

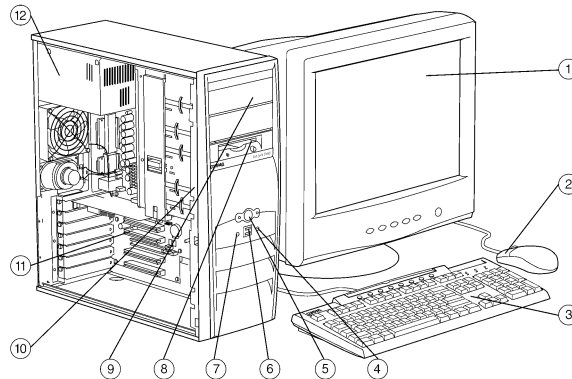
Overview

What's New

- Intel® Pentium® 4 processors
- Intel® 845 chipset
- New *Evo* industrial design with carbon and silver color
- New Small Form Factor and Desktop chassis

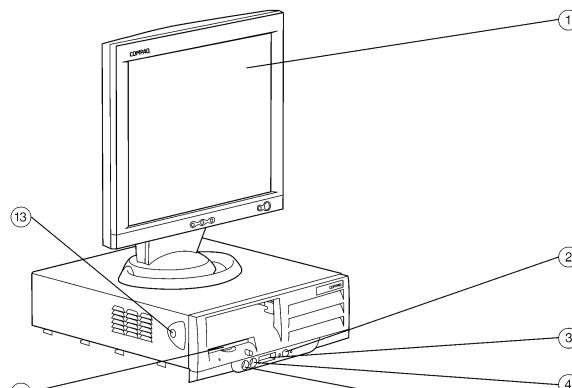
At A Glance

- Intel® Pentium® 4 processors with 400-MHz Front Side Bus
- Choice of three form factors
- Compaq Intelligent Manageability
- Energy Star compliant with energy-saving features
- Windows XP Ready
- D300s models pre-loaded with Microsoft Office XP SBE and Norton Antivirus
- Protected by Compaq Services, including a 3-1-1 limited warranty. Terms and conditions vary by country. Certain restrictions and exclusions apply. Three-year onsite and labor not available in all countries.



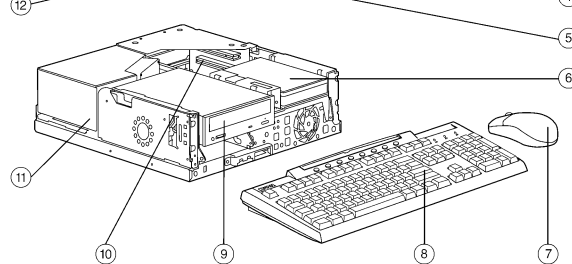
Convertible Minitower

1. CRT Monitor (sold separately)
2. 2-Button Scroll Mouse
3. Easy Access Keyboard
4. Microphone Connector (optional)
5. Dual-State Power Button
6. USB Connector (optional)
7. Headphone Connector (optional)
8. 1.44-MB Diskette Drive
9. 2 External Expansion Bays
10. SMART III Ultra ATA/100 Hard Drive
11. Expansion Slots
12. 250-Watt Power Supply



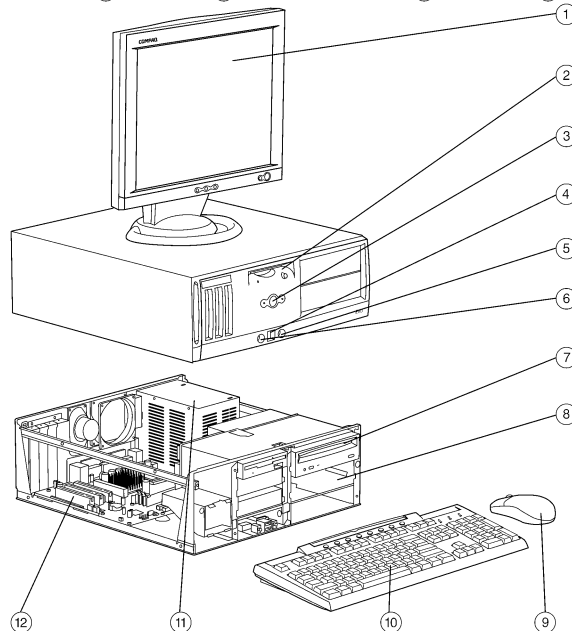
Small Form Factor

1. TFT Monitor (sold separately)
2. Dual-State Power Button
3. USB Connectors
4. Headphone Connector
5. Microphone Connector
6. SMART III Ultra ATA/100 Hard Drive
7. 2-Button Scroll Mouse
8. Easy Access Keyboard
9. CD-ROM Drive
10. Expansion Slots
11. 175-Watt Power Supply
12. 1.44-MB Diskette Drive
13. Quick Release Cover Latch



Desktop

1. TFT Monitor (sold separately)
2. 1.44-MB Diskette Drive
3. Dual-State Power Button
4. USB Connector (optional)
5. Microphone Connector (optional)
6. Headphone Connector (optional)
7. CD-ROM Drive
8. External Expansion Bay
9. 2-Button Scroll Mouse
10. Easy Access Keyboard
11. 235-Watt Power Supply
12. Expansion Slots



Standard Features – Select Models

Compaq Evo Desktop D300 Series with 845 chipset

Pre-Configured Models

(Geos to localize with favorable configuration models and part numbers)

Model Key

Example:

D5S/P1.5/20j/2/128c/vn

D5S =

Evo D300 Small Form Factor

P1.5 =

Pentium 4 1.5-GHz processor

20 =

Hard Drive

j =

845 chipset

2 =

Microsoft Windows 2000 SP2

128 =

Memory

c =

CD-ROM

6 =

NVIDIA Vanta 16-MB AGP graphics

g =

NVIDIA MX200 16-MB 4X

AGP graphics

n =

Integrated Intel Pro/100 VM

Standard Features – Select Components

Compaq Evo Desktop D300 Series with 845 chipset

Processor and Speed <i>One of the following</i>	Intel Pentium 4 Processors 1.5-GHz 1.6-GHz 1.7-GHz	Standard L2 Cache Front Side Bus Maximum Memory	256-KB Integrated ECC 400-MHz 1.5-GB
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Note: All Compaq Evo Desktop D300 contain three DIMM slots, but can only be upgraded to a maximum of 3-GB when 1-GB PC133 SDRAM are available.

Hard Drives	20-GB 7200 rpm QSI SMART III Ultra ATA/100
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Standard Memory <i>One of the following</i>	256-MB SDRAM (PC133) 128-MB SDRAM (PC133)
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Removable Storage	1.44-MB Diskette Drive
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Optical Storage	48X CD-ROM Drive
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Keyboard/Mouse	Easy Access Keyboard 2-Button Scroll Mouse
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Audio	Integrated AC'97 Audio with Internal Speaker
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NIC	Integrated Intel PRO/100 VM Network Connection
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Graphics	NVIDIA Vanta 16-MB 4X AGP
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Operating System <i>One of the following</i>	Microsoft Windows 2000 SP2/Windows XP Professional Microsoft Windows 98 SE Microsoft Windows XP Professional Microsoft Windows XP Home
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Intelligent Manageability	Yes
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Standard Features – Custom Components

Compaq Evo Desktop D300 Series with 845 chipset

Processor and Speed	Intel Pentium 4 Processors	Standard L2 Cache	256-KB Integrated ECC
<i>One of the following</i>	1.5-GHz	Front Side Bus	400-MHz
	1.6-GHz	Maximum Memory	1.5-GB
	1.7-GHz		
	1.8-GHz		
	1.9-GHz		
	2.0-GHz*		
	2.2-GHz*		

Note: Intel Pentium 4 processors with speeds of 2.0-GHz or above have 512-KB L2 cache.

Note: All Compaq Evo Desktop D300 contain three DIMM slots, but can only be upgraded to a maximum of 3-GB when 1-GB PC133 SDRAM are available.

Hard Drives	20-GB 7200 rpm QSI SMART III Ultra ATA/100
<i>One of the following</i>	20-GB 5400 rpm QSI SMART III Ultra ATA/100
	40-GB 7200 rpm QSI SMART III Ultra ATA/100
	40-GB 5400 rpm QSI SMART III Ultra ATA/100
	60-GB 7200 rpm QSI SMART III Ultra ATA/100
	36-GB 10,000 rpm Wide Ultra3 SCSI
	Ultra 29160N Controller

Standard Memory	1.5-GB SDRAM (PC133) (3 x 512)
<i>One of the following</i>	1.0-GB SDRAM (PC133) (2 x 512)
	512-MB SDRAM (PC133)
	256-MB SDRAM (PC133)
	128-MB SDRAM (PC133)
	64-MB SDRAM (PC133)

Removable Storage	1.44-MB Diskette Drive
	Imega Zip 250 Drive

Optical Storage	48X CD-ROM Drive
	16X DVD-ROM with RAM Read
	24X/10X/40X CD-RW Drive
	8X/4X/32X DVD/CD-RW Combo Drive

Keyboard/Mouse	Easy Access Keyboard (<i>carbon</i>)
	Enhanced Keyboard (<i>carbon</i>)
	2-Button Scroll Mouse (<i>carbon</i>)

Audio	Integrated AC'97 Audio with Internal Speaker
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NIC	Integrated Intel PRO/100 VM Network Connection
	3COM 3C920C-TX Network Connection

Modem	Lucent V90 56K PCI Modem
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Graphics	NVIDIA Vanta 16-MB 4X AGP
	NVIDIA GeForce2 MX200 16-MB 4X AGP
	NVIDIA GeForce2 MX400 32-MB 4X AGP
	Matrox G450 Dual Head 32-MB AGP
	Matrox G200 MMS Quad Head 32-MB PCI
	Matrox G550 Dual DVI 32-MB AGP

Standard Features – Custom Components

Compaq Evo Desktop D300 Series with 845 chipset

Operating System <i>One of the following</i>	Microsoft Windows 2000 SP2/Windows XP Professional Microsoft Windows NT 4.0 SP6a Microsoft Windows 98 SE Microsoft Windows 2000 SP2/ Windows NT 4.0 SP6a Microsoft Windows 2000 SP2 Microsoft Windows XP Professional Microsoft Windows XP Home
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Software	Microsoft Windows Office XP Professional Microsoft Windows Office XP Small Business Microsoft Windows Office XP Personal Norton AntiVirus 2002
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Intelligent Manageability	Yes
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Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

