

À
PREFEITURA MUNICIPAL DE COTIPORÃ
A/C.: COMISSÃO DE LICITAÇÕES
PREGÃO ELETRÔNICO Nº 0002/2021

PROPOSTA DE PREÇOS

Empresa: Athenas Automação Ltda

Endereço: Rua Buarque de Macedo, 439, São Geraldo, Porto Alegre/RS

CNPJ: 01.425.676/0001-90

Fone/E-mail: (51) 3363-4800 / licita@athenas.inf.br

Responsável pela assinatura da Ata de Registro de Preços/Contrato: Sr. André Felipe Henkin (Sócio-Gerente)

Pessoa de contato: Karina Castilhos / **Telefone:** (51) 3363-4800 / **E-mail:** licita@athenas.inf.br

Dados Bancários: Banco do Brasil / Ag. 0367-0 / C/C: 111.666-5 e Banrisul / Ag. 0018 / C/C: 0601033009

ITEM	Descrição do equipamento	UN	Quant	Preço unitário	Preço total
01	NOTEBOOK EDUCACIONAL <i>Conforme descrição técnica do edital e abaixo:</i> Marca/fabricante: Lenovo Modelo: ThinkPad E14 AMD GEN2 PN: 20T7000CTO	PÇ	50	R\$ 5.476,00 (Cinco quatrocentos e setenta e seis reais)	R\$273.800,00 (Duzentos e setenta e três mil e oitocentos reais)
Processador	DESCRIÇÃO: - Processador de 64 bits, família móvel com litografia máxima de 14nm. 2 núcleos físicos e 4 threads, frequência de operação nominal mínima de 2.1Ghz, com pelo menos 4 MB de cache, suportar tecnologias de Turbo Boost ou Turbo Core e de virtualização. Para efeitos de referência, foi utilizado o processador Intel Core i3-10110u , mas serão aceitos outros processadores, de características técnicas diferentes, de performance igual ou superior, desde que, sejam do mesmo ano de lançamento ou mais recente, auferidos pelo Passmark versão 10; o desempenho será comprovado por intermédio de resultados de BenchMark, disponíveis em: http://www.cpubenchmark.net/cpu_list.php ; Marca/ Modelo do processador ofertado: AMD RYZEN 3 4300U				
PLACA MÃE	Do mesmo fabricante do microcomputador, ou fabricada sob sua especificação para uso exclusivo, não sendo aceito o emprego de placas mãe de livre comercialização no mercado. Possui dispositivo de segurança compatível com o TPM 2.0 integrado. Suportar o uso de duas unidades de disco. Seja por uso de unidades de 2,5 polegadas ou M.2;				
BIOS	BIOS residente em flash rom. Totalmente compatível com o padrão UEFI. Com suporte a plug-and-play e atualizável por software, tipo Flash EPROM, sendo que o processo de atualização pode ser obtido, através do sítio do fabricante do equipamento na Internet. Possibilita a inserção de código de identificação do equipamento (número de registro patrimonial), recuperável por software de gerenciamento. Permite configurar senhas para, no mínimo, Power-on e Disco Rígido (HDD) e acesso à configuração do equipamento (Setup). As atualizações da BIOS, quando disponibilizadas, serão no site do fabricante do equipamento. Permite criação de um pendrive de recuperação da BIOS. Visando as questões de segurança e integridade da BIOS, essa está em conformidade com as normativas NIST 800-147 e NIST-800-88; O fabricante é registrado na "Membership List" do Unified Extensible Firmware Interface Fórum, acessível pelo website www.uefi.org/members , estando na categoria "Promoters", de forma a atestar que os seus equipamentos estão em conformidade com a especificação UEFI 2.x ou superior.				
Memória	Memória DDR4 SDRAM 2.666 MT/s ou superior. - 8GB instalado.				
Unidade de armazenamento	Capacidade de armazenamento de 256GB SSD. Interface M.2 PCIe NVME ou superior; Marca/Modelo da unidade ofertada: FRU: 00UP747- PN: MZALQ256HAJD-000L1				

	Samsung PM991 - https://download.lenovo.com/Images/Parts/00UP747/00UP747_A.jpg
Segurança	Possui o Leitor Biométrico de impressões digitais;
	Possui sistema de fechamento da lente da Webcam integrado ao gabinete; Equipamento permite a colocação de dispositivo antifurto do tipo Kensington ou Noble.
Portas interfaces	Conectores de entrada de microfone e de saída de fones de ouvido (serão aceitos conectores do tipo combo). Possui 3 (três) portas USB no total, sendo, 01 (uma) porta USB 3.1 energizada e, possui, 1 (uma) porta no padrão USB 3.1 Tipo C, com capacidade de transmitir sinal de vídeo e carregar o equipamento simultaneamente, permitindo conexão única entre o notebook e as DOCAS compatíveis. 1 saída padrão HDMI ou outra porta com adaptador apropriado para disponibilizar saída HDMI.
Teclado	Teclado retro iluminado acoplado ao gabinete no padrão ABNT2. A impressão sobre as teclas do tipo permanente, não podendo apresentar desgaste por abrasão ou uso prolongado.Com proteção contra líquidos.
Dispositivo apontador	Mouse embutido do tipo Touch Pad ou Clickpad com 2 botões. Possui dispositivo apontador tipo "Pointing stick" ou suas variantes comerciais, com no mínimo 2 botões.
Fonte de alimentação/bateria	Fonte de alimentação para corrente alternada com tensões de entrada de 100 a 240 VAC (+/-10%), 50-60Hz, com seleção automática de tensão. Bateria interna com pelo menos 45Whr de capacidade energética; Equipamento ofertado oferece suporte a carga rápida da bateria;
Gabinete	O gabinete, em todo ou na tampa do LCD, possui em sua composição, materiais como: alumínio, liga de magnésio, fibra de carbono e/ou vidro. Possui botão liga/desliga. Possui alto falantes e microfones integrados ao gabinete. Não existe quaisquer adaptações no gabinete destinadas a implementar o sistema de trava de segurança Kensington ou Noble. Peso máximo do conjunto (notebook com bateria instalada) de no máximo 1.850 gramas.
Interface de vídeo	Possui compatibilidade com DirectX 12 e OpenGL 4.5. Possui no mínimo 1 (uma) conexão de vídeo externa do tipo HDMI;
Tela	Tamanho mínimo de 14". Resolução nativa de 1920 x 1080 pixels ou superior. Controle de brilho regulável através de teclas funcionais do teclado. Tratamento antirreflexivo, não sendo aceita a solução glare (brilhante ou polida) ou adesivos antirreflexos. Câmera (tipo webcam) integrada no padrão HD 720p com microfones duplos ("array") e com sistema de controle físico de privacidade integrado ao gabinete.
Interface de rede	Placa de rede integrada padrão Gigabit Ethernet. Suporte a PXE e Wake-On-Lan.
Interface de rede sem fio	Placa de rede Wireless embutida padrão 802.11 AX (2x2). Interface Bluetooth 5.0;
Interface de som	Possui controladora integrada, com conectores de saída e microfone (serão aceitos conectores do tipo combo).Possui alto falantes de 2W cada e microfones duplos integrados ao gabinete. Controle de mudo e de volume regulável através de teclas funcionais do teclado.
Sistema operacional	O equipamento será fornecido com licença do Sistema Operacional Microsoft® Windows 10 Professional 64 bits ou superior, idioma português (Brasil) com a respectiva chave de ativação gravada na memória flash da BIOS, reconhecida automaticamente na instalação do Sistema Operacional; O fabricante do equipamento disponibiliza no seu respectivo website, download gratuito de todos os drivers, BIOS, firmwares, manuais para o equipamento ofertado e devem ser facilmente localizados e identificados pelo modelo do equipamento ou código do produto; O licitante fornecerá pré-instalado, ou disponibilizar via Internet, software que permita a verificação e instalação das últimas atualizações de todas as ferramentas e drivers disponíveis pelo fabricante.
Garantia	Os equipamentos possuem garantia do fabricante por um período de 36 (trinta e seis) meses e de 12 (doze) meses para a bateria; A abertura do chamado do fabricante poderá ser feita através de central de atendimento tipo (08007014815), comprometendo-se a manter registros dos mesmos constando a descrição do problema, com atendimento 10 horas por dia, 5 dias por semana; O equipamento ofertado possui código de identificação único para a abertura dos chamados;

	<p>Durante o prazo de garantia será substituída sem ônus para a contratante, a parte ou peça defeituosa, salvo quando o defeito for provocado por uso inadequado dos equipamentos; A garantia deverá contemplar defeitos de hardware; A garantia prestada pelo fabricante do equipamento ou empresa prestadora de serviços de assistência técnica devidamente credenciada pelo mesmo por meio de carta, que deverá ser fornecida no ato da apresentação da proposta, devidamente assinada pelo representante legal; O atendimento no local para reparo será das 08h às 18h, de segunda a sexta-feira;</p> <p>Esta modalidade de cobertura de garantia obrigatoriamente, entrará em vigor a partir da data de atesto, recebimento definitivo, da respectiva nota fiscal dos equipamentos fornecidos; A licitante não é o próprio fabricante do equipamento, apresentamos declaração/certificado do fabricante, comprovando que o produto ofertado possui a garantia solicitada neste termo de referência;</p> <p>É possível consultar o status da garantia através de site do fabricante (informado na proposta).</p>
<p>Certificação</p>	<p>Apresentado catalogo completo do item para análise da especificação técnica; O modelo do equipamento, na configuração ofertada, possui certificado de conformidade contra incidentes elétricos e de combustão dos materiais (IEC/EN 60950) e de compatibilidade eletromagnética (IEC/EN 61000, CISPR 22 / EN 55022 ou CISPR 32 / EN 55032 e CIPR24 / EN 55024), comprovado através de certificados ou do relatório de avaliação de conformidade nos moldes da portaria 170/2012 vigente do INMETRO; Os equipamentos ofertados estão em conformidade com as diretivas ROHS (Restriction of Certain Hazardous Substances); O Fabricante do equipamento ofertado deve possuir sistema de gestão ambiental com base na norma ISO 14001, devidamente comprovado através do respectivo certificado em plena validade; O Fabricante do equipamento ofertado possui Certificação ISO 9001:2000 em plena validade; O modelo, do equipamento ofertado, está listado pela Microsoft no seu catálogo de produtos compatíveis e certificados "HCL" (Hardware Compatibility List) em https://partner.microsoft.com/en-us/dashboard/hardware/search/cpl ou, certificados de compatibilidade do equipamento obtidos junto a Microsoft; Possui certificado em que o fabricante do equipamento é membro do consorcio DMTF (Desktop Management Task Force) que especifica o padrão "DMI" de gerenciamento. O FABRICANTE é membro na categoria "BOARD". O certificado será conferido através de acesso a pagina http://www.dmtf.org/about/list/. Apresenta página impressa onde consta tal informação, especificando o endereço eletrônico da fonte extraída; Comprovação que, o(s) produto(s) ofertado(s) pertence(m) à linha corporativa. Não serão aceitos equipamentos destinados ao uso da linha doméstica;</p> <p>Compatibilidade com o padrão DMI 2.0 (Desktop Management Interface) ou superior da DMTF (Desktop Management Task Force), comprovado através de documentação do fabricante do equipamento. O fabricante do equipamento, deverá ser membro da RBA (Responsible Business Alliance), antiga EICC, ou possuir Certificação válida ISO 45001, para garantia de conformidade com as questões ambientais, qualidade e segurança do bem-estar de seus funcionários e investimentos ambientais. O fabricante está relacionado no site da RBA, http://www.responsiblebusiness.org/about/members/ e apresentamos o Certificado da ISO 45001 válido. Apresentada certificação Energy Star® 6.0 (ou mais atual), através do site www.energystar.gov ou apresentar relatório técnico de ensaios de conformidade de consumo de energia, emitido por laboratório de ensaio acreditado pela Coordenação Geral de Acreditação (CGCRE) do Inmetro, de acordo com a norma NBR/ISO IEC 17025;</p>
<p>Outros requisitos</p>	<p>Todos os equipamentos a serem entregues serão idênticos, ou seja, todos os componentes externos e internos de mesmos modelos e marcas. Caso o componente não mais se encontre disponível no mercado, admitem-se substitutos com qualidade e características idênticas ou superiores, mediante nova homologação. Todos os cabos e conectores necessários ao funcionamento dos equipamentos serão fornecidos com comprimento mínimo de 1,5m (um metro e cinquenta centímetros). Cabos de conexão à rede elétrica deverão seguir o padrão NBR-14136.</p> <p>As unidades do equipamento serão entregues devidamente acondicionadas em embalagens individuais adequadas, que utilizem preferencialmente materiais recicláveis, de forma a garantir a máxima proteção durante o transporte e a</p>

armazenagem. O equipamento (notebook, mouse, fonte e demais componentes) obrigatoriamente estará padronizado na cor preta, cinza ou preta/cinza. O equipamento, comprovadamente, pertence à linha corporativa, não sendo aceitos equipamentos destinados ao uso doméstico. Catálogo técnico oficial do produto, do Fabricante, que apresente as características técnicas em conformidade com as descritas no Edital. Caso os Catálogos Técnicos apresentados omitam alguma informação ou exigência técnica em relação aos descritivos do Edital e seus Anexos, anexado aos mesmos a declaração do fabricante, completando estas informações, em Português. Não serão aceitos produtos descontinuados por seus fabricantes.

Declaramos para os fins de direito, na qualidade de licitante do procedimento licitatório PREGÃO ELETRÔNICO Nº 0002/2021, de que a proposta vigorará pelo prazo de 60 (sessenta) dias corridos, contados da data limite prevista para entrega das propostas, conforme art. 64, § 3º, da Lei nº 8.666/93 e art. 6º da Lei nº 10.520, de 17/07/2002 e de total conhecimento e concordância com os termos deste Edital e seus Anexos.

CONDIÇÕES GERAIS:

Os equipamentos ofertados, na proposta comercial, serão novos (sem uso, reformados ou recondicionados), bem como, não estarão fora da linha de produção/fabricação;

A Licitante, declarada vencedora, fornecerá equipamentos em conformidade as especificações técnicas constantes no Termo Referencial, bem como, na proposta comercial, os quais não serão inferiores as especificações mínimas técnicas exigidas;

Nos preços propostos serão considerados todos os encargos previdenciários, fiscais (ICMS e outros), trabalhistas, tributários, comerciais, equipamentos, embalagens, instalação quando houver, fretes, seguros, tarifas, descarga, transporte, responsabilidade civil e demais despesas incidentes ou que venham a incidir sobre os equipamentos, objeto desta licitação. Os preços propostos serão considerados completos e suficientes para o fornecimento dos equipamentos, objeto desta licitação, sendo desconsiderada qualquer reivindicação de pagamento adicional devido a erro ou à má interpretação de parte da licitante.

Validade da Proposta: 60 (sessenta) dias, a contar da data da disputa do pregão.

Prazo de Entrega: Os produtos serão entregues no prazo de até 45 (quarenta e cinco) dias após o recebimento do empenho

Condições de Pagamento: pagamento será efetuado através de depósito em conta corrente da fornecedora em até 08 (oito) dias a contar do recebimento, mediante a apresentação da Nota Fiscal;

Dados Bancários Banco do Brasil Ag. 0367-0 C/C: 111.666-5
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Links para consulta:

[PSREF ThinkPad ThinkPad E14 Gen 2 \(AMD\) \(lenovo.com\)](https://psref.lenovo.com/pt/ThinkPad/ThinkPad%20E14%20Gen%20(AMD))

Site do fabricante:

www.lenovo.com.br / <https://support.lenovo.com/br/pt/>

Site do fabricante para validação da garantia, download de drivers:

http://support.lenovo.com/br/pt/?menu-id=lenovo_think_product_support

<http://pcsupport.lenovo.com/br/pt/warrantylookup>

Telefone do fabricante, para abertura de chamados técnicos: 0800-7014815

Telefone da licitante: 0800-0064001

Os Serviços de assistência técnica aos produtos Lenovo, serão prestados por:

Filial Responsável IBM Porto Alegre

Av. Dolores Alcaraz Caldas, 90 (7º, 8º, 11º andares) Porto Alegre/RS/Telefone de Contato: (51) 2131-5914

Responsável Técnico: Roberto Osório Schneider /E-mail: schneide@br.ibm.com

Declaramos que atendemos todas às características mínimas descritas no objeto licitado.

Porto Alegre, 15 de março de 2021



ATHENAS AUTOMAÇÃO LTDA
ANDRÉ FELIPE HENKIN
SÓCIO-GERENTE
RG: 6026394376
CPF: 418.019.540-20

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Certificate CN19/31787.06

The management system of

Lenovo Tecnologia (Brazil) Ltd.

Business Registration Address: ESTRADA MUNICIPAL JOSÉ COSTA DE MESQUITA, 200–BAIRRO CHÁCARA ALVORADA–MODULES 5 TO 10 –INDAIATUBA / SP BRAZIL–ZIP CODE: 13.337–200 Brasil
Business Operation Address: ESTRADA MUNICIPAL JOSÉ COSTA DE MESQUITA, 200–BAIRRO CHÁCARA ALVORADA–MODULES 5 TO 10 –INDAIATUBA / SP BRAZIL–ZIP CODE: 13.337–200 Brasil



has been assessed and certified as meeting the requirements of

ISO 45001:2018

For the following activities

Manufacture of Computer Products and Servers.

This certificate is valid from 28 October 2019 until 27 October 2022 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date Issue 1. Certified since 28 October 2019

Multiple certificates have been issued for this scope
The main certificate is numbered CN19/31787.00

Authorised by

A handwritten signature in black ink, consisting of stylized, overlapping letters.



0005

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HC SGS 45001 2018 0219 M3(5)

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CERTIFICATE

Certificate Number: 111969.00
With One Page Addendum

The Quality Management System and implementation of:

Lenovo Group, LTD

With Headquarters at:
8001 Development Drive
Morrisville, NC 27560
United States

meets the requirements of the standard:

ISO 9001:2015

Scope of Certification:

Design, development, manufacturing, distribution, fulfillment, services, marketing, and sales of computer products and devices, data center products, mobile devices, smart devices, and accessories.

Certificate Expires:	June 30, 2022
Certificate Issued:	July 1, 2019
Certified Since:	July 1, 2016

Dr. Cem O. Onus
Managing Director, Business Assurance
DEKRA Certification, Inc.
1120 Welsh Road, Suite 210
North Wales, PA 19454 USA
(215) 997-4519
dekra-certification.us



ADDENDUM

Certificate Number: 111969.00

Addendum Page One of One

Standard: ISO 9001:2015

The Quality Management System and implementation of:

Lenovo Group, LTD

Site Address	Scope Per Site:
HQ: 8001 Development Drive; Morrisville, NC 27560 USA	Responsibility of the company's overall QMS through the management of documentation/changes, management review, corrective actions, internal audit, planning/evaluation and compliance to applicable requirements.
8001 Development Drive; Morrisville, NC 27560 USA	Design, development, fulfillment, services, marketing, and sales of computer products and devices, data center products, mobile devices, smart devices, and accessories.
19/1A, & 2A Edayar, Cuddalore Main Road, Edayar Palayam Village – Pondicherry, India	Manufacturing of computer products and devices.
Apodaca (Monterrey), Mexico; Boulevard Escobed No 316, Apodaca Industrial Park, PO 66600	Manufacturing of computer products and devices, and data center products.
Estrada Municipal José Costa de Mesquita, 200 – Chácara Alvorada – Indaiatuba/SP, Brazil	Manufacturing of computer products and devices, and data center products.
6540 Franz Warner Parkway; Whitsett, NC 27377 USA	Manufacturing, distribution, fulfillment and services of computer products and devices, data center products, mobile devices, smart devices, and accessories.
Digital Park, Einsteinova 851 01; Bratislava, Slovakia	Fulfillment, services, marketing, and sales of computer products and devices, data center products, mobile devices, smart devices, and accessories.
Minatomiral Center Building; 2F 3-6-1; Minatomiral, Nishi-Ku; Yokohama, Japan	Design and development of computer products and devices.



CERTIFICATE

Certificate Number: 111968.00

The Environmental Management System and implementation of:

Lenovo Group, LTD.

8001 Development Drive
Morrisville, NC 27560
United States

meets the requirements of the standard:

ISO 14001:2015

Scope of Certification:

Design, development, manufacturing, distribution, fulfillment, and repair of computer products and devices, data center products, mobile devices, smart devices and accessories.

Certificate Expires:	June 16, 2022
Certificate Issued:	June 17, 2019
Certified Since:	June 17, 2013



Dr. Cem O. Onus
Managing Director
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ADDENDUM

Certificate Number: 111968.00

Standard: ISO 14001:2015

The Environmental Management System and implementation of:
Lenovo Group, LTD

Site Address	Scope Per Site:
HQ: 8001 Development Drive, Morrisville, NC 27560 USA	Responsibility of the company's overall EMS through the management of documentation/changes, management review, corrective actions, internal audit, planning/evaluation and compliance to applicable requirements.
8001 Development Drive, Morrisville, NC 27560 USA	Design and development of data center products.
19/1A, & 2A Edayar, Cuddalore Main Road, Edayar Palayam Village – Pondicherry, India	Manufacturing of computer products and devices.
Apodaca (Monterrey), Mexico, Boulevard Escobedo No 316, Apodaca Industrial Park, PO 66600	Manufacturing of computer products and devices and data center products.
Estrada Municipal José Costa de Mesquita, 200 – Chácara Alvorada – Indaiatuba/SP, Brazil	Manufacturing of computer products and devices and data center products.
6540 Franz Warner Parkway, Whitsett, NC 27377 USA	Manufacturing, distribution, fulfillment, and repair of computer products and devices, data center products, mobile devices, smart devices, and accessories.
Am Zehnthof 77, 45307 Essen, Germany	Design and development of computer products and devices.
Minatomiral Center Building, 21F 3-6-1, Minatomiral, Nishi-Ku, Yokohama, Japan	Design and development of computer products and devices.



