare the product operating condition class: A1, A2, A3 or A4. The unit under test is placed at a temperature corresponding to the highest allowable temperature for the specific operating condition class (A1, A2, A3 or A4), which the model is declared to be compliant with.
Firmware availability		Not available	
Secure data deletion	NIST	Guidelines for Media Sanitization, NIST Special Publication 800-88 - Revision 1	
Ability of the data storage product to be disassembled		Not available	
Critical raw material (CRM) content		EN 45558:2019	