

Certificado de Conformidade

Certificate of Conformity

Certificado/Certificate
UL-BR 24.1271

Revisão / Review
01

Emissão / Issue
5 de setembro de 2024
September 5, 2024

Validade / Expiration
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Reconhecer que o Solicitante / *Acknowledge that the Certificate Holder*

HP BRASIL INDÚSTRIA E COMÉRCIO DE EQUIPAMENTOS ELETRÔNICOS LTDA
CNPJ: 22.086.683/0001-84

avaliou o produto / *has had*

ESTAÇÃO DE TRABALHO / WORKSTATION

ao qual atende aos requisitos do Programa de Certificação ou Portaria / *evaluated and meets the requirements of the Certification Program or Decree*

PORTARIA NO. 304:2023 /
DECREE NO. 304/2023

e pode ostentar o Selo de Identificação da Conformidade do Sistema Brasileiro de Avaliação da Conformidade (SBAC) sobre o(s) produto(s) relacionado(s) neste certificado.

and can display the Conformity Identification Seal of the Brazilian Conformity Assessment System (SBAC) on the product(s) listed in this certificate.

Rafael Parada
Program Owner

UL do Brasil Certificações, organismo acreditado pela Coordenação Geral de Acreditação do INMETRO – CGCRE, segundo o registro Nº OCP-0029. / *UL do Brasil Certificações, Certification Body accredited by Coordenação Geral de Acreditação do INMETRO - CGCRE according to the register Nr OCP-0029.*

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Solicitante / Certificate Holder (100039-522) **HP BRASIL INDÚSTRIA E COMÉRCIO DE EQUIPAMENTOS ELETRÔNICOS LTDA**
ALAMEDA XINGU, 350, ANDAR 8 CONJ. 801 – ALPHAVILLE, BARUERI, SP.
CEP: 06455-030
CNPJ: 22.086.683/0001-84

Fabricante / Manufacturer (100500-147) **FLEXTRONICS INTERNATIONAL TECNOLOGIA LTDA**
AVENIDA LIBERDADE, 6315
18087-170 – SOROCABA – SP – BRASIL

Modelo de Certificação / 5
Certification Model

Norma(s) Aplicável(is) / IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, CISPR 22:2008,
Applicable standards CISPR 32:2012, CISPR 32:2015/COR:2016, CISPR 24:2010+ A1:2015, IEC 61000-3-2:2014, IEC 61000-3-3:2013, IEC 61000-4-2:2008, IEC 61000-4-3:2006 +A1:2007 +A2:2010, IEC 61000-4-4:2012, IEC 61000-4-5:2014, IEC 61000-4-6:2013, IEC 61000-4-8:2009, IEC 61000-4-11:2004

Identificação UL / UL Identification BR2357, Vol. 8, Sec. 24; Sec 32; Sec 47; Sec 48; Sec 50; Sec 52; Sec 56, Sec 60, Sec 67

Lote ou No. de Série / N/A
Lot or Serial Number

Identificação da Família/Modelo/Lote de Produto(s) Certificado(s):

Identification of the Family/Model/Lot of Certified Product(s):

| Marca / Brand Name | Modelo / Model | Descrição / Description | Código de Barras / Bar Code Number |
|-----------------------|--|---|---------------------------------------|
| HP | FCLSA-1701A, FCLSA-1701B, FCLSA-1701C, FCLSA-1703A, FCLSA-1703B, TPC-F114-MT-250A, TPC-F114-MT-250C, TPC-F114-MT-500D, TPC-F114-MT-500L, TPC-F128-MT-350 / TPC-F128-MT-500E / TPC-F128-MT-500P, TPC-F138-MT-700, TPC-F138-MT-500, TPC-F138-MT-350, FCW-F001MT-700, FCW-F001MT-500, FCW-F001MT-450, FCW-F001MT-350, FCLSA-2201A, FCLSA-2201B, FCLSA-2201C, FCLSA-2203A, FCLSA-2203B, FCLSA-2204A, FCLSA-2204B | HP Z4 G4, Z8 G4, HP Z2 TOWER G4, HP Z2 TOWER G5, HP Z2 G8 TOWER WORKSTATION DESKTOP PC, HP Z2 TOWER G9 WORKSTATION DESKTOP PC, HP Z2 TOWER G9 WORKSTATION DESKTOP PCX, HP Z4 G5 Workstation Desktop PC, HP Z4 G5 Workstation, HP Z8 G5 Workstation Desktop PC, HP Z8 G5 Workstation, HP Z8 Fury G5 Workstation, HP Z8 Fury G5 Workstation XXXXXXXXXXXX | N/A |

Informações de Ensaios / Test Information:

| Laboratório de Ensaio / Testing Laboratory | Relatório de Ensaio / Test Report | Data de Emissão / Issue Date |
|---|--------------------------------------|---------------------------------|
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT17011 | 2017-09-18 |
| Audix Technology (Shenzhen) Co. Ltd. | ACS-E17564 | 2017-09-28 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT17009 | 2017-08-29 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT17009-01 | 2017-09-22 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT17009-03 | 2018-10-26 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT17009-04 | 2019-05-22 |
| Audix Technology (Shenzhen) Co. Ltd. | ACS-E17485-1 | 2018-08-08 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT18009-02 | 2019-03-11 |
| Audix Technology (Shenzhen) Co. Ltd. | ACS-E18098-1 | 2019-04-16 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT20005 | 2020-04-13 |
| Audix Technology Corporation, EMC Department | EM-E200130 | 2020-03-23 |



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| Audix Technology Corporation, EMC Department | ATTCB109143 | 2020-12-23 |
| Audix Technology Corporation, EMC Department | ACSCBIT20005 | 2020-04-13 |
| Audix Technology Corporation, EMC Department | ACS-E20182-2 | 2020-12-15 |
| IBEC | R211299 | 2021-09-01 |
| IBEC | R211321 | 2021-08-06 |
| Audix Technology (Shenzhen) Co. Ltd. | ACSCBIT21009 | 2021-12-13 |
| Audix Technology (Shenzhen) Co. Ltd. | ACWE-RC210344 | 2021-12-01 |
| Audix Technology (Shenzhen) Co. Ltd. | ATTCB111110 | 2022-11-24 |
| Audix Technology (Shenzhen) Co. Ltd. | ACS-E23023 | 2023-02-09 |
| Audix Technology (Shenzhen) Co. Ltd. | ATTCB111071 | 2022-11-24 |
| Audix Technology (Shenzhen) Co. Ltd. | ACS-E22172-1 | 2023-02-09 |
| Audix Technology (Shenzhen) Co. Ltd. | ACS-E22172 | 2022-09-16 |
| IBEC | R240325 | 2024-04-18 |
| IBEC | R240326 | 2024-05-08 |
| Audix Technology Corporation | ATTCB111015 | 2022-11-22 |
| Audix Technology Corporation | ATTCB111015-01 | 2024-04-15 |
| Audix Technology (Shenzhen) Co., Ltd. | ACS-E22153-2 | 2024-06-25 |

Informações de Auditoria / Audit Information:

| Local da Auditoria / Audit Location | Data de Realização / Perform Date |
|--|-----------------------------------|
| Tratamento de Reclamações Complaint Handling | 2024-04-19 |
| Fabricante Manufacturer | 2024-03-27 |

Informações Adicionais / Additional Information:

100-240V~, 6A; 10A; 12A, 50-60Hz / 115-127V~ 16A; 200-240V 10A, 50-60Hz.
100-240V~, 50-60Hz, 3A
100-240V~, 50-60Hz, 4A / 6A / 8.2A / 10A
100-240V~, 8.2A, 6A, 5.5A, 4.2A, 50-60Hz
100 V~, 50-60 Hz, 12 A,
115-127 V~, 50-60 Hz, 12 A,
200-240 V~, 50-60 Hz, 10 A

Observações / Observations:

- A validade deste Certificado de Conformidade está atrelada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações da UL do Brasil Certificações previstas no RAC específico. Para verificação da condição atualizada de regularidade deste Certificado de Conformidade deve ser consultado o banco de dados de produtos e serviços certificados do Inmetro.
The validity of this Certificate of Conformity is linked to the performance of maintenance assessments and treatment of possible non-conformities in accordance with the guidelines of UL do Brasil Certifications provided for in the specific Conformity Assessment Regulation. To check the updated condition of regularity of this Certificate of Conformity, the Inmetro database of certified products and services must be consulted.
- 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.

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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.

4. Esta autorização está vinculada a um contrato e para o escopo acima citado.
This license is related to a commercial proposal and to the scope above cited.

Histórico de Revisões / Revisions History:

| Revisão / Review | Data / Date | Descrição da Revisão / Revision Description |
|---|--|--|
| 01 | 15 de janeiro de 2025 January 15, 2025 | Rev 1: Inclusão do modelo HP Z8 Fury G5 (FCLSA-2204A, FCLSA-2204B) / <i>Rev 1: Model inclusion</i> |
| 00 | 5 de setembro de 2024 September 5, 2024 | Emissão Inicial com recertificação do certificado UL-BR 21.1705 / <i>Initial issue</i> |
| A última revisão substitui e cancela as anteriores / <i>The last review replaces and cancels the previous ones</i> | | |

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Anexo I / Attachment I:

| Componente/ Component | Fabricante/ Manufacturer | Tipo/Modelo Type/Model | Características técnicas/ Technical data | Norma/ Standard | Marca de conformidade/ Mark(s) of conformity |
|--------------------------------------|---|---|---|---|---|
| Metal | -- | -- | Minimum 1.0 mm thickness (Chassis dimensions approx. 17.5 in x 15.2 in x 6.65 in / 44.5 cm x 38.6 cm x 16.9 cm) | -- | -- |
| Plastic Enclosure (decorate part) | Interchange able | Interchangeable | Minimum HB. | UL94 UL 746C | UL |
| Ari duct (optional) | Interchange able | Interchangeable | Minimum V-2, See Diagrams ID 3-02 | UL94 UL 746C | UL |
| Switching Power Supply | Chicony Power Technology Co., Ltd. | D15-1K0P1A | I/P: 100-127Vac, 12A, 50-60Hz; 200-240Vac, 6.3A, 50-60Hz; 118Vac, 12A, 400Hz, O/P: DC V12-M0/18A, V12-M1/9A, V12- B/18A, V12-D/18A, V12-S/18A, V12-G1/18A, V12- G2/18A, V12- CPU0/18A, V12- CPU1/18A, V12- CPU2/18A, V12 CPU3/18A, 5VSB/6A V12(CPU0, CPU1, CPU2,CPU3, M0, M1, B, D, S, G1 and G2) shall not exceed 1000W. Total continuous output power 1000W max. Max. Operating altitude up to 5 000 m, Max. ambient 40 °C. | IEC 60950 1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950- 1:2006 + A11:2009 + A1:2010 + A12:2011+A2:201 3. UL60950-1 | CB by TUV Rheinland, (Cert. No. JPTUV- 075284A1/M1. Report No.11047801003) UL(E143709) |
| Alternate | DELTA ELECTRO NICS INC | DPS-465AB-3XX DPS-1125BBXX DPS-1450ABXX (X can be 0- 9, A-Z or blank) | Input: 100-240V/6A; 50- 60Hz; 118V/6A, 400Hz. DC Output: V12,1- CPU0/18A; V12,1- CPU2/18A; V12,1- M0/18A; V12,1-B/18A; V12,1- S/18A; 5VSB/5,5A, V12,1- CPU0 & V12,1-CPU2 & V12,1-M0 & V12,1-B & V12,1-S, TOTAL 38, 5A(465W)MAX. MAX. TOTAL OUTPUT 465W. Operating altitude up to 5 000 m, Max. ambient 50°C. | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950- 1:2006 + A11:2009 + A1:2010 + A12:2011 +A2:2013. UL60950-1 | CB by UL (Demko), (Cert. No. DK- 63185-UL. Report No. E131881- A2118-CB-1) UL(E131881) |
| Alternate | DELTA ELECTRO NICS INC | DPS-750AB-36 XX (X can be 0- 9, A-Z or blank) | Input: 100-240V ~/ 10A, 50- 60Hz; 118V~/ 10A, 400 Hz. Output: Max. TOTAL OUTPUT 750W, V12- CPU0/18A;V12- CPU2/18A;V12- M0/18A;V12- B/18A;V12- S/18A;V12-D/18A; V12-G1/18A;V12- G2/18A; 5VSB/5,5A. The total current(Power) of combined V12- CPU0,V12- CPU2,V12-M0,V12- B,V12- S,V12-D,V12- G1,V12-G2 is 62,5A(750W) MAX. Operating altitude up to 5 000 m, | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950- 1:2006 + A11:2009 + A1:2010 + A12:2011 +A2:2013. UL60950-1 | CB by UL (Demko), (Cert. No. DK- 63227-UL. Report No. E131881- 4787962865. 1 (BA1)-1) UL(E131881) |

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| | | | Max. ambient 50°C. | | |
| Internal Plastic Parts | Interchangeable | Interchangeable | Minimum V-2 or HF-2 | UL 94, UL 746C | UL |
| Certification Marks Label Materials (All factories) | Worldmark | 3311T-E2 | Used in combination with Printer/Ribbon DPW3000-140-450. Affixed to the metal surface. | UL 969, CSA C22.2 No. 15. Additionally evaluated in the end product to IEC 60950-1, 2nd Ed. Am 2 | UL |
| Hard Disk Device (Optional) - (up to four 3.5" HDD's or up to four 2.5" HDD's if provided) | Interchangeable | Interchangeable | 5 Vdc / 2.0 A Max, 12 Vdc / 2.5A Max or 5Vdc/ 2.5A Max. | IEC 60950-1, EN 60950-1, UL 60950-1 | Verified by other certificate body |
| Solid State Drive (2.5" and/or M.2) (Optional) - (up to 4 SSD's and/or up to 2 M.2's provided if provided) | Interchangeable | Interchangeable | 5/12V, 2.0/2.0A or 5V, max. 3.0A | IEC 60950-1, EN 60950-1, UL 60950-1 | Verified by other certificate body |
| Optical Drive Device (optional) (up to 2 if provided) | Interchangeable | Interchangeable | 5Vdc/2.5A Max.; 12Vdc/ 3.0A Max. or 5Vdc/2.5A Max. Laser Class 1. Recognized at least UL60950- 1+A1. | EN60950-1:2006+A1; IEC/EN60825-1; IEC60950-1(evaluate and complied with clause 4.2.11 of IEC609501/Am1:2009) or IEC 60950 1/A1:2009 | Verified by other certificate body |
| Internal speaker | Interchangeable | Interchangeable | 4 ohm, 3 W Max | -- | -- |
| Internal Wiring | Interchangeable | Interchangeable | PVC, TFE, PTFE, FEP, or neoprene insulated, or surface marked "VW-1 or FT- 1", rated minimum 300 V, 105°C, routed away from mechanically moving parts and does not pass over sharp edges. Wiring in LVISC may be rated min. 30 V, 80C. | UL 758, CSA C22.2 No. 210.2 | UL, cUL or CSA |
| Connectors and Receptacles | Interchangeable | Interchangeable | Connectors in low voltage secondary circuitry (SEC) (ELV, SELV) | UL 1977 | UL |
| DC FAN (Front Chassis fan) (optional) | Foxconn Technology Co., Ltd | PVA092G12H-P29 | DC 12V, 1.20A, 84.42CFM min | EN60950-1 UL 507 | TUV UL |
| Alternate | Delta Electronics Inc | AUB0912VH | DC12V, Max. 0.60A, 62.51CFM min | EN60950-1 UL 507 | VDE UL |
| Alternate | Interchangeable | Interchangeable | DC12V, Max. 1.20A, 62.51CFM min | EN60950-1 UL 507 | VDE, TUV or UL |
| DC FAN (CPU cooler fan) | Foxconn Technology Co., Ltd | PVA092G12S PVA092G12H-P29 | DC 12V, MAX. 0.40A, 60.0CFM min 84.24CFM min | EN60950-1 UL 507 | TUV UL |
| Alternate | Delta Electronics Inc | QUR0912VH QUR0912SJ-00 | DC 12V, MAX. 0.6A, 62.50CFM min 77.00CFM min | EN60950-1 UL 507 | VDE UL |

