DELL™ OPTIPLEX™ 330

TECHNICAL GUIDEBOOK

INSIDE THE OPTIPLEX 330

VERSION 1.0

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DELL™ OPTIPLEX™ 330

The Dell OptiPlex 330 raises the bar in the entry-level desktop category by providing advanced features to suit the needs of growing businesses. Configuration options include two form factor choices, blazing-fast Intel Core™ 2 Duo processors, an optional energy-efficient 80PLUS® power supply, and RAID 1 support. The OptiPlex 330 delivers essential networking capabilities and enhanced performance. Simplify desktop computing with the OptiPlex 330.

POWER EFFICIENCY

Productivity and power savings in a proven, reliable design. Dell Energy Smart is a unique approach to energy-efficient computing which includes hardware and software, tools, and partnerships.

- Dell factory-enabled Energy Smart software settings put your system into a low-energy sleep state after 15 minutes of inactivity. Remote power policy management software delivers even greater energy savings
- Efficient hardware includes Intel Core™ 2 Duo, 80PLUS® power supplies, ENERGY STAR® 4.0 and EPEAT™ Gold configurations
- Efficient Dell BTX design and HyperCool™ thermal-management technology help save energy and boost reliability
- Dell's online Energy Calculator is a unique tool which allows you to compare systems, features, and usage models to optimize energy savings across Dell commercial client products
- Dell is working alongside industry leaders and standards organizations worldwide to help drive revolutionary change

SMART SECURITY

Strategic, comprehensive endpoint solutions for all types of businesses.

- Simple deterrents such as physical locks help prevent theft
- RAID 1 support helps keep data intact and accessible via real-time redundancy
- CompuTrace® tracking capability incorporated into the BIOS can help reduce data loss from theft

ESSENTIAL REMOTE MANAGEMENT

Run your IT better and have greater control with flexible hardware options and management software. Dell Client Manager brings it all together in one management console, available as a free download. Built-in, standards-based management helps ensure simplicity and interoperability.

- Widely installed ASF (Alert Standard Format) standards-based technology, which supports basic in- and out-of-band hardware inventory, alerting, and power control
- Dell Client Manager Standard, available at no cost, integrates all components of Dell™ OpenManage™ into a single remote console

DELL DEPLOYMENT SERVICES

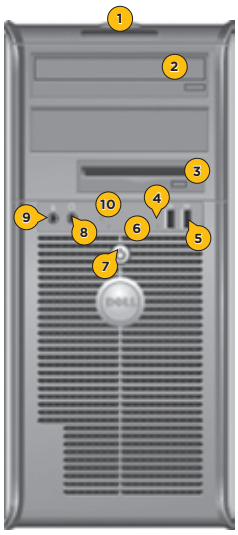
Get IT Faster with custom image management, in-factory configuration, and deployment made simple. Dell's direct, steppingstone approach to customization helps ensure the best fit for your needs.

- Dell ImageDirect allows you to dynamically create, manage, and load your custom images to Dell client systems
- Advanced Configuration Services enable easy customization, at the point of sale
- Microsoft® Windows Vista® Assessment and Migration options help streamline and optimize your deployment processes

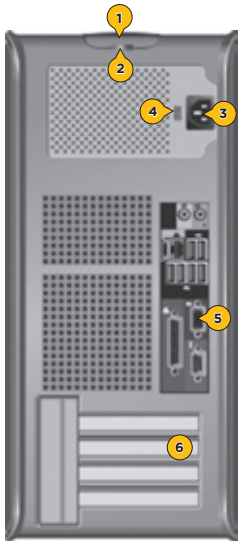
SIMPLY PUT: DELL™ OPTIPLEX™ 330

EASY TO MANAGE.
EFFICIENT TO OWN.

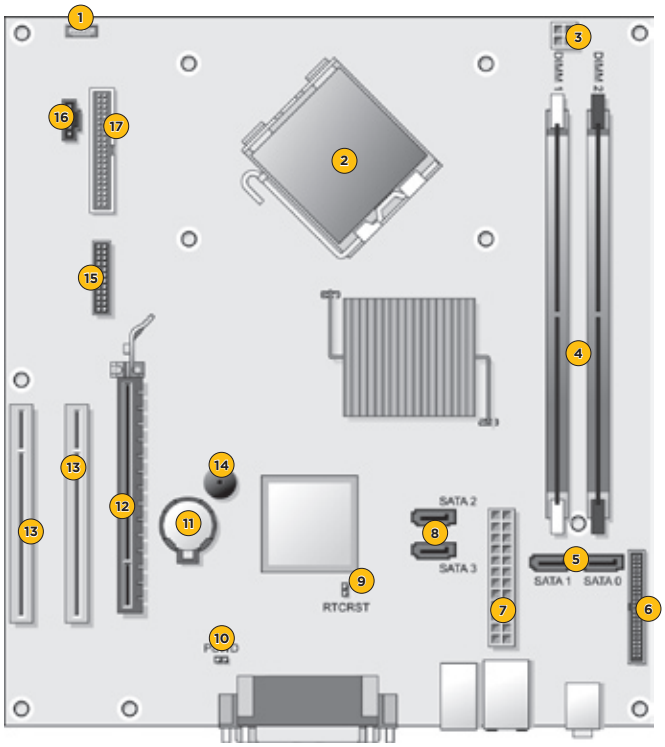
MINI TOWER COMPUTER (MT) VIEW



FRONT VIEW	
1	service tag
2	optical drive
3	floppy drive
4	drive activity light
5	USB 2.0 connectors (2)
6	diagnostic lights
7	power button
8	headphone connector
9	microphone connector
10	LAN indicator light

