



MARKETING NAME*: OptiPlex™ 790, OptiPlex™ 790n, OptiPlex™ 790FLX, OptiPlex™ 790FLX-HD Mini-Tower
REGULATORY MODEL: D09M
REGULATORY TYPE: D09M001
EFFECTIVE DATE: April 20, 2011

Dell Inc.
www.dell.com

TABLE OF CONTENTS FOR PRODUCT SAFETY, EMC & ENVIRONMENTAL DATASHEET

Regulatory

- I. [Product Safety](#)
- II. [Electromagnetic Compatibility](#)
- III. [Ergonomics, Acoustics, and Hygienics](#)
- IV. [Power Cords and User Documentation](#)
- V. [Datasheet Responsible Party Name and Address](#)
- VI. [Trade Import/Export Compliance Data](#)

Environmental

- VII. [System Dimension and Weight](#)
- VIII. [Declarations and Certifications](#)
- IX. [Performance Data](#)
- X. [Product Materials Information](#)
- XI. [Packaging](#)
- XII. [Batteries](#)
- XIII. [Design for Environment](#)
- XIV. [Recycling/End-of-Life Service Information](#)
- XV. [Dell Corporate Environmental Information](#)

I. PRODUCT SAFETY¹

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
Cambodia	ISC
Canada	SCC
China	CNCA or CCC
Croatia	KONCAR
European Union	CE
Germany	TUV
IECEE	IECEE CB
Israel	SII
Kazakhstan	OTAN – CKT
Kenya	KEBS
Kuwait	KUCAS
Mexico	NYCE or NOM
Moldova	INSM
Nigeria	SONCAP
Norway	NEMKO
Russia	GOST
Saudi Arabia	KSA ICCP
Singapore	Safety Registration Scheme
South Africa	NRCS
Taiwan	BSMI
United States	NFPA
United States	NRTL
Uzbekistan	STZ

* 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 COMPATIBILITY²

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 B
Belarus	BELLIS	Class B
Bosnia & Herzegovina, Montenegro, Serbia	KVALITET	Class B
Canada	ICES	Class B
China	CNCA or CCC	Class B
Croatia	KONCAR	Class B
European Union	CE	Class B
Israel	SII	Class B
Japan	VCCI	Class B
Kazakhstan	OTAN – CKT	Class B
Moldova	INSM	Class B
Norway	NEMKO	Class B
Russia	GOST	Class B
South Africa	SABS	Class B
South Korea	KCC	Class B
Taiwan	BSMI	Class B
United States	FCC	Class B
Uzbekistan	STZ	Class B
Vietnam	ICT	Class B

III. ERGONOMICS, ACOUSTICS AND HYGIENICS³

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

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.

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. SYSTEM DIMENSION AND WEIGHT

Depth, mm/cm	Width, mm/cm	Height, mm/cm	Weight, kg	Optimal Resolution (Display Only)
41.7 cm	17.5 cm	36 cm	8.87 kg May vary with additional options installed	N/A

VIII. DECLARATIONS AND CERTIFICATIONS

This system received the following approvals and may be labeled with one or more of these marks depending on point of purchase:

Approvals	Certificate #	Yes / No / N/A
China	CECP	CQC10701052767
Global	Energy Star	E-Star 5.0 (2863PDFCert)
* EPEAT	Link below for registration status	Gold
Germany	Blue Angel UZ 78 Desktop	TBD
Nordic	TCO'05 Desktops	05110136
South Korea	E-standby	TBD

* EPEAT registered where applicable/supported see product links for respective registration status by country: [Desktops](#), [Monitors](#), [Notebooks](#), [Workstation-Desktops](#), and [Workstation-Notebooks](#).

Information on Dell's participation in various Eco-labels and Green Standards can be found [here](#).

Dell is a member of the Electronic Industry Citizenship Coalition (<http://www.eicc.info/>)

Through internal design controls and supply chain declarations, this system has been verified to comply with the EU RoHS Directive. For more details, see www.dell.com/rohsinfo.



All Dell products shipping directly into China which are manufactured on or after March 1st, 2007, will be China RoHS compliant. For more details, see www.dell.com/chinarohs.

All Dell products shipping to South Korea are compliant with South Korea RoHS requirements, declarations [here](#).

Information on Japan RoHS (J-MOSS) chemical disclosures is available [here](#).

