# DELL™

# OPTIPLEX™360

## TECHNICAL GUIDEBOOK

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# DELL™ OPTIPLEX™ 360

**Designed with growing businesses and organizations with less complex IT infrastructures in mind, the OptiPlex 360 is built with practical features focused on providing essential business value. The OptiPlex 360 delivers reliable, cost effective business productivity with Intel® Core™2 Duo processors, high-speed memory options and integrated video support. Customizable to meet your business needs, the OptiPlex 360 offers technology that provides basic manageability, security, and energy efficiency. All backed by a choice of smart, desktop-focused services that provide your IT professionals the tools they need throughout the technology lifecycle, from acquisition to asset retirement. Essential business value of the OptiPlex 360 is just one of the reasons Dell is a leader in business desktops – and why OptiPlex is the easiest choice you'll make today.**

## OPTIPLEX MEANS BUSINESS

The OptiPlex 360 delivers essential performance to help keep your business running:

- Exceptional value for reliable business class computing, featuring Intel® Core™2 Duo，Pentium Dual Core and Celeron(R) processors
- Planning support with up to 12 month lifecycle, stable images, managed transitions and Dell ImageWatch™ to provide early notification of upcoming technology changes
- Customizable Global service and support through Dell ProSupport™ service options
- Dell Client Manager remote manager allows easy system manageability

## OPTIPLEX IS EASY TO OWN

The OptiPlex 360 is designed and built to be both flexible and easily scalable to meet your changing needs:

- The right fit for basic user productivity with choice of two form factors
- Time-saving tool-less design and Dell exclusive DirectDetect™ troubleshooting LED's help result in reduced maintenance and service costs
- Add predictability to the IT management process with a minimum 60-day transition period between product transitions
- Dell client manager enabling, remote inventory, diagnosis & system hardware management

## OPTIPLEX SECURITY

OptiPlex provides basic security offerings to help protect your critical data:

- System and BIOS passwords to help prevent unauthorized access
- Chassis loop lock provides physical system protection
- Proactive Dell ProSupport services help reduce risk and protect your sensitive data with Hard Drive Data Recovery and Certified Data Destruction

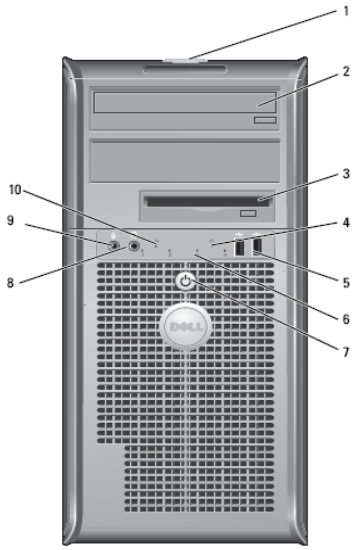
## OPTIPLEX GETS GREEN

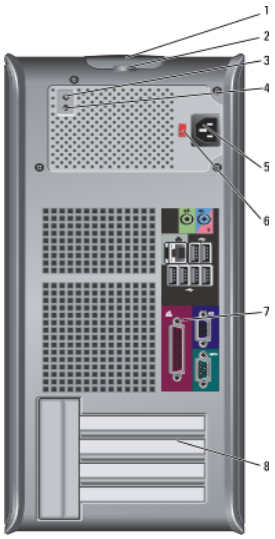
Dell is committed to being the greenest PC Company on the planet. And the OptiPlex 360 delivers smart energy choices so that you can:

- Achieve outstanding performance with less energy through Dell's Energy Smart power management
- Help reduce power consumption—and cost— with Dell's power supply, which is up to 88% efficient, available after Nov 17, 2008 on selected models

**Recycle your current desktops free of charge with the purchase of a new Dell OptiPlex**

## MINI TOWER COMPUTER (MT) VIEW

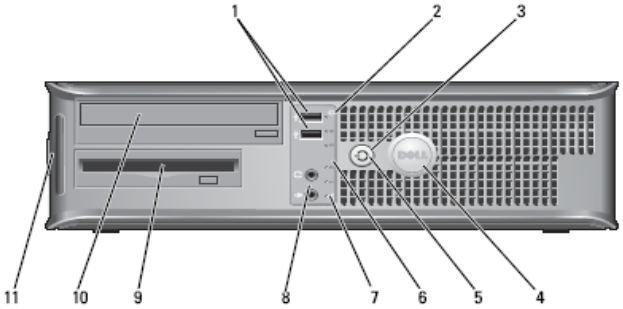


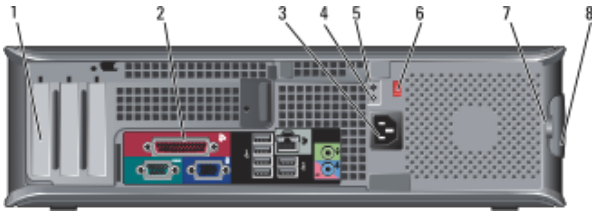




| FRONT VIEW | | | |
|---|---|---|---|
| 1 | Service Tag | 6 | Diagnostic lights |
| 2 | Optical drive | 7 | power button |
| 3 | Floppy drive | 8 | headphone connector |
| 4 | Drive activity light | 9 | microphone connector |
| 5 | USB 2.0 connectors(2) | 10 | LAN indicator light |

| BACK VIEW | | | |
|---|---|---|---|
| 1 | cover-release latch | 5 | power connector |
| 2 | padlock ring | 6 | voltage selector switch |
| 3 | Built in Self Test (BIST) LED | 7 | back panel connectors |
| 4 | BIST switch | 8 | card slots |

## DESKTOP COMPUTER (DT) VIEW

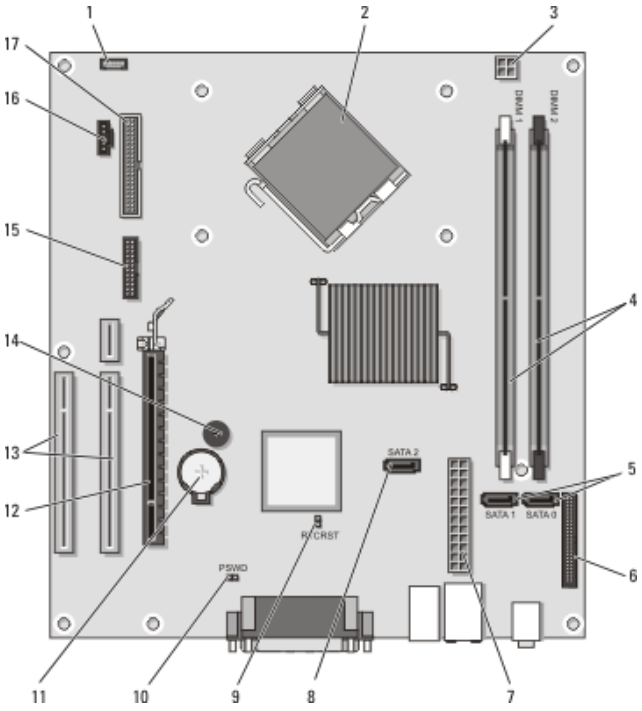



| FRONT VIEW | | | |
|---|---|---|---|
| 1 | USB 2.0 connectors (2) | 7 | LAN indicator light |
| 2 | drive activity light | 8 | headphone and microphone connectors |
| 3 | power button | 9 | floppy drive |
| 4 | Dell badge | 10 | optical drive |
| 5 | power light | 11 | Service Tag |
| 6 | diagnostic lights | | |

| BACK VIEW | | | |
|---|---|---|---|
| 1 | card slots | 5 | Built in Self Test (BIST) LED |
| 2 | back panel connectors | 6 | voltage selection switch |
| 3 | power connector | 7 | padlock ring |
| 4 | BIST switch | 8 | cover-release latch |