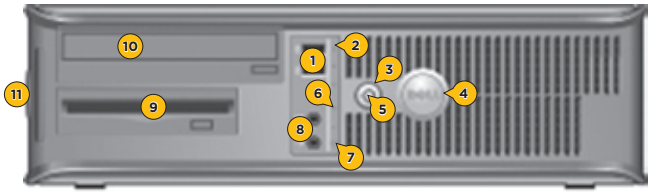


BACK VIEW	
1	cover-release latch
2	padlock ring
3	power connector
4	voltage selector switch
5	back panel connectors
6	card slots



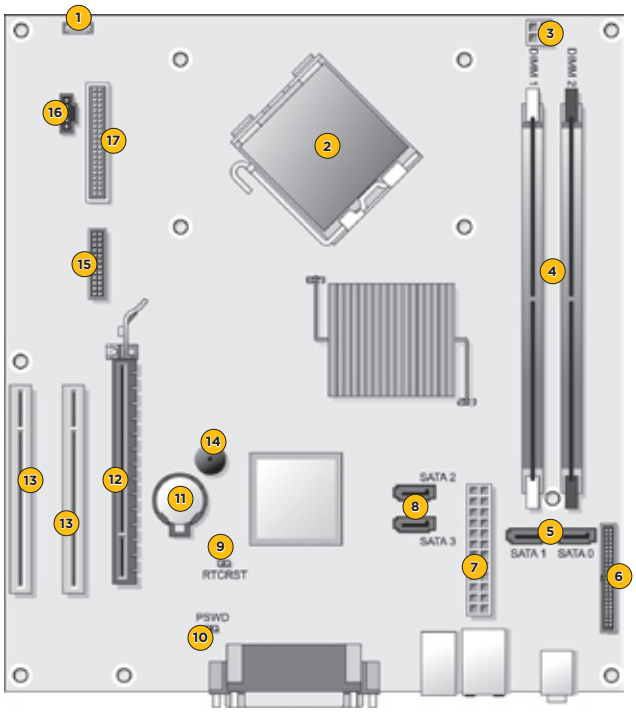
SYSTEM BOARD COMPONENTS	
1	speaker connector (INT_SPKR)
2	processor connector (CPU)
3	processor power connector (12VPOWER)
4	memory module connectors (DIMM_1, DIMM_2)
5	SATA drive connectors (SATA0, SATA1)
6	front-panel connector (FRONTPANEL)
7	power connector (POWER)
8	SATA drive connectors (SATA2, SATA3)
9	RTC reset jumper (RTCRST)
10	password jumper (PSWD)
11	battery socket (BATTERY)
12	PCI Express x16 card connector (SLOT1)
13	PCI card connectors (SLOT2 and SLOT3)
14	internal buzzer (SPKR)
15	serial/PS/2 connector (PS2/SER2)
16	fan connector (FAN_CPU)
17	floppy drive connector (FLOPPY)

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
2	back panel connectors
3	power connector
4	voltage selection switch
5	padlock ring
6	cover-release latch



SYSTEM BOARD COMPONENTS	
1	speaker connector (INT_SPKR)
2	processor connector (CPU)
3	processor power connector (12VPOWER)
4	memory module connectors (DIMM_1, DIMM_2)
5	SATA drive connectors (SATA0, SATA1)
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9	RTC reset jumper (RTCRST)
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14	internal buzzer (SPKR)
15	serial/PS/2 connector (PS2/SER2)
16	fan connector (FAN_CPU)
17	floppy drive connector (FLOPPY)

MARKETING SYSTEM CONFIGURATIONS

Offerings may vary by region. For more information regarding the configuration of your computer, click "Start Help" and "Support" and select the option to view information about your computer.

OPERATING SYSTEM

One of the following Operating Systems will be preinstalled.

	MT	DT
Windows Vista® Operating System	Windows Vista® Ultimate, Windows Vista® Business, Windows Vista® Home Basic	
Windows XP® Operating System	Windows® XP Professional, Windows® XP Home Edition	
Other	FreeDOS (for n-series), Red Flag Linux (China only)	
OS Media Support	✓	✓

CHIPSET

	MT	DT
Chipset	Intel® G31 Express Chipset (ICH7R)	
Non-volatile Memory on Chipset		
BIOS Configuration FWH (firmware hub)	8 MB located at SP1_FLASH on chipset	
TPM 1.2 Security Device (Trusted Platform Module)		
NIC EEPROM	1 MB located at LOM_FLASH on chipset	

PROCESSOR

Processor numbers are not a measure of performance.

PROCESSOR (SPEED, CACHE, FSB)	MT	DT
Intel® Core™ 2 Duo with Intel, Enhanced Intel SpeedStep Technology, and Execute Disable Bit		
Intel Core 2 Duo E7200 Processor (2.53GHz, 3MB L2 cache, 1066MHz FSB)	✓	✓
Intel Core 2 Duo E6850 Processor (3.0 GHz, 4 MB L2 cache, 1333 MHz FSB)	✓	✓
Intel Core 2 Duo E6750 Processor (2.66 GHz, 4 MB L2 cache, 1333 MHz FSB)	✓	✓
Intel Core 2 Duo E6550 Processor (2.33 GHz, 4 MB L2 cache, 1333 MHz FSB)	✓	✓
Intel Core 2 Duo E4700 Processor (2.6 GHz, 2 MB L2 cache, 800 MHz FSB)	✓	✓
Intel Core 2 Duo E4600 Processor (2.4 GHz, 2 MB L2 cache, 800 MHz FSB)	✓	✓
Intel Core 2 Duo E4500 Processor (2.2 GHz, 2 MB L2 cache, 800 MHz FSB)	✓	✓
Intel Core 2 Duo E2220 Processor (2.4Hz, 1MB L2 cache, 800MHz FSB)	✓	✓
Intel Core 2 Duo E2200 Processor (1.8GHz, 1MB L2 cache, 800MHz FSB)	✓	✓
Intel Core 2 Duo E2180 Processor (2.0 GHz, 1 MB L2 cache, 800 MHz FSB)	✓	✓
Intel Core 2 Duo E2160 Processor (1.8 GHz, 1 MB L2 cache, 800 MHz FSB)	✓	✓
Intel® Celeron® with Execute Disable Bit		
Intel Celeron 440 Processor (2.0 GHz, 512 K L2 cache, 800 MHz FSB)	✓	✓
Intel Celeron 430 Processor (1.8 GHz, 512 K L2 cache, 800 MHz FSB)	✓	✓
Intel Celeron 420 Processor (1.6 GHz, 512 K L2 cache, 800 MHz FSB)	✓	✓

ADVANCED SYSTEM MANAGEABILITY MODES

	MT	DT
Basic Client Systems Management (w/ ASF)	✓	✓

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 in performance.