REACH (Registration, Evaluation, Authorization and Restriction of Chemicals, EC 1907/2006) is the European Union's (EU) chemical substances regulatory framework. Dell complies with the REACH directive. For more details, see www.dell.com/REACH

Dell's Energy Star qualified products are listed on the EPA website [here](#)

IX. PERFORMANCE DATA

System Configuration

The Energy Consumption data is based on a configuration including:

Processor	SANDY BRIDGE D-0 4c LGA 2.5GHZ 65W GT1 ES2
Hard Drive(s)	Western Digital 1TB/7200RPM
Memory	Four Samsung 2G/1333MHz
Video Card	CRD,GRPHC,1GB,FH,OHGA1,GT330
RMSD / Optical Drive	TSST TS-H653H 16X DVD+/-RW SATA HH
Power Supply (Internal or External)	Flextronics Internal PWR SPLY
Power Supply Size in Watts	265 W
Power Supply Efficiency Level	89.07%

Energy Consumption⁴

Energy efficiency benefits the environment and lowers the total cost of equipment ownership by reducing power consumption. Dell offers energy calculators that help estimate power needs, potential emissions avoidance and potential cost savings. Click [here](#) for Dell's Client Energy Savings Calculator, Data Center Capacity Planner, and Monitor Power Savings Calculator. Information on Energy Efficiency is available [here](#)

Service Level	Energy Consumption (Wattage)	Heat Dissipation (BTU/hr). AUTOMATICALLY CALCULATED	Description of Service Level
Maximum	81.75	279.585	The system is running programs to maximize the power consumption.
Idle Mode	50.19	171.6498	As specific EPA Energy Star Computer mode.
S3 "Sleep" Mode	2.27	7.7634	Suspend-to-RAM (low-power/sleep mode)
Off	0.96	3.2832	System is turned off but still connected to its AC power source. If the product is a computer, the Low Power Mode feature is enabled via BIOS if available.

*Maximum **Energy Consumption** results are based solely upon the laboratory testing of the **System Configuration** listed above.

⁴ This document is informational only and reflects laboratory performance. Your product may perform differently, depending on the software, components and peripherals you ordered. Accordingly, the customer should not rely upon this information in making decisions about electrical tolerances or otherwise. No warranty as to accuracy or completeness is expressed or implied.



Energy consumption is tested at 230 Volts / 50 Hz. Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour. BTU is calculated based upon the wattage reading taken in the given mode. To convert Watts to BTU, (1 Watt = 3.42 BTU)

If applicable, iAMT increases the power consumption even during the off state. The power measurements reported above are valid only if the iAMT Management Engine (ME) is set to "ON" in S0 state only (S0 is simply power-on, non-sleep, working state).

ErP compliance is tied to the CE mark.

Declared Noise Emissions 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 Operator Position (L_{pAm} , decibels) (re 2×10^{-5} Pa)	Sound Pressure Bystander Position (L_{pAm} , decibels) (re 2×10^{-5} Pa)
Hard Drive Accessing	3.8	27.5	24.2
Optical Drive Accessing	5.2	38.1	31.1
Idle	3.9	29	24.9
CPU activated (at a utilization of 50%) ECMA-74	N/A	N/A	N/A
CPU activated (at a utilization of 90%) Blue Angel UZ 78	4.2	31.7	28.4



X. PRODUCT MATERIALS INFORMATION⁵

Dell has implemented process controls and corrective actions throughout its organization and supply chain to ensure that its chemicals management objectives are met — and that the targeted restricted materials are replaced and alternative materials are developed for future product generations. Process controls that Dell implemented include piece-part supplier declarations and Dell factory and supplier material testing audits. To review Dell’s Restricted Material Guidance document click [here](#). Information on Dell’s material use is available [here](#).

Restricted Substances

This Dell product does **NOT** contain any of the following substances (in concentrations exceeding legal threshold limits):

- Asbestos
- 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)
- Ozone Depleting Substances; 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)
- PCTs (polychloroterphenyls)
- PBBs (polybromobiphenyls)
- PBDEs (polybrominated diphenylethers)
- BFR (brominated flame retardants) and PVC (polyvinyl chloride) in plastic parts greater than 25 grams
- Polychlorinated naphthalenes (PCNs)
- Tributyl tin (TBT)
- Triphenyl tin (TPT)

Additional Materials Information

- External and/or Internal cables may use PVC as an insulating material to ensure product safety
- The case material is, >Galvanized steel< (i.e. PC+ABS, Aluminum, etc)
- Product may contain post-industrial recycled content (plastics, metal, glass)
- This product contains 10% post consumer recycled plastic
- Materials that may require special handling, please see WEEE Product End-of-Life Instructions [here](#)
- Marking of plastic parts greater than 25 grams are done in accordance with ISO 11469 (see below)

Flame Retardants Used in Motherboards

Part	Flame Retardant
Motherboard	BFR, CFR

⁵ **Waste Handling.** Local regulations should be observed when disposing of this product due to the presence of the materials and substances as listed above.



