THE COMPAQ DESKPRO/i FAMILY OF PERSONAL COMPUTERS
Features/Specifications

Making COMPAQ Features And Performance Easily Attainable

Compaq packages powerful features and performance, and makes them available—at competitive prices—to the whole spectrum of business users. This new family covers a wide range of processing speeds. For mainstream applications, two 386-based PCs offer a choice of 25-MHz or 33-MHz processors with 16 Kbytes of four-way set-associative cache. Users with more demanding applications can choose a COMPAQ DESKPRO/i PC with a 25-MHz 486SX processor or a 33-MHz 486DX processor. Additionally, the family will include a 66-MHz 486DX2 model when that processor becomes available in the marketplace, providing even greater power for your most challenging applications.

It's All In The Family

The COMPAQ DESKPRO/i Family establishes a new price performance standard for desktop PCs. Every COMPAQ DESKPRO/i PC comes complete with a full range of high-performance features, including:

- An integrated QVision 1024 Graphics Controller that provides dramatic acceleration for CAD and windowing environments.
- Easy, affordable processor upgrades that allow you to increase performance by simply adding a processor chip or secondary cache.
- Business audio capability.
- The right amount of storage and expandability to accommodate changing needs.
- A comprehensive set of hardware and software security features that provides the utmost protection for your valuable data.
- The uncompromising quality and exacting engineering associated with Compaq for more than a decade.

So if you've been waiting for a breakthrough to take your next step in PC computing, your wait is over. This exceptional combination of features and performance is available to you now, from Compaq—the name that gave the world a whole new way to spell quality.
MORE OF THE FEATURES YOU NEED

Built-in business audio with microphone, speaker, and special software to take advantage of the audio capabilities of Microsoft Windows 3.1

SELECT THE COMPAQ DESKPRO 610 PC that's optimum for your needs today with the assurance that your investment is protected over the long term. COMPAQ DESKPRO 610 PCs offer extraordinary flexibility in adapting to meet your increasing performance demands.

Compaq 1024 Color Monitor option

120-Megabyte Hard Drive

3 1/2-Inch 1.44-Megabyte Diskette Drive

Optional 80/120-Megabyte Tape Drive

Memory expansion sockets for 8-, 4-, 2-, and 1-Megabyte SIMMs (maximum memory configuration is 32 megabytes)

Slot for an optional 512-Kbyte VRAM Module to give you 256 colors in 1024 x 768 resolution

Socket for an optional 387 math coprocessor

486 Performance Upgrade Socket to upgrade to any of several levels of 486SX, 486DX, and 486DX2 processor performance

Three full-sized 8-/16-bit expansion slots

Slot for an optional 486 64-Kbyte Cache Module
BREAKTHROUGH PERFORMANCE NOW... AND IN THE FUTURE

Choose Your Performance

Standard COMPAQ DESKPRO/i PCs cover a broad range of 386 and 486 processor options. The COMPAQ DESKPRO 3/33i and COMPAQ DESKPRO 3/25i feature popular 386 microprocessors, operating at 33 MHz and 25 MHz, respectively. We further enhance performance of 386-based PCs by adding 16 Kbytes of four-way set-associative cache memory to service nearly all processor-to-memory requests in zero wait states.

The COMPAQ DESKPRO 4/25i is standard with a 25-MHz 486DX microprocessor, while the COMPAQ DESKPRO 4/33i comes standard with a 33-MHz 486DX microprocessor. Both products feature an integrated 32-bit processor and cache memory controller with 8 Kbytes of cache. With wider data paths and an advanced circuit design that allows concurrent processing of internal instructions, these 486 processors execute instructions much faster than a 386. For faster calculations in specialized, numeric-intensive applications, the 486DX processor also incorporates a built-in math coprocessor.