	MT	DT
Type: DDR2 Synch DRAM Non-ECC Memory	667 MHz or 800 MHz speeds	
DIMM Slots	2	2
DIMM Capacities	Up to 2 GB	Up to 2 GB
Minimum Memory	512 MB	512 MB
Maximum Memory with 667 MHz Speed Memory	2 GB	2 GB
Maximum Memory with 800 MHz Speed Memory	4 GB[1]	4 GB[1]
Configurations:		
800 MHz Memory Configurations		
4 GB DDR2 Non-ECC SDRAM, 800 MHz (2 DIMM)	✓	✓
2 GB DDR2 Non-ECC SDRAM, 800 MHz (1 DIMM)	✓	✓
2 GB DDR2 Non-ECC SDRAM, 800 MHz (2 DIMM)	✓	✓
1 GB DDR2 Non-ECC SDRAM, 800 MHz (1 DIMM)	✓	✓
667 MHz Memory Configurations		
2 GB DDR2 Non-ECC SDRAM, 667 MHz (2 DIMM)	✓	✓
2 GB DDR2 Non-ECC SDRAM, 667 MHz (1 DIMM)	✓	✓
1 GB DDR2 Non-ECC SDRAM, 667 MHz (2 DIMM)	✓	✓
1 GB DDR2 Non-ECC SDRAM, 667 MHz (1 DIMM)	✓	✓
512 MB DDR2 Non-ECC SDRAM, 667 MHz (1 DIMM)	✓	✓

[1] The total amount of available memory will be less, depending on actual system configuration.

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 (Normal) 2 (Second HDD support, mutually exclusive with floppy)
Optical Drives Supported (External)	2	1
Interface:		
SATA (number of connectors)	4	4
Floppy/Diskette	1	1
Hard Drive: size, type, speed, RPM		
80 GB SATA 10 K RPM HDD[2]	✓	✓
250 GB SATA 7200 RPM HDD[2]	✓	✓
160 GB SATA 7200 RPM HDD[2]	✓	✓
80 GB SATA 7200 RPM HDD[2]	✓	✓
RAID 1 Data Protection: (includes two matching capacity/speed hard drives)		
80 GB SATA 10 K RPM HDD[2]	✓	✓
250 GB SATA 7200 RPM HDD[2]	✓	✓
160 GB SATA 7200 RPM HDD[2]	✓	✓
80 GB SATA 7200 RPM HDD[2]	✓	✓
Optical Drive:		
DVD +/- RW	16x SATA	16x SATA
DVD-ROM	16x SATA	16x SATA
Combo Drive CD-RW	48x/32x/16x SATA	48x/32x/16x SATA
CD-ROM	48x SATA	48x SATA
Floppy Diskette Drive: (SFF requires a slimline floppy drive)		
Floppy Drive	1.44 MB	1.44 MB

[2] 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.

SYSTEM BOARD CONNECTORS

See Detailed Engineering Specifications for maximum card dimensions support.

	MT	DT
PCI Slot(s):	2	2
PCIe x16 Slot:	1	1
PCIe x1 Slot:		
Serial ATA (SATA)	4	4
Serial	1	1

GRAPHICS/VIDEO CONTROLLER

MT supports full height card, DT supports low profile card.

	MT	DT
Integrated Intel® Graphics Media Accelerator 3100[3]	Integrated on system board	
Enhanced Graphic/Video Options		
DVI (Digital) Adapter Card	Optional full height or low profile card	Optional low profile card
128 MB ATI Radeon™ X1300[3] with DVI and TV Out	Optional full height or low profile card	Optional low profile card
256 MB ATI Radeon™ HD 2400 PRO[3] with DVI and TV Out	Optional full height or low profile card	Optional low profile card
256 MB ATI Radeon™ HD 2400 XT Dual Monitor[3] with VGA cable and TV Out	Optional full height or low profile card	Optional low profile card
256 MB ATI Radeon™ HD 2400 XT Dual Monitor[3] with DVI and VGA cables and TV Out	Optional full height or low profile card	Optional low profile card

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

EXTERNAL PORTS/CONNECTORS

MT supports full height card, DT supports low profile card.

See chassis diagrams section for port/connector locations.	MT	DT
USB 2.0	8	
Serial	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	
1394 Controller	Optional full height card	Optional low profile card
Video:		
VGA	One rear	
DVI	Optional (DVI adapter card)	
Audio:		
Microphone-in	One minijack front	
Headphone	One minijack front	
Stereo Line-in	One minijack rear	
Speakers Line-out	One minijack rear	

COMMUNICATIONS – NETWORK ADAPTER (NIC)

	MT	DT
Broadcom (BCM5787) Gigabit LAN 10/100/1000 (WOL, PXE, and ASF2.0)	Integrated on system board	

COMMUNICATIONS – MODEM

MT supports full height card, DT supports low profile card.