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| Alternate | Interchangeable | Interchangeable | DC12V, Max. 0.6A, 60.0CFM min | EN60950-1 UL 507 | VDE, TUV or UL |
| DC FAN (Front Middle Chassis fan) | Foxconn Technology Co., Ltd | PVA080G12R-P29-AE | DC12V, Max. 0.80A, 71.1CFM min | EN60950-1 UL 507 | TUV UL |
| Alternate | Delta Electronics Inc | AUB0812SJ-00XXXXXX, X stands for A-Z, 0-9, -or blank | DC12V, Max. 0.84A, 66.64CFM min | EN60950-1 UL 507 | VDE UL |
| DC FAN (Rear chassis fan) | Foxconn Technology Co., Ltd | PVA120G12T PVA120K12P | DC 12V, 0.5A, 102.24CFM min 135.18CFM min | EN60950-1 UL 507 | TUV UL |
| Alternate | Delta Electronics Inc | AFB1212VH | DC 12V, 0.6A max, 95.70 CFM min | EN60950-1 UL 507 | VDE UL |
| Alternate | Interchangeable | Interchangeable | DC 12V, 0.6A max, 95.70 CFM min | EN60950-1 UL 507 | VDE, TUV or UL |
| DC FAN (Memory fan up to 2 provided - optional) | Foxconn Technology Co., Ltd | PVA060G12N PVA120G12S | DC 12V, 0.55A, 25.77 CFM min | EN60950-1 UL 507 | TUV UL |
| Alternate | Delta Electronics Inc | AFB0612EH AUB1212H | DC 12V, 0.48A, 36.38CFM min 68.52CFM min | EN60950-1 UL 507 | VDE UL |
| Alternate | Interchangeable | Interchangeable | DC 12V, 0.55A, 25.77 CFM min | EN60950-1 UL 507 | VDE, TUV or UL |
| Front IO Module (FIO-E) (optional) | Foxconn | FMB-1704 FMB-1705 | SELV, Front IO Module (FIO-E) UL approval covers the PWB material, connector plastics, and any other plastics, and foam materials used, and the operator accessible connector overcurrent protection devices. See additional information for this item below: | UL 60950-1, 2nd Ed. CAN/CSA C22.2 No. 60950-1-07, 2nd Ed. Additionally evaluated in the end product to IEC 60950-1 2nd Ed. | UL |
| -PWB | Interchangeable | Interchangeable | V-1 or better, Minimum 105 °C | UL796 | UL |
| -Current Limited Power Switch (U850 for USB 3.0 port J70) | DIODES Incorporated | AP21xyz, The —xl in the model name can be any number from 4 to 9 (denoting active low or active high enable pin). —yl can be 1, 2, 5 or 6 (denoting channel switch type). —zl can be blank, single or multiple alphanumeric characters, not affecting safety. | 2.7-5.5V, single channel switch. Cont. Current: 1.5A, Current limit (typical): 2.1A | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013. UL2367 | CB by TUV Rheinland, (Cert. No. JPTUV-075284- A1/M1. Report No. 11047801003) UL |
| Alternate | TEXAS INSTRUMENTS INC | TPS2068C, followed by DBV, DGK or DGN may be followed by additional letters and numbers. | Input Voltage - 4.5Vdc to 5.5Vdc, Output Continuous Rating: 1.5A; Output Current Limit: 2.7 A, Ambient= -40 to 85°C | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A11:2009 + A1:2010+ A12:2011+A2:201 UL2367 | CB by UL Demko (Cert. No. US-24596- UL) UL |

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| -Current Limited Power Switch (U1108 for Type C port (J210), U1109 for Type C port (J211)) | NXP Semiconductor Taiwan Ltd. | NX5P3290UK | Input Voltage Range: 4.0 Vdc to 5.5Vdc Current Limit Rating: 3.3 A | IEC 62368-1: 2014, EN 62368-1: 2014, UL 62368-1 | CB by UL Demko UL |
| -Poly Switch (F3 for USB 3.0 port(J71)) | Littelfuse Inc | 0805L150ULYR | 6Vdc, 1.5A | EN 60730-1 UL 1434 | TUV Rheinland, UL |
| Motherboard | Foxconn | FMB-1701 | SELV, Motherboard UL approval covers the PWB material, lithium battery, lithium battery protect circuit, connector plastics, and any other plastics, and foam materials used, fan(s) and the operator accessible connector over current protection devices. See additional information for this item below: | UL 60950-1, 2nd Ed. CAN/CSA C22.2 No. 60950-1-07, 2nd Ed. Additionally evaluated in the end product to IEC 60950-1 2nd Ed. | UL |
| -RTC Battery | SHUN WO NEW POWER BATTERY TECHNOLOGY LTD | CR2032*, * - Cell model numbers maybe followed by an optional slash (/) and single or multiple alphanumeric characters which denote optional features such as various mounting tabs, connecting leads or plugs, packaging etc | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | JHIH HONG TECHNOLOGY CO LTD | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | Interchangeable | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| -Poly Switch (F1 for PS2 port(J66 J67)) | Littelfuse Inc | 0805L110ULYR | 6Vdc, 1.1A | EN 60730-1 UL 1434 | TUV Rheinland, UL |
| Switching Power Supply (for only mother board Venti) | DELTA ELECTRONICS INC | DPS-650AB-30 XX (X can be 0-9, A-Z or blank.) | I/P: 100-240V~/10A, 50-60Hz; O/P: +12.1Vmain/18A, +12.1Vcpu1/18A, +12.1Vcpu2/18A, +12.1VG1/18A, +12.1VG2/18A, Maximum power shall not exceed 650W, Altitude during operation 5000m, maximum ambient temperature (Tma): 50 degree C. | IEC 60950-1: 2005 (Second Edition) + Am 1:2009 + Am 2:2013; EN 60950-1: 2006 +A11: 2009 + A1:2010 + A12: 2011 + A2: 2013 UL 62368-1 | CB by TUV, (Cert. No. JPTUV-091004. Report No. 50180118 001) UL E131881 |
| RTC battery (for mother board L04857- xxx (where x can be 0-9 for marketing purpose) | MITSUBISHI ELECTRIC HOME APPLIANCE CO LTD | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | Interchangeable | CR2032 | Rated 3.0V, maximum abnormal charging current 10mA. | UL1642 | UL |

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| Alternate | Interchangeable | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Motherboard (for only Switching Power Supply DPS-650AB-30 XX (X can be 0-9, A-Z or blank.)) | Foxconn | Venti | SELV, Motherboard UL approval covers the PWB material, lithium battery, lithium battery protect circuit, connector plastics, and any other plastics, and foam materials used, fan(s) and the operator accessible connector over current protection devices. See additional information for this item below: | UL 60950-1, 2nd Ed. CAN/CSA C22.2 No. 60950-1-07, 2nd Ed. Additionally evaluated in the end product to IEC 60950-1 2nd Ed. | UL |
| -PWB | Interchangeable | Interchangeable | V-1 or better, Minimum 105 °C | UL796 | UL |
| -RTC Battery | SHUN WO NEW POWER BATTERY TECHNOLOGY LTD | CR2032*, * - Cell model numbers may be followed by an optional slash (/) and single or multiple alphanumeric characters which denote optional features such as various mounting tabs, connecting leads or plugs, packaging etc | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | JHIH HONG TECHNOLOGY LTD | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | MITSUBISHI ELECTRIC HOME APPLIANCE CO LTD | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | Interchangeable | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| - Poly Switch (F9 for DP port(J64), F8 for DP port(J63)) | Interchangeable | Interchangeable | Imax=40A Min. Vmax=6Vdc Min., Ih=1.10A Max. It=2.20A Max. CA1 (125 degree C Max.), CA 2, CA 3, CA 4, Tmoa=85 degree C Min. | EN 60730-1 UL 1434 | TUV Rheinland, UL |
| - IC Current Limiter (U53 for USB Header (P26) to Front USB 3.0, U56 for Internal USB 2.0 (P150)) | DIODES INC | AP2822DxyT R-G1, where x is N or blank and y is K, KA, KB or KE. | Volts: 2.7-5.5V, Cont. Current: 0.5-2.0A, Prot. Current: 1.4-3.2A, Temp Range: - 40 to 85 degree C | IEC 60950-1: 2005 + A1 +A2 UL2367 | CB UL |
| - IC Current Limiter (U53 for USB Header (P26) to Front USB 3.0, U56 for Internal USB 2.0 (P150)) | DIODES INC | AP2822DxyT R-G1, where x is N or blank and y is K, KA, KB or KE. | Volts: 2.7-5.5V, Cont. Current: 0.5-2.0A, Prot. Current: 1.4-3.2A, Temp Range: - 40 to 85 degree C | IEC 60950-1: 2005 + A1 +A2 UL2367 | CB UL |

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| Alternate | TEXAS INSTRUMENTS INC | TPS2061C, followed by DBV, DGK or DGN may be followed by additional letters and numbers | Volts: 4.5 - 5.5 VDC, Cont. Current: 1.0A, Prot. Current: 1.9A, Temp Range: -40 to 85 degree C | IEC 60950-1: 2005 + A1 +A2 UL2367 | CB UL |
| Alternate | UNISONIC TECHNOLOGIES CO LTD | US107XXX-AF5-R (First X=A, B, C, Second X=L or H, Third X=L or G) | Input voltage: 3.0 Vdc - 5.5 Vdc. Output current limit: 1.2 - 2.8 A | IEC62368-1 UL62368-1 | CB UL |
| IC Current Limiter (U51 for REAR USB3.0 x2 (J10 Bottom), U52 for LAN+ USB2.0(J9), U55 for REAR USB3.0 x2 (J10 Top), U58 for Internal USB 3.0(P152) to SD Card) | SILERGY TECHNOLOGY | SY6288xyyyy (x=A, B, C, D or E; yyyyy-0-9, A- Z or blank) | Volts: 2.5-5.5V, Output current limit: max. 4.43A | IEC 60950-1: 2005 + A1 +A2 UL2367 | CB UL |
| Alternate | RICHTEK TECHNOLOGY CORP | RT9742..G. The first dot "." can be A to Z represent output current/enabl e function. The second dot "." can be N or blank represent discharge function. The third dot "." can be J5F/J5/V represent package type. | Volts: 2.7-6.0V, Output current limit: 3A/ 2A/ 1.5A/ 1A | IEC 60950-1: 2005 + A1 +A2 UL2367 | CB UL |
| Alternate | DIODES INC | AP22811AW 5-7, AP22811BW 5-7, AP22811AM 8-13, AP22811BM 8-13 | Volts: 2.7-5.5V, Cont. Current: 2.0A, Prot. Current: 3.2A, Temp Temp Range: -40 to 85 degree C | IEC 60950-1: 2005 + A1 +A2 UL2367 | CB UL |
| Thunderbolt 3.0 Tenor card (optional) | FOXCONN TECHNOLOGY CO LTD | TPC-F005AO | SELV, Thunderbolt 3.0 Tenor card, UL approval covers the PWB material, connector plastics, and any other plastics, and foam materials used. | IEC 60950-1 UL60950-1 | CB UL |
| CPU heatsink | -- | -- | Aluminium. See supplement 3-02 for details. | -- | -- |
| Alternate | -- | -- | Aluminium. See supplement 3-03 for details. | -- | -- |
| Alternate | -- | -- | Aluminium. See supplement 3-04 for details. | -- | -- |
| Alternate | -- | -- | Aluminium. See supplement 3-05 for details. | -- | -- |

| Object/part No. | Manufacturer/ trademark | Type/model | Technical data | Standard (Edition / year) | Mark(s) of conformity ¹⁾ |
|-----------------|-------------------------|------------|-----------------------|---------------------------|-------------------------------------|
| Metal Enclosure | -- | -- | Min. 0.8 mm thickness | -- | -- |

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| Plastic Front Panel (decorate part) | Interchangeable | Interchangeable | Min. HB | UL94, UL 746C | UL |
| Dust Filter Mesh (optional) | Interchangeable | Interchangeable | HB or HBF min. | UL 94, UL 746C | UL |
| Internal Plastic Parts | Interchangeable | Interchangeable | Min. V-2 or HF-2 | UL 94, UL 746C | UL |
| Switching Power Supply | Delta Electronics Inc | DPS-350AB-38 XX (X= 0-9, A-Z or blank) | AC Input: 100-240 V, 50-60 Hz, 4.0 A. DC Output: +12.1 VMAIN, 18 A, +12.1 VCPU, 18 A, +12.1 VCPU2, 18 A. MAX POWER 350 W. 50 °C. Altitude during operation 5000 m. | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A11:2009+A1:2010 +A12:2011 + A2:2013. IEC 62368-1:2014, EN 62368-1:2014 + A11:2017 UL60950-1 UL62368-1 | CB by TUV Rh, UL (E131881) |
| Alternate | Acbel Polytech Inc | PCK002 | AC Input: 100-240 V, 50-60 Hz, 4 A. DC Output: +12.1 VMAIN, 18 A, +12.1 VCPU1, 18 A, +12.1 VCPU2, 18 A. MAXIMUM POWER SHALL NOT EXCEED 350 W. 45 °C (50 °C for UL) Altitude during operation 5000 m. | IEC 60950-1: 2005 (Second Edition) + Am 1:2009 + Am2: 2013, EN 60950-1:2006+ A11:2009 + A1:2010 + A12:2011 + A2:2013. IEC 62368-1: 2014, EN 62368-1:2014 +A11:2017 UL62368-1 | CB by TUV Rh, UL (E131875) |
| Alternate | Lite-On Technology Corporation | PA-5501-2YXXXXXX (Y= A-Z, hyphen or blank; X= A-Z, 0-9, hyphen or blank) | AC Input: 100-240 V, 50-60 Hz, 6 A. DC Output: +12.1 VMAIN, 18 A, +12.1 VCPU1, 18 A, +12.1 VCPU2, 18 A, +12.1 VG1, 18 A, +12.1 VG2, 18 A; +12.1 VMAIN & +12.1 VCPU1 & +12.1 VCPU2 & +12.1 VG1 & +12.1 VG2 Total output power can't exceed 500 W. 50 °C. Altitude during operation 5000 m. | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A11:2009 + A1: 2010 + A12:2011 + A2:2013. IEC 62368-1:2014, EN 62368-1:2014 + A11:2017 UL62368-1 | CB by TUV Rh, UL (E132068) |

