

Product environmental attributes – THE ECO DECLARATION

The declaration may be published only when all rows and/or fields marked with an * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P14.

Brand *	Lenovo	Logo
Company name *	Lenovo	
Contact information *	Lenovo Global Environmental Affairs Alvin L Carter 1009 Think Place Building 2 / 5J3 Morrisville, North Carolina 27560 alcarter@lenovo.com	lenovo.
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environme	nt.html
Additional information		

	ased on product specification or test results based obtained from sample testing), that the product ts given in this declaration.
Type of product *	Server
Commercial name *	ThinkServer TS440
Model number *	70AL,70AM,70AN,70AQ
Issue date *	2013,August 14
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.

Quality	Control F	Requireme	ent met
Item		Yes	No
QC1 *	The company enforces an internal quality control scheme to ensure the correctness of this eco declaration	\boxtimes	
QC2 *	The company is a member of an eco declaration system that enforces regular independent quality control such as organized by IT-Företagen (see www.itecodeclaration.org).	\boxtimes	

Model number *	ThinkServer TS440	MT : 70AL,70AM,70
Issue date *	2013,August 14	Log

OAN,70AQ ----

			JVC) .
Produc	ct environmental attributes - Legal requirements	Require	men	t met
Item		Yes	No	n.a.
P1	Hazardous substances and preparations			
P1.1*	Products do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (PBDE). (See legal reference and Note B1)			
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.	\boxtimes		
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),	\boxtimes		

Item		Yes	No	n.a.
P1	Hazardous substances and preparations			
P1.1*	Products do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (PBDE). (See legal reference and Note B1)			
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.	\square		
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1- trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.			
P1.4*	Products do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% polychlorinated terphenyl (PCT) in preparations (see legal reference).	\boxtimes		
P1.5*	Products do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).	\square		
P1.6*	Textile and leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)-phosphate (TRIS), Tris-(aziridinyl)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal reference). Comment: Legal reference has no maximum concentration values.			\square
P1.7*	Textile and leather parts with direct skin contact do not contain more than 0.003% Azo colorants that split aromatic amines. (See legal reference and Note B1)			\boxtimes
P1.8*	Wooden parts do not contain arsenic and chromium as a wood preservation treatment as well as pentachlorophenol and derivatives (see legal reference). Comment: Legal reference has no maximum concentration values.			
P1.9*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0.5 microgram/cm ² /week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:1998.			
P1.10*	REACH Article 33 information about substances in articles is available at (add URL or mail contact): http://www.lenovo.com/social_responsibility/us/en/ThinkGreen_products.html#environment			
P2	Batteries			
P2.1*	If the product contains a battery or an accumulator, it is labeled with the disposal symbol and if it contains more than 0.0005% of mercury (for button cells only) by weight, or more than 0.004% of lead, it shall be marked with the chemical symbol for the metal concerned, Hg or Pb. Information on proper disposal is provided in user manual. (See legal reference)			
P2.2*	Button cells used in the product do not contain more than 2% by weight of mercury. Other batteries or accumulators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (See legal reference)	\boxtimes		
P2.3*	Batteries and accumulators are easily removable by either users or service providers (as dependent on the design of the product). Exception: Batteries that are permanently installed for safety, performance, medical or data integrity reasons do not have to be "easily removable". (See legal reference)	\square		
P3	Safety, EMC connection to the telephone network and labeling			
P3.1*	The product complies with legally required safety standards as specified (see legal reference).	\boxtimes		
P3.2*	The product complies with legally required standards for electromagnetic compatibility (see legal reference).	\square		
P3.3*	If product is intended for connection to a public telecom network or contains a radio transmitter, it complies with legally required standards for radio and telecommunication devices (see legal reference).	\square		
P3.4*	The product is labeled to show conformance with applicable legal requirements (see legal reference).	\bowtie		
P4	Consumable materials			
P4.1*	If a photo conductor (drum, belt etc.) is used in the product, it does not contain cadmium max 0.01% (see legal reference and Note B1).			
P4.2*	If ink/toner is used in the product, it does not contain cadmium max 0.1% by weight (see legal reference).			\boxtimes
P4.3*	If the ink/toner formulation/preparation is classified as hazardous according to applicable regulations, the product/packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance with these requirements is available (see legal reference).			
P5	Product packaging			
P5.1*	Packaging and packaging components do not contain more than 0.01% lead, mercury, cadmium and hexavalent chromium by weight of these together.	\boxtimes		
P5.2*	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference).	\boxtimes		
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference).			