### SYSTEM BOARD




| COMPONENTS | | | |
|---|---|---|---|
| 1 | speaker connector (INT_SPKR) | 10 | password jumper (PSWD) |
| 2 | processor connector (CPU) | 11 | battery socket (BATTERY) |
| 3 | processor power connector (12VPOWER) | 12 | PCI Express x16 card connector (SLOT1) |
| 4 | memory module connectors (DIMM_1, DIMM_2) | 13 | PCI card connectors (SLOT2 and SLOT3) |
| 5 | SATA drive connectors (SATA0, SATA1) | 14 | internal buzzer (SPKR) |
| 6 | front-panel connector (FRONTPANEL) | 15 | serial/ PS/2 connector (PS2/ SER2) |
| 7 | power connector (POWER) | 16 | fan connector (FAN_CPU) |
| 8 | SATA drive connectors (SATA2,) | 17 | floppy drive connector (FLOPPY) |
| 9 | RTC reset jumper (RTCRST) | | |

# MARKETING SYSTEM CONFIGURATIONS

**NOTE: Offerings may vary by region. For more information regarding the configuration of your computer, click Start>Help and Select the option to view information about your computer.**

### OPERATING SYSTEM

**NOTE: One of the following Operating Systems will be preinstalled.**

| | MT | DT |
|---|---|---|
| **Windows Vista®** operating system | Windows Vista® Business SP1, Windows Vista® Home Basic SP1 | |
| **Windows XP®** operating system **(**through downgrade right） | Windows® XP Professional SP3 | |
| **Other** | FreeDOS for (n-series all countries except China), Novell SLED (China only) | |
| **OS Media Support** | X | X |

## CHIPSET

| | MT | DT |
|---|---|---|
| **Chipset** | Intel® G31Express Chipset (ICH7) | |
| **Non-volatile memory on chipset** | | |
| BIOS Configuration FWH (firmware hub) | 8Mb located at SPI_FLASH on chipset | |
| NIC EEPROM | 2Kb located at LOM_FLASH on chipset | |

## PROCESSOR

**NOTE: Processor numbers are not a measure of performance.**

| Processor (Speed, Cache, FSB) | MT | DT |
|---|---|---|
| **Intel® Core 2 Duo with Intel, Enhanced Intel Speed Step Technology and Execute Disable Bit** | | |
| Intel Core 2 Duo E8600 Processor (3.33GHz, 6MB L2 cache, 1333MHz FSB) | X | X |
| Intel Core 2 Duo E8500 Processor (3.16GHz, 6MB L2 cache, 1333MHz FSB) | X | X |
| Intel Core 2 Duo E8400 Processor (3.00GHz, 6MB L2 cache, 1333MHz FSB) | X | X |
| Intel Core 2 Duo E7600 Processor (3.06GHz, 3MB L2 cache, 1066MHz FSB) | X | X |
| Intel Core 2 Duo E7500 Processor (2.93GHz, 3MB L2 cache, 1066MHz FSB) | X | X |
| Intel Core 2 Duo E7400 Processor (2.80GHz, 3MB L2 cache, 1066MHz FSB) | X | X |
| **Intel® Pentium dual core with Intel, Enhanced Intel Speed Step Technology and Execute Disable Bit** | | |
| Intel Core 2 Duo E6300 Processor (2.8Hz, 2MB L2 cache, 1066MHz FSB) | X | X |
| Intel Core 2 Duo E5400 Processor (2.7GHz, 2MB L2 cache, 800MHz FSB) | X | X |
| Intel Core 2 Duo E5300 Processor (2.6Hz, 2MB L2 cache, 800MHz FSB) | X | X |
| Intel Core 2 Duo E5200 Processor (2.5GHz, 2MB L2 cache, 800MHz FSB) | X | X |
| **Intel® Celeron dual core with Intel, Enhanced Intel Speed Step Technology and Execute Disable Bit** | | |
| Intel Celeron Dual Core E1600 Processor (2.4GHz, 512K L2 cache, 800MHz FSB) | X | X |
| Intel Celeron Dual Core E1500 Processor (2.2GHz, 512K L2 cache, 800MHz FSB) | X | X |
| Intel Celeron Dual Core E1400 Processor (2.0GHz, 512K L2 cache, 800MHz FSB) | X | X |
| **Intel® Celeron with Enhanced Execute Disable Bit** | | |
| Intel Celeron 450 Processor (2.5GHz, 512K L2 cache, 800MHz FSB) | X | X |
| Intel Celeron 440 Processor (2.0GHz, 512K L2 cache, 800MHz FSB) | X | X |

## MEMORY

**Your computer supports a maximum of 4 GB of memory when you use two 2-GB DIMMs.**

**Memory modules should be installed in pairs of matched memory size, speed, and technology. If the memory modules are not installed in matched pairs, the computer will continue to operate, but with a slight reduction**

| | MT | DT |
|---|---|---|
| **Type: DDR2 Synch DRAM Non-ECC Memory** | 800MHz speeds | |
| **DIMM Slots** | 2 | 2 |
| **DIMM Capacities** | Up to 2GB | Up to 2GB |
| **Minimum Memory** | 1GB | 1GB |
| **Maximum Memory with 800MHz speed memory** | 4GB | 4GB |
| **800MHz Memory configurations** | | |
| 4GB[1] DDR2 Non-ECC SDRAM, 800MHz, (2 DIMM) | X | X |
| 2GB DDR2 Non-ECC SDRAM, 800MHz, (1DIMM) | X | X |
| 2GB DDR2 Non-ECC SDRAM, 800MHz, (2 DIMM) | X | X |
| 1GB DDR2 Non-ECC SDRAM, 800MHz, (2 DIMM) | X | X |
| 1GB DDR2 Non-ECC SDRAM, 800MHz, (1 DIMM) | X | X |

[1]-The total amount of available memory will be less than 4GB. The amount less depends on the actual system configuration. To fully utilize 4GB or more of memory requires a 64-bit enabled processor and 64-bit operating system.