	Desktop	Small Form Factor	Convertible Minitower
Expansion Capability			
Memory Expansion Slots	3 DIMM's	3 DIMM's	3 DIMM's
Slots			
PCI	3	2 (on Riser)	5 (3 on PCA, 2 via PCI Extender Card)
AGP	1 (1.5V AGP 4X)	1 Low Profile AGP (1.5V AGP 4X)	1 (1.5V AGP 4X)
Bays			
Internal	(2) HDD	(1) HDD	(2) HDD
External	(2) 5.25" 1/2 ht	(1) 5.25" 1/2 ht	(2) 5.25" 1/2 ht
	(1) Floppy	(1) Floppy	(1) Floppy
Chassis Dimensions (H x W x D)			
Inches	5.72 x 15.25 x 17.9 inches	3.9 x 13.1 x 14.4 inches	17.65 x 6.6 x 16.8 inches
Centimeters	14.5 x 38.7 x 45.5 centimeters	9.9 x 33.3 x 36.6 centimeters	44.8 x 16.8 x 42.7 centimeters
Chassis Weight			
System Weight	25 lb / 11.34 kg	20 lb / 9.1 kg	26.0 lbs / 11.8 kg
Weight Supported	100 lb / 45.5 kg	100 lb / 45.5 kg	100 lb / 45.5 kg
Box Dimensions (H x W x D)			
Inches	23.5 x 19.88 x 15.25 inches	13.0 x 20.5 x 18.13 inches	23.13 x 13.0 x 22.5 inches
Centimeters	59.69 x 50.5 x 38.74 centimeters	33.02 x 52.07 x 46.05 centimeters	58.75x 33.02 x 57.15 centimeters
Box Weight			
	36.25 lb.	34 lb.	38 lb.
System Memory			
Type/Speed		SDRAM DIMM - PC133 Only	
Current Maximum Memory		1.5-GB	
Maximum Memory		3-GB (when 1-GB PC133 SDRAM are available)	
Memory Parity		Not Supported	
ECC Memory		Supported (Intel 845 chipset does not support mixing of Non-ECC and ECC PC133 memory)	
Serial Presence Detect Support		Mandatory as part of PC133 Spec	
Supported Features			
Processor		Intel Socket 478	
CPU Bus Speed Supported		400-MHz	
Memory Type Supported		SDRAM	
Memory Speed Supported		PC133 Only	
SPD Support		Yes	
Hard Drive Interfaces Supported		SMART Ultra ATA/100/66/33	
Hard Drive Controller (PCI) Interfaces Supported		SMART Ultra ATA/100/66/33	
Intel® Pentium® 4			
Coprocessor		Yes	
CPU Socket Type/Number		Surface Mount ZIF Socket - 478 Pins	
CPU Package		mPGA478B, FC-PGA2	
Front Side Bus Speed		400-MHz	
Standard L2 Cache		256K	
L2 Cache Architecture / Speed		Advanced Transfer Cache on Die with 8-way associativity and Error Correcting Code (ECC) / Full Speed of Processor	

Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

System Board	Architecture	P4 / PCI / AGP 4X		
	Chipset	Intel 845 Chipset		
	I/O Controller	Super I/O 3		
	System Board Form Factor	Standard uATX on Desktop		
		Custom on Small Form Factor		
		Standard uATX + optional PCI Extender Board on Convertible Minitower		
	Processor Socket - 478 Pin ZIF	Yes		
	DIMM Connectors	Yes (3)		
	AGP Connector	Yes (1)		
	AGP Integrated	No		
	PCI Connectors	Desktop (3)		
		Small Form Factor (2 on Riser)		
		Convertible Minitower (3 standard + 2 additional via the optional PCI Extender Card)		
	Flash ROM	Yes		
	Audio (ADI 1885 - AC97)	Yes		
	CD ROM IN (Audio)	Yes		
	Clear CMOS Button	Yes		
	CPU Fan Header	Yes (not installed on D300 Small Form Factor)		
	Chassis Fan Header	Yes		
	Chassis Speaker Header	Yes		
	CMOS Battery Holder - Lithium	Yes		
	NIC	Yes		
	Wake-On-Lan®	Yes		
	Alert-On-LAN®	Yes		
	Power Supply Header	Yes		
	Power Switch, Power LED & HD LED Header	Yes (on systemboard on D300 Small Form Factor)		
	Password Clear Header	Yes		
	Reset Header (Not Installed)	Yes		
	Riser Connector	Yes on D300 Small Form Factor only		
	SCSI LED Header	Yes (on riser on D300 Small Form Factor)		
	Speaker Header	Yes		
	Boards that connect to System Board	Desktop	Solenoid Lock PCB (Option) Front I/O Board (Option)	
		Small Form Factor	Solenoid Lock PCB (Option) Riser board - 2 PCI Slots	
Convertible Minitower		Solenoid Lock PCB (Option) PCI Extender Board - 2 additional PCI Slots Front I/O Board (Option)		

Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

Serviceability Features of System Board	<ul style="list-style-type: none"> Dual Color Power and HD LED - To Indicate Normal Operations and Fault Conditions Blinking Diagnostic Keyboard LED Codes Diagnostic LED Label under Hood Cover User Diagnostic Software Support Over-Temp Warning on Screen (Need Intelligent Manageability to work) Compaq Software Restore CD Flash ROM 3.3V Aux Power LED on System PCA Dual Function 5V Aux Power LED (ON) /PS_ON LED (OFF) on System PCA Processor Hot LED on System PCA Diagnostic Power Switch LED (Not needed onD300 Small Form Factor because power switch is on system board) Clear Password Jumper Clear CMOS Button 		
Desktop Chassis	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Color System Board Form Factors Supported Cooling Solutions Supported (3 Fans) Slots Supported Front I/O Rear I/O Internal Speaker Custom Power Supply Security Locks Supported Power Switch / LED Cable </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Silver/Carbon Standard uATX Variable Speed Power Supply Fan Variable Speed Processor Fan Heatsink Variable Speed Chassis Fan 3 Full Length, Full Height PCI Slots 1 Half Length, Full Height AGP Front Headphone, Mic, and 2 USB (Option) Standard ATX I/O Panel Yes 235-Watt Enhanced ATX PS Kensington Cable Lock Security Module (Solenoid Hood Lock and Hood Sensor) Lock Tab built into back of Chassis Yes </td> </tr> </table>	<ul style="list-style-type: none"> Color System Board Form Factors Supported Cooling Solutions Supported (3 Fans) Slots Supported Front I/O Rear I/O Internal Speaker Custom Power Supply Security Locks Supported Power Switch / LED Cable 	<ul style="list-style-type: none"> Silver/Carbon Standard uATX Variable Speed Power Supply Fan Variable Speed Processor Fan Heatsink Variable Speed Chassis Fan 3 Full Length, Full Height PCI Slots 1 Half Length, Full Height AGP Front Headphone, Mic, and 2 USB (Option) Standard ATX I/O Panel Yes 235-Watt Enhanced ATX PS Kensington Cable Lock Security Module (Solenoid Hood Lock and Hood Sensor) Lock Tab built into back of Chassis Yes
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Small Form Factor Chassis	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Color System Board Form Factors Supported Cooling Solutions Supported (2 Fans) Slots Supported Front I/O Rear I/O Internal Speaker Custom Power Supply Security Locks Supported Power Switch / LED Cable </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Silver/Carbon Custom SFF Variable Speed Power Supply Fan Variable Speed Chassis Fan 2 Half Length, Full Height PCI slots 1 Low Profile AGP Front Headphone, Mic, and 2 USB Standard Standard ATX I/O Connectors (Some Single Stacked) Yes 175-Watt Enhanced ATX Like PS Kensington Cable Lock Security Module (Solenoid Hood Lock and Hood Sensor) Compaq Lock Bracket – 173234 (chassis securement only, hood lock required to secure hood) No (on system board) </td> </tr> </table>	<ul style="list-style-type: none"> Color System Board Form Factors Supported Cooling Solutions Supported (2 Fans) Slots Supported Front I/O Rear I/O Internal Speaker Custom Power Supply Security Locks Supported Power Switch / LED Cable 	<ul style="list-style-type: none"> Silver/Carbon Custom SFF Variable Speed Power Supply Fan Variable Speed Chassis Fan 2 Half Length, Full Height PCI slots 1 Low Profile AGP Front Headphone, Mic, and 2 USB Standard Standard ATX I/O Connectors (Some Single Stacked) Yes 175-Watt Enhanced ATX Like PS Kensington Cable Lock Security Module (Solenoid Hood Lock and Hood Sensor) Compaq Lock Bracket – 173234 (chassis securement only, hood lock required to secure hood) No (on system board)
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Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

Convertible Minitower Chassis	Color
	System Board Form Factors Supported
	Cooling Solutions Supported (3 Fans)
	Slots Supported
	Front I/O
	Rear I/O
	Internal Speaker
	Custom Power Supply
	Security Locks Supported
	Power Switch / LED Cable

Serviceability Features of Chassis	Desktop	Small Form Factor	Convertible Minitower
Dual Color Power and HD LED to Indicate Normal Operations and Fault Conditions	Yes	Yes	Yes
Diagnostic LED Label under Hood Cover	Yes	Yes	Yes
Security Module (Smart Cover Lock and Hood Sensor)	Optional	Optional	Optional
Front power switch	Yes	Yes	Yes
Green Pull Tabs, and Quick Release Latches for easy Identification	Yes	Yes	Yes
System memory can be upgraded without removing the system board or any internal components	Yes	Yes	Yes
Tool-less Hood Removal	Yes (with captive thumbscrew)	Yes (with side push buttons)	Yes (with captive thumbscrew)
Tool-less Hard Drive, CD & Floppy Removal	Yes	Yes	Yes
Tool-less System Board Removal	No	Yes	No
Industry Standard CD Bay	Yes	Yes	Yes
Towerable	Yes	Yes	Yes (Can also Rotate Drives)
Universal Tower Stand	Yes (Option)	Yes (Option)	No (Not needed)
Green Color Coded Latches & Cable Pull Tabs for Easy Identification	Yes	Yes	Yes

Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

Interfaces	Desktop	Small Form Factor	Convertible Minitower
I/O Chip	Super IO 3	Super IO 3	Super IO 3
Serial Port / UART Type	Yes (2) / SN75185	Yes (2) / SN75185	Yes (2) / SN75185
Parallel Port	Yes	Yes	Yes
USB	2 USB 1.1 (Optional 2 Front USB)	4 USB 1.1	2 USB 1.1 (Optional 2 Front USB)
Infrared Port	No	No	No
Network	RJ-45 (with integrated LEDs)	RJ-45 (with integrated LEDs)	RJ-45 (with integrated LEDs)
Keyboard	Yes (PS/2)	Yes (PS/2)	Yes (PS/2)
Mouse	Yes (PS/2)	Yes (PS/2)	Yes (PS/2)
Video	Yes (AGP 4X 1.5V Bus)	Yes (AGP 4X 1.5V Bus)	Yes (AGP 4X 1.5V Bus)
Audio	Yes	Yes (Mic-In, Hphone Out, Line-In, Line-Out)	Yes

Power Supply	Desktop	Small Form Factor	Convertible Minitower
Full Ranging Input (No Line Select Switch)	Yes	Yes	Yes
Active Power Factor Correction (APFC) (Input Current is nearly ½ a non-APFC PS)	Yes	Yes	Yes
Operating Voltage Range	90 to 264VAC	90 to 264VAC	90 to 264VAC
Rated Voltage Range	100 to 240VAC	100 to 240VAC	100 to 240VAC
Rated Line Frequency	50-60 Hz	50-60 Hz	50-60 Hz
Rated Input Current	3.6A @ 100VAC	2.7A @ 100VAC	3.6A @ 100VAC
Maximum Rated Power	235W	175W	250W
Heat Dissipation	Max: 1,234 BTU/hr Nominal: 617 BTU/hr Max: 311 kg-cal/hr Nominal: 155 kg-cal/hr	Max: 920 BTU/hr Nominal: 460 BTU/hr Max: 232 kg-cal/hr Nominal: 116 kg-cal/hr	Max: 1,313 BTU/hr Nominal: 656 BTU/hr Max: 331 kg-cal/hr Nominal: 165 kg-cal/hr

Environmental and Mechanical Engineering Support Center <http://env-websvr.ccm.cpqcorp.net/EMESC/default.htm>

Power Conservation 'Energy Saver'	Desktop	Small Form Factor	Convertible Minitower
Energy Star Compliant	Yes	Yes	Yes
Blue Angel Compliant (<5w in S5-Power Off)	Yes	Yes	Yes
Power Consumption in ES Mode - Suspend to RAM (S3) (Instantly Available PC)	TBD	~2W	TBD
APM Support	Yes	Yes	Yes
Screen Blanking	Yes	Yes	Yes
Hard Disk 'Idle' Mode	Yes	Yes	Yes
System Idle Mode	Yes	Yes	Yes
Processor/Cache Memory Power-Down (S3)	Yes	Yes	Yes
CD-Rom Spins Down when not in use	Yes	Yes	Yes

Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

ROM Features	<ul style="list-style-type: none"> Instantly Available PC (Suspend to RAM - S3) ROM Based F10 Setup Remote System Installation via F12 (PXE) Failsafe Boot Block ROM Emergency ROM Flash Recovery with Video CMOS Archive and CMOS Restore Save and Restore CMOS Setup via Diskette Auto Setup when New Hardware Installed Serial, Parallel, USB Enable/Disable Port Control Removable Media Write / Boot Control Remote Boot from Server Network Server Mode Power-On Password Setup Password Memory Change Alert (Need IM to work) Thermal Alert (Need IM to work) Cover Removal Alert (Need IM to work) Master Boot Record Security Remote ROM Flash Remote Wakeup Power Management ACPI Ready DMI BIOS (Desktop Management Interface)
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System Environmental Specs	Operating Temperature	50° to 95°F/10° to 35° C (Derating of 1.0°C per 300m (1000ft) to 3000m (10,000ft), no direct sustained sunlight)		
	Non-operating Temperature	-22° to 140° F -30° to 60° C (Maximum rate of change is 20°C/Hr.)		
	Relative Humidity (non-condensing)	Operating	10% to 90% (28°C maximum wet bulb temperature)	
	Relative Humidity (non-condensing)	Non-Operating	5% to 95% (38.7°C maximum wet bulb temperature)	
	Max Altitude (unpressurized)	Operating	10,000 ft 3,048 m (Maximum allowable altitude change rate is 1500 ft/min)	
	Max Altitude (unpressurized)	Non-Operating	30,000 ft 9,144 m (Maximum allowable altitude change rate is 1500 ft/min)	
	Acoustics	Desktop	W2000 Idle (HDD spinning but not seeking) = 32.7 DB	
		Small Form Factor	W2000 Idle (HDD spinning but not seeking) = 31.5 DB	
		Convertible Minitower	W2000 Idle (HDD spinning but not seeking) = 31.1 DB	
	Shock	Operating	5 G	
		Non-Operating	20 G	
	Vibration	Operating	10 G (positive and negative directions front to back on Small Form Factor)	
			Operating: Random vibration at 0.000215 G ² /Hz, 10Hz to 300Hz, (0.25G's nominal)	
	Non-Operating	Random vibration at 0.0005 G ² /Hz, 10Hz to 500Hz, (0.5G's nominal).		

Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

Software

Preinstalled Software	Desktop	Small Form Factor	Convertible Minitower
Microsoft Windows 98 SE	Yes	Yes	Yes
Microsoft Windows NT 4. SP6a	Yes	Yes	Yes
Microsoft Windows 2000 SP2	Yes	Yes	Yes
Microsoft Windows XP Pro	(when available from Microsoft)	(when available from Microsoft)	(when available from Microsoft)
Microsoft Windows XP Home	(when available from Microsoft)	(when available from Microsoft)	(when available from Microsoft)
Microsoft Windows XP SBE	No	No	Yes (D300s models only)
Norton Antivirus	No	No	Yes (D300s models only)
Computer Setup Utility via F10 (ROM Based)	Yes	Yes	Yes
Diagnostics for Windows	Yes	Yes	Yes
Diagnostics for DOS	No	No	No
Microsoft Internet Explorer	Yes	Yes	Yes
Intelligent Manageability Agent	Yes	Yes	Yes
Plug and Play Ready	Yes	Yes	Yes
Windows 98	Yes	Yes	Yes
Windows 2000	Yes	Yes	Yes
Windows XP Pro	Yes	Yes	Yes
Windows XP Home	Yes	Yes	Yes
Windows NT 4.0	Plug and Play not supported in Windows NT 4.0	Plug and Play not supported in Windows NT 4.0	Plug and Play not supported in Windows NT 4.0
Boot Support			
Local Diskette Boot	Yes	Yes	Yes
Local CD Boot	Yes	Yes	Yes
Remote Boot	Yes	Yes	Yes
Network Boot	Yes	Yes	Yes

Intelligent Manageability Information downloadable from: <http://www.compaq.com/im>

Initial Configuration and Deployment Intelligent Manageability Home Page
Altiris eXpress
PC Transplant / PC Transplant PRO
System Software Management
Novel ZenWorks 2.0
Insight Manager
Support Software CD
Compaq Software Restore CD

Asset Control Asset Tag
DIMM Serial Presence Detect
Hard drive serial number, model, & manufacturer
Monitor serial number, model & manufacturer
System serial number, model, & manufacturer
ROM revision levels
System board revision level
Compaq Fingerprint Identification Technology (Optional)
DMI BIOS
Memory Change Alert (Intelligent Manageability needed to work)
Ownership Tag
Smart Cover Lock (Optional)
Kensington Lock Support
Smart Cover Sensor (Optional)

Standard Features – Base Unit Details

Compaq Evo Desktop D300 Series with 845 chipset

Standard Security Features

Asset Tracking and Security Home Page <http://www.compaq.com/im/ats.html>
Optional Smart Cover Lock
Mechanical Security Provision
Cable Lock Provision
Power-On Password
Serial, Parallel, USB Enable/Disable
Removable Media Write / Boot Control
Power-On Password
Setup Password

Software Updating and Management

Software Updating and Management Home Page <http://www.compaq.com/im/sum.html>
Remote ROM Flash
ROM Based Setup(F10)and Start-up Diagnostics
Support Software CD & WWW Site

Fault Notification and Recovery

Fault Management Home Page <http://www.compaq.com/im/fnr.html>
DMI BIOS
SMART Hard Drives, Fault Notification, & Prefailure Warranty
Proactive Backup
ATA RAID Controller Option
ECC Memory, Fault Notification, and Pre-failure Warning
Processor Fault Notification and Prefailure Warranty (Not supported by P4 processor)
Surge Tolerant Full Ranging Power Supply
Thermal Sensor
Ultra ATA Integrity Monitoring (CRC Checking)

Other Features

ACPI-Ready Hardware
Compaq Insight Manager LC and XE Agents
Altiris agent
Compaq Management Solutions Partners Program
Dual-State Power Button
Compaq Management Solutions Partners Program
Wired for Management Support

Service and Support

On-site Warranty ^{Note 1}: This three-year, limited warranty covers all parts for three years and provides free, next-business-day ^{Note 2} service (parts and labor) for the first year and includes free telephone support ^{Note 3} 24 hours a day, 7 days a week. The customer may extend or upgrade the warranty to provide labor and/or on-site service for the second and third years. Global coverage ^{Note 2} ensures that any product purchased in one country and transferred to another non-restricted country will remain fully covered under the original warranty.

^{Note 1}: Terms and conditions may vary by country. Certain restrictions and exclusions apply.

^{Note 2}: On-site service may be provided pursuant to a service contract between Compaq and an authorized Compaq third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

^{Note 3}: Technical telephone support applies only to Compaq-configured Compaq and third-party Compaq-qualified hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.

