



## Annex B2 - Product environmental attributes Servers/Data Storage Products

The declaration may be published only when all rows and/or fields marked with \* are filled-in (N/A for not applicable). Additional information regarding each item may be found under P15.

Brand *	Lenovo ThinkSystem	Logo
Company name *	Lenovo	1
Contact information *	Lenovo DCG Storage Development	
e-mail address	Rick Lin	
	Lenovo Taiwan Branch	Lenovo
	8F., No. 66, Sanchong Rd.,	
	Nangang Dist., Taipei City, Zipcode: 11502	
	Rlin12@lenovo.com	
Internet site *	https://www.lenovo.com/us/en/about/sustainability	
Additional information	The latest version of this document can be found at:	
	http://www.lenovo.com/ecodeclaration	

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.			
Type of product *	Data Storage		
Commercial name *	D1212, D1224		
Model number *	4587		
Issue date *	01/15/2020		
Intended market *	☐ Global ☐ Europe ☐ Asia, Pacific & Japan ☐ Americas ☐ Other		
Additional information			

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

### About Annex B2

Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template:

P4.1 – P4.3 Consumable materials

P9.1 TEC and Print speed

P10.2 - P10.3 Chemical emissions from printing products

P11.1 - P11.3 Consumable materials for printing products

Model number *		4587 Logo		010		
Issue date *		01/15/2020	<u> </u>	<u>-en</u>	DVC	<b>)</b> <sub>TM</sub>
Product	environ	mental attributes - Legal requirements	F	Require	ment	met
Item				Yes	No	N/A
P1	Hazardo	ous substances and preparations				
P1.1*		s do comply with current European RoHS Directive. (See legal reference and NOTE B1)		$\boxtimes$		
P1.2*		s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.		$\boxtimes$		
P1.3*	hydrobro trichloroe	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1 ethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum ration values.	1,1-			
P1.4*		s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated (PCT) in preparations (see legal reference).		$\boxtimes$		
P1.5*	Products	s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms ontaining at least 48% per mass of chlorine in the SCCP (see legal reference).	s in the			
P1.6*	(see lega	th direct and prolonged skin contact do not release nickel in concentrations above 0,5 μg/cm² al reference). nt: Max limit in legal reference when tested according to EN1811:2011-5.	²/week			
P1.7*	REACH	Article 33 information about substances in articles is available at (add URL or mail contact):		X		
	https://w	ww.lenovo.com/us/en/sustainability-resources				
P2	Batterie	S				
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with the dispos Information on proper disposal is provided in user manual. (See legal reference)	sal			
P2.2*	Batteries reference	s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See e)	e legal			$\boxtimes$
P2.3*	Batteries	s and accumulators are readily removable. (See legal reference)				$\boxtimes$
P2.4*	Docume	ntation includes the number of cycles the (secondary) battery can withstand. (See legal reference	ence)			
P2.5*		ternal batteries of a notebook computer cannot be "accessed and replaced by a nonprofessic e related text is present and legible on the external packaging (see legal reference)	onal			
P3		nity verification & Eco design (ErP)				
P3.1*		duct is CE-marked to show conformance with applicable legal requirements (see legal referer claration of Conformity can be requested at: https://www.lenovo.com/us/en/compliance/eu-doo	,			
P3.2*		duct complies with the Eco design requirements for energy-related products, al reference).		$\boxtimes$		
	Required	d information is; given in item P15 or added to this document,  available at: https://www.lenovo.com/us/en/compliance/eco-declar	ration			
P5	Product	packaging	ution			
P5.1*	Packagir	ng and packaging components do not contain more than 0,01% lead, mercury, cadmiu ent chromium by weight of these together.	ım and			
P5.2*	The pack	kaging materials are marked with abbreviations and numbers indicating the nature of the mat be legal reference).	terial(s)			
P5.3*	The prod	duct packaging material is free from ozone depleting substances as specified in the Montreal P al reference). nt: Legal reference has no maximum concentration values.	rotocol			
P6		nt information				

Information for recyclers/treatment facilities is available (see legal reference).

