**Worldwide Regulatory Compliance Engineering and Environmental Affairs**

MARKETING NAME*: PowerEdge™ T610                                 **Dell Inc.**
REGULATORY MODEL: E03S                                          **www.dell.com**
REGULATORY TYPE: E03S001
EFFECTIVE DATE: December 7, 2010

### TABLE OF CONTENTS FOR PRODUCT SAFETY, EMC & ENVIRONMENTAL DATASHEET

## I.      PRODUCT SAFETY[1]

The product has been certified and bears the Mark, as applicable, of the Product Safety authorities as indicated below.

| Country/Region | Authority or Mark |
|---|---|
| Argentina | IRAM |
| Belarus | BELLIS |
| Canada | SCC |
| China | CNCA or CCC |
| Croatia | KONCAR |
| European Union | CE |
| Germany | TUV |
| IECEE | IECEE  CB |
| Israel | SII |
| Kazakhstan | OTAN – CKT |
| Kenya | KEBS |
| Mexico | NYCE or NOM |
| Moldova | INSM |
| Nigeria | SONCAP |
| Norway | NEMKO |
| Russia | GOST |
| Saudi Arabia | KSA ICCP |
| South Africa | NRCS |
| Taiwan | BSMI |
| Ukraine | UKRTEST or UKRSERTCOMPUTER |
| United States | NRTL |
| Uzbekistan | STZ |

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* Notice:  This product has been assigned a unique regulatory model and regulatory type that is imprinted on the product shipping invoice and product labeling to provide traceability to the regulatory approvals noted on this datasheet.  This datasheet applies to any product that utilizes the assigned regulatory model and type including marketing names other than those listed on this datasheet.  Requests for specific information on product regulatory approvals should reference the assigned product regulatory model and type.

[1] The above-listed Product Safety certifications may vary depending upon the location of the factory and specific product configuration.  Certification marks may not be applied on products for countries outside the purchaser's country.

## II. ELECTROMAGNETIC COMPATIBILITY[2]

The product has been certified and bears the Mark, as applicable, of the EMC authorities as indicated below.

| Country/Region | Authority or Mark | Class |
|---|---|---|
| Australia / New Zealand | ACMA or C-Tick | Class A |
| Belarus | BELLIS | Class A |
| Bosnia & Herzegovina, Montenegro, Serbia | KVALITET | Class A |
| Canada | ICES | Class A |
| China | CNCA or CCC | Class A |
| Croatia | KONCAR | Class A |
| European Union | CE | Class A |
| Israel | SII | Class A |
| Japan | VCCI | Class A |
| Kazakhstan | OTAN – CKT | Class A |
| Moldova | INSM | Class A |
| Norway | NEMKO | Class A |
| Russia | GOST | Class A |
| South Africa | SABS | Class A |
| South Korea | KCC | Class A |
| Taiwan | BSMI | Class A |
| Ukraine | UKRTEST or UKRSERTCOMPUTER | Class A |
| United States | FCC | Class A |
| Uzbekistan | STZ | Class A |
| Vietnam | ICT | Class A |

## III. ERGONOMICS, ACOUSTICS AND HYGIENICS[3]

The product has been certified and bears the Mark, as applicable, of the Ergonomics, Acoustics and Hygienics authorities as indicated below.

| Country/Region | Authority or Mark |
|---|---|
| Germany | GS |
| Russia | GOST |

## IV. POWER CORDS AND USER DOCUMENTATION

Dell products are provided with the power cord and user documentation suitable for the intended country of delivery. Products that are relocated to other countries should use nationally certified power cords and plugs to ensure safe operation of the product. Contact Dell to determine if alternate power cords or user documentation in other languages is available for your market.

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[2] The above-listed EMC certifications may vary depending upon the location of the factory and specific product configuration. Certification marks may not be applied on products for countries outside the purchaser's country.

[3] The above-listed Ergonomics, Acoustics and Hygienics certifications may vary depending upon the location of the factory and specific product configuration. Certification marks may not be applied on products for countries outside the purchaser's country.