After-Market Options

Graphics	NVIDIA GeForce2 MX200 16-MB AGP	251954-B21	
	NVIDIA GeForce2 MX400 32-MB AGP	227003-B21	
	Matrox G550 32-MB AGP VGA	250227-B21	
	Matrox G550 32-MB AGP DVI	251435-B21	
	Matrox G200 MMS PCI Quad with DVI Cables	179597-B21	
	Matrox G200 MMS PCI Quad Analog Cables	159513-B21	
	DVI Cables for the G200 MMS PCI Quad	170840-B21	
Hard Drives	<i>SMART III Ultra ATA/100 Hard Drives with Drive Protection System (DPS)</i>		
	120-GB 7200 rpm SMART III Ultra ATA Quiet Seek and Idle Hard Drive with DPS (worldwide)	250021-B21	
	80-GB 7200 rpm SMART III Ultra ATA Quiet Seek and Idle Hard Drive with DPS (worldwide)	250020-B21	
	40-GB 7200 rpm SMART III Ultra ATA Quiet Seek and Idle Hard Drive with DPS (worldwide)	201066-B21	
	20-GB 7200 rpm SMART III Ultra ATA Quiet Seek and Idle Hard Drive with DPS (worldwide)	251974-B21	
	Ultra ATA RAID Card	238051-B21	
	<i>SCSI Hard Drives</i>		
	72-GB 10K rpm 1.0" Ultra3 (Ultra 160) SCSI Hard Drive	250023-B21	
	36-GB 15K rpm Ultra3 (Ultra 160) SCSI Hard Drive	250022-B21	
	18.2-GB 10K rpm Ultra3 (Ultra 160) SCSI Hard Drive	159764-B21	
	18.2-GB 15K rpm Ultra3 (Ultra 160) SCSI Hard Drive	191188-B21	
	Adaptec 29160N Ultra160 (Ultra3) SCSI Controller	157810-B21	
	Input/Output Devices	<i>Keyboards</i>	
		Compaq Easy Access Keyboard (carbon)	202109-xx8
		<i>Mice</i>	
Compaq 2-Button Scroll Mouse		170299-B22	
Memory (DIMMs)		<i>133-MHz SDRAM DIMMs</i>	
	256-MB Memory Kit (1 x 256-MB SDRAM DIMM, 133 MHz)	174225-B21	
	128-MB Memory Kit (1 x 128-MB SDRAM DIMM, 133 MHz)	174224-B21	
	64-MB Memory Kit (1 x 64-MB SDRAM DIMM, 133 MHz)	174223-B21	
Monitors	<i>TFTs</i>		
	Compaq TFT8030 Monitor (18-inch, Carbon/Silver)	234362-001	
	Compaq TFT8030 Monitor (18-inch, Baseless)	250199-001	
	Compaq TFT5030 Monitor (15-inch, Carbon/Silver)	228134-001	
	Compaq TFT5030 Monitor (15-inch, Baseless)	250198-001	
	Compaq TFT5015 Monitor (15-inch, Opal)	234043-001	
	Compaq TFT5015 Monitor (15-inch, Carbon/Silver)	234044-001	

After-Market Options

Monitors (continued)

CRTs

Professional Series

Compaq P1220 CRT Monitor (21-inch, Carbon/Silver)	244374-xxx
Compaq P1210 CRT Monitor (21-inch, Opal)	210290-001
Compaq P1210 CRT Monitor (21-inch, Carbon/Silver)	230538-001
Compaq P920 CRT Monitor (19-inch, Carbon/Silver)	244375-xxx
Compaq P910 CRT Monitor (19-inch, Opal)	210254-001
Compaq P910 CRT Monitor (19-inch, Carbon/Silver)	230535-001
Compaq P710 CRT Monitor (17-inch, Opal)	210189-001
Compaq P720 CRT Monitor (17-inch, Carbon/Silver)	244373-xxx

Value Series

Compaq V720 CRT Monitor (17-inch, Opal)	232943-xxx
Compaq V720 CRT Monitor (17-inch, Carbon/Silver)	232944-xxx
Compaq V710 CRT Monitor (17-inch, Opal)	187895-001
Compaq V510 CRT Monitor (15-inch, Opal)	228114-xxx
Compaq V510 CRT Monitor (15-inch, Carbon/Silver)	228113-xxx

Standard Series

Compaq S910 CRT Monitor (19-inch, Opal)	138485-001
Compaq S920 CRT Monitor (19-inch, Opal)	240325-xxx
Compaq S920 CRT Monitor (19-inch, Carbon/Silver)	240326-xxx
Compaq S710 CRT Monitor (17-inch, Opal)	152991-001
Compaq S710 CRT Monitor (19-inch, Carbon)	154499-002
Compaq M710 CRT Monitor (19-inch, Opal)	154499-005
Compaq S720 CRT Monitor (17-inch, Opal)	239286-xxx
Compaq S720 CRT Monitor (17-inch, Carbon/Silver)	239287-xxx
Compaq M720 CRT Monitor (17-inch, Carbon/Silver)	238994-xxx
Compaq M720 CRT Monitor (17-inch, Opal)	240759-xxx
Compaq S510 CRT Monitor (15-inch, Carbon)	168636-002
Compaq M510 CRT Monitor (15-inch, Opal)	168636-005

Multimedia

Labtec Spin-22 Speakers (carbon)	246637-001
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Optical Drives

DVD-ROM Drives

16X/40X DVD-ROM Drive (carbon)	237495-B22
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DVD-RAM Drives

4.7-GB DVD-RAM Drive (carbon)	294415-B22
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CD-ROM Drives

48X Max CD-ROM Drive (carbon)	187217-B21
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DVD-RW Drives

4.7-GB DVD-RW Drive (carbon)	246625-B22
4.7-GB DVD-R Media (5-pack)	239405-001
4.7-GB DVD-RW Media	249142-001

CD-RW Drives

16X/10X/40X CD-RW Drive	240598-B22
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Combo Drives

8X Combo DVD-ROM and CD-RW Drive (carbon)	244885-B22
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After-Market Options

Removable Storage

Floppy Drives

ZIP 100 High-Capacity Floppy Drive (carbon)	294402-B22
ZIP 100 Media 3-Pack	127591-001
ZIP 250 High-Capacity Floppy Drive (carbon)	294416-B22
ZIP 250 Media 3-Pack	217896-B21

Tape Drives

TR5 10/20-GB Tape Drive (carbon)	294243-B21
TR5 10/20-GB Media 3-Pack	125782-B21
35/70-GB AIT SCSI Tape Drive (carbon)	246626-B22

Security

USB Biometric Identification Device	240238-B21
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Memory

845 chipset (128-MB)

133-MHz SDRAM DIMM MEMORY

STANDARD MEMORY

128-MB DIMM Standard

MAXIMUM MEMORY

Intel 845 Chipset supports up to 3-GB of PC133 SDRAM. Platform can utilize 3-GB of memory when 1-GB DIMMs are available with the installation of optional SDRAM Memory Kits.

Memory		Slot		
		1	2	3
Standard	128-MB	128-MB	Empty	Empty
Current Maximum Memory	1.5-GB	512-MB	512-MB	512-MB
Maximum Memory when 1-GB available	3-GB	1-GB	1-GB	1-GB

Note: All Compaq Evo Desktop D300 contain three DIMM slots, but can only be upgraded to a maximum of 3-GB when 1-GB PC133 SDRAM are available.

Note: 1-GB PC133 SDRAM not currently offered as after-market options.

Note: It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

845 chipset (256-MB)

133-MHz SDRAM DIMM MEMORY

STANDARD MEMORY

256-MB DIMM Standard

MAXIMUM MEMORY

Intel 845 Chipset supports up to 3-GB of PC133 SDRAM. Platform can utilize 3-GB of memory when 1-GB DIMMs are available with the installation of optional SDRAM Memory Kits.

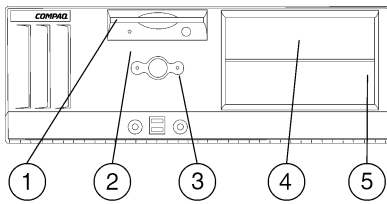
Memory		Slot		
		1	2	3
Standard	256 MB	256 MB	Empty	Empty
Current Maximum Memory	1.5-GB	512-MB	512-MB	512-MB
Maximum Memory when 1-GB available	3-GB	1-GB	1-GB	1-GB

Note: All Compaq Evo Desktop D300 contain three DIMM slots, but can only be upgraded to a maximum of 3-GB when 1-GB PC133 SDRAM are available.

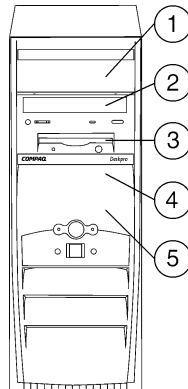
Note: 1-GB PC133 SDRAM not currently offered as after-market options.

Note: It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

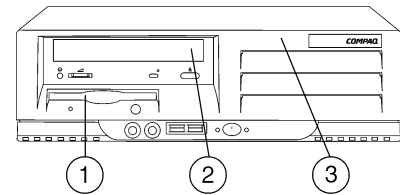
Storage



Desktop Configuration



Convertible Minitower Configuration



Small Form Factor Configuration

EVO DESKTOP D300 DRIVE SUPPORT

	Quantity Supported	Position Supported	Controller
DESKTOP			
Diskette Drives	1	1	Floppy
Tape Drives	2	4,5	IDE
CD-ROM Drives	2	4,5	IDE
DVD-ROM Drives	2	4,5	IDE
CD-RW Drives	2	4,5	IDE
SMART III Ultra ATA Hard Drives	Up to 2	2,3	Ultra ATA
SCSI Hard Drives	Up to 2	2,3	SCSI

CONVERTIBLE MINITOWER

Diskette Drives	1	3	Floppy
Tape Drives	2	1,2	IDE
CD-ROM Drives	2	1,2	IDE
DVD-ROM Drives	2	1,2	IDE
CD-RW Drives	2	1,2	IDE
SMART III Ultra ATA Hard Drives	Up to 2	4,5	Ultra ATA
SCSI Hard Drives	Up to 2	4,5	SCSI

SMALL FORM FACTOR

Diskette Drives	1	1	Floppy
Tape Drive	1	2	IDE
CD-ROM Drives	1	2	IDE
DVD-ROM Drives	1	2	IDE
SMART III Ultra ATA Hard Drives	1	3	IDE

Technical Specifications – Audio

Integrated AC '97 Audio with Internal Speaker	Card Type	Integrated
	Plug and Play	Yes
	Stereo Codec	Yes
	OPL3 FM Synthesis	Yes
	Sound Blaster Compatibility	Yes
	Ports	Microphone-in (10-Kohm Minimum) Line-in (10-Kohm Minimum) Headphone/Line-out (16-ohm Minimum)
	Sampling	7 kHz to 48 kHz
	Compression	ADPCM, ESPCM
	OS support	Windows 98 S.E. Windows 2000
	Wavetable Syntheses (software)	Yes