## DRIVES AND REMOVABLE STORAGE

| | MT | DT |
|---|---|---|
| **Bays:** | | |
| 3.5-inch bay (External Floppy) | 1 | 1 |
| 5.25-inch bay (External Optical) | 2 | 1 |
| Hard Drives Supported (Internal) | 2 | 1 |
| Optical Drives Supported (External) | 2 | 1 |
| **Interface:** | | |
| SATA (number of connectors) | 3 | 2 |
| Floppy/Diskette | 1 | 1 |
| **Hard Drive:** Size, type, speed, RPM | | |
| 320GB[1] SATA 7200 RPM HDD | X | X |
| 250GB SATA 7200 RPM HDD | X | X |
| 160GB[1] SATA 7200 RPM HDD | X | X |
| 80GB SATA 7200 RPM HDD | X | X |
| **2nd HDD support:** (includes two matching capacity/speed hard drives) | | |
| 320GB SATA 7200 RPM HDD | X (no Raid support) | |
| 250GB SATA 7200 RPM HDD | X (no RAID support) | |
| 160GB SATA 7200 RPM HDD | X (no Raid support) | |
| 80GB SATA 7200 RPM HDD | X (no RAID support) | |

## DRIVES AND REMOVABLE STORAGE

| | MT | DT |
|---|---|---|
| **Optical Drive:** (SFF/USFF requires a slimline optical drive) | | |
| DVD +/- RW[2] | 16x SATA | 16x SATA |
| DVD-ROM[3] | 16x SATA | 16x SATA |
| Combo Drive CDRW/DVD | 48x/32CDRW/DVD Combo SATA | 48x/32CDRW/DVD Combo SATA |
| **Floppy Diskette Drive:** (SFF requires a slimline floppy drive) | | |
| Floppy Drive | 1.44MB | 1.44MB |

[1] For hard drives, GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

[2] Discs burned with this drive may not be compatible with some existing drives and players; using DVD+R media provides maximum compatibility.

[3] DVD-ROM drives may have write-capable hardware that has been disabled via firmware modifications.

## SYSTEM BOARD CONNECTORS

**NOTE: See Detailed Engineering Specifications for maximum card dimensions support.**

| | MT | DT |
|---|---|---|
| **PCI Slot(s): number of** | 2 FH | 2LP or 2FH with riser |
| **PCIe x16 Slot: number of** | 1 FH | 1 LP Native or 1 FH with Combo Riser |
| **Serial ATA (SATA)** | 3 | 2 |
| **Serial (native)** | 1 | 1 |

## GRAPHICS/VIDEO CONTROLLER

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser.**

| | MT | DT |
|---|---|---|
| Integrated Intel® Graphics Media Accelerator 3100* | Integrated on system board | |
| **Enhanced Graphic/Video* Options 1** | | |
| 256MB ATI Radeon™ HD 2400 PRO with DVI and TV Out | Optional full height or low profile card | Optional low profile card |
| **Enhanced Graphic/Video Options 1** | | |
| DVI (Digital) Adapter Card | Optional full height or low profile card | Optional low profile card |
| 256MB ATI Radeon™ HD 3450 Graphics Dual VGA and TV Out | Optional full height or low profile card | Optional low profile card |
| 256MB ATI Radeon™ HD 3450 Graphics Dual DVI or VGA and TV Out | Optional full height or low profile card | Optional low profile card |
| 256MB nVidia GeForce 9300 GE | Optional full height or low profile card | Optional low profile card |

## EXTERNAL PORTS/CONNECTORS

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser. SFF supports low profile card.**

| See chassis diagrams section for port/connector locations | MT | DT |
|---|---|---|
| USB 2.0 | 8 | |
| Serial (native) | One rear | |
| PS/2 and Serial (low profile card includes PS/2 dongle) | Optional full height or low profile card | |
| Parallel | One rear | |
| Network Connector (RJ-45) | One rear | |
| **Video:** | | |
| VGA | One rear | |
| **Audio:** | | |
| Microphone-in | One minijack front | |
| Headphone | One minijack front | |
| Stereo line-in | One minijack rear | |
| Speakers line out | One minijack rear | |
| **Risers:** (PCI riser card will replace two PCI slots and Combo riser card will replace one PCI and one PCIe slots.) | | |
| Combo full height riser with 1 PCI and 1 PCIe connector | | Optional |
| Dual full height riser with 2 PCI connectors | | Optional |

## COMMUNICATIONS - NETWORK ADAPTER (NIC)

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser.**

| | MT | DT |
|---|---|---|
| Broadcom (BCM5784M) Gigabit LAN 10/100/1000 (WOL, PXE) | Integrated on system board | |
| Broadcom NetXtreme 10/100/1000 PCIe Gigabit Networking Card | Optional full height | Optional Low-profile or full height card with optional riser |

[1] This term does not connote an actual operating speed of 1 Gb/sec. For high speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

## COMMUNICATIONS – MODEM

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser.**

| | MT | DT |
|---|---|---|
| V.92 Data/Fax Controllerless Modem | Optional full height or low profile card | |

## AUDIO AND SPEAKERS

| | MT | DT |
|---|---|---|
| ADI 1984A High Definition Audio | Integrated on system board | |
| Internal Chassis Speaker | Optional | |
| Dell AX210<br>(USB powered) Speakers | Optional | |
| Dell A510/AX510PA Speakers | Optional | |

## KEYBOARD AND MOUSE

| | MT | DT |
|---|---|---|
| Dell USB Entry Keyboard | Optional | |
| Dell USB Entry QuietKey Keyboard (after Nov) | Optional | |
| Dell USB Entry Mouse | Optional | |
| Dell Palmrest | Optional | |
| Dell Logo Mouse Pad | Optional | |

## SECURITY

| | MT | DT |
|---|---|---|
| Chassis lock slot | Standard | |

## SERVICE AND SUPPORT

**NOTE: For more details on Dell Service Plans please to go to: www.dell.com/service/service_plans**

| | MT | DT |
|---|---|---|
| **1 Year Next Business Day On-Site Service (1-1-1)** | Standard | |
| **3 Year Limited Hardware Warranty (3-3-0)** | Optional | |
| **3 Year Next Business Day On-site Service (3-3-3)** | Optional | |
| **Gold Tech Support** | Optional | |

## SOFTWARE

| | MT | DT |
|---|---|---|
| Dell Client Manager Standard | Available via Dell.com | |
| Norton Internet Security | 90 Day Trial or optional subscription | |
| McAfee Security Center | 90 Day Trial or optional subscription | |

# DETAILED ENGINEERING SPECIFICATIONS

## SYSTEM DIMENSIONS (PHYSICAL)

**NOTE: System Weight* and Shipping Weight* is based on a typical configuration and may vary based on PC configuration. A typical configuration includes: integrated graphics, one hard drive, one optical drive, and one diskette drive.**

| | MT | DT |
|---|---|---|
| **Chassis Volume** LITERS | 33 | 16 |
| **Chassis Weight*** POUNDS/KILOGRAMS | 27.2 / 12.34 | 23 / 10.4 |
| **Chassis Dimensions: (HxWxD)** | | |
| Height INCHES/CENTIMETERS | 16.3 / 41.4 | 4.5 / 11.4 |
| Width INCHES/CENTIMETERS | 7.3 / 18.5 | 15.7 / 39.9 |
| Depth INCHES/CENTIMETERS | 17.3 / 43.9 | 13.9 / 35.3 |
| **Shipping Weight*** POUNDS/KILOGRAMS INCLUDES PACKAGING MATERIALS | 19.73kg | 12.7kg |
| **Packaging Parameters (HxWxD)** | | |
| Height INCHES/CENTIMETERS | 22.38 / 56.8 | 20.63 / 52.4 |
| Width INCHES/CENTIMETERS | 22.25 / 56.5 | 20.31 / 51.6 |
| Depth INCHES/CENTIMETERS | 14.25 / 36.2 | 11.75 / 29.8 |

