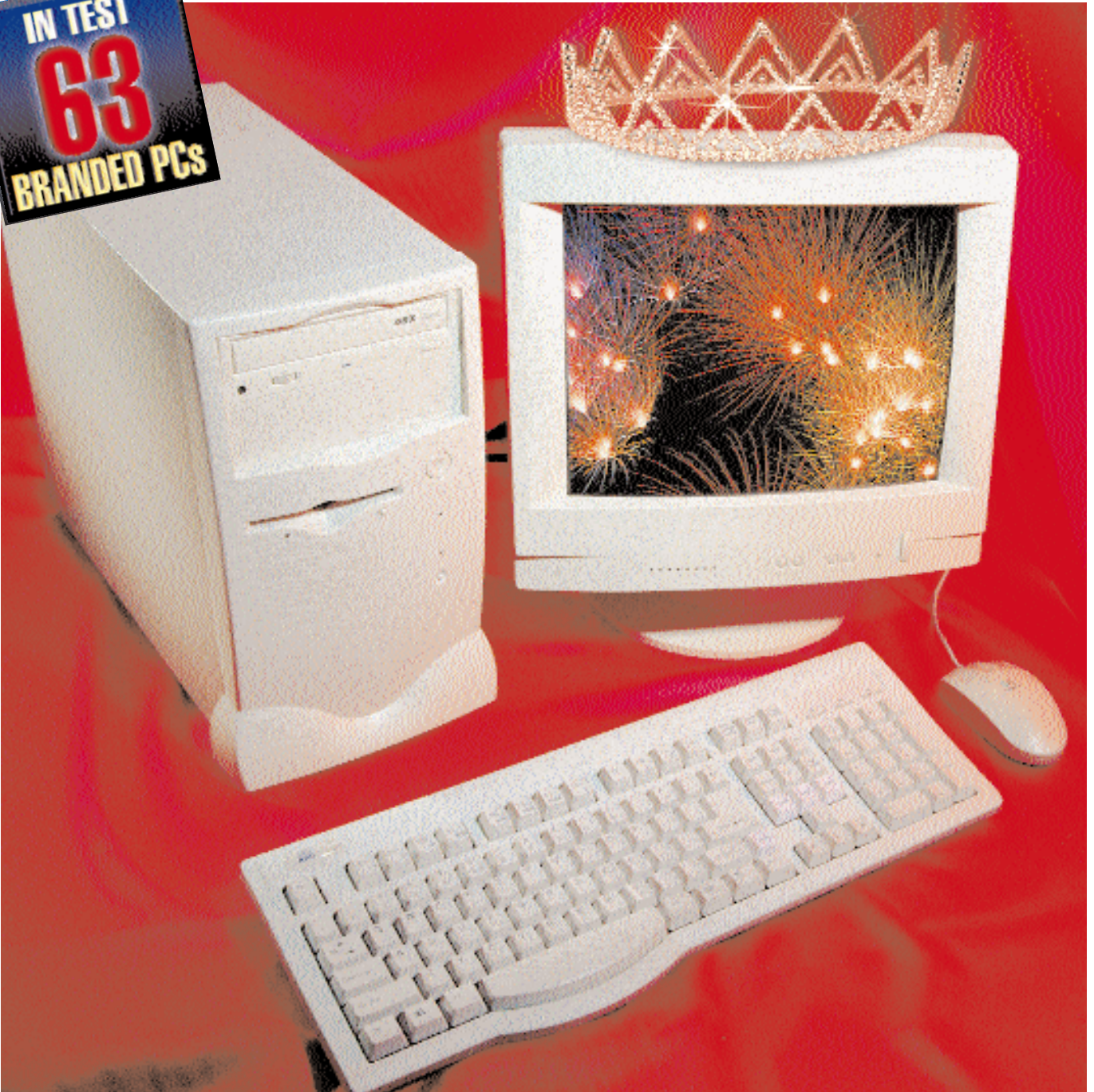


# PC

IN TEST  
**63**  
BRANDED PCs



Innumerable brands with a myriad of components has made buying a computer a tricky affair. The largest-ever test in India guides you to a dream PC

**W**ith the proliferation of newer and more advanced components graphics cards, high-performance motherboards, storage devices and processors the concept of a computer for everyone is a near reality. In this roundup of computer brands available in the Indian



[www.chip-india.com/october1999/best-](http://www.chip-india.com/october1999/best-)

market, we have tried to cover an extensive range from home computers for gaming and Web browsing, to powerful office systems capable of handling the most taxing 3D applications.

With over 38 major computer manufacturers spread over eight cities in India, the number and the variety of computers available to the prospective buyer is staggering. Thus, arriving at a calculated decision is very difficult indeed.

To cover as many brands as possible, our engineers toured Delhi, Chennai, Calcutta, Bangalore, Pune and Hyderabad to conduct the benchmarking tests locally (See CHIP On Assignment on Page 196). This not only saved time as PCs did not have to be transported to the CHIP Test Centre in Mumbai, we also managed to cover a far wider range of computers to ensure that readers benefit from the largest comparison test of branded PCs in India.

#### The PC 2000

With the launch of at least four new chipsets and processors over the past year by companies like Intel, AMD and Cyrix, the hardware industry is undergoing a definite metamorphosis. Much has changed in the construction of computers more power is available at a much lower price.

During the course of this test, some of the most significant and path-breaking developments that were noticed in the

design and manufacture of local and branded PCs are:

**Integration of peripherals:** Most computer manufacturers especially those catering to the low-end segment are using a new range of motherboards that integrate components such as graphics card and soundcard. The cost of manufacturing a computer using an integrated motherboard is lower than if one were to source separate soundcard and video card. Motherboards such as Intel's SR440BX go a step further by integrating a Riva TNT 3D accelerator with 16 MB of video RAM, plus a Creative AWE 64 sound-

card. This kind of power is sufficient for the home user and is more than capable of handling graphics-intensive applications.