ThinkPad E14 Gen 2 (AMD) Platform Specifications

Product Specifications Reference (PSREF)

Processor	AMD Ryzen™ Mobile Processors with Radeon™ Graphics (Ryzen 7 4800U is NOT available in EMEA)								Smart card reader	None
	Processor Number	# of Cores	# of Threads	Base Clock	Max Boost Clock	Cache	Memory Types	Processor Graphics	Media reader	None
	Ryzen 3 4300U	4	4	2.7 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics	Ports	One USB 2.0, one USB 3.2 Gen 1 (Always On), one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort 1.2), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, security keyhole <i>* Depending on many factors, actual data transfer speed may be lower than theoretical speed</i>
	Ryzen 5 4500U	6	6	2.3 GHz	4.0 GHz	3MB L2 / 8MB L3			Monitor cable	None
	Ryzen 7 4700U	8	8	2.0 GHz	4.1 GHz	4MB L2 / 8MB L3			Bundled Accy	None
	Ryzen 7 4800U	8	16	1.8 GHz	4.2 GHz	4MB L2 / 8MB L3			Camera	<i>One of the following, configurable by model:</i> • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Graphics	AMD Radeon Graphics in processor; supports up to 3 independent displays via native display and two external monitors; supports external monitors via HDMI (up to 3840x2160@30Hz) or USB Type-C (up to 3840x2160@60Hz)								Audio support	HD Audio, Realtek ALC3287 codec / stereo HARMAN-branded speakers, 2W x 2, Dolby Audio® / dual array microphone, headphone / microphone combo jack
Chipset	AMD SoC (System on Chip) platform								Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, optional LED backlight
Memory	20GB or 24GB max / 3200MHz DDR4, dual-channel capable 4GB or 8GB memory soldered to systemboard, one DDR4 SO-DIMM socket								UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	Size	Resolution	Type	Surface	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Security	Power-on password, hard disk password, supervisor password, security keyhole
	14.0"	FHD (1920x1080)	TN	Anti-glare	220 nits	16:9	400:1	90°	Security chip	• Discrete TPM 2.0, TCG Certified • Firmware TPM 2.0 integrated in chipset
	14.0"	FHD (1920x1080)	WVA	Anti-glare	250 nits	16:9	700:1	170°	System Mgt	None
Multi-touch	None								Fingerprint reader	<i>Optional:</i> Touch style fingerprint reader on power button
Storage	Up to two drives • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4								NFC	None
Optical	None								Battery	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Ethernet	Gigabit Ethernet Connection, Realtek R8111GUS								Max battery life	<i>MobileMark® 2014:</i> 13 hrs <i>* Battery life varies significantly with hardware configurations, settings, usage, & other factors</i>
WLAN + Bluetooth™	One of the following, configurable by model: • Realtek® RTL8822CE, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card • Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.1, M.2 card <i>(Realtek RTL8822CE is NOT available in EMEA)</i> <i>* Intel WiFi 6 full features might be limited by country level restrictions</i> <i>* Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above)</i>								AC adapter	65W USB-C AC adapter
WWAN	None								Operating system	• Windows® 10 Home 64 <i>(optional)</i> • Windows 10 Pro 64
SIM card	None								Limited warranty	<i>(optional)</i> • 1-year mail-in repair service • 1-year depot repair service • 1-year depot with 2-year system board repair service • 1-year limited onsite service
Dimensions	<i>Case Material</i>		<i>Dimensions (WxDxH)</i>						Mil-Spec test	MIL-STD-810G military testing
	Aluminum		12.76" x 8.66" x 0.70"; 324mm x 220mm x 17.9mm						Environment	EPPEAT™ Gold; ENERGY STAR® 8.0; ErP lot3; TCO Certified; RoHS-compliant
	PC/ABS		12.76" x 8.66" x 0.81"; 324mm x 220mm x 20.5mm							
	Aluminum (top) + PC/ABS (bottom)		12.76" x 8.66" x 0.74"; 324mm x 220mm x 18.9mm							
Weight	<i>Case Material</i>		<i>Weight</i>							
	Aluminum		starting at 3.62 lb / 1.64 kg							
	PC/ABS		starting at 3.73 lb / 1.69 kg							
	Aluminum (top) + PC/ABS (bottom)		starting at 3.51 lb / 1.59 kg							
Case color	Black <i>Display cover:</i> Aluminum or PC/ABS plastic; <i>Bottom:</i> Aluminum or PC/ABS plastic									

Note: The specifications above may not be available in all regions.

CPU Benchmarks

Over 1,000,000 CPUs benchmarked

AMD Ryzen 3 4300U vs Intel Core i3-10110U @ 2.10GHz

The values for the CPUs below are determined from thousands of [PerformanceTest](#) benchmark results and are updated daily.

CPUS

High End

High Mid Range

Low Mid Range

Low End

Best Value (On Market)

Best Value XY Scatter

Best Value (All time)

New Desktop

New Laptop

Single Thread

Systems with Multiple CPUs

Overclocked

Power Performance

CPU Mark by Socket Type

Cross-Platform CPU Performance

CPU Mega List

Search Model

Compare ²

Common

Most Benchmarked

AMD vs Intel Market Share

	AMD Ryzen 3 4300U ^x	Intel Core i3-10110U @ 2.10GHz ^x	+ ADD
Price	Search Online	\$309.95	BUY NOW!
Socket Type	FP6	FCBGA1528	
CPU Class	Laptop	Laptop	
Clockspeed	2.7 GHz	2.1 GHz	
Turbo Speed	Up to 3.7 GHz	Up to 4.1 GHz	
# of Physical Cores	4 (Threads: 4)	2 (Threads: 4)	
Max TDP	15W	15W	
Yearly Running Cost	\$2.74	\$2.74	
First Seen on Chart	Q1 2020	Q4 2019	
# of Samples	92	148	
Cross-Platform Rating	11574	7563	
Single Thread Rating	2338	2339	
CPU Mark	7708	4089	

CPU Mark Rating

As of 12th of March 2021 - Higher results represent better performance

AMD Ryzen 3 4300U	7.708
Intel Core i3-10110U @ 2.10GHz	4.089

CPU Value (CPU Mark / \$Price)

As of 12th of March 2021 - Higher results represent better value

AMD Ryzen 3 4300U	NA
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Intel Core i3-10110U @ 2.10GHz	13.19
--	-----------------------

PassMark Software © 2008-2021

CPU Single Thread Rating

As of 12th of March 2021 - Higher results represent better performance

AMD Ryzen 3 4300U	2.338
-----------------------------------	-----------------------

Intel Core i3-10110U @ 2.10GHz	2.339
--	-----------------------

PassMark Software © 2008-2021

Estimated Energy Usage Cost

Estimated Energy Adjustable Values

Average hours of use per day	Average CPU Utilization (0-100%) ¹	Power cost, \$ per kWh ²
<input type="text" value="8"/>	<input type="text" value="25"/>	<input type="text" value="0.25"/>

¹ Average user usage is typically low and can vary from task to task. An estimate load 25% is nominal.

² Typical power costs vary around the world. Check your last power bill for details. Values of \$0.15 to \$0.45 per kWh are typical.

	AMD Ryzen 3 4300U	Intel Core i3-10110U @ 2.10GHz
Max TDP	15W	15W
Power consumption per day (kWh)	0.0	0.0
Running cost per day	\$0.007	\$0.007
Power consumption per year (kWh)	10.9	10.9
Running cost per year	\$2.74	\$2.74

Shown CPU power usage is based on linear interpolation of Max TDP (i.e. max load). Actual CPU power profile may vary.



Software

- [BurnInTest](#)
- [PerformanceTest](#)
- [OSForensics](#)
- [MemTest86](#)
- [WirelessMon](#)
- [Zoom Search Engine](#)
- [Free Software](#)

Hardware

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- [USB2.0 Loopback Plugs](#)
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Fornecedor / Supplier LENOVO TECNOLOGIA (BRASIL) LTDA
(100592254) Estrada Municipal Jose Costa de Mesquita, 200
Módulos 5 a 10, Chacara Alvorada, Indaiatuba – SP - CEP 13337-200, Brasil
CNPJ - 07.275.920/0001-61

Produto Certificado / Certified Product Computador Portátil / Notebook

Família de produto / Product's Family ThinkPad T450, ThinkPad X250, ThinkPad T450S,
ThinkPad L450, ThinkPad T460S, ThinkPad L460,
ThinkPad T460, ThinkPad T470, ThinkPad X270, ThinkPad E470, ThinkPad E490,
ThinkPad T490, ThinkPad L390, ThinkPad E14, ThinkPad L13, ThinkPad T495,
ThinkPad T14, ThinkPad T14 Gen 1xxxxx, ThinkPad E14 Gen 2xxxxx

Modelo - Tipo / Model - Type ThinkPad T450, 20CLXXXXXX, 20BW, 20DS, 20F9, 20FA, 20FU, 20FV, 20FN, 20FM, 20HD,
20HE, 20JM, 20JN, 20HM, 20HN, 20K5, 20K6, 20H1, 20H2, 20H3, 20N8, 20N9, X280 model(s)
20KEXXXXX, 20KFXXXXX, T480, model(s) 20L5XXXXX, 20L6XXXXX, E480, model(s)
20KNXXXXX, 20KQXXXXX, 20KRXXXXX, 20M7XXXXX, 20M8XXXXX, 20M5XXXXX, 20M6XXXXX,
20L2XXXXX, 20L1XXXXX, ThinkPad T490xxxxxxxxx, 20N2, 20N3, 20Q9, 20QH, ThinkPad L390
Yoga, ThinkPad L390*****, ThinkPad S2 Yoga 4th Gen*, ThinkPad S2 4th Gen*****,
20NT*****, 20NU*****, 20NR*****, 20NS*****, 20NW*****, 20NV*****, ThinkPad
E14*****, 20RA*****, 20RB*****, ThinkPad L13 Yoga, ThinkPad L13, ThinkPad S2 Yoga 5th
Gen*****, ThinkPad S2 5th Gen*****, 20R5*****, 20R6*****, 20R3*****, 20R4*****, 20R8*****,
20R7*****, 20NK*****, 20S0, 20S1, 20S2, 20S3, 20UD, 20UE, 20T6, 20T7 (onde X pode ser 0-9, a-z,
A-Z, '-' ou em branco).

Marca comercial / Trademark Lenovo

Normas aplicáveis / Applicable standards IEC 60950-1: 2005, CISPR 22: 2005 +A1: 2005, CISPR 24: 1997 + A1: 2001 + A2:
2002, IEC 61000-3-2: 2005, IEC 61000-3-3: 2008, IEC 61000-4-2: 2008, IEC 61000-
4-3: 2006 +A1: 2010, IEC 61000-4-4: 2012, IEC 61000-4-5: 2009, IEC 61000-4-6:
2008, IEC 61000-4-8: 2009, IEC 61000-4-11: 2010 e Anexo E da Portaria no.
170/2012

Programa de certificação ou Portaria / Certification Program or Decree PORTARIA NO. 170/2012 / DECREE NO. 170/2012
PORTARIA NO. 407/2015 / DECREE NO. 407/2015
PORTARIA NO. 48/2017 / DECREE NO. 48/2017

Relatório de Avaliação e Ensaios / Assessment and Test Report # BR2334, Vol. 1, Sec. 38, 39, 40, 41, 51, 52, 53, 56, 57, 61, 71, 73, 74, 77, 80, 84, 85,
89, 92, 95, 96

Concessão Para / Concession for Ostentar o Selo de Identificação da Conformidade do Sistema Brasileiro de Avaliação
da Conformidade (SBAC) sobre o(s) produto(s) relacionado(s) neste certificado.
*Bearing the Conformity Identification Seal of the Brazilian System of Evaluation of
Conformity (SBAC) on the product covered by this certificate.*

Revisão / Revision date 18 de Novembro de 2020 / November 18, 2020
Validade / Expire date 11 de Maio de 2023 / May 11, 2023

Pedro Mottola
Program Owner

UL do Brasil Certificações, organismo acreditado pela Coordenação Geral de
Acreditação do INMETRO – CGCRE, segundo o registro No.: OCP-0029
confirma que o produto está em conformidade com a(s) Norma(s) e programas
ou Portarias acima descritas.

*UL do Brasil Certificações, Certification Body accredited by Coordenação Geral de
Acreditação do INMETRO - CGCRE according to the register No.: OCP-0029
confirms that the product is in compliance with the standards and certification
Program or Decree above mentioned.*



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Solicitante / Applicant **LENOVO TECNOLOGIA (BRASIL) LTDA**
(100592254) Estrada Municipal Jose Costa de Mesquita, 200
Módulos 5 a 10, Chácara Alvorada, Indaiatuba - SP
CEP 13337-200, Brasil

Fabricante / Manufacture **LENOVO TECNOLOGIA (BRASIL) LTDA**
(100592-254) Estrada Municipal Jose Costa de Mesquita, 200
Módulos 5 a 10, Chácara Alvorada, Indaiatuba - SP
CEP 13337-200, Brasil

MARCAÇÃO / MARKING: Marca do fabricante, modelo e características elétricas.

CARACTERÍSTICAS NOMINAIS / RATINGS:

2.25 A ou 3.25 A 20 Vdc. Class III ADLX45NAC2A
20 Vdc, 2.25 A/3.25 A/4.5 A (2.25A for 45 W Adapter / 3.25 A for 65 W Adapter / 4.5A for 90 W Adapter) 2,25 A a 4,5 , 20 Vdc, Class III

Entrada: 100-240V, 1,8 A, 50-60Hz

Saída: 20V - 3,25 A / 15 V - 3 A / 9 V - 2 A / 5 V - 2 A

LISTA DE ACESSÓRIOS / LIST OF ACCESSORIES: N/A

LISTA DE COMPONENTES CRÍTICOS / LIST OF CRITICAL COMPONENTS:

Componente / Component	Manufacturer/ trademark	Type/model	Technical data	Normal/ Standard
Rating Label	Cymmetrik enterprise	CM-100T-019	(Tested to Durability Test per Sub-clause 1.7.11)	NBR 14136, NBR NM 60884-1
Cord set	Interchangeable	Interchangeable	--	NBR 14136, NBR NM 60884-1
Printed Wiring Board Printed Wiring Board for Wireless Network Card Alternate Printed Wiring Board for WWAN Module	Interchangeable	Interchangeable	Minimum V-1, 105°C	
Flexible Printed Wiring	Interchangeable	Interchangeable	Minimum V-2 or VTM-2. (SELV circuit, no components mounted on it)	
AC/DC adapter	Chicony Power Technology Co., Ltd. / Lenovo	ADLX45NCC2A ADLX45NCC2. (The dot "." in model name can be A to Z, 0 to 9 or blank for marketing purpose only) ADLX45NCC3A ADLX45NCC3. (The dot "." in model	I/P: 1.3A 100-240Vac 50-60Hz, Cl. II, DC-output: 2.25A 20V I/P: 1.3A 100-240Vac 50-60Hz, Cl. I,	IEC 60950-1 (ed. 2); am1, EN 60950-1: 2006+A11+A1+ A12:2011, UL 60950-1

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		name can be A to Z, 0 to 9 or blank for marketing purpose only)	DC-output: 2.25A 20V
		ADLX65NC.2A (The dot "." in model name can be C, G, T, N and P for marketing purpose only)	I/P: 1.8A 100-240V~ 50-60Hz, Cl. II. DC-output: 3.25A 20V
		ADLX65NC.3A (The dots "." in model name can be C, G, T, N and P for marketing purpose only)	I/P: 1.8A 100-240V~ 50-60Hz, Cl. I DC-output: 3.25A 20V
		ADLX90NC.2A (The dot "." in model name can be C, G, T, N and P for marketing purpose only)	I/P: 1.2A max. 100-240VAC 50-60Hz, Cl. II DC-output: 4.5A 20V
		ADLX90NC.3A (The dot "." in model name can be C, G, T, N and P for marketing purpose only)	I/P: 1.2A max. 100-240VAC 50-60Hz, Cl. I DC-output: 4.5A 20V
	Delta Electronics Inc. / lenovo	ADLX45NDC2 ADLX45NDC2A (Class II, double insulated) and ADLX45NDC3A ADLX45NDC3B (Functional earthing)	I/P: AC 100-240V, 1.2A, 50-60Hz O/P: 20Vdc/2.25A
	Delta Electronics Inc. / lenovo	ADLX65NDC2A ADLX65NDT2A (Class II equipment) and	I/P: 100-240Vac, 1.5A, 50-60Hz O/P: 20Vdc, 3.25A
	Delta Electronics Inc. / Lenovo	ADLX65NDC3A ADLX65NDT3A (Class I equipment) ADLX65SDC2A ADP-45TD B	I/P: 100-240Vac, 1.5A, 50-60Hz, Cl. II, O/P: 20Vdc, 3.25A
Alt. AC/DC	Delta Electronics	ADLX90NDC2A	I/P: AC 100-240V, 1.5A, 50-60Hz,

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adapter	Inc. / lenovo	ADLX90NDT2A (Class II equipment) and	O/P: 20Vdc, 4.5A	IEC 60950-1 (ed. 2); am1, EN 60950-1: 2006+A11+A1+A12:2011, UL 60950-1
	Delta Electronics Inc. / lenovo	ADLX90NDC3A ADLX90NDT3A (Class I equipment) ADP-65FD B (Class I equip.) ADP-90XD B	I/P: 100-240Vac, 1.5A, 50-60Hz O/P: 20Vdc, 3.25A	
	Lite-On Technology Corporation / Lenovo	ADLX65NDC3B ADLX65NDT3B (Class I equip.) ADLX65NDC2B (Class II equip.) ADP-65XB A, ADLX65SDC2A	I/P: AC 100-240V, 1.3A, 50-60Hz, Cl. II O/P: 20Vdc, 2.25A I/P: AC 100-240V, 1.3A, 50-60Hz, Cl. I	
		ADLX45NL*2* (* = A-Z, 0-9 or blank)	O/P: 20Vdc, 2.25A	
		ADLX45NLC3* (* = A-Z, 0-9 or blank)	I/P: AC 100-240V, 50-60Hz, 1.8A, Cl. II O/P: 20Vdc, 3.25A	
		ADLX65NL*3* (* can be any character or blank)	I/P: AC 100-240V, 50-60Hz, 1.8A, Cl. I O/P: 20Vdc, 3.25A	
		ADLX65SLC2A	I/P: AC 100-240V, 2.0A, 50-60Hz, Cl. II O/P: 20Vdc, 3.25A	
		ADLX90NL*2* (* can be any character or blank)	I/P: AC 100-240V, 50-60Hz, 1.5A, Cl. II O/P: 20Vdc, 4.5A	
		ADLX90NL*3* (* can be any character or blank)	I/P: AC 100-240V, 50-60Hz, 1.5A, Cl. I O/P: 20Vdc, 4.5A	
		ADLX45DLC2* (The * can be any character or blank), PA-1450-17XX (The X can be any character or blank)	I/P: AC 100-240V, 50-60Hz, 1.8A, cl.I	

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		ADLX45DLC3* (The * can be any character or blank), PA-1450-18XX (The X can be any character or blank) PA-1650-72 PA-1450-12XX (X=A-Z, 0-9 or blank), ADLX45NLC3* (*=A-Z, 0-9 or blank except for ADLX45NLC3A)	O/P: 20Vdc, 3.25A I/P: 1.3A, 100-240Vac, 50-60Hz, Class I; O/P: 2.25A, 20Vdc, Tma: 40°C	
AC/DC adapter (Optional)	Acbel Polytech Inc.	2) ADLX45NCC3A ADLX45NAC2A ADLX45NAC3A	I/P: 1.2A, 100-240Vac, 50-60Hz, Class II; O/P: 2.25A, 20Vdc ; 45W MAX. Tma: 40°C, L.P.S.	IEC 60950-1: 2005+A1+A2; EN 60950-1: 2006+A11:2009+A1:2010+A12 : 2011+A2:2013;
AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX45YDC3A	I/P: 100-240V~, 1.2A, 50/60Hz, O/P: 20Vdc/2.25A, 15Vdc/3A, 9Vdc/2A, 5Vdc/2A, Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950 1:2006+A11+A1+A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX45YLC2A	I/P: AC 100-240V, 1.3A 50-60Hz - O/P: DC 20V; 2.25A, 15V; 3A, 9V; 2A, 5V; 2A Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX45YDC2A	I/P: 100-240V~, 1.2A, 50-60Hz, O/P: 20Vdc/2.25A, 15Vdc/3A, 9Vdc/2A, 5Vdc/2A, Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX45YLC3A	I/P: AC 100-240V, 1.3A 50-60Hz O/P: DC 20V; 2.25A, 15V; 3A, 9V; 2A, 5V; 2A Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950- 1:2006+A11+A1+A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45YCC3A	I/P: 100-240V~, 50-60Hz, 1.3A DC- output: 2A 5V or 2A 9V or 3A 15V or 2.25A 20V, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950- 1:2006+A11+A1+A12+A2, UL 60950-1

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AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45YAC2A	I/P: AC 100-240V, 50-60Hz, 1.2A O/P: DC 5V/ 2.0A or 9V/ 2.0A or 15V/ 3.0A or 20V/ 2.25A, Cl. II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+ A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Acbel Polytech Inc .	ADLX45YAC3A	I/P: AC 100-240V, 50-60Hz, 1.2 ^a - O/P: DC 5V/ 2.0A or 9V/ 2.0A or 15V/ 3.0A or 20V/ 2.25A, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX65YDC3A	I/P: AC 100-240V, 1.8A 50-60Hz -- O/P: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A. Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX65YDC2A	I/P: AC 100-240V, 1.8A 50-60Hz -- O/P: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A. Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX65YLC3A	I/P: AC 100-240V; 1.8A; 50 60Hz O/P: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A . Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX65YLC2A	I/P: AC 100-240V; 1.8A; 50-60Hz - O/P: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A .Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YCC3A	I/P: 100-240V~, 50-60Hz, 1.8A DC- output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YCC2A	I/P: 100-240V~, 50-60Hz, 1.8A. DC- output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V, Cl. II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1

