DELL™
OPTIPLEX™ 740

TECHNICAL GUIDEBOOK

INSIDE THE OPTIPLEX 740

TABLE OF CONTENTS

DELL™ OPTIPLEX™ 740

The Dell OptiPlex 740 is the right choice for customers aiming to balance image stability and end-user performance. Dell extends the OptiPlex 740's value by offering a longer lifecycle with proven industry-standard features such as ASF 2.0, TPM 1.2, and RAID 0 & 1. With support for new AMD long-lifecycle processors and AMD Phenom™ Triple and Quad-core processors[1], the OptiPlex 740 is maximized for performance, manageability, and stability for years to come. Simplify desktop computing with the OptiPlex 740.

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, software, tools, and industry 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 AMD Cool'n'Quiet™ 2.0 processor technology, 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.

• Enhanced Virus Protection from AMD can help strengthen PC protection

• RAID 1 support helps keep data intact and accessible via real-time data redundancy

• Built-in TPM 1.2[2] helps protect the network from unauthorized access, while enabling multi-factor authentication via an optional Smart Card Reader and/or fingerprint reader

• Wave Embassy Trust Suite software offers a comprehensive security solution, from protecting network access to encrypting files and data transfers

ESSENTIAL REMOTE MANAGEMENT:

Run IT better and have greater control with flexible hardware options and scalable management software. Built-in, standards-based management helps ensure simplicity and interoperability.

• Widely installed ASF 2.0 (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 as a free download, integrates all components of Dell™ OpenManage™ into a single management console. Easily scalable with upgrades to Dell Client Manager Plus or the Management Suite for Dell Clients.

[1] AMD Phenom™ processors available in Q2 2008.

[2] TPM 1.2 not available in China due to governement regulations.

DELL DEPLOYMENT SERVICES:

Get IT faster with custom image management, in-factory configuration, and deployment made simple. Dell's direct, stepping-stone 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:

EXCEPTIONAL STABILITY.
RELEVANT TECHNOLOGY.

MINI TOWER COMPUTER (MT) VIEW
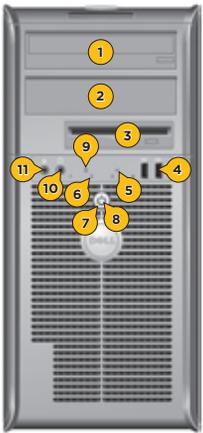
FRONT VIEW

1	5.25-inch drive bay
2	5.25-inch drive bay
3	3.5-inch drive bay
4	USB 2.0 connectors (2)
5	LAN indicator light
6	diagnostic lights
7	power button
8	power light
9	hard drive activity light
10	headphone connector
11	microphone connector
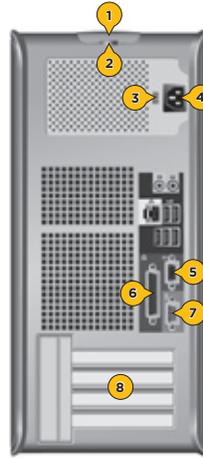
BACK VIEW

1	cover-release latch
2	padlock ring
3	voltage selection switch
4	power connector
5	VGA port
6	parallel port
7	serial port
8	card slots (4)

SYSTEM BOARD COMPONENTS

6	password jumper (PSWD)
7	SATA drive connectors (SATA0, SATA1, SATA2, SATA3)
8	front-panel connector (FRONTPANEL)
9	power connector (POWER)
10	internal USB (INT_USB)
11	RTC reset jumper (RTCRST)
12	intrusion switch connector (INTRUDER)
13	battery socket (BATTERY)
14	PCI Express x16 connector (SLOT1)
15	PCI Express x1 connector (SLOT4)
16	PCI connector (SLOT2)
17	PCI connector (SLOT3)
18	serial connector (SERIAL2)
19	aux power LED (aux_LED)
20	floppy connector (DSKT)
21	optional DVI-card connector (DVI_HDR)
22	VGA connector
23	parallel port
24	serial port
25	USB 2.0 connector (3)
26	RJ 45 network port
27	USB 2.0 connector (2)
28	stereo-in/microphone
29	stereo out

SYSTEM BOARD COMPONENTS

1	speaker connector (INT_SPKR)
2	fan (FAN_CPU)
3	processor connector (CPU)
4	processor power connector (12VPOWER)
5	memory module connectors (DIMM_1, DIMM_2, DIMM_3, DIMM_4)

DESKTOP COMPUTER (DT) VIEW
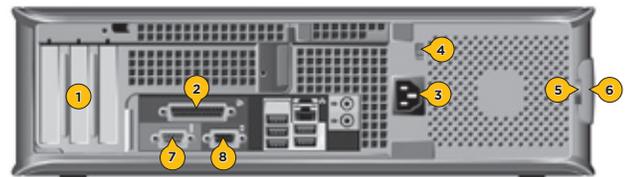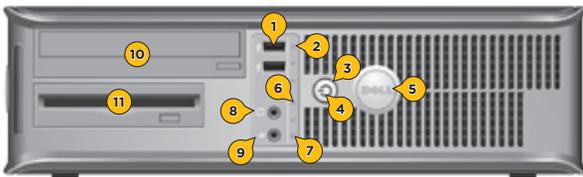
FRONT VIEW			
1	USB 2.0 connectors (2)	7	hard drive activity light
2	LAN indicator light	8	headphone connector
3	power button	9	microphone connector
4	power light	10	5.25-inch drive bay
5	Dell badge	11	3.5-inch drive bay
6	diagnostic lights		

BACK VIEW	
1	card slots
2	parallel port
3	power connector
4	voltage selection switch
5	padlock ring
6	cover-release latch
7	serial port
8	VGA port
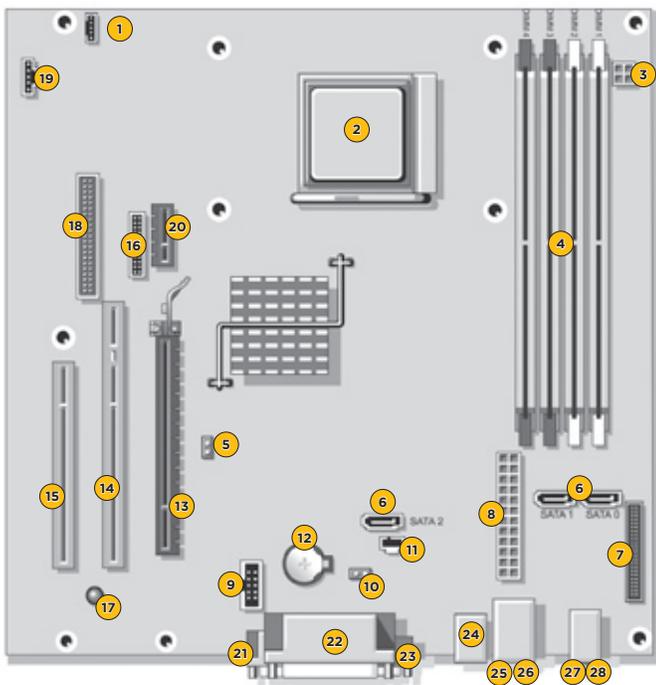
SYSTEM BOARD COMPONENTS	
5	password jumper (PSWD)
6	SATA drive connectors (SATA0, SATA1, SATA2)
7	front-panel connector (FRONTPANEL)
8	power connector (POWER)
9	internal USB (INT_USB)
10	RTC reset jumper (RTCRST)
11	intrusion switch connector (INTRUDER)
12	battery socket (BATTERY)
13	PCI Express x16 connector (SLOT1)
14	PCI connector (SLOT2)
15	PCI connector (SLOT3)
16	serial connector (SERIAL2)
17	aux power LED (aux_LED)
18	floppy connector (DSKT)
19	fan connector (FAN_CPU)
20	optional DVI-card connector (DVI-HDR)
21	VGA connector
22	parallel port
23	serial port
24	USB 2.0 connectors (3)
25	RJ 45 network port
26	USB 2.0 connector (2)
27	stereo-in/microphone
28	stereo out