New breeds of motherboards (such as those supporting the Celeron processor) also integrate a 56 Kbps fax/modem and a 10/100 Mbps LAN card. After these components are integrated on the motherboard, one just needs to provide external connections from the motherboard. This saves space and lowers the cost of manufacturing. Apart from this, almost all boards have hardware that automatically sense the condition of the critical points of the circuitry processor

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temperature, CPU fan speed and motherboard temperature. This offers greater reliability and robustness of the system; the user can anticipate problems and impending failure. Also evident is the appearance of intrusion detection features that can monitor whether the system casing has been opened, and issue an alarm if this occurs.

**New standards:** Universal Serial Bus (USB), which is already a standard, is integrated in almost all motherboards. Other standards, such as the ATA/66 interface for IDE hard disks, are making an appearance. With a theoretical data transfer rate of 66 Mops, this standard promises to bring SCSI-level performance to the home and office user at the same cost as the present ATA/33 standard. The NLX form factor systems (which look like the desktop systems; only much slimmer) also support IrDA or infra red wireless transmission. This is especially useful to the office user as it enables one to transfer data between

devices like laptops, printers and handheld computing devices that support this feature. In future motherboards, we can expect to see more exotic and powerful standards like IEEE 1394 (Firewire), which will enable a new wave of faster throughput of data.

**Ease of use:** Especially evident in the branded PCs, every effort is being made to facilitate an easier computing experience from setting up to actual usage. Setting up of the systems has been simplified all the ports and the connection points of the system are labelled and referenced in the instruction manual. For example, computers from Compaq automatically load the operating system as soon as the computer is switched on. This allows the user to configure the computer to personal preferences.

Most companies include a recovery CD with the PC, which when booted from, loads the operating system and all the necessary drivers in one go. This lessens the downtime of the systems.

Many local assemblers have jumped on the ease-of-use bandwagon by incorporating keyboards that feature one-touch launch of applications and commonly used multimedia features like the audio CD player.

**More power to multimedia:** Almost all the systems available today feature PCI soundcards capable of 64-voice polyphony (where 64 notes can be played back simultaneously). Many of them have two stereo outputs; which means that the user can connect up to four speakers to bring Dolby Digital sound to the living room. The power of the speakers have also risen manufacturers now bundle powerful high-fidelity speaker systems with most high-end systems.

In fact, systems from IBM and Hewlett-Packard give a lot of importance to the sound system, and speakers from heavyweights such as Infinity and JBL are standard. On the video front, in the high end systems, DVD-ROM drives are being sold with MPEG-

## TEST PROCESS

The computers were standardised prior to running the tests. The resolution of the screen was maintained at 800x600 with 16-bit colour, and the monitor refresh rate was 72 Hz. The latest version of DirectX 6.1 was loaded on a clean installation of Windows 98. All programs loaded by the device drivers, and programs bundled with the hardware that launches at Windows startup, were disabled. This was done by removing the programs in the StartUp group in the Programs menu and also from the registry.

In Windows 98, the System Information Tool in the Applications group was used to disable the programs that are executed directly through the Run group of the Registry. This is located in HKEY\_LOCAL\_MACHINE \SOFTWARE \Microsoft \Windows \CurrentVersion \Run. This was done to prevent other programs from interfering with the running of the benchmark and fouling with the results.

The benchmarks for testing the computers comprised two test suites

Winstonefi 99 (the Ziff-Davis benchmarking software) and CHIPmark for Windows 98. We opted for the Business Winstonefi 99 set of tests as they are based on Windows 9x.

Winstonefi 99 consists of a self-running suite of software commonly used in the office, including MS Word, MS Excel, Corel WordPerfect and

Netscape Navigator. The packages were script-driven to enable common tasks in each software to run through a series of automated actions. For example, while running the test for MS Word, a sample document was modified with respect to font and point size, cut-and-paste OLE tasks and insertion of images into documents. In Excel, data

## PRICE WISE

For evaluating the PCs in this comparison test, we adopted a different approach. Instead of grouping them according to their processing power, we separated them on the basis of price. This approach presents an interesting set of possibilities as a range of computers of different power within the same price range. This also gives a very true indication of the price-performance rating of the systems.



The categories were:  
Budget PCs: Sub-Rs 40,000 PCs, inexpensive and not very high on peripherals these are targeted at



the budget-conscious home and office user.

Mid-range PCs: Priced between Rs 40,000 and Rs 60,000, these represent most PCs sold today. Features make them ideal for applications such as gaming, home



entertainment (like video playback) and general-purpose computing.

Premium PCs: Above Rs 60,000, these computers contain the choicest of components such as a very powerful graphics cards, large and fast hard disks, and exotic peripherals like DVD-capable video, multi-point speaker

## OBJECT OF DESIRE



A test of personal computers would not be complete without the mention of the iMac, which is fast becoming popular with home and office users.

The test suites and benchmarking programs test the PCs in categories ranging from word processing to spreadsheets to gaming and have been designed such that they run in close tandem with the operating system. For this reason, the programs cannot function across

platforms, and this is why we were unable to include the iMac in the evaluation of home and business computers. Also used as part of the evaluation process were tests that simulate real-world applications, over the usual

specifications and parameters of hardware the iMac could not be evaluated against these PCs on similar grounds.

However, the iMac, powered by a 233 MHz PowerPC with a 4 GB Quantum hard disk and 64 MB of SDRAM, has a definite fan following and is perfect for most home and office users. Despite the power and the attractive candy colour, the fact that the iMac does not have a floppy disk drive makes it less

in the cells of the sample spreadsheet were modified using mathematical functions such as addition, standard deviation and averaging.

CHIPmark for Windows 98 was run in a similar fashion. Like Winstonefi 99, it runs software from the Microsoft Works suite of office software. This includes the Microsoft Works Word Processor, and Spreadsheet and Database applications, along with Intuit Quicken. These software packages tested performance in the Productivity category.