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AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YAC3A	I/P: AC 100-240V; 50-60Hz; 1.8A - O/P: DC 5V/2A,9V/2A,15V/ 3A,20V/3.25A, Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter (Alternate)	Acbel Polytech Inc.	ADLX65YAC2A	I/P: AC 100-240V; 50-60Hz; 1.8A - O/P: DC 5V/2A,9V/2A,15V/ 3A,20V/3.25A Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Enclosure - for LCD cover	Toray Industries Inc. E I DUPONT DE NEMOURS & Co Inc. Teijin Limited Resin And	C23452S TCP1206-G50 A695H HTNFR55G50NHLW GXV-35(vv)(#U), (vv) - Indicates 40 GXV-3545WI	V-0, min.0.28 mm Thick V-0 min., 0.8mm thickness min., 65 °C min. V-0, min.0.4 mm thick V-0, min. 0.5 mm thick V-0, Minimum 1.25mm thick	UL 94
- for LCD bezel	Plastic Teijin Limited Resin And Plastic Mitsubishi Engineering- Plastics Corp. Ecotech Polymers Inc	through 50 (#U) - Optional suffix except for letter U GXV-3540U(#), (#) - Suffix optional MB1700 PCABSFR(J)e, (J) - Denotes a three digit number from 701 to	V-0, min. 0.6 mm thick V-0, min. 0.81mm thick V-0, Minimum 0.85mm thick V-0, min. 0.80 mm thick	UL 94
- for LCD bezel (for touch panel only)	Teijin Limited Resin And Bayer Materialscience AG Plastic Inter- changeable	799 indicative of customer code. PC-(m1)28(m1)(#) (#) - Suffix optional; (m1) - is replaced by a digit 0 through 9.) Inter-changeable FR3002 + (z) ((z) – Material designation and color code may be followed by up to three	V-0 , min. 0.40 mm V-0, 1.8 mm thickness min., 75°C min. Glass V-0, min. 1.0mm thick	UL 94; UL 746C

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<p>- for top side around keyboard</p>	<p>Mitsubishi Engineering-Plastics Corp.</p> <p>Waffer Catcher</p> <p>Foxconn JuRong Huaye (JY)</p> <p>Mitac CPM Ka shui E I DUPONT</p> <p>Samsung SDI Co Ltd</p>	<p>letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix);</p> <p>+ - Material designations may be followed by a six digit numerical code denoting color)</p> <p>TMB1615</p> <p>AZ91D</p> <p>HTNFR55G50NHL</p> <p>GC 1150(+)(RR30) ((+) - May be replaced by one, two, or three numbers and/or letter(s); RR30 - 30% Recycled Material.)</p>	<p>Al-Mg alloy, 0.8 mm thick.</p> <p>V-0, min.0.4 mm thick</p> <p>V-0, 1.8 mm thickness min., 60°C min.</p>	
<p>- for top side around keyboard</p>	<p>Mitsubishi Engineering-Plastics Corp.</p>	<p>TMB1615+ (+- Suffix optional, exceptions: The following cannot be used as optional suffixes: "T" for grade 2030, "A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF- (v)(u), "S1" for F20- 54.)</p>	<p>V-0, min. 1.0mm thick</p>	<p>UL 94</p>
	<p>Waffer Catcher</p> <p>Foxconn</p> <p>JuRong Huaye (JY)</p> <p>Mitac CPM</p> <p>Ka shui</p>	<p>AZ91D</p> <p>AZ91D</p> <p>AZ91D</p> <p>AZ91D</p> <p>AZ91D</p> <p>AZ91D</p> <p>AZ91D</p>	<p>Al-Mg alloy, 0.8 mm thick.</p>	<p>--</p>

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Enclosure (For Top side around keyboard)	MITSUBISHI ENGINEERING-PLASTICS CORP	MB1800+, MB180(x)+ ((x) Represents a digit from 19, incl.+ Suffix optional, exceptions: The following cannot be used as optional suffixes: "T" for grade 2030, "A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF(v)(u), "S1" for F2054, "R" for grade MB2211, "V" for grade S3000+(f1), S3001+(f1), S3003+(f1).)	Plastic, V-0 min., 1.0mm thickness min., 60 °C min	UL 94
- for bottom case	E I DUPONT DE NEMOURS & Co Inc.	HTNFR55G50NHL W HTNFR55G50NHLWSF	V-0, min.0.4 mm thick V-0, thickness 0.75mm min., 65°C	UL 94
TFT-LCD panel (LED backlight)	Inter- changeable Au Optronics Corp AUO	Inter-changeable B125XTNZZZZ B140HAK01.0	14.0", Glass is of min. 0.34 mm thickness. 12.5", Glass is of min. 0.34 mm thickness. 12.5 inch TFT- LCD with LED Backlight design	--
LCD Panel (LED backlight)	AU Optronics Corporation LG Display Co., Ltd. LG Display Co., Ltd. Samsung Display Co., Ltd	B140XTN02.E LP140WF6 LP140WH8 LTN140AT35-401 N140HCA, N140HCA-EAB, N140BGA, N140BGA-EA3	14.0 inch (LED backlight), Glass is of min. 0.34mm thickness 14.0" TFT-LCD	Applicable parts of IEC 60950-1
Alt. LCD Panel (LED backlight)	Samsung Display Co., Ltd InnoLux Interchangeable	LTN140HL05-401 N140HCE Interchangeable	14.0 inch (LED backlight), Glass is of min. 0.34mm thickness	
HDD (optional)	Seagate HGST Japan Ltd Toshiba Corp or equivalent	ST3 or 3.5 Series or ST with additional suffixes; ST9 or 2.5 Series or ST with additional suffixes or equivalent TT5SAE may have suffix MQ may have suffix	5Vdc/12Vdc, 1.5A max. 5Vdc, 1.5A max. 5Vdc/12Vdc, 1.5A max. 5Vdc, 1.5A max. (5Vdc, 0.7A) (5Vdc, 1.4A)	IEC 60950-1: 2005 - UL 60950-1

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HDD (Optional) Alternate	Seagate Singapore International Headquarters Pte Ltd. Western Digital Technologies Inc HGST Japan Ltd. Toshiba Corp Interchangeable	ST320LT012 ST500LT012 ST320LT007 WD may have suffix TS5SAF may have suffix TT7SAE may have suffix HDD2 may have suffix Interchangeable	(5Vdc, 0.55A) (5Vdc, 0.45A) 5Vdc, 1.5A 5Vdc, 0.7A 5Vdc Max. 1.5/1.0A, 5V/12Vdc	
SSD (optional)	Interchangeable Samsung Electronics Co Ltd. Micron Technology Inc Toshiba Corp Semiconductor & Storage Intel Corp Lite-on technology corporation	Interchangeable MZ-7 may have suffix MZ-N may have suffix REALSSD C400 2.5 CTxxxM500SSD1 THNSNF128GC SS SSDSC2 may PX-xxxGCSexxxxxx	3.3Vdc or 5Vdc (5Vdc, 0.75A) 3.3Vdc, 3.5A max. (5Vdc, 2.0A) (5Vdc) (5Vdc) 5Vdc, 2.0A max.	EN 60950-1: 2006+A11+A1+ A12, UL 60950-1 EN 60950-1: 2006+A11+A1+ A12, UL 60950-1 IEC 60950-1 (ed.2);am1, UL 60950-1
SSHD (optional) (Alternate)	Seagate Technology Inc. Interchangeable	ST3 with additional suffix, 3.5 Series ST9 with additional suffix, 2.5 Series Interchangeable	5/12Vdc, 1.5 A max./ 1.5 A max.	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A 1+A12+A2, UL 60950-1
Li-ion battery pack (building-in) (optional)	Sanyo Energy (Suzhou) Co. Ltd. / LENOVO Sony Taiwan Ltd. / lenovo LG Chemical	45N1108 45N1110 45N1112 45N1116 ASM P/N 45N1112 45N1712 45N1118	11.1Vdc, 2.09Ah, 24Wh or 11.1Vdc, 2.14Ah, 24Wh 11.1Vdc, 2.09Ah, 24Wh 11.4Vdc, 2.06Ah, 24Wh 11.4Vdc, 2.06Ah,	IEC 60950-1 (ed. 2); am1

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	Ltd. / Lenovo Simplo Technology	SB10K97576	24Wh NOM 11.55Vdc; Typ. 2080mAh/24Wh; Min. 1970mAh/22.75Wh	
Alt. Building-in Li-ion battery pack	LG Chem, Ltd Simplo Technology Co Ltd	SB10K97577 SB10K97578	11.4Vdc, 2.10Ah / 24Wh	EC 60950-1(ed.2);am1;am2, EN 60950-1:2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1, UL 2054
External Li-ion battery pack	Sanyo Energy (Suzhou) Co. Ltd. / Lenovo Sanyo Energy (Suzhou) Co. Ltd. / Lenovo LG Chemical Ltd. / Lenovo Simplo Technology Co. Ltd. / Lenovo Celxpert Energy Corp Panasonic Group, Sanyo Electric Co., Ltd. (Lenovo)	45N1124 45N1128 45N1134 ASM P/N 45N1126 ASM P/N 45N1130 ASM P/N 45N1136 45N1132 SB10K97579 SB10K97580 SB10K97581	11.1V, 2090 (Typ.) / 2040 (Min.)mAh/ 24Wh 10.8V, 4400 (Typ.) / 4300 (Min.) mAh/ 48Wh 10.8Vdc, 6600 (Typ.) / 6500 (Min.) mAh/72Wh 11.4Vdc, 2.06Ah, 24Wh 10.8Vdc, 4.4Ah, 48Wh 11.22Vdc, 6.34Ah, 72Wh 10.8Vdc or 11.1Vdc, 4.4Ah, 47Wh or 47.52Wh or 48Wh 11.55Vdc, Typ. 2080mAh/24Wh, Min. 1970mAh/22.75Wh	IEC 60950-1:2005+A1; EN 60950-1: 2006+A11: 2009+A1:2010+A12:2011; UL 60950-1; UL 2054
Alt. External Lion battery pack	Sanyo Energy (Suzhou) Co Ltd LG Chem, Ltd.	SB10K97582 SB10K97584 SB10K97583 SB10K97585	10.8Vdc, Typ. 4400mAh, 48Wh; Min. 4116mAh, 44.45Wh 10.8Vdc, Typ. 6600mAh, 72Wh; Min. 6272mAh; 67.73Wh 10.8Vdc, 48Wh, 4400mAh 11.25Vdc, 6.32Ah, 72Wh	IEC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC62133(ed.2), UL 60950-1 (investigated with UL 2054)

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RTC battery (Lithium type)	Panasonic Mitsubishi Hitachi MaxellLtd Panasonic Corporation of North America Varta Microbattery GmbH Mitsubishi Electric Corp Jhih Hong Technology Co Ltd FDK Corp Vic-Dawn Enterprise Co Ltd Interchangeable	CR2032 CR1632	3Vdc, maximum abnormal charging current 10 mA. Minimum of maximum abnormal charging current 4mA, Provided with an Abnormal charging protection circuit with a Resistor (R4) of 1 k Ohm and a Diode (D3)	UL 1642
Front Battery	Sanyo Energy (Suzhou) Co.,Ltd.	SB10F46460	11.25V, 2.09Ah, 24Wh	IEC60950-1, 2nd; am 1 + am2, IEC 62133(ed.2), UL60950-1, 2nd; am 2, UL2054
Front Battery Alternate	Simplo Technology Co., Ltd.	SB10F46461	11.4V, 2.065Ah, 24Wh	IEC60950-1, 2nd; am 1 + am2, IEC 62133 (ed.2), UL60950-1, 2nd; am 2,UL2054
Rear Battery	Sanyo Energy (Suzhou) Co., Ltd.	SB10F46462	11.1V, 2.14Ah, 24Wh	IEC60950-1, 2nd; am 1 + am2, IEC 62133 (ed.2), UL60950-1, 2nd; am 2, UL2054
Rear Battery Alternate	Simplo Technology Co., Ltd.	SB10F46463	11.4V, 2.065Ah, 24Wh	IEC60950-1, 2nd; am 1 + am 2, IEC 62133 (ed.2), UL60950-1, 2nd; am 2, UL2054

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<p>DC fan for CPU</p>	<p>Toshiba Home Technology Corp.</p> <p>Asia Vital Components Co., Ltd.</p> <p>Panasonic System Networks Kyushu Co., Ltd</p> <p>Delta Electronics, Inc.</p>	<p>M-244C-XX M-240C-XX (XX: Rev. No. for modification not related to safety aspects, blank or any numbers (2 digits))</p> <p>M-252C-XX (where suffix "XX" represents numbers "0" through "9" or blank)</p> <p>BATA0607R5HV (V=ABCD where A,B,C,D may be A-Z, 0-9 or "-")</p> <p>BAZB0607R5HV (V=ABCD where A,B,C,D may be A-Z, 0-9 or "-")</p> <p>M-238C-1</p> <p>UDQFWYR02BCM</p> <p>UDQFRYR01BCM</p> <p>KSB0705HCA02 XXXXXX (X stands for 0-9, AZ, - or blank)</p> <p>BAZD0707Z5HV (Z=A, B, C, G, R, S or T ; V=ABCD where A, B, C, D may be A-Z, 0-9 or "-") (UL: BAZD0707R5H(V) (where (V) may be XXXX, where X may be A through Z, 0 through 9 or "-".))</p> <p>ND75C16XXXXXXXXXXXX ND75C14XXXXXXXXXXXX (X stands for A-Z, 0-9, - or blank for marketing purpose only.)</p>	<p>5Vdc, 0.32A, 2 CFM min. for discrete main boards, 2.2 CFM min. for UMA main board</p> <p>5Vdc, 0.35A</p> <p>5Vdc, 0.50A, 2.771 CFM min. for discrete main boards, 2.734 CFM min. for UMA main board</p> <p>5Vdc, 0.50A, 2.651 CFM min. for UMA main board</p> <p>5Vdc, 0.29A</p> <p>5Vdc, 0.28A, 2.3 CFM min.</p> <p>5Vdc, 0.50A max., 2.84 CFM min.</p> <p>5Vdc, 0.45A max., 3.47CFM min</p>	<p>IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+ A12+A2, UL 507</p>
<p>Alt. DC fan for CPU</p>	<p>Sunonwealth Electric Machine Industry Co., Ltd.</p>	<p>EF50050S1-C42Z (Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank)</p>	<p>5Vdc, 0.45A, 2.6 CFM min. for UMA main board</p> <p>5Vdc, 0.45A, 2.4 CFM min. for UMA</p>	<p>IEC 60950-1: 2005, Am.1 UL507,</p>

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	EF50050S1-C3Z (Z stands for 15 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank)	main board 5Vdc, 0.4A max., 1.15 CFM min. for UMA main board
	EG50050S1- CA3Z (Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank for marketing purpose only.)	5Vdc, 0.50A, 2.539 CFM min. for discrete main board
Delta Electronics, Inc.	KDB0505HCA07X XXXXX (X stands for 0-9, A-Z, - or blank)	5Vdc, 0.45A, 2.7 CFM min. for discrete main board
Asia Vital Components Co., Ltd.	BAZA0607R5HV BAZA0807R5HV (V=ABCD where A,B,C,D may be A-Z,0-9 or "-") /, - or blank)	
	EF50050S1-C45Z	
Sunonwealth Electric Machine Industry Co., Ltd.	BAZC0606R5HP005	5Vdc, 0.45A, 2.5
	EF50050S1-C25Z (Z stands for 15 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank)	
Sunonwealth Electric Machine Industry Co., Ltd.	EF50050S1-C6Z (Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank)	
	KDB05105HBA04 XXXXX (X stands for 0-9, A-Z, - or	CFM min. for discrete main board
	ND75C02 may have suffix	
Delta Electronics,	ND75C06XXXXXXXX XXX (X stands for A-Z, 0-9, - or blank) (UL: ND75C06(Y11) the number	5Vdc, 0.40A max., 0.90 CFM min. for

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	Inc. Sunonwea lth Electric Machine Industry Co., Ltd.	after Y represents digit, each digit may be A rough 9, "-" or blank.) EG50050S1-C9Z (Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank) (UL: EG50050S1- C9(Y) (where (Y) stands for 30 variables, each variable may be A through Z, 0	discrete main board	
	Toshiba Home Technology Corp.	M-256C-XX (XX : Rev. No. for modification not related to safety aspects, blank or any numbers (2 digits))	5Vdc, 0.29A, 1.8CFM	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 507
LPS protector IC for USB ports	Texas Instruments, Inc. Global Mixed-mode Technology Inc. Texas Instruments, Inc. Pericom Semiconductor Corporation PSE	TPS2069DGN G548A1, G548A2, G548B1, G548B2, G548C1, G548C2, G548D1, G548D2 TPS2069C, followed by DBV, DGK or DGN, may be followed by additional letters and numbers. TPS2543, TPS2544, TPS2545 and TPS2546. PI5USB2543ZHE PI5USB25xyZHEz, where xx is 44 or 46 and y is blank or A, ZH is packaging type, E is Pb-free, and z is blank for bulk	2.7-5.5Vdc, continuous rating: 1.5A, current limit: 2.6A 3.0-5.5Vdc, current rating: 2.0A, 1.5A, 1.0A and 0.75A, protection current rating: 2.8A, 2.1A, 1.4A and 1.2A 4.5Vdc to 5.5Vdc, continuous rating: 1.5A, current limit: 2.7A 4.5-5.5Vdc, continuous rating: 2.5A, current limit: 3.1A - 5Vdc +/- 10%, current limit: 250mA to 2.5A 4.5 - 5.5 Vdc, Continuous Rating: 30 mA to 2.5 A, Current Limit: 100 mA to 3.18 A	IEC 60950-1: 2005, Am.1

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LPS protector IC for Mini Display port	Texas Instruments, Inc.	TPS2530 may be followed by DBV, may be followed by R or T	2.7Vdc to 5.5Vdc, continuous rating: 500mA, current limit: 1.3A	IEC 60950-1: 2005+A1; UL Subject 2367
	On Semiconductor France SAS	NCP380xSN05AA T1G Where x = L or H,	2.5Vdc to 5.5Vdc, continuous rating: 0.5A, current limit: 0.7A 0.5A per output channel 2.7-5.5Vdc, Cl. III, SELV	
	Texas Instruments, Inc.	TPS204.. and TPS205.. (The first "." can be any number from 1 to 4 and defines the number of power switches internal to the device. The second is a revision letter for that particular family. Alphabetic characters representing device package options may follow model number)		
	Global Mixed-mode Technology Inc	G5250M1, G5250L2, G5250L1, G5250M2	3.0-5.5Vdc, Operational Current Rating per output: 1.0A, Overcurrent Protection Current Rating per output: 1.4A	
Power Distribution Switch (U6: JUSB1, JUSB2) (Located on Mainboard)	Global Mixedmode Technology Inc.	G54712	3 A max., 3.0-5.5 Vdc; Class III. SELV	IEC 60950-1: 2005; UL Subject 2367
	Silergy Technology	SY6288xyyyy (x=A, B, C, D or E; y= 0-9,A-Z or blank)	3.7 A max., 2.5-5.5Vdc; Class III. SELV	
Power Distribution Switch (UT1) (Located on VGA & Power Button Board)	ANPEC Electronics Corp.	APL3517 series	0.5 A, 2.7-5.25 Vdc; Class III. SELV	IEC 60950-1: 2005+A1; UL Subject 2367
Power Distribution Switch (UT1) (Located on VGA & Power Button Board)	Global Mixed-Mode Technology Inc	G5250Q1T73U	0.5 A, 2.7-5.25 Vdc; Class III. SELV	IEC 60950-1: 2005+A1; UL Subject 2367
Power Distribution switch for USB3.0, USB2.0 and HDMI ports)	Global Mixed-Mode Technology Inc (GMT)	G5260ARE1U G524B2T11U	4.5-5.5 Vdc, output Continuous rating: 0.2 A, output current limit: 0.3-0.5 A per output channel, Cl.III, SELV	IEC 60950-1: 2005+Am1+Am2, EN 60950-1:2006+Am11+Am1+Am12+Am2, UL 2367

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Power Distribution Swich (U187) for USB Type-C port use	Texas Instruments Incorporated	TPS65982	Inputs: VIN_3V3 = 3.3Vdc; PP_EXT = 4.5 - 22Vdc; PP_HV = 4.5 - 22Vdc; PP_5V0 = 4.75 - 5.5Vdc; PP_CC1 = 2.95 - 5.5Vdc; PP_CC2 = 2.95 - 5.5Vdc; Cl. III - Outputs: PP_EXT = 4.5 - 22Vdc, 4.301A max; PP_HV = 4.5 - 22Vdc, 4.306A max; PP_5V0 = 4.75 - 5.5Vdc, 3.69A max; PP_CC1 = 2.95 - 5.5Vdc, 0.9A max; PP_CC2 = 2.95 - 5.5Vdc, 0.9A max	IEC 60950-1 (ed.2); am1; am2, EN 60950-1: 2006+A11+A12+A2, UL 2367
Power Distribution Swich (U13) for USB3.0 ports	Global Mixedmode Technology Inc.	G517AL series	2.7-5.5Vdc, Operational Current Rating per output: 2.1A, Overcurrent Protection Current Rating per output: 2.2-3.0A	IEC 60950-1: 2005+A1+A2
Power Distribution Swich (U53, U88, U120) For USB port use	Texas Instruments Incorporated	TPS2069 may be followed by other characters that do not impact the safety feature of the device.	Input Voltage: 2.7Vdc - 5.5Vdc; Output Continuous Rating: 1.5 A; Output Current Limit: 3.9 A	IEC 60950-1 (ed.2); am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, UL 2367
Alt. Power Distribution Swich (U53, U88, U120) for USB port use	Texas Instruments Incorporated	TPS2546 Additional suffixes after the model number designate the type of integrated circuit package, integrated circuit lead types or other features that are considered not to affect the functionality of the device.	Input Voltage = 4.5Vdc to 5.5Vdc; Output Continuous Rating = 2.5A; Output Current Limit = 3.1A	IEC 60950-1 (ed.2); am1; am2, EN 60950-1: 2006+A11+A1+ A12+A2, UL 2367
Supplementary Protector (U100) for DP Alternate	On Semiconductor France Sas Texas Instruments Inc. K.K. Tyco Electronics Raychem	NCP380HSN05 AAT1G TPS205 may have suffix TPS2530 TPS2541ARTE may have suffix TPS2069C may have suffix nanoSMDC150	2.5 – 5.5V, Output Continuous Rating 0.5A, Output Current Limit 0.7A. 2.7 – 5.5V, 0.5A. (The output of the device provides limited power sources in accordance with clause 2.5 EN 60950-1/A1:2010 Annex CC.) 4.5 – 5.5Vdc, 2.7A. (The output of the device provides 6Vdc, 1.5A	
Supplementary Protector (U88) for USB (J34)	Pericom Technology (Shanghai) Co.,LTD	PI5USB2546 may have suffix	4.5 - 5.5V, output continuous 2.5A, output limit 3.18A.	UL2367, IEC60950-1, 2nd; am1 + am2