SYSTEM BOARD COMPONENTS	
1	internal speaker (INT_SPKR)
2	processor connector (CPU)
3	processor power connector (12VPOWER)
4	memory module connectors (DIMM_1, DIMM_2, DIMM_3, DIMM_4)

SMALL FORM FACTOR COMPUTER (SFF) VIEW
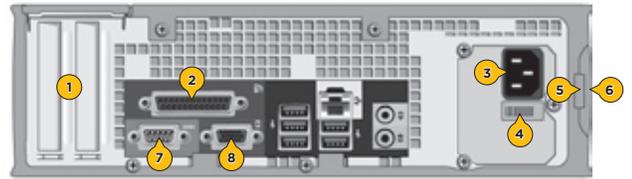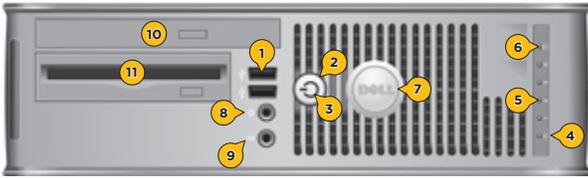
FRONT VIEW			
1	USB 2.0 connectors (2)	7	Dell badge
2	power button	8	headphone connector
3	power light	9	microphone connector
4	hard drive activity light	10	5.25-inch drive bay
5	diagnostic lights	11	3.5-inch drive bay
6	LAN indicator light		

BACK VIEW	
1	card slots
2	parallel port
3	power connector
4	voltage selection switch
5	padlock ring
6	cover-release latch
7	serial port
8	VGA port
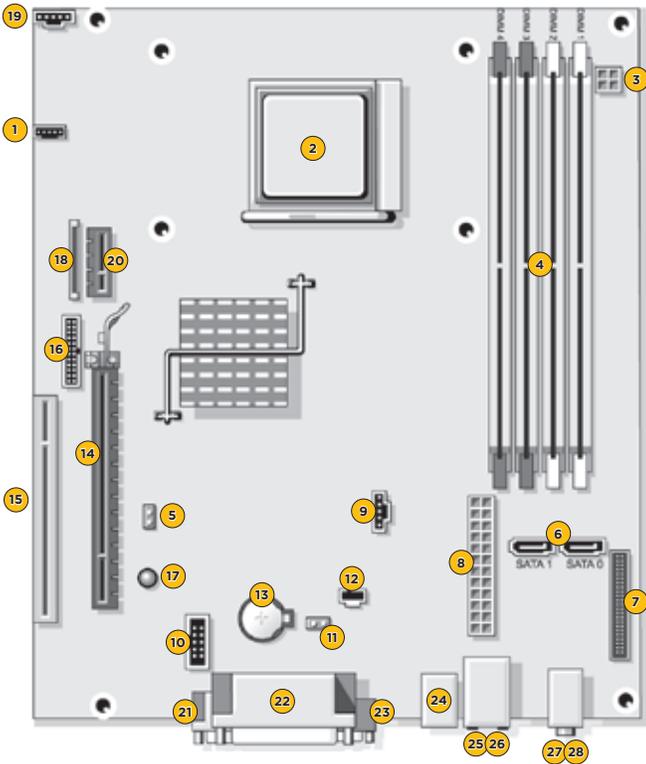
SYSTEM BOARD COMPONENTS	
5	password jumper (PSWD)
6	SATA drive connectors (SATA0, SATA1)
7	front-panel connector (FRONTPANEL)
8	power connector (POWER)
9	fan connector (FAN_HDD)
10	internal USB connector (INT_USB)
11	RTC reset jumper (RTCRST)
12	intrusion switch connector (INTRUDER)
13	battery socket (BATTERY)
14	PCI Express x16 connector (SLOT1)
15	PCI connector (SLOT2)
16	serial connector (SERIAL2)
17	aux power LED (aux_LED)
18	floppy drive connector (DSKT)
19	fan connector (FAN_CPU)
20	optional DVI-card connector (DVI-HDR)
21	VGA port
22	parallel port
23	serial port
24	USB 2.0 connector (3)
25	RJ 45 network port
26	USB 2.0 connector (2)
27	stereo-in/microphone
28	stereo out

SYSTEM BOARD COMPONENTS	
1	internal speaker connector (INT_SPKR)
2	processor connector (CPU)
3	processor power connector (12VPOWER)
4	memory module connectors (DIMM_1, DIMM_2, DIMM_3, DIMM_4)

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	SFF
Windows Vista® Operating System	Windows Vista® Ultimate (32-bit), Windows Vista® Business (32- and 64-bit), Windows Vista® Home Basic (32-bit)		
Windows XP® Operating System	Windows® XP Professional SP2, Windows® XP Home Edition SP2 (all 32-bit only)		
Other	FreeDOS (for n-series), Red Flag Linux (China only)		
OS Media Support	✓	✓	✓

CHIPSET

The AMD Phenom processor requires the 8 Mbit (1 MB) NVRAM chip and is therefore available only on models that include the 8 Mbit (1 MB) NVRAM chip. If your computer has the 8 Mbit (1 MB) NVRAM chip and the AMD Phenom processor, the word *enhanced* appears in the title on the BIOS splash screen and the system setup program screens.

	MT	DT	SFF
Chipset	nVIDIA® Quadro® NVS 210S Chipset (North Bridge) nForce 430 (South Bridge)		
Non-volatile Memory on Chipset			
BIOS Configuration SPI (Serial Peripheral Interface)	4 Mbit (512 KB) or 8 Mbit (1 MB) on select models located at SPI_FLASH on chipset		
TPM 1.2 Security Device (Trusted Platform Module)	16 KB located at TPM1P2 on chipset		
NIC EEPROM	LOM configuration contained within a 1 Gbit SPI flash chip		

PROCESSOR

Global Standard Products (GSP) are a subset of Dell's relationship products that are managed for availability and synchronized transitions on a worldwide basis. They ensure the same platform is available for purchase globally. This allows customers to reduce the number of configurations managed on a worldwide basis, thereby reducing their costs. They also enable companies to implement global IT standards by locking in specific product configurations worldwide. The following GSP processors identified below will be made available to Dell customers.

Processor numbers are not a measure of performance.