Microsoft Excel/Powerpoint Performance Test

Upgrade with Ease

With COMPAQ DESKPRO/i PCs, upgrading the processor is remarkably simple—just add or replace chips. For example, to upgrade the COMPAQ DESKPRO 3/33i or COMPAQ DESKPRO 3/25i to any of several levels of 486 performance, simply remove the hood and place the new chip in the 486 Performance Upgrade Socket. Set switches to specify the type and speed of the new processor. Replace the hood and you're back in business at a higher level of performance. To upgrade 486-based PCs, replace the existing chip with the upgrade chip, and set the appropriate switches. You can boost 486 performance even further by adding a secondary cache module with 64 Kbytes of two-way set-associative cache memory to any COMPAQ DESKPRO/i PC with a 486 processor.

Furthermore, this innovative design even provides the capability to support emerging technology, so you stay on the cutting edge of performance. For example, COMPAQ DESKPRO/i PCs support upgrades to Intel 486DX2 and OverDrive Processors, which use Intel's speed-doubling technology to process commands internally at twice the speed of the memory bus.

Cost Effective Memory Upgrades

Each COMPAQ DESKPRO/i comes standard with 4 megabytes of high-speed memory, expandable to 32 megabytes using industry-standard single inline memory modules (SIMMs). In keeping with the COMPAQ DESKPRO/i philosophy, memory expansion is quick and easy—simply add any combination of 8-, 4-, 2-, and 1-Megabyte SIMMs to the memory expansion sockets on the system board.
See The Difference
In Graphic Detail

With the introduction of the COMPAQ DESKPRO/ii Family, Compaq makes high-performance, high-resolution graphics a practical reality for business users. COMPAQ DESKPRO/ii PCs come standard with an integrated QVision 1024 Graphics Controller to provide unparalleled performance in graphics-intensive applications and windowing environments. With the QVision 1024 Controller, you'll realize an immediate performance improvement in your day-to-day work. This new controller delivers high resolution and blazing speed (up to 10 times faster than competitors) for graphics operations such as rendering of graphics and screen fonts, scrolling, jumping from page-to-page, redrawing, and moving windows.

The Picture Of Productivity

COMPAQ DESKPRO/ii PCs incorporate this new graphics system to help you work faster and more efficiently. The QVision 1024 Controller produces resolutions up to 1024 x 768, so you can display CAD drawings in incredible detail or view entire documents and spreadsheets at once. The standard 512 Kbytes of VRAM supports display of 256 simultaneous colors at 640 x 480 resolution, or 16 colors at 1024 x 768. By upgrading video memory with an additional 512-Kbyte VRAM module, you can achieve:

- 256 colors at 1024 x 768 resolution
- More than 65,000 colors at 800 x 600 and 640 x 480 resolution
- 16.7 million colors in 800 x 600 and 512 x 480 (true-color mode) resolution

A built-in 8-bit DAC (digital-to-analog converter) provides outstanding color depth with a palette of an incredible 16.7 million colors for all these resolutions.

The Speed You Need

The QVision 1024 Controller features an intelligent design that speeds response by assuming tasks normally performed by the CPU. For example, the combination of a graphics accelerator, or BitBLT engine, and optimized software driver provides lightning-quick response for typical windowing operations such as scrolling, changing window size, and using pop-up and pull-down menus. Drawing borders, menu bars, and other graphical objects is also fast thanks to a true-line-draw accelerator. In addition, the 8-bit DAC provides a hardware cursor that stays rock solid and respond instantly when you move it around the screen. The graphics subsystem is compatible with COMPAQ Advanced VGA, VEGA, EGA and CGA modes, so you can protect your existing software investment while increasing performance. For optimum performance in specific application environments, COMPAQ DESKPRO/ii PCs come standard with drivers for Microsoft Windows and OS/2 Presentation Manager.

Look At Your Choice Of Monitors

The new 14-inch COMPAQ 1024 Color Monitor provides an ideal match for your COMPAQ DESKPRO/ii PC. This new multisync monitor accepts noninterlaced input and refreshes at a rate of up to 72 MHz at 1024 x 768 resolution to virtually eliminate flicker. For maximum convenience, we put microprocessor controls at your fingertips. Push a button to change the height and width of your viewing area. Your COMPAQ 1024 Color Monitor remembers your choices and automatically adjusts to your viewing preference.