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Supplementary Protector (U53, U2 on Subcard) for USB (J33, J2 on Subcard) Alternate	Global Mixedmode Technology Inc.	G524C may have suffix	2.7 - 5.5V, output continuous 1.6A, output limit 2.3A.	IEC60950-1, 2nd; am1 +am2
Supplementary Protector (U110) for HDMI (J42)	Texas Instruments Inc	TPS2553 may have suffix	2.5 - 6.5V, output continuous 1.5A, output limit 1.7A.	UL2367, IEC60950-1, 2nd; am1 + am2
Supplementary Protector (U110) for HDMI (J42) Alternate	Global Mixedmode Technology Inc.	G517AL may have suffix	2.7 - 5.5V, output continuous 2.15A, output limit 2.75A.	UL2367, IEC60950-1, 2nd; am1 + am2
Polyswitch (LPS protector for VGA port)	Polytronics Technology Corp.	nanoSMDC150xx xxxxxxxxxxxxxxxx xx (x=0-9, A-Z, ".", "-", or blank)	6Vdc, 1.5A	EN 60730-1, UL 1434
Speakers (optional)	Interchangeable	Interchangeable	Each rated 4Ω, 2.5W max. (two provided) 2 provided, each 8ohm, 1W (typical)	
PCBs	Interchangeable	Interchangeable	V-1 min., 105C	UL 796
ThinkPad Basic Dock (Optional) ThinkPad Pro Dock (Optional) ThinkPad Ultra Dock (Optional) (Dock for UMA used only)	Universal Global Scientific Universal Global Scientific Universal Global Scientific	40A0 40A1 40A2	20Vdc, 3.25A 20Vdc, 3.25A 20Vdc, 4.5A	IEC 60950-1 (ed. 2); am1
ThinkPad WiGig Dock (Optional)	Inventec Corporation	W123	DC 20V; 2.25A	IEC 60950-1:2005+A1+A2
Enclosure: Keyboard Bezel	Interchangeable	Mg Alloy AZ91Z Mg Alloy AZ91D	Magnesium alloy. (Tested to Flame Test per Sub-clause A.2)	
Enclosure: Base Cover	Interchangeable	Mg Alloy AZ91Z Mg Alloy AZ91D	Magnesium alloy. (Tested to Flame Test per Sub-clause A.2)	
Enclosure: Front Metal Bezel	SUS304 1/2H	SUS	--	
Enclosure: Front Sheet Bezel	Teijin Chemicals Ltd	PC-3280	V-0, Minimum 0.45mm thick	
Enclosure: Front Sheet Bezel	Shenzhen Teesun Technology Co. Ltd.	PC-FR 1363	Minimum 0.45 mm thick. (Conducted Glow-wire Flammability Test)	-

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Keyboard	Chicony Electronics Co Ltd Lite-On Technology Corp	CSXXX-XX (X = 0-9 or A-Z) CS13xy (x = Blank or X or T for size difference and key layout difference; y= Blank or BL for Back light) THXX-XXXX (X can be 0-9, A-Z, a-z or blank)	Minimum HB.	
Heatsink	--	--	Aluminium, copper or copper alloy	
Internal Wiring	Interchangeable	Interchangeable	PVC, TFE, PTFE, FEP, polychloroprene, polyimide, or marked VW-1.	
Connectors and Receptacles for Several provided four USB ports, LAN port, Display port, VGA (D-sub) Earphone port, Media Card port and Express Card port. Alternate	Interchangeable	Interchangeable	Copper Alloy Pins housed in bodies of Plastic, V-1 or Better.	
Fuse (F25)	Panasonic Corporation, Panasonic Corporation Of North America	ERBRD may have suffix	Rated 32V, 0.5A.	UL248
Fuse (F25) Alternate	Littelfuse Inc	497	Rated 32V, 0.5A.	UL248
Fuse (F13, F23)	Panasonic Corporation, Panasonic Corporation Of North America	ERBRD may have suffix	Rated 32V, 1.0A.	UL248
Fuse (F13, F23) Alternate	Littelfuse Inc	497	Rated 32V, 1.0A.	UL248
Docking Connector	Interchangeable	Interchangeable	Copper Alloy Pins housed in bodies of Plastic, V-1 or Better.	UL94
PTC for VGA (Located on VGA & Power Button Board)	POLYTRONICS TECHNOLOGY CORP. LITTELFUSE INC.	SMD1812P110TF	8Vdc, 1.1A	IEC/EN 60730-1 - UL 1434
Plastic Barrier (For bottom speaker openings use)	CHENGDU KANGLONGX IN PLASTICS CO LTD	KLX FRPC-1860B, KLX FRPC-1860-83B	VTM-0, 0.125 mm thickness min.	UL 94
- Adhesive (For plastic barrier use)	JINKAIDA GLUTINOUS MANUFACTURE CO., LTD	JKD W001	--	--
Sponge (On Heatsink module) - Adhesive (For sponge use)	Inoac Corp 3M Dexerials Corp	Calmflex F-2G (c2) 9448 G9000	HF-1, 2.0mm thickness min. -- --	UL 94 -- --

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Glue	Suzhou Jinkaida Glutinous MER Co., Ltd. Suzhou SIDIKE Electronics Adhesive Material Co.,Ltd. 3M Dexerials Corporation	W001 DS-10 9448A/ 9448AB G9000-SY	Complied with Cl. 4.6.5. Complied with Cl. 4.6.5.	--
Adhesive tape	DIC Corporation	8800SD	--	IEC 60950-1
Overcurrent protective device (for USB Type C port) (to be used when providing USB type C port)	AEM Components (Suzhou) Co Ltd	T0603FF5000TM	35 Vdc, 5 A	Applicable parts of IEC 60950-1, UL 248-1, UL248-14
PCB	HONGHENGSH ENG ELECTRONICAL TECHNOLOGY (HUAIAN) CO LTD	HD5, HD6, ML, ML1, ML3, ML5,ML6, MLU	V-0, min. 105°C	Applicable parts of IEC 60950-1, UL 94, UL 796
	T-MAC TECHVEST PCB CO LTD	MV-1, YA-1, YA-2, YA-3, YA-3A, YA-4, YA-4A, YA-11	V-0, min. 105 °C	Applicable parts of IEC 60950-1, UL 94, UL 796
Adaptaer (for 20 Vdc, 2,25 A)	Chicony Power Technology Co Ltd	ADLX45YCC2D	I/P: 100-240 Vac, 1.3 A, 50-60 Hz; O/P:20 Vdc, 2.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II, 40° C Altitude: 5000 m	CB by Nemko (NO102327) CB by Demko (DK-73341-UL), UL
Adapter (For 20 Vdc, 2.25 A) (Alternate)	Chicony Power Technology Co Ltd	ADLX45YCC3D	I/P: 100-240 Vac, 1.3 A, 50-60 Hz; O/P:20 Vdc, 2.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II, 40° C Altitude: 5000 m	CB by Nemko (NO102328) CB by Demko (DK-73342-UL), UL
Adapter (For 20 Vdc, 2.25 A) (Alternate)	Delta Electronics, Inc.	ADLX45YDC3D, ADLX45YDC2D	I/P: 100-240 Vac, 1.2 A, 50-60 Hz; O/P:20 Vdc, 2.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II with functional earth for model ADLX45YDC3D, Class II for model ADLX45YDC2D, 40° C Altitude	CB by TUV RH (JPTUV-088399); CB by TUVRH (JPTUV-088525), UL
Adapter (For 20 Vdc, 2.25 A) (Alternate)	Lite-On Technology Corp	ADLX45YLC2D	I/P: 100-240 Vac, 1.3 A, 50-60 Hz; O/P:20 Vdc, 2.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	CB by Demko (DK-74396-UL); CB by Demko (DK-74550-UL), UL
Adapter (For 20 Vdc, 2.25 A) (Alternate)	Lite-On Technology Corp	ADLX45YLC3D	I/P: 100-240 Vac, 1.3 A, 50-60 Hz; O/P:20 Vdc, 2.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	CB by Demko (DK-73964-UL); CB by Demko (DK-73960-UL), UL
Adapter (For 20 Vdc, 3.25 A) (Alternate)	Chicony Power Technology Co Ltd	ADLC65YCC2D	I/P: 100-240 Vac, 1.3 A, 50-60 Hz; O/P:20 Vdc, 3.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	CB by Nemko (NO102312). CB by Demko (DK-73335-UL), UL
Adapter (For 20 Vdc, 3.25 A) (Alternate)	Chicony Power Technology Co Ltd	ADLX65YCC3D	I/P: 100-240 Vac, 1.8 A, 50-60 Hz; O/P:20 Vdc, 3.25 A / 15 Vdc, 3 A / 9	CB by Nemko (NO102313); CB by Demko (DK-73338-UL), UL

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			Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	
Adapter (For 20 Vdc, 3.25 A) (Alternate)	Delta Electronics, Inc.	ADLC65YDC3D, ADLC65YDC2D	I/P: 100-240 Vac, 1.8 A, 50-60 Hz; O/P:20 Vdc, 3.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	CB by TUVRH (JPTUV- 088370); CB by TUVRH (JPTUV-088549), UL
Adapter (For 20 Vdc, 3.25 A) (Alternate)	Lite-ON Technology Corp	ADLX65YLC2D	I/P: 100-240 Vac, 1.8 A, 50-60 Hz; O/P:20 Vdc, 3.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	CB by Demko (DK-73622-UL); CB by Demko (DK-73627-UL), UL
Adapter (For 20 Vdc, 3.25 A) (Alternate)	Lite-ON Technology Corp	ADLX65YLCD3	I/P: 100-240 Vac, 1.8 A, 50-60 Hz; O/P:20 Vdc, 3.25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class II 40° C Altitude: 5000m	CB by Demko (DK-73466-M1- UL); CB by Demko (DK-73473- M1-UL), UL
DC Fan	Delta Electronics Inc.	ND75C30XXXXXXXXXX, stands for A-Z, 0-9, - or blank for marketing purpose only	5 Vdc, 0.5 A, 3.05 CFM min	UL, TUV
DC Fan	Asia Vital Components CO., Ltd.	BAPA0706R5HV V=ABCD where A, B, C, D may be A-Z, 0-9 or "-"	5 Vdc, 0.5 A, 3.6 CFM min	UL, TUV

Seção 71:

Componente/Component	Fabricante/ Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Cord set (Optional)	Interchangeable	Interchangeable	---	NBR 14136, NBR NM 60884-1
AC/DC adapter	Acbel Polytech Inc.	ADLX45NAC2A	I/P: 100-240Vac, 50-60Hz, 1.2A O/P: 20Vdc, 2.25A, 45W MAX. Cl. I II (altitude: 3100m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Acbel Polytech Inc.	ADLX45NAC3A	I/P: 100-240Vac, 50-60Hz, 1.2A O/P: 20Vdc, 2.25A, 45W MAX. Cl. I (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45NCC2A, ADLX45NCC2. (The dot "." in model name can be B to Z, 0 to 9 or blank for marketing purpose only.)	I/P: 100-240Vac, 50-60Hz, 1.3A O/P:20Vdc, 2.25A, Cl. II (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45NCC3A, ADLX45NCC3. (The dot "." in model name can be B to Z, 0 to 9 or blank for marketing purpose only.)	I/P: 100-240Vac, 50-60Hz, 1.3A O/P:20Vdc, 2.25A, Cl. I (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc	ADLX45NDC2A, ADLX45NDC3A, ADLX45NDC2, ADLX45NDC3, ADLX45NDC3B, ADP-45TD B	I/P: 100-240Vac, 50-60Hz, 1.2A O/P:20Vdc, 2.25A, Cl. II (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1

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Componente/Component	Fabricante/Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX45DLC2* (The * can be any character or blank) PA-1450-17XX (The X can be any character or blank)	I/P: 100-240Vac, 50-60Hz, 1.3A O/P: 20Vdc, 2.25A, Cl. II (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX45DLC3* (The * can be any character or blank) PA-1450-18XX (The X can be any character or blank)	I/P: 100-240Vac, 50-60Hz, 1.3A O/P: 20Vdc, 2.25A, Cl. I (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65NC.2A (The dot "." in model name can be C, G, T, N and P for marketing purpose only.)	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20Vdc, 3.25A, Cl. II (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65NC.3A (The dot "." in model name can be C, G, T, N and P for marketing purpose only.)	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20Vdc, 3.25A, Cl. I (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc	ADLX65NDC3A, ADLX65NDC3B, ADLX65NDC2A, ADLX65NDC2B, ADLX65NDT3A, ADLX65NDT3B, ADLX65NDT2A, ADLX65NDT2B, ADP-65FD B	I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 20Vdc, 3.25A, Cl. II (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX65NL*2* (* can be any character or blank), PA-1650-71	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20Vdc, 3.25A, Cl. II (altitude: 3048m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX65NL*3* (* can be any character or blank), PA-1650-72	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20Vdc, 3.25A, Cl. I (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX65SDC2A	I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 20Vdc, 3.25A, Cl. II (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX45YDC3A	I/P: 100-240V~, 1.2A, 50-60Hz, O/P: 20Vdc/2.25A, 15Vdc/3A, 9Vdc/2A, 5Vdc/2A, Class I. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX45YDC2A	I/P: 100-240V~, 1.2A, 50-60Hz, O/P: 20Vdc/2.25A, 15Vdc/3A, 9Vdc/2A, 5Vdc/2A, Class II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX45YLC2A	I/P: AC 100-240V, 1.3A 50-60Hz O/P: DC 20V; 2.25A, 15V; 3A, 9V; 2A, 5V; 2A Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX45YLC3A	I/P: AC 100-240V, 1.3A 50-60Hz O/P: DC 20V; 2.25A, 15V; 3A, 9V; 2A, 5V; 2A Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45YCC3A	I/P: 100-240V~, 50-60Hz, 1.3A DC-output: 2A 5V or 2A 9V or 3A 15V or 2.25A 20V, Cl. I. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1

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Componente/Component	Fabricante/Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45YCC2A	I/P: 100-240V~, 50-60Hz, 1.3A DC-output: 2A 5V or 2A 9V or 3A 15V or 2.25A 20V, Cl. II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Acbel Polytech Inc / trademark for lenovo	ADLX45YAC2A	I/P: AC 100-240V, 50-60Hz, 1.2A O/P: DC 5V/ 2.0A or 9V/ 2.0A or 15V/ 3.0A or 20V/ 2.25A, Cl. II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Acbel Polytech Inc .	ADLX45YAC3A	I/P: AC 100-240V, 50-60Hz, 1.2A O/P: DC 5V/ 2.0A or 9V/ 2.0A or 15V/ 3.0A or 20V/ 2.25A, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX65YDC3A	I/P: AC 100-240V, 1.8A 50-60Hz O/P: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A. Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Delta Electronics Inc.	ADLX65YDC2A	I/P: AC 100-240V, 1.8A 50-60Hz O/P: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A. Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX65YLC3A	I/P: AC 100-240V; 1.8A; 50-60Hz O/P: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A . Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Lite-On Technology Corporation	ADLX65YLC2A	I/P: AC 100-240V; 1.8A; 50-60Hz O/P: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A . Class II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YCC3A	I/P: 100-240V~, 50-60Hz, 1.8A DC-output: 2A5V or 2A 9V or 3A 15V or 3.25A 20V, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YCC2A	I/P: 100-240V~, 50-60Hz, 1.8A DC-output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V, Cl. II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YAC3A	I/P: AC 100-240V; 50-60Hz; 1.8A O/P: DC 5V/2A,9V/2A,15V/3A,20V/3.25A, Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1
Alt. AC/DC adapter (Alternate)	Acbel Polytech Inc .	ADLX65YAC2A	I/P: AC 100-240V; 50-60Hz; 1.8A O/P: DC 5V/2A,9V/2A,15V/3A,20V/3.25A Class II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
Enclosure: Part of Base Cover	Interchangeable	Mg Alloy AZ91D	Magnesium Alloy. (Conducted Flame Test per sub-clause A.2.)	--
Enclosure: Part of Keyboard Bezel	Interchangeable	Mg Alloy AZ91D	Magnesium Alloy. (Conducted Flame Test per sub-clause A.2.)	--
Enclosure: Part of LCD Rear Cover	Toray Industries Inc.	A695H may have suffix	V-0, nominal 1.5 mm thick.	UL94
Enclosure: Part of LCD Rear Cover Alternate	Toray Industries Inc.	C3452S may have suffix	V-0, nominal 1.35 mm thick.	UL94
Enclosure: Part of LCD Rear Cover Alternate	TEIJIN limited Resin and Plastic	GXV-35 may have suffix	V-0, nominal 1.35 mm thick.	UL94

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Enclosure: Front Sheet Bezel	Polyshine Technology(Shanghai) Co Ltd	Pxx07 may have suffix ("x" would be replaced by a single letter from A to Z.)	V-0, nominal 0.43 mm thick	UL94
Enclosure: Front Bezel Cover bottom	Mitsubishi Engineering-Plastics Corp	MB1700 may have suffix	V-0, nominal 0.8 mm thick.	UL94
Printed Wiring Board	Interchangeable	Interchangeable	Minimum V-1, 105°C	UL796
Flexible Printed Wiring	Interchangeable	Interchangeable	Minimum V-2 or VTM-2. (SELV circuit, no components mounted on it)	UL746E
Battery Pack	LG Chem, Ltd.	L17L6P71	11.4 Vdc, 48Wh, 6 Cell, Polymer, 3S2P	IEC62133:2012, IEC 60950-1(ed.2);Am1+Am2
Battery Pack Alternate	Simplo Technology Co Ltd	L17M6P71	11.4 Vdc, 48Wh, 6 Cell, Polymer, 3S2P	IEC62133:2012, IEC 60950-1(ed.2);Am1+Am2
Battery Pack Alternate	Celxpert Energy Corp	L17C6P71	11.4 Vdc, 48Wh, 6 Cell, Polymer, 3S2P	IEC62133:2012, IEC 60950-1(ed.2);Am1+Am2
RTC battery	Interchangeable	CR2016	Minimum of maximum abnormal charging 10mA. Provided with abnormal charging protection circuit with a Resistor (R4) 1k ohm and Diode (D3)	UL1642
LCD Panel	AU Optronics Corp	B125XTNZZZZ (Z = any alphanumeric character or dot or blank)	12.5 inch TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1
LCD Panel Alternate	Infovision Electronics (Kunshan) Co Ltd	M125NWxyyyy (where x could be 0-9, A-Z, blank or symbol "-", y could be 0-9, A-Z, blank or symbol "-")	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1+Am2
LCD Panel Alternate	Hefei BOE Optoelectronics Technology Co Ltd	**12***-*** where "***" could be any letter of "0" to "9" or "A" to "Z" or blank	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1
LCD Panel Alternate	AU Optronics Corp	B125HANZZZZ (Z = any alphanumeric character or dot or blank)	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1+Am2
LCD Panel Alternate	Infovision Electronics (Kunshan) Co Ltd	M125NWxyyyy (where x could be 0-9, A-Z, blank or symbol "-", y could be 0-9, A-Z, blank or symbol "-")	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1+Am2
LCD Panel Alternate	Innolux Corp	N125HCE-Gxx where "X" could be any letter of "0" to "9" or "A" to "Z" or blank	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1+Am2
LCD Panel Alternate	AU Optronics Corp	B125HAKZZZZ (Z = any alphanumeric character or dot or blank)	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1+Am2
LCD Panel Alternate	Infovision Electronics (Kunshan) Co Ltd	R125NWxyxy (where x could be 0-9, A-Z, blank or symbol "-", y could be 0-9, A-Z, blank or symbol "-")	TFT-LCD with LED Backlight design.	IEC 60950-1(ed.2);Am1+Am2
SSD	Lenovo (Beijing) Ltd	LENSE20512GMSP34MEAT2TA may have suffix	3.3Vdc, 3A	IEC 60950-1(ed.2);Am1+Am2
SSD Alternate	Interchangeable	Interchangeable	3.3 Vdc	IEC 60950-1(ed.2);Am1+Am2
Keyboard	Chicony Electronics Co Ltd	CMSNBL-xxxx or CMSBL-xxxx (Where x may be 0-9, a-z, A-Z, ".", "-", or blank)	Minimum HB	UL60950-1
Keyboard Alternate	Lite-On Technology Corp	SN5370 may have suffix	Minimum HB	UL60950-1
Keyboard Alternate	Primax Electronics Ltd	NBLBF or NBBF	Minimum HB	UL60950-1