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| Alternate | Delta Electronics Inc | DPS-500AB-51 XX (X= 0-9, A-Z, blank) | AC Input: 100-240 V, 50-60 Hz, 6 A. DC Output: +12.1 VMAIN, 18 A, +12.1 VCPU1, 18 A, +12.1 VCPU2, 18 A (+12.1 VCPU1 and +12.1 VCPU2 TOTAL 320 W MAX.) +12.1 VG1, 18 A, +12.1 VG2, 18 A (+12.1 VG1 and +12.1 VG2 TOTAL 320 W MAX.) MAX POWER 500 W. 50 °C. Altitude during operation 5000 m. | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013. IEC 62368-1:2014, EN 62368-1:2014 + A11:2017 UL62368-1 | CB by TUV Rh, UL (E131881) |
| Alternate | Chicony Power Technology Co Ltd | D19-700P1A | AC Input: 100-240 V, 50-60 Hz, 8.2 A. DC Output: +12.1 Vmain, 18 A, +12.1 Vcpu1, 18 A, +12.1 Vcpu2, 18 A, +12.1 Vg1, 18 A, +12.1 Vg2, 18 A. Total output shall not exceed 700 W. Maximum output power: 700 W. 50 °C. Altitude during operation 5000 m. | IEC 60950-1:2005 (Second Edition) + Am 1:2009+Am 2: 2013, EN 60950-1:2006+ A11:2009 + A1:2010 +A12: 2011 + A2:2013. IEC 62368-1:2014, EN 62368-1:2014 + A11:2017 UL62368-1 | CB by TUV Rh, UL (E143709) |
| Hard Disk Drive (HDD) (optional) | Toshiba Electronic Devices & Storage Corporation | HDWL1yy (y= 11-99) | 1.0 A, 3.3 Vdc, 1.0 A, 5.0 Vdc. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+ A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by CSA, TUV, UL (E145163) |
| Alternate | HGST Japan Ltd | H series | 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. | IEC 60950-1: 2005+ A1+A2,EN 60950-1: 2006+ A11+A1+A12+A2, UL 60950-1 ed.2 | CB by TUV Rh, UL (E182115) |
| Alternate | Western Digital Technologies Inc | WDUUUUZVTX-YYXXYY series, where WD is Western Digital. May or may not be present; where UUUU may be any number or blank indicating memory capacity; Z may be any alpha character indicating memory capacity multiplier | Class III supplied by SELV. Ratings are not required and are provided for reference only. 1.5 A max., 5.0 Vdc or 1.5 A max., 5.0 Vdc, 1.0 A max., 12 Vdc. | IEC 62368: 2014, IEC 60950-1:2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E101559) |

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| | | and physical for factor; VTX may be any alphanumeric character indicating business unit, RPM/buffer and interface; YYXXYY may be any alphanumeric character or blank indicating SELV logic/configuration, firmware, etc. Can be 3 to 7 alphanumeric characters. | | | |
| Alternate | or equivalent | or equivalent | Ratings are not required and provided for reference only: 1.0 A max., 3.3 Vdc, 1.0 A max., 5.0 Vdc or 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc or 1.5 A max., 5.0 Vdc. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL62368-1 ed.2, UL 60950-1 ed.2 | Verify by other cert. body, UL |
| Solid State Drive (SSD) (optional) | Samsung Electronics Co Ltd | MZ-K***** (* can be 0-9, A- Z, blank, slash or dash) | 4.8 A, 3.3 Vdc. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by TUV Rh, UL (E149091) |
| Alternate | Lite-On Technology Corporation | CA1-GDxxxxxx (where "x" can be any alphanumeric or blank) | 3.5 A, 3.3 Vdc (optional) | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1 ed.2 | CB by TUV Rh, UL (E205203) |
| Alternate | Kingston Digital International Ltd Taiwan Branch | *****SA1000*** ***** (the "*" maybe alphanumeric, capacity, character, "-" or blank) | 3.0 A, 3.3 Vdc (optional) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (DEMKO), UL (E333487) |
| Alternate | Lite-On Technology Corporation | K2-L1xxxxxxxx ("x" can be any alphanumeric character or blank) | 2.5 A, 5.0 Vdc. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1 ed.2 | CB by TUV Rh, UL (E205203) |
| Alternate | Western Digital Technologies Inc | GRxxxxy-x (where x and y are any alphanumeric character, or blank representing non-safety critical features such as memory size) | Class III supplied by SELV. Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E332258) |

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| Alternate | Intel Corp | SSD* (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, 5.0 Vdc and/ or 12 Vdc. (for reference only) | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E139761) |
| Alternate | or equivalent | or equivalent | Ratings are not required and provided for reference only: 4.8 A max., 3.3 Vdc or 2.5 A max, 5.0 Vdc or 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc or 3.3 Vdc, 5.0 Vdc and/ or 12 Vdc. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1: 2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verify by other cert. body, UL |
| Optical Disk Drive (ODD) (optional) | Hitachi-LG Data Storage Inc | U9** (where first "*" can be any number 0-9 and second "*" can be any alphanumeric character, denoting board name or the change of shape not related with safety) | 1.8 A, 5.0 Vdc. Laser Class 1. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 60825-1:2007, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| Alternate | Philips & Lite-On Digital Solutions Corporation | DG-xx3Sxxxxx (x can be any alphanumeric character or blank) | 2.0 A, 5.0 Vdc, 1.25 A, 12 Vdc. (optional) Laser Class 1. | IEC 60950-1: 2005+ A1+A2, EN 60950-1:2006+A11+A1+A12+A2, IEC 60825-1: 2007, UL 60950-1ed.2 | CB by TUV Rh, UL (E306430) |
| Alternate | or equivalent | or equivalent | Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc or 2.0 A max., 5.0 Vdc, 1.25 A max., 12 Vdc. Laser Class 1. | IEC 62368-1: 2014, EN 62368-1: 2014 +A11, IEC 60950-1: 2005 +A1+A2, EN 60950-1:2006 +A11+A1+A12+A2, IEC 60825-1:2007, IEC 60825-1:2014, UL 62368-1 ed.2, UL 60950-1ed.2 | Verify by other cert. body, UL |
| Speaker (optional) | Interchangeable | Interchangeable | 4 ohm, 3 W max. | -- | -- |
| Heat sink for CPU | Interchangeable | Interchangeable | Aluminium. | -- | -- |
| CPU FAN(for Heat sink CPU type A) | HUIZHOU CITY XUNSHUO TECHNOLOGY CO LTD | DF0802512(X)UN, ((X) can be SE, B1, B2, RF, FD, PO) | DC 12V, Max. 0.60A, Min. 52.1CFM | EN62368-1 UL 507 | TUV UL |
| Alternate | FOXCONN TECHNOLOGY CO LTD | PVA080G12Q | DC 12V, Max. 0.65A, Min. 60 CFM. | EN60950-1 UL 507 | TUV UL |

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| Alternate | DELTA ELECTRONICS INC | AUB0812VJ-00XXXXXX (X= A-Z, 0-9, - or blank) | DC 12V, Max. 0.50A, Min. 53.05 CFM. | EN60950-1 UL 507 | TUV UL |
| Alternate | Interchangeable | Interchangeable | DC 12V, Max. 0.65A, Min. 52.1CFM | EN60950-1 EN62368-1UL507 | Verify by other cert. body, UL |
| CPU Fan (for Heat sink CPU type B, type C) | HUIZHOU CITY XUNSHUO TECHNOLOGY CO LTD | DF0922512(X)UN, ((X) can be SE, B1, B2, RF, FD, PO) | DC 12V, Max. 0.60A, Min. 65.8 CFM. | EN62368-1 UL 507 | TUV UL |
| Alternate | FOXCONN TECHNOLOGY CO LTD | PVA092G12S | DC 12V, Max. 0.4A, Min. 60.0CFM. | EN60950-1 UL 507 | TUV UL |
| Alternate | DELTA ELECTRONICS INC | AUB0912VH | DC 12V, Max. 0.60A, Min. 62.51 CFM. | EN60950-1 EN62368-1 UL 507 | VDE UL |
| Alternate | Interchangeable | Interchangeable | DC 12V, Max. 0.60A, Min. 60.0CFM. | EN60950-1 EN62368-1 UL 507 | Verify by other cert. body, UL |
| System fan (optional) | FOXCONN TECHNOLOGY CO LTD | PVA092G12H | DC 12V, Max. 0.4A, Min. 64.47CFM. | EN60950-1 UL 507 | TUV UL |
| Alternate | DELTA ELECTRONICS INC | AUB0912VH | DC 12V, Max. 0.60A, Min. 62.51 CFM. | EN60950-1 EN62368-1 UL 507 | VDE UL |
| Alternate | DELTA ELECTRONICS INC | AFB0912VH-A | DC 12V, Max. 0.60A, Min. 63.27 CFM. | EN60950-1 UL 507 | VDE UL |
| Alternate | FOXCONN TECHNOLOGY CO LTD | PVA092G12S | DC 12V, Max. 0.4A, Min. 59.6CFM. | EN60950-1 UL 507 | TUV UL |
| Alternate | SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO LTD | EF92251BX- Q0(Z) ((Z) stands for 30 characters, each character stands for one of the following signs: 0-9, A-Z, "-", "(", ")", ".", "/" or blank.) | DC 12V, Max. 3.3W, Min. 57.0 CFM. | EN60950-1 UL 507 | TUV UL |
| Alternate | Interchangeable | Interchangeable | DC 12V, Max. 0.60A, Min. 57.0 CFM. | EN60950-1 UL 507 | Verify by other cert. body, UL |
| Blower fan (optional) | FOXCONN TECHNOLOGY CO LTD | PVB090G12L | DC 12V, Max. 0.88A, Min. 21.6CFM. | EN60950-1 UL 507 | VDE UL |
| Alternate | Interchangeable | Interchangeable | DC 12V, Max. 0.88A, Min. 21.6 CFM. | EN60950-1 UL 507 | Verify by other cert. body, UL |
| Graphics Card (optional) | NVIDIA CORP | PG150(sku510) (RTX6000) | Max. 295W, Complied with SELV and LPS requirement. | IEC 60950-1 UL 60950-1 | CB by UL UL |
| Alternate | Interchangeable | Interchangeable | Max. 295W, Complied with SELV and LPS requirement. | IEC 60950-1 UL 60950-1 | Verify by other cert. body, UL |

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| LAN port Card (Optional) | FOXCONN TECHNOLOGY CO LTD | TPC-F011AO | All output connector complies with limited power source (LPS) | -- | -- |
| -PWB | Interchangeable | Interchangeable | V-1 or better, Minimum 105 °C | UL796 | UL |
| General Accessory Card (Optional) | Interchangeable | Interchangeable | No laser, fans, liquid cooling, TV/cable tuners, batteries or TNV employed. | -- | -- |
| Motherboard | FOXCONN TECHNOLOGY CO LTD | FMB-2001 | Motherboard UL approval covers the PWB material, lithium battery, lithium battery protect circuit, connector plastics, and any other plastics, and foam materials used, and the operator accessible connector over current protection | UL 62368-1 | UL |
| Alternate | FOXCONN TECHNOLOGY CO LTD | FMB-2002 | Motherboard UL approval covers the PWB material, lithium battery, lithium battery protect circuit, connector plastics, and any other plastics, and foam materials used, and the operator accessible connector over current protection | UL 62368-1 | UL |
| -PWB | Interchangeable | Interchangeable | V-1 or better, Minimum 105 °C | UL796 | UL |
| -RTC Battery | SHUN WO NEW POWER BATTERY TECHNOLOGY LTD | CR2032*, * - Cell model numbers may be followed by an optional slash (/) and single or Multiple alphanumeric characters which denote optional features such as various mounting tabs, connecting leads or plugs, packaging etc | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | JHIH HONG TECHNOLOGY CO LTD | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | MITSUBISHI ELECTRIC HOME APPLIANCE CO LTD | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |
| Alternate | Interchangeable | CR2032 | Rated 3.0V, maximum abnormal charging current: 10mA. | UL1642 | UL |

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| - Poly Switch (VF1 for display port (J63), VF100 for display port (J64)) | Littelfuse Inc | 0805L110ULXX YYYYY (X, Y stands for A to Z, 0 to 9 or blank) | 1.1 A, 6 V min. | EN 60730-1 UL 1434 | TUV Rheinland, UL |
| Alternate | Polytronics Technology Corp | SPR-P110 | 1.1 A, 6 V min. | EN 60730-1 UL 1434 | TUV Rheinland, UL |
| Alternate | Interchangeable | Interchangeable | 1.1 A, 6 V min. | EN 60730-1 UL 1434 | TUV Rheinland, UL |
| IC Current Limiter (U52 for USB 2.0x2 (J9) and Serial port + PS2 Header (P77), U53 for front USB 3.0x2 (J81), U57 for front USB 3.0 (TOP J94), U55 for Rear US 3.0x2 (BOTJ10), U51 for Rear USB 3.0x2 (TOP J10)) | DIODES INC | AP22811AW5-7 | Input Voltage: 2.7-5.5Vdc Output Continuous Rating: 2.0 A Output Current Limit: 3.2 A CB: Operating Temperature: -40°C~ + 85°C | IEC 60950-1 UL2367 | CB UL |
| Alternate | JOULWATT TECHNOLOGY CO LIMITED | JW7115S-2SOTA#TRPBF | Vin: 2.7-5.5Vdc, Vout: 2.7-5.5Vdc, Iout: 2.05-2.35A | IEC 62368-1 UL62368-1 | CB UL |
| Alternate | WILL SEMICONDUCTOR | WS4612EDx-5/TR (x can be A, B, C or D, A for EN high enable & Discharge, B for EN low enable & Discharge, C for EN high enable & no Discharge, D for EN low enable & no Discharge.) | Input Voltage Range: 2.5Vdc to 5.5Vdc, Current Limit Rating: 2.1-2.7A | IEC 62368-1 IEC 60950-1 UL62368-1 | CB UL |
| Alternate | SILERGY TECHNOLOGY (TAIWAN) INC | SY6288xyyyy (x=A, B, C, D or E, yyyyy=0-9, A- Z or blank) | I/P= 2.5 to 5.5 Vdc. O/P= 5.5 Vdc max, 1.6 to 4.43 A max. | IEC 60950-1 UL2367 | CB UL |
| IC Current Limiter (U63 for USB 3.0 (BOT J94)) (Alternate) | TEXAS INSTRUMENTS INCORPORATE D | 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 | Ratings: (Electrical ratings is optional) Input Voltage= 4.5 to 5.5 Vdc. Output Continuou Rating= 2.5 A. Outpu Current Limit = 3.1 A. Ambient = -40 to 85 °C. | IEC 60950-1 UL2367 | CB UL |
| Graphics Card (optional) | Nvidia Corp | PG150 (sku510), Market name: RTX 6000,Quadro RTX 6000 | N/A (SELV) 295 W max., Complied with ES1 and LPS requirement. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2,UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E204896) |