PC Labs Windows Benchmark Version 2.50 Graphics WINMARKS

<table>
<thead>
<tr>
<th>Monitor</th>
<th>Tested Configurations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Digital WDC 59c30</td>
<td>Resolution = 1024 x 768</td>
</tr>
<tr>
<td></td>
<td>Color = 16</td>
</tr>
<tr>
<td></td>
<td>Video Memory = 512 Kbyte</td>
</tr>
</tbody>
</table>

Results, expressed in WINMARKS, reflect a weighted average of what PC Labs considers to be the 12 most frequently used rendering operations. Competitors often use these controls to drive their graphic subsystems. The Diamond SpeedSTAR can be found in Gateway 2000 PCs, the WDC 59c30, in Dell PCs, and the ATI Ultra, in select AST PC Models.
In addition, a tilt-and-swivel base allows you to easily adjust the monitor for the best viewing angle. Of course, you can also choose from a wide range of other color and monochrome monitor options from Compaq.

Standard On Every COMPAQ DESKPRO/i PC

The audio circuitry, microphone, and built-in speaker that comprise this new audio subsystem is a standard feature on all COMPAQ DESKPRO/i PCs. With this feature, or external speakers are required. However, if you prefer, you can connect these or other audio devices through the four built-in jacks.

Plug in your standard COMPAQ microphone to record messages, or use Line-in to connect input devices such as a CD or tape player. You can connect Line-out to a standard recording device, or to external powered speakers.

Audio Software Included

You can use business audio in OLE (Object Linking and Embedding)-compliant Microsoft Windows 3.1 applications. To get you started, we include an audio driver for Microsoft Windows 3.1, and two Microsoft applications that allow you to control the volume of sound playback, select which input source to record from, and control the recording level of your source.

You'll Like The Sound Of This

Compaq is among the first manufacturers to enhance business computing by integrating voice and other sounds into your daily work. Now, you can use business audio to extend the capabilities of your PC, thanks to a unique combination of hardware and software jointly developed by Compaq and Microsoft Corporation. This technology adds a whole new dimension to office communications. Instead of typing a memo, simply pick up the microphone and record a message. You can then place the audio icon exactly where you want it in a document or spreadsheet, so the recipient gets your personal message. Imagine the scores of uses for this practical new tool. For example, you could add a voice message to clarify numbers in a spreadsheet, underscore an important message in a report, or introduce an article.

"Mike, here's a preview of that chapter you wanted. I can already see book sales soaring!"
VALUE-ADDED STANDARD FEATURES

The Compaq philosophy is to build in quality features that add to the versatility and usefulness of our products. Here's a summary of the well-thought-out standard COMPAQ DESKPRO/i PC features that increase the value of your investment.

Software Included

To save you time and money, hard drive models of COMPAQ DESKPRO/i PCs come standard with the following software:

- MS DOS 5.0 in five languages
- COMPAQ User Programs to aid in setup and increase performance, including Compaq Expanded Memory Manager (CEMM) and the COMPAQ Disk CACHE Utility
- EZ Help Online Library
- Audio driver for Microsoft Windows 3.1
- Volume Control and Recording Control audio applications for Microsoft Windows 3.1
- Other high-performance drivers, including graphics drivers for the QVision 1024 Controller

Windows models all have all of the above software, plus Microsoft Windows 3.1 and a COMPAQ Mouse.

Compaq Quality And Reliability

The COMPAQ DESKPRO/i Family of products continues the COMPAQ legacy of setting industry standards for quality and reliability. It's a process that begins at the clean-sheet engineering stage and continues through development, manufacturing, and testing.