P6.1\*

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating "Yes" means that the product is compliant with the mandatory requirements.

Model number *	4587	Logo	Lanova
Issue date *	01/15/2020		LEI IOVO"

Product	t environmental attributes - Market requirements (See General NOTE GN below)			
	·	Require	ment	met
Item	*=mandatory to fill in. Additional information regarding each item may be found under P14.	Yes	No	N/A
P7	Design, Disassembly, recycling			
P7.1*	Parts that have to be treated separately are easily separable			
P7.2*	Plastic materials in covers/housing have no surface coating.	$\boxtimes$		
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.	$\boxtimes$		
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.			
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.	$\boxtimes$		
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).	$\boxtimes$		
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives			
P7.8*	Upgrading can be done using commonly available tools	$\boxtimes$		
P7.9	Spare parts are available after end of production for: 5 years			
P7.10	Service is available after end of production for: 5 years			
	Material and substance requirements			
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum):			
D7 40	Material type: Metal (Steel) Material type: PC ABS Material type:			
P7.12	Insulation materials of external electrical cables are PVC free.	<u> </u> _		
P7.13	Insulation materials of internal electrical cables are PVC free.			
P7.14	External plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine and 0,1% weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardants, an			
	polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containin			
	more than 25% post-consumer recycled content.	e		
P7.15	Printed circuit boards, PCBs (without components) are low halogen: all PCBs > 25 g are low haloge	n	$\boxtimes$	
	as defined in IEC 61249-2-21. (See <sup>5</sup> NOTE B2)			
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4:			$\boxtimes$
P7.17	Marking: <u>Alt. 1:</u> Chemical specifications of flame retardants in printed circuit boards > 25 g (without components):			
P1.11	TBBPA (additive) , TBBPA (reactive) (See NOTE B3), Other: chemical name: , CAS #:	$\boxtimes$		
	, , , , , , , , , , , , , , , , , , , ,			
	Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4:			
	<u> </u>		Ш_	
P7.18	Alt. 1: Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations i concentrations above 0,1%:	n _		
	1. Chemical name: , CAS #: (See NOTE B4)			
	2. Chemical name: , CAS #: "			
	3. Chemical name: , CAS #: "			
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:			$\square$
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been		$\blacksquare$	
	assigned the following Risk phrases; and Hazard statements:			
	The source(s) for these classifications is/are found at (add URL(s)): (See note B5)			
P7.20*	Postconsumer recycled plastic material content is used in the product (See Note B6):		X	
	If VEC at least one of the true alternatives halow shall be assured.			_
	If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated as			
	a percentage of total plastic by weight) is %.			
	or			
	b) The weight of recycled material is g.			

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see <a href="http://www.ecma-international.org/publications/standards/Ecma-370.htm">http://www.ecma-international.org/publications/standards/Ecma-370.htm</a>.

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

Model number *	4587	Logo	Lonovo
Issue date *	01/15/2020		Leliovo

Product environmental attributes - Market requirements (continued)		Requirement me	
Item	Yes	No	N/A