	MT	DT	SFF
AMD Phenom™ X3 and X4 (Triple and Quad-core) processors with AMD-Virtualization, HyperTransport Technology, and Cool'n'Quiet, Enhanced Virus Protection*			
AMD Phenom X4 9600B Processor (2.3 GHz, 2000 MHz, 4 x 512 KB L2 cache, 95W)	X-GSP	X-GSP	X-GSP
AMD Phenom X4 9550 Processor (2.2 GHz, 2000 MHz, 4 x 512 KB L2 cache, 95W)	✓	✓	✓
AMD Phenom X3 8750 Processor (2.4 GHz, 2000 MHz, 3 x 512 KB L2 cache, 95W)	✓	✓	✓
AMD Phenom X3 8600B Processor (2.3 GHz, 2000 MHz, 3 x 512 KB L2 cache, 95W)	X-GSP	X-GSP	X-GSP
AMD Athlon™ Dual-core processors with AMD-Virtualization, HyperTransport Technology, Cool'n'Quiet Technology, and Enhanced Virus Protection			
AMD Athlon 64 X2 5600+ Processor (2.9 GHz, 2000 MHz, 2 x 512 KB L2 cache, 89W)	✓	✓	✓
AMD Athlon 5400B Processor (2.8 GHz, 2000 MHz, 2 x 512 KB L2 cache, 65W)	X-GSP	X-GSP	X-GSP
AMD Athlon 64 X2 5200+ Processor (2.7 GHz, 2000 MHz, 2 x 512 KB L2 cache, 65W)	✓	✓	✓
AMD Athlon 5000B Processor (2.6 GHz, 2000 MHz, 2 x 512 KB L2 cache, 65W)	X-GSP	X-GSP	X-GSP
AMD Athlon 4850e Processor (2.5 GHz, 2000 MHz, 2 x 512 KB L2 cache, 45W)	✓	✓	✓
AMD Athlon 64 X2 4800+ Processor (2.5 GHz, 2000 MHz, 2 x 512 KB L2 cache, 65W)	✓	✓	✓
AMD Athlon 4450B Processor (2.3 GHz, 2000 MHz, 2 x 512 KB L2 cache, 45W)	X-GSP	X-GSP	X-GSP
AMD Athlon 64 X2 4400+ Processor (2.3 GHz, 2000 MHz, 2 x 512 KB L2 cache, 65W)	✓	✓	✓
AMD Athlon 4050e Processor (2.1 GHz, 2000 MHz, 2 x 512 KB L2 cache, 45W)	✓	✓	✓
AMD Athlon™ (Single-core) processors with AMD-Virtualization, HyperTransport Technology, and Cool'n'Quiet, Enhanced Virus Protection			
AMD Athlon 1640B Processor (2.7 GHz, 2000 MHz, 512 KB x 1 L2 cache, 45W)	X-GSP	X-GSP	X-GSP

*AMD Phenom™ processors available in Q2 2008.

ADVANCED SYSTEM MANAGEABILITY MODE

	MT	DT	SFF
Basic Client Systems Management (Broadcom Full ASF 2.0)	✓	✓	✓

MEMORY

Your computer supports a maximum of 8 GB of memory when you use four 2 GB DIMMs; however, 32-bit operating systems, such as the 32-bit version of Microsoft® Windows® XP, can only use a maximum of 4 GB of address space. Moreover, certain components within the computer require address space in the 4 GB range. Any address space reserved for these components cannot be used by computer memory; therefore, the amount of memory available to the operating system is less than 4 GB.

The entire 8 GB memory range is available to 64-bit operating systems.

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	SFF
	DDR2 Synch DRAM Non-ECC Memory 667 MHz or 800 MHz speeds		
DIMM Slots	4	4	4
DIMM Capacities	Up to 2 GB	Up to 2 GB	Up to 2 GB
Minimum Memory	512 MB	512 MB	512 MB
Maximum Memory with 667 MHz Speed Memory	8 GB[2]	8 GB[2]	8 GB[2]
Maximum Memory with 800 MHz Speed Memory	8 GB[2]	8 GB[2]	8 GB[2]
Configurations:			
800 MHz Memory Configurations			
4 GB[2] DDR2 Non-ECC SDRAM, 800 MHz, (4 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			
8 GB[2] DDR2 Non-ECC SDRAM, 667 MHz, (4 DIMM)	✓	✓	✓
4 GB[2] DDR2 Non-ECC SDRAM, 667 MHz, (2 DIMM)	✓	✓	✓
4 GB DDR2 Non-ECC SDRAM, 667 MHz, (4 DIMM)	✓	✓	✓
2 GB DDR2 Non-ECC SDRAM, 667 MHz, (4 DIMM)	✓	✓	✓
2 GB DDR2 Non-ECC SDRAM, 667 MHz, (2 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)	✓	✓	✓

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

DRIVES AND REMOVABLE STORAGE

	MT	DT	SFF
Bays:			
3.5-inch Bay Externally Accessible	1	1[4]	1 (slimline)
3.5-inch Bay Internally Accessible	2	1[4]	1
5.25-inch Bay	2	1	1 (slimline)
Hard Drives Supported[3]	2	2	1
Optical Drives Supported	2	1	1
Interface:			
SATA	4	3	2
Floppy/Diskette	1	1	1
Hard Drive: Size, Type, Speed			
80 GB[5] SATA 10K RPM HDD	✓	✓	✓
250 GB[5] SATA 7200 RPM HDD	✓	✓	✓
160 GB[5] High Reliability SATA 7200 RPM HDD	✓	✓	✓
160 GB[5] SATA 7200 RPM HDD	✓	✓	✓
80 GB[5] SATA 7200 RPM HDD	✓	✓	✓
RAID 0[6] Enhanced Performance: (includes two matching capacity/speed hard drives)			
160 GB[5] SATA 10K RPM HDD	✓	✓	
160 GB[5] SATA 7200 RPM HDD	✓	✓	
320 GB[5] SATA 7200 RPM HDD	✓	✓	
500 GB[5] SATA 7200 RPM HDD	✓	✓	
RAID 1[6] Data Protection: (includes two matching capacity/speed hard drives)			
80 GB[5] SATA 10K RPM HDD	✓	✓	
250 GB[5] SATA 7200 RPM HDD	✓	✓	
160 GB[5] SATA 7200 RPM HDD	✓	✓	
80 GB[5] SATA 7200 RPM HDD	✓	✓	

[3] This only pertains to drives physically contained within the chassis and does not refer to HDDs attached via eSATA (including port multiplier), USB or optional 1394.

[4] Card length can be longer than standard half-length card but cannot be a full-length card.

[5] 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.

[6] RAID 0 and RAID 1 in DT chassis restricted to Western Digital HDDs, may not be available in select regions.

DRIVES AND REMOVABLE STORAGE, CONT.

	MT	DT	SFF
Optical Drive:			SFF requires a slimline optical drive
DVD+/-RW	16x SATA		8x EIDE
DVD-ROM	16x SATA		8x EIDE
Combo Drive CD-RW	48x/32x/48x/16x SATA		24x/24x/24x EIDE
CD-ROM	48x SATA		24x EIDE
Floppy Diskette Drive:			
Floppy Drive	1.44 MB		1.44 MB (slimline)
Media Card Reader: (uses Externally Accessible 3.5-inch bay)			
Dell 19 in 1 Media Card Reader	✓	✓	✓

SYSTEM BOARD CONNECTORS

	MT	DT	SFF
PCI Slot(s): number of	2	2	1
PCIe x16 Slot: number of	1	1	1
PCIe x1 Slot: number of	1		
Flexbay (used for Media Card Reader)	1	1	1
Serial ATA (SATA)	4	3	2

SYSTEM BOARD CONNECTOR MAXIMUM ALLOWABLE DIMENSIONS

	MT	DT	SFF
PCI Slot(s) Dimensions: (HxL)	2	2	1
Height INCHES/CENTIMETERS	4.376"; 11.115 cm	2.731"; 6.89 cm	
Length INCHES/CENTIMETERS	6.6"; 16.765[4] cm	6.6"; 16.765 cm	

[4]Card length can be longer than standard half-length card but cannot be a full-length card.

SYSTEM BOARD CONNECTOR MAXIMUM ALLOWABLE DIMENSIONS, CONT.

