



Regulatory, Safety and Environmental Notices

USER GUIDE

About This Guide

This guide provides regulatory, safety and environmental information that is compliant with U.S., Canadian, and international regulations for notebook computers, desktops, thin clients and personal workstations.



WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

Regulatory notices

This document provides country- and region-specific non-wireless and wireless regulatory notices and compliance information for the computer product. Some of these notices may not apply to your product.

One or more integrated wireless devices may be installed. In some environments, the use of wireless devices may be restricted. Such restrictions may apply on-board airplanes, in hospitals, near explosives, in hazardous locations, and so on. If you are uncertain of the policy that applies to the use of this product, ask for authorization to use it before you turn it on.

To identify a hardware device such as a wireless LAN (WLAN) network device, follow the instructions provided by your operating system.

Regulatory markings for your country or region may be located on the bottom of the product, either under the battery, (or some other user-accessible location), or on the wireless or modem module.



Caution: Devices not for sale or use in the United States may not have an FCC ID.

Federal Communications Commission notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by HP may void the user's authority to operate the equipment.

Cables

To maintain compliance with FCC Rules and Regulations, connections to this device must be made with shielded cables having metallic RFI/EMI connector hoods.

Declaration of Conformity for products marked with the FCC logo (United States only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following 2 conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

If you have questions about the product that are not related to this declaration, write to

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, TX 77269-2000

For questions regarding this FCC declaration, write to

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, TX 77269-2000

or call HP at 281-514-3333.

To identify your product, refer to the part, series, or model number located on the product.

Products with wireless LAN devices or HP Mobile Broadband Modules

This device must not be co-located or operating in conjunction with any other antenna or transmitter.



WARNING! Exposure to Radio Frequency Radiation: The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation of tablet PCs and notebook computers.

During normal operation of tablet PCs and notebook computers with displays equal to or less than 30.5 cm (12 inches): To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas should not be less than 2.5 cm (1 inch). To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

During normal operation of notebook computers with displays greater than 30.5 cm (12 inches): To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas should not be less than 20cm (8 inches), including when the computer display is closed. To identify the location of the wireless antennas, refer to the computer user guides included with your computer.



CAUTION: When using IEEE 802.11 a wireless LAN, this product is restricted to indoor use, due to its operation in the 5.15- to 5.25-GHz frequency range. The FCC requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High-power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65- to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

Brazil notice

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Este equipamento atende aos limites de Taxa de Absorção Específica referente à exposição a campos elétricos, magnéticos e eletromagnéticos de radiofrequências adotados pela ANATEL.

Canada notices

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations, CAN ICES-3(B)/NMB-3(B). If this device has WLAN or Bluetooth capability, the device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

 **WARNING! Exposure to Radio Frequency Radiation:** The radiated output power of this device is below the Industry Canada radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

During normal operation of tablet PCs and notebook computers with displays equal to or less than 30.5 cm (12 inches): To avoid the possibility of exceeding the Industry Canada radio frequency exposure limits, human proximity to the antennas should not be less than 2.5 cm (1 inch). To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

During normal operation of notebook computers with displays greater than 30.5 cm (12 inches): To avoid the possibility of exceeding the Industry Canada radio frequency exposure limits, human proximity to the antennas should not be less than 20 cm (8 inches), including when the computer display is closed. To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

 **CAUTION:** When using IEEE 802.11 a wireless LAN, this product is restricted to indoor use, due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High-power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65- to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The antennas for this device are not replaceable. Any attempt at user access will damage your computer.

European Union regulatory notices

Declaration of Conformity



Products bearing the CE marking comply with one or more of the following EU Directives as may be applicable:

Low Voltage Directive 2006/95/EC; EMC Directive 2004/108/EC; Ecodesign Directive 2009/125/EC; R&TTE Directive 1999/5/EC; RoHS Directive 2011/65/EU

Compliance with these directives is assessed using applicable European Harmonised Standards.