## V. DATASHEET RESPONSIBLE PARTY NAME AND ADDRESS

Dell Inc.
Department: Global Regulations and Standards
MS: PS4-30
Round Rock, Texas 78682, USA
512-338-4400
Regulatory_Compliance@Dell.com

## VI. TRADE (IMPORT/EXPORT) COMPLIANCE DATA

| | |
|---|---|
| System US Harmonized Tariff System (USHTS) Number | 8471.50.0150 |
| System US Export Control Classification Number (ECCN) | 4A994 |

For additional questions regarding importing & exporting classification of Dell products, please send an e-mail to:
US_Export_Classification@dell.com

## VII. PRODUCT MATERIALS INFORMATION[4]

Dell's vision is to avoid the use of substances in its products that could seriously harm the environment or human health and to ensure that we act responsibly and with caution. Dell's material restrictions are based on consideration for world-wide legal requirements, international treaties and conventions, and specific market requirements. These restrictions apply to use in Dell products and in the manufacture of Dell products and their components within specified thresholds. Dell enforces these restrictions through robust compliance assurance processes throughout the entire supply chain.

**Material Declarations and Certifications**
The list of world-wide legal and market requirements is constantly changing and too lengthy to list in this data sheet. However, here are several of the more commonly requested declarations and certifications.

▪ **EU RoHS**: The Restriction of Hazardous Substances Directive is a European Union directive. Dell has voluntarily adopted the requirements of the directive globally to help eliminate waste, conserve energy and reduce environmentally sensitive materials. Through internal design controls and supply chain declarations, this system has been verified to comply with the EU RoHS Directive. In addition, eleventh generation (11G) and future generation base servers have been designed without leveraging EU RoHS exemption 7b: lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications. This is commonly referred to as RoHS 6/6 compliant. Previous generation servers (9G / 10G) may leverage exemption 7b; those platforms would be commonly referred to as RoHS 5/6 compliant. For more information, please see RoHS Guidance.

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[4] Waste Handling. Local regulations should be observed when disposing of this product due to the presence of the materials and substances as listed above.

- **EU REACH**: REACH (Registration, Evaluation, Authorization and Restriction of Chemicals, EC 1907/2006) is the European Union's (EU) chemical substances regulatory framework. REACH requires Dell to provide customers with sufficient information on Substances of Very High Concern (SVHC) contained in products in concentration above 0.1% weight by weight (w/w) to allow safe use of the product. Translations can be found at www.Dell.com/REACH.

| Dell Enterprise Products* | Substances of Very High Concern (SVHC) | |
|---|---|---|
| Part Name | Substance Name | CAS Number |
| Chassis / Bezel | No SVHC | Not Applicable |
| Mechanical Assemblies (Fans, Heatsinks, Motors, etc.) | | |
| Printed Circuit Assembly – PCA | | |
| Internal Cables / Cords / Connectors | | |
| Internal Hard Disk Drives | | |
| Internal Media Reading/Storage Devices (optical, etc.) | | |
| Power Supply | | |
| UPS | | |
| Complete Rack/Rail Product | | |

\* Disclosure is calculated based on the total % w/w of all part types listed in each table.

- **China RoHS:** China RoHS restricts the same six substances as the EU version. In addition, producers must also properly label and disclose RoHS information for applicable EIP (Electronic and Information Products) and parts sold in China. All Dell products shipping directly into China which were manufactured on or after March 1st, 2007, are China RoHS compliant.

Below is the Dell China RoHS Disclosure for Enterprise products.