## SYSTEM BOARD CONNECTOR MAXIMUM ALLOWABLE DIMENSIONS

| | MT | DT |
|---|---|---|
| **PCI Slot(s) Dimensions: (HxL)** | 2 | 2 |
| Height INCHES/CENTIMETERS | 4.376/11.115 | 2.731/6.89 |
| Length INCHES/CENTIMETERS | 6.6/16.765* | 6.6/16.765 |
| **PCIe x16 Slot Dimensions: (HxL)** | 1 | 1 |
| Height INCHES/CENTIMETERS | 4.376/11.115 | 2.731/6.89 |
| Length INCHES/CENTIMETERS | 6.6/16.765* | 6.6/16.765 |
| **Risers:** (PCI riser card will replace two PCI slots and Combo riser card will replace one PCI and one PCIe slots.) | | |
| **Combo Full Height Riser with 1 PCI and 1 PCIe connector (HxL)** | | |
| Height INCHES/CENTIMETERS | | 4.376/11.115 |
| Length INCHES/CENTIMETERS | | 6.9/17.53** |
| **Dual Full Height Riser with 2 PCI connectors (HxL)** | | 1 |
| Height INCHES/CENTIMETERS | | 4.376/11.115 |
| Length INCHES/CENTIMETERS | | 6.9/17.53** |

* Card length can be longer than standard Half-Length Card but cannot be a Full-Length Card.

** 6.9/17.53 in/cm is longer than the standard Half-Length Card

## SYSTEM LEVEL ENVIRONMENTAL AND OPERATING CONDITIONS

| | MT | DT |
|---|---|---|
| **Temperature** | | |
| Operating | 10° to 35°C (50° to 95°F) | 10° to 35°C (50° to 95°F) |
| Non-Operating | -40° to 65°C (–40° to 149°F) | -40° to 65°C (–40° to 149° F) |
| **Relative Humidity** | | |
| Operating (Noncondensing) | 20 to 80 %* (*Max Wet bulb temperature= 29 °C) | 20 to 80 %* (*Max Wet bulb temperature= 29 °C) |
| Non-Operating (Noncondensing) | 5 to 95 %+ (+Max Wet bulb temperature= 38 °C) | 5 to 95 %+ (+Max Wet bulb temperature= 38 °C) |
| **Maximum vibration** | | |
| Operating | 5 to 350 Hz at 0.0002 G2/Hz | 0.25 G at 3 to 200 Hz at 0.5 octave/min |
| Non-Operating | 5 to 500 Hz at 0.001 to 0.01 G2/Hz | 0.5 G at 3 to 200 Hz at 1 octave/min |
| **Maximum Shock** | | |
| Operating | 40 G +/- 5% with pulse duration of 2 msec +/- 10% (equivalent to 51 cm/ sec[20 in/sec]) | 40 G +/- 5% with pulse duration of 2 msec +/- 10% (equivalent to 51 cm/sec [20 in/sec]) |
| Non-Operating | 105 G +/- 5% with pulse duration of 2 msec +/- 10% (equivalent to 127 cm/ sec[50 in/sec]) | 105 G +/- 5% with pulse duration of 2 msec +/- 10% (equivalent to 127 cm/sec [50 in/sec]) |
| **Maximum Altitude** | | |
| Operating | –15.2 to 3048 m (–50 to 10,000 ft) | –15.2 to 3048 m (–50 to 10,000 ft) |
| Non-Operating | –15.2 to 10,668 m (–50 to 35,000 ft) | –15.2 to 10,668 m (–50 to 35,000 ft) |

## POWER

| Non EPA Power | MT | DT |
|---|---|---|
| **Power Supply Wattage** | **255W** | **235W** |
| AC input Voltage Range | 90~135Vac,180~264Vac (PFC) | 90~135Vac,180~264Vac (PFC) |
| AC input current | 9A/3.5A(PFC), | 6.5/3.5A(PFC) |
| AC input Frequency | 47~63Hz | 47~63Hz |
| AC holdup time | >16ms | >16ms |
| Minimum Efficiency (Active PFC, Energy Star Compliant) | NA | NA |
| Minimum Efficiency (Active PFC) | NA | NA |
| Minimum Efficiency (PFC) | 65% | 65% |
| **DC parameters** | | |
| +3.3v output | 11A | 9A |
| +5.0v output | 17A | 15A |
| +12.0v output (add as many 12v rails as needed) | 16A | 14A |
| +5.0v auxiliary output | 4A | 4A |
| -12.0v output | 0.2A | 0.2A |
| Max total power | 255W | 235W |
| Max combined +3.3v / +5.0v power | 121W | 105W |
| Max combined 12.0v power (note: only if more than one 12v rail) | NA | NA. |
| BTUs/h (based on PSU max wattage) | 870BTUs/h | 801BTUs/h |
| **3.3v CMOS battery (type and estimated battery life)** | CR2032, 5years | CR2032, 5years |
| **RTC accuracy (time of day)** | 4 second/24 hours | 4 second/24hours |
| **Power Supply Fan (size and type)** | 80mm | 92mm |
| **Compliance: (add all that apply)** | | |
| Energy star compliant | No | No |
| Blue Angel Compliant | | |
| 1W requirement | Yes | Yes |
| UL/cUL, CE, CCC, Nemko, TUV, BSMI | Yes | Yes |

| EPA Power | MT | DT |
|---|---|---|
| **Power Supply Wattage** | **255W** | **255W** |
| AC input Voltage Range | 90~264Vac | 90~264Vac |
| AC input current | 3.6A/1.8A, | 4/2A |
| AC input Frequency | 47~63Hz | 47~63Hz |
| AC holdup time | >16ms | >16ms |
| Minimum Efficiency (Active PFC) | 83% | 83% |
| **DC parameters** | | |
| +3.3v output | 8A | 5A |
| +5.0v output | 15A | 15A |
| +12.0v1 output | 13A | 18A |
| +12.0v2 output | 7A | NA |
| +5.0v auxiliary output | 4A | 4A |
| -12.0v output | 0.5A | 0.5A |
| Max total power | 255W | 255W |
| Max combined +3.3v / +5.0v power | 80W | 91.5W |
| Max combined 12.0v power (note: only if more than one 12v rail) | 220W | NA. |
| BTUs/h (based on PSU max wattage) | 870BTUs/h | 870BTUs/h |
| **Power Supply Fan (size and type)** | 80mm | 92mm |
| **Compliance: (add all that apply)** | | |
| Energy Star compliant | Yes | Yes |
| Blue Angel Compliant | Yes | Yes |
| 1W requirement | Yes | Yes |
| UL/cUL, CE, CCC, Nemko, TUV, BSMI | Yes | Yes |

## AUDIO

| Integrated ADI 1984A High Definition Audio | MT | DT |
|---|---|---|
| **High Definition Stereo support** | Yes | Yes |
| **Number of channels** | 2 | 2 |
| **Number of Bits / Audio resolution** | 16,20 and 24-bit resolution | 16,20 and 24-bit resolution |
| **Sampling rate (recording/playback)** | Up to 192KHz | Up to 192KHz |
| **Signal to Noise Ratio** | 96dB | 96dB |
| **Wavetable voices** | | |
| **Analog Audio** | Yes | Yes |
| **Dolby Digital** | | |
| **THX** | | |
| **Digital out (S/PDIF)** | | |
| **Audio Jack Impedance** | | |
| Microphone | 1K~2Kohm | 1K~2Kohm |
| Line-In | >10Kohm | >10Kohm |
| Line-Out | >10Kohm | >10Kohm |
| Headphone | 16~500ohm | 16~500ohm |
| **Internal Speaker Power Rating** | 2W | 2W |