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Supplementary Protector (U88, IC Current limiter) for USB AOU(J34)	Texas Instruments Inc	SN1702001 may have suffix	4.5-5.5Vdc, continuous 2.5A protective 3.1A.	IEC60950-1 (ed2) Am1+Am2
Supplementary Protector (U53, IC Current limiter) for USB(J33)	Texas Instruments Inc	TPS2069 may have suffix	2.7-5.5Vdc, continuous 1.5A protective 3.9A.	IEC60950-1 (ed2) Am1+Am2
Supplementary Protector (U53, IC Current limiter) for USB(J33) Alternate	ROHM Co Ltd	BD82032FVJ may have suffix	4.5-5.5Vdc, continuous 1.5A protective 2.3A.	IEC60950-1 (ed2) Am1+Am2
Supplementary Protector (U110) for HDMI(J62)	Texas Instruments Inc	TPS2553, may be followed by -1, followed by DRV or DBV	2.5-6.5Vdc, continuous 1.5A protective 1.7A	IEC60950-1 (ed2) Am1+Am2
Supplementary Protector (U192) for Thunderbolt, Type C (J59, J60)	Texas Instruments Inc	SN1701012 may have suffix (TPS65988)	PPHV1, PPHV2: 4.5-22Vdc, continuous 4A protective 4.91A, PPCABLE1, PPCABLE2 2.95-5.5Vdc, continuous 0.6A protective 0.9A,	IEC60950-1 (ed2) Am1+Am2
Supplementary Polyswitch (F41, Thermistor) for RJ45 dongle(J59)	AEM Components (Suzhou) Co Ltd	PBS0603-035F may have suffix	6Vdc, hold 0.35A, trip 0.75A	IEC/EN60738-1:2006+A1, IEC/EN60738-1-1:2008
Supplementary Polyswitch (F41, Thermistor) for RJ45 dongle(J59) Alternate	Bourns Electronics (Taiwan) Ltd	MF-FSMF035X may have suffix	6Vdc, hold 0.35A, trip 0.75A	IEC/EN60730-1:2000
Fuse (F23, F51)	Panasonic Corporation, Panasonic Corporation Of North America	ERBRD may have suffix	32 Vdc, 1 A	UL248
Fuse (F23, F51) Alternate	Littelfuse Inc	497 may have suffix	32 Vdc, 1 A	UL248
Fuse (F25)	Panasonic Corporation, Panasonic Corporation Of North America	ERBRD may have suffix	32 Vdc, 0.5 A	UL248
Fuse (F25) Alternate	Littelfuse Inc	497 may have suffix	32 Vdc, 0.5 A	UL248
DC Fan	Asia Vital Components Co Ltd	BAZA0605R5H may have suffix	5Vdc, 0.5A	UL507, IEC 60950-1(ed.2);Am1+Am2
DC Fan Alternate	Delta Electronics Inc	ND55C47 may have suffix	5Vdc, 0.45A	UL507, IEC 60950-1(ed.2);Am1+Am2
Speaker	Interchangeable	Interchangeable	Two provided. Each 8ohm, 1W (typical)	--
Interconnecting Cable (Optional)	Interchangeable	Interchangeable	Max. 3.05 m in length, VW-1 or FT-1.	UL758
Connectors and Receptacles for USB ports, Ethernet port, HDMI port, Audio port and micro SD card port.	Interchangeable	Interchangeable	V-1 or Better.	UL94

Seção 73:

Componente/Component	Fabricante/Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Cord set (Optional)	Interchangeable	Interchangeable	---	NBR 14136, NBR NM 60884-1
Alt. Power Adapter	Acbel Polytech Inc / trademark for lenovo	ADLX45YAC2A	I/P: AC 100-240V 50-60Hz, 1.2A O/P: DC 5V/ 2.0A or 9V/2.0A or 15V/ 3.0A or 20V/2.25A, Cl. II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1

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Alt. Power Adapter	Acbel Polytech Inc .	ADLX45YAC3A	I/P: AC 100-240V 50-60Hz, 1.2A O/P: DC 5V/ 2.0A or 9V/ 2.0A or 15V/ 3.0A or 20V/ 2.25A, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Delta Electronics, Inc.	ADLX65YDC3A	I/P: AC 100-240V 1.8A 50-60Hz O/P: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A. Class II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Delta Electronics, Inc.	ADLX65YDC2A	I/P: AC 100-240V 1.8A 50-60Hz O/P: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A. Class II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Lite-On Technology Corporation	ADLX65YLC3A	I/P: AC 100-240V; 1.8A; 50-60Hz O/P: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A . Class I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Lite-On Technology Corporation	ADLX65YLC2A	I/P: AC 100-240V; 1.8A; 50-60Hz O/P: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A . Class II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Chicony Power Technology Co., Ltd.	ADLX65YCC3A	I/P: 100-240V~ 50-60Hz, 1.8A DC-output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V, Cl. I. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Chicony Power Technology Co., Ltd.	ADLX65YCC2A	I/P: 100-240V~ 50-60Hz, 1.8A DC-output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V, Cl. II. (altitude: 5000m)	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Acbel Polytech Inc .	ADLX65YAC3A	I/P: AC 100-240V; 50-60Hz; 1.8A O/P: DC5V/2A,9V/2A,15V/ 3A,20V/3.25A, Class I. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. Power Adapter	Acbel Polytech Inc .	ADLX65YAC2A	I/P: AC 100-240V; 50-60Hz; 1.8A O/P: DC 5V/2A,9V/2A,15V/ 3A,20V/3.25A Class II. (altitude: 5000m)	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Enclosure (for LCD Cover)	Toray Industries Inc	A695H	V-0, thickness 0.8mm min., 130°C	UL 94
Enclosure (for LCD Bezel)	Mitsubishi Engineering- Plastics Corp	MB1700+ (+ - Suffix optional, exceptions: The following cannot be used as optional suffixes:"A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF-(v)(u),"S1" for F20-54, "R" for grade MB2211, "V" for grades S- 3000+(f1), S-3001+(f1), S- 3003+(f1) & S-2000+(f1), S- 2001+(f1), S-2003+(f1).)	V-0, thickness 0.75mm min., 60°C	UL 94

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Componente/ Component	Fabricante/ Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Enclosure (for top side around Keyboard)	Mitsubishi Engineering- Plastics Corp	TMB1615+(+Suffix optional, exceptions: The following cannot be used as optional suffixes: "A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF-(v)(u),"S1" for F20-54, "R" for grade MB2211, "V" for grades S-3000+(f1), S- 3001+(f1), S-3003+(f1) & S- 2000+(f1), S-2001+(f1), S- 2003+(f1).)	V-0, thickness 1.0mm min., 60°C	UL 94
Enclosure (for bottom case)	E I Dupont De Nemours & Co Inc	HTNFR55G50NHLW	V-0, thickness 0.75mm min., 65°C	UL 94
TFT-LCD panel	AU Optronics Corporation	B140HAK01.0	14.0" (LED backlight) , Glass is of min. 0.34mm thickness	IEC 60950-1
TFT-LCD panel	Interchangeable	Interchangeable	14.0" (LED backlight), Glass is of min. 0.34mm thickness	IEC 60950-1
HDD (optional)	Western Digital Technologic, Inc.	WDUUUUXZYXXYY	Max. 1.5A/1.0A, 5Vdc /12Vdc	IEC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
HDD (optional)	Interchangeable	Interchangeable	Max. 1.5A/1.0A, 5Vdc/12Vdc	IEC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1
SSD (optional)	Samsung Electronics Co., Ltd.	MZ-N***** (* = 0-9, A-Z, blank, slash or dash)	3.3Vdc, 3.5A max.	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
Alt. SSD (optional)	Lite-on Technology Corporation	CV3- CExxxxxxx ("x" can be any alphanumeric character or blank)	5Vdc, 1.0 or 1.5 or 2.0A	IEC 60950- 1:2005+A1+A2
Alt. SSD (optional)	Interchangeable	Interchangeable	Generic, 3.3 Vdc, 3.5A Max.; or 5Vdc, 2.0A Max.	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
SSHD (optional)	Seagate Technology Inc.	ST3 with additional suffix, 3.5 Series	5/12Vdc, 1.5 A max.	IEC 60950-1
SSHD (optional)	Seagate Technology Inc.	ST9 with additional suffix, 2.5 Series	5Vdc, 1.5 A max.	IEC 60950-1
SSHD (optional)	Interchangeable	Interchangeable	5/12Vdc, 1.5 A max., or 5Vdc, 1.5 A max.	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2,UL 60950-1
Speakers (two provided)	Interchangeable	Interchangeable	Each rated 4Ω max., 2.5W max.	IEC 60950-1

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Building-in Li-ion battery pack (Optional)	Sanyo Energy (Suzhou) Co Ltd	SB10K97576	NOM 11.55Vdc; Typ. 2080mAh/24Wh; Min. 1970mAh/22.75Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1, UL 2054
Alt. Building-in Li-ion battery pack (Optional)	LG Chem, Ltd	SB10K97577	11.4Vdc, 2.10Ah / 24Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1, UL 2054
Alt. Building-in Li-ion battery pack (Optional)	Simplo Technology Co Ltd	SB10K97578	11.46Vdc, 2.095Ah or 24Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1, UL 2054
External Li-ion battery pack	Sanyo Energy (Suzhou) Co Ltd	SB10K97579	NOM 11.55Vdc, Typ. 2080mAh/ 24Wh, Min. 1970mAh/22.75Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1, UL 2054
External Li-ion battery pack	LG Chem, Ltd.	SB10K97580	11.4Vdc, 2.1Ah, 24Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1
External Li-ion battery pack	Celxpert Energy Corp	SB10K97581	11.4Vdc, 24Wh, 2.11Ah	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1 (investigated with UL 2054)
Alt. External Li-ion battery pack	Sanyo Energy (Suzhou) Co Ltd	SB10K97582	10.8Vdc, Typ. 4400mAh, 48Wh; Min. 4116mAh, 44.45Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1 (investigated with UL 2054)
Alt. External Li-ion battery pack	LG Chem, Ltd.	SB10K97583	10.8Vdc, 48Wh, 4400mAh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1
Alt. External Li-ion battery pack	Sanyo Energy (Suzhou) Co Ltd	SB10K97584	10.8Vdc, Typ. 6600mAh, 72Wh; Min. 6272mAh; 67.73Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1 (investigated with UL 2054)

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Alt. External Li-ion battery pack	LG Chem, Ltd.	SB10K97585	11.25Vdc, 6.32Ah, 72Wh	EC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62133(ed.2), UL 60950-1 (investigated with UL 2054)
Alt. External Li-ion battery pack	Simplo Technology Co Ltd	SB10K97597	11.46Vdc, 2.095Ah or 24Wh	IEC 60950-1(ed.2);am1; am2, EN 60950-1: 2006+A11+A1 +A12+A2, IEC 62133(ed.2), UL 60950-1 (investigated with UL 2054)
DC Fan	Delta Electronics, Inc.	ND75C16XXXX XXXXXXX (X stands for A-Z, 0-9, - or blank for marketing purpose only.)	5Vdc, 0.45A Max., 3.47CFM min.	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 507
DC Fan	Sunonwealth Electric Machine	EG50050S1-CA3Z (Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank for Marketing purpose only.)	5Vdc, 0.45mA, 2.25W, 3.9CFM	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 507
DC Fan	Toshiba Home Technology Corp.	M-256C-XX (XX : Rev. No. for modification not related to safety aspects, blank or any numbers (2 digits))	5Vdc, 0.29A, 1.8CFM	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 507
RTC battery (Lithium type)	Panasonic Corporation Of North America	CR1632#, CR1632*, CR-1632* (# - These cells and batteries may come with an optional single or multiple alphanumeric denoting various pin, tab, cap or wire termination types ; * - Cell model numbers may be followed by an optional slash (/) and single or multiple alphanumeric characters (i.e. letters and/or numbers), which denote optional features such as various mounting tabs, connecting leads or plugs, packaging, etc.)	3Vdc, max. abnormal charging current 4mA	UL 1642
RTC battery (Lithium type)	Hitachi Maxell Ltd	CR1632* (* - These cells and batteries may come with an optional single or multiple alphanumeric denoting various pin, tab, cap or wire termination types.)	3Vdc, max. abnormal charging current 4mA	UL 1642
Alt. RTC battery (Lithium type)	Double Best Co Ltd	CR1632 (j)(k) ((j) - These cells may have Various insulating tube, ring, or tape (k) - These cells and batteries may come with an optional single or multiple alphanumeric suffix denoting various pin, tab, cap or wire termination types)	5Vdc, max. abnormal charging current 10mA	UL 1642

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Componente/ Component	Fabricante/ Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Power Distribution Switch (U207 for USB type C port used)	Texas Instruments Inc	TPS65988	Input Voltage: 1. PPHV1: 4.5 to 6 VDC, 1 to 4 A ; 2. PPHV2: 4.5 to 6 VDC, 1 to 4 A ; 3. PPCABLE1: 2.95 to 5.5 Vdc, 0.6 A ; 4. PPCABLE2: 2.95 to 5.5 Vdc, 0.6 A ; 5. VIN_3V3: 3.3 VDC ; Output Continuous Rating: 1. VBUS1: 4.5 to 6 VDC, 1 to 4 A, with PPHV1 input ; 2. VBUS2: 4.5 to 6 VDC, 1 to 4 A, with PPHV2 input ; 3. C1CC1/C1CC2: 2.95 to 5.5 Vdc, 0.6A, with PPCABLE1 input ; 4. C2CC1/C2CC2: 2.95 to 5.5 Vdc, 0.6A, with PPCABLE2 input Output Current Limit: 1. VBUS1: 4.5 to 6 VDC, 1.39 to 4.91A, with PPHV1 input; 2. VBUS2: 4.5 to 6 VDC, 1.39 to 4.91 A, with PPHV2 input ; 3. C1CC1/C1CC2: 2.95 to 5.5 Vdc, 0.9A, with PPCABLE1 input ; 4. C2CC1/C2CC2: 2.95 to 5.5 Vdc, 0.9A, with PPCABLE2 input	IEC 60950-1: 2005+A1+A2; UL Subject 2367
PTC (F60) for docking port used	Littelfuse Inc	0603L035YR	6Vdc, 0.35A	IEC/EN 60730- 1, UL 1434
PTC (F60) for docking port used	Bourns Electronics (Taiwan) Ltd	MF-FSMF035	6Vdc, 350mA	IEC/EN 60730- 1, UL 1434
Power Distribution Switch (U53) for USB3.0 port used	Texas Instruments Inc	TPS2069, may be followed by other characters that do not impact the safety feature of the device.	Input Voltage: 2.7Vdc - 5.5Vdc; Output Continuous Rating: 1.5 A; Output Current Limit: 3.9 A	IEC 60950-1: 2005+A1+A2; UL Subject 2367
Power Distribution Switch (U53) for USB3.0 port used	Rohm Co Ltd	BD82032FVJ, may be followed by additional suffixes	2.3 A max., 4.5-5.5 Vdc; Class III. SELV	IEC 60950-1: 2005+A1+A2; UL Subject 2367
Power Distribution Switch (U88) for USB3.0 port used	Texas Instruments Inc	INC SN1702001	Input Voltage: 4.5Vdc to 5.5Vdc; Output Continuous Rating: 2.5 A; Output Current Limit: 3.1 A	IEC 60950-1: 2005+A1+A2; UL Subject 2367
Power Distribution Switch (U88) for USB3.0 port used	Pericom Semiconductor Corp	PI5USB25xyZ HEz where xx is 44, 46, 47 or 48 and y is blank or A, ZH is packaging type, E is Pb-free, and z is blank for bulk packaging or X for tape and reel packaging.	Input Voltage: 4.5Vdc to 5.5Vdc; Output Continuous Rating: 30mA-2.5A; Output Current Limit: 100Ma-3.18A	IEC 60950-1: 2005+A1+A2; UL Subject 2367
Power Distribution Switch (U110) for HDMI port used	Texas Instruments Inc	TPS2553 series	Input Voltage: 2.5Vdc to 6.5Vdc; Output Continuous Rating: 1.5 A; Output Current Limit: 1.7 A	IEC 60950-1: 2005+A1+A2; UL Subject 2367

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Fuse (F61 for SD card slot ; F43 for smart card slot) 1)	Littelfuse Inc	497	32Vdc, 1A	UL 248
Fuse (F61 for SD card slot ; F43 for smart card slot) 1)	Panasonic Corporation, Panasonic Corporation Of North America	ERBRD*	32Vdc, 1A	UL 248
Sponge for heatsink	Century Creation International Co Ltd	CR-2030B	V-1, min. 1.0mm thickness	UL 94
Sponge for heatsink - glue	Sony	G9000	--	IEC 60950-1
Internal plastic barrier for Speaker openings	Chengdu Kanglongxin Plastics Co Ltd	KLX FRPC-1860B	VTM-0, min. 0.3mm thickness	UL 94
Internal plastic barrier for Speaker openings - adhesive tape	Jiangsu Sidike New Materials Science & Technology Co Ltd	DST-(a)	100 °C	UL 510A
ThinkPad WiGig Dock (Optional)	Lenovo Information Products (Shenzhen) Co., Ltd.	W123	20Vdc, 2.25A	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2
PCB	Interchangeable	Interchangeable	min. V-1, 105°C min	UL 796

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Componente/Component	Fabricante/ Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
Cord set (Optional)	Interchangeable	Interchangeable	---	NBR 14136, NBR NM 60884-1
AC/DC adapter	Acbel Polytech Inc. (Lenovo)	ADLX45YAC2A	Input: AC 100-240V; 50-60Hz, 1.2A, Class II Output: DC 5V/2.0A or 9V/2.0A or 15V/3.0A or 20Vdc/2.25A	IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Acbel Polytech Inc. (Lenovo)	ADLX45YAC3A	Input: AC 100-240V; 50-60Hz, 1.2A, Class I Output: DC 5V/2.0A or 9V/2.0A or 15V/3.0A or 20V2.25A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Chicony Power Technology Co., Ltd (Lenovo)	ADLX45YCC2A	I/P: 1.3A 100-240V~ 50-60Hz Cl.II. DC-output: 2A 5V or 2A 9V or 3A 15V or 2.25A 20V	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Chicony Power Technology Co., Ltd (Lenovo)	ADLX45YCC3A	I/P: 1.3A 100-240V~50-60Hz Cl.I. DC-output: 2A 5V or 2A 9V or 3A 15V or 2.25A 20V	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Delta Electronics Inc (Lenovo)	ADLX45YDC3A, ADLX45YDC2A	Input: 100-240V~, 1.2A 50-60Hz; Output: 20Vdc/2.25A or 15Vdc/3A or 9Vdc/2A or 5Vdc/2A	IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Lite-On Technology Corporation (Lenovo)	ADLX45YLC2A	Input: AC 100-240V; 1.3A; 50-60Hz; Class II Output: DC 20V; 2.25A, 15V; 3A, 9V; 2A, 5V; 2A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Lite-On Technology Corporation (Lenovo)	ADLX45YLC3A	Input: AC 100-240V; 1.3A; 50-60Hz; Class I Output: DC 20V; 2.25A,15V; 3A, 9V; 2A, 5V; 2A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1

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AC/DC adapter	Acbel Polytech Inc. (Lenovo)	ADLX65YAC2A	Input: AC 100-240V; 50-60Hz; 1.8A; Class II Output: DC 5V/2.0A or 9V/2.0A or 15V/3.0A or 20V/3.25A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Acbel Polytech Inc. (Lenovo)	ADLX65YAC3A	Input: AC 100-240V; 50-60Hz; 1.8A; Class I Output: DC 5V/2.0A or 9V/2.0A or 15V/3.0A or 20V/3.25A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Chicony Power Technology Co., Ltd (Lenovo)	ADLX65YCC2A	I/P: 1.8A 100-240V~ 50-60Hz Cl.II. DC-output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Chicony Power Technology Co., Ltd (Lenovo)	ADLX65YCC3A	I/P: 1.8A 100-240V~ 50-60Hz Cl.I. DC-output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Delta Electronics Inc (Lenovo)	ADLX65YDC2A, ADLX65YDC3A	Input: AC 100- 240V; 1.8A; 50-60Hz; Class II Output: DC 20V; 3.25A, DC 15V; 3A, DC 9V; 2A, DC 5V; 2A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Lite-On Technology Corporation (Lenovo)	ADLX65YLC2A	Input: AC 100-240V; 1.8A; 50-60Hz; Class II Output: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
AC/DC adapter	Lite-On Technology Corporation (Lenovo)	ADLX65YLC3A	Input: AC 100-240V; 1.8A; 50-60Hz; Class II Output: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A	IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1
Plastic Enclosure	Covestro Deutschland AG [PC Resins]	FR3002 + (+ - Material designations may be followed by a six digit numerical code denoting color.)	V-0, min. 1.2 mm thick	UL 94
Plastic Enclosure	Covestro Deutschland AG [PC Resins]	FR3021 + (+ - Material designations may be followed by a six digit numerical code denoting color.)	V-0, min. 1.5 mm thick	UL 94
Plastic Enclosure	Ningbo Lg Yongxing Chemical Co Ltd	LUPOY GN-5001RFD	V-0, min. 1.0 mm thick	UL 94
Plastic Enclosure	Ningbo Lg Yongxing Chemical Co Ltd	LUPOY GN- 5151RF(#) (#) - May or may not be followed by suffix letter from A-Z inclusive, except F, and except Grades AF302G, HT700B, XR401B, LI912A, AF303G, AF303S	V-0, min. 1.0 mm thick	UL 94
Mesh for speaker opening	Chengdu Kanglongxin Plastics Co Ltd	H KLX FRPC- 1860, H KLX FRPC-1860B	VTM-0, min. 0.125 mm thickness	UL 94
Mesh for speaker opening	Chengdu Kanglongxin Plastics Co Ltd	KLX FRPC-1860, KLX FRPC-1860B	VTM-0, min. 0.125 mm thickness	UL 94
Adhesive for speaker mesh	3M	467	Complied with Cl. 4.6.5	IEC 60950-1
Mesh for rear side opening	Interchangeable	Interchangeable	Metal, thickness 0.2 mm	-
Adhesive for rear side opening	Jiangshu Sidike Electronics Adhesive Material Co Ltd	DS-5	Complied with Cl. 4.6.5	IEC 60950-1