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| alt. | Nvidia Corp | PG212, Market name: Quadro P1000 | Not required. (Supplied by SELV) 50 W max., Complied with ES1 and LPS requirement. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A 12+A2,UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (DEMKO), UL (E204896) |
| alt. | Interchangeable | Interchangeable | 295 W max., certified by UL listed accessary | IEC 62368-1: 2018,EN 62368-1: 2020+A11: 2020, UL 62368-1 ed.3 | Verify by other cert. body, UL |
| General Accessory Card (I/O card) (optional) | interchangeable | Interchangeable | Ratings are not required and provided for reference only: 3.3 or 5 or 12 Vdc. (50 W max.) | IEC 62368-1: 2018, EN 62368-1: 2020+A11: 2020, UL 62368-1 ed.3 | Verify by other cert. body, UL |
| HP Front Type-C SuperSpeed USB 20Gbps port (optional) | Foxconn International Inc | TPC-F014AO | Electrical ratings not Required (the equipment intended for building-in, supplied by ES1:1.8 Vdc/ 3.3 Vdc/5.0 Vdc) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (DEMKO), UL |
| Motherboard | Foxconn International Inc | FMB-2011 | 12.1 Vdc. | UL 62368-1 ed.3 | UL (E93839) |
| RTC Battery | Shun Wo New Power Battery Technology Ltd | 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) | Max Abnormal Charging Current 10 mA. | UL1642 ed.5 | UL (MH25881) |
| alt. | Jhih Hong Technology Co Ltd | CR2032 | Max Abnormal Charging Current 10 mA. | UL1642 ed.5 | UL (MH48406) |
| alt. | Mitsubishi Electric Home Appliance Co Ltd | CR2032 | Max Abnormal Charging Current 10 mA. | UL1642 ed.5 | UL (MH21249) |
| alt. | Interchangeable | CR2032 series | Max Abnormal Charging Current 10 mA. | UL1642 ed.5 | UL |
| Polyswitch (VF1, VF100 for Display) | Littelfuse Inc | 0805L110ULXX YYYYY (X, Y stands for A to Z, 0 to 9 or blank) | 1.1 A, 6 V min. | IEC 60730-1: 2020,EN 60730-1: 2011, Clause 15, 17 | TUV/RH, UL (E183209) |

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| | | | | and Annex J, UL 1434 ed.1 | |
| alt. | Polytronics Technology Corp | SPR-P110 | 1.1 A, 6 V min. | IEC 60730-1: 2020, EN 60730-1: 2011, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E201431) |
| alt. | Interchangeable | Interchangeable | 1.1 A, 6 V min. | IEC 60730-1: 2020, EN 60730-1: 2011, Clause 15, 17 and Annex J, UL 1434 ed.1 | Verify by other cert. body, UL |
| Power Distribution Switch (U51, U53, U55, U57 for USB 3.0 and U52 for USB 2.0) | Diodes Inc | AP22811AW5-7 | Input Voltage: 2.7 to 5.5 Vdc. Output= 1. Output Continuous Rating= 2.0 A. Output Current Limit= 3.2 A. Operating Temperature= -40 to + 85 °C. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 2367 ed.1 | CB by UL (US), UL (E322375) |
| alt. | Joulwatt Technology Co Limited | JW7115S-2SOTA#TRPBF | Vin= 2.7 to 5.5 Vdc, Vout= 2.7 to 5.5 Vdc, Iout= 2.05 to 2.35 A. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (DEMKO), UL (E497605) |
| alt. | Will Semiconductor | WS4612EDx-5/TR (x can be A, B, C or D, A for EN high enable & Discharge, B for EN low enable & Discharge, C for EN high enable & no Discharge, D for EN low enable & no Discharge) | Ratings: (Optional) Input Voltage Range= 2.5 to 5.5 Vdc. Current Limit Rating= 2.1 to 2.7 A. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (DEMKO), UL (E486497) |
| alt. | Silergy Corp | SY6288xyyyy (x= A, B, C, D or E, yyyyy= 0-9, A- Z or blank) | I/P= 2.5 to 5.5 Vdc. O/P= 5.5 Vdc max, 1.6 to 4.4 A max. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 2367 ed.1 | CB by TUV Rh, UL (E491480) |
| Power Distribution Switch (U63 for USB 3.0) | Texas Instruments Inc | 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) | Ratings: (Electrical ratings is optional) Input Voltage=4.5 to 5.5 Vdc. Output Continuous Rating= 2.5 A. Output Current Limit= 3.1 A. Ambient = -40 to 85 °C. | IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 2367 ed.1 | CB by UL (US), UL (E169910) |

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| Metal Chassis | -- | -- | Sheet steel or steel, thickness 0.8 mm min. | -- | -- |
| Plastic Front Panel (Construction 1) | UR Materials Industry (Shenzhen) Co Ltd | 210 | HB min., 60 °C min., thickness 2.5 mm min. | UL 94 ed.6 UL 746C | UL (E323548) |
| Plastic Front Panel (Construction 2) | -- | -- | Consists of three parts, see below for details. | -- | -- |
| - Dust-proof decoration (Option) | INEOS STYROLUTION GROUP GMBH | GP-22 | HB min., 60 °C min., thickness 2.0 mm min. | UL 94 ed.6 UL 746C | UL (E108538) |
| - Dust-proof front panel (Option) | UR Materials Industry (Shenzhen) Co Ltd | 210 | HB min., 60 °C min., thickness 2.5 mm min. | UL 94 ed.6 UL 746C | UL (E323548) |
| - Dust Filter Mesh (Option) | LG CHEM LTD | HI121 | HB min., 90 °C min., thickness 1.7 mm min. | UL 94 ed.6 UL 746C | UL (E67171) |
| alt. | NAN YA PLASTICS CORP PLASTICS 3RD DIV | 6300 | HB min., 90 °C min., thickness 1.7 mm min. | UL 94 ed.6 UL 746C | UL (E130155) |
| alt. | Interchangeable | Interchangeable | HB or HBF min | UL 94 ed.6 UL 746C | UL |
| Front I/O Cover on Plastic Front Panel | Interchangeable | Interchangeable | Sheet steel or steel, thickness 0.2 mm min. | -- | -- |
| Internal wiring | Interchangeable | Interchangeable | PVC, TFE, PTFE, FEP, or neoprene insulated, or surface marked "VW-1 or FT-1", rated minimum 300 V, 105° C, routed away from mechanically moving parts and does not pass over sharp edges. Wiring in LVISC may be rated min. 30 V, 80C. | UL 758, CSA C22.2 No. 210.2 | UL, cUL or CSA |
| Insulating Tubing/Sleeving | Interchangeable | Interchangeable | PVC, TFE, PTFE, FEP, or neoprene insulated, or surface marked "VW-1 or FT-1", rated minimum 300 V, 105° C | UL 224 | UL |
| External Decorate Parts | Interchangeable | Interchangeable | HB or HBF min. | UL 94 ed.6 | UL |
| Internal Plastic Parts | Interchangeable | Interchangeable | V-2 or VTM-2 or HF-2 min. | UL 94 ed.6 | UL |
| PCB | Interchangeable | Interchangeable | V-1 min., 105 °C min. | UL 796 ed.11 | UL |
| Switching Power Supply | Acbel Polytech Inc | PCK002-0 | AC I/P:100-240V~, 50-60Hz, 4.2A. DC O/P: +12.1VMAIN/18.0A. | UL/cUL 62368-1 Ed.3 IEC 62368-1: | CB by TUV (JPTUV-127970) |

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| | | | +12.1V CPU/18.0A. +12.1V CPU2/18.0A. MAXIMUM POWER SHALL NOT EXCEED 350W MAXIMUM POWER SHALL NOT EXCEED 350W The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C | 2018 IEC 60950- 1:2005+A1+A 2 | UL (E131875) |
| alt. | Delta Electronics, Inc | DPS-350AB-44 XX (X=A-Z, 0-9, or blank) | AC Input: 1-2). 100- 240V~, 50-60Hz, 4.2A; DC Output: +12.1V MAIN, 18A; +12.1V CPU, 18A; +12.1V CPU2, 18A; +12.1V CPU and +12.1V CPU2 TOTAL 320.0W MAX.; TOTAL 350W MAX. The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C | IEC 62368-1: 2014 IEC 60950- 1:2005+A1+A2 | CB by TUV (JPTUV- 104850-M2) |
| alt. | Delta Electronics, Inc. | 1.DPS-450AB- 30 XX (X = 0-9, A-Z, Blank) | 1.AC I/P: 100-240 V, 5.5 A, 50-60 Hz. Class I. DC O/P: 18.0 A +12.1V MAIN, 18.0 A, +12.1V CPU. 18.0 A, +12.1V PU2.(+12.1V CPU and +12.1V CPU2 TOTAL 320.0W MAX.) MAX POWER 450W The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C | IEC 62368-1: 2014 IEC 60950-1: 2005+A1+A 2 UL 62368-1 ed.2 | CB by TUV/Rh, UL (E131881) |
| | | 2.DPS-500AB- 51 XX (X = 0-9, A- Z, Blank) | | | |
| | | | 2.AC I/P:100-240 V, 6 A, 50-60 Hz. Class I. DC O/P: +12.1V MAIN, 18A; | | |

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| | | | +12.1V CPU1, 18A; +12.1V CPU2, 18A; (+12.1V CPU1 and +12.1V CPU2 TOTAL 320.0W MAX.); +12.1V G1, 18A; +12.1VG2, 18A; (+12.1VG1 and +12.1VG2 TOTAL 320.0W MAX.) MAX POWER 500W The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C | | |
| alt. | Lite-On Technology Corporation | 1.PA-3451- 1YXXXXX (Y = A-Z, or "-" or blank ; X can be A-Z, 0-9, "-" or blank) 2.PA-5501- 2YXXXXX (Y = A-Z, or "-" or blank ; X can be A-Z, 0-9, "-" or blank) | 1.Input: 100-240 VAC, 5.5A, 50-60Hz Output: +12.1VMAIN / 18A, +12.1V CPU / 18A, +12.1V CPU2 / 18A; +12.1VMAIN & +12.1V CPU & +12.1V CPU2 Total power can't exceed 450W. The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C 2.Input: 100-240 VAC, 6A, 50-60Hz Output: +12.1VMAIN / 18A, +12.1V CPU1 / 18A, +12.1V CPU2 / 18A, +12.1VG1 / 18A, +12.1VG2 / 18A; +12.1VMAIN & +12.1V CPU1 & +12.1V CPU2 &+12.1VG1 & +12.1VG2 Total output power can't exceed 500W The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C | IEC 62368- 1:2014, EN 62368- 1:2014 +A11, IEC 62368-1:2018, IEC 60950- 1:2005+A1+A 2 UL 62368-1 ed.3 UL 62368-1 ed.2 | CB by TUV (JPTUV- 125629) UL (E132068) |

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| alt. | Chicony Power Technology Co., Ltd. | D19-700P1A | I/P: 100-240Vac, 8.2A, 50-60Hz O/P: DC 18A +12.1Vmain, 18A +12.1Vcpu1, 18A +12.1Vcpu2, 18A +12.1Vg1, 18A +12.1Vg2 Total output shall not exceed 700W Maximum output power: 700W The manufacture specified the equipment to be operated up to 5000m Maximal ambient temperature as specified by the manufacturer: +50°C | UL/cUL 62368-1 EC 62368-1:2014 IEC 60950-1:2005+A1+A2 | CB by TUV (JPTUV-104291-M1) UL (E132068) |
| Hard Disk Drive(HDD) (optional) | Western Digital Technologies Inc | WDUUUZVTX-YYXXYY series, where WD is Western Digital. May or may not be present; where UUUU may be any number or blank indicating memory capacity; Z may be any alpha character indicating memory capacity multiplier and physical for factor; VTX may be any alphanumeric character indicating business unit, RPM/buffer and interface; YYXXYY may be any alphanumeric character or blank indicating SELV logic/ configurati on, firmware, etc. Can be 3 to 7 alphanumeric characters. | Class III supplied by SELV. Ratings are not required and are provided for reference only. 1.5 A max., 5.0 Vdc, 1.0 A max., 12 Vdc. | IEC 62368-1:2014, IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by UL (US) UL (E101559) |
| alt. | Toshiba Electronic Devices & Storage Corporation | HDWL1yy (y= 11-99) | 1.0 A, 3.3 Vdc, 1.0 A, 5.0 Vdc. | IEC 60950-1:2005+A1+A2 EN 60950-1: 2006+A11+A1+A12+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by TUV UL (E145163) |
| alt. | HGST Japan Ltd | DH series | 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. | IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A11+A1+A12+A2, UL 60950-1 ed.2 | CB by TUV/Rh UL (E182115) |

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| alt. | SK Hynix Inc | HFSabcD0FEH-defgh (The suffix 'a', 'b' and 'c' denoting memory capacity can be any letter (A to Z) or number (0 to 9), 'd', 'e', 'f', 'g' and 'h' denoting buyer can be any letter(A to Z) or number (0 to 9)) | 3.3 A, 3.3 Vdc. | IEC 62368-1: 2018, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by TUV/SUD UL (E333981) |
| alt. | SK Hynix Inc | HFSabcd32TC H-7efgh ('a', 'b', 'c' and 'd' denoting memory capacity can be any letter (A to Z) or number (0 to 9), 'e', 'f', 'g' and 'h' denoting buyer can be any letter (A to Z) or number (0 to 9)) | 2.0 A, 5.0 Vdc. | IEC 62368-1: 2018, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by TUV/SUD UL (E333981) |
| alt. | SK Hynix Inc | HFSabcGETFEI-defgh (The suffix 'a', 'b' and 'c' denoting memory capacity can be any letter (A to Z) or number (0 to 9), 'd', 'e', 'f', 'g' and 'h' denoting buyer can be any letter (A to Z) or number (0 to 9)) | 2.1 A, 12 Vdc. | IEC 62368-1: 2018, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by TUV/SUD UL (E333981) |
| alt. | or equivalent | or equivalent | Ratings are not required and provided for reference only: 3.3 A max., 3.3 Vdc or 2.0 A max., 5.0 Vdc or 2.1 A max., 12 Vdc or 1.0 A max., 3.3 Vdc, 1.0 A max., 5.0 Vdc or 1.5 A max., 5.0 Vdc, 1.0 A max., 12 Vdc. | IEC 62368-1: 2018, IEC 62368-1:2014, EN 62368-1: 2014 +A11, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1 ed.2, UL 62368-1 ed.3 | Verify by other cert. body, UL |
| Solid State Drive (SSD) (optional) | Samsung Electronics Co Ltd | MZ-K***** (* can be 0-9, A-Z, blank, slash or dash) | 4.8 A, 3.3 Vdc. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by TUV/Rh UL (E149091) |
| alt. | Solid State Storage Technology Corp | K2-L1xxxxxxxx ("x" can be any alphanumeric character or blank) | 2.5 A, 5.0 Vdc. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1:2005+A1 | CB by TUV/Rh UL (E205203) |

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| | | | | +A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1 ed.2, UL 62368-1 ed.3 | |
| alt. | Solid State Storage Technology Corp | ED1-2Wxxxxxx (where "x" can be any alphanumeric character or blank) | 2.0 A, 12 Vdc (optional) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by UL (Demko) UL (E205203) |
| alt. | Western Digital Corporation | GRxxxxxy-x (x, y =0-9, A-Z, blank; not safety- relevant) | Class III supplied by SELV. Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc, 3.0 A max., 3.3 Vdc, 1.8 A max., 12 Vdc. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, UL 60950-1 ed.2, UL 62368-1 ed.3 | CB by UL (US) UL (E332258) |
| alt. | Intel Corp | SSD* (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, 5.0 Vdc and/ or 12 Vdc. (for reference only) | UL 62368-1 ed.3, | CB by UL (US) UL (E139761) |
| alt. | or equivalent | or equivalent | Ratings are not required and provided for reference only: 4.8 A max., 3.3 Vdc or 2.5 A max, 5.0 Vdc or 2.0 A max., 12 Vdc or 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc or 3.3 Vdc, 5.0 Vdc and/ or 12 Vdc. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005 IEC 60950-1: 2005/ A1: 2009, IEC 60950-1: 2005/ A2: 2013, UL 62368-1 ed.3 | Verify by other cert. body, UL |
| Optical Disk Drive (ODD) (optional) | LG ELECTRONICS INC | DU9** (Where first "*" can be any number 0-9 and second "*" can be any alphanumeric character, denoting non safety related differences) | 1.6 A or 1.8A, 5.0 Vdc. Laser Class 1. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, IEC 60825-1:2014, UL 60950-1 ed.2 UL 62368-1 ed.3 | CB by Intertek UL (E119002) |
| alt. | Philips & Lite- On Digital Solutions | DG-xx3Sxxxxx (x can be any alphanumeric | 2.0 A, 5.0 Vdc, 1.25 A, 12 Vdc. (optional) | IEC 62368-1: 2014, IEC 60950-1: | CB by TUV/Rh UL (E306430) |