The full Declaration of Conformity can be found at the following web site:
www.hp.eu/certificates (Search with the product model name or its Regulatory Model Number (RMN), which may be found on the regulatory label.)

The point of contact for regulatory matters is Hewlett-Packard GmbH, ept./MS:HQ-TRE, Herrenberger Strasse 140, 71034 Boeblingen, GERMANY.

Products with wireless functionality (EMF)

This product meets international guidelines (ICNIRP) for exposure to radio frequency radiation.

This product incorporates a radio transmitting and receiving device. For notebook computers in normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with EU requirements. Products designed to be operated at closer proximities, such as tablet computers, comply with applicable EU requirements in typical operating positions.

This equipment incorporates a radio transmitting and receiving device. In normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with the Australian and New Zealand Standards.

This product is designed for use without restrictions in all EU countries plus Iceland, Liechtenstein, Norway and Switzerland.

Ergonomics notice

Germany (English text)

When a mobile computer is used at the office workstation for display work tasks where the Visual Display Unit (VDU) Directive 90/270/EEC is applicable, an adequate external keyboard is required. Depending on the application and task, an adequate external monitor may also be necessary to attain working conditions comparable to a workstation setup.

Ref: EK1-ITB 2000 (voluntary GS certification)

Mobile computers bearing the "GS" approval mark meet the applicable ergonomic requirements. Without external keyboards, they are suitable only for short-time use of VDU tasks.

During mobile use with disadvantageous illumination conditions (e.g. direct sun light) reflections may occur, which result in reduced readability.

Germany (Deutscher text)

Wird ein mobiler Computer für Bildschirmarbeitsaufgaben verwendet, wo die Richtlinie 90/270/EEG (Bildschirmarbeitsrichtlinie) anzuwenden ist, wird eine geeignete externe Tastatur notwendig. Abhängig von der Anwendung und der Aufgabe kann ein geeigneter externer Monitor erforderlich sein, um vergleichbare Arbeitsbedingungen zu einem stationären Arbeitsplatz zu erreichen.

Ref: EK1-ITB 2000 (freiwillige GS Zertifizierung)

Mobile Computer, welche das "GS" Zeichen tragen, entsprechen den ergonomischen Anforderungen und sind nur für kurzzeitige Benutzung von Bildschirmarbeitsaufgaben geeignet.

Bei mobiler Nutzung mit ungünstigen Lichtverhältnissen (z.B. direkte Sonneneinstrahlung) kann es zu Reflexionen und damit zu Einschränkungen der Lesbarkeit der dargestellten Zeichen kommen.

Japan notices

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。 VCCI-B

この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）が運用されています。

- 1 この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局が運用されていないことを確認して下さい。
- 2 万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混信回避のための処置等（例えば、パーティションの設置など）についてご相談して下さい。
- 3 その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の事例が発生した場合など何かお困りのことが起きたときは、次の連絡先へお問い合わせ下さい。

連絡先：日本ヒューレット・パッカード株式会社 TEL：0120-014121

5 GHz帯を使用する特定無線設備（802.11a相当）は屋内使用に限られています。この機器を屋外で使用することは電波法で禁じられています。

Wireless LAN, Wireless WAN, and Bluetooth certification markings

この製品には、認証済みの無線機器を搭載しています。

This product contains certified radio equipment.



South Korea notices

해당 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음 (무선모뎀제품이 설치되어 있는 경우).

B급 기기
(가정용 방송통신기기)

이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Mexico notice

Declaración para México

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

If your product is provided with wireless accessories such as a keyboard or mouse and you need to identify the model of the accessory, refer to the label included on that accessory.

Singapore wireless notice

Turn off any WWAN devices while you are onboard aircraft. The use of these devices onboard aircraft is illegal, may be dangerous to the operation of the aircraft, and may disrupt the cellular network. Failure to observe this instruction may lead to suspension or denial of cellular services to the offender, or legal action, or both.