**China RoHS**

In accordance with China's Administrative Measures on the Control of Pollution Caused by Electronic Information Products (also known as China RoHS), the following information is provided regarding the names and concentration levels of Toxic and/or Hazardous Substances which may be contained in Dell products. The China RoHS requirements can be found in Chinese MII MCV standard: "Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products."

| Dell Enterprise Products | | | | | | |
|---|---|---|---|---|---|---|
| Part Name | Toxic or Hazardous Substances and Elements | | | | | |
| | Lead (Pb)** | Mercury (Hg) | Cadmium (Cd) | Hexavalent Chromium (Cr VI) | Polybrominated biphenyls (PBB) | Polybrominated diphenyl ethers (PBDE) |
| Chassis / Bezel | X | O | O | O | O | O |
| Mechanical Assemblies (Fans, Heatsinks, Motors, etc.) | X | O | O | O | O | O |
| Printed Circuit Assembly - PCA* | X | O | O | O | O | O |
| Cables / Cords / Connectors | X | O | O | O | O | O |
| Hard Disk Drives | X | O | O | O | O | O |
| Media Reading/Storage Devices (optical, etc.) | X | O | O | O | O | O |
| Power Supply / Power Adapter | X | O | O | O | O | O |
| Power Cord | X | O | O | O | O | O |
| Pointing Devices (Mice, etc.) | X | O | O | O | O | O |
| Keyboard | X | O | O | O | O | O |
| UPS | X | O | O | O | O | O |
| Complete Rack/Rail Product | X | X | O | O | O | O |

"O" indicates the hazardous and toxic substance content of the part is lower than the threshold defined by the MCV Standard.

"X" indicates the hazardous and toxic substance content of the part is over the threshold defined by the MCV Standard. In all cases where an X is shown, an allowable exemption is used.

* Printed Circuit Assembly includes all Printed Circuit Boards (PCBs) and their respective population of discrete components, ICs, and connectors.

** The Xs indicate that at least one allowable lead exemption is used. However, solder used at the second level interconnect for the base system may be lead-free (commonly referred to as RoHS 6/6 compliant).

**Restricted Materials List**

Dell provides a detailed restricted materials guidance document at: Restricted Materials Guide. Below is a subset of those materials. Dell products <u>do</u> <u>not</u> contain any of the following substances (in concentrations exceeding legal threshold limits):

▪ Asbestos (EU 76/769/EEC)
▪ Azo dyes/colorants in components that come into direct contact with human skin
▪ Cadmium and its compounds (except for use in applications exempted by the EU RoHS Directive)
▪ Class I and Class II CFCs (chlorofluorocarbons) and HCFCs (hydrofluorocarbons)
▪ Chloroparaffins, short chained (10-13 carbon chain)
▪ Chromium VI and its compounds (except for use in applications exempted by the EU RoHS Directive)
▪ Halogenated dioxins or furans (i.e. polychlorinated dibenzodioxines, polychlorinated dibenzofurans)
▪ Lead and its compounds (except for use in applications exempted by the EU RoHS Directive)
▪ Mercury (except for use in applications exempted by the EU RoHS Directive)
▪ Nickel and its compounds in components that are likely to result in prolonged skin exposure
▪ PCBs (polychlorobiphenyls) or PCTs (polychloroterphenyls)
▪ PBBs (polybromobiphenyls) or PBDEs (polybrominated diphenylethers)
▪ PVC (polyvinyl chloride) in plastic parts greater than 25 grams
▪ Polychlorinated naphthalenes (PCNs)
▪ Tributyl tin (TBT) and triphenyl tin (TPT) compounds

**Flame Retardants**

Flame retardants are occasionally needed to meet strict fire safety codes. Dell avoids the use of Brominated Flame Retardants (BFRs) when possible by using plastics that can be flame retarded with non-halogenated compounds and by using design strategies that reduce the need to use flame retarded plastics all together. Through industry partnerships Dell is actively working to evaluate the viability of halogen-free alternatives and to help establish supply chain capability and capacity.