	Material and su	bstance requirements	(continued)				
P7.21*		material content is used		OTE B7):			
	If YES; at least of a) Of total plas	one of the two alternative stic parts' weight > 25 g, by weight) is %.	s below shall be answe	ered;	ated as a percentage of		
	or	by weight/ is 70.					
		of the biobased plastic r					
P7.22*		e free from mercury, i.e.		.m. maraum, aantant n	ar lama. ma		$\boxtimes$
P7.23*		d specify: Number of lar es an integral display, th		um mercury content pe			
P8	Batteries	23 arī irītegrai display, tir	c total mercury content	in the integrated dispi	ay. IIIg		
P8.1*	Battery chemical	composition:					
P9	-	ption (See NOTE B8)					
P9.1		he following power level	s or energy consumption	ons are reported:			
Energy mo		Power level at	Power level at	Power level at	Reference/Standard	for energy	· 🛛
0,		<b>100</b> V AC	115 V AC	230 V AC	modes and test meth	iod *	
Peak (On-	max)	W	<b>496</b> W	<b>485</b> W	Full load		
Categor	V						
EPS No-lo		W	W	W			
(External p	ower supply /						
charger plugged in the wall							
	disconnected from						
the produc	τ.)	W	W	W			<u> </u>
_	ergy Consumption		VV	VV			
ETEC *	o.g, cocap	kWh/year	kWh/year	kWh/year			$\boxtimes$
	ergy Consumption	·	•	·			
External Po	ower Supply Efficie	ency Level (International	Efficiency Marking Pro	tocol) * :			
Display res	solution * :	megapixels					$\boxtimes$
Default tim	e to enter energy	save mode: minu	tes				$\boxtimes$
P9.2*	Information abou	it the energy save functi	on is provided with the	product.	•		$\overline{\boxtimes}$
P9.3	Energy efficiency	class (monitors only):					$\overline{\boxtimes}$
P10	Emissions						
	Noise emission	<ul> <li>Declared according to</li> </ul>	ISO 9296 (See NOTE	B9)			
P10.1	Mode	Mode description			it A-weighted sound pov	wer level, Lwe	.,c (В)
	Idle	* Idle		* 6.5			
	Operation	* Typical loading		* 6.5			
	Other mode	Declared A-weighted soun			on desktop – idle)		
	Other mode	Declared A-weighted soun	d pressure level (dB) $L_{p{\sf An}}$	54 (operator position	on desktop – operating)	-	
	Measured accord	ding to: ISO 7779	ECMA-74				
	FI	Other	(only if not covered by	ECMA-74)			
D10.4	Electromagneti		t for low from the state of the	tromagnotic fields -f !	no following valuate:		
P10.4	P10.4 Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s):						

 $see \ \underline{http://www.ecma-international.org/publications/standards/Ecma-370.htm}$ 

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available; see <a href="http://www.ecma-international.org/publications/standards/Ecma-370.htm">http://www.ecma-international.org/publications/standards/Ecma-370.htm</a>

NOTE B9 A Guidance document on Acoustic Noise is available;

woder number "		4587				Logo	Lono	VO	
Issue dat	te *	01/15/2020					Leno	VU	тн
Product	environn	nental attrib	utes - Market requirem	ents (continued)			Require	ment	met
Item							Yes	No	N/A
P12	Ergonor	nics for comp	uting products						
P12.1*	The disp	lay meets the	ergonomic requirements of	ISO 9241-307 for visua	l display technolog	jies.			X
P12.2*	The phys	sical input devi	ce meets the requirements	of ISO 9995 and ISO 9	241-410.				
P13		ng and docun							
P13.1*	Product Product	packaging mat packaging mat	erial type(s): Corrugate erial type(s): LDPE erial type(s): EPE	weight (kg): 3.72 weight (kg): 0.05 weight (kg): 1.2					
P13.2*	Product	plastic primary	packaging is free from PV	C.					
P13.3*			orrugated fiberboard packa per content: 22 %	aging, specify the conta	ained percentage	of minimum p	ost-		
P13.4*		media for user ronic, ⊠Pape	and product documentation r, ☐Other	ı (tick box):					
P13.5	Ùser and		this item if paper document mentation on paper media						
	Totally c	hlorine-free							
	Element	al chlorine-free							
	Processe	ed chlorine-free	•						
P14	Volunta	ry programs							
P14.1	The prod	luct meets the	requirements of the followi	ng voluntary program(s)	):				
	ENERG` Eco-labe Eco-labe		Criteria version: Criteria version: Criteria version:	Date: Date: Date:	Product o Product o Product o	ategory:			
P15	Addition	nal information	n (See NOTE B10)						
P9			of computer products; de						
	the info supplier informa Accoun	rmation conta 's knowledge tion. The infor t Representati	s no representations, gua ined in this document. Al available at the time of c mation provided here is ive for more information.	Il information provided ompletion, and suppli approximate and proving the control of the control	I by supplier in the er shall have no d ided for informati	is document obligation to ι	is provided l ipdate such	based	d on
P9			ified Enterprise Servers f ar.gov/products/data_cer						