	MT	DT	SFF
PCIe x16 Slot Dimensions: (HxL)	1	1	1
Height INCHES/CENTIMETERS	4.376″; 11.115 cm	2.731″; 6.89 cm	
Length INCHES/CENTIMETERS	6.6″; 16.765[4] cm	6.6″; 16.765 cm	
PCIe x1 Slot Dimensions: (HxL)	1		
Height INCHES/CENTIMETERS	4.376″; 11.115 cm		
Length INCHES/CENTIMETERS	6.6″; 16.765[4] cm		
Combo Full Height Riser with 1 PCI and 1 PCIe connector (HxL)		1/1	
Height INCHES/CENTIMETERS		4.376″; 11.115 cm	
Length INCHES/CENTIMETERS		6.9″; 17.53[7] cm	
Dual Full Height Riser with 2 PCI connectors (HxL)		2	
Height INCHES/CENTIMETERS		4.376″; 11.115 cm	
Length INCHES/CENTIMETERS		6.9″; 17.53[7] cm	

[4] Card length can be longer than standard half-length card but cannot be a full-length card.

[7] 6.9″; 17.53 cm is longer than the standard half-length card.

GRAPHICS/VIDEO CONTROLLER

MT supports full-height card, DT supports low-profile card or full-height card with optional riser. SFF supports low-profile card.

	MT	DT	SFF
Integrated nVIDIA® Quadro NVS 210S[8]	Integrated on system board		
Enhanced Graphic/Video Options			
DVI (Digital)	Optional full-height or low-profile Add-2 card		
128 MB ATI Radeon™ X1300 with DVI and TV Out	Optional full-height or low-profile card		
256 MB ATI Radeon™ X1300 PRO Dual Monitor with VGA cable and TV Out	Optional full-height or low-profile card		
256 MB ATI Radeon™ X1300 PRO Dual Monitor with DVI and VGA cables and TV Out	Optional full-height or low-profile card		
256 MB ATI Radeon™ HD 2400 PRO with DVI and TV Out	Optional full-height or low-profile card		
256 MB ATI Radeon™ HD 2400 XT Dual Monitor with VGA cable and TV Out	Optional full-height or low-profile card		
256 MB ATI Radeon™ HD 2400 XT Dual Monitor with DVI and VGA cables and TV Out	Optional full-height or low-profile card		

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

GRAPHICS/VIDEO CONTROLLER, CONT.

Integrated nVIDIA® Quadro NVS 210S[8]	MT	DT	SFF
Bus Type	Integrated		
GPU Core Clock	300 MHz Integrated 24-bit RAMDAC		
Frame Buffer Memory (onboard and shared) Size and Speed	Up to 128 MB of shared system memory (depends on SBIOS)		
Maximum Power Consumption	15.72W		
Overlay Planes	Yes		
Maximum Color Depth	32-bit		
Maximum Vertical Refresh Rate	75 Hz		
Multiple Display Support	Yes, with optional DVI add-in card		
Operating Systems Graphics/Video API Support	DirectX 9.0c		
Supported Resolutions and Max Refresh Rates (Hz) (Note: analog and/or digital)	D-sub = 1920x1440 @ 75 Hz DVI = 1600x1200 @ 60 Hz		
External Connectors	VGA		
Dimensions INCHES/CENTIMETERS (L x H)			
Environmental Operating Conditions			
Operating Temperature Range	0°–105° C (32°–221° F)		
Relative Humidity Range	20%–80% (non-condensing)		
Altitude Range	–15.2–3048 m (–50–10,000 ft)		

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

DVI (Digital) Adapter	MT	DT	SFF
Bus Type	sDVO		
Maximum Supported Resolution	Up to 2048 x 1566 @ 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"/14.61 cm x 6.99 cm		
Dimensions of Low-profile Card INCHES/CENTIMETERS (LxH)		5.75" x 2.75"/14.61 cm x 6.99 cm	
External Connectors	DVI		

GRAPHICS/VIDEO CONTROLLER, CONT.

128 MB ATI Radeon X1300 with DVI and TV Out	MT	DT	SFF
Bus Type		PCIEx16	
GPU Core Clock		400 Mhz	
Frame Buffer Memory (onboard and shared) Size and Speed		128 MB 400 Mhz	
Maximum Power Consumption		20W	
Overlay Planes		Yes	
Maximum Color Depth		32-bit	
Maximum Vertical Refresh Rate		85 Hz	
Multiple Display Support		No	
Operating Systems Graphics/Video API Support		D3D and OpenGL	
Supported Resolutions and Max Refresh Rates (Hz) (Note: analog and/or digital)		Max: 1920x1440 @ 75 Hz Min: 640x480 @ 60 Hz	
External Connectors		DVI-D and S-video with Composite	
Dimensions of Full-height Card INCHES/CENTIMETERS (LxH)	6.6" x 4.72"/ 167.64 cm x 12.0 cm		
Dimensions of Low-profile Card INCHES/CENTIMETERS (LxH)		6.6" x 3.35"/16.764 cm x 8.5cm	
Environmental Operating Conditions			
Operating Temperature Range		50°–122°F (10°– 50°C)	
Relative Humidity Range		5%–90% RH	
Altitude Range		0-20,000 ft.	

256 MB ATI Radeon X1300 PRO with DVI and TV Out	MT	DT	SFF
Bus Type		PCIEx16	
GPU Core Clock		400 Mhz	
Frame Buffer Memory (onboard and shared) Size and Speed		256 MB 400 Mhz	
Maximum Power Consumption		20W	
Overlay Planes		Yes	
Maximum Color Depth		32-bit	
Maximum Vertical Refresh Rate		85 Hz	
Multiple Display Support		No	

GRAPHICS/VIDEO CONTROLLER, CONT.

256 MB ATI Radeon™ X1300 PRO with DVI and TV Out, cont.	MT	DT	SFF
Operating Systems Graphics/Video API Support	D3D and OpenGL		
Supported Resolutions and Max Refresh Rates (Hz) (Note: analog and/or digital)	Max: 1920x1440 @ 75 Hz Min: 640x480 @ 60 Hz		
External Connectors	DVI-D and S-video with Composite		
Dimensions of Full-height Card INCHES/CENTIMETERS (LxH)	6.6" x 4.72"/16.764 cm x 12.0 cm		
Dimensions of Low-profile Card INCHES/CENTIMETERS (LxH)		6.6" x 3.35"/16.764 cm x 8.5 cm	
Environmental Operating Conditions			
Operating Temperature Range	50°–122°F (10°–50° C)		
Relative Humidity Range	5%–90% RH		
Altitude Range	0–20,000 ft.		

256 MB ATI Radeon™ HD 2400 PRO with DVI and TV Out	MT	DT	SFF
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	Yes		
Maximum Color Depth	32-bit		
Maximum Vertical Refresh Rate	85 Hz		
Multiple Display Support	No		
Operating Systems Graphics/Video API Support	D3D and OpenGL		
Supported Resolutions and Max Refresh Rates (Hz) (Note: analog and/or digital)	Max: 1920x1440 @ 75 Hz Min: 640x480 @ 60 Hz		
External Connectors	DVI-D and S-video		
Dimensions of Full-height Card INCHES/CENTIMETERS (LxH)	6.6" x 4.72"/16.764 cm x 12.0 cm		
Dimensions of Low-profile Card INCHES/CENTIMETERS (LxH)		6.6" x 3.35"/16.764 cm x 8.5 cm	

GRAPHICS/VIDEO CONTROLLER, CONT.

256 MB ATI Radeon™ HD 2400 PRO with DVI and TV Out, cont.	MT	DT	SFF
Environmental Operating Conditions			
Operating Temperature Range	50°–122°F (10°–50° C)		
Relative Humidity Range	5%–90% RH		
Altitude Range	0–20,000 ft.		