	MT	DT
V.92 Data/Fax Controllerless Modem	Integrated on system board	

AUDIO AND SPEAKERS

	MT	DT
ADI 1984 High Definition Audio	Integrated on system board	
Internal Chassis Speaker	Optional	
Dell A225 Speakers	Optional	
Dell A525 Speakers	Optional	
Dell AS501 Flat Panel Speakers (Sound Bar)	Optional	
Dell AS501PA Flat Panel Speakers (Sound Bar)	Optional	

KEYBOARD AND MOUSE

	MT	DT
Dell USB Entry QuietKey Keyboard	Optional	
Dell USB Enhanced Multimedia Keyboard	Optional	
Dell Smart Card USB Keyboard	Optional	
Dell Bluetooth Keyboard and Mouse	Optional	
Dell USB Entry 2 Button Scroll Mouse	Optional	
Dell USB Optical 2 Button Scroll Mouse	Optional	
Dell USB Premium 5 Button Mouse	Optional	
Dell Palmrest	Optional	
Dell Logo Mouse Pad	Optional	

SECURITY

	MT	DT
Trusted Platform Module (TPM) 1.2		
Chassis Intrusion Switch		
Dell USB External Biometric Fingerprint Reader		
Chassis Lock Slot	Standard	

SERVICE AND SUPPORT

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

	MT	DT
3-Year Limited Warranty[4] (3-3-0)	Standard	
3-Year Next Business Day On-site[5] Warranty (3-3-3)	Optional	
Gold Tech Support	Optional	

[4] For a copy of limited warranty, write Dell USA LP, Attn: Warranties, One Dell Way, Round Rock, TX 78682 or visit www.dell.com/warranty

[5] May be provided by third party. Technician dispatched, if necessary, following phone-based troubleshooting. Availability varies. See dell.com/servicecontracts for details.

SOFTWARE

	MT	DT
Dell Client Manager Standard	Available via Dell.com	
Norton Internet Security™	90-Day trial or optional subscription	

DETAILED ENGINEERING SPECIFICATIONS

SYSTEM DIMENSIONS (PHYSICAL)

System Weight[6] and Shipping Weight[7] 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[6] POUNDS/KILOGRAMS	27.2 lbs; 12.34 kg	23 lbs; 10.4 kg
Chassis Dimensions: (HxWxD)		
Height INCHES/CENTIMETERS	16.3″; 41.4 cm	4.5″; 11.4 cm
Width INCHES/CENTIMETERS	7.3″; 18.5 cm	15.7″; 39.9 cm
Depth INCHES/CENTIMETERS	17.3″; 43.9 cm	13.9″; 35.3 cm
Shipping Weight[7] POUNDS/KILOGRAMS (includes packaging materials)	19.73 kg	12.7 kg
Packaging Parameters (HxWxD)		
Height INCHES/CENTIMETERS	22.38″; 56.8 cm	20.63″; 52.4 cm
Width INCHES/CENTIMETERS	22.25″; 56.5 cm	20.31″; 51.6 cm
Depth INCHES/CENTIMETERS	14.25″; 36.2 cm	11.75″; 29.8 cm

[6] Weights are approximates and may change based on system configuration and included accessories.

[7] Dimensions are region specific. Each region may have unique packing.

SYSTEM BOARD CONNECTOR MAXIMUM ALLOWABLE DIMENSIONS

	MT	DT
PCI Slot(s) Dimensions: (HxL)	2	2
Height INCHES/CENTIMETERS	4.376″; 11.115 cm	2.731″; 6.89 cm
Length INCHES/CENTIMETERS	6.6″; 16.765 cm	6.6″; 16.765 cm
PCIe x16 Slot Dimensions: (HxL)	1	1
Height INCHES/CENTIMETERS	4.376″; 11.115 cm	2.731″; 6.89 cm
Length INCHES/CENTIMETERS	6.6″; 16.765 cm	6.6″; 16.765 cm

SYSTEM LEVEL ENVIRONMENTAL AND OPERATING CONDITIONS

	MT	DT
Temperature		
Operating	10°–35°C (50°–95°F)	10°–35°C (50°–95°F)
Non-Operating	-40°–65°C (–40°–149°F)	-40°–65°C (–40°–149°F)
Relative Humidity	20%–80% (non-condensing)	20%–80% (non-condensing)
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 3,048 m (–50 to 10,000 ft)	–15.2 to 3,048 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

	MT	DT
Power Supply Wattage	305W	280W
AC Input Voltage Range	90~135Vac,180~264Vac (PFC) 90~264Vac(EPA)	90~135Vac,180~264Vac (PFC) 90~264Vac(EPA)
AC Input Current	9A / 4.5A(PFC), 6.5 / 4.5A(EPA)	6.5 / 4.5A(PFC)
AC Input Frequency	47~63 Hz	47~63 Hz
AC Holdup Time	>16 ms	>16 ms
Minimum Efficiency (Active PFC, Energy Star® Compliant)	80%	80%
Minimum Efficiency (Active PFC)		
Minimum Efficiency (PFC)	65%	65%

POWER, CONT.

	MT	DT
DC Parameters		
+3.3v Output	17A	10A
+5.0v Output	22A	15A
+12.0v Output	18A@12Va, 18A@12Vb	16A
+5.0v Auxiliary Output	4A	4A
-12.0v Output	1A	0.5A
Max Total Power	305W	280W
Max Combined +3.3v / +5.0v Power	150W	108W
Max Combined 12.0v Power (note: only if more than one 12v rail)	264W	
3.3v CMOS Battery (type and estimated battery life)	CR2032, 5 years	CR2032, 5 years
RTC Accuracy (time of day)	Lead 1 second/day	Lead 1 second/day
Power Supply Fan	80 mm	92 mm
Compliance:		
Energy Star Compliant power supply option available	✓	✓
FEMP Executive Order 13221	✓	✓
UL Certified	✓	✓

AUDIO

INTEGRATED ADI 1984 HIGH DEFINITION AUDIO	MT	DT
High Definition Stereo Support	✓	✓
Number of Channels	2	2
Number of Bits / Audio Resolution	16, 20 and 24	16, 20 and 24
Sampling Rate (recording/playback)	Up to 192 KHz	Up to 192 KHz
Signal to Noise Ratio	96 dB	96 dB
Analog Audio	✓	✓

AUDIO, CONT.