NOTE B10 Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

# Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive)*  * Specific exemptions apply for certain products and applications.	P1.1, P3.1
Regulation (EC) 1907/2006 (REACH Regulation), annex XVII	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2006/66/EC (Battery and accumulators Directive), as amended.*  * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2,3, P8.1
Directive 2014/35/EU (Low Voltage Directive)	P3.1
Directive 2014/30/EU (EMC Directive)	P3.1
Directive 2014/53/EU (RE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Commission Regulation (EC) No 278/2009 of 6 April 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power demand and average active efficiency of external power supplies	P3.1, P3.2, P9.1
COMMISSION REGULATION (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers	P2.4, P2.5, P3.1, P3.2, P7.23, P9.1
Regulation (EC) No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive)	P6.1
Implementing Regulation (EU) 2019/290 establishing the format for registration and reporting of producers of electrical and electronic equipment to the register.	
Commission Implementing Regulation 2017/699 establishing a common methodology for the calculation of the weight of electrical and electronic equipment (EEE) placed on the national market in each Member State and a common methodology for the calculation of the quantity of waste electrical and electronic equipment (WEEE) generated by weight in each Member State.	

# Lenovo ErP Lot9 Information Sheet - Servers & Storage Products-

As required by COMMISSION REGULATION (EU) 2019/424 of 15 March 2019 laying down ecodesign requirements for servers and data storage products pursuant to Directive 2009/125/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 617/2013. (ErP Lot9)

### Products scope of this sheet: Servers & storage products

This document is only valid in connection with the IT Eco Declaration of the specific Product.

#### **SERVERS**

Additional information

General information				
Commercial name (3.1 (b))	D1212, D1224	Logo		
Contact Address (3.1 (b) )				
Model Number (3.1 (c) )	4587		Lenovo	
Issue Date	01/15/2020			

Product 6	environmental attributes (EU) 2019/424 – Annex II points 3.1 and 3.3
1.a	Is the product consider to be in scope of ErP Lot 9 in scope out of scope, product is out of scope as:
1.b (3.1 (a))	Server type Rack Server High Performance Computing (HPC) Tower Server Multi Node Server Blade Server Data Storage product (Please go to "DATA STORAGE PRODUCTS" section
1.c	Year of manufacture:
(3.1 (d))	Todi of mandidotare.
1.d (3.1 (p))	Product model part of a server product family? No Yes List of all model configurations that are represented by the model:
1.e	Information on the secure data deletion functionality
(3.1 (n))	(a) instructions on how to use the functionality:
	(b) techniques used:
	(c) supported secure data deletion standard (if any):  OR - Reference to other information:
1.f	
(3.1 (o))	Blade servers? No Yes
	list of recommended combinations with compatible chassis:
Recycling	
2.a (3.3 (a))	Indicative weight range at component level, of the  (a) Cobalt in the batteries  (b) Neodymium in the HDDs
(5.5 (a))	following critical raw materials:
	□ between 5 g and 25 g □ between 5 g and 25 g
	above 25 g above 25 g
2.b (3.3 (b))	Instructions on the disassembly operations <ul> <li>(a) the type of operation;</li> <li>(b) the type and number of fastening technique(s) to be unlocked;</li> <li>(c) the tool(s) required.</li> </ul>
	OR - Reference to other information:
2.c	Firmware
	Reference to information on last available firmware:
Additional	Information
I	