CHIPmark also tests the performance of the computer in categories such as Creativity and Entertainment. In the former, programs like Macromedia Extreme3D, MetaTools PowerGoo and Adobe PhotoDeluxe were used. In the Entertainment category, a video clip is played, along with the game SpeedBoat Attack. Here, too, these tests are completely self-running and script-driven.

All these programs were run three times, with a reboot between each run. Meanwhile, the performance of the computer in each category was logged and the average calculated. Finally, the overall performance of each computer was ascertained by giving equal weightage to the performance of the PCs in both the test suites. The CHIPmark was able to give a clear indication of the performance of a  
c o m p u t e r

# 1/2 Page Vert. AD

## Alpha Data Celeron 400



## Not enough room for expansion



Positioned as a cost-effective solution to the home and office user, this Mumbai-based computer brand uses an Intel 440ZX66-based motherboard. Forfeiting 100 MHz bus speed in favour of 66 MHz obviously lowers costs,

but compromises on the overall performance. The system looks exactly like the Pentium III version from the same company, except that the motherboard features a Socket 370 interface. This original Intel board has limited expansion capabilities, with just one free PCI and ISA slot.

The rest of the components, such as the graphics card, soundcard and CD drive, are identical with those provided with the P-III version. All the manuals for the system are included, and the drivers are pre-installed.

The manufacturers have bundled a 14-inch ViewSonic E40 monitor with

standard screen controls. Rather inadequate, considering that 15-inch monitors are the bare minimum for a multimedia computer today.

With a fairly good selection of components (though with limited expansion capabilities), this is a good choice for

**VERDICT** **B**

- Good speakers
- 2 MB video RAM
- 66 MHz bus speed

Price: Rs 40,000  
Contact: Alpha Data  
Phone: 022-5222040  
Fax: 022-5227491

## Alpha Data P-III 450



## For general-purpose gaming



Supporting an attractive cabinet, the Alpha Data P-III is a good option for gaming and general applications that require moderate power.

Though the overall performance

proved satisfactory, the i740 graphics processor, like the Celeron PC from the same manufacturer carried just 2 MB of video RAM way too low for high-intensity gaming and multimedia applications. The 440ZX-based motherboard cuts costs for the home user. Other multimedia components like the Creative AudioPCI64 and the standard Infra48 CD-ROM drive deliver good performance for most applications. The Intex speakers feature good sound quality, even at high levels. The rest of the system comprises a Perfect (yes, that's the brand) keyboard and a Logitech

First Mouse. All the drivers and manuals for the peripherals and motherboard are included with the system.

The 14-inch ViewSonic E40 is rather too low for a computer with such high specs. However, the performance was good and that makes this system a very

**VERDICT** **B+**

- Good speakers
- 2 MB video RAM
- 14-inch monitor

Price: Rs 50,000  
Contact: Alpha Data  
Phone: 022-5222040  
Fax: 022-5227491

## ARS Celeron



## A space-saving option



Based on a Celeron 400 and an SiS 5595 chipset, this computer integrates the graphics adapter directly on the motherboard. The graphics card consists of an SiS 540 onboard graphics card that shares main memory and uses it as video RAM. There are

two PCI, one ISA and one shared PCI/ISA slot, providing an average level of expansion capabilities. Though this might result in a loss in the graphics performance, the effects are not noticeable for the general-purpose home user.

The soundcard, like the ARS P-III, is the Yamaha 724 PCI card that provides very realistic and high fidelity MIDI playback using the XG wavetable. A baby AT form factor motherboard is enclosed in a very compact and attractive casing. The hard disk is a speedy Fujitsu MPD 3043AT that features ATA66 compliance, and a Samsung 48x CD-ROM drive is

also provided. A Vintron 14-inch monitor provides fairly good display.

With integration of peripherals on the motherboard, this system is ideal for the budget home and office user where price is a consideration and a reasonable level of performance is required. However, this is not a solution for the power user.

**VERDICT** **B**

- Integrated video card
- Fast ATA66 hard disk
- Low expansion capabilities

Price: Rs 33,750  
Contact: India Peripherals  
Phone: 022-6000555  
Fax: 022-6499118



## ARS P-III

## Good Audio and Expansion Capabilities



**B**ased on a P-III 450, this system carries 64 MB of memory and uses a 440ZX motherboard from Mercury. With two DIMM slots, the RAM can be expanded up to 256 MB. There

are a total of three PCI, one ISA and a single shared PCI/ISA slot. This allows for a fair amount of expandability. The 4.3 GB Seagate U4 IDE hard disk drive delivers a good level of performance for general-purpose home and office applications, and a 14-inch Vintron monitor provides good image quality. Drivers and manuals for the motherboard and the peripherals are included along with the CD containing the drivers. Multimedia components include a 48x Samsung IDE drive with a Yamaha 724 PCI sound-card. This card is especially noted for its

very good MIDI playback. Rounding up the system is an ARS Windows keyboard with a Logitech First Mouse.

With a good choice of components for processing-intensive applications, this is a good system for the home and office user alike.