256 MB ATI Radeon™ HD 2400 XT Dual Monitor with DVI/VGA via cables and TV Out	MT	DT	SFF
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	Yes		
Maximum Color Depth	32-bit		
Maximum Vertical Refresh Rate	85 Hz		
Multiple Display Support	2		
Operating Systems Graphics/Video API Support	D3D and OpenGL		
Supported Resolutions and Max Refresh Rates (Hz) (Note: analog and/or digital)	Max: 1920x1440 @ 75 Hz Min: 640x480 @ 60 Hz		
External Connectors	DMS-59		
Dimensions of Full-height Card INCHES/CENTIMETERS (LxH)	6.6" x 4.72"/16.764 cm x 12.0 cm		
Dimensions of Low-profile Card INCHES/CENTIMETERS (LxH)		6.6" x 3.35"/16.764 cm x 8.5 cm	
Environmental Operating Conditions			
Operating Temperature Range	50°–122°F (10°–50° C)		
Relative Humidity Range	5%–90% RH		
Altitude Range	0–20,000 ft.		

EXTERNAL PORTS/CONNECTORS

MT supports full-height cards, DT supports low-profile cards or full-height cards with optional riser. SFF supports low-profile cards.

See chassis diagrams section for port/connector locations	MT	DT	SFF
USB 2.0 (includes one internal on MT, DT and SFF)	8		
Front	2		
Back	5		
Internal	1		
Serial	One rear		
PS/2 and 1 Additional Serial **(low-profile bracket 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 or low-profile card		
Video:			
VGA	One rear		
DVI	Optional full-height or low-profile Add-2 card		
Audio:			
Microphone-in	One minijack front		
Headphone	One minijack front		
Stereo line-in	One minijack rear		
Speakers line-out	One minijack rear		
Risers: (replaces 1 PCI slot and 1 PCIe slot on DT system board)			
Combo full-height riser with 1 PCI and 1 PCIe connector		✓	
Dual full-height riser with 2 PCI connectors		✓	

COMMUNICATIONS - NETWORK ADAPTER (NIC)

MT supports full-height card, DT supports low-profile card or full-height card with optional riser. SFF supports low-profile card.

	MT	DT	SFF
Integrated Broadcom® 5754 Gigabit Ethernet LAN 10/100/1000 (Remote Wake Up and PXE support)	Integrated on system board		
Broadcom NetXtreme 10/100/1000 PCIe Gigabit[5] Networking Card	Supports full-height card	Low-profile card or full-height card with optional riser	Supports low profile card

[5] 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.

Integrated Broadcom® 5754 Gigabit Ethernet LAN 10/100/1000	MT	DT	SFF
External Connector Type	RJ45		
Data Rates Supported	10/100/1000 Mbps		
Controller Details			
Controller Bus Architecture	PCI-e V1.1x1		
Integrated Memory			
Data Transfer Mode			
Power consumption (full operation per data rate connection speed)	1000 Mbps: 1312 mW, 100 Mbps: 731 mW, 10 Mbps: 844 mW		
Power Consumption (standby operation)	No Link (low power mode): 55mW No Link (w/ WOL): TBD 10 Mbps Idle (w/ WOL): 175 mW 100 Mbps Idle (w/ WOL): 352 mW		
IEEE Standards Compliance	802.3ab, 802.3z-Clause 30,802.1p, 802.3x		
Hardware Certifications			
Boot ROM Support	PXE, RPL		
Network Transfer Mode			
Network Transfer Rate	Full duplex at 10, 100, or 1000 Mbps and half duplex at 10 or 100 Mbps		
Environmental			
Operating Temperature	0° C–70° C (32° F–158° F)		
Operating Humidity	20%–80% (non-condensing)		
Operating System Driver Support	DOS, NT, Win2K, Netware, XP, Vista 32- and 64-bit		
Manageability	WOL, PXE		
Management Capabilities Alerting	ASF2.0		

COMMUNICATIONS - NETWORK ADAPTER (NIC), CONT.

Broadcom NetXtreme 10/100/1000 PCIe Gigabit Networking Card	MT	DT	SFF
Connector Type	RJ-45		
Data Rates Supported	10/100/1000 Mbps Half- or full-duplex		
Controller Details			
Controller Bus Architecture	PCIe c1.0a x1		
Integrated Memory	64 KBytes RX, 8 KBytes TX		
Data Transfer Mode	Bus-Master DMA		
Power Consumption (full operation per data rate connection speed)	2.84W (860mA @ +3.3V)		
Power Consumption (standby operation)	Less than 300mW		
IEEE Standards Compliance	802.3, 802.2, 802.3x, 802.1p		
Hardware Certifications	FCC B, VCCI B, CE		
Boot ROM Support	No		
Network Transfer Mode			
Network Transfer Rate	10BASE-T (full-duplex) 20 Mbps Max 100BASE-TX (half-duplex) 100 Mbps Max 100BASE-TX (full-duplex) 200 Mbps Max 1000BASE-T (full-duplex) 2000 Mbps Max		
Environmental			
Operating Temperature	0° C–55° C (32° F–131° F)		
Operating Humidity	5%–85% (non-condensing)		
Operating System Driver Support	Window XP, Vista®, Linux, Netware, Unix		
Manageability	WOL, PXE2.1, ACPI		
Management Capabilities Alerting	None		

COMMUNICATIONS – MODEM

MT supports full-height card, DT supports low-profile card or full-height card with optional riser. SFF supports low-profile card.

	MT	DT	SFF
V.92 Data/Fax Controllerless Modem	Supports full-height card	Low-profile card or full-height card with optional riser	Supports low-profile card

V.92 Data/Fax Controllerless Modem	MT	DT	SFF
Bus	PCI		
External 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° C – 50° C (32° F–122° F)		
Operating Humidity	45° C (113° F) 90% max		
Operating System Support	Vista® 32/64, Windows XP 32/64		
Operating System Driver Support	Vista 32/64, Windows XP 32/64		
Power Requirements	+3.0V~+3.6V, 116.6mW max		
Chipset	Conexant SmartHSFs/LF (CX11256 & CX20493)		
Dimensions of Full-height Card INCHES/CENTIMETERS **(LxH)**	5.25" x 4.73"/13.325 cm x 12.002 cm		
Dimensions of Low-profile Card INCHES/CENTIMETERS **(LxH)**		5.26" x 3.12"/13.366 cm x 7.923 cm	

AUDIO AND SPEAKERS

	MT	DT	SFF
Sigmatel STAC9200X Two Channel 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	SFF
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	SFF
Trusted Platform Module (TPM) 1.2[1]	Integrated on system board		
Chassis Intrusion Switch	Optional		
Dell USB External Biometric Fingerprint Reader	Optional		
Chassis Lock Slot	Standard		

[1] TPM 1.2 currently not available in China due to government regulations.