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| | Corporation | character or blank) | Laser Class 1. | 2005+A1+A2, EN 60950-1: 2006+A11+A1 +A12+A2, EN 60825-1:2007, UL 60950-1 ed.2 UL 62368-1 ed.3 | |
| alt. | LG Electronics Inc | GHB** (where the "*" can be 0~9, A~Z, any alphanumeric character or blank according to design, brand, buyer, color, software or other configurations, denoting non safety related differences) | 2.0 A, 5.0 Vdc, 2.5 A, 12 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by Intertek UL (E119002) |
| alt. | or equivalent | or equivalent | Ratings are not required and provided for reference only: 2.0 A max., 5.0 Vdc, 1.25 A max., 12 Vdc, 2.5 A max.,12 Vdc. Laser Class 1. | IEC 62368-1: 2014, IEC 62368-1:2018, IEC 60950-1: 2005+A1+A2, EN 60950-1: 2006+A11+A1+A12+A2, EN 60825-1: 2007, UL 60950-1 ed.2UL 62368-1 ed.3 | Verify by other cert. body, UL |
| Speaker (optional) | -- | -- | 4 ohm, 3 W max. | -- | -- |
| CPU Fan (for Type-A) CPU Heat sink) | Foxconn Technology Co., Ltd | PVA092G12S | 0.40 A max., 12 Vdc, 70.48 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Huizhou City Xunshuo Technology Co., Ltd | DF0922512(X)U N (above (X) may be SE,B1,B2,RF,F D,PO) | 0.60 A max., 12Vdc, 80.04 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV, UL (E465463) |
| alt. | Interchangeable | Interchangeable | 0.60 A max., 12Vdc, 70.48 CFM min. Rotating speed: 4500±10% RPM max., Fan radius: 46mm max., Mass of moving parts: 34.2g max. | EN 62368-1: 2014, UL 507 ed.10 | Verify by other cert. body, UL |
| CPU Fan (for Type-C) CPU Heat sink) | Foxconn Technology Co., Ltd | PVA080G12Q | 0.65 A max., 12 Vdc, 60.0 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV UL (E231557) |
| alt. | Delta Electronics, Inc. | AUB0812VJ-00XXXXXX (X stands for A- Z,0-9,- or blank for marketing purpose only) | 0.50 A max., 12Vdc,53.05 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV UL (E132003) |
| alt. | Huizhou City Xunshuo Technology Co., Ltd | DF0802512(X)U N (above (X) may be SE,B1,B2,RF,F | 0.60 A max., 12Vdc, 52.7 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV UL (E365488) |

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| | | D,PO) | | | |
| alt. | Interchangeable | Interchangeable | 0.65 A max., 12 Vdc, 52.7 CFM min. Rotating speed: 4500±10% RPM max, Fan radius: 40mm max, Mass of moving parts: 31.4g max | EN 62368-1: 2014, UL 507 ed.10 | Verify by other cert. body, UL |
| CPU Fan (for Type-B CPU Heat sink) | Foxconn Technology Co., Ltd | PVA092G12S | 0.40 A max., 12 Vdc, 70.48 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Huizhou City Xunshuo Technology Co., Ltd | DF0922512(X)U N (above (X) may be SE,B1,B2,RF,F D,PO) | 0.60 A max., 12Vdc, 80.04 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV, UL (E365488) |
| alt. | Interchangeable | Interchangeable | 0.60 A max., 12Vdc, 70.48 CFM min. Rotating speed: 4500±10% RPM max., Fan radius: 46mm max., Mass of moving parts: 34.2g max. | EN 62368-1: 2014, UL 507 ed.10 | Verify by other cert. body, UL |
| Front System Fan (2 unit)(optional when graphic card <80W) | Foxconn Technology Co., Ltd | PVA060F12Q | 0.20 A max., 12 Vdc, 22.0 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co., Ltd | MF60201VX- 1QZ (Z) stands for 30 characters. Each character standards for one of the following signs):0- 9,A- Z,(,),./,- or blank for marketing purpose only, no safety critical related. | 0.252 A max., 12Vdc, 22.0 CFM min. | IEC/EN 61000-6- 1:2019 IEC/EN 61000-6- 3:2021 EN 62368-1: 2014, UL 507 ed.10 | CB by TUV Rh (R 50275749), UL |
| alt. | Interchangeable | Interchangeable | 0.252 A max., 12Vdc, 22.0 CFM min. Rotating speed: 5400±15% RPM max., Fan radius: 30mm max., Mass of moving parts: 16.9g max. | EN 62368-1: 2014, UL 507 ed.10 | Verify by other cert. body, UL |
| Rear System fan | Sunonwealth Electric Machine Industry Co.,Ltd. | PF92251V3- 1Q07Z (Z) stands for 30 characters. Each character standards for one of the following signs):0-9,A- Z,(,),./,- or blank for marketing purpose only, no safety critical related. | 0.56 A max., 12 Vdc, 72.0 CFM min. | EN 62368-1: 2014, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Foxconn Technology Co., Ltd | PVA092G12H- P29 | 1.20A max., 12Vdc, 70.92 CFM min. | EN 62368-1: 2014, | CB by TUV Rh (R 50275749), UL |

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| | | | | UL 507 ed.10 | |
| alt. | Interchangeable | Interchangeable | 1.20 A max., 12Vdc, 70.92 CFM min. 3900±10% RPM max., Fan radius: 41mm max., Mass of moving parts: 47.6g max. | EN 62368-1: 2014, UL 507 ed.10 | Verify by other cert. body, UL |
| HP Z2 G9 Single Type-C SuperSpeed USB 20Gbps Front Port | Foxconn Technology Co., Ltd | FSW-F001AO | Not required. (Supplied by ES1) | UL 62368-1 ed.3 | UL (E93839) |
| - IC Current Limiter (U7 for USB Type- C(J210)) | Cypress Semiconductor Corp. | CYAC1126- 40LQXI ACG1F | Input: 2.7-5.5Vdc; 4.85- 5.5Vdc (VCONN) Output: 5Vdc, 3A, 15W (VBUS); 5Vdc, 200mA, 1W (VCONN) (Protective Current 4.2A, include drift) | IEC/EN 62368- 1:2014 UL2367 | CB by UL (US), UL(E331901) |
| Motherboard | Foxconn Technology Co., Ltd | FMB-2201 | All output connector comply with limited power source(LPS) | UL 62368-1 ed.3 | UL (E93839) |
| RTC Battery | Shun Wo New Power Battery Technology Ltd | 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) | Max Abnormal Charging Current 10 mA. | UL1642 ed.6 | UL (MH25881) |
| alt. | Jhih Hong Technology Co Ltd | CR2032 | Max Abnormal Charging Current 10 mA. | UL1642 ed.6 | UL (MH48406) |
| alt. | Double Best Co Ltd | CR2032 (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) | Max Abnormal Charging Current 10 mA. | UL1642 ed.6 | UL (MH46388) |
| alt. | MITSUBISHI ELECTRIC HOME APPLIANCE CO LTD | CR2032 | Maximum abnormal charging current 10mA, protected by diode (D4) and 1Kohm resistor (R321). | UL1642 ed.6 | UL (MH21249) |

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| alt. | Interchangeable | CR2032 series | Max Abnormal Charging Current 10 mA. | UL1642 ed.5 | UL |
| Power Distribution Switch (U63) for USB ports (J94 pin 10) use | TEXAS INSTRUMENTS INCORPORATED | TPS2546, maybe followed by Q, may be followed by RTE, may be followed by R or T, may be followed by Q1 | Input Voltage : 4.5Vdc to 5.5Vdc; Cont. Current: 2.5A; Prot. Current: 3.1A. | IEC 62368-1: 2014 UL 2367 ed.2 | CB by UL (US), UL (E169910) |
| alt. | DIODES INC | PI5USB2546ZH DEX | Input Voltage: 4.5 -5.5 Vdc Continuous Rating: 30 mA to 2.5 A Current Limit: 100 mA to 3.18 A Ambient: -40 to 85°C | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E340734) |
| Metal Chassis | Interchangeable | Interchangeable | Sheet steel or steel, thickness 0.91 mm min. See Enclosures- Diagrams 4-01 for details. | -- | -- |
| Power Supply Cord (optional) | Interchangeable | Interchangeable | Detachable. Types NISP-2, NISPE-2, NISPT-2, SP-2, SPE- 2, SPT-2, SP-3, SPE- 3, SPT-3, SV, SVE, SVO, SVOO, SVT, SVTO, SVTOO, SJ, SJE or SJT. 240 Vac 1.5 m min. long, rated VW-1, one end with grounding type NEMA 5-15P or NEMA 6- 15P, the other end with an appliance coupler. No. 14 AWG min. | UL 817 ed.2 | UL |
| Interconnecting Cable (optional) | Interchangeable | Interchangeable | Detachable, 3.05 m long max., 30 V min., 70 °C min., suitable for external use, jacketed, VW-1 or FT-1. | UL 758, ed.3 or UL 444, ed.5 or UL 1863 ed.4 | UL |
| Certification Marks, Rating Label and Grounding/ Warning Label Materials | CCL Design (Suzhou) Co Ltd (Worldmark) | 3311T-E2a | Used in combination with Printer/ Ribbon DPW3000-140-450. Affixed to the metal surface. | UL 969 ed.5 | UL (MH20595) |
| alt. | Interchangeable | Interchangeable | 70 °C min. | UL 969 ed.5 | UL |
| Front Handle Cover | UR Materials Industry (Shenzhen) Co Ltd | 210 | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL (E323548) |
| Plastic Bezel (front) | UR Materials Industry (Shenzhen) Co Ltd | 210 | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL (E323548) |
| alt. | Sabic Innovative Plastics US L L C | C6200(GG) | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL (E121562) |
| alt. | Interchangeable | Interchangeable | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL |
| Blank Panel (optional, when | Sabic Innovative Plastics US L L C | 925(GG) | V-2 min., 120 °C min., thickness 0.8 mm min. | UL 94 ed.6 | UL (E121562) |

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| Removable Storage Modules, ODD not provided) | | | | | |
| Base Foot | Interchangeable | Interchangeable | HB min. | UL 94 ed.6 | UL |
| Rubber Feet (on Base Foot) (optional) | Interchangeable | Interchangeable | HB or HBF min. | UL 94 ed.6 | UL |
| PCB | Interchangeable | Interchangeable | V-1 min., 105 °C min. | UL 796 ed.11 | UL |
| Interlock Switch | Dongguan City Rising Sun Electronics Co Ltd | MSS | 5.0 A, 125 V. 3.0 A, 250 V. | EN 61058-1: 2002+A2, EN 61058-1-1: 2016, EN IEC 61058-1: 2018, UL 61058-1 ed.5 | TUV, UL (E477493) |
| Switching Power Supply (PSU) | Lite-On Technology Corporation | PS-2771-3XXXXXX (X= 0-9, A-Z, hyphen or blank) | AC I/P: 100-240 V, 10.0 A, 50-60 Hz. DC O/P: +12 V/ 64.6 A, +12 Vsb/ 4.32 A. Total power can't exceed 775 W. Class I, 45.0 °C. Altitude during operation 5000 m. | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1:2005+A1 +A2, UL 62368-1 ed.3 | CB by TUV/Rh, UL (E132068) |
| alt. | Lite-On Technology Corporation | PS-2521-3XXXXXX (X= 0-9, A-Z, hyphen or blank) | AC I/P: 100-240 V, 10.0 A, 50-60 Hz. DC O/P: +12 V/ 43.75 A, +12 Vsb/ 4.13 A. Total power can't exceed 525 W. Class I, 45.0 °C. Altitude during operation 5000 m. | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | CB by TUV/Rh, UL (E132068) |
| alt. | Delta Electronics Inc | DPS-775AB-1 XX (X= 0-9, A-Z or blank) | AC I/P: 100-240 V, 10.0 A, 50-60 Hz. DC O/P: +12.1 V/ 64.6 A, +12 VSB/ 4.32 A Class I, 45.0 °C. Altitude during operation 5000 m. | IEC 62368-1: 2018, EN IEC 62368-1: 2020+ A11, IEC 62368-1: 2014, EN 62368-1: 2014+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | CB by UL (Demko), UL (E131881) |
| alt. | Delta Electronics Inc | DPS-1125AB-5 XX (X= 0-9, A-Z or blank) | AC I/P: 100 V, 12.0 A, 50-60 Hz. DC O/P: V12,1=: +12 Vdc/ 93.75 A, 12VSB=: +12 Vdc/ 5.75A, max. total output 1125 W or AC I/P: 115-127 V, 12.0 A, 50-60 Hz. DC O/P: V12,1=: +12 Vdc/ 106.25 A, 12VSB=: | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | CB by TUV/Rh, UL (E131881) |

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| | | | +12 Vdc/ 5.75 A, max. total output 1275 W or AC I/P: 200-240 V, 10.0 A, 50-60 Hz. DC O/P: V12,1=+12 Vdc/ 120.9 A, 12VSB=+12 Vdc/ 5.75 A, max. total output 1450 W. Class I, 50.0 °C. Altitude during operation 5000 m. | | |
| Front SYS Fan (optional) | Foxconn Technology Co Ltd | PVA092G12H- P29 | 1.2 A max., 12 Vdc, 70.2 CFM min. | EN IEC 62368-1: 2020+A11, EN 62368-1: 2014+ A11, UL 507ed.10 | TUV, UL (E231557) |
| alt. | HeYuan Yongjia Industry Co Ltd | AS9025V12 | 0.6 A max., 12 Vdc, 64.92 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Interchangeable | Interchangeable | 1.2 A max., 12 Vdc, 64.92 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Rear SYS Fan | Foxconn Technology Co Ltd | PVA120G12U | 0.75 A max., 12 Vdc, 115.2 CFM min. | EN IEC 62368-1: 2020+A11, EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | HeYuan Yongjia Industry Co Ltd | AB12025S12 | 0.65 A max., 12 Vdc, 115.5 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Interchangeable | Interchangeable | 0.75 A max., 12 Vdc, 115.2 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950- 12005+A1 + A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Dual Memory Fan (front and rear) (optional) | Foxconn Technology Co Ltd | PVA060G12S- ***_** (*=0-9 or A- Z, a-z) | 2.0 A max., 12.0 Vdc, 56.1 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | HeYuan Yongjia Industry Co Ltd | FAB6025N12 | 1.5 A max., 12 Vdc, 52.9 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Interchangeable | Interchangeable | 2.0 A max., 12.0 Vdc, 52.9 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Side Panel Fan (front and rear) (optional) | Foxconn Technology Co Ltd | PVA080F12T- ***_** (*=0-9 or A- Z, a-z) | 0.9 A max., 12 Vdc, 63.1 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | HeYuan Yongjia Industry Co Ltd | AB8020S12 | 1.2 A max., 12 Vdc, 60.2 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |

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| alt. | Interchangeable | Interchangeable | 1.2 A max., 12 Vdc, 60.2 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+ A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| CPU Fan (inside the CPU HS) | Foxconn Technology Co Ltd | PVA120G12V | 1.2 A max., 12 V dc, 115.2 CFM min. | EN IEC 62368-1: 2020+A11, EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | HeYuan YongJia Industry Co Ltd | FABB025N12 | 1.2 A max., 12 V dc, 113.6 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Huizhou City XunShuo Technology Co Ltd | DF1082512B2F g (g - series no. g can be a-z or blank for different markets) | 1.0 A max., 12 V dc, 121.77 CFM. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E465463) |
| alt. | Interchangeable | Interchangeable | 1.2 A max., 12 Vdc, 113.6 CFM min. | IEC 62368-1: 2018, IEC 62368- 1:2014, IEC 60950- 1: 2005+ A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Heatsink (HS) for CPU | Interchangeable | Interchangeable | Aluminium. | -- | -- |
| Removable Storage Modules (optional) | CRU Data Security Group LLC | DX175 | 5.0/ 12 Vdc, 3.0/ 6.0 A (optional) | UL 62368-1 ed.2 | UL (E237918) |
| - HDD Box Fan | Yen Sun Technology Corp | FD124015MB- N- CBH | 0.12 A max., 12 Vdc, 6.6 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E187205) |
| Hard Disk Drive (HDD) (optional) | SK Hynix Inc | HFS3T8GD0FE I-Aabcd (a, b, c and d denoting buyer can be any letter (A to Z) or number (0 to 9)) | 3.3 A, 3.3 Vdc. Class III. | IEC 62368-1: 2018, UL 62368-1 ed.3 | CB by TUV/SUD, UL (E333981) |
| alt. | SK Hynix Inc | HFS3T8G32FE H- BA10A | 2.0 A, 5.0 Vdc. Class III. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by TUV/SUD, UL (E333981) |
| alt. | SK Hynix Inc | HFS15T3DGLX 070N | 2.1 A, 12 Vdc. Class III. | IEC 62368-1: 2018, UL 62368-1 ed.3 | CB by TUV/SUD, UL (E333981) |
| alt. | Toshiba Electronic Devices & Storage Corporation | HDWL1yy (where "xx" may be any number 00-10, "yy" may be any number 11-99) | 0.5 A, 3.3 Vdc, 0.7 A, 5.0 Vdc. (optional) | IEC 62368-1: 2014, UL 62368-1 ed.2 | CB by UL (JP), UL (E145163) |
| alt. | HGST Japan Ltd | Hww7210nnKL A3nn | 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 60950-1 | CB by TUV/Rh, UL (E182115) |

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| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 3.3 A max., 3.3 Vdc or 2.0 A max., 5.0 Vdc or 2.1 A max., 12 Vdc or 0.5 A max., 3.3 Vdc, 0.7 A max., 5.0 Vdc or 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verified by other certificate body, UL |
| Solid State Drive (SSD) (optional, alternate when HDD not provided) | Samsung Electronics Co Ltd | MZ-K***** (* can be 0-9, A-Z, blank, slash or dash) | 4.8 A, 3.3 Vdc. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E149091) |
| alt. | Solid State Storage Technology Corp (Lite-On) | K2-L1xxxxxxx ("x" can be any alphanumeric character or blank) | 2.5 A, 5.0 Vdc. Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed. 2, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E205203) |
| alt. | Solid State Storage Technology Corp | ED1- 2Wxxxxxxx (where x can be any alphanumeric character or blank) | 2.0 A, 12 Vdc (optional) Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2 | CB by TUV/Rh, UL (E205203) |
| alt. | Western Digital Technologies Inc | GRxxxxyy-x (where x and y are any alphanumeric character, or blank representing non-safety critical features such as memory size) | Class III supplied by SELV. Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E332258) |
| alt. | Intel Corp | SSD* (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, 5.0 Vdc and/ or 12 Vdc. (for reference only) | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E139761) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 4.8 A max., 3.3 Vdc or 2.5 A max., 5.0 Vdc or 2.0 A max., 12 Vdc or 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc or | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 | Verified by other certificate body, UL |

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| | | | 3.3 Vdc, 5.0 Vdc and/ or 12 Vdc. | ed.2 | |
| Optical Disk Drive (ODD) (optional) | Hitachi-LG Data Storage Inc | DU9** (where first "*" can be any number 0-9 and second "*" can be any alphanumeric character, denoting non safety related differences) | 1.8 A, 5.0 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| alt. | Philips & Lite- On Digital Solutions Corporation | DG-xx3Sxxxxx (x can be any alphanumeric character or blank) | 2.0 A, 5.0 Vdc, 1.25 A, 12 Vdc. (optional) Class III. Class 1 Laser Product. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2007, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E306430) |
| alt. | LG Electronics Inc | GHB** (where the "*" can be 0~9, A~Z, any alphanumeric character or blank according to design, brand, buyer, color, software or other configurations, denoting non safety related differences) | 2.0 A, 5.0 Vdc, 2.5 A, 12 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc or 2.0 A max., 5.0 Vdc, 2.5 A max., 12 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, IEC 60825-1: 2007, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verified by other certificate body, UL |
| Graphics Card (GPU) (optional) | Foxconn International Inc | TPC-F004G | 350 W max. Interface ports (I/O ports) complied with ES1 (SELV), LPS requirement. (UL Listed Accessory) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (Demko), UL (E93839) |
| alt. | NVIDIA Corp | PG192 | 75 W max. Interface ports (I/O ports) complied with ES1 (SELV), LPS requirement. (UL Listed Accessory) | IEC 62368-1: 2018 EN IEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E204896) |
| alt. | Interchangeable | Interchangeable | 350 W max. Interface ports (I/O ports) complied with ES1 (SELV), LPS requirement. (UL Listed Accessory) | UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | UL |
| alt. | Component User | 864763-001, | 0.9 A, 5.0 Vdc. (optional) | IEC 62368-1: | CB by UL |

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| HP USB 3.0 SD4 Card RDR (optional) | Industry Co Ltd | L11328-001 | | 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | (Demko), UL (E500712) |
| Low-Voltage Solid-State Overcurrent (U850 for USB 3.0 (charge)) | Diodes Incorporated | AP21xyz (The 'x' in model name may be any numeral, 4-9; 'y' may be 1, 2 5 or 6; 'z' may be any single or multiple alpha-numeric characters) | Single channel/ Dual channel: 0.5 to 1.5 A, 2.7 to 5.5 Vdc. (Supplied by external ES1 power source) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 2367 ed.2 | CB by Nemko, UL (E322375) |
| alt. | Texas Instruments Incorporated | TPS2068x, May be followed by other characters that do not impact the safety feature of the device. | Input voltage: 4.5 to 5.5 Vdc. Output continuous rating: 1.5 A. Output current limit: 2.7 A. Maximum operational temperature: 85 °C. (optional) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 2367 ed.2 | CB by UL (US), UL (E169910) |
| Motherboard | Foxconn International Inc | FMB-2203 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | UL 62368-1 ed.3 | UL (E93839) |
| RTC Battery | Shenzhen Pkcell Battery Co Ltd (JHT) | CR2032 | Max Abnormal Charging Current= 10.0 mA. | IEC 60086-4: 2019, UL1642 ed.6 | CB by TUV/Rh, UL (MH48406) |
| alt. | Interchangeable | CR2032, CR-2032, CR 2032 series | Max Abnormal Charging Current= 10.0 mA. | UL1642 ed.6 | UL |
| Thermistor (F4, F5 for USB 3.2) | Polytronics Technology Corp | SMD0805P350 SLR series | 3.5 A, 6.0 Vdc min. | IEC 60730-1: 2013+A1, EN 60730-1: 2016, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E201431) |
| alt. | Littelfuse inc | 0805L350SL series | 3.5 A, 6.0 Vdc min. | IEC 60730-1: 2013+A1, EN 60730-1: 2016, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E183209) |
| alt. | Thinking Electronic Industrial Co Ltd | KLM2S300 | 3.0 A, 6.0 Vdc min. | EN 60730-1: 2011, Clause 15, 17, J15 and J17, UL 1434 ed.1 | TUV, UL (E138827) |
| alt. | CYG Wayon Circuit Protection Co Ltd | LP-ISML350abcd (a=C, U, blank, b=S, Z, blank, c=H, blank, d=F, blank) | 3.5 A, 6.0 Vdc min. | IEC 60730-1: 2013, Clauses 15, 17, J15 and J17, UL 1434 ed.1 | TUV, UL (E202125) |
| alt. | Interchangeable | Interchangeable | 3.5 A max., 6.0 Vdc min. It (Itrip) = 7.0 A. | IEC 60730-1:2013 +A11, Clause 15, 17 and Annex J, UL 1434 ed.1 | Verify by other cert. body, UL |
| Metal Chassis | Interchangeable | Interchangeable | Sheet steel or steel, thickness 0.91 mm min. | -- | -- |

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| | | | See Enclosures- Diagrams 4-01 for details. | | |
| Metal Handle (x2) | Interchangeable | Interchangeable | Metal. | -- | -- |
| Power Supply Cord (optional) | Interchangeable | Interchangeable | Detachable. Types NISP-2, NISPE-2, NISPT-2, SP-2, SPE-2, SPT-2, SP-3, SPE-3, SPT-3, SV, SVE, SVO, SVOO, SVT, SVTO, SVTOO, SJ, SJE or SJT. 240 Vac min., 1.5 m min. and 2.4 m max. long, rated VW-1, one end with grounding type NEMA 5-15P or NEMA 6-15P, the other end with an appliance coupler. No. 14 AWG min. | UL 817 ed.2 | UL |
| Interconnecting Cable (optional) | Interchangeable | Interchangeable | Detachable, 3.05 m long max., 30 V min., 80 °C min., suitable for external use, jacketed, VW-1 or FT-1. | UL 758, ed.3 or UL 444, ed.5 or UL 1863 ed.4 | UL |
| Certification Marks, Rating Label and Grounding/ Warning Label Materials | CCL Design (Suzhou) Co Ltd (Worldmark) | 3311T-E2a | Used in combination with Printer/ Ribbon DPW3000-140-450. Affixed to the metal surface. | UL 969 ed.5 | UL (MH20595) |
| alt. | Interchangeable | Interchangeable | 70 °C min. | UL 969 ed.5 | UL |
| Plastic Bezel/ Plastic Panel, (front, top) | UR Materials Industry (Shenzhen) Co Ltd | 210 | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL (E323548) |
| alt. | Ineos Styrolution Group Gmbh | GP-22 | HB min., 80 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL (E108538) |
| alt. Plastic Bezel/ Plastic Panel, (front) | Interchangeable | Interchangeable | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL |
| Blank Panel (optional, when Removable Storage Modules, ODD not provided) | Sabic Innovative Plastics US L L C | 925(GG) | V-2 min., 120 °C min., thickness 0.8 mm min. | UL 94 ed.6 | UL (E121562) |
| PCB | Interchangeable | Interchangeable | V-1 min., 105 °C min. | UL 796 ed.11 | UL |
| CPU Fan Duct Frame, | UR Materials Industry (Shenzhen) | Fliger 300 | Plastic part (V-2 min., 60 °C min., thickness | UL 94 ed.6 | UL (E323548) |

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| PCI Retainer Frame (internal) | Co Ltd | | 0.8 mm min.) with Metal part (thickness 0.6 mm) | | |
| alt. PCI Retainer Frame (internal) | Interchangeable | Interchangeable | Plastic part (V-2 min., 60 °C min., thickness 0.8 mm min.) with Metal part (thickness 0.6 mm) | UL 94 ed.6 | UL |
| PCI Card Guide (for Front SYS Fan - lower and middle), Front Fan Duct (for Front SYS Fan - upper), Rear Fan Duct (for Rear SYS Fan) | UR Materials Industry (Shenzhen) Co Ltd | Fliger 300 | V-2 min., 60 °C min., thickness 0.8 mm min. | UL 94 ed.6 | UL (E323548) |
| alt. | Sabic Innovative Plastics US L L C | 925(GG) | V-2 min., 120 °C min., thickness 0.8 mm min. | UL 94 ed.6 | UL (E121562) |
| Switching Power Supply (PSU) | Delta Electronics Inc | DPS-1125AB-4 XX (X=0-9, A-Z or blank) | AC I/P: 100 V, 12 A, 115-127 V, 12 A, 200-240 V, 10 A, 50-60 Hz, Class I. DC O/P: V12.1-CPU0, 18 A, V12.1-M0, 18 A, V12.1-G1, 18 A, V12.1-B, 18 A, V12.1-CPU1, 18 A, V12.1-M1, 18 A, V12.1-G2, 18 A, V12.1-S, 18 A, V12.1-CPU2, 18 A, V12.1-M2, 18 A, V12.1-G3, 18 A, V12.1-D, 18 A, V12.1-CPU3, 18 A, V12.1-M3, 18 A, V12.1-G4, 18 A, 5VSB, 15 A.100 V, 12 A, 50-60 Hz, Max. total outputs: 1125 W. 115-127 V, 12 A, 50-60 Hz, Max. total outputs: 1275 W. 200-240 V, 10 A, 50-60 Hz, Max. total outputs: 1450 W. 55 °C. Altitude during operation 5000 m. | IEC 62368-1: 2014, EN 62368-1: 2017+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | CB by UL (Demko), UL (E131881) |
| alt. | Delta Electronics Inc | DPS-1450AB-2 XX (X= 0-9, A-Z or blank) | AC I/P: 100 V, 16 A or 115-127 V, 16 A or 200-240 V, 10 A, 50-60 Hz, Class I. DC O/P V12.1CPU0: +12 Vdc/ 18 A, V12,1-M0: +12 Vdc/ 18 A, V12,1-G1: +12 Vdc/ 18 A, V12,1-B: +12 Vdc/ 18 | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | CB by TUV/Rh, UL (E131881) |

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| | | | A, V12,1-CPU1: +12 Vdc/ 18 A, V12,1-M1: +12 Vdc/ 18 A, V12,1-G2: +12 Vdc/ 18 A, V12,1-S: +12 Vdc/ 18 A, V12,1-CPU2: +12 Vdc/ 18 A, V12,1-M2: +12 Vdc/ 18 A, V12,1-G3: +12 Vdc/ 18 A, V12,1-D: +12 Vdc/ 18 A, V12,1- CPU3: +12 Vdc/ 18 A, V12,1-M3: +12Vdc/ 18 A, V12,1-G4: +12 Vdc/ 18 A, 5VSB: +5 Vdc/ 15 A. 100 V, 16 A, 50-60Hz, Max. total outputs: 1450 W. 115-127 V, 16 A, 50-60 Hz, Max. total outputs: 1550 W. 200-240 V, 10 A, 50-60 Hz, Max. total outputs: 1700 W. 55 °C. Altitude during operation 5000m. | | |
| Rear SYS Fan | Foxconn Technology Co Ltd | PVA120K12P | 1.30 A max., 12 Vdc, 135.18 CFM min. | EN 62368-1: 2014 + A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | PFC0381B1- 1QZ (Z standards for 30 characters, each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank, for marketing purpose only, no safety critical related) | 0.932 A max., 12 Vdc, 137.0 CFM min. | EN IEC 62368-1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Interchangeable | Interchangeable | 1.30 A max., 12 Vdc, 135.18 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+ A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Front SYS Fan (lower) | Foxconn Technology Co Ltd | PVA120G12S | 0.30 A max., 12 Vdc, 81.90 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | MFC0251V1- 1Q0Z (Z standards for 30characters, each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank, for marketing purpose only, no safety critical related) | 0.25 A max., 12 Vdc, 83.0 CFM min. | EN IEC 62368-1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |

