

### 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 *	ThinkPad	Logo			
Company name *	Lenovo				
Contact information *	Lenovo Global Environmental Affairs Alvin L Carter 1009 Think Place Building 2 / 5F1 Morrisville, North Carolina 27560 alcarter@lenovo.com	lenovo			
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment.html				
Additional information	The latest version of this document can be found at http://www.lenovo.com/social_responsibility/us/en/datasheets_notebooks.html				

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 *	lotebook PC						
Commercial name *	ThinkPad X1 Carbon						
Model number *	M/T: 3443/3444/3446/3448/3460/3462/3463						
Issue date *	2014, June 17						
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	equireme	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 \*

2014, June 17

### ThinkPad X1 Carbon M/T: 3443/3444/3446/3448/3460/3462/3463

Issue date \*

Logo

lenovo

Product	environmental attributes - Legal requirements	Require	ment	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), 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).	$\boxtimes$		
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.	,		
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)			$\square$
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 <sup>2</sup> /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/environment.html			
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 th design of the product). Exception: Batteries that are permanently installed for safety, performance, medic or data integrity reasons do not have to be "easily removable". (See legal reference)	e 🔀		
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 complie with legally required standards for radio and telecommunication devices (see legal reference).	s 🔀		
P3.4*	The product is labeled to show conformance with applicable legal requirements (see legal reference).	$\square$		
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 ar hexavalent chromium by weight of these together.	nd 🔀		
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 Montre Protocol (see legal reference). Comment: Legal reference has no maximum concentration values.	al 🔀		

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

Model number *		ThinkPad X1 Carbon			
		M/T: 3443/3444/3446/3448/3460/3462/3463			
Issue da	ite *	2014, June 17 Logo	lend	ovo	
Produc	t environ	mental attributes - Market requirements - Environmental conscious design	Require	ment	met
Item		atory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a.
P6		ent information		-	
P6.1*	Informat	ion for recyclers/treatment facilities is available (see legal reference).	$\boxtimes$		
P7	Design		_		_
P7.1*		mbly, recycling at have to be treated separately are easily separable			
P7.2*		naterials in covers/housing have no surface coating.			⊢⊢
P7.3*		arts >100g consist of one material or of easily separable materials.			╞
P7.4*		arts >25g have material codes according to ISO 11469 referring ISO 1043.		<u> </u>	
P7.5	-	arts are free from metal inlays or have inlays that can be removed with commonly available tools			⊢⊢
P7.6*					⊢⊢
F7.0		re easily separable. (This requirement does not apply to safety/regulatory labels).			
P7.7*		: <b>lifetime</b> ng can be done e.g. with processor, memory, cards or drives			
P7.8*		ng can be done using commonly available tools			╞
P7.9.					⊢⊢
P7.10	<u> </u>	arts are available after end of production for: 5 years			╞
F7.10		is available after end of production for: 5 years	_		
P7.11*		and substance requirements cover/housing material type:			
1 7.11		type: <i>PC+ABS-FR(40)</i> Material type: Material type:			
P7.12	Electrica	I cable insulation materials of power cables are PVC free.		$\boxtimes$	
P7.13	Electrica	I cable insulation materials of signal cables are PVC free		Ē	Ē
P7.14		/housing plastic parts >25g are free from chlorine and bromine.		Ħ	Ħ
P7.15	All printe Note B2	ed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (S			
P7.16		etarded plastic parts >25g in covers / housings are marked according ISO 1043-4:			
P7.17	TBBPA (	al specifications of flame retardants in printed circuit boards >25g (without components): (additive) , TBBPA (reactive) , Other ; chemical name: <i>DOPO(9,10-dihydro-9-oxa-10- aphenanthrene-10-oxide)</i> , CAS #: <i>35948-25-5</i>			
87.10	ISO 104	al specifications of flame retardants in printed circuit boards (without components) >25g according 3-4: <b>FR(40)</b>	g		
P7.18		retarded plastic parts >25g contain the following flame retardant substances/preparations above 0.1%:	in 🗌		
	Provide complete 1. Chem	<ul> <li>nt: No legal limits exist, this is a market requirement.</li> <li>a list of all used flame retardants including MSDS for each flame retardant. The list must cont</li> <li>chemical name, CAS number and supplier.</li> <li>ical name: , CAS #: , Supplier:</li> <li>ical name: , CAS #: , Supplier:</li> </ul>	ain		
	3. Chem Alt. 2	ical name: , CAS #: , Supplier:			
P7.19	Plastic p	al specifications of flame retardants in plastic parts >25g according ISO 1043-4: <i>FR(40)</i> arts >25g are free from flame retardant substances/ preparations above 0.1% classified as R45, 6, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)			
P7.20	Of total p	plastic parts' weight >25g, recycled material content is 0%. (Assessment is about main computer parts only. adapter, Cords, Drives, Keyboard, LCD, and misc parts not included.)			
P7.21		plastic parts' weight >25g, biobased material content is 0%.			
P7.22	Light sou	urces are free from mercury	$\square$		
P8	Batterie				
P8.1*		chemical composition: Lithium Ion/Lithium Manganese Dioxide			
P8.2	Batteries	s meet the requirements of the following voluntary program/s: US Call2Recycle, EPBA, JBRC			

