


THE ECO DECLARATION



Ecma/TC38-TG3/2015/026
(Rev. 1 – 15 April 2015)

Annex B2 - Product environmental attributes Computers and computer monitors


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 * | <i>Lenovo</i> |  |
| Company name * | <i>Lenovo</i> | |
| Contact information * e-mail address | <i>Lenovo Global Environmental Affairs Alvin L. Carter 1009 Think Place Building 2 / 5F1 Morrisville, North Carolina 27560 alcarter@lenovo.com</i> | |
| Internet site * | <i>www.lenovo.com</i> | |
| Additional information | | |


| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 * | <i>Notebook PC</i> |
| Commercial name * | <i>ThinkPad X1 Carbon</i> |
| Model number * | <i>20FB, 20FC</i> |
| Issue date * | <i>November 18, 2016</i> |
| Intended market * | <input checked="" type="checkbox"/> Global <input type="checkbox"/> Europe <input type="checkbox"/> Asia, Pacific & Japan <input type="checkbox"/> Americas <input type="checkbox"/> Other |
| Additional information | |

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

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| <p>About Annex B2</p> <p>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:</p> <ul style="list-style-type: none"> 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. |
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|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------|--------------------------|--|
| Model number * | 20FB, 20FC | Logo |  | | |
| Issue date * | November 18, 2016 | | | | |
| Product environmental attributes - Legal requirements | | | | | |
| Item | | Requirement met | | | |
| | | Yes | No | n.a. | |
| P1 | Hazardous substances and preparations | | | | |
| P1.1* | Products do comply with current European RoHS Directive. (See legal reference and NOTE B1) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| P1.2* | Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| P1.3* | Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorocarbons (HCFC), Halons, carbontetrachloride, 1,1,1-trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| P1.4* | Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated terphenyl (PCT) in preparations (see legal reference). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| 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). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| P1.6* | Parts with direct and prolonged skin contact do not release nickel in concentrations above 0,5 µg/cm ² /week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:2011-5. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P1.7* | REACH Article 33 information about substances in articles is available at (add URL or mail contact): http://www.lenovo.com/social_responsibility/us/en/materials.html | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P2 | Batteries | | | | |
| P2.1* | If the product contains a battery or an accumulator, the battery/accumulator is labeled with the disposal symbol. Information on proper disposal is provided in user manual. (See legal reference) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P2.2* | Batteries or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See legal reference) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P2.3* | Batteries and accumulators are readily removable. (See legal reference) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P3 | Conformity verification & Eco design (ErP) | | | | |
| P3.1* | The product is CE-marked to show conformance with applicable legal requirements (see legal reference). The Declaration of Conformity can be requested at (add link or e-mail address): http://www.lenovo.com/social_responsibility/us/en/ec_doc_notebooks/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P3.2* | The product complies with the Eco design requirements for energy-related products, (see legal reference). Required information is available : http://www.lenovo.com/social_responsibility/us/en/datasheets_notebooks/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 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. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| P5.2* | The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s) used (see legal reference). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P5.3* | The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference). Comment: Legal reference has no maximum concentration values. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| P6 | Treatment information | | | | |
| P6.1* | Information for recyclers/treatment facilities is available (see legal reference). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

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 * | 20FB, 20FC | Logo |  |
| Issue date * | November 18, 2016 | | |