Note B1: Restriction applies to the homogeneous material, unless other specified and expressed in weight %.

Issue da	te *	ThinkServer TS440MT : 70AL,70AM,70AI2013,August 14Logo			
			lenc		
Produc	t environ	mental attributes - Market requirements - Environmental conscious design	Require	ment	met
tem		tory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a
P6		nt information			
P6.1*	Informati	on for recyclers/treatment facilities is available (see legal reference).	\square		
P7	Design				
		mbly, recycling			
P7.1*	Parts that	t have to be treated separately are easily separable	\square		
P7.2*	Plastic m	aterials in covers/housing have no surface coating.		\times	
P7.3*	Plastic p	arts >100g consist of one material or of easily separable materials.	\boxtimes		
P7.4*	Plastic p	arts >25g have material codes according to ISO 11469 referring ISO 1043.	\boxtimes		
P7.5	Plastic p	arts are free from metal inlays or have inlays that can be removed with commonly available tools.	\square		
P7.6*	Labels a	re easily separable. (This requirement does not apply to safety/regulatory labels).			
	Product	lifetime			
P7.7*	Upgradin	g can be done e.g. with processor, memory, cards or drives			
P7.8*	Upgradin	g can be done using commonly available tools			Ē
P7.9.	Spare pa	rts are available after end of production for: years			Ħ
P7.10	<u> </u>	s available after end of production for: years			H
		and substance requirements			
P7.11*		cover/housing material type:			
		type: Steel Material type: PC+ABS Material type:			
P7.12	Electrica	cable insulation materials of power cables are PVC free.		\boxtimes	
P7.13	Electrica	cable insulation materials of signal cables are PVC free			Ē
P7.14	All cover	housing plastic parts >25g are free from chlorine and bromine.		Ē	Ħ
P7.15		d circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (Si	ee		H
	Note B2)				
P7.16	Flame re	tarded plastic parts >25g in covers / housings are marked according ISO 1043-4:	\boxtimes		
	Marking:				
P7.17	Alt. 1				_
		I specifications of flame retardants in printed circuit boards >25g (without components):			
	IBBPA (additive), TBBPA (reactive), Other; chemical name:, CAS #:			
	Alt. 2				
		I specifications of flame retardants in printed circuit boards (without components) >25g according			
	ISO 1043	3-4:			
P7.18	Alt. 1				
		etarded plastic parts >25g contain the following flame retardant substances/preparations	in		
		ations above 0.1%: it: No legal limits exist, this is a market requirement.			
		a list of all used flame retardants including MSDS for each flame retardant. The list must conta	in		
		chemical name, CAS number and supplier.			
	1. Chemi	cal name: , CAS #: , Supplier:			
	2. Chemi	cal name: , CAS #: , Supplier:			
		cal name: , CAS #: , Supplier:	\boxtimes		
	Alt. 2 Chamian	Langeifications of flows retardants in plastic parts - 25g apparding ISO 1042 4;			
	Grieffica	I specifications of flame retardants in plastic parts >25g according ISO 1043-4:			
P7.19	Plastic p	arts >25g are free from flame retardant substances/ preparations above 0.1% classified as R45,	\square		
-		5, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)			
P7.20	Of total p	lastic parts' weight >25g, recycled material content is 0 %.			
P7.21		lastic parts' weight >25g, biobased material content is 0 %.			
P7.22		rces are free from mercury			X
P8	Batteries	3			
P8.1*		hemical composition: Lithium Manganese dioxide			
P8.2	Batteries	meet the requirements of the following voluntary program/s:			-

Note B2: IEC61249-2--21 has maximum limits for chlorine and bromine but does not address fluorine, iodine and astatine which are included in the group of halogens.

Note B3: 'Starting from January 2009, Risk phrases can be replaced by Hazard phrases according to the Globally Harmonized System (GHS), mandatory by December 2010.