Technical Specifications – Communications

Integrated Intel PRO/100 VM Network Connection with WOL	Manufacturer	Intel®		
	Interface	Intel SingleDriver™ technology (10/100-Mbps support)		
	Connector	RJ-45		
	Expansion bus architecture	PCI 2.2		
	Configuration	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	
		Data interface	PCI, 32-bit bus mastering	
		I/O address	Integrated connectivity with Intel I/O Controller Hub (ICH2)-based platforms	
	OS driver support	Microsoft Windows NT 3.51 and 4.0, Microsoft Windows 95 and 98, Microsoft Windows 2000, Beta Novell® NetWare® 3.11, 3.12, and 4.1x, 5 Server Sun Solaris™, SCO UnixWare OpenDesktop and OpenServer		
	Software support	Instrumentation support for CIM/WBEM SNMP, DMI, PXE 2.0, Intel PROSet utility for installation and configuration, Alert on LAN Software Developer Kit and same code		
	Remote wakeup	Alert On LAN (tx alerting)—PME # AND WAKE signals; no cable required on 810 or 820 chipset platforms		
Boot PROM support	Yes, Intel PRO/100 Boot Agent (PXE 2.0, RPL)			
Special features	Digital adaptive equalization control, link status interrupt capability, boundary scan support, 3-port LED support (speed, link, activity), 10BASE-T auto polarity correction, diagnostic loopback mode, 1:1 transmit transformer ratio support, automatic detection of unplugged mode, remote monitoring (alerting)			
Proactive alert technology	Alert on LAN (transmit functionality only)—requires Management Console software such as HP OpenView and requires alert utilities for the management console, proxy client software, client configuration software			
F12 BIOS support	Yes			
Environmental requirements	Operating temperature	32° to 131° F (0° to 55° C)		
	Operating humidity (non-condensing)	85% at 131° F (55° C)		
	Altitude	10,000 feet (3,048 meters)		
	Non-operating temperature	-40° to 158° F (-40° to +70° C)		
	Altitude	5,000 feet (15,240 meters)		
Power	300 mW typical in active transmit mode; reduced power in unplugged mode (<50 mW); 3.3 V device			
Power management	ACPI 1.0			
Flash package	48-pin Shrink Small Outline Package (SSOP)			
Network management	PCI 2.2			
LED indicators	Three-port support (speed, link, and activity)			
Standards compliance	IEEE VLAN support (802.1A), IEEE 802.2, IEEE 802.3 and IEEE 802.3u, (100-Mbps ethernet), IEEE Intel Priority Packet (801.1p), SCO UnixWare OpenDesktop and OpenServer, PC'99			

Technical Specifications – Communications

3COM 3C920C-TX Network Connection	Manufacturer	3ComOL		
	Connector	RJ-45		
	Expansion bus architecture	PCI 2.2		
	Configuration	Network transfer rate	10BaseT (half-duplex) 10 Mbps 10BaseT (full-duplex) 20 Mbps 100BaseTX (half-duplex) 100 Mbps 100BaseTX (full-duplex) 200 Mbps	
		Data interface	PCI, 32-bit bus mastering	
		I/O address	Automatic I/O address	
		Interrupt level	Automatic IRQ setup	
	Standards compliance	IEEE 802.3 (10-Mbps Ethernet), IEEE 802.3u (100-Mbps Ethernet)		
	OS driver support	Microsoft Windows 95, Microsoft Windows 98, Microsoft Windows 2000, Microsoft Windows NT 3.5/x and 4.0,		
	Remote wakeup	Yes, WAKE signal		
	Proactive alert technology	No		
	Environmental operating requirements	Temperature	32° to 131° F (0° to 55° C)	
		Humidity (non-condensing)	10% to 90%	
	Power management	ACPI		
Network management	DMI 2.0, WfM 2.x, PCI 2.2			
Power	+3.3 V, 340 mA			
LED indicators	100-Mbps link, 10-Mbps link, activity			
Dimensions	4.7 x 2.2 inches (12.0 x 5.6 cm)			
Certifications	CE Mark, FCC Class B, VCCI Class B, CISPR 22 Class B			

Technical Specifications – Communications

Lucent V.90 56K PCI Win Modem	Data Transmission	V.90/K56flex technology speeds: 56,000 Kb/s maximum downstream data; controllerless
	Data Speeds	(upload only): 33,600; 31,200; 28,800; 26,400; 21,600; 19,200; 16,800; 14,400; 12,000; 9600; 7200; 4800; 2400; 1200; and 300 b/s
	Data Standards	ITU V.90, ITU-T, V.34, V.32 (bis), V.22bis, V.22, V.21, V.23, and Bell 212A, and Bell 103.
	Fax speeds	14400; 12000; 9600; 7200; 4800; 2400; 1200; 300 b/s
	Fax mode capabilities	Group 3 FAX: V.17, V.29, V.27ter, and V21 Channel 2., Class 1 interface, TIA/EIA-578
	Error Correction and Data Compression	ITU-T recommended V.42 error correction, V.42 error correction (LAPM and MNP), V.42bis and MNP Class 5 data compression, ITU-T V.42bis data compression
	Power Management	APM and ACPI states D0, D1, D2, and D3, Meets PCI 2.2 requirements and PC 99 requirements
	Upgradability	Software driver upgradable for future enhancements
	Video	ITU-T V.80 video ready interface
	Other	TIA/EIA 602 standard AT command set Built-in DTE interface with speeds up to 115.2 Kb/s, parallel 16550a UART-compatible interface Optional Ring wake signal
	Operating temperature	32° to 104° F/0° to 40° C
	Operating humidity	20% to 80%, non-condensing
	Operating System Driver Support	Microsoft Windows 98, 98SE, NT4.0, Windows 2000

Technical Specifications – Graphics

NVIDIA Vanta16-MB AGP Graphics Controller	Form factor	Half-size ATX
	Bus type	AGP 4X
	Memory support	16-MB SDRAM (64-bit frame buffer interface)
	Memory clock	125 MHz
	RAMDAC	250 MHz
	Internal clock	100 MHz
	Data path	64-bit
	Process	0.22 μ
	Pipelines	2 (bilinear)
	Fill rate	200 M pixels per second
	Triangle rate	8 M triangles per second
	Video overlay filter	2 x 2
	MPEG support (software)	CSC IDCT
	Color space conversion	Yes
	Scaling	Yes
	Quick draw support	Yes
	DCI and Microsoft DirectX video playback	Yes
	Microsoft DirectX support	Yes
	3-D support	Yes
	Engine acceleration	Basic video color conversion and scaling 100% hardware triangle setup engine
	Dual monitor support	With additional PCI controller only
	OS support	Microsoft Windows 98, Microsoft Windows 2000, Microsoft Windows NT 4.0, Microsoft Windows Me
	Other	Optimized for Direct3D acceleration with support for Microsoft DirectX 5.0 and 6.0 128-bit TwiN-Textel (TNT) architecture Two texture-mapped, lit pixels per clock Single pass multi-texture rendering 32-bit rendering with destination alpha 24-bit Z-buffer, 8-bit stencil buffer Anisotropic filtering (superior to trilinear MIP-mapping) High-performance, 128-bit 2-D/GUI/DirectDraw acceleration Transparent BLT, stretch BLT, points, lines, polylines, polygons, fills, patterns, arbitrary clipping and fast text rendering; pipeline optimized for multiple color depths including 8, 16, and 24 bits per pixel Video acceleration for DirectShow, MPEG-1, MPEG-2 and Intel Indeo® Fast 32-bit VGA/SVGA Triple 8-bit, 250-MHz palette DAC

Resolutions Supported	Colors	Real-Time 3-D Gouraud Shading	Refresh Rates
1920 x 1200	256, 65K, 16.7M	256, 65K	60 to 75 Hz depending on color depth
1920 x 1080	256, 65K, 16.7M	256	60 to 85 Hz depending on color depth
1600 x 1200	256, 65K, 16.7M	256	60 to 85 Hz depending on OS and color depth
1280 x 1024	256, 65K, 16.7M	256, 65K	60 to 100 Hz
1152 x 864	256, 65K, 16.7M	256, 65K	60 to 85 Hz depending on color depth
1024 x 768	256, 65K, 16.7M	256, 65K, 16.7M	60 to 85 Hz
800 x 600	256, 65K, 16.7M	256, 65K, 16.7M	60 to 85 Hz
640 x 480	256, 65K, 16.7M	256, 65K, 16.7M	60 to 85 Hz

Technical Specifications – Graphics

NVIDIA GeForce2 MX 16- and 32-MB AGP Graphics Controllers	Vertical frequency	60-85 Hz		
	Graphics controller	NVIDIA GeForce2 MX 200 and MX400		
	Bus type	AGP 4X		
	RAMDAC	Integrated 350 MHz RAMDAC		
	Memory type	SDRAM		
	Memory amount	16, 32 or 64-MB unified frame buffer and texture memory (16-MB on GeForce2 MX 200)		
	Memory speed	166 MHz		
	Data path	256-bit		
	Controller clock speed	GeForce2 MX 200—175 MHz GeForce2 MX 400—200 MHz GeForce2 32MB MX 400 w/ TV-Out—175 MHz (consumer models only) GeForce2 64MB MX 400 w/ TV-Out—175 MHz (consumer models only)		
	Maximum vertical refresh rate	85-Hz		
	Maximum pixel clock	350-MHz		
	Graphics API support	DirectX 7, DirectX 8		
	Operating systems support	Microsoft® Windows® 2000, Microsoft Windows NT 4.0, and Microsoft Windows 98		
	Buffer	96-bit (per pixel)		
	Image planes	24-bit double-buffered		
	Z-buffer	32-bit (24-bit with stencil planes)		
	Overlay	Supported		
	Stencil planes	8-bit (maximum)		
	Alpha planes	8-bit		
	External interface	Analog video output port; the video port (female, 15-pin, D-SUB connector) provides connection to an analog display		
	Resolutions Supported			
		Refresh Rate (Hz)	Max Refresh Rate (Hz)	Max Refresh Rate (Hz)
Resolution		8-bit Color	16-bit Color	32-bit Color
1920 x 1440		85, 75	85, 75	85, 75
1920 x 1200		85	85	85
1920 x 1080		85	85	85
1600 x 1200		85	85	85
1280 x 1024		85	85	85
1152 x 864		85	85	85
1024 x 768		85	85	85
800 x 600		85	85	85
640 x 480		85	85	85