| Product environmental attributes - Market requirements (See General NOTE GN below) | | | | |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| - Environmental conscious design | | | Requirement 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 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.2* | Plastic materials in covers/housing have no surface coating. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| P7.3* | Plastic parts > 100 g consist of one material or of easily separable materials. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| P7.4* | Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.5 | Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.6* | Labels are easily separable. (This requirement does not apply to safety/regulatory labels). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Product lifetime | | | | |
| P7.7* | Upgrading can be done e.g. with processor, memory, cards or drives | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.8* | Upgrading can be done using commonly available tools | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.9 | Spare parts are available after end of production for: 5 years | | | <input type="checkbox"/> |
| P7.10 | Service is available after end of production for: 5 years | | | <input type="checkbox"/> |
| Material and substance requirements | | | | |
| P7.11* | Product cover/housing material type (e.g. plastics, metal, aluminum): Material type: PC-GF40FR(40),EP-CF70FR(52) Material type: PC+ABS-FR(40) Material type: Magnesium | | | |
| P7.12 | Insulation materials of external electrical cables are PVC free. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| P7.13 | Insulation materials of internal electrical cables are PVC free. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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, and polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containing more than 25% post-consumer recycled content. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.15 | Printed circuit boards, PCBs (without components) are low halogen: all <input type="checkbox"/> PCBs > 25 g <input checked="" type="checkbox"/> are low halogen as defined in IEC 61249-2-21. (See 1NOTE B2) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.16 | Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking: FR(40),FR(52) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.17 | Alt. 1: Chemical specifications of flame retardants in printed circuit boards > 25 g (without components): <input type="checkbox"/> TBBPA (additive), <input type="checkbox"/> TBBPA (reactive) (See NOTE B3), <input checked="" type="checkbox"/> Other: DOPO(9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide) , CAS #: 35948-25-5 Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.18 | Alt. 1: Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations in concentrations above 0,1%: 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: FR(40),FR(52) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.19 | In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been assigned the following Risk phrases; R53 and Hazard statements: H412 The source(s) for these classifications is/are found at (add URL(s)): , (See note B5) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P7.20* | Postconsumer recycled plastic material content is used in the product (See Note B6): 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 5 g. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |


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 <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

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.

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| Model number * | 20FB, 20FC | Logo |  |
| Issue date * | November 18, 2016 | | |

Product environmental attributes - Market requirements (continued) **Requirement met**

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|------|-----|----|------|
| Item | Yes | No | n.a. |
|------|-----|----|------|

Material and substance requirements (continued)

| | | | | |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|--------------------------|
| P7.21* | Biobased plastic material content is used in the product (See NOTE B7): If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the biobased plastic material content (calculated as a percentage of total plastic by weight) is %. or b) The weight of the biobased plastic material is g. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|--------------------------|

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|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|
| P7.22* | Light sources are free from mercury, i.e. less than 0,1 mg/lamp. If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|

P8 Batteries

| | | |
|-------|--------------------------------------------------|--------------------------|
| P8.1* | Battery chemical composition: <i>Lithium Ion</i> | <input type="checkbox"/> |
|-------|--------------------------------------------------|--------------------------|

P9 Energy consumption (See NOTE B8)

| | | | | |
|--------------------------------------------------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------------------------------------|
| P9.1 For the product the following power levels or energy consumptions are reported: | | | | |
| Energy mode * | Power level at 100 V AC | Power level at 115 V AC | Power level at 230 V AC | Reference/Standard for energy modes and test method * |
| <i>Peak (On-max)</i> | <i>45/65 W</i> | <i>45/65 W</i> | <i>45/65 W</i> | <i>Full load</i> |