Model number *	Thin	kServer TS	5440	MT : 70A	L,70AM,70AN,7	'OAQ	
Issue date *	2013,Au	gust 14			Logo	lenov	10.
Product environ	mental at	ttributes - Market	requirements (continued)		Requirem	ent met
Item			•				No n.a.
	consump						
The pro		e following power lev oped w/ WOL Enabl	ed.	-		\boxtimes	
Energy mode *		Power level at 100 V AC	Power level at 115 V AC	Power level a 230 V AC	t Reference / Standard and test method *	for energy mo	des
Max configuration							
ldle@50Hz		W	W	106.9 W	Use for Energy Star re	gistration	
ldle@60Hz		W	111.2 W	W	Use for Energy Star re	gistration	
Min configuration				·			
ldle@50Hz		W	W	27.68 W	Use for Energy Star re	gistration	
ldle@60Hz		W	28.38 W	W	Use for Energy Star reg	gistration	
Typical configurat	ion				1		
Idle@50Hz		W	W	37.37 W	Use for Energy Star reg	istration	
Idle@60Hz		W	38.89 W	W	Use for Energy Star reg	istration	
Peak(On-max)							
Idle							
EPS No-load		W	W	W			
(External power sup charger plugged in t outlet but disconnec the product.)	the wall	, vv	v	v			
TEC Typical Energy Con	sumption	kWh/week	kWh/week	kWh/week			
ETEC * Annual Energy Cons	sumption	kWh/year	kWh/year	kWh/year	$E_{TEC} = (8760/1000) \times (F_{0.1} + P_{idle} \times 0.3)$	Poff X 0.6 + Pslee	ep X
0,	•	Poff: Off Mode(S5) -	WOL Enabled; P _{sleep} :	Sleep Mode(S3) - WC	DL Enabled; P _{idle} : Idle State - V	VOL Enabled	
Display resolution	: Megapix	els					
Print Speed	•	Images per minu	ite				
Default time to ente	r enerav sa						
		the energy save fun	ction is provided wit	h the product.		\boxtimes	\neg
P9.3* The pro ENERG	duct meets	s the energy require	ments of the followi	ng voluntary program	m/s: ation for Computer Server		
Others s							
		- Declared according	to ISO 9296				
P10.1 Mode		Mode description		Declared	Declared A-we		
				A-weighted sound power	sound pressure leve	I $L_{p Am}$ (dB)	
				level L_{WAd} (B)	Desktop	Bystander position	Not
امام				* 1 9		operator attend	led)
Idle Operatio	on '	* HDD:Idel * HDD:Operating		* 4.8 * 5.1	33 36		— 님
Other m				0.1	50		
	ed accordi						
P10.2 The pro	duat '	Other			ith L _{pAm} measurement dista	nce m)	
FIU.2 The pro	ouct meets	s the acoustic noise	requirements of the	ionowing voluntary	program/s:		

		ThinkServer TS440 MT : 70AL,70AM,70AI	1,70AQ		
Issue dat	te *	2013,August 14 Logo	lend)VO.	
Product	environ	mental attributes - Market requirements (continued)	Requir	ement	me
Item			Yes	No	n.a
	Chemic	al emissions from printing products			
P10.3*		rformed according to ECMA-328 (ISO/IEC 28360) standard , other specify:			X
P10.4		emission rate (print phase) is (mg/h):			X
	• •	Dust Ozone Styrene Benzene TVOC			~
P10.5	Chemica	al emission requirements of the following voluntary program/s are met for :			
		Dust Ozone Styrene Benzene TVOC			~
	Electro	magnetic emissions			
P10.6	Comput program	ter display meets the requirement for low frequency electromagnetic fields of the following $v_{1/5}$:	oluntary		\ge
P11		nable materials for printing products			
P11.1*	A Safety	y Data Sheet (SDS) is available for the ink/toner preparation, even if not legally required (se	e P4.3).		\geq
P11.2*	Paper c EN1228	containing post-consumer recycled fibers can be used, provided that it meets the requi	rements of		\geq
P11.3*	2-sided	(duplex) printing/copying is an integrated product function.			X
P12	Ergono	mics for computing products			
P12.1*	The disp	play meets the ergonomic requirements of ISO 9241-307 for visual display technologies.			\mathbf{X}
P12.2*	The phy	vsical input device meets the requirements of ISO 9995 and ISO 9241-410.			\mathbf{x}
P13	Packag	ing and documentation			
P13.1*	Product Product Product	packaging material type(s): cardboard weight (kg): 2.27 packaging material type(s): cardboard weight (kg): 0.18 packaging material type(s): EPE weight (kg): 0.624 packaging material type(s): pallet weight (kg): 15 packaging material type(s): weight (kg): 15 weight (kg): 15	5		
P13.2*	Product	plastic packaging is free from PVC.	\boxtimes		
P13.3*		media for user and product documentation (tick box): nic , Paper , Other			
P13.4*	For pape	 and product documentation, please specify contained percentage of post-consume % (Japan only 70%) 	r recycled		
P14		nal information (See Note B4)			
	informat knowled	: Supplier makes no representations, guarantees, assurances or warranties whether expres- tion contained in this document. All information provided by supplier in this document is pro- lge available at the time of completion, and supplier shall have no obligation to update such d here is approximate and provided for informational purposes only. See a Lenovo Account tion.	vided based on su information. The	upplier's informat	