▪ Dell currently prohibits the use of PBBs and PDBEs (including DecaBDE) for all applications.
▪ Dell currently prohibits the use of all other BFRs (including TBBP-A and HBCD) in plastics parts for many products including desktops, notebooks, and servers.
▪ Power and signal electrical cable may use PVC as an insulating material to ensure product safety.
▪ All cover/housing plastics > 25 grams are halogen free.
▪ Printed circuit boards with components are not all halogen free.
▪ Plastic parts > 25 grams are free from flame retardant substances/preparations above 0.1% classified as R45/46, R50/51/53, and R60/61.
▪ More information can be viewed at: Halogen Position.

| Part | Flame Retardant | ISO 1043-4 |
|---|---|---|
| Motherboard | Phenolic Resin – Br based FR | FR(4) |
| PCI Card Hold Down | Organophosphorus based | FR(40) |
| Switch Intrusion Cover | Organophosphorus based | FR(40) |
| CPU/Fan Shroud | Organophosphorus based | FR(40) |
| Castor Tower Foot | Non-FR | Non-FR |
| Shroud Extension | Organophosphorus based | FR(40) |
| Cover Handle Insert | Organophosphorus based | FR(40) |
| CPU Blank | Organophosphorus based | FR(40) |
| Bezel Insert | Non-FR | Non-FR |
| HDD Guide Rail | Organophosphorus based | FR(40) |
| Fan Carrier | Organophosphorus based | FR(40) |

## VIII. ENERGY AND ACOUSTICS DATA

Dell now offers an online tool to help Enterprise customers predict realistic values for system heat, power consumption, acoustic sound power level (per ISO9298), total weight, total current, flow rate, air temperature rise, and other performance data. Because these measurements are highly dependant on configuration, the tool allows the user to specify processor types, speeds, memory, PCI cards, HDDs, and power supplies.

Energy consumption is measured using the industry standard SPECjbb2005 benchmark at 100% utilization for baseline power measurements. Customers can also change the application loads by selecting 'idle' or 'scientific' under the edit tab. The 'scientific' reading is a more realistic measurement for processor intensive applications or cluster systems.

Please visit: http://www.dell.com/calc for the datacenter calculator tool. Also visit http://www.dell.com/energy for information on Dell's other energy initiatives.

For your convenience, we have provided Declared Noise Emissions of a typical/common configuration below. These measurements are in accordance with ISO 9296 (tested in accordance with ISO 7779).

| Service Level | Sound Power ($L_{WAd}$, bels) (1 bel=10 decibels, re $10_{-12}$ Watts) | Sound Pressure Bystander Position ($L_{pAm}$, decibels) (re $2x10_{-5}$ Pa) |
|---|---|---|
| CD Drive Accessing | 5.6 | 40 |
| Hard Drive Accessing | 5.4 | 38 |
| Idle | 5.3 | 37 |
| CPU Stress Mode* | 5.5 | 38 |

* CPU Stress Mode measurements are taken at a 90% load using the industry standard SpecPower stressing utility.

## IX. DESIGN FOR ENVIRONMENT

**Longevity and Upgrading**
▪ To extend the life of your system, you can install or upgrade certain system components (e.g., microprocessor, memory, expansion cards, and storage devices).
▪ Upgrading can be done with commonly available tools.
▪ Spare parts are available after the end of production.

**Design for Recyclability**
▪ Minimal use of composite structure material.
▪ Minimal use of non-separable connections, such as gluing and welding between different materials.
▪ Plastic materials in covers/housing have no surface coating.
▪ Plastic parts > 25 grams have materials codes according to ISO 11469 referring ISO 1043
▪ Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.
▪ Labels are easily separable.

## X.   RECYCLING/ END-OF-LIFE SERVICE INFORMATION

Take back and recycling services are offered for this product in certain countries. If you want to dispose of system components, visit www.dell.com/recyclingworldwide and select the relevant country.

▪ **EU WEEE:** Dell is dedicated to meeting the requirements of the European Union's WEEE (Waste from Electrical and Electronic Equipment) Directive and is engaged in the development of country-specific implementation schemes to comply with the national WEEE laws. The directive aims to reduce the waste arising from electrical and electronic equipment, and improve the environmental performance of everything involved in the life cycle of electrical and electronic equipment. The EU WEEE mark is applied to products sold in Europe and many products world wide.  EU recycling information can be found at www.euro.dell.com/recycling.

The following text can be found translated into all pertinent languages in the product's user documentation.