Category I1

| | | | | |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Short Idle State</i> | <i>6.516 W</i> | <i>6.420 W</i> | <i>6.972 W</i> | <i>P_{SHORT_IDLE} in ENERGY STAR</i> |
| <i>Long Idle State</i> | <i>2.412 W</i> | <i>2.328 W</i> | <i>2.448 W</i> | <i>P_{LONG_IDLE} in ENERGY STAR</i> |
| <i>Sleep (S3)</i> | <i>0.516 W</i> | <i>0.516 W</i> | <i>0.564 W</i> | <i>P_{SLEEP} in ENERGY STAR</i> |
| <i>Off (S5)</i> | <i>0.288 W</i> | <i>0.348 W</i> | <i>0.396 W</i> | <i>P_{OFF} in ENERGY STAR</i> |
| EPS No-load <small>(External power supply / charger plugged in the wall outlet but disconnected from the product.)</small> | W | <i>0.096 W</i> | <i>0.252 W</i> | |
| PTEC * Typical Energy Consumption | W | W | W | <input type="checkbox"/> |
| ETEC * Annual Energy Consumption | <i>21.45 kWh/year</i> | <i>21.26 kWh/year</i> | <i>23.06 kWh/year</i> | $E_{TEC} = (8760/1000) \times (P_{OFF} \times T_{OFF} + P_{SLEEP} \times T_{SLEEP} + P_{LONG_IDLE} \times T_{LONG_IDLE} + P_{SHORT_IDLE} \times T_{SHORT_IDLE})$ <input type="checkbox"/> |
| External Power Supply Efficiency Level (International Efficiency Marking Protocol) * : <i>V</i> <input type="checkbox"/> | | | | |
| Display resolution * : <i>1920 x 1080, 2560 x 1440</i> Pixels <input type="checkbox"/> | | | | |
| Default time to enter energy save mode: <i>30</i> minutes <input type="checkbox"/> | | | | |
| P9.2* | Information about the energy save function is provided with the product. | | | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| P9.3 | Energy efficiency class (monitors only): | | | <input type="checkbox"/> |

P10 Emissions


Noise emission – Declared according to ISO 9296 (See NOTE B9)

| | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------|------------------------------------------------------------------------------------------------|
| P10.1 | Mode | Mode description | Statistical upper limit A-weighted sound power level, $L_{WA,c}$ (B) |
| | Idle | * <i>Idle</i> | * <i>3.1</i> <input type="checkbox"/> |
| | Operation | * <i>Operating(CPU)</i> | * <i>3.4</i> <input type="checkbox"/> |
| | | | Declared A-weighted sound pressure level, L_{pAm} (dB) <i>(operator position desktop)</i> |
| | Idle | * <i>Idle</i> | * <i>19</i> <input type="checkbox"/> |
| | Operation | * <i>Operating(CPU)</i> | * <i>24</i> <input type="checkbox"/> |
| Measured according to: <input checked="" type="checkbox"/> ISO 7779 <input checked="" type="checkbox"/> ECMA-74 <input type="checkbox"/> Other (only if not covered by ECMA-74) | | | |

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 <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

NOTE B9 A Guidance document on Acoustic Noise is available; see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

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|----------------|-------------------|------|-------------------------------------------------------------------------------------|
| Model number * | 20FB, 20FC | Logo |  |
| Issue date * | November 18, 2016 | | |

| Product environmental attributes - Market requirements (continued) | | Requirement met | | |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|
| Item | | Yes | No | n.a. |
| Electromagnetic emissions | | | | |
| P10.4 | Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s): MPR-II(3 pin AC adapter only) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P12 Ergonomics for computing products | | | | |
| P12.1* | The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P12.2* | The physical input device meets the requirements of ISO 9995 and ISO 9241-410. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P13 Packaging and documentation | | | | |
| P13.1* | Product packaging material type(s): Corrugated Cardboard weight (kg): 0.428 Product packaging material type(s): 100% Recycled Polyethylene (RLDPE) weight (kg): 0.164 Product packaging material type(s): Others (Polyethylene bags) weight (kg): 0.016 | | | |
| P13.2* | Product plastic primary packaging is free from PVC. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| P13.3* | For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-consumer recovered fiber content: 80 % | | | <input type="checkbox"/> |
| P13.4* | Specify media for user and product documentation (tick box): <input checked="" type="checkbox"/> Electronic, <input checked="" type="checkbox"/> Paper, <input type="checkbox"/> Other | | | <input type="checkbox"/> |
| P13.5 | (Please only complete this item if paper documentation used) User and product documentation on paper media is chlorine-free: If Yes, please specify: Totally chlorine-free Elemental chlorine-free Processed chlorine-free | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | | <input type="checkbox"/> | | |
| | | <input checked="" type="checkbox"/> | | |
| | | <input type="checkbox"/> | | |
| P14 Voluntary programs | | | | |
| P14.1 | The product meets the requirements of the following voluntary program(s): ENERGY STAR® Criteria version: 6.1 Date: Product category: 11 Eco-label: TCO Criteria version: 5.0 Date: Product category: Eco-label: EPEAT Criteria version: Gold Date: Product category: Eco-label: GREENGUARD Criteria version: Gold Date: Product category: | | | |
| P15 Additional information (See NOTE B10) | | | | |
| P9 | Energy consumption of computer products; description of the tested product configuration: | | | |
| P7.12 | Low halogen power cord can be ordered on request. | | | |
| | | | | |
| | | | | |