Flame Retardants Used in Mechanical Plastic Parts > 25 grams

Resin Material	Marking per ISO 11469:2000, 11469:1996	Flame Retardant Marking per ISO 1043-4 (i.e. FR(16), FR(40), etc.)	Flame Retardant (i.e. TBBPA, triaryl phosphate ester, etc.)	List applicable R-Phrase(s) per EU Directive 1272/2008
ABS	>ABS<	None	N/A	N/A
PC+ABS	>PC+ABS FR(40)<	FR(40)	Organo Phosphate	R43

XI. PACKAGING

Information on Dell's sustainable packaging effort available [here](#).

No CFCs (chlorofluorocarbons), HCFCs (hydrofluorocarbons) or other ozone depleting substances are used in packaging material. Chromium, lead, mercury, 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 or polymers are used for packaging material. Dell complies with the EU Directive 94/62/EEC. Plastics packaging materials marked according to ISO 11469 standards.

Packaging Materials	Total Weight of each Material type, (kg)	% of Post Consumer Recycled Content (PCR)
Corrugated Fiberboard	1.59	Varies
EPE	0.22	Varies

Printed user documentation is bleached in a chlorine-free process.

XII. BATTERIES

Below is a listing of batteries that could be present in the product:

Battery Description – Internal Batteries	Battery Type	Battery Weight (kg)
CR-2032 coin cell	Lithium	0.0032 (MITSUBISHI)
CR-2032 coin cell	Lithium	0.0029 (PANASONIC)

- Batteries used in this product are in compliance with EU Battery Directive 2006/66/EC.
- Batteries in this product are not based on mercury, lead or cadmium technologies.
- Information about takeback and the recycling of batteries can be found in the in the Recyclability section below.
- The product documentation includes instructional information on the proper removal and disposal of the batteries used in this product.



XIII. DESIGN FOR ENVIRONMENT

Longevity and Upgrading

Dell systems are, when applicable, designed for easy assembly, disassembly, and servicing. Connections are easy to find and accessible with commonly available tools. To extend the life of your system, you can install or upgrade certain system components (e.g., microprocessor, memory, expansion cards, optical drives, and storage devices). Spare parts (such as batteries, power supplies, keyboard parts) are available after the end of production for up to five years, or otherwise through the warranty period.

Recyclability

Information for recycling is available [here](#).

For recyclability, this system incorporates the following design guidelines:

- EU WEEE mark is applied to products sold in Europe, EU recycling information can be found at www.euro.dell.com/recycling
- WEEE Product End-of-Life Instructions are available [here](#)
- Plastic parts heavier than 25g have material codes according to ISO 11469:2000.
- Minimal use of composite structure materials.
- Minimal use of non-separable connections, such as gluing and welding between different materials.
- Painting/coating of Desktop chassis plastics has been avoided.
- Painting/coating of plastics <100 grams is compatible with recycling or reuse
- Mechanical plastic parts greater than 100 grams consist of one material or of easily separable materials.

XIV. 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, contact Dell for instructions by emailing recycling_emea@dell.com or visit www.dell.com/recyclingworldwide and select the relevant country.

XV. DELL CORPORATE ENVIRONMENTAL INFORMATION

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

Dell's Corporate Responsibility Policies are available [here](#).

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

Dell's commitment to accountability and assurance is further demonstrated in leveraging the Global Reporting Initiatives (GRI) G3 Guidelines in the preparation of our annual summary report and Web site. We are self-reporting at a B level and have submitted our self-report to GRI to check it against the criteria for GRI Application Level B. To view GRI Index 2009 click [here](#).

Dell holds International Organization for Standardization (ISO) and Occupational Health & Safety Assessment Series (OHSAS) certifications/registrations in a number of important areas including global product development and recycling/take-*back programs, quality, safety, and health and environment. You can view or download copies of certificates [here](#).

Information related to Supplier Responsibility is available [here](#).