### **DATA STORAGE PRODUCTS**

DATA OF OF OR OTHER PROPERTY.		
Commercial name (3.2 (b) )	D1212, D1224	Logo
Contact Address (3.2 (b) )	Lenovo DCG Storage Development Rick Lin Lenovo Taiwan Branch 8F., No. 66, Sanchong Rd., Nangang Dist., Taipei City, Zipcode: 11502 Rlin12@lenovo.com	Lenovo.
Model Number (3.2 (c) )	4587	
Issue Date	01/15/2020	
Additional information		

Product e	environmental attributes (EU) 2019/424 – Annex II points 3.2 and 3.3		
A.1	Is the product consider to be in scope of ErP Lot 9 🔀 in scope 🗌 out of scope Product is out of scope as:		
A.2	Data Storage type		
(3.2 (a) )	Large Data Storage Product Other:		
A.3 (3.2 (d))	Year of manufacture: 2016		
A.4	PSU efficiency at 10 % (if applicable), 20 %, 50 % and 100 % of rated output power		
(3.2 (e))	(expressed in % and rounded to the first decimal place): : Multi-output Single-output		
	10% 20% 88.7 50% 92.1 100% 90.6 Average		
A.5 (3.2 (f) )	Power factor at 50 % of the rated load level (rounded to three decimal places)		
A.6 (3.2 (g))	Operating condition class (as defined in Table 6 or ErP lot 9)		
	Exception comments		
	This product has been tested in order to verify that it will function within the boundaries (such as temperature and humidity) of the declared operating condition class.		
A.6	Information on the secure data deletion tool(s)		
(3.2 (h) )	<ul><li>(a) instructions on how to use the functionality:</li><li>2 methods are provided to use the functionality.</li></ul>		
	Use a command line tool to do the secure data deletion on the remote target system via boot up a customized		
	Linux OS on it.		
	Eg: OneCli.exe serase –bmc USERID:PASSWORD@xx.xx.xx.xxsftp root:password@xx.xxx.xx.xx:/home –log 5  2) Use BoMC to create a full functions bootable media, start the media and choose secure erase from the text menu.		
	<ol> <li>Use BoMC to create a full functions bootable media, start the media and choose secure erase from the text menu. https://datacentersupport.lenovo.com/us/en/solutions/Invo-center</li> </ol>		
	(b) techniques used:		
	OS tools under Linux -> Standard Linux Open Source tool (c) supported secure data deletion standard (if any): Secure Erase/block Erase/Crypto Erase, Sanitize		
	(c) supported secure data deletion standard (ii any). Secure Erase/block Erase/Crypto Erase, Samtize		
	OR - Reference to other information: https://datacentersupport.lenovo.com/us/en/solutions/Invo-center		
	ING DATA		
B.1 (3.3 (a))	Indicative weight range at component (a) Cobalt in the batteries (b) Neodymium in the HDDs level, of the following critical raw		
(0.0 (a) )	materials:		
	between 5 g and 25 g		
	above 25		
B.2	Instructions on the disassembly operations		
(3.3 (b))	(a) the type of operation; Refer to the installation guide, use reverse process.		
	<ul> <li>https://datacentersupport.lenovo.com/uu/en/products/storage/lenovo-storage/d1212/4587/documentation</li> <li>(b) the type and number of fastening technique(s) to be unlocked; Refer to the installation guide.</li> </ul>		
	(c) the tool(s) required. Phillips screwdriver, Flat blade screw driver, Hex driver, Torx driver, and Allen wrenches of		
	appropriate size		
	OR - Reference to other information:		
B.3	Firmware		
	Defended to information and last available formation		
	Reference to information on last available firmware:  https://datacentersupport.lenovo.com/uu/en/products/storage/lenovo-storage/d1212/4587/downloads/driver-list/		
	https://datacentersupport.icnovo.com/ad/cn/products/storage/renovo-storage/a-12-12-4-50-140-windads/dnvci-list/		
	After EOL'ed, firmware would be available at:		
	https://download.lenovo.com/eol/index.html		
Additional information			
Auditional			