## COMMUNICATIONS - NETWORK ADAPTER (NIC)

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser. SFF supports low profile card.**

| Integrated Broadcom5784M Gigabit[1] LAN | MT | DT |
|---|---|---|
| Connector Type | RJ-45 | |
| **Data Rates supported** | 10/100/1000M | |
| **Controller Details** | | |
| Controller bus architecture (example PCIe 1.0a x1) | PCIe V1.1 x 1 | |
| Integrated memory | Yes (buffer memory) | |
| Data transfer mode (example Bus-Master DMA) | DMA | |
| Power consumption (full operation per data rate connection speed) | 752 mW | |
| Power consumption (standby operation) | 64 mW | |
| **IEEE standards compliance (example 802.1P)** | IEEE802.3, IEEE802.3u, IEEE802.3x | |
| **Hardware Certifications (example FCC, B, GS mark…)** | IEEE | |
| **Boot ROM Support** | Yes | |

[1] This term does not connote an actual operating speed of 1 Gb/sec. For high speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

## COMMUNICATIONS - NETWORK ADAPTER (NIC) (CONT.)

| | MT | DT |
|---|---|---|
| **Network Transfer Mode (example Full Duplex, Half Duplex)** | | |
| Network Transfer Rate (example 10BASE-T (half-duplex) 10 Mbps<br>10BASE-T (full-duplex) 20 Mbps<br>100BASE-TX (half-duplex) 100 Mbps<br>100BASE-TX (full-duplex) 200 Mbps<br>1000BASE-T (full-duplex) 2000 Mbps | 10BASE-T (half-duplex) 10 Mbps<br>10BASE-T (full-duplex) 20 Mbps<br>100BASE-TX (half-duplex) 100 Mbps<br>100BASE-TX (full-duplex) 200 Mbps<br>1000BASE-T (full-duplex) 2000 Mbps | |
| **Environmental** | | |
| Operating temperature | 0 to 125°C | |
| Operating humidity | NA | |
| **Operating System Driver Support** | Windows XP(32bit), Windows Vista (32bit) | |
| **Manageability (examples WOL, PXE..)** | WoL, PXE | |
| **Management Capabilities Alerting (examples ASF 2.0 AMT…)** | | |

## COMMUNICATIONS – MODEM

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser. SFF supports low profile card.**

| V.92 DATA/FAX CONTROLLERLESS MODEM | MT | DT |
|---|---|---|
| **Bus** | PCI | |
| **Connector** | RJ-11 | |
| **Data Transmission** | PCM - Pulse Coded Modulation (V.92/V.90)<br>TCM - Trellis Coded Modulation (V.90/V.34/V.32 bis/V.32) | |
| **Data Speeds** | 56kbps receive, 48kbps transmit | |
| **Data Standards** | ITU V.92/V.90, V.34/V.32 bis/V.32 | |
| **Fax Speeds** | 14.4kbps | |
| **Fax Mode Capabilities** | 2-wire, half-duplex, synchronous | |
| **Error Correction and Data Compression** | V.44, V.42, V.42bis, MNP 2-4, MNP 5 | |
| **Power Management** | WOR (wake on ring) capable | |
| **Upgradeability** | Driver upgradeable | |
| **Video** | V.80 Synchronous Access Mode (SAM) can be supported by software applications (not driver) | |
| **Operating Temperature** | 0~50 degree C | |
| **Operating Humidity** | 45 degree C 90% max | |
| **Operating System Support** | Vista 32, Windows XP 32 | |
| **Operating System Driver Support** | Vista 32, Windows XP 32 | |

## COMMUNICATIONS – MODEM (CONT.)

| | MT | DT |
|---|---|---|
| **Power Requirements** | +3.0V~+3.6V, 116.6mW max | |
| **Chipset** | Conexant SmartHSFs/LF (CX11256 & CX20493) | |
| **Dimensions of full height card** INCHES/CENTIMETERS (L X H) | L: 5.25'/13.325cm<br>H: 4.73'/12.002cm | |
| **Dimensions of low profile card** INCHES/CENTIMETERS (L X H) | | L: 5.26'/13.366cm<br>H: 3.12'/7.923cm |

## GRAPHICS/VIDEO CONTROLLER

**NOTE: MT supports full height card, DT supports low profile card or full height card with optional riser. SFF supports low profile card.**

| INTEGRATED INTEL GRAPHICS MEDIA ACCELERATOR 3100* | MT | DT |
|---|---|---|
| **Bus Type (example integrated or PCIe x16)** | Integrated | |
| **GPU core clock** | 400 MHz | |
| **Frame Buffer Memory (onboard and shared) Size and Speed** | Up to 256MB of shared system memory | |
| **Maximum power consumption** | 9.0 W | |
| **Overlay Planes** | Yes | |
| **Maximum Color Depth** | 32 bit | |
| **Maximum Vertical Refresh Rate** | 85 Hz | |
| **Multiple Display Support** | No | |
| **Operating Systems Graphics/ Video API Support** | OpenGL 1.4/DirectX 9.0C | |
| **Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)** | Up to 2048x1536 @ 75 Hz<br>Supports flat panels up to 1920x1200 @ 60 Hz or digital CRT/HDTV at 1400x1050 @ 85 Hz | |
| **External connectors** | VGA | |
| **Dimensions** INCHES/CENTIMETERS (L X H) | N/A | |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 0° to 106° C (32° to 223° F) | |
| Relative Humidity Range | 20% to 80% (non-condensing) | |
| Altitude Range | -15.2 to 3048 m (–50 to 10,000 ft) | |

## GRAPHICS/VIDEO CONTROLLER (CONT.)

| 256MB ATI RADEON™ HD 2400 PRO WITH DVI AND TV OUT* | MT | DT |
|---|---|---|
| **Bus Type (example integrated or PCIe x16)** | PCIEx16 | |
| **GPU core clock** | 400MHz | |
| **Frame Buffer Memory (onboard and shared) Size and Speed** | 256MB 500Mhz | |
| **Maximum power consumption** | 21W | |
| **Overlay Planes** | Yes | |
| **Maximum Color Depth** | 32-bit | |
| **Maximum Vertical Refresh Rate** | 85Hz | |
| **Multiple Display Support** | No | |
| **Operating Systems Graphics/ Video API Support** | D3D and Open GL | |
| **Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)** | Max : 1920x1440/32bpp @ 75Hz<br>Min : 640x480/8bpp @ 60Hz | |
| **External connectors** | DVI-D and S-video | |
| **Dimensions of full height card** INCHES/CENTIMETERS (L X H) | 167.64mm x 120mm | 167.64mm x 120mm |
| **Dimensions of low profile card** INCHES/CENTIMETERS (L X H) | | 167.64mm x 85mm |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 10°-50° C | |
| Relative Humidity Range | 5-90% RH | |
| Altitude Range | 0-20,000 ft. | |