SERVICE AND SUPPORT

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

	MT	DT	SFF
3-Year Limited Warranty[9] (3-3-0)	Standard		
3-Year Next Business Day On-site[10] Service (3-3-3)	Optional		
Gold Tech Support	Optional		

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

[10] 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	SFF
Dell Client Manager Standard	Available via Dell.com		
Wave EMBASSY® Trust Suite	Standard		
Norton Internet Security™	90-Day Trial or Optional Subscription		
McAfee® Security Center	90-Day Trial or Optional Subscription		

DETAILED ENGINEERING SPECIFICATIONS

SYSTEM DIMENSIONS (PHYSICAL)

System Weight[11] and Shipping Weight[11] 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	SFF
Chassis Volume LITERS	33	16	10.7
Chassis Weight[11] POUNDS/KILOGRAMS	25.8 lbs; 11.70 kg	18.2 lbs; 8.26 kg	15 lbs; 6.80 kg
Chassis Dimensions: (HxWxD)			
Height INCHES/CENTIMETERS	16.3″; 41.4 cm	4.5″; 11.4 cm	3.65″; 9.26 cm
Width INCHES/CENTIMETERS	7.3″; 18.5 cm	15.7″; 39.9 cm	12.4″; 31.4 cm
Depth INCHES/CENTIMETERS	17.3″; 43.9 cm	13.9″; 35.3 cm	13.4″; 34 cm
Shipping Weight[11] POUNDS/KILOGRAMS **(includes packaging materials)**	43.5″; 19.73 cm	28″; 12.7 cm	21.3″; 9.66 cm
Packaging Parameters (HxWxD)[12]			
Height INCHES/CENTIMETERS	22.38″; 56.85 cm	20.63″; 52.4 cm	20.88″; 50.04 cm
Width INCHES/CENTIMETERS	22.25″; 56.52 cm	20.31″; 51.59 cm	19.38″; 49.23 cm
Depth INCHES/CENTIMETERS	14.25″; 36.2 cm	11.75″; 29.85 cm	10.63″; 27 cm

[11] Weights are approximate and may change based on system configuration and included accessories.

[12] Dimensions listed here are Americas-specific. Each region may have unique packing.

SYSTEM LEVEL ENVIRONMENTAL AND OPERATING CONDITIONS

	MT	DT	SFF
Temperature			
Operating	10°–35° C (50°–95° F)		
Non-Operating (Storage)	-40°–65° C (-40°–149° F)		
Relative Humidity	20%–80% (non-condensing)		
Maximum Vibration			
Operating	0.25 G at 3 to 200 Hz at 0.5 octave/min		
Non-Operating (Storage)	0.5 G at 3 to 200 Hz at 1 octave/min		

SYSTEM LEVEL ENVIRONMENTAL AND OPERATING CONDITIONS, CONT.

	MT	DT	SFF
Maximum Shock			
Operating	Bottom half-sine pulse with a change in velocity of 50.8 cm/sec (20 inches/sec)		
Non-Operating (Storage)	27-G faired square wave with a velocity change of 508 cm/sec (200 inches/sec)		
Maximum Altitude			
Operating	–15.2 – 3048 m (–50 – 10,000 ft)		
Non-Operating (Storage)	–15.2 – 10,668 m (–50 – 35,000 ft)		

POWER

	MT		DT		SFF	
Power Supply Wattage	**305W**	**305W High Efficiency**	**280W**	**280W High Efficiency**	**275W**	**275W High Efficiency**
AC Input Voltage Range	90-135A/ 180-264A	90-264A	90-135A/ 180-264A	90-264A	90-135A/ 180-264A	90-264A
AC Input Current (low AC range/high AC range)	9.0A/4.5A	4.7A/2.35A	6.5A/4.5A	4.5A/2.3A	6.0A/3.0A	4.5A/2.3A
AC Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
AC Holdup Time (50% load)	16 ms	16 ms	16 ms	16 ms	16 ms	16 ms
Minimum Efficiency (Energy Star Compliant)	❯65%	❯80%	❯65%	❯80%	❯65%	❯80%
Energy Star 4.0 Compliant Power Supply		✓		✓		✓
PFC (Active)		✓		✓		✓
DC Parameters						
+3.3v Output	17.0A	17.0A	10.0A	10.0A	5.0A	5.0A
+5.0v Output	22.0A	22.0A	15.0A	15.0A	18.0A	18.0A
+12.0v Output	18.0+18.0A	18.0+18.0A	16.0A	16.0A	17.0A	17.0A
+5.0v Auxiliary Output	4.0A	4.0A	4.0A	4.0A	4.0A	4.0A
-12.0v Output	1.0A	1.0A	0.5A	0.5A	0.5A	0.5A
Max Total Power	305W	305W	280W	280W	275W	275W
Max Combined +3.3v / +5.0v Power	150W	150W	108W	108W	106W	106W

POWER, CONT.

DC Parameters, cont.	MT		DT		SFF	
Max Combined 12.0v Power	264W	264W				
BTUs/h (based on PSU max wattage)	1600	1300	1468	1195	1444	1171
3.3v CMOS battery	3-V CR2032 lithium coin cell; estimated 5-year battery life					
RTC Accuracy	Drift 2 seconds per month					
Power Supply Fan	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Ball bearing	Ball bearing
Power Supply Meets Requirements of:						
Energy Star 4.0 Compliant Power Supply		✓		✓		✓
Blue Angel Compliant		✓		✓		✓
UL Compliant	✓	✓	✓	✓	✓	✓
FEMP Executive Order 13221		✓		✓		✓

AUDIO

Integrated STAC9200X Two Channel High Definition Audio	MT	DT	SFF
High Definition Stereo Support	✓	✓	✓
Number of Channels	2		
Number of Bits / Audio Resolution	24-bit resolution		
Sampling Rate (recording/playback)	44.1,48,96,192 KHz sample rate		
Signal to Noise Ratio	DAC 100 dB; ADC 96 dB		
Wavetable Voices			
Analog Audio	✓	✓	✓
Dolby Digital			
THX			
Digital Out (S/PDIF)			

AUDIO, CONT.

Integrated STAC9200X Two Channel High Definition Audio	MT	DT	SFF
Audio Jack Impedance			
Microphone		150 kΩ	
Line-In		150 kΩ	
Line-Out		190 kΩ	
Headphone		.5 Ω	
Internal Speaker Power Rating		2 Watts	

HARD DRIVES[5]

80 GB SATA 10000 RPM HDD	MT	DT	SFF
Capacity (bytes)		80,026,361,856	
Dimensions INCHES (W x D x H)		5.87 x 4 x 1	
Interface Type and Maximum speed		Up to 3 GB/s	
Internal Buffer Size (range)		16 MB	
Average Seek Time		4.6 ms	
Rotational Speed		10000 rpm	
Logical Blocks		156,301,488	
Power Source			
DC Power (Max)		Idle 7.0W, Active 10.0W	
DC Current		5V (.8A) and 12V (1.8A)	
Environmental Operating Conditions			
Temperature Range		41°F–140°F (5°C–60°C)	
Relative Humidity Range		20%–80% non-condensing	
Maximum Wet Bulb Temperature		84°F (29°C)	
Altitude Range		-50 ft–10000 ft	
Environmental Non-Operating Conditions			
Temperature Range		-40°F–149°F (-40°C–65°C)	

[5] 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,[5] CONT.