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	kPad X1 C	arbon								
M/T: 3443/3444/3446/3448/3460/3462/3463											
Issue date *	2014, Ju	ine 17	Logo lenovo.								
Product enviro	nmental a	ttributes - Marke	et requirements	s (contin	ued)				Require	ement	met
Item		••							Yes	No	n.a.
P9         Energy consumption           9.1         For the product the following power levels or energy consumptions are reported: See P14											
		pped w/ WOL Enal		nsumption		sport			$\boxtimes$		
Energy mode *		Power level at 100 V AC	Power level at 115 V AC		evel at V AC		erence / Star hod *	ndard for e	energy modes ar	id test	
Peak (On-max)		<i>90</i> W	<i>90</i> W	90 W		Full	load				
Category I1		1	I								
Short Idle - WOL	. Enabled	8.832 W	8.412 W	<b>8.496</b> W		Use	ofor Energy	Star V6 re	egistration(P <sub>SHOR</sub>	LIDLE)	
Long Idle - WOL	Enabled	5.580 W	5.028 W	6.168 W		Use	ofor Energy	Star V6 re	egistration(PLONG	IDLE)	
Sleep (S3) - WO	L Enabled	1.524 W	1.536 W	1.572 W		Use	e for Energy	Star V6 re	egistration(P <sub>SLEEP</sub>	 )	
Sleep (S3) - WO	L Disabled	W	W	w	/	Ref	erence				
Off (S5) - WOL E		0.264 W	0.276 W	0.348 W				Star V6 re	gistration(P <sub>OFF</sub> )		
Off (S5) - WOL D		W	W	W			e for ErP		<b>9</b>		
EPS No-load			0.26 W	0.38 W							
(External power s charger plugged i	(External power supply / charger plugged in the wall outlet but disconnected from										
TEC Typical Energy C	onsumption	kWh/week	kWh/week	kWh/week							
ETEC * Annual Energy Co	onsumption	<b>33.35</b> kWh/year	<b>31.83</b> kWh/year	<b>33.31</b> kWh/year		T <sub>SL</sub>	c <b>= (8760/10</b> EEP <b>+ P</b> long_i ORT IDLE)	00) x (P <sub>C</sub> DLE × T <sub>LOI</sub>	DFF × TOFF + PSI NG_IDLE + PSHORT	LEEP × IDLE ×	
Display resolution	n : <b>1600 x 9</b>	000 Pixels									
Print Speed	:	Images per mi	nute								$\square$
Default time to er	nter energy s	ave mode: 20 minu	ites								
P9.2* Inform	nation about	the energy save fu	nction is provided	with the p	oroduct.				$\square$		
ENEF		s the energy require version: <i>Version</i> (									
	sions	Declared consults									
P10.1 Mode		<ul> <li>Declared according</li> <li>Mode description</li> </ul>	ng to ISO 9296		Declared				A-weighted level $L_{p{\sf Am}}$ (dB)		
					und pow				1		_
		leve	Desktop (cply if produc		Bystander pos						
				_		or Desk		operator atte			
Idle * HDD: Idle				.7				20			
	Operation * HDD: Operation Other mode			3.	.3				29		
	Measured according to: ISO7779 ECMA-74										
P10.2 The p	product meets	m) s the acoustic nois	e requirements of	the followi	ing volun	itarv	program/s:				