| 256MB AMD RADEON™ HD 3450 GRAPHICS DUAL DVI OR VGA AND TV OUT | MT | DT |
|---|---|---|
| **Bus Type (example integrated or PCIe x16)** | PCIEx16 | |
| **GPU core clock** | 600Mhz | |
| **Frame Buffer Memory (onboard and shared) Size and Speed** | 500Mhz | |
| **Maximum power consumption** | 22W | |
| **Overlay Planes** | Yes | |
| **Maximum Color Depth** | 32-bit | |
| **Maximum Vertical Refresh Rate** | 85Hz | |
| **Multiple Display Support** | Yes | |
| **Operating Systems Graphics/ Video API Support** | D3D and OpenGL | |
| **Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)** | Max : 1920x1440/32bpp @ 75Hz<br>Min : 640x480/8bpp @ 60Hz | |
| **External connectors** | DMS-59 and S-video | |
| **Dimensions of full height card** INCHES/CENTIMETERS (L X H) | 167.64mm x 120mm | 167.64mm x 120mm |
| **Dimensions of low profile card** inches/centimeters (L x H) | | 167.64mm x 85mm |

| 256MB AMD RADEON™ HD 3450 GRAPHICS DUAL DVI OR VGA AND TV OUT (CONT.) | MT | DT |
|---|---|---|
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 10°-50° C | |
| Relative Humidity Range | 5-90% RH | |
| Altitude Range | 0-20,000 ft. | |

| 256MB nVidia GeForce 9300 GE | MT | DT |
|---|---|---|
| **Bus Type (example integrated or PCIe x16)** | PCIEx16 | |
| **GPU core clock** | 540Mhz | |
| **Frame Buffer Memory (onboard and shared) Size and Speed** | 500Mhz | |
| **Maximum power consumption** | 25W | |
| **Overlay Planes** | Yes | |
| **Maximum Color Depth** | 32-bit | |
| **Maximum Vertical Refresh Rate** | 85Hz | |
| **Multiple Display Support** | Yes | |
| **Operating Systems Graphics/ Video API Support** | D3D and OpenGL | |
| **Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)** | Max : 1920x1440/32bpp @ 75Hz | |
| **External connectors** | DMS-59[1] and S-video | |
| **Dimensions of full height card** inches/centimeters (L x H) | 167.64mm x 120mm | 167.64mm x 120mm |
| **Dimensions of low profile card** inches/centimeters (L x H) | | 167.64mm x 85mm |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 10°-50° C | |
| Relative Humidity Range | 5-90% RH | |

**Overlay Planes** Yes

* Significant of system memory may be allocated to support integrated graphics, depending on operating system, system memory size and other factors.
* Populating a up-graphics card in the x16 slot disabled onboard video.

## HARD DRIVES

| 80GB SATA 7200 RPM HDD | MT | DT |
|---|---|---|
| **Capacity* (bytes)** | 80GB | |
| **Dimensions** inches/centimeters (W x H x D) | 4/10.16 x 1.028/2.61 x 5.787/14.7 | |
| **Interface type and Maximum speed** | SATA, 3Gbps | |
| **Internal buffer size (range)** | 2MB, 8MB | |
| **Seek Time (RD/WR)** | 8.9/10.9ms | |
| **Rotational Speed** | 7200Rpm | |
| **Logical Blocks** | 512-byte | |
| **Power Source** | | |
| DC Power Requirements | +5V ± 5%，+12V ± 10% | |
| DC Current **(Peak)** | 1.6A(5V), 1.9A(12V) | |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 0° to 60°C | |
| Relative Humidity Range | 8 to 90% | |
| Maximum Wet Bulb Temperature | 37.7°C | |
| Altitude Range | -200~10000ft. | |
| **Environmental Non-Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | -40° to 65°C | |
| Relative Humidity Range | 5 to 95% | |
| Maximum Wet Bulb Temperature | 40°C | |
| Altitude Range | -200~40000ft. | |

| 160GB SATA 7200 RPM HDD | MT | DT |
|---|---|---|
| **Capacity* (bytes)** | 160GB | |
| **Dimensions** inches/centimeters (W x H x D) | 4/10.16 x 1.028/2.61 x 5.787/14.7 | |
| **Interface type and Maximum speed** | SATA, 3Gbps | |
| **Internal buffer size (range)** | 2MB, 8MB, 16MB | |
| **Seek Time (RD/WR)** | 8.9/10.9ms | |
| **Rotational Speed** | 7200Rpm | |
| **Logical Blocks** | 512-byte | |
| **Power Source** | | |
| DC Power Requirements | +5V ± 5%，+12V ± 10% | |
| DC Current **(Peak)** | 0.86A(5V), 2.0A(12V) | |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 5° to 55°C | |
| Relative Humidity Range | 5 to 90% | |
| Maximum Wet Bulb Temperature | 37.7°C | |
| Altitude Range | -200~10000ft. | |
| **Environmental Non-Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | -40° to 65°C | |
| Relative Humidity Range | 5 to 95% | |
| Maximum Wet Bulb Temperature | 40°C | |
| Altitude Range | -200~40000ft. | |

| 250GB SATA 7200 RPM HDD | MT DT |
|---|---|
| **Capacity (bytes)** | 250,059,350,016 |
| **Dimensions** inches (W x D x H) | 5.87 x 4 x 1 |
| **Interface type and Maximum speed** | Up to 3Gb/s |
| **Internal buffer size** | 8 MB |
| **Average Seek Time** | 8.5 ms |
| **Rotational Speed** | 7200 rpm |
| **Logical Blocks** | 488,397,168 |
| **Power Source** | |
| DC Power (Max) | Idle 7.0W, Active 10.0W |
| DC Current | 5V (.8A) and 12V (1.8A) |
| **Environmental Operating Conditions (Non-Condensing):** | |
| Temperature Range | $5^0$C to $60^0$C |
| Relative Humidity Range | 20% to 80% non-condensing |
| Maximum Wet Bulb Temperature | $29^0$C |
| Altitude Range | -50 ft to 10000 ft |
| **Environmental Non-Operating Conditions (Non-Condensing):** | |
| Temperature Range | $-40^0$C to $65^0$C |
| Relative Humidity Range | 10% to 90% non-condensing |
| Maximum Wet Bulb Temperature | $38^0$C |
| Altitude Range | -50 ft to 35000 ft |

| 320GB SATA 7200 RPM HDD | MT DT |
|---|---|
| **Capacity (bytes)** | 320,072,933,376 |
| **Dimensions** inches (W x D x H) | 5.87 x 4 x 1 |
| **Interface type and Maximum speed** | Up to 3Gb/s |
| **Internal buffer size** | 16 MB |
| **Average Seek Time** | 8.5 ms |
| **Rotational Speed** | 7200 rpm |
| **Logical Blocks** | 625,142,448 |
| **Power Source** | |
| DC Power (Max) | Idle 7.0W, Active 10.0W |
| DC Current | 5V (.8A) and 12V (1.8A) |
| **Environmental Operating Conditions (Non-Condensing):** | |
| Temperature Range | $5^0$C to $60^0$C |
| Relative Humidity Range | 20% to 80% non-condensing |
| Maximum Wet Bulb Temperature | $29^0$C |
| Altitude Range | -50 ft to 10000 ft |
| **Environmental Non-Operating Conditions (Non-Condensing):** | |
| Temperature Range | $-40^0$C to $65^0$C |
| Relative Humidity Range | 10% to 90% non-condensing |
| Maximum Wet Bulb Temperature | $38^0$C |
| Altitude Range | -50 ft to 35000 ft |