**VERDICT** **B+**

- ♦ Spacious cabinet
- ♦ 14-inch monitor

Price: Rs 43,500  
Contact: India Peripherals  
Phone: 022-6000555  
Fax: 022-6499118



## Big Apple P-II 350

## Good Value for the Home User



**T**his P-II 350-based system with 64 MB of 100 MHz RAM uses an Xcel 2000 chipset-based motherboard, which on changing the jumper settings supports both the Slot 1 and Socket 370 processors. The motherboard houses

three DIMM slots and supports a maximum of 768 MB RAM and features an onboard SiS 620 graphics chip with 8 MB of shared memory, a SoundPro sound processor, an HSP-PcTel 56 Kbps modem and a Davicom network adaptor. The system also features a fast infrared port besides two USB, one PS/2, two serial, one parallel and one game port. Other components include a Seagate 8.5 GB hard drive, a Salora 15-inch monitor with on-screen display, Hitachi 32x CD-ROM drive, Aryen 180W speakers, Perfect Win95 keyboard and a Dexxa two-button mouse. The software pack includes Win-

dows 98, Pc-Cillin 98 AntiVirus, Corel WordPerfect Suite 8 and SuperVoice. Although the performance is average on the benchmarks, it offers loads of features

**VERDICT** **A-**

- ♦ Onboard sound, graphics, modem and network adaptor
- ♦ Economical price
- ♦ Large capacity hard drive
- ♦ Multiple ports
- ♦ Average performance
- ♦ CD-ROM drive takes time to read data

Price: Rs 35,950  
Contact: Big Apple Computer and Peripherals  
Phone: 040-7847194  
Fax: 040-7813278

# AD 1



## Big Apple P-III 450 Ample Storage Space



This machine is a P-III 450 MHz system with 64 MB RAM and features a similar motherboard with an onboard SiS 620 graphics processor (with 8 MB of shared memory), a SoundPro sound processor, an HSP-PcTel 56 Kbps

modem and a Davicom 10BaseT/100BaseTX network adaptor. Like the Big Apple P-II 350 again, there is only a single shared PCI/ISA slot for expansion. This system features a huge 16.8 GB (7200 rpm) IBM hard disk drive ample for all your office and home applications. Another highlight is the 5x Creative DVD-ROM drive. Available ports include a fast infrared port besides two USB, one PS/2, two serial, one parallel and one game port. Other components in the system consist of a Salora 15-inch monitor with on-screen display, Aryen 180W speakers, Perfect Win95 keyboard

and a Dexxa two-button mouse. The software pack includes Windows 98, Pc-Cillin 98 AntiVirus, Corel WordPerfect Suite 8 and SuperVoice. The performance of the machine is above average and it packs a



- ♦ Onboard sound, graphics, modem and network adaptor
  - ♦ 5x DVD drive
  - ♦ Economical price
  - ♦ Large capacity hard drive
  - ♦ Only one shared PCI/ISA slot
- Price: Rs 47,450  
Contact: Big Apple Computer and Peripherals  
Phone: 040-7847194



## Box Optima Great Performance, Great Looks



With a P-III 450 and 64 MB of RAM installed on an ASUS 440BX motherboard. With two PCI slots, one ISA slot and one shared PCI/ISA slot, the system features excellent graphics with an ATi Rage

Fury TV-tuner card, 16 MB memory and a Box 17-inch flat USB monitor. The monitor has an on-screen display with touch buttons. Another striking feature of the system is the Pioneer 6x DVD drive, which does not have the conventional tray; instead it uses a very trendy slot-in interface a front slot loading mechanism that pops out the disk when you press Eject. That's not all the system also features a Quantum Fireball CR 4.3 GB hard drive, an internal 56 Kbps Aztec modem, a three-piece Altec Lansing subwoofer system and a Box wireless keyboard.

Apart from these highlights, the loads of bundled software include Windows 98, Internet Explorer 5.0, Norton AntiVirus 5.0, Winamp and Power Player.

The system is very high performance with a good choice of components



- ♦ 17-inch flat monitor
  - ♦ 6x DVD drive
  - ♦ 16 MB TV-tuner card
  - ♦ 3-piece subwoofer sound system
- Price: Rs 65,000  
Contact: Box Infocom Technologies  
Phone: 044-8213939  
Fax: 044-8214466



## Box Ultima Specially suited to Surfing



This P-II 350 based system has only 32 MB of RAM installed on a 440ZX Intel chipset motherboard that houses two PCI slots, one ISA and one shared PCI/ISA slot. A 15-inch Box mon-

itor and a 4 MB ATi Xpert98 AGP card take care of the graphics. The machine is average in terms of performance and looks. An Acer 40x CD-ROM drive, Yamaha PCI soundcard and Samsung 60W speakers comprise the multimedia components. Bundled software includes Windows 98, Internet Explorer 5.0, Norton AntiVirus 5.0, Box Doors Desktop, and Computer optimisation software with many other shareware and freeware. An internal 56 Kbps Rockwell modem and a Box multimedia and Internet keyboard facilitate Web surfing and e-mail. All the necessary drivers are

included on the accompanying CDs and the manuals indicate processes like setting up and configuring the system.

Though the benchmarks displayed average performance and perhaps with a need for additional RAM, a home user would find this a good choice.



- ♦ Bundled software
  - ♦ One-touch multimedia/Internet keyboard
  - ♦ Low on RAM
- Price: Rs 41,000  
Contact: Box Infocom Technologies  
Phone: 044-8213939



### CCS Space P-II 400

## No USB, More than Ample Storage



All the benchmarks ran smoothly on this reasonably good system with a P-II 400 processor and 64 MB of RAM on a 440 ZX Intel chipset motherboard. The motherboard has two PCI

slots, one ISA slot and one shared PCI/ISA slot. A 14-inch Daewoo monitor and an SiS 4 MB AGP take care of the graphics capabilities while a 40x CyberDrive CD-ROM, a Yamaha ISA soundcard and Mecmar 120W speakers form the multimedia components of the PC. The CyberDrive CD-ROM is slow in reading data. Mecmar 120W speakers are small in size but provide good output. A Seagate 8.4 GB hard disk provides ample storage space.

Surprisingly, the manufacturers have not included USB ports a defi-

nite limitation that can restrict the system's upgradeability as many USB devices are now available in the market. A Samsung keyboard and a Logitech 3-button mouse complete the system. The system seems appropriate as a standard home or office system and for reasonably intensive

**VERDICT** **B+**

- ♦ Large capacity hard drive
- ♦ No USB ports

Price: Rs 47,500  
Contact: Consolidated Computer Services  
Phone: 044-8262726



### Cerebra P-III 450

## An Average Home Entertainment System



A system with average components, the machine features a P-III 450 processor and 64 MB RAM installed on a 440ZX Intel chipset motherboard. Two PCI slots, one ISA slot and one shared PCI/ISA slot provide room

for installation of additional cards. A 15-inch Acer monitor complements the 8 MB SiS AGP card, both of which help deliver graphics performance that is quite impressive.