INTEGRATED ADI 1984 HIGH DEFINITION AUDIO, CONT.	MT	DT
Audio Jack Impedance		
Microphone	1K-2K ohm	1K-2K ohm
Line-In	>10K ohm	>10K ohm
Line-Out	>10K ohm	>10K ohm
Headphone	16-500 ohm	16-500 ohm
Internal Speaker Power Rating	+5V	+5V

COMMUNICATIONS – NETWORK ADAPTER (NIC)

MT supports full height card, DT supports low profile card.

INTEGRATED BROADCOM 5787 GIGABIT LAN	MT	DT
Connector Type	RJ-45	
Data Rates Supported	10 / 100 / 1000 M	
Controller Details		
Controller Bus Architecture	PCIe V1.1 x 1	
Integrated Memory	Yes (buffer memory)	
Data Transfer Mode	DMA	
Power Consumption (full operation per data rate connection speed)	1298 mW	
Power Consumption (standby operation)	340 mW	
IEEE Standards Compliance	IEEE802.3, IEEE802.3u, IEEE802.3x	
Hardware Certifications	IEEE	
Boot ROM Support	✓	
Network Transfer Mode		
Network Transfer Rate	10BASE-T (half-duplex) 10 Mbps 10BASE-T (full-duplex) 20 Mbps 100BASE-TX (half-duplex) 100 Mbps 100BASE-TX (full-duplex) 200 Mbps 1000BASE-T (full-duplex) 2000 Mbps	

COMMUNICATIONS – NETWORK ADAPTER (NIC), CONT.

INTEGRATED BROADCOM 5787 GIGABIT LAN, CONT.	MT	DT
Environmental		
Operating Temperature	0–125°C; 32°–257°F	
Operating Humidity		
Operating System Driver Support	Windows® XP (32-bit), Windows Vista® (32-bit)	
Manageability	WoL, PXE	
Management Capabilities Alerting	ASF 2.0	

COMMUNICATIONS – MODEM

MT supports full height card, DT supports low profile card.

V.92 DATA/FAX CONTROLLERLESS MODEM	MT	DT
Connector	RJ-11	
Data Transmission	PCM - Pulse Coded Modulation (V.92/V.90) TCM - Trellis Coded Modulation (V.90/V.34/V.32 bis/V.32)	
Data Speeds	56 Kbps receive, 48 Kbps transmit	
Data Standards	ITU V.92/V.90, V.34/V.32 bis/V.32	
Fax Speeds	14.4 Kbps	
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°C; 32°–122°F	

GRAPHICS/VIDEO CONTROLLER

MT supports full height card, DT supports low profile card.

INTEGRATED INTEL GRAPHICS MEDIA ACCELERATOR 3000	MT	DT
Bus Type	Integrated	
GPU Core Clock	350 MHz Integrated 24-bit RAMDAC	
Frame Buffer Memory (onboard and shared) Size and Speed	Up to 256 MB of shared system memory[3]	
Maximum Power Consumption	9.0 W	
Overlay Planes	✓	
Maximum Color Depth	32 bit	
Maximum Vertical Refresh Rate	85 Hz	
Multiple Display Support	Yes, with optional DVI add-in card	
Operating Systems Graphics/Video API Support	OpenGL 2.0/DirectX 9.0C	
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Up to 2048x1566 @ 75 Hz Supports flat panels up to 1920x1200 @ 60 Hz or digital CRT/HDTV at 1400x1050 @ 85 Hz	
External Connectors	VGA	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	0°–106°C; 32°–223°F	
Relative Humidity Range	20%–80% (non-condensing)	
Altitude Range	-15.2–3048 m (-50–10,000 ft)	

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

DVI (DIGITAL) ADAPTER	MT	DT
Bus Type	sDVO	
Maximum Supported Resolution	Up to 2048x1566 @ 75 Hz Supports flat panels up to 1920x1200 @ 60 Hz or digital CRT/HDTV at 1400x1050 @ 85 Hz	
Dimensions of Full Height Card : INCHES/CENTIMETERS (LxH)	5.75 x 2.75 in / 14.61 x 6.99 cm	
Dimensions of Low Profile Card : INCHES/CENTIMETERS (LxH)		5.75 x 2.75 in / 14.61 x 6.99 cm
External Connectors	DVI	

GRAPHICS/VIDEO CONTROLLER, CONT.

128 MB ATI RADEON X1300[3] WITH DVI AND TV OUT	MT	DT
Bus Type	PCIe x16	
GPU Core Clock	400 Mhz	
Frame Buffer Memory (onboard and shared) Size and Speed	128 MB; 400 Mhz	
Maximum Power Consumption	20W	
Overlay Planes	✓	
Maximum Color Depth	32-bit	
Maximum Vertical Refresh Rate	85 Hz	
Multiple Display Support		
Operating Systems Graphics/Video API Support	D3D and Open GL	
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max: 1920 x 1440 / 32 bpp @ 75 Hz Min: 640 x 480 / 8 bpp @ 60 Hz	
External Connectors	DVI-D and S-video with Composite	
Dimensions of Full Height Card: INCHES/CENTIMETERS (LxH)	16.764 cm x 12.0 cm	16.764 cm x 12.0 cm
Dimensions of Low Profile Card: INCHES/CENTIMETERS (LxH)		16.764 cm x 8.5 cm
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	10°– 50°C; 50°–122°F	
Relative Humidity Range	5–90% RH	
Altitude Range	0–20,000 ft.	