## OPTICAL DRIVES

| DVD +/- RW[1] | MT | DT |
|---|---|---|
| **External Dimensions** inches/centimeters (Without Bezel – W x H x D) | 148.2 x 42 x 170mm (± 0.5mm) | |
| **Weight (max) pounds/kilograms** | 0.8kg | |
| **Interface type and speed** | SATA, 1.5Gbps | |
| **Disc Capacity** | 8cm and 12cm | |
| **Internal buffer size** | Supplier Dependant | |
| **Access Times (typical)** | Supplier Dependant | |
| **Maximum Data Transfer Rates** | | |
| Writes | 16x DVD/48x CD | |
| Reads | 16x DVD/48x CD | |
| **Power Source** | | |
| DC Power Requirements | 12V, 5V | |
| DC Current | 1200mA (12V)/ 900mA (5V) | |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | 5° to 50°C | |
| Relative Humidity Range | 20 to 80% RH | |
| Maximum Wet Bulb Temperature | 29°C | |
| Altitude Range | -200 to 3048m | |
| **Environmental Non-Operating Conditions (Non-Condensing):** | | |
| Operating Temperature Range | -40° to 65°C | |
| Relative Humidity Range | 15 to 90% RH | |
| Maximum Wet Bulb Temperature | 38°C | |
| Altitude Range | -200 to 10600m | |

[1] Discs burned with this drive may not be compatible with some existing drives and players; using DVD+R media provides maximum compatibility.

## OPTICAL DRIVES (CONT.)

| DVD-ROM[1] | MT | DT |
|---|---|---|
| **External Dimensions** inches/centimeters (Without Bezel – W x H x D) | 148.2mm(6in)/42mm (2in)/ 190.5 (max) | |
| **Weight (max)** pounds/kilograms | 750g | |
| **Interface type and speed** | SATA 1.5Gbit/s | |
| **Disc Capacity** | Standard | |
| **Internal buffer size** | supplier dependent | |
| **Access Times (typical)** | supplier dependent | |
| **Maximum Data Transfer Rates** | | |
| Writes | N/A | |
| **Reads** | 16x DVD/48x CD | |
| **Power Source** | | |
| **DC Power Requirements** | 12V, 5V | |
| **DC Current (Peak)** | 1200mA (12V)/ 900mA (5V) | |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| **Operating Temperature Range** | 5C to 50C | |
| **Relative Humidity Range** | 20% to 80% RH | |
| **Maximum Wet Bulb Temperature** | 29C | |
| **Altitude Range** | -200 to 3048m | |
| **Environmental Non-Operating Conditions (Non-Condensing):** | | |
| **Operating Temperature Range** | -40C to 65C | |
| **Relative Humidity Range** | 5% to 95% RH | |
| **Maximum Wet Bulb Temperature** | 38C | |
| **Altitude Range** | -200 to 10600m | |

[1] DVD-ROM drives may have write-capable hardware that has been disabled via firmware modifications.

| COMBO DRIVE CD-RW | MT | DT |
|---|---|---|
| **External Dimensions** inches/centimeters (Without Bezel – W x H x D) | 148.2mm(6in)/42mm (2in)/ 190.5 (max) | |
| **Weight (max)** pounds/kilograms | 750g | |
| **Interface type and speed** | SATA 1.5Gbit/s | |
| **Disc Capacity** | Standard | |
| **Internal buffer size** | supplier dependent | |
| **Access Times (typical)** | supplier dependent | |
| **Maximum Data Transfer Rates** | | |
| **Writes** | 48x CD | |
| **Reads** | 16x DVD/48x CD | |

## OPTICAL DRIVES (CONT.)

| COMBO DRIVE CD-RW | MT | DT |
|---|---|---|
| **Power Source** | | |
| **DC Power Requirements** | 12V, 5V | |
| **DC Current (Peak)** | 1200mA (12V)/ 900mA (5V) | |
| **Environmental Operating Conditions (Non-Condensing):** | | |
| **Operating Temperature Range** | 5C to 50C | |
| **Relative Humidity Range** | 20% to 80% RH | |
| **Maximum Wet Bulb Temperature** | 29C | |
| **Altitude Range** | -200 to 3048m | |
| **Environmental Non-Operating Conditions (Non-Condensing):** | | |
| **Operating Temperature Range** | -40C to 65C | |
| **Relative Humidity Range** | 5% to 95% RH | |
| **Maximum Wet Bulb Temperature** | 38C | |
| **Altitude Range** | -200 to 10600m | |

More details for optical drives can be found at: http://support.dell.com/support/systemsinfo/documentation.aspx?c=us&l=en&s=gen&~cat=7

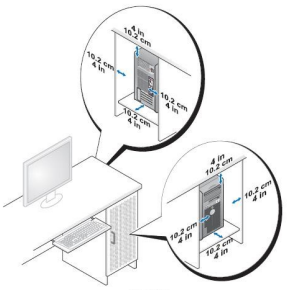
## BIOS DEFAULTS

| BIOS Factory Defaults (All Chassis's) | | | | | |
|---|---|---|---|---|---|
| **BIOS address** | F0000h | **USB front panel** | On | **Low power mode** | Off |
| **BIOS chip (NVRAM)** | 8Mb | **Module bay** | | **Password** | Disabled |
| **Setup Option** | Default Factory Value | **Serial #1 Port** | Auto | **POST hot keys** | Setup& Boot Menu |
| **Parallel Port mode** | PS/2 | **Keyboard Num lock** | Report | **SATA drives** | On |
| **Parallel Port address** | 378 | **Keyboard error report** | On | **Floppy** | Internal or USB if no internal |
| **Wake on LAN** | Off | **Onboard Video** | Auto | **Limit CPUID** | Off |
| **EIST** | Off | **HD Acoustic mode** | Bypass | **ASF Settings** | Off |
| **Onboard Audio** | On | **Onboard Video buffer** | | **HD Password** | Disabled |
| **Onboard Modem** | On | **Primary Video** | Auto | **Hyper-threading** | On |
| **Flex bay** | | **Suspend mode** | S3 | **Auto Power on** | Off |
| **Execute Disable** | On | **Chassis intrusion** | | **Auto Power time** | 12:00am |
| **Onboard NIC** | On (without PXE) | **TPM** | | **SERR** | On |
| **PS2 Mouse** | On | **Smart drive error report** | Off | **Fast Boot** | On |
| **Onboard USB** | On | **A/C recovery** | Off | | |

## CHASSIS ENCLOSURE & VENTILATION REQUIREMENTS

### ENCLOSURE VENTILATION

If your enclosure has doors, they need to be of a type that allows at least 30% airflow through the enclosure (front and back).

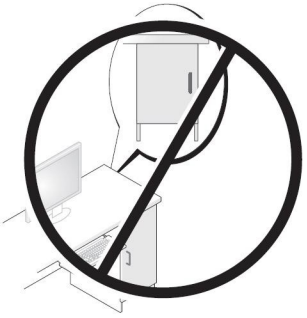


### ENCLOSURE MINIMUM CLEARANCE

Leave a 10.2 cm (4 in.) minimum clearance on all vented sides of the computer to permit the airflow required for proper ventilation.