Technical Specifications – Graphics

Matrox Millennium G450 Dual Head AGP and PCI Graphics Controllers	Form Factor	ATX		
	Bus type	AGP 1X, 2X, 4X: PCI Rev 2.2 bus specification		
	Standard memory	AGP: 32 MB / PCI: 16 MB		
	DAC speed	360 MHz (secondary DAC: 200 MHz)		
	Data path	64-bit DDR External/256-bit Internal		
	Internal bus width	256-bit DualBus		
	Memory interface	64-bit DDR Memory		
	Frame buffer	AGP: 32 MB / PCI: 16 MB		
	Two integrated RAMDACs	Yes		
	Engine acceleration	3 ROP bitBLT, line draw, text, color expansion, basic video color conversion and scaling, triangle setup engine		
	Other	PCI bus mastering, texture mapping support, flat and Gouraud shading, direct 3-D support, Anisotropic Filter, perspective texture, specular highlighting, wireframe, dithering, full scene anti-aliasing, vertex fog, dual texture mapping, Plug-and-Play AGP 2X and AGP 4X, 0.18-micron technology (lower heat/power consumption), high-quality DVD playback with full access to Microsoft Windows, Color Space Conversion, Quick Draw support, DCI and DirectX video playback, MS DirectDraw support		
	3D Features	Single cycle multi-texturing	Yes	
		Environment-mapped bump mapping	Yes	
		Internal rendering	32-bit	
	Source textures	Up to 32-bit		
	Maximum texture size	2048 X 2048		
	Hardware non-power-of- 2 textures	Yes		
	32-bit color output	Yes		
	32-bit independent Z-buffer	Yes		
	Stencil buffering	Yes		
	AGP texturing	Yes		
	Trilinear filtering	Yes		
	DirectX support	Yes		
	OpenGL support	Yes		
DualHead Display Features	Multi-Display Mode, DVD Max Mode, DualHead Zoom Mode, DualHead Clone Mode, Single Chip Multi-Monitor support			
Supported Modes	This list assumes setup to be DualHead multi-display running Microsoft Windows 98. If using Microsoft Windows NT 4.0 or Microsoft Windows 2000 while in multi-display, primary CRT is limited to modes supported by 2nd CRT.			
Primary CRT Color Depths	Color Depths (bpp)	Refresh Rates		
640 x 480	8, 16, 24, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz		
800 x 600	8, 16, 24, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz		
1024 x 768	8, 16, 24, 32	60 Hz, 70 Hz, 75 Hz, 85 Hz		
1152 x 864	8, 16, 24, 32	75 Hz		
1280 x 960	8, 16, 24, 32	60 Hz, 75 Hz, 85 Hz		
1280 x 1024	8, 16, 24, 32	60 Hz, 75 Hz, 85 Hz		
1600 x 1200	8, 16, 24, 32	60 Hz, 65 Hz, 70 Hz, 75 Hz (85 Hz available in single monitor configuration only)		
1800 x 1440	8, 16, 24	60 Hz, 72 Hz, 75 Hz, 85 Hz		
1856 x 1392	8, 16, 24	60 Hz, 75 Hz, 85 Hz		
1920 x 1440	8, 16, 24	60 Hz, 75 Hz, 85 Hz		
2048 x 768	8, 16	60 Hz, 75 Hz		
Secondary CRT Color Depths	Color Depths (bpp)	Refresh Rates		
640 x 480	16, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz		
800 x 600	16, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz		
1024 x 768	16, 32	60 Hz, 70 Hz, 75 Hz, 85 Hz		
1152 x 864	16, 32	75 Hz		
1280 x 960	16, 32	60 Hz, 75 Hz, 85 Hz		
1280 x 1024	16, 32	60 Hz, 75 Hz, 85 Hz		
1600 x 1200	16, 32	60 Hz, 65 Hz, 70 Hz, 75 Hz, 85 Hz		

Technical Specifications – Graphics

Matrox G200 MMS Quad Head 32-MB PCI Graphics Controller	Interface	PCI		
	Standard Memory	32MB SGRAM (8MB per port)		
	DAC Speed	250MHz		
	Data Path	128-bit Internal/64-bit External		
	Color Space Conversion	Yes		
	Scaling	Yes		
	Quick Draw Support	Yes		
	DCI & DirectX Video Playback	Yes		
	Direct3D Support	Yes		
	Engine Acceleration	3 ROP bitBLT Line Draw Text Color Expansion Basic Video Color Conversion and Scaling Triangle Setup Engine		
	Output	The Matrox G200 Quad MMS controller features two output ports, which require 2 adapter cables to connect analog or digital output displays		
		Analog Display Support	2 RGB cables support two DB-15 analog displays per cable	
		DVI (Digital Visual Interface) Display Support	DVI cable option kit provides two DVI cables for connecting two DVI compliant displays per cable	
		Display options supported	Four analog displays via two RGB cables Four DVI displays via two DVI cables Two analog displays via one RGB cable and two DVI displays via one DVI cable	
OS Support	Windows NT 4.0			
Other	PCI bus mastering Texture mapping support Flat and Gouraud shading Anisotropic Filter Perspective texture Specular highlighting Dithering Full scene anti-aliasing Vertex fog			
Refresh Rate (per display)				
Aspect Ratio	Resolution	Vertical	Horizontal	
4:3/5:4	640 x 480	60-200Hz	31-102KHz	
	800 x 600	60-200Hz	38-114KHz	
	1024 x 768	60-140Hz	48-113KHz	
	1152 x 864	60-120Hz	54-110KHz	
	1280 x 1024	60-100Hz	64-107KHz	
	1600 x 1200	60-90Hz	75-113KHz	
16:9/16:10	1800 x 1440	60-70Hz	89-104KHz	
	856 x 480	60-200Hz	30-108KHz	
	1280 x 720	60-100Hz	44-76KHz	
	1600 x 1024	60-100Hz	64-108KHz	
	1920 x 1080	60-80Hz	70-94KHz	
	1920 x 1200	60-76Hz	75-95KHz	

With DVI digital flat panel displays, the maximum display resolution is 1280 x 1024

Maximum refresh rates may not be attainable at the highest display resolutions with 24 or 32-bit color palettes

Technical Specifications – Graphics

Matrox G550 Dual DVI 32-MB AGP Graphics Controller	Form factor	Low profile (LP) board with ATX bracket attached (kit also includes a Small Form Factor (SFF) bracket)	
	Bus type	AGP 4X, AGP 2X, and AGP 1X	
	Standard memory	32-MB, high-speed DDR	
	DAC speed	360-MHz RAMDAC; secondary 230-MHz RAMDAC	
	Data path	64-bit DDR external bus to frame buffer memory/256-bit internal	
	Internal bus width	256-bit DualBus	
	Memory interface	64-bit DDR memory	
	Frame buffer	32 MB	
	Operating systems supported	Microsoft Windows 2000, Microsoft Windows 98, Microsoft Windows NT 4.0	
	Two integrated RAMDACs	Yes	
	3-D engine acceleration	<p>Matrox HeadCasting* engine, two dual-textured 3-D pixels/clock for fast 3-D game play, dual pixel pipelines with dual texturing units per pipeline, floating point 3-D setup engine with dynamically re-allocatable resources; Microsoft DirectX Environment-Mapped Bump Mapping; Vibrant Color Quality rendering; bilinear, 8-sample-per-pixel trilinear, and anisotropic filtering; Microsoft DirectX and OpenGL® alpha blending modes; Z-buffer support</p> <p><i>*Note: System recommendations for HeadCasting and DVD—450-MHz or higher computer; 128 MB RAM; 56-K or higher modem with minimum 40-K connection, microphone, and DVD-ROM; Internet Explorer 5.5 or higher, Microsoft PowerPoint 2000 or Microsoft PowerPoint XP (for Matrox Virtual Presenter)</i></p>	
	3-D features	Single cycle multi-texturing	Yes
		Environment-mapped bump mapping	Yes
	Internal rendering	32-bit	
	Source textures	Up to 32-bit	
	Maximum texture size	2048 x 2048	
	32-bit color output	Yes	
	32-bit independent Z-buffer	Yes	
	Stencil buffering	Yes	
	AGP texturing	Yes	
	Trilinear filtering	Yes	
	Microsoft DirectX support	Yes	
	OpenGL support	Yes, through Matrox	
DualHead 3-D display features	HeadCasting, Microsoft DirectX compliant, dual texturing units per pixel pipeline, two pixel pipelines, single-cycle multi-texturing, environment-mapped bump mapping, 32-bit internal rendering precision, up to 32-bit source textures, 32-bit color output, bilinear, trilinear and anisotropic 3-D filtering, 32-bit independent Z-buffer, OpenGL support		
Other 3-D features	Alpha blending, fogging, specular highlighting, environment mapping, stencil buffering, triple buffering, AGP texturing		
Other	Texture mapping support; true color RGB, flat, and Gouraud shading; Direct3-D support; anisotropic filter; perspective-correct texture mapping; specular highlighting (any color); hardware dithering (including dithering of LUT textures); sort-dependent antialiasing; vertex and table fogging; dual texture mapping; Plug-and-Play; 0.18-micron technology (lower heat/power consumption); high-quality DVD playback with DVDMax; color space conversion; QuickDraw supported DCI and Microsoft DirectX and OpenGL blend modes; Microsoft DirectDraw support; support for picture-in-picture and multiple video windows; Unique Motion Video Rendering support		
Kit contents	Matrox G550 graphics card with standard ATX bracket, DVI digital cable, VGA analog cable, Small Form Factor bracket, CD containing software drivers and documentation		
Optional software bundles (not included)	Matrox Virtual Presenter for Microsoft PowerPoint; Digimask™ System, HeadFone™ by LipSinc; The Matrox Software DVD Player; eDualHead browser enhancements (PageWrap, PageLog, and PageJump); Matrox PowerDesk		

Technical Specifications – Graphics

**Matrox G550 Dual DVI 32-MB AGP
Graphics Controller** *(continued)*

DualHead configurations	Digital flat panel + digital flat panel , VGA monitor/analog flat panel + VGA monitor/analog flat panel
DualHead 2-D display features	DualHead Multi-Display support; DualHead Browser Enhancement Suite, DualHead DVDMax, DualHead Zoom, DualHead Clone, DVDMax, DualHead MultiDesk, DualHead TV-out, DualHead Snapshot, Dual DVI support, True Multi-Display support with Microsoft Windows 2000
DualHead display technology chip specifications	Multiple independent displays with a single AGP card: digital flat panel/digital flat panel; analog flat panel (RGB monitor)/analog flat panel (RGB monitor)

Resolutions Supported	Maximum Colors Supported	Refresh Rates
640 x 480	16 million	200 Hz vertical
800 x 600	16 million	200 Hz vertical
1024 x 768	16 million	160 Hz vertical
1152 x 864	16 million	150 Hz vertical
1280 x 1024	16 million	120 Hz vertical
1600 x 1200	16 million	100 Hz vertical
1800 x 1440	16 million	90 Hz vertical
1920 x 1200	16 million	100 Hz vertical
2048 x 1536	16 million	85 Hz vertical
Secondary Resolutions Supported	Maximum Color Depths (bpp)	Refresh Rates
640 x 480	16 million	200 Hz vertical
800 x 600	16 million	200 Hz vertical
1024 x 768	16 million	160 Hz vertical
1152 x 864	16 million	150 Hz vertical
1280 x 1024	16 million	120 Hz vertical
1600 x 1200	16 million	85 Hz vertical
1920 x 1200	16 million	65 Hz vertical

Technical Specifications – Hard Drives

7200 rpm SMART III Ultra ATA/100 Hard Drives	60-GB	Capacity	60,000 MB	
		Rotational Speed	7200 rpm	
		Interface	Ultra ATA/100	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Transfer Rate Synchronous (Maximum)	100 MB/s	
		Seek Time (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8 ms (10.1 ms quiet seek)
			Full-Stroke	18 ms (21.1 ms quiet seek)
		Physical Configuration	Logical Blocks	78,165,360
	Operating Temperature	41° to 131°F/5° to 55°C		

Note: 60-GB capacity points include Quiet Idle technology, which reduces acoustic levels approximately 5 decibels, and ship worldwide.