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 |
| Regulation (EC) 1907/2006(REACH, 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 2013/56/EC (Battery and accumulators Directive) * * 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 2006/95/EC (Low Voltage Directive) | P3.1 |
| Directive 2004/108/EC (EMC Directive) | P3.1 |
| Directive 1999/5/EC (R&TTE 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 |
| 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 |

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 | 20FB, 20FC | |
| Issue Date | November 18, 2016 | |
| Additional information | | |

| P7.1.1 Product environmental attributes | | | | | | |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|------------------|
| (d) | | year of manufacture: | | | | 2016 |
| (e) | | Etec value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are disabled and if the system is tested with switchable graphics mode with UMA driving the display. | | | | |
| (f) | | Etec value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are enabled | | | | |
| | | Category A (according to ErP Lot 3) | Category B (according to ErP Lot 3) | Category C (according to ErP Lot 3) | Category D (according to ErP Lot 3) | |
| capability adjustments applied during testing | Memory over base [GB] | 12 | | | | |
| | Additional internal storage | No (Yes / No) | (Yes / No) | (Yes / No) | (Yes / No) | (Yes / No) |
| | Discrete television tuner | No (Yes / No) | (Yes / No) | (Yes / No) | (Yes / No) | (Yes / No) |
| | Discrete Audio Card | No (Yes / No) | (Yes / No) | (Yes / No) | (Yes / No) | (Yes / No) |
| | Discrete graphics Card(s) [number / #] | No #: (Yes / No) | #: (Yes / No) | #: (Yes / No) | #: (Yes / No) | #: (Yes / No) |
| | Category of discrete graphics Card(s) | | | | | |
| Test results | Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx) | 11.16 | | | | |
| | Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled | | | | | |
| (g) | Idle state power demand (Watts); | | | | 3.26 | |
| (h) | Sleep mode power demand (Watts); | | | | 0.56 | |
| (i) | Sleep mode with WOL enabled power demand (Watts) (where enabled); | | | | 0.61 | |
| (j) | Off mode power demand (Watts); | | | | 0.40 | |
| (k) | Off mode with WOL enabled power demand (Watts) (where enabled); | | | | 0.40 | |
| (l) | 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)*: | | | | | |
| | Average active efficiency: 45W: 87,98%,88,63%,88,83%, 65W: 89,41%,88,62%,88,96% | | | | | |
| (o) | Minimum number of loading cycles that the batteries can withstand (applies only to notebook computers): | | | | 1000 | |
| (p-1) | Measurement methodology used to determine information mentioned in points (l) – internal PSU efficiency: | | | | | |
| | Not applicable | | | | | |