Systems engineers dedicated to testing ensure that COMPAQ products are compatible with hundreds of third-party hardware products and software applications. In addition, reliability engineers put our PCs through extremes of temperature, humidity, and use to ensure that they will continue to serve you well throughout the years to come.

Service And Support In The Compaq Tradition

Our primary objective is to lead the industry in the category of customer satisfaction. In this effort, we have again emphasized Compaq quality and reliability in the COMPAQ DESKPRO/i Family of PCs, and in the service and support program that backs all COMPAQ DESKPRO/i products. Designed and engineered for easy serviceability and low-cost ownership, COMPAQ DESKPRO/i Family PCs are backed by a One Year Limited Warranty.

Other components of COMPAQ DESKPRO/i service and support include:

- Accessible technical information for resellers, service providers, and end users. Compaq technical personnel can tap into SMART, Support Management Automated Reasoning, for quick and thorough answers to your inquiries.
- Timely, reliable service with field replaceable parts and a network of Authorized COMPAQ Service Providers in locations worldwide.
## TECHNICAL SPECIFICATIONS

### Hard Drives

<table>
<thead>
<tr>
<th>Capacity Per Drive (MB)</th>
<th>540 MB</th>
<th>340 MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Supported</td>
<td>One</td>
<td>One</td>
</tr>
<tr>
<td>Height</td>
<td>Half</td>
<td>Half</td>
</tr>
<tr>
<td>Size (in)</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Drive Type(s)</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>Controller</td>
<td>IDE</td>
<td>IDE</td>
</tr>
<tr>
<td>Transfer Rate (Mbits/sec)</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Sector Interleave</td>
<td>1:1</td>
<td>1:1</td>
</tr>
</tbody>
</table>

**SEEK TIMES (TYPICAL, INCLUDING SETTLING):**
- Track-to-Track (ms) 1.5
- Average (ms) 6
- Maximum (ms) 9
- Rotational Speed (RPM) 3828

**PHYSICAL CONFIGURATION:**
- Cylinders 1806
- Heads 12
- Sectors Per Track 46
- Bytes Per Sector 512

**LOGICAL CONFIGURATION:**
- Cylinders 889
- Heads 20
- Sectors Per Track 63
- Bytes Per Sector 512

### Hard Drives continued

<table>
<thead>
<tr>
<th>Capacity Per Drive (MB)</th>
<th>483 MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Supported</td>
<td>One</td>
</tr>
<tr>
<td>Height</td>
<td>Half</td>
</tr>
<tr>
<td>Size (in)</td>
<td>3.5</td>
</tr>
<tr>
<td>Drive Type(s)</td>
<td>27</td>
</tr>
<tr>
<td>Controller</td>
<td>IDE</td>
</tr>
<tr>
<td>Transfer Rate (Mbits/sec)</td>
<td>16</td>
</tr>
<tr>
<td>Sector Interleave</td>
<td>1:1</td>
</tr>
</tbody>
</table>

**SEEK TIMES (TYPICAL, INCLUDING SETTLING):**
- Track-to-Track (ms) 10
- Average (ms) 15
- Maximum (ms) 20
- Rotational Speed (RPM) 3833

**LOGICAL CONFIGURATION:**
- Cylinders 832
- Heads 6
- Sectors Per Track 38
- Bytes Per Sector 512

### System Unit

**Dimensions (L x W x D):**
- 15.95 x 15.05 x 4.0 in
- 40.1 x 38.25 x 10.16 cm

**WEIGHT:**
- Models 210, 120, and 60: 15.65 lb (7.20 kg)
- Model 1: 11.1 lb (5.01 kg)

**INPUT REQUIREMENTS:**
- Nominal Line Voltage: 100 to 120 VAC (220 to 240 VAC outside NA)
- Line Voltage Range: 90 to 132 VAC (180 to 264 VAC outside NA)
- Line Frequency: 47 to 63 Hz
- Current (nominal): 4.8 A
- Fuse: 4.0 A