	40-GB	Capacity	40,000 MB	
		Rotational Speed	7200 rpm	
		Interface	Ultra ATA/100	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Transfer Rate Synchronous (Maximum)	100 MB/s	
		Seek Time (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8 ms (10.1 ms quiet seek)
			Full-Stroke	18 ms (21.1 ms quiet seek)
		Physical Configuration	Logical Blocks	78,165,360
	Operating Temperature	41° to 131°F/5° to 55°C		

Note: 40-GB capacity points include Quiet Idle technology, which reduces acoustic levels approximately 5 decibels, and ship worldwide.

	20-GB	Capacity	20,000 MB	
		Rotational Speed	7200 rpm	
		Interface	Ultra ATA/100	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Transfer Rate Synchronous (Maximum)	100 MB/s	
		Seek Time (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8 ms (10.1 ms quiet seek)
			Full-Stroke	18 ms (21.1 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
	Operating Temperature	41° to 131°F/5° to 55°C		

Note: 20-GB 7200rpm drives shipping in EMEA with Quiet Seek also have Quiet Idle technology, which reduces acoustic levels by approximately 5 decibels.

Technical Specifications – Hard Drives

5400 rpm SMART III Ultra ATA/100 Hard Drives	40-GB	Capacity	40,000 MB	
		Rotational Speed	5400 rpm	
		Interface	Ultra ATA/100	
		Transfer Rate Synchronous (Maximum)	66 MB/s	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Seek Time (typical reads, including settling)	Single Track	1.5 ms (2.9 ms quiet seek)
			Average	10.5 ms (12.4 ms quiet seek)
			Full-Stroke	23 ms (23 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
	Operating Temperature	41° to 131°F/5° to 55°C		
	20-GB	Capacity	20,000 MB	
		Rotational Speed	5400 rpm	
		Interface	Ultra ATA/100	
		Transfer Rate Synchronous (Maximum)	66 MB/s	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Seek Time (typical reads, including settling)	Single Track	1.5 ms (2.9 ms quiet seek)
			Average	10.5 ms (12.4 ms quiet seek)
			Full-Stroke	23 ms (23 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
		Operating Temperature	41° to 131°F/5° to 55°C	
10,000 rpm Wide Ultra3 SCSI Hard Drives	36.4-GB	Capacity	36,400 MB	
		Rotational Speed	10,000 rpm	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Interface	Ultra3 (Ultra160) SCSI	
		Transfer Rate Synchronous (Maximum)	160 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.6 ms
			Average	4.7 ms
			Full-Stroke	12 ms
		Logical Blocks	71,132,000	
	Operating Temperature	50° to 95°F/10° to 35°C		

Technical Specifications – Input/Output Devices

Compaq Easy Access Keyboard	Dimensions (HxWxD)	18.3 x 6.3 x 1.4 in/465 x 160 x 36 mm		
	Weight	Approximately 2 lbs/0.9 kg		
Electrical	Operating Voltage	+5VDC ± 5%		
	Power Consumption	50 mA maximum (with 3 LEDs on)		
	System Interface	PS/2 mini-din connector		
	ESD	CE level 4, 15 kV air discharge		
	EMI-RFI	Conforms to FCC rules for a Class B computing device		
	PC98	Functionally compliant		
	Mechanical	Languages	30+ available	
		Keycaps	Low-profile design	
		Switch Actuation	55 g nominal peak force with tactile feedback	
		Switch Life	20 million keystrokes (using Hasco modified tester)	
Switch Type		Contamination resistant membrane		
Key Leveling Mechanism		For all double wide and greater length keys		
Cable Length		6 ft/1.8 m		
PC98-99		Mechanically compliant		
Acoustics		50 dBA maximum sound pressure level		
Environmental		Operating Temperature	50° to 122° F/10° to 50° C	
	Non-operating Temperature	–22° to 140° F/–30° to 60° C		
	Operating Humidity	10% to 90% (non condensing at ambient)		
	Non-operating Humidity	20% to 80% (non condensing at ambient)		
	Operating Shock	40 g, 6 surfaces		
	Non-operating Shock	80 g, 6 surfaces		
	Operating Vibration	2 g peak acceleration		
	Non-operating Vibration	4 g peak acceleration		

Technical Specifications – Input/Output Devices

Compaq 2-Button Scroll Mouse	Scroll Wheel	8 mm	
	Maximum Rotation Speed	30 mm/s	
	Switch Type	Light force micro-switch	
	Switch Life	1 million operations	
	Mechanical Life	Minimum 200,000 revolutions	
	Environmental	Operating Temperature	50° to 122° F/10° to 50° C
		Non-operating Temperature	–22° to 140° F/–30° to 60° C
		Operating Humidity	10% to 90% (non condensing at ambient)
		Non-operating Humidity	20% to 80% (non condensing at ambient)
		Operating Shock	40 g, 6 surfaces
		Non-operating Shock	80 g, 6 surfaces
		Operating Vibration	2 g peak acceleration
		Non-operating Vibration	4 g peak acceleration
		Electrical	Operating Voltage
	Power Consumption		15mA
	System Consumption		PS/2 mini-din connector
	ESD		CE level 4, 15 kV air discharge
	EMI-RFI		Conforms to FCC rules for a Class B computing device
	PC98		Functionally compliant
	Mechanical	Resolution	400 ± 20% DPI
		Tracking Speed	10 in/s maximum
		Acceleration	100 in/s
		Switch Actuation	85 g nominal peak force
Switch Life		1,000,000 operations (using Hasco modified tester)	
Cable Length		2 m	
PC98-99		Mechanically compliant	
Regulatory Approvals	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BCIQ, C-Tick		

Technical Specifications – Optical Storage

48X CD-ROM Drive	Interface	ATAPI IDE		
	Data buffer	16.6 Mbps		
	Data transfer rate	Sustained—150 Kbps minimum (audio)	Variable (CD)—3,000 to 7,200 Kbps	
	Disk rotation technology	CAV (Constant Angular Velocity)		
	Access time (ms)	Random: <100 ms	Full-stroke seek: <150 ms	
	Average access time	< 80 ms		
	Cache buffer (standard/maximum)	128 KB		
	Disk formats read	Multi-session Photo CD, multi-read CD-ROM, CD text, audio CD, CD-I, CD-RW, CD-R, CD-Extra, CD-ROM XA		
	Disk formats written	None		
	Disk capacity (CD)	650 MB		
	Block size	Mode 1—2,048 bytes Mode 2—2,340 / 2,336 bytes CD-DA—2,352 bytes CD-XA—2,328 bytes		
	Diameter	12 cm; 8 cm		
	Thickness	1.2 mm		
	Track pitch	1.6 μ m		
	Audio output level	Line-out—0.7 V @ 47 Kohm	Headphone—0.6 V @ 32 ohm	
	Startup time	<7 seconds (typical); < 30 seconds with multi-session		
	Operating conditions	Temperature	41° to 113° F (5° to 45° C)	
		Relative humidity	10% to 80%	
	Dimensions (HxWxD, maximum)	1.7 x 5.9 x 8.2 inches (4.3 x 15.0 x 20.8 cm)		
	Weight	2.6 pounds (1200 g)		
	Operating systems supported	Microsoft Windows 98/98SE, Microsoft Windows 2000, and Microsoft Windows NT 4.0 SP4 or later		
	MPEG playback graphics solution support	None		

Technical Specifications – Optical Storage

24X/10X/40X CD-RW Drive	Interface	ATAPI IDE		
	Media formats written	CD-R and CD-RW		
	Media capacity	650 MB		
	Write methods	Disc-at-once, track-at-once, session-at-once, fixed packet, and variable packet		
	Recording/playing time	74 minutes		
	Data transfer rates	Sustained	CD-R write—2,400 Kbps (16X) CD-RW write (1-4X media) —1,500 Kbps (4X) CD-RW write (4-10X media) —1,500 Kbps (10X) CD-RW read—1,500 Kbps (10X) Digital audio extraction (minimum) —1,500 Kbps (10X)	
		Variable	CD-ROM, CD-R read—1,500 to 6,000 Kbps (10X to 40X)	
	Data transfer modes	ATA PIO mode 4—16.7 Mbps ATA multi-word DMA mode 2—16.7 Mbps ATA UltraDMA mode 0—16.7 Mbps (mandatory and default setting) ATA UltraDMA mode 1—24 Mbps (optional); mode 2—33 Mbps (optional)		
	Media formats read	CD-audio, CD-ROM (modes 1 and 2), CD-ROM XA (mode 2, forms 1 and 2), single- or multi-session photo CD, CD-I, video CD, CD-text		
	Access times	Random	< 120 ms typical	
		Full stroke	<200 ms typical	
	Rotational speed	17X—40X CAV	8,350 RPM, constant	
		16X CLV	3,424—7,952 RPM	
		10X CLV	2,140—4,970 RPM	
		8X CLV	1,712—3,976 RPM	
		4X CLV	856—1,988 RPM	
	Start-up time	Single	<7 seconds typical	
		Multi-session	<30 seconds typical	
	Stop time	<4 seconds		
	Block size	Mode 1—2,048 / 2,352 bytes Mode 2, Form 1—2,048 / 2,328 / 2,336 / 2,340 / 2,352 bytes Mode 2, Form 2—2,328 / 2,336 / 2,340 / 2,352 bytes CD-DA—2,352 / 2,368 bytes		
Disc diameter	120 mm or 80 mm			
Track pitch	1.6 µm			
Disc loading mechanism	Half-height, tray load			
Operating conditions	Temperature	41° to 113° F (5° to 45° C) operating; -4° to 140° F		
	Humidity	10% to 80%		
Mounting orientation	Horizontal or vertical			
Dimensions	Fits in a standard 5.25-inch drive bay			
Weight	2.6 pounds (1.2 kg)			
Approvals/environmental	UL 94 and 1950, CSA, CE, FDA, FCC			
Operating systems supported	Microsoft Windows 98, Microsoft Windows NT 4.0, Microsoft Windows 2000			