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DC Fan	Asia Vital Components Co., Ltd	BAZA0706R5HY002	5Vdc, 0.5A, 3.42CFM min.	EN 60950-1:2006/A2: 2013
DC Fan	Sunonwealth Electric Machine Industry Co. Ltd.	EG50050S1-CCZ Z stands for 30 characters. Each character stands for one of the following signs: 0- 9, A-Z, (,), ., /, - or blank for marketing purpose only	5Vdc, 450mA, 2.25W, 3.6CFM min.	EN 60950-1: 2006+A11+A1+ A12+A2
DC Fan	Toshiba Home Technology Corp.	M-257C-XX XX: Rev. No. for modification not related to safety aspects, blank or any numbers (2 digits)	5Vdc, 0.34A, 2.0CFM min.	EN 60950-1:2006/A2: 2013
Li-ion battery pack	Lg Chem, Ltd. (Lenovo)	L17L3P51	11.1Vdc, 4050mAh, 45Wh.	IEC 60950-1 (ed2); am 1; am2, IEC 62133 (ed.2), UL 60950-1; 2nd, UL 2054
Li-ion battery pack	Simplo Technology Co Ltd (Lenovo)	L17M3P51, L17M3P52	11.1Vdc 4.08Ah or 4.12Ah or 45Wh	IEC 60950-1 (ed2); am 1; am2, IEC 62133 (ed.2), UL 60950-1; 2nd, UL 2054
Li-ion battery pack	Celxpert Energy Corp (Lenovo)	L17C3P51	11.1Vdc, 45Wh, 4120mAh	IEC 60950-1 (ed2); am 1; am2, IEC 62133 (ed.2), UL 60950-1; 2nd, UL 2054
LCD panel	AUO	B140HAN04.2	14.0" TFT, glass type, min. 0.34 mm thick (with LED back-light module)	IEC 60950-1
LCD panel	Interchangeable	Interchangeable	14.0" TFT, glass type, min. 0.34 mm thick (with LED back-light module)	IEC 60950-1
SSD (Optional)	Samsung Electronics Co., Ltd.	MZ-V*****	3.3Vdc, 3.5A max.	IEC 60950-1, UL 60950-1
Alt. SSD (Optional)	SK Hynix Inc.	HFSabcG32MNBdefgh	5Vdc, 2.0A	EN 60950-1:2006+A11+A1+A12
Alt. SSD (Optional)	Samsung Electronics Co., Ltd.	MZ-5*****	12Vdc, 0.5A	IEC 60950-1:2005+A1+A2, UL 60950-1, 2 nd
Alt. SSD (Optional)	Interchangeable	Interchangeable	3.3Vdc, 3.5A max. or 5Vdc, 2.0A max. or 12Vdc, 0.5A max.	IEC 60950-1, EN 60950-1, UL 60950-1
HDD (optional)	Seagate Technology	ST series (ST will be followed by suffixes indicating disk size, storage capacity and SELV options) 3.5 series (3.5 will be followed by suffixes indicating storage capacity, SELV options and disk speed)	5/12Vdc, 1.5A max.	EN 60950-1:2006+A11+A1+A12
HDD (optional)	Interchangeable	Interchangeable	5/12Vdc, 1.5A max.	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1
SSHD (optional)	Seagate Technology Inc.	ST3 with additional suffix, 3.5 Series	5/12Vdc, 1.5 A max./ 1.5 A max.	IEC 60950-1, UL 60950-1
SSHD (optional)	Seagate Technology Inc.	ST9 with additional suffix, 2.5 Series	5Vdc, 1.5 A max.	IEC 60950-1, UL 60950-1
SSHD (optional)	Interchangeable	Interchangeable	5/12Vdc, 1.5 A max./ 5Vdc, 1.5 A max.	IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1

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RTC Battery (Lithium)	Panasonic Corporation, Panasonic Corporation Of North America	CR2032* (* Cell model numbers may be followed by an optional slash (/) and single or multiple alphanumeric characters (i.e. letters and/or numbers), which denote optional features such as various mounting tabs, connecting leads or plugs, packaging, etc.)	3V, max. abnormal charging current 10mA	UL 1642
RTC Battery (Lithium)	Interchangeable	CR2032	3V, max. abnormal charging current 10mA	UL 1642
PCB	Interchangeable	Interchangeable	Min. V-1, 105°C min.	UL 796
Speakers (Two provided)	Interchangeable	Interchangeable	4Ω min., max. 2.5W	IEC 60950-1
Power Distribution Switch (U6401, U0302) for USB 3.1 and USB 2.0 port use	Silergy	SY6288xyyyyy (x=A, B,C,D,E; yyyyyy=0-9, A-Z or blank)	I/P: DC 2.5-5.5V O/P: DC 5.5 max., 1.6A max. (x=A, B) DC 5.5 max., 3.7A max. (x=C,D,E)	IEC 60950-1: 2005+A1+A2, UL 2367
Power Distribution Switch (U6402) for USB3.1 port use	Texas Instruments Inc	TPS2543, TPS2544, TPS2545, TPS2546 Additional suffixes after the model number designate the type of integrated circuit package, integrated circuit lead types or other features that are considered not to affect the functionality of the device.	Input Voltage = 4.5 Vdc to 5.5 Vdc Output Continuous Rating: TPS2543, TPS2544, TPS2545, TPS2546 = 2.5 A Output Current Limit: TPS2543, TPS2544, TPS2545, TPS2546 = 3.1 A	IEC 60950-1: 2005+A1+A2, UL 2367
Power Distribution Switch (U4301) for USB-C port use	NXP Semiconductor Taiwan Ltd.	NX5P3290UK	Input Voltage Range: 4.0 Vdc to 5.5Vdc. Current Limit Rating: 3.3 A.	UL 62368-1, IEC 62368- 1(ed.2), EN 62368- 1:2014
PTC Polyswitches (F4701) for HDMI port use	Littelfuse Inc.	1206L050	6Vdc, 0.5A	UL 1434, EN 60730-1

Seção 77:

Componente/Component	Fabricante/Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
S01. Connectors and Receptacles (secondary SELV circuits)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of plastic rated V-2 min	UL94
S01a. Connectors and Receptacles (secondary SELV circuits)	Interchangeable	Interchangeable	Min. 30Vac	UL498, UL1977.
S02. Internal Plastic Part Materials	Interchangeable	Interchangeable	Min. V-2 or HF-2	UL94
S03. Interconnecting Cable (primary) (telecom)	Interchangeable	Interchangeable	Min. 105 degree C, 300 V, max 3.05 m long, jacketed, VW-1 or FT-1	UL758
S04. Label	Interchangeable	Interchangeable	70 degree C if max. surface temperature not specified.	UL969
S04a. Label	Interchangeable	Interchangeable	Rating was engraved on the enclosure directly	--

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S04b. Label	Interchangeable	Interchangeable	Molded as part of enclosure or label, Hot stamping, laser etching, silk screened or printed by ink.	--
S04c. Label (Laser Carving)	Interchangeable	Interchangeable	Laser carved on enclosure directly.	--
S05. Printed Wiring board	Interchangeable	Interchangeable	V-1 min.	UL796
S05a. Plastic Material of Flexible Printed Wiring	Interchangeable	Interchangeable	V-2 min. or VTM-2 min. when no components mounted on surface	UL94, UL746C, UL746E, UL746F
S05b. Flexible Printed Wiring, alternate	Interchangeable	Interchangeable	V-2 min. or VTM-2 min. when no components mounted on surface	UL796, UL796F
S05c. Flexible Printed Wiring, alternate	Interchangeable	Interchangeable	V-1 min. or VTM-1 min. when components mounted on surface	UL796, UL796F
S06. Wiring, internal secondary ELV/SELV circuits	--	--	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min 30 V, 60 degree C.	UL758
S07. Power supply cord (Optional)	Interchangeable	Interchangeable	No. 18 AWG min., Detachable, min. 1.5 m. max. 4.5 m (14.76 ft.) long, Type SVT or SJT or SPT-2 flexible cord, if one end terminated in NEMA 5-15P grounding type attachment plug; if one end terminated in NEMA 6-15P grounding type attachment plug, the other end in an appliance coupler.	UL62, UL498, or UL817
01.LCD Panel	LG DISPLAY CO LTD	LP133WF2	13.3 inch LED TFT	UL 60950-1
02.LCD Panel (Alternate)	Interchangeable	Interchangeable	13.3 inch LED TFT	UL 60950-1
03.Speaker	Interchangeable	Interchangeable	Two provided. Each 4 Ohm, max., 2.5 W	Evaluated in this Application
06.Solid Stare Drive (SSD) (Optional)	INTEL CORP	SSDSA1*, SSDSA2*, SSDSC1*, SSDSC2*, SSDMA*, SSDMC*, SSDPE*, SSDPED*, SSDSCMMW*, SSDSCI*, SSDSCJ*, SSDSCK*, where * can be optional letters or numbers used to identify features such as memory type, size (thickness, width) and identify details not critical to the compliance of the drive.	3.3 Vdc, 5 Vdc, and/or 12 Vdc	UL 60950-1
06a. Solid Stare Drive (SSD) (Optional)	SAMSUNG ELECTRONICS CO LTD	MZ-N***** (Where "*" may be any alphanumeric character and/or slash and/or blank.)	3.3 Vdc	UL 60950-1
06b. Solid Stare Drive (SSD) (Optional)	Interchangeable	Interchangeable	3.3 Vdc, 5 Vdc, and/or 12 Vdc	UL 60950-1
07a. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd. / Lenovo	ADLX65YCC3A, ADLX65YCC2A	Input : AC 100-240V; 50-60Hz; 1.8A; Output: 2A 5V or 2A 9V or 3A 15V or 3.25A 20V	UL/IEC 60950-1, IEC/UL 62368-1 2nd
07b. AC/DC adapter (Alternate)	Chicony Power Technology Co., Ltd. / Lenovo	ADLX45YCC3A, ADLX45YCC2A	Input : AC 100-240V; 50-60Hz; 1.3A; Output: 2A 5V or 2A 9V or 3A 15V or 2.25A 20V	IEC/UL 60950-1, IEC/UL 62368-1 2nd

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07c. AC/DC adapter (Alternate)	Lite-On Technology Corporation / Lenovo	ADLX45YLC3A, 4X20M26256, 4X20M26265, PA-1450-34YX, (Y= A-Z, Blank or hyphen; X= 0-9, A-Z, Blank or hyphen), SA10E75841, 00HM663, ADLX45YLC2A, PA-1450-35YX, (Y= A-Z, Blank or hyphen; X= 0-9, A-Z, Blank or hyphen), SA10E75842, 00HM664	Input : AC 100-240V; 1.3A; 50-60Hz; Output: DC 20V; 2.25A, 15V; 3A, 9V; 2A, 5V; 2A	IEC/UL 60950-1, IEC/UL 62368-1 2nd
07d. AC/DC adapter (Alternate)	Lite-On Technology Corporation / Lenovo	ADLX65YLC2A, PA-1650-47YX, (Y=A-Z, Blank or hyphen; X= 0-9, A-Z, Blank or hyphen), SA10M13948, 01FR025 ADLX65YLC3A, 4X20M26272, 4X20M26281, PA-1650-46YX, (Y= A-Z, Blank or hyphen; X= 0-9, A-Z, Blank or hyphen), SA10M13945, 01FR024, SA10J20147, 00PC748	Input : AC 100-240V; 1.8A; 50-60Hz; Output: DC 20V; 3.25A, 15V; 3A, 9V; 2A, 5V; 2A	IEC/UL 60950-1, IEC/UL 62368-1 2nd
07e. AC/DC adapter (Alternate)	Acbel Polytech Inc. / Lenovo	ADLX65YAC3A, P/N: SA10E75845, FRU P/N:00HM667, , Korea Option P/N:4X20M26256, China Option P/N:4X20M26265 ADLX45YAC2A, P/N: SA10E75846, FRU P/N: 00HM668	Input : AC 100-240V; 50-60Hz; 1.2A; Output: DC 5V/2.0A or 9V/2.0A or 15V/3.0A or 20V/2.25A	IEC/UL 60950-1, IEC/UL 62368-1 2nd
07f. AC/DC adapter (Alternate)	Acbel Polytech Inc. / Lenovo	ADLX65YAC3ALC/ LI PN: SA10M13943, FRU PN: 01FR028, , Korea Option PN: 4X20M26272, China Option PN: 4X20M26281 ADLX65YAC2A, LC / LI PN: SA10M13949, FRU PN: 01FR029	Input : AC 100-240V; 50-60Hz; 1.8A; Output: DC 5V/2A, 9V/2A, 15V/3A, 20V/3.25A	IEC/UL 60950-1, IEC/UL 62368-1 2nd
07g. AC/DC adapter (Alternate)	Delta Electronics, Inc.	ADLX45YDC3A, ADLX45YDC2A	Input: 100-240V~, 1.2A, 50-60Hz; Output: 20Vdc/2.25A, 15Vdc/3A, 9Vdc/2A, 5Vdc/2A	IEC/UL 60950-1, IEC/UL 62368-1 2nd
07h. AC/DC adapter (Alternate)	Delta Electronics, Inc.	ADLX65YDC3A, ADLX65YDC2A, ADP-65UD B	Input: 100-240V~, 1.8A, 50-60Hz; Output: 20Vdc/3.25A, 15Vdc/3A, 9Vdc/2A, 5Vdc/2A	IEC/UL 60950-1, IEC/UL 62368-1 2nd
07i. AC Adapter (Optional) (Alternate)	Interchangeable	Interchangeable	O/P rated: 20 Vdc, 2.25 A. Evaluated for use up to 5000 m and minimum 35 degree C.	IEC/UL 60950-1, IEC/UL62368-1 2nd
07j. AC Adapter (Optional) (Alternate)	Interchangeable	Interchangeable	O/P rated: 20 Vdc, 3.25 A. Evaluated for use up to 5000 m and minimum 35 degree C.	IEC/UL 60950-1, IEC/UL62368-1 2nd
08. Enclosure Opening dimension	--	--	See Enclosure ID 4-02 for detail	--
08-1. Enclosure (LCD Panel cover)	Interchangeable	Interchangeable	Metal alloy, min. 1.0 mm thickness	Evaluated in this Application
09. Enclosure (LCD bezel, uppercase, bottom case)	MITSUBISHI ENGINEERING-PLASTICS CORP	MB1700+ (+) - Suffix optional, exceptions: The following cannot be used as optional suffixes: "T" for grade 2030, "A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF- (v)(u), "S1" for F20- 54.	V-0, min. 0.75mm thickness, RTI =60degree C	UL 94, UL746C

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09. Enclosure (LCD bezel, uppercase, bottom case) (Alternate)	MITSUBISHI ENGINEERING-PLASTICS CORP	TMB1615+ (+) - Suffix optional, exceptions: The following cannot be used as optional suffixes: "T" for grade 2030, "A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF-(v)(u),"S1" for F20-54.	V-0, min. 1.0 mm thickness, RTI =85degree C	UL 94, UL746C
09. Enclosure (LCD bezel, uppercase, bottom case) (Alternate)	E I DUPONT DE NEMOURS & CO INC	HTNFR55G50NHLW	V-0, min. 0.4 mm thickness, RTI =65degree C	UL 94, UL746C
09-1. Metallized Coating	Shanghai Weihong Model Plastics Mfr Co Ltd	Sputtering	0.1-2.0 Mils,	UL746C
10. RTC Battery	Vic-Dawn Enterprise CO., LTD.	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10a. RTC Battery (Alternate)	Jhjh Hong Technology Co., Ltd	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10b. RTC Battery (Alternate)	Double Best Co Ltd	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10c. RTC Battery (Alternate)	MITSUBISHI ELECTRIC CORP	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10d. RTC Battery (Alternate)	Mitsubishi Electric Home Appliance Co., Ltd	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10e. RTC Battery (Alternate)	PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10f. RTC Battery (Alternate)	SONY ENERGY DEVICES CORP	CR2032	3Vdc; max. abnormal charging current 10 mA	UL 1642
10g. RTC Battery (Alternate)	Interchangeable	CR2032	3Vdc; max. abnormal charging current 10 mA Reverse Current Protection provided by diode and 1kohm resistor	UL 1642
11. Battery pack (Li-ion)	CELPERT ENERGY CORP (Lenovo)	L17C3P53	11.1Vdc, 45Wh, 4120mAh	IEC62133, IEC/UL 60950-1UL 2054
11a. Battery pack (Li-ion) (Alternate)	LG CHEM, LTD (Lenovo)	L17L3P55	11.1Vdc 4.05Ah/45Wh	IEC62133, IEC/UL 60950-1UL 2054
11b. Battery pack (Li-ion) (Alternate)	SIMPLOTECHNOLOGY CO LTD (Lenovo)	L17M3P55	11.1Vdc 4.08Ah or 4.12Ah or 45Wh	IEC/UL 60950-1, UL 2054, IEC/UL62368
12. CPU cooling fan	ASIA VITAL COMPONENTS CO.,LTD.	BAZD0606Z5HV, Z be can B or R; V=ABCD where A, B, C, D may be A-Z, 0-9 or -.	5 Vdc, max. 0.5A, Min. 3.24 CFM	UL 507
12a. CPU cooling fan (Alternate)	Delta Electronics, Inc.	ND55C48(Y11) the number after Y represents digit, each digit may be A through Z, 0 through 9, "-" or blank.	5 Vdc, max. 0.45A, Min. 0.58 CFM	UL 507
12b. CPU fan (Alternate)	Interchangeable	Interchangeable	5 Vdc, Max. 0.5A, Min. 0.58 CFM	UL 507
13. Polyswitch for HDMI port	POLYTRONICS TECHNOLOGY CORP	SPR-P110(\$) (\$) May be followed by symbol "-" and up to two alphanumeric characters denoting a resistance range or customer code.	6 Vdc, I _h = 1.1 A, I _t = 1.8 A	UL 1434, IEC60730-1:2000

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13a. Polyswitch for HDMI port (Alternate)	LITTELFUSE INC	0805L110UL, 0805L110UL##, 0805L110UL##***** where ## is Up to two alphanumeric characters denoting packing quantity and packing method, where ***** is Up to five alphanumeric characters denoting a product lead type and customer code.	6 Vdc, I _h = 1.1 A, I _t = 1.8 A	UL 1434, IEC60730-1:2000
13b. Polyswitch for HDMI port (Alternate)	Bourns Inc.	MF-PSMF110X	6 Vdc, I _h = 1.1 A, I _t = 2.2 A	UL 1434, IEC60730-1:2000
13c. Polyswitch for HDMI port (Alternate)	Interchangeable	Interchangeable	6 Vdc, I _h = max 1.1 A, I _t = max 2.2 A, CA3	UL 1434, IEC60730-1:2000
14. Power Distribution Switch for USB Port	TEXAS INSTRUMENTS INC	TPS2002CDRC, TPS2003CDRC, TPS2060CDGN, TPS2062CD, TPS2066CDGN, TPS2062CDRB-2, TPS2064CDGN-2, TPS2064CDGN, TPS2066CD, TPS2066CDGN-2, TPS2062CDGN	Rated 4.5-5.5 Vdc, output continuous rating: 0.5 - 2.0 A, output current limit: 1.30 - 3.95 A per output channel, CI,III, SELV, complied with Annex CC	Subject 2367, IEC60950-1 2nd
14a. Power Distribution Switch for USB port (Alternate)	TEXAS INSTRUMENTS INC	TPS2543, TPS2544, TPS2545, TPS2546, maybe followed by Q, may be followed by RTE, may be followed by R or T, may be followed by Q1	4.5-5.5 Vdc, Cont. Current: 2.5A, Prot.Current: 3.1A	Subject 2367, IEC60950-1 2nd
14b. Power Distribution Switch for USB port (Alternate)	TEXAS INSTRUMENTS INC	TPS2069. May be followed by other characters that do not impact the safety feature of the device.	4.5-5.5 Vdc, Cont.Current: 1.5A, Prot.Current: 2.7A	Subject 2367, IEC60950-1 2nd
14c. Power Distribution Switch for USB port (Alternate)	TEXAS INSTRUMENTS INC	TPS2069. May be followed by other characters that do not impact the safety feature of the device.-2	4.5-5.5 Vdc, Cont. Current: 1.5A, Prot.Current: 2.86A	Subject 2367, IEC60950-1 2nd
14d. Power Distribution Switch for USB port (Alternate)	ROHM CO LTD	BD82034FVJ, may be followed by additional suffixes	4.5-5.5 Vdc, Cont.Current: 1.5A, Prot.Current: 2.86A	Subject 2367, IEC60950-1 2nd