Users are reminded to restrict the use of radio equipment in fuel depots, chemical plants, and where blasting operations are in progress.

As with other mobile radio transmitting equipment, users are advised that for satisfactory operation of the equipment and for the safety of personnel, no part of the human body should be allowed to come too close to the antennas during operation of the equipment.

This device has been designed to comply with applicable requirements for exposure to radio waves, based on scientific guidelines that include margins intended to assure the safety of all people, regardless of health and age. These radio wave exposure guidelines employ a unit of measurement known as the specific absorption rate (SAR). Tests for SAR are conducted using standardized methods, with the phone transmitting at its highest certified power level in all used frequency bands. The SAR data information is based on CENELEC's standards EN50360 and EN50361, which use the limit of 2 watts per kilogram, averaged over 10 grams of tissue.

Thailand WWAN wireless notice

This telecom equipment has complied with NTC regulations.

เครื่องโทรคมนาคมและอุปกรณ์นี้ มีความสอดคล้องตามข้อกำหนดของ กทท.

Taiwan notices

Wireless LAN 802.11a devices

在5.25G ~5.35G頻帶內操作之無線資訊傳輸設備僅適於室內使用

Wireless LAN 802.11b devices

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Airline travel notice

Use of electronic equipment onboard commercial aircraft is at the discretion of the airline.

User-replaceable battery notices

When a battery has reached the end of its useful life, do not dispose of the battery in general in household waste. Follow the local laws and regulations in your area for computer battery disposal.

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, refer to the HP Web site at <http://www.hp.com/recycle>.

For information about removing a user-replaceable battery, refer to the user guide included with the product.

ENERGY STAR compliance

As an ENERGY STAR[®] Partner, Hewlett-Packard Company has followed the EPA's enhanced product qualification and certification process to ensure that the products marked with the ENERGY STAR logo are ENERGY STAR qualified per the applicable ENERGY STAR guidelines for energy efficiency. The following logo appears on all ENERGY STAR-qualified computers:



The ENERGY STAR program for computers was created by the EPA to promote energy efficiency and reduce air pollution through more energy-efficient equipment in homes, offices, and factories.

The power management feature allows the computer to initiate a low-power or "Sleep" mode after a period of user inactivity. When used with an external ENERGY STAR qualified monitor, this feature also supports similar power management features of the monitor. To take advantage of these potential energy savings, the power management feature has been preset to behave in the following ways when the system is operating on AC power:

- Turn off the display after 10 minutes
- Initiate Sleep after 20 minutes

The computer exits Sleep when the power/Sleep button is pressed. When the Wake On LAN (WOL) feature is enabled, the computer can also exit Sleep in response to a network signal.

Additional information on the potential energy and financial savings of the power management feature can be found on the EPA ENERGY STAR Power Management Web site at <http://www.energystar.gov/powermanagement>.

Additional information on the ENERGY STAR program and its environmental benefits are available on the EPA ENERGY STAR Web site at <http://www.energystar.gov>.

Power cord notice

If you were not provided with a power cord for the computer or for an external power accessory intended for use with the computer, you should purchase a power cord that is approved for use in your country or region.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the diameter of the wire must be a minimum of **0.75 mm²**/18AWG, and the length of the cord must be between **1.0 m** (3.2 ft) and **2 m** (6.56 ft). If you have questions about the type of power cord to use, contact your authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

Japan power cord notice

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

DC plug of external HP power supply



Macrovision Corporation notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only, unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Safety notices for notebook computers

 **WARNING!** To reduce the risk of serious injury, read the Safety & Comfort Guide. It describes proper workstation setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located on the Web at <http://www.hp.com/ergo>.