**TEMPERATURE RANGE:**
- Operating: 50° to 104° F (10° to 40° C)
- Nonoperating: -14° to 122° F (-10° to 50° C)

**RELATIVE HUMIDITY (NONCONDENSING):**
- Operating: 20% to 80%
- Nonoperating: 5% to 90%

### COMPAQ 1024 Color Monitor

<table>
<thead>
<tr>
<th>Type</th>
<th>Color Multiscanning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Display Area</td>
<td>240 x 140 mm</td>
</tr>
<tr>
<td>Dot Pitch</td>
<td>0.28 mm</td>
</tr>
</tbody>
</table>

**Factory Preset Resolutions:**
- 300 x 256 (72 Hz)
- 256 x 256 (60 Hz interfaced)
- 200 x 150 (60 Hz)
- 160 x 128 (72 Hz)
- 128 x 102 (72 Hz)
- 128 x 96 (70 Hz)
- 96 x 80 (70 Hz)
- 64 x 40 (50 Hz)
- 48 x 32 (50 Hz)

**Bandwidth:** 25 MHz

**Input Impedance:** 75 Ohms

**Horizontal Frequency:** 30 to 50 kHz

**Vertical Frequency:** 50 to 100 Hz

**Power Supply:**
- Internally 15 VAC and 135 to 264 VAC at 50 to 60 Hz
- 5 VDC regulated

**Power Rating:**
- 85 Watts

**Sync Input:**
- Sync on green, TTL Sync, Composite Sync

**Signal Cable:**
- 15 pin subminiature D

**Dimensions (W x H x L):**
- 14.6 x 13.3 x 15.2 in
- 37.2 x 34.3 x 38.6 cm

**Weight:** 28.04 lb (12.7 kg)

### Audio

**Sampling rate:** 5.11 to 48 kHz

**Data Types:**
- 8-bit linear
- 16-bit linear

**INPUT/OUTPUT CONNECTORS:**
- Microphone In: Stereo 1/8 in microphone
- Headphone Out: Stereo 1/8 in headphones
- Line In: Stereo 1/8 in microphone
- Line Out: Stereo 1/8 in headphones

**INPUT/OUTPUT IMPEDANCE:**
- Microphone In: 1 Kohm nom
- Headphone Out: 4 ohm
- Line In: 20 Kohm nom
- Line Out: 20 Kohm

**INPUT/OUTPUT VOLTS RMS:**
- Microphone In: 150 mV max
- Line In: 1.4 max
- Line Out: 4.2 max
## STANDARD MODELS AND OPTIONS

### Products

**COMPAQ DESKPRO 4/33i**
- 33 MHz 486 microprocessor; integrated cache memory controller with 8 Kbytes of cache memory; chip-upgradable architecture for 486DX/25 and 486DX/33 processors

**COMPAQ DESKPRO 4/25i**
- 25 MHz 486SX microprocessor; integrated cache memory controller with 16 Kbytes of cache memory; chip-upgradable architecture for 486SX, 486DX/25, and 486DX/33 processors

**COMPAQ DESKPRO 3/33i**
- 33 MHz 386 microprocessor; 16 Kbytes of four-way set associative cache memory; socket for optional math coprocessor; chip-upgradable architecture for 486SX, 486DX, 486DX/25, and 486DX/33 processors

**COMPAQ DESKPRO 3/25i**
- 25 MHz 386 microprocessor; 16 Kbytes of four-way set associative cache memory; socket for optional math coprocessor; chip-upgradable architecture for 486SX, 486DX, 486DX/25, and 486DX/33 processors