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

256 MB ATI RADEON™ HD 2400 PRO[3] WITH DVI AND TV OUT	MT	DT
Bus Type	PCIEx16	
GPU Core Clock	400 MHz	
Frame Buffer Memory (onboard and shared) Size and Speed	256 MB; 500 Mhz	
Maximum Power Consumption	21W	
Overlay Planes	✓	
Maximum Color Depth	32-bit	

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

GRAPHICS/VIDEO CONTROLLER, CONT.

256 MB ATI RADEON™ HD 2400 PRO[3] WITH DVI AND TV OUT, CONT.	MT	DT
Maximum Vertical Refresh Rate	85 Hz	
Multiple Display Support		
Operating Systems Graphics/Video API Support	D3D and Open GL	
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max: 1920 x 1440 / 32 bpp @ 75 Hz Min: 640 x 480 / 8 bpp @ 60 Hz	
External Connectors	DVI-D and S-video	
Dimensions of Full Height Card: INCHES/CENTIMETERS (LxH)	16.764 cm x 12.0 cm	16.764 cm x 12.0 cm
Dimensions of Low Profile Card: INCHES/CENTIMETERS (LxH)		16.764 cm x 8.5 cm
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	10°– 50°C; 50°–122°F	
Relative Humidity Range	5–90% RH	
Altitude Range	0–20,000 ft.	

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

256 MB ATI RADEON™ HD 2400[3] XT DUAL MONITOR WITH DVI/VGA VIA CABLES AND TV OUT	MT	DT
Bus Type	PCIEx16	
GPU Core Clock	600 Mhz	
Frame Buffer Memory (onboard and shared) Size and Speed	500 Mhz	
Maximum Power Consumption	25W	
Overlay Planes	✓	
Maximum Color Depth	32-bit	
Maximum Vertical Refresh Rate	85 Hz	
Multiple Display Support	2	
Operating Systems Graphics/Video API Support	D3D and Open GL	
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	Max: 1920 x 1440 / 32 bpp @ 75 Hz Min: 640 x 480 / 8 bpp @ 60 Hz	
External Connectors	DMS-59 and S-video	
Dimensions of Full Height Card: INCHES/CENTIMETERS (LxH)	16.764 cm x 12.0 cm	16.764 cm x 12.0 cm

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

GRAPHICS/VIDEO CONTROLLER, CONT.

256 MB ATI RADEON™ HD 2400[3] XT DUAL MONITOR WITH DVI/VGA VIA CABLES AND TV OUT, CONT.	MT	DT
Dimensions of Low Profile Card: INCHES/CENTIMETERS (LxH)		16.764 cm x 8.5 cm
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	10°– 50°C; 50°–122°F	
Relative Humidity Range	5–90% RH	
Altitude Range	0–20,000 ft.	

[3] Significant memory may be used to support graphics, depending on system memory size and other factors.

HARD DRIVES

80 GB SATA 10K RPM HDD[2]	MT	DT
Capacity (bytes)	80 GB[2]	
Dimensions: INCHES/CENTIMETERS (WxHxD)	4"/10.16 cm x 1.028"/2.61 cm x 5.787"/14.7 cm	
Interface Type and Maximum Speed	SATA, 3 Gbps	
Internal Buffer Size (range)	16 MB	
Seek Time (RD/WR)	4.6/5.2 ms	
Rotational Speed	10,000 Rpm	
Logical Blocks	512-byte	
Power Source		
DC Power Requirements	+5V±5%+12V±5%	
DC Current (Peak)	1.228A(5V), 2.4A(12V)	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	10°– 50°C; 50°–122°F	
Relative Humidity Range	5–95%	
Maximum Wet Bulb Temperature	33°C; 91.4°F	
Altitude Range	-1,000–10,000 ft.	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°– 65°C; -40°–149°F	

[2] 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.

HARD DRIVES, CONT.

80 GB SATA 10 K RPM HDD[2] CONT.	MT	DT
Environmental Non-Operating Conditions (Non-Condensing), cont.:		
Relative Humidity Range	5–95%	
Maximum Wet Bulb Temperature	35°C; 95°F	
Altitude Range	-1,000–40,000 ft.	

[2] 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.

80 GB[2] SATA 7200 RPM HDD	MT	DT
Capacity (bytes)	80 GB[2]	
Dimensions: INCHES/CENTIMETERS (WxHxD)	4"/10.16 cm x 1.028"/2.61 cm x 5.787"/14.7 cm	
Interface Type and Maximum Speed	SATA, 3 Gbps	
Internal Buffer Size (range)	2 MB, 8 MB	
Seek Time (RD/WR)	8.9/10.9 ms	
Rotational Speed	7200 Rpm	
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°– 60°C; 32°–140°F	
Relative Humidity Range	8–90%	
Maximum Wet Bulb Temperature	37.7°C; 99.8°F	
Altitude Range	-200–10,000 ft.	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°– 65°C; -40°–149°F	
Relative Humidity Range	5–95%	
Maximum Wet Bulb Temperature	40°C; 104°F	
Altitude Range	-200–40,000 ft.	

[2] 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.

HARD DRIVES, CONT.

160 GB SATA 7200 RPM HDD[2]	MT	DT
Capacity (bytes)	160 GB[2]	
Dimensions: INCHES/CENTIMETERS (WxHxD)	4"/10.16 cm x 1.028"/2.61 cm x 5.787"/14.7 cm	
Interface Type and Maximum Speed	SATA, 3 Gbps	
Internal Buffer Size (range)	2 MB, 8 MB, 16 MB	
Seek Time (RD/WR)	8.9/10.9 ms	
Rotational Speed	7200 Rpm	
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°–55°C; 41°–131°F	
Relative Humidity Range	5–90%	
Maximum Wet Bulb Temperature	37.7°C; 99.8°F	
Altitude Range	-200–10,000 ft.	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°– 65°C; -40°–149°F	
Relative Humidity Range	5–95%	
Maximum Wet Bulb Temperature	40°C; 104°F	
Altitude Range	-200–40,000 ft.	