80 GB SATA 10000 RPM HDD, cont.	MT	DT	SFF
Environmental Non-Operating Conditions, cont.			
Relative Humidity Range	10%–90% non-condensing		
Maximum Wet Bulb Temperature	100.4°F (38°C)		
Altitude Range	-50 ft–35000 ft		

80 GB SATA 7200 RPM HDD	MT	DT	SFF
Capacity (bytes)	80,026,361,856		
Dimensions INCHES (W x D x H)	5.87 x 4 x 1		
Interface Type and Maximum Speed	Up to 3 GB/s		
Internal Buffer Size (range)	8 MB		
Average Seek Time	8.5 ms		
Rotational Speed	7200 rpm		
Logical Blocks	156,301,488		
Power Source			
DC Power (Max)	Idle 7.0W, Active 10.0W		
DC Current	5V (.8A) and 12V (1.8A)		
Environmental Operating Conditions			
Temperature Range	41°F–140°F (5°C–60°C)		
Relative Humidity Range	20%–80% non-condensing		
Maximum Wet Bulb Temperature	84°F (29°C)		
Altitude Range	-50 ft–10000 ft		
Environmental Non-Operating Conditions			
Temperature Range	-40°F–149°F (-40°C–65°C)		
Relative Humidity Range	10%–90% non-condensing		
Maximum Wet Bulb Temperature	100.4°F (3°8C)		
Altitude Range	-50 ft–35000 ft		

[5] 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, cont.	MT	DT	SFF
Capacity (bytes)		160,041,885,696	
Dimensions INCHES (W x D x H)		5.87 x 4 x 1	
Interface Type and Maximum Speed		Up to 3 GB/s	
Internal Buffer Size (range)		8 MB	
Average Seek Time		8.5 ms	
Rotational Speed		7200 rpm	
Logical Blocks		312,581,808	
Power Source			
DC Power (Max)		Idle 7.0W, Active 10.0W	
DC Current		5V (.8A) and 12V (1.8A)	
Environmental Operating Conditions			
Temperature Range		41°F–140°F (5°C–60°C)	
Relative Humidity Range		20%–80% non-condensing	
Maximum Wet Bulb Temperature		84°F (29°C)	
Altitude Range		-50 ft–10000 ft	
Environmental Non-Operating Conditions			
Temperature Range		-40°F–149°F (-40°C–65°C)	
Relative Humidity Range		10%–90% non-condensing	
Maximum Wet Bulb Temperature		100.4°F (38°C)	
Altitude Range		-50 ft–35000 ft	

250 GB SATA 7200 RPM HDD	MT	DT	SFF
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 3 GB/s	
Internal Buffer Size (range)		8-16 MB	
Average Seek Time		8.5 ms	

[5] 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,[5] CONT.

250 GB SATA 7200 RPM HDD, cont.	MT	DT	SFF
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			
Temperature Range	41°F–140°F (5°C–60°C)		
Relative Humidity Range	20%–80% non-condensing		
Maximum Wet Bulb Temperature	84°F (29°C)		
Altitude Range	-50 ft–10000 ft		
Environmental Non-Operating Conditions			
Temperature Range	-40°F–149°F (-40°C–65°C)		
Relative Humidity Range	10%–90% non-condensing		
Maximum Wet Bulb Temperature	100.4°F (38°C)		
Altitude Range	-50 ft–35000 ft		

[5] 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	SFF
External Dimensions INCHES/CENTIMETERS (Without Bezel–WxHxD)	6"/14.82 cm x 2"/4.2 cm x 7.5"/19.05 cm (max)		5.04"/12.80 cm x 0.5"/1.27 cm x 4.97"/12.61 cm
Weight (max) POUNDS/KILOGRAMS	800 g	800 g	180 g
Interface Type and Speed	SATA 16x	SATA 16x	PATA 8x or SATA 8x
Disc Capacity	Standard	Standard	Standard
Internal Buffer Size	Supplier dependent	Supplier dependent	Supplier dependent
Access Times (typical)	Supplier dependent	Supplier dependent	Supplier dependent

OPTICAL DRIVES, CONT.

DVD +/- RW	MT	DT	SFF
Maximum Data Transfer Rates			
Writes	16x DVD/48x CD	16x DVD/48x CD	8x DVD/ 24x CD
Reads	16x DVD/48x CD	16x DVD/48x CD	8x DVD/ 24x CD
Power Source			
DC Power Requirements	12V	12V	5V
DC Current	1200mA (12V)/ 900mA (5V)	1200mA (12V)/ 900mA (5V)	1000mA
Environmental Operating Conditions			
Operating Temperature Range	5°C–50°C	5°C–50°C	5°C–50°C
Relative Humidity Range	20%–80% RH	20%–80% RH	20%–80% RH
Maximum Wet Bulb Temperature	29°C	29°C	29°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m
Environmental Non-Operating Conditions			
Operating Temperature Range	-45°C–65°C	-45°C–65°C	-45°C–65°C
Relative Humidity Range	5%–95% RH	5%–95% RH	5%–95% RH
Maximum Wet Bulb Temperature	38°C	38°C	38°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m

DVD-ROM	MT	DT	SFF
External Dimensions INCHES/CENTIMETERS (Without Bezel–WxHxD)	6"/14.82 cm x 2"/4.2 cm x 7.5"/19.05 cm (max)		5.04"/12.80 cm x 0.5"/1.27 cm x 4.97"/12.61 cm
Weight (max) POUNDS/KILOGRAMS	750 g	750 g	175 g
Interface Type and Speed	SATA 48x	SATA 48x	PATA 24x or SATA 24x
Disc Capacity	Standard	Standard	Standard
Internal Buffer Size	Supplier dependent	Supplier dependent	Supplier dependent
Access Times (typical)	Supplier dependent	Supplier dependent	Supplier dependent

OPTICAL DRIVES, CONT.

DVD-ROM	MT	DT	SFF
Maximum Data Transfer Rates			
Writes			
Reads	16x DVD/48x CD	16x DVD/48x CD	16x DVD/48x CD
Power Source			
DC Power Requirements	12V	12V	5V
DC Current	1200mA (12V)/ 900mA (5V)	1200mA (12V)/ 900mA (5V)	800mA
Environmental Operating Conditions			
Operating Temperature Range	5°C–50°C	5°C–50°C	5°C–50°C
Relative Humidity Range	20%–80% RH	20%–80% RH	20%–80% RH
Maximum Wet Bulb Temperature	29°C	29°C	29°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m
Environmental Non-Operating Conditions			
Operating Temperature Range	-45°C–65°C	-45°C–65°C	-45°C–65°C
Relative Humidity Range	5%–95% RH	5%–95% RH	5%–95% RH
Maximum Wet Bulb Temperature	38°C	38°C	38°C
Altitude Range	-200–10600 m	-200–10600 m	-20–10600 m

Combo CD-RW	MT	DT	SFF
External Dimensions INCHES/CENTIMETERS **(Without Bezel–WxHxD)**	6"/14.82 cm x 2"/4.2 cm x 7.5"/19.05 cm (max)		5.04"/12.80 cm x 0.5"/1.27 cm x 4.97"/12.61 cm
Weight (max) POUNDS/KILOGRAMS	750 g	750 g	175 g
Interface Type and Speed	SATA 48x	SATA 48x	PATA 24x or SATA 24x
Disc Capacity	Standard	Standard	Standard
Internal Buffer Size	Supplier dependent	Supplier dependent	Supplier dependent
Access Times (typical)	Supplier dependent	Supplier dependent	Supplier dependent

OPTICAL DRIVES, CONT.

Combo CD-RW, cont.	MT	DT	SFF
Maximum Data Transfer Rates			
Writes	48x CD	48x CD	24x CD
Reads	16x DVD/48x CD	16x DVD/48x CD	16x DVD/48x CD
Power Source			
DC Power Requirements	12V	12V	5V
DC Current	1200mA (12V)/ 900mA (5V)	1200mA (12V)/ 900mA (5V)	900mA
Environmental Operating Conditions			
Operating Temperature Range	5°C–50°C	5°C–50°C	5°C–50°C
Relative Humidity Range	20%–80% RH	20%–80% RH	20%–80% RH
Maximum Wet Bulb Temperature	29°C	29°C	29°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m
Environmental Non-Operating Conditions			
Operating Temperature Range	-45°C–65°C	-45°C–65°C	-45°C–65°C
Relative Humidity Range	5%–95% RH	5%–95% RH	5%–95% RH
Maximum Wet Bulb Temperature	38°C	38°C	38°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m

CD-ROM	MT	DT	SFF
External Dimensions INCHES/CENTIMETERS **(Without Bezel–WxHxD)**	6"/14.82 cm x 2"/4.2 cm x 7.5"/19.05 cm (max)		5.04"/12.80 cm x 0.5"/1.27 cm x 4.97"/12.61 cm
Weight (max) POUNDS/KILOGRAMS	750 g	750 g	175 g
Interface Type and Speed	SATA 48x	SATA 48x	PATA 24x
Disc Capacity	Standard	Standard	Standard
Internal Buffer Size	Supplier dependent	Supplier dependent	Supplier dependent
Access Times (typical)	Supplier dependent	Supplier dependent	Supplier dependent

OPTICAL DRIVES, CONT.