### Standard Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>31/2-Inch 1.2-Megabyte Diskette Drive</td>
</tr>
<tr>
<td>Model 90 (All except COMPAQ DESKPRO 486/33i)</td>
<td>31/2-Inch 1.2-Megabyte Hard Drive, MS-DOS Version 5.0, EZ Help, Online Library, COMPAQ User Programs and other utilities and drivers</td>
</tr>
<tr>
<td>Model 80 (All except COMPAQ DESKPRO 486/33i)</td>
<td>31/2-Inch 1.2-Megabyte Hard Drive, MS-DOS Version 5.0, EZ Help, Online Library, COMPAQ User Programs and other utilities and drivers</td>
</tr>
<tr>
<td>Model 120</td>
<td>31/2-Inch 1.4-Megabyte Diskette Drive, 120-Megabyte Hard Drive, MS-DOS Version 5.0, EZ Help, Online Library, COMPAQ User Programs and other utilities and drivers</td>
</tr>
<tr>
<td>Model 120 Windows (COMPAQ DESKPRO 4/33i only)</td>
<td>31/2-Inch 1.4-Megabyte Diskette Drive, 120-Megabyte Hard Drive, MS-DOS Version 6.0, EZ Help, Online Library, COMPAQ User Programs and other utilities and drivers</td>
</tr>
</tbody>
</table>

### Standard Models, continued

**Model 210 (COMPAQ DESKPRO 4/25i)(486/33i only)**
- 21/2-Inch 1.4-Megabyte Diskette Drive, MS-DOS Version 5.0, EZ Help, Online Library, COMPAQ User Programs and other utilities and drivers

### Standard Features

- **Design:** Upgradable system design
- **Memory:** Four megabytes of high-speed memory, expandable to 32 megabytes
- **Expansion:** Three 84-pin ISA slots
- **Storage:** Three drive positions
  - One third-height for a diskette drive
  - One half-height accessible for a diskette drive, or CD-ROM drive
  - One half-height 3 1/2-inch internal for a hard drive, 5 1/4-inch external to 30 megabytes
- **Graphics:** QVision Hi4 Graphics Controller with 16 colors, expandable to 256 colors; resolution up to 640 x 480; graphics acceleration; 128-color support
- **Interfaces:** Serial, parallel, pointing device (mouse), keyboard, microphone, line-in, and Head-out/Line-out
- **Software:** Microsoft Windows Audio Applications and driver, COMPAQ User Programs
  - Disk Cache Utility
  - Back-Level Memory Manager (BEMM)
  - Other COMPAQ software and drivers, including high-performance graphics drivers
- **Power Supply:** 145 Watt with manual line switching
- **Warranty:** One Year Limited Warranty
- **Security:** Asset management provision
  - Administrator password
  - Power-on password
  - Keyboard password
  - QuickLock/QidBlank
  - Network server mode
  - Diskette boot control
  - Hard drive control
  - Serial interface control
  - Parallel interface control
  - Diskette write control
  - SETUP control

### Options

- **Processor:** 64-KByte Secondary
- **Memory:** Cache Module 8-, 4-, 2-, and 1-Megabyte Single Inline Memory Modules (SIMMs)
- **Mass Storage:** 5 1/4-inch 2-Megabyte Hard Drive
- **Devices:** 510-, 310-, 210-, 110-, 80-, 34-Megabyte Hard Drives; 330/335 and 150/250-Megabyte Tape Drives; 80-120 Megabyte Tape Drive with Compression

### Software and Reference Material

- Microsoft MS-DOS Version 5.0 as Published by COMPAQ
- COMPAQ License Pack for MS-DOS Version 5.0
- Microsoft MS-DOS Version 3.31 as Published by COMPAQ
- COMPAQ License Pack for MS-DOS Version 3.1
- Microsoft MS-DOS 2.0 Standard Edition as Published by COMPAQ
- Sybase Plus Software for MS-DOS
- Sybase Plus Software for MS-DOS
- COMPAQ DESKPRO/1 Technical Reference Guide
- COMPAQ Business System Guide
- COMPAQ Business System Guide

### Supported Operating Systems From Joint Integration Partners

- Banga VINES Version 4.11
- Microsoft LAN Manager Version 2
- Microsoft Windows
- Novell NetWare v4.11
- Novell NetWare 2.2
- SCO UNIX System V 3.2
- SCO Open Desktop

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*When available.*