[2] 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.

250 GB SATA 7200 RPM HDD	MT	DT
Capacity (bytes)	250 GB[2]	
Dimensions: INCHES/CENTIMETERS (WxHxD)	4"/10.16 cm x 1.028"/2.61 cm x 5.787"/14.7 cm	
Interface Type and Maximum Speed	SATA, 3 Gbps	

[2] 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.

HARD DRIVES, CONT.

250 GB SATA 7200 RPM HDD[2] CONT.	MT	DT
Internal Buffer Size (range)	2 MB, 8 MB, 16 MB	
Seek Time (RD/WR)	8.9/10.9 ms	
Rotational Speed	7200 Rpm	
Logical Blocks	512-byte	
Power Source		
DC Power Requirements	+5V±5%+12V±10%	
DC Current (Peak)	0.68A(5V), 2.8A(12V)	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	0°– 60°C; 32° – 140°F	
Relative Humidity Range	5 – 90%	
Maximum Wet Bulb Temperature	37.7°C; 99.8°F	
Altitude Range	-200 –10,000 ft.	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°– 65°C; -40° – 149°F	
Relative Humidity Range	5 – 95%	
Maximum Wet Bulb Temperature	40°C; 104°F	
Altitude Range	-200 – 40,000 ft.	

[2] 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.

OPTICAL DRIVES

DVD +/- RW	MT	DT
External Dimensions: INCHES/CENTIMETERS (Without Bezel–WxHxD)	5.8″/14.82 cm x 1.7″/4.2 cm x 6.7″/17.0 cm	
Weight (max): POUNDS/KILOGRAMS	1.8 lbs; 0.8 kg	
Interface Type and Maximum Speed	SATA, 1.5 Gbps	
Disc Capacity	3.15″ and 4.72″; 8 cm and 12 cm	
Internal Buffer Size	2 MB	
Access Times (typical)	140 ms	
Maximum Data Transfer Rates		
Writes	16X (21.6 MB/s) CD	
Reads	16X (21.6 MB/s) CD	
Power Source		
DC Power Requirements	+5V±5%+12V±10%	
DC Current (Peak)	1.4A(5V), 1.3A(12V)	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	5°– 50°C; 41° – 122°F	
Relative Humidity Range	20 – 80% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	0 – 3,500 m	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°– 65°C; -40° – 149°F	
Relative Humidity Range	15 – 90% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	0 –12,500 m	

OPTICAL DRIVES, CONT.

DVD-ROM	MT	DT
External Dimensions: INCHES/CENTIMETERS (Without Bezel–WxHxD)	5.8″/14.82 cm x 1.7″/4.2 cm x 6.7″/17.0 cm	
Weight (max): POUNDS/KILOGRAMS	1.6 lbs; 0.71 kg	
Interface Type and Maximum Speed	SATA, 1.5 Gbps	
Disc Capacity	3.15″ and 4.72″; 8 cm and 12 cm	
Internal Buffer Size	198 KB, 256 KB	
Access Times (typical)	110 ms	
Maximum Data Transfer Rates		
Writes		
Reads	16x (21.6 MB/s)	
Power Source		
DC Power Requirements	+5V±5%+12V±10%	
DC Current (Peak)	1.2A(5V), 0.9A(12V)	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	5°– 50°C; 41° – 122°F	
Relative Humidity Range	20 – 80% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	-200 – 3,048 m	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°– 65°C; -40°– 149°F	
Relative Humidity Range	15 – 95% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	-200 –10,600 m	

OPTICAL DRIVES, CONT.

COMBO DRIVE CD-RW	MT	DT
External Dimensions: INCHES/CENTIMETERS (Without Bezel–WxHxD)	5.8″/14.82 cm x 1.7″/4.2 cm x 6.7″/17.0 cm	
Weight (max): POUNDS/KILOGRAMS	1.7 lbs; 0.75 kg	
Interface Type and Maximum Speed	SATA, 1.5 Gbps	
Disc Capacity	3.1″ and 4.7″; 8 cm and 12 cm	
Internal Buffer Size	1.5 MB, 2 MB	
Access Times (typical)	130 ms	
Maximum Data Transfer Rates		
Writes	48x (7.2 MB/s) CD	
Reads	16x (21.6 MB/s) CD	
Power Source		
DC Power Requirements	+5V±5%+12V±10%	
DC Current (Peak)	1.2A(5V), 1A(12V)	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	5°– 50°C; 41°–122°F	
Relative Humidity Range	20–80% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	-200–3,048 m	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°–65°C; -40°–149°F	
Relative Humidity Range	5–95% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	-200–10,600 m	

OPTICAL DRIVES, CONT.

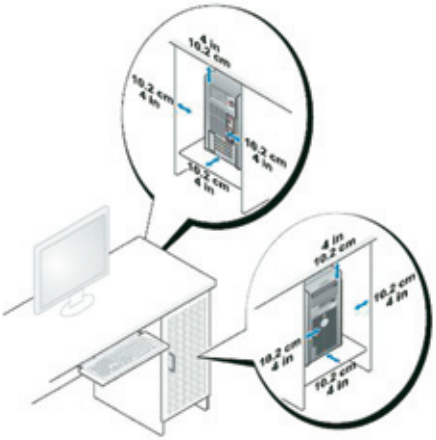
CD-ROM	MT	DT
External Dimensions: INCHES/CENTIMETERS (Without Bezel – WxHxD)	57.4″/14.58 cm x 16.3″/4.13 cm x 66.9″/17.0 cm	
Weight (max): POUNDS/KILOGRAMS	1.6 lbs; 0.71 kg	
Interface Type and Maximum Speed	SATA, 1.5 Gbps	
Internal Buffer Size	96 KB	
Access Times (typical)	80 ms	
Maximum Data Transfer Rates		
Writes		
Reads	100 MB/s	
Power Source		
DC Power Requirements	+5V±5%+12V±10%	
DC Current (Peak)	0.9A(5V), 1A(12V)	
Environmental Operating Conditions (Non-Condensing):		
Operating Temperature Range	5°–50°C; 41°–122°F	
Relative Humidity Range	10–80% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	0–3,500 m	
Environmental Non-Operating Conditions (Non-Condensing):		
Operating Temperature Range	-40°–65°C; -40°–149°F	
Relative Humidity Range	5–95% RH	
Maximum Wet Bulb Temperature	29°C; 84.2°F	
Altitude Range	0–12,500 m	