Technical Specifications – Optical Storage

16X/40X DVD-ROM Drive with RAM Read	Bus	Ultra DMA 33
	Data transfer rate (1 KB = 1024 bytes)	Sustained DVD = 8.1 Mbps to 21.6 Mbps CD-ROM = 2.55 Kbps to 6.00 Kbps
	Disc rotation technology	DVD—CAV (Constant Angular Velocity) CD—CAV
	Access time (ms)	Random Full stroke seek DVD = <100 ms; CD-ROM = < 80 ms DVD = <240 ms; CD-ROM = <160 ms
	Cache buffer standard / max	512 KB
	ATAPI interface	ATAPI
	Disc formats read	DVD-RAM, DVD-ROM, DVD-video, DVD-R, DVD-RW, DVD-RAM, Photo CD/multi-session, CD-ROM, CD text, audio CD, CD-I, CD-RW, CD-R, CD-DA, video CD, CD Extra, CD-ROM XA, MPEG, MPC level
	Disc formats written	None
	Disc	Capacity DVD—650 MB DVD—4.7 GB Block size Mode 0—2,352 (bytes) Mode 1—2,352 / 2,340 / 2,336 / 2,048 (bytes) Mode 2—2,352 / 2,340 / 2,336 / 2,048 (bytes) DVD—2,048 (bytes) Diameter 12 cm, 8 cm Thickness 1.2 mm (CD-ROM) 1.2 mm (DVD) Track pitch 1.6 µm (CD-ROM) 0.74 µm (DVD)
	Audio output level	Line out Headphones 0.7± 0.1 Vrms 0.45 ± 0.2 Vrms
	Operating conditions	Temperature Humidity 41° to 113° F (5° to 45° C) 5% to 85% relative humidity
	Dimensions (HxWxD)	1.67 x 5.83 x 8.18 inches (4.23 x 14.81 x 20.75 cm)
	Weight	2.22 pounds (1 kg)
	Agency approvals / environmental	UL, CSA, TUV, FDA, FCC, CE, EMI
	OS support	Microsoft Windows 98/98SE, Microsoft Windows Me, Microsoft Windows 2000, and Microsoft Windows NT 4.0 Note: MPEG video playback is not supported on Microsoft Windows NT.
	MPEG video playback compatibility	Refer to the platform for support
	RPC2 (Regional Protection Control)	Yes
	Minimum CPU supported	Intel® Pentium® II 400 MHz or Intel Celeron™ 466 MHz
	Mounting orientation	Operates in horizontal or vertical position

Technical Specifications – Optical Storage

8X/4X/32X DVD/CD-RW Combo Drive	Orientation	Either horizontal or vertical	
	Tray load	5.25 inch half-height	
	Interface type	ATAPI	
	Dimensions—external, excluding bezel (W x H x D)	5.8 x 1.7 x 7.7 inches (146.5 x 42.1 x 196 mm)	
	Disc diameter	5 inches, 3 inches (12 cm, 8 cm)	
	Disc thickness	0.05 inch (1.2 mm)	
	Track pitch	1.6 μ m (CD), 0.74 μ m (DVD)	
	Disc center hole diameter	0.6 inch (15 mm)	
	Reference scanning velocity	1.2 m/s (CD); 3.5 m/s (DVD SL); 3.8 m/s (DVD DL)	
	Read only disc parameters	Formats and modes supported	CD-ROM—Mode 1; CD-ROM XA—Mode 2 (forms 1 and 2); CD digital audio; CD Extra; CD-I—Mode 2 (forms 1 and 2) and CD-I-Ready; Photo CD (single and multi-session); video CD; DVD (single- and double-layer); DVD-R (3.95-GB); DVD-R (4.7-GB)
		Capacity	540 MB (CD— mode 1, 12 cm); 650 MB (CD— mode 2, 12 cm); 700MB (CD-ROM—80 minutes); 180 MB (CD-ROM—8 cm); 4.7 GB (DVD-5); 8.5 GB (DVD-9); 9.4 GB (DVD-10)
		Block size	Mode 1—2,048 and 2,352 bytes; mode 2, form 1—2,048, 2,328, 2,336, 2,340 and 2,352 bytes; mode 2, form 2—2,328, 2,336, 2,340 and 2,352 bytes; CD-DA—2,352 and 2,368 bytes; DVD—2,048 bytes
	Writeable disc parameters	Disc type	CD-R and CD-RW
		Write methods	Disc at Once, Track at Once, Session at Once, Variable Packet, Fixed Packet
Format and modes supported		CD-ROM (mode 1); CD-ROM XA (mode 2, forms 1 and 2); CD digital audio, CD-I (mode 2, forms 1 and 2); video CD	
Capacity		540 MB (mode 1, 12 cm); 650 MB (mode 2, 12 cm); 700 MB (CD-ROM, 80 minutes); 180 MB (CD-ROM, 8 cm)	
Block size		Mode 1 Disc type—2,048 bytes; mode 2, form 1—2,048 and 2,352 bytes; mode 2, form 2—2,352 bytes; CD-DA—2,352 bytes	
Access times (typical reads, including settling)	Random	< 130 ms (typical)	
	Full stroke	< 240 ms (typical)	

Technical Specifications – Optical Storage

8X/4X/32X DVD/CD-RW Combo Drive (continued)	Data transfer rates	Sustained—1,200 KB/s (8X) CD-R write
		Sustained—600 KB/s (4X) CD-RW
		Sustained—1,200 KB/s (8X) Digital audio extraction (minimum) CAV)
		Variable—1,500 to 4,800 KB/s (10X to 32X) CD-ROM, CD-R read, CD-RW read
		Variable—2,705 to 10,820 KB/s (2X to 8X) DVD read
Data transfer modes		ATA PIO mode 4 (16.7 Mbps); ATA Multi-word DMA mode 2 (16.7 Mbps); ATA UltraDMA mode 0 (16.7-Mbps—default setting if UDMA supported); ATA UltraDMA mode 1 (24 Mbps, optional), mode 2 (33 Mbps, optional)
	Cache buffer	2 MB (minimum)
	Startup time (single)	< 7 seconds (typical)
	Startup time (multi-session)	< 30 seconds (typical)
	Stop time	< 4 seconds
Power		Source Four-pin, DC power receptacle
	DC power requirement	5 VDC \pm 5%—100 mV ripple p-p 12 VDC \pm 5%—200 mV ripple p-p
	DC current	5 VDC (< 1 A typical, < 1.5 A maximum) 12 VDC (< 1 A typical, < 1.5 A maximum)
	Total drive power (standby mode)	< 2.5 watt
Audio output level		0.7 Vrms (typical)
Configuration jumper block		Master, slave, and cable select modes
Data interface connector		40-pin, shrouded and keyed, flat ribbon
Environmental (all conditions non-condensing)		Temperature (operating) 41° to 113°F (5° to 45°C)
	Relative humidity (operating)	10% to 85%
	Maximum wet bulb temperature (operating)	86°F (30°C)
Certifications, requirements		MPC-3 compliant, multi-read requirements, PC'99 certified, ACA AS/NZS 3548, ANSI C63.4-1992, ATAPI Spec SFF-8020, ATA Spec X3T9.2791D, Australian Communications Authority, CB Bulletin No. 92A1, CFR 21, Part 1040, CSA C22.2 No. 950, C.I.S.P.R. Pub 22, ECMA 74, EEC/93/68, EEC/73/23, EEC/99/5, EMKO-TSE (74SEC) 207/94
Operating systems supported		Microsoft Windows 98, Microsoft Windows NT 4.0, Microsoft Windows 2000 Note: MPEG video playback is not supported on Microsoft Windows NT.
Option kit contents		8X Combo CD-RW/DVD-ROM Drive, Roxio™ EasyCD Creator, InterVideo™ WinDvd™ 2000, Dantz Retrospect Express for RW, CDR media, CD-RW media, audio cable, and installation guide

Technical Specifications – Removable Storage

1.44-MB Diskette Drive	Diskette Size	3.5 in.		
	LED Indicators (front panel)	Green		
	Read/Write Capacity per diskette (high/low density)	1.44 MB/720 KB		
	Drive Supported	One		
	Drive Height	One-third		
	Drive Rotation	300 rpm		
	Transfer Rate (high/low)	500/250 Kb/s		
	Bytes/Sector	512		
	Sectors/Track (high/low)	18/9		
	Tracks/Side (high/low)	80/80		
	Access Times	Track-to-Track (high/low)	3/6 ms	
		Average (high/low)	169/94 ms	
		Settling Time	15 ms	
Latency Average		100 ms		

Zip 250 Drive	Interface	ATAPI IDE		
	Media format supported	Zip disk		
	Media capacity	250 MB		
	Access time	29 ms (average)		
	Drive rotational speed	2,941 rpm		
	Size	Fits into a 5.25-inch bay (with bracket)		
	Data transfer rate	Maximum sustained	2.4 Mbps	
			1.4 Mbps	
			1.4 Mbps (100 MB), 2.4 MB/s (250 MB)	
			0.3 Mbps (100 MB), 2.4 MB/s (250 MB)	
Operating conditions	Temperature	50° to 125° F (10° to 51.5° C)		
	Humidity	20% to 80%		
	Compatible operating system	Microsoft Windows 98/98SE, Microsoft Windows 2000, and Microsoft Windows NT 4.0 SP4 or later		

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