Heat-related safety warning notice

 **WARNING!** To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC/EN 60950).

Potential safety conditions notice

If you notice any of the following conditions (or if you have other safety concerns), do not use the computer: crackling, hissing, or popping sound, or a strong odor or smoke coming from the computer. It is normal for these conditions to appear when an internal electronic component fails in a safe and controlled manner. However, these conditions may also indicate a potential safety issue. Do not assume it is a safe failure. Turn off the computer, disconnect it from its power source, and contact technical support for assistance.

User-replaceable battery notices

 **WARNING!** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

 **WARNING!** To reduce the risk of fire or burns, do not disassemble, crush, or puncture; do not short external contacts; do not dispose of in fire or water.

 **WARNING!** Keep the battery away from children.

 **WARNING!** To reduce potential safety issues, only the battery provided with the computer, a replacement battery provided by HP, or a compatible battery purchased as an accessory from HP should be used with the computer.

Headset and earphone volume level notice



WARNING! Listening to music at high volume levels and for extended durations can damage one's hearing. To reduce the risk of hearing damage, lower the volume to a safe, comfortable level and reduce the amount of time listening at high levels.

For your own safety, before using headsets or earphones, always reset the volume. Some headphones are louder than other headphones, even if the volume control setting is the same.

Changing the default audio or equalizer settings might lead to higher volume and should only be done with caution.

For your own safety, headsets or earphones used with this product should comply with the headphone limits in EN 50332-2.

If the computer includes a headset or earphones, this combination is in compliance to EN 50332-1.

Power cord notices



WARNING! To reduce the risk of electric shock or damage to the equipment:

- Plug the power cord into an AC outlet that is easily accessible at all times.
 - Disconnect power from the computer by unplugging the power cord from the AC outlet (not by unplugging the power cord from the computer).
 - If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.
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WARNING! To reduce potential safety issues, only the AC adapter provided with the computer, a replacement AC adapter provided by HP, or an AC adapter purchased as an accessory from HP should be used with the computer.

Cleaning the keyboard



WARNING! To reduce the risk of electric shock or damage to internal components, do not use a vacuum cleaner attachment to clean the keyboard. A vacuum cleaner can deposit household debris on the keyboard surface. Clean the keyboard regularly to prevent keys from sticking and to remove dust, lint, and particles that can become trapped beneath the keys. A can of compressed air with a straw extension can be used to blow air around and under the keys to loosen and remove debris.

Travel notice



WARNING! To reduce the risk of electric shock, fire, or damage to the equipment, do not attempt to power the computer with a voltage converter kit sold for appliances.

China safety notices

China: Altitude notice

Altitude warning for products not certified for use in >5000 m



仅适用于海拔 2000m 以下地区安全使用

– or –

仅适用于海拔 2000 米以下地区安全使用

China: Tropical warning notice

Tropical warning for products not certified for use in tropical regions.



仅适用于非热带气候条件下安全使用

Norway and Sweden: Cable grounding notice for products with a TV tuner



CAUTION: To reduce potential safety issues, use a galvanic isolator when connecting to a cable distribution system.

Environmental notices for notebook computers

This section provides country- and region-specific environmental notices and compliance information. Some of these notices may not apply to your product.

Electronic hardware and battery recycling

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, see the HP Web site at <http://www.hp.com/recycle>.

Disposal of waste equipment by users



This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service or go to <http://www.hp.com/recycle>.

Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at <http://www.hp.com/go/reach>.

China environmental notices

微型计算机电源说明书

能耗信息说明

惠普公司对笔记本电脑提供能耗信息说明，更多信息请登陆

<http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/chinasepa.html>

回收信息说明

惠普公司对废弃的电子计算机（笔记本电脑）提供回收服务，更多信息请登陆

<http://www.hp.com.cn/hardwarerecycle>

环境标志信息

笔记本电脑已在中国环境标志认证产品的范围中，环境标志表明该产品不仅品质合格，而且在生产、使用和处理处置过程中符合特定的环境保护要求，与同类产品相比，具有低毒少害、节约资源等环境优势，在国家环境保护部网站 (<http://www.sepa.gov.cn>) 上可浏览到关于环境标志的信息。

China PC energy label

In accordance with “The Regulation of the Implementation on China Energy Label for Microcomputers” (CEL-30), this microcomputer has an Energy Efficiency Label. The energy efficiency grade, TEC (Typical Energy Consumption), and product category presented on the label are determined and calculated according to the standard GB28380-2012.