Combo CD-ROM, cont.	MT	DT	SFF
Maximum Data Transfer Rates			
Writes			
Reads	48x CD	48x CD	24x CD
Power Source			
DC Power Requirements	12V	12V	5V
DC Current	1200mA (12V)/ 900mA (5V)	1200mA (12V)/ 900mA (5V)	800mA
Environmental Operating Conditions			
Operating Temperature Range	5°C–50°C	5°C–50°C	5°C–50°C
Relative Humidity Range	20%–80% RH	20%–80% RH	20%–80% RH
Maximum Wet Bulb Temperature	29°C	29°C	29°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m
Environmental Non-Operating Conditions			
Operating Temperature Range	-45°C–65°C	-45°C–65°C	-45°C–65°C
Relative Humidity Range	5%–95% RH	5%–95% RH	5%–95% RH
Maximum Wet Bulb Temperature	38°C	38°C	38°C
Altitude Range	-200–10600 m	-200–10600 m	-200–10600 m

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 UNLESS NOTED)	
Feature Setting	**Default Value**
DISKETTE DRIVE	**INTERNAL DRIVE**
SATA-0:	On
SATA-1:	On
SATA-2[3]:	Depends on chassis and HDDs installed
SATA-3[3]:	Depends on chassis and HDDs installed
SMART Reporting:	Off
ONBOARD DEVICES	
Integrated NIC:	On
Integrated Audio:	On
USB Controller:	On
Rear Quad USB:	On
Rear Triple USB:	On
Front USB:	On
LPT Port Mode:	PS/2
LPT Port Address:	378h
Serial Port #1:	Auto
UART Powerdown	Auto
VIDEO	
Primary Video:	Auto
Video Memory Size	64 MB
PERFORMANCE	
Multiple CPU Core:	On
HDD Acoustic Mode:	Bypass

[3] This only pertains to drives physically contained within the chassis and does not refer to HDDs attached via eSATA (including port multiplier), USB or optional 1394.

BIOS DEFAULTS, CONT.

BIOS FACTORY DEFAULTS, CONT. (ALL CHASSIS UNLESS NOTED)	
Feature Setting	**Default Value**
SECURITY	
Admin Password:	
System Password:	
SATA-0 Password:	
SATA-1 Password:	
SATA-2 Password[13]:	
SATA-3 Password[14]:	Depends on chassis
Password Changes:	Unlocked
No Execute:	On
Computrace*:	Deactivate
POWER MANAGEMENT	
AC Recovery:	Off
Auto Power On:	Off
Auto Power Time:	12:00 AM
Low Power Mode:	Off
Remote Wake Up:	Off
Cool and Quiet:	On
Suspend Mode:	S3
MAINTENANCE	
Service Tag:	System specific
ASF Mode:	Off
Load Defaults:	Cancel
Event Log:	Mark All Entries

[13] Not present on SFF
[14] Only present on MT

BIOS DEFAULTS, CONT.

| BIOS FACTORY DEFAULTS (ALL CHASSIS UNLESS NOTED)	
Feature Setting	**Default Value**
POST BEHAVIOR	
Fast Boot:	On
Numlock Key:	On
POST Hotkeys:	Setup & Boot Menu
MEBx Hotkey:	On
Keyboard Errors:	Report

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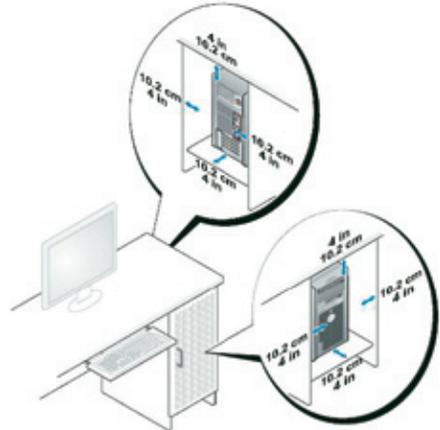
RECOMMENDED ENCLOSURE

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.
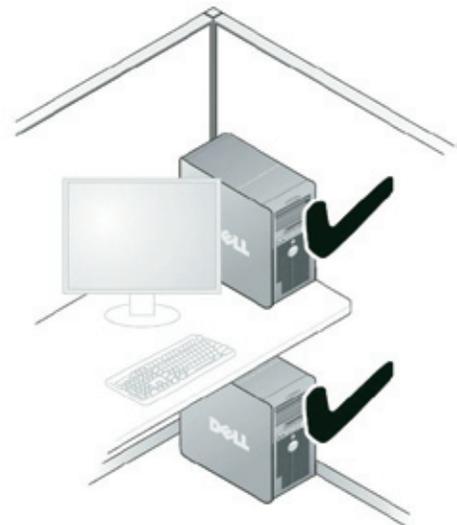
REGULATORY COMPLIANCE AND ENVIRONMENTAL

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: 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™ 740 MT: Declared noise emissions in accordance with ISO 9296 (tested in accordance with ISO 7779[15])			
SERVICE LEVEL	Sound Power (LWAd, bels) (1 bel=10 decibels, re 10$_{-12}$ Watts)	Sound Pressure Operator Position (LpAM, decibels) (re 2x10$_{-5}$ Pa)	Sound Pressure Bystander Position (LpAM, decibels) (re 2x10$_{-5}$ PA)
Hard Drive Accessing	3.7	28	24
CD Drive Accessing	5.1	42	37
Idle	3.6	28	23

OPTIPLEX™ 740 DT: Declared noise emissions in accordance with ISO 9296 (tested in accordance with ISO 7779[15])			
SERVICE LEVEL	Sound Power (LWAd, bels) (1 bel=10 decibels, re 10$_{-12}$ Watts)	Sound Pressure Operator Position (LpAM, decibels) (re 2x10$_{-5}$ Pa)	Sound Pressure Bystander Position (LpAM, decibels) (re 2x10$_{-5}$ PA)
Floppy Drive Accessing	4.9	40	34
Hard Drive Accessing	3.8	28	23
CD Drive Accessing	5.5	45	38
Idle	3.9	28	23

OPTIPLEX™ 740 SFF: Declared noise emissions in accordance with ISO 9296 (tested in accordance with ISO 7779[15])			
SERVICE LEVEL	Sound Power (LWAd, bels) (1 bel=10 decibels, re 10$_{-12}$ Watts)	Sound Pressure Operator Position (LpAM, decibels) (re 2x10$_{-5}$ Pa)	Sound Pressure Bystander Position (LpAM, decibels) (re 2x10$_{-5}$ PA)
Floppy Drive Accessing	4.8	37	32
Hard Drive Accessing	4.0	31	27
CD Drive Accessing	4.8	31	26
Idle	3.9	30	25

[15] The Declared Noise Emission in accordance with ISO 9296 for the Dell OptiPlex 740 is as follows$_1$: (all values LwAd expressed in bels$_2$; 1 bel=10 decibels, re 10$_{-12}$ Watts).