Sound output is also above average with a Creative Ensoniq PCI soundcard and Creative SBS 20 speakers. Other components include a Seagate U4 4.3 GB hard drive, a Creative 48x CD-ROM drive, a Cerebra keyboard and a Microsoft OEM mouse. Software bundled with the system is Windows 98 OEM pack with the media included. There is also a CD included that carries

the drivers for the motherboard and the other peripherals in the system.

With a powerful processor and a decent amount of RAM, this is a good system for the medium- to high-end home and office user, who requires a high amount of processing power for

**VERDICT** **B+**

- ♦ 8 MB SiS graphics
- ♦ Good multimedia performance
- ♦ No USB ports

Price: Rs 50,000  
Contact: Cerebra Integrated Technologies  
Phone: 080-3323054  
Fax: 080-3327313

# AD 2





## Compaq Presario 4010

## Excellent Surround Audio



This home computer appears to be tailor-made for the Internet and packs plenty of features for a machine of its size. The modular packaging of this machine is a notable feature. Setting it up is effortless, with Windows

98 installing itself when the computer is started up the first time. The hardware is automatically configured with all the necessary drivers loaded, and can be used right away.

Additional buttons on the keyboard allow the user to launch Web Browser, e-mail client, audio CD controls and other applications. The sound subsystem, with an ESS Solo-1, Aureal A3D support and the powered JBL Pro speakers, is very impressive. Internet support is through a 56 Kbps Diamond Supra Express internal modem. The layout of the components is well-planned and there is

effective circulation of air. The sound and the graphics card are integrated on to the motherboard. An absence of AGP slot means that you cannot upgrade your graphics card.

With a very attractive price and extreme ease of set-up, this is a very good choice for the price-conscious home

- ♦ Simple to set up and use
- ♦ Very affordable and compact
- ♦ No AGP Slot

Price: Rs 47,141  
Contact: AVI Electronics  
Phone: 022-6460296  
Fax: 022-6460347



## Compaq Presario 4016

## Perfect for Home Cinema and Games



One of the most multimedia-rich computers available, the Compaq Presario 4016 houses a very powerful set of components. A 6x DVD drive is standard, along with a 17-inch monitor that delivers crisp picture quality, an ATi Rage

Pro 3D graphics accelerator with 8 MB integrated video RAM and a Diamond Supra Express PCI 56 K modem. The multimedia keyboard allows you to launch commonly used Internet-related programs such as your browser and e-mail client, apart from the standard audio CD controls.

All the procedures for setting up the machine are indicated on the accompanying user manual. The sound subsystem, which consists of a Yamaha XG onboard soundcard with Aureal A3D support, is very impressive. This, together with the JBL Pro-powered speakers, deliver

very impressive audioperformance. The A3D feature generates a virtual sound field, creating the illusion of sound coming from all directions, using just two speakers.

The feature-rich and powerful Presario 4016 is an excellent choice whose price

- ♦ DVD drive
- ♦ Fast graphics, PCI 56K modem
- ♦ Limited expansion possibilities
- ♦ Rather expensive

Price: Rs 86,852  
Contact: AVI Electronics  
Phone: 022-6460296  
Fax: 022-6460347



## Datamini Festiva E-FX

## Great for Graphics, needs a Bigger Monitor



This powerful offering in the Festiva series of Datamini computers features a P-III 500 MHz with 64 MB RAM and an i740 graphics accelerator. Interestingly, the motherboard features both a Slot 1 and a Socket 370 interface.

The soundcard and the modem are integrated on the board itself. A special connecting plate is fixed on the lowest slot, which links the phone line sockets to the rest of the board. Here too, a speedy Maxtor 4.3 GB hard disk is used, making this system ideal for data-intensive tasks such as multimedia and database management.

Like the Festiva FS, this system is extremely limited on expansion capabilities only two free PCI slots. The modem connector occupies the shared PCI/ISA slot. The drivers and instruction manuals are supplied with the system. A

14-inch monitor and a one-touch multimedia keyboard are supplied with this model, along with a Logitech three-button mouse. The machine comes with a good selection of hardware and is ideally suited to the power user. A 15-inch monitor would have complemented this

- ♦ Integrated 56K PCI modem
- ♦ Support for both Slot 1 and Socket 7
- ♦ 14-inch monitor
- ♦ Very limited expansion capabilities

Price: Rs 51,999  
Contact: GES Technologies



### Datamini Festiva FS

## Good Performance, Dated Motherboard



This Celeron-based computer offers a good combination of multimedia and Internet capabilities for both the home and office user. It features a rather old 440LX/EX-based mother-

board, with a bus speed of only 66 MHz and 32 MB SDRAM of the same speed. This system comes with a 4.3 GB Fujitsu hard disk that features the new ATA66 interface, but the motherboard is based upon the usual ATA33 standard. This is rather unfortunate, as a motherboard that features the ATA66 standard would have perfectly complemented the hard disk. A Creative Vibra 16XV sound chip is integrated on to the motherboard and a PCI 56 K modem is provided with the system.

Rounding off the system is a 40x

Mitsumi CD-ROM drive and a 14-inch Datamini monitor.

With an ease of use and a set of components that are suited to the home user, this is a good choice for non-demanding applications like Web brows-

**VERDICT** **A-**

- ♦ Integrated 56 K modem
- ♦ Fast ATA66-compliant hard disk
- ♦ 32 MB RAM
- ♦ No 100 MHz support

Price: Rs 34,320  
Contact: GES Technologies  
Phone: 022-8290296  
Fax: 022-8290145



### Datas Celeron 400

## A Good Bargain



This system with a Celeron 400 MHz processor and 64 MB of RAM uses a 440LX Intel chipset motherboard with an integrated Creative PCI 128 sound chip. Three PCI slots and one ISA slot provide ample

room for expansion for most applications. The PC employs a 4.3 GB Seagate Medalist hard disk and an SiS 6326 graphics accelerator with 4 MB of video RAM, and a composite and S-video TV-out. The performance of the Acer 50x CD-ROM drive is quite satisfactory.