1. Energy Efficiency Grades

The grade is determined by the standard with the calculation of base consumption level with the sum of all the allowances for additional components such as main memory and graphics card. For products of any grade, the TEC should not exceed the value specified in the following table:

Product Type	TEC (kilowatt hour)			
	Category	Grade 1	Grade 2	Grade 3
Desktop microcomputer, AIO	A	$98.0 + \Sigma E_{fa}$	$148.0 + \Sigma E_{fa}$	$198.0 + \Sigma E_{fa}$
	B	$125.0 + \Sigma E_{fa}$	$175.0 + \Sigma E_{fa}$	$225.0 + \Sigma E_{fa}$
	C	$159.0 + \Sigma E_{fa}$	$209.0 + \Sigma E_{fa}$	$259.0 + \Sigma E_{fa}$
	D	$184.0 + \Sigma E_{fa}$	$234.0 + \Sigma E_{fa}$	$284.0 + \Sigma E_{fa}$
Portable Computer	A	$20.0 + \Sigma E_{fa}$	$35.0 + \Sigma E_{fa}$	$45.0 + \Sigma E_{fa}$
	B	$26.0 + \Sigma E_{fa}$	$45.0 + \Sigma E_{fa}$	$65.0 + \Sigma E_{fa}$
	C	$54.5 + \Sigma E_{fa}$	$75.0 + \Sigma E_{fa}$	$123.5 + \Sigma E_{fa}$

 **NOTE:** ΣE_{fa} is the sum of power factor of product additional functions.

2. Typical Energy Consumption

The energy consumption figure presented on the label is the data measured with the representative configuration that covers all the configurations in the registration unit which is selected according to CEL-30. Thus, actual energy consumption of this specific microcomputer may not be the same as the TEC data presented in the label.

3. Product Category

The product category is determined by the standard according to the microcomputer's configuration. The categorization of products complies with the regulations in the following table:

Product Type	Configuration Description	
	Desktop microcomputer, AIO	Portable Computer
Category A	The desktop microcomputer and AIO whose configuration is out of the scope of Category B, C, and D	The portable computer whose configuration is out of the scope of Category B and C
Category B	CPU physical core number of 2, and system memory of not less than 2GB	A Discrete GPU
Category C	CPU physical core number of over 2, with at least one of the following features: 1. System memory of not less than 2 GB 2. A Discrete GPU	The product that has a CPU physical core number of not less than 2, system memory of not less than 2GB, A Discrete GPU with Frame Buffer Width not less than 128-bit.
Category D	CPU physical core number of not less than 4, with at least one of the following features: 1. System memory of not less than 4 GB 2. A Discrete GPU with Frame Buffer Width not less than 128-bit	

For more details on the specification, please refer to the standard GB28380-2012.

本机根据《微型计算机能源效率标识实施规则》(CEL-30)的要求加施中国能效标识。能效标识中显示的能效等级、典型能源消耗和产品类型均根据《微型计算机能效限定值及能效等级》(GB28380-2012)的要求确定。对上述标识内容的说明如下：