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| alt. | Foxconn Technology Co Ltd | PVA120G12T | 0.50 A max., 12 Vdc, 102.24 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Heyuan Yongjia Industry Co Ltd | AS12025S12 | 0.65 A max., 12 Vdc, 109.92 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Interchangeable | Interchangeable | 0.65 A max., 12 Vdc, 81.90 CFM min. | IEC 62368-1: 2018IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Front SYS Fan (middle) | Foxconn Technology Co Ltd | PVA080G12R | 0.80 A max., 12.0 Vdc, 75.1 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | PF80251BX- 1QZ (Z standards for 30 characters, each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank, for marketing purpose only, no safety critical related) | 0.552 A max., 12 Vdc, 64.8 CFM min. | EN IEC 62368-1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Interchangeable | Interchangeable | 0.80 A max., 12.0 Vdc, 64.8 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Front SYS Fan (upper) | Foxconn Technology Co Ltd | PVA092G12H- P29 | 1.20 A max., 12 Vdc, 87.93 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | PF92251BX- 1QZ (Z standards for 30 characters, each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank, for marketing purpose only, no safety critical related) | 0.828 A max., 12.0 Vdc, 85.4 CFM min. | EN IEC 62368-1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Interchangeable | Interchangeable | 1.20 A max., 12 Vdc, 85.4 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+ A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| CPU Fan (inside the CPU HS) | Foxconn Technology Co Ltd | PVA092G12H- P29 | 1.20 A max., 12 Vdc, 84.42 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Foxconn | PVA120G12V | 1.20 A max., 12 Vdc, | EN 62368-1: | TUV, UL |

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| | Technology Co Ltd | | 115.2 CFM min. | 2014+A11, UL 507 ed.10 | (E231557) |
| alt. | Huizhou City XunShuo Technology Co Ltd | DF1082512B2F g (g - series no. g can be a-z or blank for different markets) | 1.0 A max., 12 Vdc, 121.77 CFM. | EN IEC 62368-1: 2018+A11, UL 507 ed.10 | TUV, UL (E465463) |
| alt. | Interchangeable | Interchangeable | 1.20 A max., 12 Vdc, 84.42 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Heatsink (HS) for CPU | Interchangeable | Interchangeable | Aluminium. | -- | -- |
| Removable Storage Modules (optional) | CRU Data Security Group LLC | DX175 | 5/12 Vdc, 3/6 A (optional) | UL 62368-1 ed.2 | UL (E237918) |
| HDD Box Fan | Yen Sun Technology Corp | FD124015MB- N-CBH | 0.12 A max., 12 Vdc, 6.6 CFM | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E187205) |
| Hard Disk Drive (HDD) (optional) | SK Hynix Inc | HFS3T8GD0FE I-Aabcd (a, b, c and d denoting buyer can be any letter (A to Z) or number (0 to 9)) | 3.3 A, 3.3 Vdc. Class III. | IEC 62368-1: 2018, UL 62368-1 ed.3 | CB by TUV/SUD, UL (E333981) |
| alt. | SK Hynix Inc | HFS3T8G32FE H-BA10A | 2.0 A, 5.0 Vdc. Class III. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by TUV/SUD, UL (E333981) |
| alt. | SK Hynix Inc | HFS15T3DGLX 070N | 2.1 A, 12 Vdc. Class III. | IEC 62368-1: 2018, UL 62368-1 ed.3 | CB by TUV/SUD, UL (E333981) |
| alt. | Toshiba Electronic Devices & Storage Corporation | HDWL1yy (where "xx" may be any number 00-10, "yy" may be any number 11-99) | 0.5 A, 3.3 Vdc, 0.7 A, 5.0 Vdc. (optional) | IEC 62368-1: 2014, UL 62368-1 ed.2 | CB by UL (JP), UL (E145163) |
| alt. | HGST Japan Ltd | Hww7210nnKL A3nn | 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E182115) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 3.3 A max., 3.3 Vdc or 2.0 A max., 5.0 Vdc or 2.1 A max., 12 Vdc or 0.5 A max., 3.3 Vdc, 0.7 A max., 5.0 Vdc or 1.5 A max., 5.0 Vdc, | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 | Verified by other certificate body, UL |

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| | | | 2.0 A max., 12 Vdc. | ed.2 | |
| Solid State Drive (SSD) (optional, alternate when HDD not provided) | Samsung Electronics Co Ltd | MZ-K***** (* can be 0-9, A-Z, blank, slash or dash) | 4.8 A, 3.3 Vdc. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E149091) |
| alt. | Solid State Storage Technology Corp (Lite-On) | K2-L1xxxxxxx ("x" can be any alphanumeric character or blank) | 2.5 A, 5.0 Vdc. Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed. 2, UL 60950-1ed.2 | CB by TUV/Rh, UL (E205203) |
| alt. | Solid State Storage Technology Corp | ED1-2Wxxxxxxx (where x can be any alphanumeric character or blank) | 2.0 A, 12 Vdc (optional) Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2 | CB by TUV/Rh, UL (E205203) |
| alt. | Western Digital Technologies Inc | GRxxxxy-x (where x and y are any alphanumeric character, or blank representing non-safety critical features such as memory size) | Class III supplied by SELV. Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E332258) |
| alt. | Intel Corp | SSD* (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, 5.0 Vdc and/ or 12 Vdc. (for reference only) | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E139761) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 4.8 A max., 3.3 Vdc or 2.5 A max., 5.0 Vdc or 2.0 A max., 12 Vdc or 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc or 3.3 Vdc, 5.0 Vdc and/ or 12 Vdc. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verified by other certificate body, UL |
| Optical Disk Drive (ODD) (optional) | Hitachi-LG Data Storage Inc | DU9** (Where first "*" can be any number 0-9 and second "*" can be any alphanumeric character, denoting non safety related differences) | 1.8 A, 5.0 Vdc. Class III. Class I Laser Product. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| alt. | Philips & Lite- On Digital Solutions | DG-xx3Sxxxxx (x can be any | 2.0 A, 5.0 Vdc, 1.25 A, 12 Vdc. (optional) | IEC 62368-1: 2014, IEC 60950-1: | CB by TUV/Rh, UL (E306430) |

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| | Corporation | alphanumeric character or blank) | Class III. Class 1 Laser Product. | 2005+A1+A2, IEC 60825-1: 2007, UL 62368-1 ed.2, UL 60950-1 ed.2 | |
| alt. | LG Electronics Inc | GHB** (where the "*" can be 0~9, A~Z, any alphanumeric character or blank according to design, brand, buyer, color, software or other configurations, denoting non safety related differences) | 2.0 A, 5.0 Vdc, 2.5 A, 12 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018 IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc or 2.0 A max., 5.0 Vdc, 2.5 A max., 12 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, IEC 60825-1: 2007, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verified by other certificate body, UL |
| Graphics Card (GPU) (optional) | Foxconn International Inc | TPC-F004G | 350 W max. Interface ports (I/O ports) complied with ES1 (SELV), LPS requirement. (UL Listed Accessory) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (Demko), UL (E93839) |
| alt. | Interchangeable | Interchangeable | 350 W max. Interface ports (I/O ports) complied with ES1 (SELV), LPS requirement. (UL Listed Accessory) | UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | UL |
| alt. HP USB 3.0 SD4 Card RDR (optional) | Component User Industry Co Ltd | 864763-001, L11328-001 | 0.9 A, 5.0 Vdc. (optional) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (Demko), UL (E500712) |
| alt. G4 Personality M.2 (optional) | Foxconn International Inc | FMB-2210 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. Dual 10GbE (optional) | Foxconn International Inc | FMB-2207 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |

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| alt. Front IO Module (FIO-E2) (optional) | Foxconn International Inc | FMB-2214 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. TBT4 (Accessory Card) (optional) | Foxconn International Inc | FMB-2209 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| Motherboard | Foxconn International Inc | FMB-2205 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | UL 62368-1 ed.3 | UL (E93839) |
| RTC Battery | Shenzhen Pkcell Battery Co Ltd (JHT) | CR2032 | Max Abnormal Charging Current= 10.0 mA. | IEC 60086-4: 2019, UL1642 ed.6 | CB by TUV/Rh, UL (MH48406) |
| alt. | Interchangeable | CR2032, CR-2032, CR 2032 series | Max Abnormal Charging Current= 10.0 mA. | UL1642 ed.6 | UL |
| Thermistor (F2 for internal connector P24, P25) (F4, F5, F6 for USB 3.0) | Polytronics Technology Corp | SPR-P260T series | 2.6 A, 6.0 Vdc min. | IEC 60730-1: 2013+A1, EN 60730-1:2016, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E201431) |
| alt. | Littelfuse Inc | 0805L260UL series | 2.6 A, 6.0 Vdc min. | IEC 60730-1: 2013+A1, EN 60730-1:2016, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E183209) |
| alt. | Interchangeable | Interchangeable | 2.6 A, 6.0 Vdc min. | IEC 60730-1: 2013+A11, Clause 15, 17 and Annex J, UL 1434 ed.1 | Verify by other cert. body, UL |
| Low-Voltage Solid- State Overcurrent (U22 for internal connector P152) | Texas Instruments Incorporated | TPS2061x Where 'x' is C or D. May be followed by other characters that do not impact the safety feature of the device. | Ratings: (optional) Input Voltage: 4.5 to 5.5 Vdc. Output Continuous Rating: 1.0 A. Output Current Limit: 1.9 A. Maximum Operational Temperature: 85 °C. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 2367 ed.2 | CB by UL (US), UL (E169910) |
| alt. | Will Semiconductor | WS4612EBx- 5/TR (x can be A, B, C or D, A for EN high enable & Discharge, B for EN low enable & Discharge, C for EN high enable & no Discharge, D for EN low enable & no | Ratings: (optional) Input Voltage Range: 2.5 to 5.5 Vdc. Current Limit Rating: 1.2 to 1.6 A. | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (Demko), UL (E486497) |

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| | | Discharge) | | | |
| alt. | Joulwatt Technology Co Limited | JW7115SA-1SOTA#TRPBF | Vin: 2.7 to 5.5 Vdc, Vout: 2.7 to 5.5 Vdc, Iout: 1.1-1.5 A. (optional) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 62368-1 ed.2 | CB by UL (Demko), UL (E497605) |
| alt. | Anpec Electronics Corp | APL3553 followed by A, B, C or D, followed by B, C, X or CT, followed by I, followed by -TR, followed by G | Input Voltage: 2.7 to 5.5 Vdc. Maximum Output Continuous Rating: 1.0 A. Current Limit Rating: 1.9 A. Ambient: - 40 to 85 °C. | IEC 62368-1: 2018, EN IEC 62368-1: 2020+A11, UL 2367 ed.2 | CB by UL (Demko), UL (E328191) |
| alt. | Diodes Incorporated | AP21xyz The 'x' in model name may be any numeral, 4-9. 'y' may be 1, 2, 5 or 6. 'z' may be any single or multiple alpha- numeric characters | Single channel / Dual channel: 0.5 to 1.5 A, 2.7 to 5.5 Vdc. (Supplied by external ES1 power source) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 2367 ed.2 | CB by Nemko, UL (E322375) |

Modelo HP Z8 Fury G5 (FCLSA-2204A, FCLSA-2204B)

| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity ¹ |
|----------------------------------|-------------------------|-----------------|---|--|------------------------------------|
| Metal Chassis | Interchangeable | Interchangeable | Sheet steel or steel, thickness 0.8 mm min. See Enclosures-Diagrams 4-01, 4-02 for details. | | |
| Power Supply Cord (optional) | Interchangeable | Interchangeable | NISP-2, NISPE-2, NISPT-2, SP-2, SPE-2, SPT-2, SP-3, SPE-3, SPT-3, SV, SVE, SVO, SVOO, SVT, SVTO, SVTOO, SJ, SJE or SJT. 240 Vac min., 1.5 m min. and 2.4 m max. long, rated VW-1, one end with grounding type NEMA 5-15P or NEMA 6-15P, the other end with an appliance coupler. No. 14AWG min. | UL 817ed.2 | UL |
| Interconnecting Cable (optional) | Interchangeable | Interchangeable | Detachable, 3.05 m long max., 30 V min., 70 °C min., suitable for external use, jacketed, VW-1 or FT-1. | UL 758, ed.3 or UL 444, ed.5 or UL 1863 ed.4 | UL |

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| Certification Marks, Rating Label and Grounding/ Warning Label Materials | CCL Design (Suzhou) Co Ltd (Worldmark) | 3311T-E2a | Used in combination with Printer/ Ribbon DPW3000-140-450. Affixed to the metal surface. | UL 969 ed.5 | UL (MH20595) |
| alt. | Interchangeable | Interchangeable | 70 °C min. | UL 969 ed.5 | UL |
| Combustible Materials outside Metal Chassis | Interchangeable | Interchangeable | HB or HBF min. | UL 94 ed.6 | UL |
| alt. | Interchangeable | Interchangeable | Flammability level is ignored, when small parts (4 g or 1750 mm3 max.) | | |
| Combustible Materials inside Metal Chassis | Interchangeable | Interchangeable | V-2 or HF-2 or VTM-2 min. | UL 94 ed.6 | UL |
| alt. | Interchangeable | Interchangeable | Flammability level is ignored, when small parts (4 g or 1750 mm3 max.) | | |
| Metal Handle (front, rear) | Interchangeable | Interchangeable | Metal. | | |
| Plastic Bezel (front, top) | UR Materials Industry (Shenzhen) Co Ltd | 210 | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL (E323548) |
| alt. Plastic Bezel (front) | Interchangeable | Interchangeable | HB min., 60 °C min., thickness 1.6 mm min. | UL 94 ed.6 | UL |
| Blank Panel (optional, when Removable Storage Modules, ODD not provided) | Sabic Innovative Plastics US L L C | 925(GG) | V-2 min., 120 °C min., thickness 0.8 mm min. | UL 94 ed.6 | UL (E121562) |
| Base Foot | Interchangeable | Interchangeable | HBmin. | UL 94 ed.6 | UL |
| Rubber Feet (on Base Foot) (optional) | Interchangeable | Interchangeable | HB or HBF min. | UL 94 ed.6 | UL |
| PCB | Interchangeable | Interchangeable | V-1 min., 105 °C min. | UL 796 ed.11 | UL |
| CPU Fan Duct Frame, PCI Retainer Frame (internal) | UR Materials Industry (Shenzhen) Co Ltd | Fliger 300 | Plastic part (V-2 min., 60 °C min., thickness 0.8 mm min.) with Metal part (thickness 0.6 mm) | UL 94 ed.6 | UL (E323548) |
| alt. PCI Retainer Frame (internal) | Interchangeable | Interchangeable | Plastic part (V-2 min., 60 °C min., thickness 0.8 mm min.) with Metal part (thickness 0.6 mm) | UL 94 ed.6 | UL |
| Switching Power Supply (PSU) | Chicony Power Technology Co | D20-1K1P1A | AC I/P: | IEC 62368-1: 2018, ENIEC | CB by UL (Demko), UL |