Other components of the system include a 14-inch Viewsonic monitor, GL-650 300W speakers, a Samsung keyboard and a Logitech 3-button mouse. The system performance was quite average on the tests. All the driv-

ers for the motherboard and the peripheral components are included on the accompanying CD. The build quality of the computer is very sturdy.

With a very affordable price tag this system is suitable for applications that do not require excessive amount of pro-

**VERDICT** **A-**

- ♦ Onboard Creative PCI128 sound-card
- ♦ Economical price
- ♦ No USB ports
- ♦ Average performance

Price: Rs 33,500  
Contact: Kunhar Peripherals  
Phone: 020-603880

# AD 3



Dats P-III 450

## Good Speakers, TV Support



A standard P-III system with 64 MB of RAM, this machine has a 440ZX Intel chipset motherboard, which provides three PCI slots and one shared PCI/ISA slot for expansion. Two USB ports are also provided. The cabi-

net is quite spacious and has ample space for installation of extra drives. An SiS AGP card with 4 MB video memory and a 14-inch Viewsonic monitor are responsible for graphics.

The AGP card has two TV-out ports. The multimedia performance is commendable, thanks to the Acer 50x CD-ROM drive, a Yamaha PCI soundcard and GL-650 300W speakers. The necessary drivers for the system are included on the accompanying CD and the manual explains the system's configuration and other details.

The system still relies on the Seagate

Medalist 4.3 GB hard disk for storage, which has been phased out in favour of the U4 models. A Samsung keyboard and a Logitech 3-button mouse complete the system. The performance of the machine was quite average and it is suited to most business and home applications that are not very 3D-intensive.

**VERDICT** **B+**

- Spacious cabinet
- Average performance
- 14-inch monitor

Price: Rs 42,900  
Contact: Kunhar Peripherals  
Phone: 020-603880  
Fax: 020-603250



Green Visin P-III

## Excellent Value for Money



Featuring a P-III 450 and 64 MB of RAM, this system is constructed almost completely using original Intel components, and some of the best available. The motherboard is an

SE440BX board with very good expansion capabilities three PCI and two ISA slots. The graphics is handled by an Intel i740 featuring 8 MB of Video RAM providing very good video playback. Especially impressive are the Creative 5x DVD drive and the Dxr2 card, which together give an impeccable DVD playback. Microsoft Elite ergonomic keyboard and a Microsoft Intellimouse with the scroll button have been provided with the computer. The monitor is an LG Studioworks 520Si that provides very sharp picture quali-

ty at the resolution of 800x600 and 75 Hz. The 4.3 GB Seagate Medialist IDE hard disk drive is suited to general-purpose home and office applications.

With a very good selection of components and impressive overall performance, this is a good choice for the power home user and the avid gamer.

**VERDICT** **A-**

- Good expansion possibilities
- Excellent video playback

Price: Rs 45,600  
Contact: Green Visin  
Phone: 011-6967547  
Fax: 011-6864633



Guru P-II 350

## Much Too Expensive for the Performance



Designed for basic office applications, this P-II 350 machine has only 32 MB RAM and does not feature a soundcard or speakers as standard components. The PC's Intel SE440BX2 motherboard has three PCI

slots, one ISA slot and one shared PCI/ISA slot. The graphics performance is quite low due to a S3 Trio PCI graphics card with 2 MB of video memory and a 14-inch Samsung 45Bn monitor.

The PC has a Seagate Medalist 4.3 GB hard disk, while other components in the system include a Samsung 40x CD-ROM, a TVS Gold keyboard and a Microsoft OEM mouse. Since the machine is targeted at office users, a WinBond network adaptor is a standard component of the system. Windows 98 OEM pack is the bundled software. Drivers for the system are included on the

accompanying CD along with the operation manual.

With a graphics card that is below par in 3D performance, this system is overly priced for its category. However, the inclusion of a network card makes this a viable choice as an office workstation for general-purpose office computing.

**VERDICT** **B**

- Spacious cabinet
- No soundcard and speakers
- 14-inch monitor

Price: Rs 46,700  
Contact: Leon Computers  
Phone: 020-5538271  
Fax: 020-5533317



### HCL Beanstalk

## Fits into Tight Corners, Average Performer



**A**imed at the home user, the HCL Beanstalk is based upon a Celeron 400 with 32 MB of RAM and an Intel 440LX motherboard. With a 15-inch Proview monitor and attached

speakers, the system is ideal for users who have cramped desks. Also bundled with the system is a Microsoft Elite ergonomic keyboard that facilitates very comfortable typing (though this does tend to take a while to get used to). A Microsoft Intellimouse with a scroll button is also provided. A 4 MB SiS 6326 graphics card provides below-average performance for 3D graphics but is sufficient for general-purpose home usage. Completing the configuration is a 4.3 GB hard disk, a 40x Philips CD-ROM drive, a hands-free microphone and a PCI

soundcard.