Model number *		ThinkPad X1 Carbon				
		M/T: 3443/3444/3446/3448/3460/3462/3463				
Issue dat	te *	2014, June 17	lenovo			
Product	environr	nental attributes - Market requirements (continued)		Require	mont	mot
Item	environi	nental attributes - Market requirements (continued)		Yes	No	n.a.
itoin	Chemic	al emissions from printing products		100		
P10.3*		formed according to ECMA-328 (ISO/IEC 28360) standard , other specify:				
P10.4		emission rate (print phase) is (mg/h):				
1 10.1	••	Dust Ozone Styrene Benzene TVOC				
P10.5		al emission requirements of the following voluntary program/s are met for :				$\boxtimes$
		Dust Ozone Styrene Benzene	туос			
	Electror	nagnetic emissions				
P10.6	Compute	er display meets the requirement for low frequency electromagnetic fields of the fol /s: <b>MPR-II</b> (3 pin AC adapter only)	lowing voluntary			
P11	Consum	hable materials for printing products				
P11.1*	A Safety	Data Sheet (SDS) is available for the ink/toner preparation, even if not legally requ	uired (see P4.3)			$\boxtimes$
P11.2*	Paper c EN1228	ontaining post-consumer recycled fibers can be used, provided that it meets the 1.	ne requirements	of		$\boxtimes$
P11.3*	2-sided	(duplex) printing/copying is an integrated product function.				$\boxtimes$
P12		mics for computing products				
P12.1*	The disp	lay meets the ergonomic requirements of ISO 9241-307 for visual display technology	gies.			
P12.2*	The phy	sical input device meets the requirements of ISO 9995 and ISO 9241-410.				
P13	Packagi	ng and documentation				
P13.1*	Product	packaging material type(s): <i>Corrugated Cardboard</i> weight (kg packaging material type(s): <i>Recycled Polyethylene(RLDPE)</i> weight (kg packaging material type(s): <i>Others (plastic bags)</i> weight (kg	g): <b>0.162</b>			
P13.2*	Product	plastic packaging is free from PVC.		$\boxtimes$		
P13.3*	Specify I	media for user and product documentation (tick box):				
	Electron	ic 🔀, Paper 🔀, Other 🗌				
P13.4*		er user and product documentation, please specify contained percentage of post-co % (Japan only 70%)	onsumer recycle	ed		
P14		nal information (See Note B4)				
	informat knowled provided informat		nt is provided b ate such inform	ased on sup ation. The in	plier's format	
P9		ergy Star Qualified Notebooks & Tablet Computers for the latest information: ww.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGrou	n&naw code=l	20		

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 - PC / Notebook -

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:

Desktop computer, integrated desktop computer, and notebook computer

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

Commercial name	ThinkPad X1 Carbon	Logo
Model Number	3443, 3444, 3446, 3448, 3460, 3462, 3463	lenovo
Issue Date	2014, July 1	
Additional information		

P7.1.1	Product environmental attributes								
(d)	year of manufacture:								
(u)	year of manufacture.	2014							
(e)	<b>E TEC value</b> (kWh) per ErP Lot 3 Category and capability adjustments applied when <b>all discrete graphics cards (dGfx) are disabled</b> and if the system is tested with switchable graphics mode with UMA driving the display:								
	Category (according to ErP Lot 3): A Etec: 20.08								
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete grap enabled:	hics cards (dGfx) are							
	Category (according to ErP Lot 3): Etec:								
(g)	idle state power demand (Watts);	6.38							
(h)	sleep mode power demand (Watts);								
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);	1.82							
(j)	off mode power demand (Watts);								
(k)	off mode with WOL enabled power demand (Watts) (where enabled);	0.32							
(I)	internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable):								
	10% 20% 50% 100% Average								
(m)	external power supply efficiency (if applicable):								
	10% 20% 50% 100% Average ;								
	or level: V								
(0)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook comp	uters): 500							
(p-1)	the measurement methodology used to determine information mentioned in points (I) - interna efficiency:	I PSU							
	Not applicable								
(p-2)	the measurement methodology used to determine information mentioned in points (m) – externa efficiency: EPA "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and A Power Supplies" dated August 11, 2004								
(p-3)	the measurement methodology used to determine information mentioned in points (o) - loading	icvcles							
()	batteries: IEC 61960 measurement methodology								
1									

(p-4)				o determine information mentioned in maximum, idle, sleep, off mode roduct IT Eco Declaration:						
			ENERG	GY STAR measurement methodology						
(q)	sequence of	steps for achieving	g a stabl	le condition with respect to power demand ::						
	ENERGY STAR measurement methodology									
(r)	description of	f how sleep and/or	off mod	de was selected or programmed:						
		By selecting	g sleep	and/or off mode thru Windows operating system						
(s)	sequence of off mode:	sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:								
		A	utomati	cally changes to sleep after 20 minutes						
(t)				efore the computer automatically reaches sleep mode, or another oplicable power demand requirements for sleep mode (in minutes):	20 minutes					
(u)	•			ser inactivity in which the computer automatically reaches a demand requirement than sleep mode (in minutes):						
(v)	the <b>length of</b>	f time before the	display	sleep mode is set to activate after user inactivity (in minutes):	10 minutes					
(w)	information o	n the energy-savir	ng poten	tial of power management functionality:						
	User info	ormation describ	ed in Us	ser Guide and Power Manager under ThinkVantage menu in all programs						
(x)	user informat	ion on how to ena	ble the p	power management functionality:						
	User info	ormation describ	ed in Us	ser Guide and Power Manager under ThinkVantage menu in all programs						
(z)		supply system, -		test voltage in V and frequency in Hz, — total harmonic distortion of ation and documentation on the instrumentation, set-up and circuits						
			230V, 5	50Hz, Total Harmonic Distortion <2 %						
Addition	Notebook Batt	ery Information:								
Yes	-	lo	n/a	This notebook computer is operated by battery/ies that cannot be acces by a non-professional user.	sed and replaced					
(Battery replaceal		Battery user eplaceable)		The battery[ies] in this product cannot be easily repla themselves	iced by users					

Additional information