1. 能效等级

微型计算机的能效等级由基础能源消耗值和附加功能功耗因子之和决定。微型计算机能效各等级的典型能源消耗应不大于下表的规定

微型计算机类型		能源消耗 (千瓦时)		
		1	2	3
台式机 计算机及 一体机	A 类	98.0+ΣEfa	148.0+ΣEfa	198.0+ΣEfa
	C 类	159.0+ΣEfa	209.0+ΣEfa	259.0+ΣEfa
	D 类	184.0+ΣEfa	234.0+ΣEfa	284.0+ΣEfa
便携式 计算机	A 类	20.0+ΣEfa	35.0+ΣEfa	45.0+ΣEfa
	B 类	26.0+ΣEfa	45.0+ΣEfa	65.0+ΣEfa
	C 类	54.5+ΣEfa	75.0+ΣEfa	123.5+ΣEfa



注：ΣEfa 为微型计算机附加功能功耗因子之和

2. 典型能源消耗

典型能源消耗值代表一个备案单元中，符合《微型计算机能源效率标识实施规则》要求的代表性规格型号产品的数值。因此，本机的典型能源消耗值可能与其所加施的能效标识中所示的典型能源消耗值不一致。

3. 产品类型

产品类型根据微型计算机的配置确定。参见下表：

类型	配置说明	
	台式机微型计算机及一体机便	携式计算机
A 类	下列 B 类、C 类、D 类配置以外的台式机微型计算机及一体机	下列 B 类、C 类配置以外的便携式计算机
B 类	中央处理器 (CPU) 物理核心数为 2，系统内存大于等于 2GB	具有独立图形显示单元 (GPU)
C 类	中央处理器 (CPU) 物理核心数大于 2，且至少具有以下特征中的一条 1. a) 系统内存大于等于 2GB； 2. 独立图形显示单元 (GPU)	中央处理器 (CPU) 物理核心数大于等于 2，系统内存大于等于 2GB，具有独立图形显示单元 (GPU) 且显存位宽大于等于 128 位。

类型	配置说明
D 类	中央处理器（CPU）物理核心数大于等于 4，且至少具有以下特征中的一条： <ol style="list-style-type: none"> 1. 系统内存大于等于 4GB； 2. 具有独立图形显示单元（GPU）且显存位宽大于等于 128 位

关于标识内容的更详细技术信息，请参考《微型计算机能效限定值及能效等级》(GB28380-2012)

China restriction of hazardous substances (RoHS)

The Table of Toxic and Hazardous Substances/Elements and their Content

As required by China's Management Methods for Controlling Pollution by Electronic Information Products.



Toxic and Hazardous Substances and Elements

Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Battery	X	0	0	0	0	0
Cables	X	0	0	0	0	0
Camera	X	0	0	0	0	0
Chassis/Other	X	0	0	0	0	0
Flash memory card reader	X	0	0	0	0	0
Floppy disk drive	X	0	0	0	0	0
Hard disk drive	X	0	0	0	0	0
Headphones	X	0	0	0	0	0
I/O PCAs	X	0	0	0	0	0
Keyboard	X	0	0	0	0	0
Liquid crystal display (LCD) panel	X	0	0	0	0	0
Media (CD/DVD/ floppy)	0	0	0	0	0	0
Memory	X	0	0	0	0	0
Motherboard, processor, heat sinks	X	0	0	0	0	0
Mouse	X	0	0	0	0	0
Optical disk drive	X	0	0	0	0	0
Optional docking device	X	0	0	0	0	0
Power adapter	X	0	0	0	0	0
Power supply	X	0	0	0	0	0
Remote control	X	0	0	0	0	0

Toxic and Hazardous Substances and Elements

Power supply	X	0	0	0	0	0
Remote control	X	0	0	0	0	0
Smart card/Java™ card reader	X	0	0	0	0	0
Speakers, external	X	0	0	0	0	0
TV tuner	X	0	0	0	0	0
USB flash memory drive	X	0	0	0	0	0
USB hub	X	0	0	0	0	0
Web camera	X	0	0	0	0	0
Wireless receiver	X	0	0	0	0	0
Wireless cards	X	0	0	0	0	0

0: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.

X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.

All parts named in this table with an X are in compliance with the European Union's RoHS Legislation "Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment" and its amendments.