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<p>14e. Power Distribution Switch for USB port (Alternate)</p>	<p>TEXAS INSTRUMENTS INC</p>	<p>SN1701012, SN1701013, SN1702024, SN1702025, SN1702026, SN1702027, SN1702028, SN1702029, SN1702030, SN1702031, SN1702032, SN1702033, SN1702034, SN1702035, SN1702036, TPS65987D, TPS65987S, TPS65988, may be followed by other characters that do not impact the safety feature of the device.</p>	<p>Models TPS65988, SN1702036, SN1702033, SN1702027, SN1702030, SN1701012</p> <p>Input Voltage: 1. PPHV1: 4.5 to 6 VDC, 1 to 4 A 2. PPHV2: 4.5 to 6 VDC, 1 to 4 A 3. PPCABLE1: 2.95 to 5.5 Vdc, 0.6 A 4. PPCABLE2: 2.95 to 5.5 Vdc, 0.6 A 5. VIN_3V3: 3.3 VDC</p> <p>Output Continuous Rating: 1. VBUS1: 4.5 to 6 VDC, 1 to 4 A, with PPHV1 input 2. VBUS2: 4.5 to 6 VDC, 1 to 4 A, with PPHV2 input 3. C1CC1/C1CC2: 2.95 to 5.5 Vdc, 0.6 A, with PPCABLE1 input 4. C2CC1/C2CC2: 2.95 to 5.5 Vdc, 0.6 A, with PPCABLE2 input</p> <p>Output Current Limit: 1. VBUS1: 4.5 to 6 VDC, 1.39 to 4.91 A, with PPHV1 input 2. VBUS2: 4.5 to 6 VDC, 1.39 to 4.91 A, with PPHV2 input 3. C1CC1/C1CC2: 2.95 to 5.5 Vdc, 0.9 A, with PPCABLE1 input 4. C2CC1/C2CC2: 2.95 to 5.5 Vdc, 0.9 A, with PPCABLE2 input</p> <p>Ambient: -40 to 75degree C</p> <p>Models TPS65987D, SN1702035, SN1702032, SN1702026, SN1702029, SN1701013</p> <p>Input Voltage: 1. PPHV1: 4.5 to 6 VDC, 1 to 4 A 2. PPHV2: 4.5 to 6 VDC, 1 to 4 A 3. PPCABLE1: 2.95 to 5.5 Vdc, 0.6 A 4. VIN_3V3: 3.3 VDC</p> <p>Output Continuous Rating: 1. VBUS1: 4.5 to 6 VDC, 1 to 4 A, with PPHV1 input 2. VBUS2: 4.5 to 6 VDC, 1 to 4 A, with PPHV2 input 3. C1CC1/C1CC2: 2.95 to 5.5 Vdc, 0.6 A, with PPCABLE1 input</p> <p>Output Current Limit: 1. VBUS1: 4.5 to 6 VDC, 1.39 to 4.91 A, with PPHV1 input 2. VBUS2: 4.5 to 6 VDC, 1.39 to 4.91 A, with PPHV2 input 3. C1CC1/C1CC2: 2.95 to 5.5 Vdc, 0.9 A, with PPCABLE1 input</p>	<p>Subject 2367, IEC60950-1 2nd</p>
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Componente/Component	Fabricante/Manufacturer	Tipo/Modelo Type/Model	Características técnicas/ Technical data	Norma/ Standard
			Ambient: -40 to 75degree C	
14f. Power Distribution Switch for USB port (Alternate)	PERICOM TECHNOLOGY (SHANGHAI) CO LTD	PI5USB2544ZHE, PI5USB2544ZHEX, PI5USB2544AZHE, PI5USB2544AZHEX, PI5USB2546ZHE, PI5USB2546ZHEX, PI5USB2546AZHE, PI5USB2546AZHEX, PI5USB2547ZHE, PI5USB2547ZHEX, PI5USB2548ZHE, PI5USB2548ZHEX	4.5-5.5 Vdc, Cont.Current: 30mA to 2.5A, Prot. Current: 100mA to 3.18A	Subject 2367, IEC60950-1 2nd
15. Internal Plastic Mesh	Mitsubishi Chemical Corporation	HF-01	0.04-0.24mm, VTM-0, 105 degree C, Aperature=410um, Line Diameter=80um, thickness=120um, see enclosure ID 4-03 for overall dimension	UL94, UL746C
16. Internal Plastic Mesh	--	--	Min. V-0, see enclosure ID4-04 for overall dimension	UL94, UL746C
17. Heatsink	--	--	Copper or Copper alloy or Steel, See Enclosure ID4-01 for detail.	--
18. IR Camera (Optional)	Interchangeable	Interchangeable	PWB: Min. V-1, comply with IEC62471 of Exempt Group	--
18-1. LED Chip	OSRAM	SFH 4715A	1.5A, 1.9Vdc, Wave length= 850nm	--
18a. IR Camera (Alternate) (Optional)	Interchangeable	Interchangeable	PWB: Min. V-1, comply with IEC62471 of Exempt Group	--
Adapter (Alternate)	Chicony Power Technology Co Ltd	ADLX65YCC2D	I/P: 100-240 Vac, 1.8A, 50-60 Hz; O/P: 20 Vdc, 3,25 A / 15 Vdc, 3 A / 9 Vdc, 2 A Class II, 40° C Altitude: 5000 m	-
Adapter (Alternate)	Chicony Power Technology Co Ltd	ADLX65YCC3D	I/P: 100-240 Vac, 1.8A, 50-60 Hz; O/P: 20 Vdc, 3,25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class I, 40° C Altitude: 5000 m	-
Adapter (Alternate)	Delta Electronics, Inc.	ADLX65YDC3D, ADLX65YDC2D	I/P: 100-240 Vac, 1.8A, 50-60 Hz; O/P: 20 Vdc, 3,25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class I, 40° C Altitude: 5000 m	-
Adapter (Alternate)	Lite-On Technology Corp	ADLX65YLC2D	I/P: 100-240 Vac, 1.8A, 50-60 Hz; O/P: 20 Vdc, 3,25 A / 15 Vdc, 3 A / 9 Vdc, 2 A / 5 Vdc, 2 A Class I, 40° C Altitude: 5000 m	-
DC Fan	Toshiba Home Technology Corp.	M-266C-XXXX	5 Vdc, 0,38 A, 1.9 CFM min.	-
DC Fan (Alternate)	Asia Vital Components Co.,	BAPA0706R5HV, V= ABCD where A, B, C, D may be A-Z, 0-9 or "-."	5 Vdc, 0,5 A, 3,42 CFM min.	-

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Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
Adapter (For 20Vdc, 2.25A)	CHICONY POWER TECHNOLOGY CO LTD	ADLX45YCC2D	I/P: 100-240Vac, 1.3A, 50-60Hz; O/P: 20Vdc, 2.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005 /AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Nemko (NO102327); CB by Demko (DK-73341-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	CHICONY POWER TECHNOLOGY CO LTD	ADLX45YCC3D	I/P:100-240Vac, 1.3A, 50-60Hz; O/P: 20Vdc, 2.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1 2014/A11 :2017, UL 60950-1, UL 62368-1	CB by Nemko (NO102328); CB by Demko (DK-73341-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Chicony Power Technology Co., Ltd	ADLX45YCC2A	I/P: 100-240Vac; 50-60Hz. 1.3A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class II. 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2:2013, EN 60950-1: 1:2006+A11+A1+ A12+A2,IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Nemko (NO94051); CB by Demko (DK- 64097-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Chicony Power Technology Co., Ltd	ADLX45YCC3A	I/P: 100-240Vac; 50-60Hz. 1.3A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class I. 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2:2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1:2014/A11: 2017, UL 60950-1, UL 62368-1	CB by Nemko (NO94050); CB by Demko (DK- 64093-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Delta Electronics, Inc.	ADLX45YDC3D, ADLX45YDC2D	I/P: 100-240Vac, 1.2A, 50-60Hz; O/P: 20Vdc, 2.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class II with functional earth for model ADLX45YDC3D , Class II for model ADLX45YDC2D , 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRH (JPTUV- 088399); CB by TUVRH (JPTUV- 088525), UL

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Adapter (For 20Vdc, 2.25A) (Alternate)	Delta Electronics, Inc	ADLX45YDC3A, ADLX45YDC2A	I/P: 100-240Vac; 50-60Hz. 1.2A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class II. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Demko (DK-57966-UL); CB by Demko (DK-63441-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Lite-On Technology Corporation	ADLX45YLC2D	I/P: 100-240Vac, 1.3A, 50-60Hz; O/P: 20Vdc, 2.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1:2014/A11: 2017, UL 60950-1, UL 62368-1	CB by Demko (DK-74396-UL); CB by Demko (DK-74550-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Lite-On Technology Corporation	ADLX45YLC3D	I/P: 100-240Vac, 1.3A, 50- 60Hz; O/P: 20Vdc, 2.25A /15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Demko (DK-73964-UL); CB by Demko (DK-73960-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Lite-On Technology Corporation	ADLX45YLC2A	I/P: 100-240Vac; 50-60Hz. 1.3A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class II. 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2:2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368- 1 :2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 073708); CB by Demko (DK- 63136-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Lite-On Technology Corporation	ADLX45YLC3A	I/P: 100-240Vac; 50-60Hz. 1.3A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class I. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2:2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 073540); CB by Demko (DK- 63151-UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Acbel Polytech Inc.	ADLX45YAC2A	I/P: 100-240Vac; 50-60Hz. 1.2A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class II. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 075061); CB by TUVRh (JPTUV- 080335), UL

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Adapter (For 20Vdc, 2.25A) (Alternate)	Acbel Polytech Inc.	ADLX45YAC3A	I/P: 100-240Vac; 50-60Hz. 1.2A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/2.25A. Class I. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368- 1:2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 075056); CB by TUVRh (JPTUV- 080344), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45YCC2D, ADLX45YCC2G	Input: 100- 240V~ 1.3A 50-60Hz, Cl. II Output: 2.25A 20Vdc /3A 15Vdc /2A 9Vdc /2A 5Vdc. 40 oC Altitude: 5000m	IEC 60950- 1:2005/AMD2:2 013, IEC 62368- 1:2014, UL 62368-1	CB by Nemko (NO102327/A2/ M1), CB by UL (DK-73341-M2- UL), UL
Adapter (For 20Vdc, 2.25A) (Alternate)	Chicony Power Technology Co., Ltd.	ADLX45YCC3D; ADLX45YCC3G	I/P:1.3A 100- 240V~ 50-60Hz O/P: 2.25A 20Vdc/3A 15Vdc /2A 9Vdc /2A 5Vdc Cl. I., 40 oC Altitude: 5000m	IEC 60950- 1:2005/AMD2:2 013, IEC 62368- 1:2014, UL 62368-1	CB by Nemko (NO102328/A1/ M1), CB by UL (DK- 73342- M1-UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	CHICONY POWER TECHNOLOGY CO LTD	ADLX65YCC2D	I/P: 100-240Vac, 1.8A, 50-60Hz; O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/ A11:2017, UL 60950-1, UL 62368-1	CB by Nemko (NO102312); CB by Demko (DK-73335-UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	CHICONY POWER TECHNOLOGY CO LTD	ADLX65YCC3D	I/P: 100-240Vac, 1.8A, 50- 60Hz; O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+ A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Nemko (NO102313); CB by Demko (DK-73338-UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Chicony Power Technology Co., Ltd	ADLX65YCC2A	I/P: 100-240Vac; 50-60Hz. 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class II. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014 /A11:2017, UL 60950-1, UL 62368-1	CB by Nemko (NO94246); CB by Demko (DK- 63995-UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Chicony Power Technology Co., Ltd	ADLX65YCC3A	I/P: 100-240Vac; 50-60Hz. 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class I. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Nemko (NO94247); CB by Demko (DK- 63993- UL), UL

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Adapter (For 20Vdc, 3.25A) (Alternate)	Chicony Power Technology Co., Ltd.	ADLX65YSCC3A	I/P: 100-240Vac, 50- 60Hz 1.8A O/P: 5Vdc, 3A / 9Vdc, 3A / 15Vdc, 3A / 20Vdc, 3.25A, Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 096407), (JPTUV- 096521), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Delta Electronics, Inc.	ADLX65YDC3D, ADLX65YDC2D	I/P: 100-240Vac, 1.8A, 50-60Hz; O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class II with functional earth for model ADLX45YDC3D, Class II for model ADLX45YDC2D, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRH (JPTUV- 088370); CB by TUVRH (JPTUV- 088549), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Delta Electronics, Inc	ADLX65YDC2A, ADLX65YDC3A	I/P: 100-240Vac; 50-60Hz. 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class II. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 076078); CB by TUVRh (JPTUV- 076777), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Delta Electronics, Inc.	ADLX65YSDC2A	I/P: 100-240Vac, 1.8A, 50-60Hz O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 3A / 5Vdc, 3A, Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+A12+A2, IEC 62368-1(ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 097420), (JPTUV- 097518), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Delta Electronics, Inc.	ADLX65YSDC3A	I/P:100-240Vac, 1.8A, 50-60Hz O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 3A / 5Vdc, 3A, Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2: 2013, EN 60950-1: 2006+A11+ A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 097420), (JPTUV- 097518), UL

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Adapter (For 20Vdc, 3.25A) (Alternate)	Lite-On Technology Corporation	ADLX65YLC2D	I/P: 100-240Vac, 1.8A, 50-60Hz; O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2:2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/ A11:2017, UL 60950-1, UL 62368-1	CB by Demko (DK-73622-UL); CB by Demko (DK-73627-UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Lite-On Technology Corporation	ADLX65YLC3D	I/P: 100-240Vac, 1.8A, 50-60Hz; O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 2A / 5Vdc, 2A Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2:2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by Demko (DK-73466-M1- UL); CB by Demko (DK- 73473-M1- UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Lite-On Technology Corporation	ADLX65YLC2A	I/P: 100-240Vac; 50-60Hz, 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/ AMD2:2013, EN 60950- 1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/ A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 074597-M1); CB by Demko (DK- 63201- UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Lite-On Technology Corporation	ADLX65YLC3A	I/P: 100-240Vac; 50-60Hz, 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class I, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 074484-A1); CB by Demko (DK- 63168- UL), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Lite-On Technology Corporation	ADLX65YSLC2A	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 3A / 5Vdc, 3A, Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 096377), (JPTUV- 096374), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Lite-On Technology Corporation	ADLX65YSLC3A	I/P: 100-240Vac, 50- 60Hz, 1.8A O/P: 20Vdc, 3.25A / 15Vdc, 3A / 9Vdc, 3A / 5Vdc, 3A, Class I, 40 oC Altitude: 5000m	IEC 60950-1:2005/ AMD2:2013, EN 60950- 1:2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 096300), (JPTUV- 096303), UL
Adapter (For 20Vdc, 3.25A) (Alternate)	Acbel Polytech Inc.	ADLX65YAC2A	I/P: 100-240Vac; 50-60Hz, 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class II, 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/ A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 075538-M1); CB by TUVRh (JPTUV- 081062), UL

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Adapter (For 20Vdc, 3.25A) (Alternate)	Acbel Polytech Inc. (Trademark: Lenovo)	ADLX65YAC3A	I/P: 100-240Vac; 50-60Hz. 1.8A, O/P: 5Vdc/2A or 9Vdc/2A or 15Vdc/3A or 20Vdc/3.25A. Class I. 40 oC Altitude: 5000m	IEC 60950-1: 2005/AMD2: 2013, EN 60950-1: 2006+A11+A1+ A12+A2, IEC 62368-1 (ed.2), EN 62368-1: 2014/ A11:2017, UL 60950-1, UL 62368-1	CB by TUVRh (JPTUV- 075533-M1); CB by TUVRh (JPTUV- 081072), UL
Enclosure Material for top cover	TORAY INDUSTRIES INC	A695H	V-0, thickness 0.8mm min., 130oC	UL 94, UL 746	UL
Enclosure Material for LCD bezel	Covestro Deutschland AG [PC Resins]	FR3002 + + - Material designations may be followed by a six digit numerical code denoting color.	V-0, thickness 0.9mm min., 70oC	UL 94, UL 746	UL
Enclosure Material for LCD bezel (Alternate)	MITSUBISHI ENGINEERING- PLASTICS CORP	MB1700+ + - Suffix optional, exceptions: The following cannot be used as optional suffixes: "NF" for grade NXG5050, "N" for grade NXG5030, "S1" for grade F20-54, "V" for grades S- 2000+(f1), S- 2001+(f1), S- 2003+(f1), the last letter "L" for grade CFH2520+.	V-0, thickness 0.75mm min., 60oC	UL 94, UL 746	UL
Enclosure Material for top side around keyboard	Covestro Deutschland AG [PC Resins]	FR3021 + + - Material designations may be followed by a six digit numerical code denoting color.	V-0, thickness 1.2mm min., 60oC	UL 94, UL 746	UL
Enclosure Material for top side around keyboard (Alternate)	Covestro Deutschland AG [PC Resins]	FR3002 + + - Material designations may be followed by a six digit numerical code denoting color.	V-0, thickness 0.9mm min., 70oC	UL 94, UL 746	UL
Enclosure Material for bottom case	E I DUPONT DE NEMOURS & CO INC	HTNFR55G50NH LW (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" for Zytel or "MIN" for Minlon or "DEL" for Delrin or "CRA" for Crastin or "RYN" for Rynite or "ETPV" for ETPV or "SOR" for Soronagrades.	V-0, thickness 0.4 mm min. 65 oC	UL 94, UL 746	UL
Mesh for speaker	Polyshine Technology (Sha nghai) Co Ltd	P(xy)07A	V-0, thickness 0.25 mm, 80 degree C	UL 94, UL 746	UL
Rubber stand	Covestro Deutschland AG [PC Resins]	FR3008 ++ - Material designations may be followed by a six digit numerical code denoting color.	Rated V-1, thickness 1.0 mm min., 60 degree C	UL 94, UL 746	UL

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Rubber stand (Alternate)	Covestro Deutschland AG [PC Resins]	FR3006 HF ++ - Material designations may be followed by a six digit numerical code denoting color.	V-1, thickness 1.5 mm min., 60 °C	UL 94, UL 746	UL
Metal sheet for docking-station hook holes	Interchangeable	Interchangeable	Metal material; see Diagrams ID 4-05 for details.	--	--
LCD panel	InnoLux.	N140HCR-GA2	14.0 inch (LED backlight)	--	Test in the equip.
LCD panel (Alternate)	Interchangeable	Interchangeable	14.0 inch (LED backlight)	--	Test in the equip.
Rechargeable Li-ion Battery Pack	LG CHEM, LTD.	L18L3P73	11.55Vdc, 4372mAh / 51Wh	IEC 60950 1:2005/AMD:2013, EN 60950-1:2006/ A1:2010/ A11:2009/ A12:2011/A2:2013, IEC62133:2012, IEC 62368-1:2014, EN 62368-1:2014/A11:2017, UL 2054, UL 60950-1,	CB by Demko (DK-77624-UL) (DK-77588- UL) (DK-77820-UL) UL
Rechargeable Li-ion Battery Pack (Alternate)	CELXPERT ENERGY CORP	L18C3P72	11.52Vdc, Typical 4380mAh / 51Wh, Rated 4250mAh / 49Wh	IEC 60950-1:2005/AMD2:2013, EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011 /A2:2013, IEC 62133:2012, EN 62133:2013, IEC 62368-1: 2014, EN 62368-1:2014/ A11:2017, UL 2054, UL 60950-1	CB by Demko (DK-76485-M2- UL) (DK-76394-M2- UL) (DK-77304-M2- UL) UL
DC Fan	Asia Vital Components Co., Ltd.	BAPA0806R5HV (V = ABCD where A, B, C, D may be A-Z, 0-9 or ".")	5Vdc, 0.5A, 2.5 CFM min.	UL507, EN 60950-1: 2006 + A11:2009 + A1: 2010 + A12: 2011 + A2: 2013	UL, TUV
DC Fan (Alternate)	Delta Electronics, Inc.	ND75C33XXXXX XXXXXX (X stands for A-Z, 0-9, - or blank (for Marketing purpose only))	5Vdc, 0.5A, 3.05 CFM min.	UL507, EN 62368-1: 2014, IEC 62368-1: 2014	UL, TUV
DC Fan (Alternate)	Sunonwealth Electric Machine Industry Co., Ltd.	EG50040S1-CG3Z (X stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), -, /, - or blank (for marketing purpose only))	5Vdc, 0.45A, 2.8 CFM min.	UL 507, EN 62368-1: 2014, EN 60950-1: 2006+A11+A1+ A12+A2	UL, TUV
Motherboard	--	--	See below	--	Tested in the equip.
- RTC battery (Lithium type)	PANASONIC CORPORATION OF NORTH AMERICA	CR2032* (* - Cell model numbers may be followed by an optional slash (/) and single or multiple alphanumeric characters (i.e. letters and/or numbers), which denote optional features	3.0Vdc, Maximum abnormal charging current 10mA	UL 1642	UL (MH12210)

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		such as various mounting tabs, connecting leads or plugs, packaging, etc.)			
- RTC battery (Lithium type) (Alternate)	MITSUBISHI ELECTRIC CORP	CR2032+ (+ - The cells may have various insulating tube, ring, or tape.)	3.0Vdc, Maximum abnormal charging current 10mA	UL 1642	UL (MH15370)
- RTC battery (Lithium type) (Alternate)	MAXELL LTD	CR2032* (* - These cells and batteries may come with an optional single or multiple alphanumeric denoting various pin, tab, cap or wire termination types.)	3.0Vdc, Maximum abnormal charging current 10mA	UL 1642	UL (MH12568)
- RTC battery (Lithium type) (Alternate)	VARTA MICROBATTERY GMBH	CR2032	3.0Vdc, Maximum abnormal charging current 10mA	UL 1642	UL (MH13654)
IR LED module	Liteon OPTO Technology (CZ) Ltd.	LTE-R28206S-NE8-XX ("XX" means different customer numbers)	Comply IEC 62471 exempt Group	IEC 62471	CB by SGS CEBEC (BE-34640)
IR LED module (Alternate)	Interchangeable	Interchangeable	Comply IEC 62471 exempt Group	IEC 62471	UL, CB or Other certification body

MODELO DE CERTIFICAÇÃO / CERTIFICATION MODEL: 5

VERSÃO DO PROJETO DO PRODUTO / PRODUCT DESIGN VERSION: N/A

DOCUMENTOS / DOCUMENTS:

Título / Title	Número / Number	Revisão / Revision	Data / Date
<<Dados da Auditoria / Audit data >> Supplier & Factory Lenovo Tecnologia (Brasil) Ltda	BR2334	0	2020-01-09
Relatório de ensaio emitido por Nemko / Test report issued by Nemko	271872	0	2014-10-24
Relatório de ensaio emitido por Compliance Certification Services INC./ Test report issued by Compliance Certification Services INC.	T140924L10-E	0	2014-10-14
Relatório de ensaio emitido por Universal Standard Service / Test report issued by Universal Standard Service	ASL15031202	0	2015-04-09
Relatório de ensaio emitido por UL Japan, Inc / Test report issued by UL Japan, Inc.	10462171S	0	2014-10-08
Relatório de ensaio emitido por UL Japan, Inc / Test report issued by UL Japan, Inc.	E200693-A68-CB-4	0	2014-09-19
Relatório de ensaio emitido por UL Japan, Inc / Test report issued by UL Japan, Inc.	10512482S-A	0	2014-10-16
Relatório de ensaio emitido por Universal Standard Service, Inc. / Test report issued by Universal Standard Service, Inc.	ASL15052618	0	2015-06-02
Relatório de ensaio emitido por / Test report issued by TÜV Rheinland Taiwan Ltd.	271814	0	2014-10-24
Relatório de ensaio emitido por / Test report issued by Cerpas Technology (Suzhou) Co., Ltd.	T150625L01-E	0	2015-06-30
Relatório de ensaio emitido por / Test report issued by Universal Standard Service, Inc.	ASL15031203	0	2015-04-09
Relatório de ensaio emitido por / Test report issued by TÜV Rheinland Taiwan Ltd.	11038672 001	0	2014-10-20
Relatório de ensaio emitido por / Test report issued by Cerpas Technology (Suzhou) Co., Ltd.	SECE1504010-A	0	2015-06-29