| | |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (p-2) | Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: EPA “Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies” dated August 11, 2004 |
| (p-3) | Measurement methodology used to determine information mentioned in points (o) – loading cycles batteries: IEC 61960 measurement methodology |
| (p-4) | Measurement methodology used to determine information mentioned in maximum, idle, sleep, off mode power as defined in Point P9.1 in the Product IT Eco Declaration: IEC 62623 / IEC EN50564:2011 measurement methodology |
| (q) | Sequence of steps for achieving a stable condition with respect to power demand: IEC 62623 / IEC EN50564:2011 measurement methodology |
| (r) | Description of how sleep and/or off mode was selected or programmed: By selecting sleep and/or off mode thru Windows operating system |
| (s) | Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode: Automatically changes to sleep |
| (t) | Duration of idle state condition before the computer automatically reaches sleep mode , or another condition which does not exceed the applicable power demand requirements for sleep mode (in minutes): 30 minutes |
| (u) | Length of time after a period of user inactivity in which the computer automatically reaches a power mode that has a lower power demand requirement than sleep mode (in minutes): |
| (v) | Length of time before the display sleep mode is set to activate after user inactivity (in minutes): 10 minutes |
| (w) | Information on the energy-saving potential of power management functionality: User information described in User Guide and Power Manager under ThinkVantage menu in all programs |
| (x) | User information on how to enable the power management functionality: User information described in User Guide and Power Manager under ThinkVantage menu in all programs |
| (z) | Test parameters for measurements: — test voltage in V and frequency in Hz, — total harmonic distortion of the electricity supply system, — information and documentation on the instrumentation, set-up and circuits used for electrical testing: 230V, 50Hz, Total Harmonic Distortion <2 % |

Addition Notebook Battery Information:

| | Battery[ies] not user replaceable | Battery[ies] user replaceable | n/a |
|-----------------------------|-----------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------|
| | The battery[ies] in this product cannot be easily replaced by users themselves. ¹⁾ | | |
| Internal/built-in Battery | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External/detachable Battery | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Bios Backup Battery | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Additional information

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¹⁾
The battery[ies] in this product cannot be easily replaced by users themselves.
Акумуляторната[ите] батерия[и] в този продукт не може да се замени[ят] лесно от самите потребители.
Las baterías de este producto no pueden ser sustituidas fácilmente por los propios usuarios.
Výměnu baterie/baterií v tomto výrobku by neměli provádět sami uživatelé.
Brugeren kan ikke uden videre udskifte batteriet/batterierne i dette produkt.
Der Akku/die Akkus dieses Produkts kann/können nicht ohne weiteres vom Benutzer selbst ausgetauscht werden.
Kasutajad ei saa selle toote akut/akusid ise hõlpsasti asendada.
Η μπαταρία[ς] στο προϊόν αυτό δεν μπορούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες.
La/les batterie(s) présente(s) dans ce produit ne peuvent être facilement remplacée(s) par les utilisateurs eux-mêmes.
Korisnik ne može lako zamijeniti Bateriju sam u ovom proizvodu.
La batteria/le batterie in questo prodotto non può/possono essere facilmente sostituita/e dall'utente.
Lietotāji paši nevar nomainīt šā ražojuma akumulatoru(-us).
Šio gaminio baterijos [baterijų] pats vartotojas negali lengvai pakeisti.
A termék akkumulátorát/akkumulátorait a felhasználó nem tudja egyedül egyszerűen kicserélni.
Il-batterija/batteriji f'dan il-prodott ma tistax/jistghux tiġi/jiġu sostitwita/i mill-utenti stess.
Batteriet [ene] i dette produktet kan ikke lett erstattes av brukerne selv.
De batterij(en) in dit product is (zijn) door de gebruiker niet gemakkelijk vervangbaar.
Użytkownik nie może sam w łatwy sposób wymienić baterii w tym produkcie.
A ou as baterias deste produto não podem ser facilmente substituídas pelos próprios utilizadores.
Bateria (bateriile) din acest produs nu poate (pot) fi ușor înlocuită (înlocuite) de utilizatorii înșiși.
Batériu(-ie) v tomto výrobku nemôže vymieňať používateľ.
Baterij/baterije v tem izdelku uporabniki sami ne morejo zlahka zamenjati.
Tämän tuotteen akku [akut] ei[vät] ole helposti käytettävän vaihdettava.
Det är inte enkelt för kunden att själv byta ut batteriet/batterierna.
Bu üründe ki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.