This is not a very powerful computer and it did not do very well on the benchmark tests, but is suited to the home user who needs a solution for daily computing needs like working with office suites and other non-demanding home

**VERDICT** **B-**

- ♦ Microsoft Elite ergonomic keyboard
- ♦ Economic pricing
- ♦ Low-end 3D graphics

Price: Rs 43,340  
 Contact: HCL Infosystems  
 Phone: 011-6421308  
 Fax: 011-6212825



### HCL Beanstalk Ultima

## Great Design, Impressive Components



**I**ncorporating a very impressive set of components, the Beanstalk Ultima stands out as a well-designed home system. Consisting of a 5x DVD drive, a P-III 450, 64 MB of RAM and a Microsoft gaming pad, this system has good enter-

tainment and gaming capabilities. One of the most distinct features is the Typhoon speakers that are nearly as large as the 17-inch Santron 7Ei monitor sold with the system. The Dxr2 card, along with the Creative 5x DVD drive delivers high quality video playback and the video output ports on the system enable connectivity to an external video display unit. However, one downside to this otherwise impressive system is the Trident 9750 AGP card that delivers below-average 3D graphics. A better graphics card would have made this system one of the best systems for home entertainment. Also included is a

ProLink USB video conferencing camera and finally there is a 56K internal PCI modem.

With a good monitor and very good DVD video playback, this system is the ideal choice for a home theatre system, but falls short of the good performance

**VERDICT** **A-**

- ♦ Microsoft Elite ergonomic keyboard
- ♦ 17-inch monitor
- ♦ Excellent DVD playback
- ♦ Video conferencing capability
- ♦ Low-end 3D graphics

Price: Rs 99,950  
 Contact: HCL Infosystems  
 Phone: 011-6421308  
 Fax: 011-6212825

# AD 4



## HCL Busybee 2000

## Ideal for a Busy Office User



One of the few computers that featured a P-II 400, this computer is almost identical in design to the Celeron-based Beanstalk. However, with above average performance, this system is targeted at the office user. The

PC offers 32 MB RAM, a 4.3 GB hard disk and an AGP 3D accelerator with 4 MB of Video RAM. A 40x Philips CD-ROM drive and a PCI soundcard are also provided.

The speakers are integrated with the 15-inch Proview monitor and the sound quality is fairly good. A desktop microphone is also provided with the system. The drivers for the peripheral components are included with the system in the accompanying CD.

Like with the Beanstalk, this PC too comes with a Microsoft scroll button Intellimouse. Completing the hardware

in the system is a 4.3 GB Seagate IDE hard disk. The software included with the system includes Windows 98 pre-installed along with the media and Norton AntiVirus.

With a decent selection of hardware for the office user where there is no need for an overly powerful computer, the

**VERDICT** **B-**

- ♦ Microsoft Elite ergonomic keyboard
- ♦ Economic pricing
- ♦ Low-end 3D graphics

Price: Rs 45,890  
Contact: HCL Infosystems  
Phone: 011-6421308  
Fax: 011-6212825



## Hewlett-Packard Pavilion 4509

## Compact Cabinet, Integrated Peripherals



Designed for the budget-conscious buyer, the Pavilion 4509 integrates a very good choice of components and usability features for the home user. The casing is very compact, thanks to the manufacturers

attempts to utilise space within the cabinet. But although this results in a surprisingly small footprint, you will find it difficult to access the components inside. Based upon an AMD K6-2 450 MHz processor, the performance of this computer is decent for general-purpose home applications including Web surfing and office applications.

Sound and 3D graphics are integrated on to the SiS motherboard with a SiS 530 graphics card and a Riptide PCI soundcard. The pair of Polk Audio speakers (attached to the monitor) is impressive. The keyboard features

numerous additional keys to facilitate quick launch of applications like the Web browser, e-mail client as well as one-touch launch of commonly used applications.

Attractive price and good functionality make this system a very good choice

**VERDICT** **A-**

- ♦ Impressive keyboard
- ♦ Small footprint
- ♦ Very cluttered interior
- ♦ Low on math-intensive applications

Price: Rs 51,600  
Contact: Sam7  
Phone: 022-6301386  
Fax: 022-6301385  
E-mail: sampathi@vsnl.com



## Hewlett-Packard Pavilion 8509

## Innovative Design, Impressive Performance



The first aspect that strikes you about the P-III 450-based Pavilion 8509 is the sleek and well designed cabinet. Like all HP machines, the complete specifications are listed on the front of the cabinet. A recessed compartment on the top

of the cabinet can be used to store CDs and is protected by a lid. The serial and USB ports (also protected by a plastic flap) can be accessed from the front of the cabinet. A very good choice of components such as Asus P2B-VT motherboard that integrates a Riva TNT with 8 MB of SGRAM, which is responsible for the machine's very good performance in gaming and graphics applications. Apart from the 8.4 GB Seagate U4 hard disk and 64 MB of RAM, the Pavilion 8509 houses a 32x LG CD-ROM drive and Polk Audio speakers that are integrated with the

monitor. Internet connectivity is facilitated by a 56 Kbps Rockwell internal PCI modem. This computer is one of the best choices for the home user who needs high performance at an attractive price.

**VERDICT** **A+**

- ♦ Fast 3D graphics
- ♦ Well-designed cabinet
- ♦ Very accessible ports
- ♦ Cramped layout of internal components

Price: Rs 72,250  
Contact: Sam7  
Phone: 022-6301386  
Fax: 022-6301385



## Hewlett-Packard Pavilion 8515

### Cutting-edge Technology & Performance



**T**op-of-the-line in its range of home computer systems, the Hewlett-Packard Pavilion 8515 features some of the most cutting-edge technologies available. Immediately apparent is

the very sleek 15-inch LCD TFT screen that also places this computer in a different league. It features OSD control, integrated speakers and is capable of a resolution of 1024x768 at 85Hz. Based upon a P-III 500 with 128 MB of SDRAM and a 6x IG DVD drive, this is a very serious multimedia machine. With a casing nearly identical to the Pavilion 8509 this one has an integrated Riva TNT and Rip-tide PCI soundcard, the graphics capabilities of this system are very impressive. The keyboard like the one provided with the 8509 series features one-touch launch

of applications with control of the DVD drive for audio and video applications.