BIOS FACTORY DEFAULTS (ALL CHASSIS)			
BIOS Address	F0000h	**HD Acoustic Mode**	Bypass
BIOS Chip (NVRAM)	8 MB	**Primary Video**	Auto
Setup Option	Default Factory Value	**Suspend Mode**	S3
Parallel Port Mode	PS/2	**Smart Drive Error Report**	Off
Parallel Port Address	378	**A/C Recovery**	Off
Wake on LAN	Off	**Low Power Mode**	Off
EIST	Off	**Password**	Disabled
Onboard Audio	On	**POST Hot Keys**	Setup & Boot Menu
Onboard Modem	On	**SATA Drives**	On
Execute Disable	On	**Floppy**	Internal or USB if no internal
Onboard NIC	On (without PXE)	**Limit CPUID**	Off
PS2 Mouse	On	**ASF Settings**	Off
Onboard USB	On	**HD Password**	Disabled
USB Front Panel	On	**Hyper-threading**	On
Serial #1 Port	Auto	**Auto Power On**	Off
Keyboard Num Lock	Report	**Auto Power Time**	12:00am
Keyboard Error Report	On	**SERR**	On
Onboard Video	Auto	**Fast Boot**	On

CHASSIS ENCLOSURE AND 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

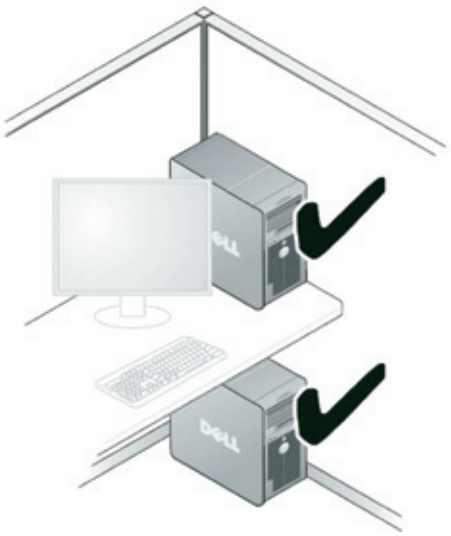
Leave a 4 in. (10.2 cm) minimum clearance on all vented sides of the computer to permit the airflow required for proper ventilation.

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 2 in. (5.1 cm) 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 330 MT	
COMPONENT	**TYPICAL CONFIGURATION**
CPU	E2160
Memory	2 GB DDRII
HDD (#, capacity)	160 GB 7200 RPM SATA
RMSD	DVD/CD-RW Combo
Graphics Adapter	Integrated Adapter

The Declared Noise Emission in accordance with ISO 9296 for the OptiPlex 330 MT is as follows[8]:
(all values L_{WAd} expressed in bels[9] ; 1 bel=10 decibels, re 10^{-12} Watts).

OPTIPLEX 330 MT	
OPERATING MODE	**TYPICAL CONFIGURATION DECLARED SOUND POWER (L_{WAd})**
Idle	3.5
HDD Operating	3.5
ODD Operating	5.3
90% CPU	4.6

[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.

[9] Declared Sound Power rounded to nearest tenth of a bel per ISO 9296 section 4.4.2.

ACOUSTIC NOISE EMISSION INFORMATION, CONT.

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[8]:

OPTIPLEX 330 MT			
OPERATING MODE	TYPICAL CONFIGURATION DECLARED SOUND PRESSURE (L_{pA})		
	Operator Position (L_{pA})	Bystander Position (L_{pA})	DeskSide Position (L_{pA})
Idle	26	21	20
HDD Operating	25	21	21
ODD Operating	43	36	37
90% CPU	38	32	29

[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.

OPTIPLEX 330 DT	
COMPONENT	TYPICAL CONFIGURATION
CPU	E1260
Memory	1 GB DDRII
HDD (#, capacity)	80 GB 7200 RPM SATA
RMSD	DVD ROM
Graphics Adapter	Integrated Adapter

ACOUSTIC NOISE EMISSION INFORMATION, CONT.

The Declared Noise Emission in accordance with ISO 9296 for the Dell OptiPlex 330 DT is as follows[8] (all values L_{WAd} expressed in bels[9] ; 1 bel=10 decibels, re 10^{-12} Watts):

OPTIPLEX 330 DT	
OPERATING MODE	**TYPICAL CONFIGURATION DECLARED SOUND POWER (L_{WAd})**
Idle	3.8
HDD Operating	3.8
ODD Operating	5.1
90% CPU	3.8

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[8]:

OPTIPLEX 330 DT			
OPERATING MODE	**TYPICAL CONFIGURATION DECLARED SOUND PRESSURE (L_{pA})**		
	Operator Position (L_{pA})	**Bystander Position (L_{pA})**	**DeskSide Position (L_{pA})**
Idle	30	25	21
HDD Operating	30	25	21
ODD Operating	43	36	35
90% CPU	30	25	21

[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 spinning. 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.

[9] Declared Sound Power rounded to nearest tenth of a bel per ISO 9296 section 4.4.2.

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