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| (x1) | Ltd | | (1) 100 V, 12 A, 50-60 Hz; (2) 115-127V, 12A, 50-60 Hz; (3) 200-240 V, 10 A, 50-60 Hz; (4) 118V12A, 400 Hz,. DC O/P: (1) +12 V, 93.75 A max. (at AC input 100 V), +11.5 VSB, 6.25 A max. Max output power: 1125 W. (2) +12V, 106.25A max. (at AC input 115-127 V), +11.5 VSB, 6.25 A max. Max output power: 1275 W. (3) +12V, 120.9A max. (at AC input 200-240 V), +11.5 VSB, 6.25 A max. Max output power: 1450 W. (4) +12V, 106.25A max. (at AC input 118 V), +11.5 VSB, 6.25 A max. Max output power: 1275 W. Class I, 55 °C. Altitude during operation 5000 m. | 62368-1: 2020+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | (E143709) |
| Switching Power Supply (PSU) (x2 max.) | Chicony Power Technology Co Ltd | R20-1K1P1A | AC I/P: (1) 100V,12A, 50-60 Hz; (2) 115-127V,12A, 50-60 Hz; (3) 200-240 V, 10 A, 50-60 Hz; (4) 118V,12A, 400 Hz. DC O/P: (1) +12 V, 93.75 A max. (at AC input 100 V), +11.5 VSB, 6.25 A max. Max output power: 1125 W. (2) +12V, 106.25A max. (at AC input 115-127 V), +11.5 VSB, 6.25 A max. Max output power: 1275 W. (3) +12 V, 120.9 A max. (at AC input 200-240 V), +11.5 VSB, | IEC 62368-1: 2018, ENIEC 62368-1: 2020+A11, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3 | CB by UL (Demko), UL (E143709) |

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| | | | 6.25 A max. Max output power: 1450 W. (4) +12V, 106.25A max. (at AC input 118 V), +11.5 VSB, 6.25 A max. Max output power: 1275 W. Class I, 48 °C. Altitude during operation 5000 m. | | |
| Rear SYS Fan | Foxconn Technology Co Ltd | PVA120K12P | 1.3 A max., 12 Vdc, 135.18 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | PFC038181-1QZ, Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank, for marketing purpose only, no safety critical related. | 0.932 A max., 12 Vdc, 137.0 CFM min. | ENIEC 62368-1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Interchangeable | Interchangeable | 1.3 A max., 12 Vdc, 135.18 CFM min. | IEC 62368-1: 2018, IEC 62368-1:2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Front SYS Fan (lower) | Foxconn Technology Co Ltd | PVA120G12Z1, Z1 stands for T, U,V,S,R | 0.3 A max., 12 Vdc, 81.9 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | MFC0251V1-1Q0Z, Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., /, - or blank, for marketing purpose only, no safety critical related. | 0.25 A max., 12 Vdc, 83.0 CFM min. | ENIEC 62368-1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Foxconn Technology Co Ltd | PVA120G12Z1, Z1 stands for T, U,V,S,R | 0.5 A max., 12 Vdc, 102.24 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Heyuan Yongjia Industry Co Ltd | Ax12025S12 (x= B, C, S) | 0.65 A max., 12 Vdc, 109.92 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Interchangeable | Interchangeable | 0.65 A max., 12 | IEC 62368-1: | Verified by |



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| | | | Vdc, 81.9 CFM min. | 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | other certificate body, UL |
| Front SYS Fan (upper and middle) | Foxconn Technology Co Ltd | PVA092G12H- P29 | 1.2 A max., 12 Vdc, 84.42 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | PF92251V1- 1QZ, Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., I, - or blank, for marketing purpose only, no safety critical related. | 0.633 A max., 12 Vdc, 75.9 CFM min. | ENIEC 62368- 1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Interchangeable | Interchangeable | 1.2 A max., 12 Vdc, 75.9 CFM min. | IEC 62368-1: 2018, IEC 62368-1:2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| DIMM Fan (front and rear) | Foxconn Technology Co Ltd | PVA080G12R | 0.8 A max., 12.0 Vdc, 75.1 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Sunonwealth Electric Machine Industry Co Ltd | PF80251BX- 1QZ, Z stands for 30 characters. Each character stands for one of the following signs: 0-9, A-Z, (,), ., I, - or blank, for marketing purpose only, no safety critical related. | 0.552 A max., 12 Vdc, 64.8 CFM min. | ENIEC 62368- 1: 2020+A11, UL 507 ed.10 | TUV, UL (E77551) |
| alt. | Interchangeable | Interchangeable | 0.8 A max., 12 Vdc, 64.8 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| CPU Fan (inside the CPU HS) | Foxconn Technology Co Ltd | PVA092G12H- P29 | 1.2 A max., 12 V de, 84.42 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |



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| alt. | Foxconn Technology Co Ltd | PVA120G12Z1, Z1 stands for T, U,V,S,R | 1.2 A max., 12 V de, 115.2 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | Huizhou City Xunshuo Technology Co Ltd | DF120251282F g, g can be A-Z or blank for different markets | 1.0 A max., 12 Vdc, 121.77 CFM min. | ENIEC 62368-1:2020+A11, UL 507 ed.10 | TUV, UL (E465463) |
| alt. | Interchangeable | Interchangeable | 1.2 A max., 12 Vdc, 84.42 CFM min. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Heatsink (HS) for CPU | Interchangeable | Interchangeable | Aluminium. | | |
| Removable Storage Modules (optional) | CRU Data Security Group LLC | DX175 | 5.0/ 12 Vdc, 3/ 6 A (optional) | UL 62368-1 ed.2 | UL (E237918) |
| HOD Box Fan | Yen Sun Technology Corp | FD124015MB-N-CBH | 0.12 A max., 12 Vdc, 6.6 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E187205) |
| Side Panel Fan (optional) | Foxconn Technology Co Ltd | PVA080F12T-***-** (*=0-9 or A-Z, a-z) | 0.9 A max., 12 Vdc, 63.1 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E231557) |
| alt. | HeYuan Yongjia Industry Co Ltd | AB8020S12 | 1.2 A max., 12 Vdc, 60.2 CFM min. | EN 62368-1: 2014+A11, UL 507 ed.10 | TUV, UL (E333267) |
| alt. | Interchangeable | Interchangeable | 1.2 A max., 12 Vdc, 60.2 CFM min. | IEC 62368-1: 2018, IEC 62368-1:2014, IEC 60950-1: 2005+A1+A2, UL 507 ed.10 | Verified by other certificate body, UL |
| Hard Disk Drive (HOD) (optional) | SK Hynix Inc | HFS3T8GD0FE I-Aabcd (a, b, c and d denoting buyer can be any letter (A to Z) or number (0 to 9)) | 3.3 A, 3.3 Vdc. Class III. | IEC 62368-1: 2018, UL 62368-1 ed.3 | CB by TUV/SUD, UL (E333981) |
| alt. | SK Hynix Inc | HFS3T8G32FE H-BA10A | 2.0 A, 5.0 Vdc. Class III. | IEC 62368-1: 2018, IEC 62368-1:2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by TUV/SUD, UL (E333981) |
| alt. | SK Hynix Inc | HFS15T3DGLX 070N | 2.1 A, 12 Vdc. Class III. | IEC 62368-1: 2018, UL 62368-1 ed.3 | CB by TUV/SUD, UL (E333981) |
| alt. | Toshiba Electronic | HOWL1yy (where "yy" may | 0.5 A, 3.3 Vdc, 0.7 A, 5.0 Vdc. | IEC 62368-1: 2014, UL | CB by UL (JP), UL |



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| | Devices & Storage Corporation | be any number 11-99) | (optional) | 62368-1 ed.2 | (E145163) |
| alt. | HGST Japan Ltd | Hww7210nnKL A3nn | 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E182115) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 3.3 A max., 3.3 Vdc or 2.0 A max., 5.0 Vdc or 2.1 A max., 12 Vdc or 0.5 A max., 3.3 Vdc, 0.7 A max., 5.0 Vdc or 1.5 A max., 5.0 Vdc, 2.0 A max., 12 Vdc. | IEC 62368-1: 2018, IEC 62368-1:2 014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verified by other certificate body, UL |
| Solid State Drive (SSD) (optional, alternate when HOD not provided) | Samsung Electronics Co Ltd | MZ-K***** (* can be 0-9, A- Z, blank, slash or dash) | 4.8 A, 3.3 Vdc. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E149091) |
| alt. | Solid State Storage Technology Corp (Lite-On) | K2-L1xxxxxxx ("x" can be any alphanumeric character or blank) | 2.5 A, 5.0 Vdc. Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed. 2, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E205203) |
| alt. | Solid State Storage Technology Corp | ED1-2Wxxxxxxx (where x can be any alphanumeric character or blank) | 2.0 A, 12 Vdc (optional) Class III. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2 | CB by TUV/Rh, UL (E205203) |
| alt. | Western Digital Technologies Inc | GRxxxy-x (where x and y are any alphanumeric character, or blank representing non-safety critical features such as memory size) | Class III supplied by SELV. Ratings are not required and provided for reference only: 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by UL (US), UL (E332258) |
| alt. | Intel Corp | SSD* (where * can be optional letters or | 3.3 Vdc, 5.0 Vdc and/ or 12 Vdc. (for reference only) | IEC 62368-1: 2014, IEC 60950-1: | CB by UL (US), UL (E139761) |

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| | | numbers used to identify features such as memory type, size (thickness, width) and identify details not critical to the compliance of the drive) | | 2005+A1+A2, UL 62368-1 ed.2, UL 60950-1 ed.2 | |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: 4.8 A max., 3.3 Vdc or 2.5 A max., 5.0 Vdc or 2.0 A max., 12 Vdc or 1.8 A max., 5.0 Vdc, 1.8 A max., 12 Vdc or 3.3 Vdc, 5.0 Vdc and/ or 12 Vdc. | IEC 62368-1: 2018, IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | Verified by other certificate body, UL |
| Optical Disk Drive (ODD) (optional) | Hitachi-LG Data Storage Inc | DU9** (where first "*" can be any number 0-9 and second "*" can be any alphanumeric character, denoting non safety related differences) | 1.8 A, 5.0 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| alt. | Philips & Lite- On Digital Solutions Corporation | DG-xx3Sxxxxx (x can be any alphanumeric character or blank) | 2.0 A, 5.0 Vdc, 1.25 A, 12 Vdc. (optional) Class III. Class 1 Laser Product. | IEC 62368-1: 2014, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2007, UL 62368-1 ed.2, UL 60950-1 ed.2 | CB by TUV/Rh, UL (E306430) |
| alt. | LG Electronics Inc | GHB** (where the "*" can be 0~9, A~Z, any alphanumeric character or blank according to design, brand, buyer, color, software or other configurations, denoting non safety related differences) | 2.0 A, 5.0 Vdc, 2.5 A, 12 Vdc. Class III. Class 1 Laser Product. | IEC 62368-1: 2018, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, UL 62368-1 ed.3, UL 60950-1 ed.2 | CB by Intertek, UL (E119002) |
| alt. | Interchangeable | Interchangeable | Ratings are not required and provided for reference only: | IEC 62368-1: 2018, IEC 62368-1: | Verified by other certificate body, UL |

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| | | | 1.8 A max., 5.0 Vdc or 2.0 A max., 5.0 Vdc, 2.5 A max., 12 Vdc. Class III. Class 1 Laser Product. | 2014, IEC 60950-1: 2005+A1+A2, IEC 60825-1: 2014, IEC 60825-1:2007, UL 62368-1 ed.3, UL 62368-1 ed.2, UL 60950-1 ed.2 | |
| alt. HP USB 3.0 SD4 Card RDR (optional) | Component User Industry Co Ltd | 864763-001, L11328-001 | 0.9 A, 5.0 Vdc. (optional) | IEC 62368-1: 2014, EN 62368-1: 2014 +A11, UL 62368-1 ed.2 | CB by UL (Demko), UL (E500712) |
| alt. Dual 10GbE (optional) | Foxconn International Inc | FMB-2207 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, ENIEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. TBT4 (optional) | Foxconn International Inc | FMB-2209 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, ENIEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. G4 Personality M.2 (optional) | Foxconn International Inc | FMB-2210 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, ENIEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. FIO-UP (optional) | Foxconn International Inc | FMB-2208 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, ENIEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. Front 10 Module (FIO-E2) | Foxconn International Inc | FMB-2214 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | IEC 62368-1: 2018, ENIEC 62368-1: 2020+A11, UL 62368-1 ed.3 | CB by UL (Demko), UL (E93839) |
| alt. Front 10 Module (FIO-E) (optional) | Foxconn International Inc | FMB-1704 | | UL 60950-1 ed.2 | UL (E93839) |
| alt. | Bourns Inc | MF-PSML150 series | 1.5 A, 6.0 Vdc min. | IEC 60730-1: 2010, EN 60730-1:2011, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E174545) |

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| alt. | CYGWayon Circuit Protection Co Ltd | LP- ISML150abcd (a= C, U, blank, b= S, Z, blank, c= H, blank, d= F, blank) | 1.5 A, 6.0 Vdc min. | IEC 60730-1: 2013, EN 60730-1: 2011, Clause 15, 17 and Annex J, UL 1434 ed.1 | TUV, UL (E202125) |
| alt. | Interchangeable | Interchangeable | 1.5 A, 6.0 Vdc min. It (Itnp) = 3.0 A. | IEC 60730-1: 2013+A1, Clause 15, 17 and Annex J, UL 1434 ed.1 | Verify by other cert. body, UL |
| Low-Voltage Solid-State Overcurrent (U850 for USB 3.0 (charge)) | Diodes Incorporated | AP2181z, The 'z' may be any single or multiple alpha- numeric characters | Single channel/ Dual channel: 0.5 to 1.5 A, 2.7 to 5.5 Vdc. (Supplied by external ES1 power source) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 2367 ed.2 | CB by Nemko, UL (E322375) |
| alt. | Texas Instruments Incorporated | TPS2068x, May be followed by other characters that do not impact the safety feature of the device. | Input voltage: 4.5 to 5.5 Vdc. Output continuous rating: 1.5 A. Output current limit: 2.7 A. Maximum operational temperature: 85 °C. (optional) | IEC 62368-1: 2014, EN 62368-1: 2014+A11, UL 2367 ed.2 | CB by UL (US), UL (E169910) |
| Motherboard (FMB-2206) | Foxconn International Inc | FMB-2206 | Electrical ratings not required (the equipment intended for building-in, supplied by ES1) | UL 62368-1 ed.3 | UL (E93839) |
| RTC Battery | Shenzhen Pkcell Battery Co Ltd (JHT) | CR2032 | Max Abnormal Charging Current= 10.0 mA. | IEC 60086-4: 2019, UL1642 ed.6 | CB by TUV/Rh, UL (MH48406) |
| alt. | Interchangeable | CR2032, CR- 2032, CR 2032 series | Max Abnormal Charging Current= 10.0 mA. | UL1642 ed.6 | UL |