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Relatório de ensaio emitido por / Test report issued by <i>Universal Standard Service, Inc.</i>	ASL15031204	0	2015-04-09
Relatório de ensaio emitido por / Test report issued by <i>UL Japan, Inc.</i>	E200693-A102-CB-1	0	2015-08-07
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T160309W07-E	0	2016-04-08
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T151227L13-D	0	2016-01-07
Relatório de ensaio emitido por / Test report issued by <i>Universal Standard Service, Inc.</i>	ASL15090705	0	2015-10-14
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	294666	0	2015-09-23
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T151014L02-D	0	2016-04-23
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T151014L02-E	0	2015-10-23
Relatório de ensaio emitido por / Test report issued by <i>Universal Standard Service, Inc.</i>	ASL15100728	0	2015-10-29
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T150818L10-E	0	2015-07-14
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T150818L10-D	0	2015-07-14
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T151206L27-D	1	2015-07-14
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T151206L27-E	1	2015-07-14
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T160303W04-D	3	2015-07-14
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T160303W04-E	3	2015-07-14
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	294356	0	2015-07-18
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	ASL15091006	0	2015-09-16
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	316511	0	2016-09-26
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	318420	0	2016-10-21
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	321645	0	2016-12-12
Relatório de ensaio emitido por / Test report issued by <i>BTL Inc.</i>	BTL-EMC-1-1611007	0	2016-11-16
Relatório de ensaio emitido por / Test report issued by <i>BTL Inc.</i>	BTL-EMC-1-1611007A	0	2017-01-16
Relatório de ensaio emitido por / Test report issued by <i>BTL Inc.</i>	BTL-FICE-1-1611007A	0	2017-01-16
Relatório de ensaio emitido por / Test report issued by <i>Universal Standard Service, Inc.</i>	ASL16100316	0	2016-10-21
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	316343	0	2016-10-19
Relatório de ensaio emitido por / Test report issued by <i>Nemko Taiwan</i>	318199	0	2016-10-19
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T161027W08-E	0	2016-11-08
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T161220W01-E	0	2016-12-30
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T161220W01-D	0	2016-12-30
Relatório de ensaio emitido por / Test report issued by <i>Universal Standard Service, Inc.</i>	ASL16101729	0	2016-11-03
Relatório de ensaio emitido por / Test report issued by <i>Compliance Certification Services Inc.</i>	T160628 W02-E	0	2016-07-07

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Relatório de ensaio emitido por / Test report issued by Intertek Testing Services Taiwan Ltd	160600401TWN-001	0	2016-06-29
Relatório de ensaio emitido por / Test report issued by Universal Standard Service, Inc.	ASL18080741	0	2018-09-04
Relatório de ensaio emitido por / Test report issued by Universal Standard Service, Inc.	ASL18110814	0	2018-11-22
Relatório de ensaios emitido por / Test report issued by Audix Technology Corporation, EMC Department	EM-E180475	0	2018-10-02
Relatório de ensaio emitido por / Test report issued by UL Japan, Inc.	E302338-A434-CB-1	0	2017-11-08
Relatório de ensaio emitido por / Test report issued by UL Japan, Inc.	E302338-A434-CB-1	Am. 1	2017-11-13
Relatório de ensaio emitido por / Test report issued by BTL Inc.	BTL-EMC-1-1710114	0	2017-11-06
Relatório de ensaio emitido por / Test report issued by TÜV Rheinland Shanghai Co. Ltd	50112351 001	0	2017-11-29
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name Nemko Taiwan	340475	0	2017-10-25
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name Audix Technology Corporation	EM-E170985	0	2017-11-03
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name Audix Technology Corporation	EM-F170681	0	2017-11-03
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name Universal Standard Service, Inc.	ASL18041324	0	2018-04-27
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name Nemko Taiwan	337579	0	2017-08-17
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name BTL Inc.	BTL-EMC-1-1708193	0	2017-09-13
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name BTL Inc.	BTL-FICE-1-1708193A	0	2018-04-20
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name Universal Standard Service, Inc.	ASL18050454	0	2018-05-17
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name UL International Demko A/S	E200693-A147-CB-1	0	2017-10-02
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name AUDIX Technology Corporation	EM-E171020	0	2017-11-17
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name AUDIX Technology Corporation	EM-F170703	0	2017-11-17
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Laboratory Name International Standards Laboratory	ISL-18LS016OS	0	2018-10-02
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by IBEC	R190724	0	2019-04-01
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by IBEC	R190725	0	2019-04-04
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by FIT	V19-020-SERV-01	0	2019-03-22
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	1811T150	0	2018-12-26
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Standard Service, Inc.	ASL19031903	0	2019-04-03
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by UL Japan, Inc.	ASL18100307	0	2018-11-20

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Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Audix Technology Corporation	EM-F180427	0	2018-10-08
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by UL International Demko A/S	E302338-A635-CB-1	0	2018-09-25
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by International Standards Laboratory	ISL-19LS004OS	0	2019-03-12
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Standard Service, Inc.	ASL19050325	0	2019-05-30
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Standard Service, Inc.	ASL19082210	0	2019-08-30
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	1906T081	0	2019-07-18
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Laboratories Taiwan Co., Ltd	E302338-A710-CB-1	0	2019-07-16
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by International Standards Laboratory	ASL19082210	0	2019-09-16
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	1907T140	0	2019-08-21
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	1811H007	0	2019-01-30
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by UL-CCIC Company Limited	E302338-A672-CB-1	0	2019-01-29
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by FIT - Flextronics Instituto de Tecnologia	V20-016-SERV-00	A	2020-04-02
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by IBEC	R194727	0	2020-04-08
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by FIT	V19-151-SERV-02	0	2020-03-24
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by IBEC	R194728	0	2020-05-22
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Standard Service, Inc.	ASL19111832	0	2019-12-25
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by FIT - Flextronics Instituto de Tecnologia	S20-078-SERV-03	A	2020-09-01
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	BTL-EMC-1-2002T020	0	2020-02-27
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	1910H024	0	2020-04-07
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by FIT - Flextronics Instituto de Tecnologia	S20-078-SERV-04	0	2020-11-06
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Standard Service, Inc.	E302338-A6128-CB-1	0	2020-03-18
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by BTL Inc.	1909H037	0	2020-03-27
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by FIT - Flextronics Instituto de Tecnologia	S20-078-SERV-05	0	2020-11-06
Relatório de ensaio emitido por Nome do Laboratório / Test report issued by Universal Standard Service, Inc.	E302338-A6178-CB-1	0	2020-03-20

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
São Paulo – SP – Brasil - 04571-010
T: 55.11.3049.8300 / W: brazil.ul.com

41-IC-F0033 rev 10.0

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. **UL-BR 20.0714**

Data de Emissão / Date of Issue 12 de Maio de 2020 / May 12, 2020

Página / Page **52/45**

Certificado de conformidade válido somente acompanhado das páginas de 1 até 45
Certificate of conformity valid with pages from 1 to 45

OBSERVAÇÕES / OBSERVATIONS:

- A validade deste Certificado está condicionada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações da UL do Brasil Certificações e previstas nos procedimentos específicos.**
The validation of this certificate depends on the surveillance inspections performing and Non conformity treatments, according to UL do Brasil Certificações procedures.
- Este certificado aplica-se aos equipamentos (produtos) idênticos ao protótipo avaliado e certificado, manufaturados na(s) unidade (s) fabril (is) mencionada (S) acima.**
This certificate applies to the products that are identical to the prototype investigated, certified and manufactured at the production site mentioned in this certificate
- Qualquer alteração no produto, incluindo a marcação, invalidará o presente certificado, salvo se o solicitante informar por escrito à UL do Brasil Certificações sobre esta modificação, a qual procederá à avaliação e decidirá quanto à continuidade da validade do certificado.**
Any non-authorized changes performed in the product, including marking, will invalidate this certificate. UL do Brasil Certificações must be notified about any desired change. This notification will be analyzed by UL do Brasil Certificações that will decide about certificate force.

Histórico de Revisões / Revisions Description:

18 de Novembro de 2020 / November 18, 2020	Inclusão de modelos ThinkPad T14 Gen 1xxxxx, ThinkPad E14 Gen 2xxxxx, 20UD, 20UE, 20T6, 20T7.
11 de setembro de 2020 / September 11, 2020	Inclusão de modelos ThinkPad T14, 20S0, 20S1, 20S2, 20S3 / Models inclusion ThinkPad T14, 20S0, 20S1, 20S2, 20S3.
23 de junho de 2020 / June 23, 2020	Atualização com relatório de ensaio / <i>Update with test report</i>
12 de Maio de 2020 / May 12, 2020	Emissão inicial com recertificação do certificado UL-BR 15.0348 / <i>Initial Issue with renewal of certificate UL-BR 15.0348</i>
A última revisão substitui e cancela as anteriores <i>The last review cancel and substitutes the previous ones</i>	

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
São Paulo – SP – Brasil - 04571-010
T: 55.11.3049.8300 / W: brazil.ul.com

41-IC-F0033 rev 10.0

Lenovo (Singapore) Pte. Ltd.
151 Lorong Chuan,
#02-01, New Tech Park,
Singapore, 556741
(Tel - 65-6827-1000 & Fax- 65-6827-1100)

Lenovo

EU Declaration of Conformity

For the **ThinkPad E14 Gen 2** Notebook Computers
Machine Type: 20T6, 20T7
Compliance ID: TP00116C

We, Lenovo (Singapore) Pte Ltd, declare under sole responsibility that the above products,
manufactured for:

Lenovo PC HK Limited.
23/F, Lincoln House, Taikoo Place 979 King's Road,
Quarry Bay, Hong Kong, P.R.China

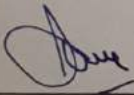
to which this declaration relates, is in conformity with the requirements of the following EU Directives:

- **Directive 2014/53/EU of the European Parliament and of the council on radio equipment.**
- **Directive 2009/125/EC establishing a framework for the setting of Ecodesign requirements for Energy-related products.**
- **Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment as amended by Directive 2015/863/EU.**

The conformity assessment procedure referred to in Article 17.4a of Directive 2014/53/EU has been followed and performed with the involvement of a Notified Body, in accordance with Article 3.2:

Notified Body Name/number: TIMCO Engineering, Inc./1177
Issued the EU-type examination certificate: TCF-772CC20

The Technical Documentation (TD), relevant to the product described above and which support this DoC is available from the EU contact address on this DoC.

Signed:  Date: 23 Apr 2020

Joseph Chua (Executive Director)

Place of issue: Lenovo (Singapore) Pte Ltd.

European Contact for regulatory topics only:
Lenovo (Slovakia), Landererova 12, 811 09 Bratislava, Slovakia
Tel: +421 2 6868 3018

Lenovo (Singapore) Pte. Ltd.
 151 Lorong Chuan,
 #02-01, New Tech Park,
 Singapore, 556741
 (Tel - 65-6827-1000 & Fax- 65-6827-1100)



Standards References

The following harmonized standards and normative documents are those to which the product's conformance is declared, and by specific reference to the essential requirements of the referenced Directives:

RE Directive									
Article 3.1a (Safety & Health)	EN 60950-1	:	2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013				✓		
	EN 62368-1	:	EN 62368-1:2014 /A11:2017				✓		
	EN 62311	:	2008				✓		
	EN 62479	:	2010				✓		
	EN 50663	:	2017						
	EN 50665	:	2017						
	EN 50566	:	2017				✓		
	EN 62209-2	:	2010				✓		
Article 3.1b (EMC)	EN 55032	:	2015/AC:2016				✓		
	EN 61000-3-2	:	2019				✓		
	EN 61000-3-3	:	2013+ A1:2019				✓		
	EN 55035	:	2017				✓		
	EN 301 489-1	V2.2.3	2019-11				✓		
	EN 301 489-3	V2.1.1	2019-03				✓		
	Draft	EN 301 489-17	V3.2.0	2017-03				✓	
		EN 301 489-19	V2.1.1	2019-04					
	Draft	EN 301 489-52	V1.1.0	2016-11					
Article 3.2 (Radio Spectrum)					Wireless module inside				
					WLAN with Bluetooth 1	WLAN with Bluetooth 2	WLAN with Bluetooth 3		
	EN 300 328	V2.2.2	2019-07		✓	✓	✓		
	EN 301 893	V2.1.1	2017-05		✓	✓	✓		
	EN 300 440	V2.2.1	2018-07		✓	✓			
	EN 301 908-1	V11.1.1	2016-07						
	EN 301 908-2	V11.1.2	2017-08						
	EN 301 908-13	V11.1.2	2016-07						
	EN 303 413	V1.1.1	2017-06						
EN 300 330	V2.1.1	2017-02							
RoHS Directive	EN 50581:2012						✓		
ErP Directive	(EU) 2019/1782						✓		
	EC 617/2013 ErP – Class B EN 50564:2011						✓		

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ANNEX

Wireless modules and External AC Adapters

Wireless module inside	MODEL
WLAN with Bluetooth 1	AX200NGW
WLAN with Bluetooth 2	9260NGW
WLAN with Bluetooth 3	RTL8822CE

Description	MODEL
External AC Adapter	ADLX45YDC2D
	ADLX45YLC2D
	ADLX45YDC3D
	ADLX45YLC3D
	ADLX65YDC2D
	ADLX65YLC2D
	ADLX65YCC2D
	ADLX65YDC3D
	ADLX65YLC3D
	ADLX65YCC3D

European Contact for regulatory topics only:
Lenovo (Slovakia), Landererova 12, 811 09 Bratislava, Slovakia
Tel: +421 2 6868 3018



Microsoft

Hardware certification report **Approved**

Private product ID: **14255099979880785**
Shared product ID: **400044369**
Submission ID: **1152921505689697874**
Submission date: **5/12/2020**
Completion date: **5/12/2020**
Company: **Lenovo**
Product name: **ThinkPad E14 Gen 2 AMD**
Category: **System**
Product type: **Laptop**
Qualification level: **Certified for Microsoft Windows 10 Client family version 1903, x64**
Marketing name: **ThinkPad E14 Gen 2 20T6**
ThinkPad E14 Gen 2 20T7

Microsoft
Certified



Lenovo - ThinkPad E14 Gen 2 : 20T6

Specifications

Brand Name:	Lenovo
Model Name:	ThinkPad E14 Gen 2
Model Number:	20T6
Type:	Notebook
Notebooks, Desktops, Integrated Computers, Slate/Tablets, Two-in-one Notebooks, and Portable All-in-ones Category for TEC (Typical Energy Consumption) Criteria:	2
Category I2: Processor Brand:	AMD
Category I2: Processor Name:	Ryzen 7
Category I2: Operating System Name:	Windows 10
Category I2: Physical CPU Cores (count):	8
Category I2: Base Processor Speed Per Core (GHz):	2.0
Category I2: System Memory (GB):	24
Category I2: Default Low-power Mode:	None
Category I2: Long Idle Power Used for Sleep Mode:	No
Category I2: Off Mode (watts):	0.3
Category I2: Sleep Mode (watts):	0.6
Category I2: Long Idle (watts):	3.6
Category I2: Short Idle (watts):	6.0
Category I2: Base TEC Allowance (kWh):	14
Category I2: Functional Adder Allowances (kWh):	20.2
Category I2: TEC of Model (kWh):	21.5
Sleep Mode Default Time Upon Shipment (min.):	30
Display Sleep Mode Default Time Upon Shipment (min.):	10
WOL (Wake on LAN) From Sleep:	Shipped Enabled Under All Conditions
Will the Speed of Any Active 1 GB/s or Higher Ethernet Network Links be Reduced to Less Than 1 GB/s When Transitioning to Sleep or Off Mode?:	No
Ethernet Capability:	Yes

Touch Screen:	No
Date Available On Market:	2020-05-25
Date Certified:	2020-03-03
Markets:	United States, Switzerland, Taiwan, Japan, Canada
ENERGY STAR Certified:	Yes

Additional Model Information

,20T7,

Captured On:
03/10/2021

[< RETURN TO SEARCH](#)

ThinkPad E14 Gen 2 (AMD)

Product Summary:

Product Type: **Notebook**

Registered In: **United States**

Manufacturer: **Lenovo**

EPEAT Tier: **Gold**

Registration Date: **2020-05-27**

Product Status: **Active**

COMPUTERS &
DISPLAYS

EPEAT Tier Score Detail

For a product to be listed on the EPEAT Registry, it must, at a minimum, meet the applicable “required” criteria. [Click here](#) to see a list of the required criteria for this product category.

This product has met the necessary [required criteria](#).

Along with required criteria, products can also meet optional criteria and score optional points. It is not required for a product to achieve any optional points.

Products that meet all required criteria and achieve **less than 50%** of the optional points are rated at
EPEAT Bronze

Products that meet all required criteria and achieve **50 - 74%** of the optional points are rated at
EPEAT Silver

Products that meet all required criteria and achieve **75 - 100%** of the optional points are rated at
EPEAT Gold

The optional criteria for this product category and optional points achieved by this product are listed below.

Optional Criteria

Scores

4.1 Substance Management

13 / 16

4.2 Materials Selection	0 / 3
4.4 Product longevity/life-cycle extension	4 / 4
4.5 Energy Conservation	2 / 3
4.7 Packaging	2 / 2
4.8 Life cycle assessment and carbon footprint	6 / 6
4.9 Corporate Environmental Performance	9 / 9
4.10 Corporate social responsibility	2 / 6
TOTAL OPTIONAL CRITERIA SCORE:	38 / 49

Please note that it is not required for a product to achieve any optional points.

Some optional criteria may not be applicable to a product. Optional criteria that are not applicable (N/A) to the product are not included in the Total Optional Criteria Score, and are not reflected above.

For any questions, comments, or feedback regarding the EPEAT Registry, please [contact us](#).

Sign up for regular updates:

[STAY CONNECTED](#)



Lenovo Tecnologia (Brasil) Ltda
CNPJ/MF: 07.275.920/0001-61
Inscrição Estadual nº 387.119.123.110

São Paulo, 23 de Fevereiro de 2021.

À
Prefeitura Municipal de Cotiporã
EDITAL/PREGÃO: nº 002/2021

DECLARAÇÃO

Declaramos, que a empresa **ATHENAS AUTOMAÇÃO LTDA., inscrita no CNPJ/MF sob o nº 01.425.676/0001-90, sediada na Rua Buarque de Macedo, 439, Porto Alegre/RS, é Revenda Autorizada, assim como sua filiais, e estão aptas a comercializarem produtos Lenovo de nossa fabricação.**

Produtos:

Família	Part Number	Garantia/SLA
ThinkPad E14 Gen2 Intel	20TB000CTO	Garantia on site de 36 (trinta e seis) meses e de 12 (doze) meses para a bateria, atendimento 10x5
ThinkPad E14 Gen2 AMD	20T7000CTO	Garantia on site de 36 (trinta e seis) meses e de 12 (doze) meses para a bateria, atendimento 10x5

Declaramos que:

- Os produtos citados acima são novos, pertencem a linha corporativa, estão em linha de produção, que não foram submetidos a uso, nem recondição, com exceção de testes de fábrica.
- Possuem BIOS com direitos Copyright e placa mãe fabricada pela Lenovo para uso exclusivo.
- BIOS está em conformidade com a norma NIST 800-147
- Os modelos ofertados atendem as diretivas ROHS de fabricação.
- Os equipamentos possuem compatibilidade com a norma Epeat.
- Os equipamentos serão entregues devidamente acondicionadas em embalagens individuais adequadas, que utilizam materiais recicláveis.
- Cpu, teclado, mouse e monitor possuem mesmo padrão de cor e são de fabricação Lenovo.
- Todo equipamento será integrado em fábrica.
- Placa mãe fabricada pela Lenovo para uso exclusivo.
- Possui BIOS com direitos copyright sobre esse BIOS, e possui livre direito de edição sobre a mesma, garantindo assim adaptabilidade do conjunto adquirido. BIOS residente em flash rom.
- Totalmente compatível com o padrão UEFI.
- Com suporte a plug-and-play e atualizável por software, tipo Flash EPROM, sendo que o processo de atualização pode ser obtido, através do sítio do fabricante do equipamento na Internet.
- Possibilita a inserção de código de identificação do equipamento (número de registro patrimonial), recuperável por software de gerenciamento.
- Permite configurar senhas para, no mínimo, Power-on e Disco Rígido (HDD) e acesso à configuração do equipamento (Setup).As atualizações da BIOS, quando disponibilizadas, serão no site do fabricante do equipamento.
- Permite criação de um pendrive de recuperação da BIOS.
- Visando as questões de segurança e integridade da BIOS, essa está em conformidade com as normativas NIST 800-147 e NIST-800-88;
- Equipamentos estão em conformidade com a especificação UEFI 2.x ou superior.
- Os equipamentos possuem garantia do fabricante por um período de 36 (trinta e seis) meses e de 12 (doze) meses para a bateria;

- A abertura do chamado do fabricante feita através de central de atendimento tipo (0800), no qual serão mantidos registros dos mesmos constando a descrição do problema, com atendimento 10 horas por dia, 5 dias por semana;

Informamos ainda que a Lenovo Tecnologia (Brasil) Limitada é responsável pelo atendimento "on site" da garantia padrão dos equipamentos conforme o Termo de Garantia Padrão da Lenovo.

A Lenovo dispõe de telefone gratuito 0800-701-4815 (ligações fora da cidade de São Paulo) e 11 3889-8986 (ligações da cidade de São Paulo) para abertura de chamados técnicos em Língua Portuguesa e service desk. Declara ainda que os drivers, atualizações e suporte dos produtos Lenovo estão disponíveis para download no site: http://support.lenovo.com/pt_BR/.

Os serviços de assistência técnica aos produtos Lenovo acima relacionados serão prestados pelos Centros Autorizados de Serviços – CAS.

Regional Porto Alegre (RS)
Av. Dolores Alcaraz Caldas, 90 (7º, 8º, 11º andares) Porto Alegre/RS
Telefone de Contato: (51) 99725-7976
Responsavel Técnico: Roberto Osorio Schneider
Email: schneipx@br.ibm.com

A presente declaração foi emitida em atendimento á **Prefeitura Municipal de Cotiporã**
EDITAL/PREGÃO: nº 002/2021

Atenciosamente,

LENOVO TECNOLOGIA (BRASIL) LIMITADA.
Geraldo Rodrigues - Representante Legal