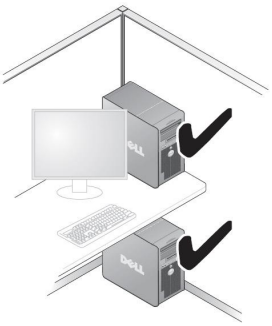
### RECOMMENDED ENCLOSURE

Do not install your computer in an enclosure that does not allow airflow. This restricts the airflow and impacts your computer's performance, possibly causing it to overheat.



### OPEN DESK MINIMUM CLEARANCE

If your computer is installed in a corner, on a desk, or under a desk, leave at least 5.1 cm (2 in.) clearance from the back of the computer to the wall to permit the airflow required for proper ventilation.



## REGULATORY COMPLIANCE AND ENVIRONMENTAL

Product related conformity assessment and regulatory authorizations including Product Safety, Electromagnetic Compatibility (EMC), Ergonomics, and Communication Devices relevant to this product may be viewed at www.dell.com/regulatory_compliance. The Regulatory Datasheet for this product is located at: http://www.dell.com/content/topics/global.aspx/corp/environment/en/prod_datasheets

Details of Dell's environmental stewardship program to conserve product energy consumption, reduce or eliminate materials for disposal, prolong product life span and provide effective and convenient equipment recovery solutions may be viewed at www.dell.com/environment. Product related conformity assessment, regulatory authorizations, and information encompassing Environmental, Energy Consumption, Noise Emissions, Product Materials Information, Packaging, Batteries, and Recycling relevant to this product may be viewed by clicking the Design for Environment link on the webpage.

# ACOUSTIC NOISE EMISSION INFORMATION

## OPTIPLEX 360 MT

| Component | Typical Configuration | High-end Configuration |
|---|---|---|
| CPU | E2220 | E7300 |
| Memory | 1 GB DDRII 667MHz x1 | 1 GB DDRII 800MHz x2 |
| HDD (#, capacity) | 80 GB 7200 RPM SATA x1 | 160 GB 7200 RPM SATA x2 |
| RMSD | CDRW/DVD Combo x1 | DVDRW/DVD dual x1 |
| Graphics Adapter | Integrated GMA3100 | Integrated GMA3100 |

The Declared Noise Emission in accordance with ISO 9296 for the Dell Optiplex 360 MT is as follows:
(all values $L_{WAd}$ expressed in bels; 1 bel=10 decibels, re $10^{-12}$ Watts)

| Operating Mode | Typical Configuration Declared Sound Power ($L_{WAd}$) | High-end Configuration Declared Sound Power ($L_{WAd}$) |
|---|---|---|
| **Idle** | 3.8 | 3.8 |
| **HDD Operating** | 3.8 | 3.8 |
| **ODD Operating** | 5.2 | 5.3 |
| **90% CPU** | 3.8 | 3.7 |

The Declared A-weighted Sound Pressure Level in decibels (re $2x10^{-5}$ Pa), at Operator, Bystander, and Desk Side Positions are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 for this product is as follows[1]:

| Operating Mode | Typical Configuration Declared Sound Pressure (LpA) | | | | High-end Configuration Declared Sound Pressure (LpA) | | | |
|---|---|---|---|---|---|---|---|---|
| | Table-Top | | Floor-Standing | | Table-Top | | Floor- Standing | |
| | Operator Position (LpA) | By-stander Position (LpA) | Operator Position (LpA) | By-stander Position (LpA) | Operator Position (LpA) | By-stander Position (LpA) | Operator Position (LpA) | By-stander Position (LpA) |
| **Idle** | **27.1** | **22.3** | **23.1** | **21.6** | **29.0** | **23.1** | **22.8** | **20.7** |
| **HDD Operating** | **27.2** | **22.4** | **22.2** | **21.7** | **28.5** | **23.1** | **22.9** | **20.8** |
| **ODD Operating** | **44.2** | **39.0** | **35.7** | **33.1** | **44.6** | **38.2** | **36.8** | **34.5** |
| **90% CPU** | **27.3** | **22.6** | **22.2** | **21.9** | **27.5** | **22.5** | **22.3** | **21.0** |

All tests are conducted according to ISO 7779 and declared according to ISO 9296 except 90% CPU. For this mode, the system CPU was stressed at 90% utilization with no other peripheral device actively seeking. This test mode is not specified in ISO 7779, but was measured using the same microphone distances and measurement techniques defined for the other reported operating modes.
Declared Sound Power rounded to nearest tenth of a bel per ISO 9296 section 4.4.2

# ACOUSTIC NOISE EMISSION INFORMATION (CONT.)

## OPTIPLEX 360 DT

| Component | Typical Configuration | High-end Configuration |
|---|---|---|
| CPU | E2220 | E4700 |
| Memory | 1 GB DDRII 667MHz x2 | 1 GB DDRII 800MHz x2 |
| HDD (#, capacity) | 80 GB 7200 RPM SATA x1 | 160 GB 7200 RPM SATA x1 |
| RMSD | CDRW/DVD Combo x1 | DVDRW/DVD dual x1 |
| Graphics Adapter | Integrated GMA3100 | Integrated GMA3100 |

The Declared Noise Emission in accordance with ISO 9296 for the Dell Optiplex 360 MT is as follows:
(all values $L_{WAd}$ expressed in bels; 1 bel=10 decibels, re $10^{-12}$ Watts)

| Operating Mode | Typical Configuration Declared Sound Power ($L_{WAd}$) | High-end Configuration Declared Sound Power ($L_{WAd}$) |
|---|---|---|
| **Idle** | 3.8 | 3.9 |
| **HDD Operating** | 3.8 | 3.9 |
| **ODD Operating** | 5.2 | 5.2 |
| **90% CPU** | 4.1 | 4.0 |

The Declared A-weighted Sound Pressure Level in decibels (re $2x10^{-5}$ Pa), at Operator, Bystander, and Desk Side Positions are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 for this product is as follows[1]:

| Operating Mode | Typical Configuration Declared Sound Pressure (LpA) | | | | High-end Configuration Declared Sound Pressure (LpA) | | | |
|---|---|---|---|---|---|---|---|---|
| | Table-Top | | Floor-Standing | | Table-Top | | Floor- Standing | |
| | Operator Position (LpA) | By-stander Position (LpA) | Operator Position (LpA) | By-stander Position (LpA) | Operator Position (LpA) | By-stander Position (LpA) | Operator Position (LpA) | By-stander Position (LpA) |
| **Idle** | **26.8** | **22.5** | **21.3** | **20.2** | **28.2** | **23.6** | **23.0** | **21.8** |
| **HDD Operating** | **26.8** | **22.5** | **21.7** | **20.4** | **28.3** | **23.8** | **22.1** | **22.3** |
| **ODD Operating** | **42.3** | **37.6** | **36.4** | **34.5** | **42.0** | **37.3** | **22.5** | **21.8** |
| **90% CPU** | **33.2** | **26.4** | **22.9** | **21.5** | **31.6** | **26.0** | **23.5** | **22.8** |

All tests are conducted according to ISO 7779 and declared according to ISO 9296 except 90% CPU. For this mode, the system CPU was stressed at 90% utilization with no other peripheral device actively seeking. This test mode is not specified in ISO 7779, but was measured using the same microphone distances and measurement techniques defined for the other reported operating modes.
Declared Sound Power rounded to nearest tenth of a bel per ISO 9296 section 4.4.2