NOTE: The referenced Environmental Protection Use Period Marking was determined according to normal operating use conditions of the product such as temperature and humidity.

产品中有毒有害物质或元素的名称及含量

根据中国《电子信息产品污染控制管理办法》



有毒有害物质和元素						
部件名	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴化联苯 (PBB)	多溴二苯醚 (PBDE)
电池	X	○	○	○	○	○
电缆	X	○	○	○	○	○
照相机	X	○	○	○	○	○
机箱 / 其他	X	○	○	○	○	○
闪存读卡器	X	○	○	○	○	○
软盘驱动器	X	○	○	○	○	○
硬盘驱动器	X	○	○	○	○	○
耳机	X	○	○	○	○	○
I/O PCAs	X	○	○	○	○	○
键盘	X	○	○	○	○	○
液晶显示器 (LCD) 面板	X	○	○	○	○	○
介质 (CD/DVD/ 软 盘)	○	○	○	○	○	○
内存	X	○	○	○	○	○
主板、处理器和 散热器	X	○	○	○	○	○
鼠标	X	○	○	○	○	○
光盘驱动器	X	○	○	○	○	○
对接设备选件	X	○	○	○	○	○
电源适配器	X	○	○	○	○	○
电源	X	○	○	○	○	○
遥控器	X	○	○	○	○	○
智能卡 /Java™ 卡读卡器	X	○	○	○	○	○

有毒有害物质和元素

外接扬声器	X	○	○	○	○	○
电视调谐器	X	○	○	○	○	○
USB 闪存盘	X	○	○	○	○	○
USB 集线器	X	○	○	○	○	○
网络摄像头	X	○	○	○	○	○
无线接收设备	X	○	○	○	○	○
无线网卡	X	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 规定的限量要求。

表中标有“X”的所有部件都符合欧盟 RoHS 法规“欧洲议会和欧盟理事会 2003 年 1 月 27 日关于电子电器设备中限制使用某

些有害物质的 2002/95/EC 号指令”及其增补版。

 注：环保使用期限的参考标识取决于产品正常工作的温度和湿度等条件。

Japan material content declaration

A Japanese regulatory requirement, defined by specification JIS C 0950, 2008, mandates that manufacturers provide material content declarations for certain categories of electronic products offered for sale after July 1, 2006. To view the JIS C 0950 material declaration for this product, see the HP Web site at <http://www.hp.com/go/jisc0950>.

2008年、日本における製品含有表示方法、JISC0950が公示されました。製造事業者は、2006年7月1日以降に販売される電気・電子機器の特定化学物質の含有につきまして情報提供を義務付けられました。製品の部材表示につきましては、www.hp.com/go/jisc0950を参照してください。

Mexico Sustainable Energy Use Law

This product has been labeled in compliance with the Mexico Sustainable Energy Use Law requiring disclosure of power consumption in the normal use (idle mode) and standby modes. Your product is one of many configurations in this model family; the idle mode power consumption of your specific configuration may vary from the information on the label. Actual power consumption of your product may be higher or lower than the value

reported on the Mexico product energy label due to factors such as configuration (components and modules chosen) and usage (tasks being performed, software installed and running, etc.)

Turkey EEE regulation

In Conformity with the EEE regulation

EEE Yönetmeliğine Uygundur

Ukraine restriction of hazardous substances

The equipment complies with requirements of the Technical Regulation, approved by the Resolution of Cabinet of Ministry of Ukraine as of December 3, 2008 № 1057, in terms of restrictions for the use of certain dangerous substances in electrical and electronic equipment.

Україна обмеження на наявність небезпечних речовин

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

Perchlorate material—special handling may apply

See <http://www.dtsc.ca.gov/hazardouswaste/perchlorate>.

This product's real-time clock battery or coin cell battery may contain perchlorate and may require special handling when recycled or disposed of in California.

For more information about HP products and services, see the HP Web site at <http://www.hp.com>.

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