*Waste Electrical and Electronic Equipment (WEEE) Directive*
*In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling. For information on how to recycle this product in your country, please visit: www.euro.dell.com/recycling.*

▪ **Turkey WEEE/RoHS:**  Dell is dedicated to meeting the requirements of Turkey's Regulation on the Restriction of the Use of Hazardous Substances in Electrical and Electronic Equipment. The following text can be found translated into Turkish in the product's user documentation:

English:

*Waste Electrical and Electronic Equipment (WEEE) Directive*
*In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling. For information on how to recycle this product in your country, please visit: www.euro.dell.com/recycling. EEE complies with Directive 'Regulation on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment'.*

Turkish:

*Waste Electrical and Electronic Equipment (WEEE) Yönergeleri*
*Avrupa Birliği'nde bu etiket, ürünün ev elektroniği aletleri atıkları ile imha edilemeyeceğini gösterir. Kurtarmak ve geri dönüşümünü sağlamak için uygun şartlarda saklanması gerekir. Bu ürünün geri döşünümünün nasıl sağlanacağı konusunda bilgi için lütfen şu adresi ziyaret edin: www.euro.dell.com/recycling. EEE Yönetmeliğine Uygundur Ve Elektronik Eşyalarda Bazi Zararli Maddelerin Kullaniminin Sinirlandirilmasina Dair Yönetmelik.*

## XI.  PACKAGING AND PRINTING

- No CFCs (chlorofluorocarbons), HCFCs (hydrofluorocarbons) or other ozone depleting substances are used in packaging material.
- Chromium, lead, mercury, or cadmium are not intentionally added to packaging materials and are not present in a cumulative concentration greater than 100 ppm as incidental impurities.
- No halogenated plastics and/or polymers are used for packaging material.
- Dell complies with the EU Directive 94/62/EEC.
- Packaging materials are labeled in accordance with DIN 6120.

| Packaging Materials | Weight, kg |
|---|---|
| PE | .78 |
| Corrugated Cardboard | 4.93 |

## XII.  BATTERIES

- Batteries in this product are not based on mercury, lead or cadmium technologies.
- The batteries used in this product are in compliance with EU Directive 91/ 157/ EEC, EU Directive 93/ 86/ EEC, EU Directive 98/ 101/ EEC, and EU Directive 2006/66/ EC.
- The product documentation includes instructional information on the proper removal and disposal of the batteries used in this product.
- Below is a listing of batteries present in the product:

| Battery Description – Internal Batteries | Battery Type |
|---|---|
| 3-V CR2032 Coin Cell | Lithium Coin |

\*\* Other batteries may be delivered in this system, depending on customer options.  The optional internal batteries are either Lithium or Nickel Metal Hydride.

- **California Perchlorate Information:** The following statement appears in the printed product user documentation shipped with the product.

  *Perchlorate Information*
  *This product's coin cell battery may contain perchlorate and may require special handling when recycled or disposed of. See www.dtsc.ca.gov/ hazardouswaste/perchlorate.*

- **EU Battery Directive:**  The following statement either appears in the printed product user documentation or on a CD shipped with the product.

  *Batteries Directive – Information for Users*

  *In the European Union, this label indicates that the batteries in this product should be collected separately and not be disposed of with household waste. Substances in batteries can have a potential negative impact on health and environment and you have a role in recycling waste batteries thus contributing to the protection, preservation, and improvement of the quality of the environment. You should contact your local authority or retailer for details of the collection and recycling schemes available. Alternatively please visit www.euro.dell.com/recycling.*

- **Taiwan Battery Statement:** The following statement appears in the printed product user documentation shipped with the product.

電池聲明 (台灣)

廢電池請回收

## XIII. DELL CORPORATE ENVIRONMENTAL INFORMATION

Information on Dell's Environmental initiatives, policies, programs and goals can be found at www.dell.com/environment.

Product Safety, EMC and Environmental Datasheets for Dell products are located at:
www.dell.com/regulatory_compliance_datasheets