Note B4: 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 B

Reference	Declaration item
2002/95/EC (ROHS Directive)	P1.1, P4.1
REACH, Annex XVII	P1.6, P1.8, P4.2
REACH, Annex XVII	P1.4
REACH, Annex XVII	P1.2
REACH, Annex XVII	P1.7
REACH, Annex XVII	P1.9
Regulation (EC) No. 2037/2000, 2038/2000, 2039/2000	P1.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
2006/66/EC (Battery and accumulators Directive)	P2.1, P2.2, P2,3, P3.4, P8.1
2006/95/EC (Low Voltage Directive)	P3.1, 3.4
2004/108/EEC (New EMC Directive)	P3.2, 3.4
1999/5/EC (R&TTE Directive)	P3.3, 3.4
"REACH" Regulation (1907/2006), annex VII	P1.10
(EC) No.1272/2008 regulation on classification, labeling and packaging (CLP)	P4.3
REACH article 31, annex II	P4.3
2004/12/EC (Directive on packaging and packaging waste)	P5.1
(97/129/EC) (Commission Decision on Identification System for Packaging Materials	P5.2
2037/2000/EC Regulation on Substances that Deplete the Ozone Layer	P5.3
2002/96/EC (WEEE directive)	P3.4, P6.1
(EC) No.1272/2008 regulation on classification, labeling and packaging (CLP)	P7.19

Lenovo ErP Lot3 Information Sheet - Workstation/Server -

As required by 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 (ErP Lot3).

Products scope of this sheet:

Workstation, mobile workstation, desktop thin client, small-scale server and computer server

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

Commercial name	ThinkServer TS440	Logo
Model Number	MT:70AL,70AM,70AN,70AQ	
Issue Date	2014/4/14	lenovo
Additional information	N/A	

(d)	year of manufacture:				See name plate of product
(e)	internal/external power supply	efficiency:			
	FSP450-50ETN/ Power Efficiency :10% -	20%	50% 02%	100% 89%	
	Power Factor : 10% -	20% 0.8		100% <i>0.95</i>	
	FSA028-EL0G				
	Power Efficiency :10% 80%	20% 88%		100% 88%	
	Power Factor: 10% -	20%	50% 0.9	100% <i>0.95</i>	
(f)	supply system, — information -Test Voltage : <i>230V</i> , Freque -Total harmonic distortion : <2	and documenta ncy: <i>50Hz</i> 2% on on the instru	ation on the umentation :	nd frequency in Hz, — total harmoni instrumentation, set-up and circuits Please refer to additional informatio fer to additional information	used for electrical testing:
(g)	maximum power (Watts)				183
	idle state power (Watts)				183
(h)	idle state power (Watts)				
(h)					
(h) (i)	idle state power (Watts)				111 N/A
(h) (i) (j)	idle state power (Watts) sleep mode power (Watts) off mode power (Watts)		mino inform	ntion montioned in points (c):	111
(h) (i) (j)	idle state power (Watts) sleep mode power (Watts)	y used to deter		ation mentioned in points (e): JS test method	111 N/A
(g) (h) (i) (j) (l-1) (l-2)	idle state power (Watts) sleep mode power (Watts) off mode power (Watts) the measurement methodology	/ used to deter	80 PL		111 N/A 5