With high-end multimedia, plenty of RAM and a powerful processor, this is the best system available for high-powered

**VERDICT** **A+**

- ♦ Very sharp flat panel LCD
- ♦ Powerful processor
- ♦ Plenty of RAM
- ♦ Very expensive

Price: Rs 1,27,750  
 Contact: Sam7  
 Phone: 022-6301386  
 Fax: 022-6301385  
 E-mail: sampathi@vsnl.com



## IBM Aptiva E 240

### Excellent Value, Great Sounding System



**O**ne of the most feature-rich machines in this roundup, the Aptiva 240 integrates an impressive set of components and peripherals. Based on a K6-2 350 MHz processor with 64 MB SDRAM, this reasonably fast machine

works out-of-the-box, which means that nothing needs to be configured after unpacking and plugging in the system. The build quality is very sturdy and the system unit is rather compact. Sound is provided by a very capable set of passive Infinity speakers and an ESS Solo-1 onboard card. These speakers are reasonably powerful, and sound is reproduced well. An ATi Rage Turbo graphics accelerator with 8 MB RAM ensures that the Aptiva copes well with multimedia applications.

The keyboard, which features a wrist support, enables one-touch launch of

applications like the Web browser, spreadsheet and audio CD control. Completing the peripheral setup is an internal PCI US Robotics 56 K modem.

The major advantages of this system are the ease of set-up and use. With its competitive price, this is one of the best systems for the home user interested in

**VERDICT** **A-**

- ♦ Very affordable and compact
- ♦ Simple to set up and use
- ♦ No configuration information in manual

Price: Rs 53,640  
 Contact: Compunics Etcetera  
 Phone: 022-6492218

# AD 5



## Indocon Endura 4500

## Low Memory with Average Components



This P-III 450-based system comes with a stingy 32 MB of 100 MHz RAM, which is definitely a bottleneck. At least 64 MB of RAM would have been appropriate for a P-III based system. The motherboard used is a

VIA chipset EX98 and has three PCI, one ISA and one shared PCI/ISA slot, allowing ample room for expansion. The graphics performance is below average due to a 14-inch Indocon monitor and SiS 6215 PCI 1-MB video memory. It features the same cabinet as the Celeron-based model Trendy from the same company. The machine delivers very average performance, and has a price tag that is not too heavy on the pocket. The soundcard is a low-end ISA Yamaha YMF 719 chipset, which is notorious for being very CPU-intensive.

With an imbalance in the choice of RAM and the video card, this system could have been much higher in performance. Also, for a P-III 450-based system, the manufacturers could have facilitated Internet capabilities by providing a modem. Also with a low-end SiS

- Trendy looks
- Only 32 MB RAM
- Low graphics performance
- 14-inch Monitor

Price: Rs 38,650  
 Contact: Indocon Micro Engineers  
 Phone: 011-6812614  
 Fax: 011-6477948  
 E-mail: wonderi@ndf.vsnl.net.in



## Indocon Trendy 366

## Affordable, but Mediocre System



A Celeron 366 MHz-based system has a very economical price tag and trendy looks are the most interesting features of this machine. With 32 MB of RAM installed on a VIA chipset motherboard, the Trendy is appropriate

only for low-end home and office users who work on basic office applications such as text editors and spreadsheets, and do not require intensive graphics or sound capabilities. The motherboard features three PCI and two ISA slots.

Not much can be said about the graphics capabilities of the machine probably due to a very mediocre SiS 6215 PCI graphics card with 1 MB of video memory. A 14-inch Indocon monitor is bundled along with the system. Apart from the relevant drivers for sound, graphics and motherboard, no software is included with the system. A

Seagate Medalist 4.3 GB hard drive and a Dexxa two-button mouse are standard components along with an Indocon keyboard and 160W speakers. With a below-average level of performance, this system is suited only to non-taxing home applications but one of the few plus

- Economical price
- Good looks
- Low performance and graphics
- 14-inch monitor

Price: Rs 29,750  
 Contact: Indocon Micro Engineers  
 Phone: 011-6812614  
 Fax: 011-6477948  
 E-mail: wonderi@ndf.vsnl.net.in



## Lampo P-III 450

## Eye-catching Looks, Great Performance



The system features a P-III 450 processor with 64 MB of RAM. An Intel SR440BX motherboard with an integrated nVidia Riva TNT graphics chip having 16 MB memory and an inte-

grated Creative64 sound chip forms the base of the system. The motherboard has three PCI and one shared PCI/ISA slot for expansion. Bundled with a Viewsonic 15-inch monitor (with on-screen display controls), the system provides excellent graphics capabilities that would suit home entertainment applications.

Other components of the machine include a 4.3 GB Seagate U4 hard drive, a Samsung 40x CD drive, Creative SBS 20 speakers, a Logitech 3-button mouse and an Acer Hotkey keyboard. The keyboard is accompanied by software that converts the function keys to multimedia

and Internet hotkeys. One touch access is also provided for the MS-DOS prompt, My Documents folder, Game and sleep mode. Windows 98 OEM pack is bundled with the machine.

With its top-notch graphics and choice of components, this is a very good home entertainment and gaming

- USB-enabled system
- Excellent 3D graphics
- Expensive

Price: Rs 57,000  
 Contact: Lampo Computers  
 Phone: 080-3440808  
 Fax: 080-3461040



Logic 2000 P-III 450

## Good Processor, Imbalanced Components



Limiting the overall performance of this P-III 450 MHz-based system is the 32 MB RAM, which is no match for the P-III 450 processor. The i440BX motherboard supports both Slot

1 and Socket 370 processors and has three PCI slots and one shared PCI/ISA slot. The ATX cabinet has a cooling system and is spacious enough to accommodate extra drives. The graphics capabilities are taken care of by an SiS accelerator 4 MB AGP card and a Samsung 45Bn 14-inch monitor. The multimedia sub-system comprises an Acer 40x CD-ROM drive, a Crystal ISA soundcard and Typhoon 220W speakers. An external Acer 56 Kbps modem provides good Internet connectivity. Apart from these, an Acer keyboard

and a Logitech 3-button mouse are also provided.

But for the low RAM, the speedy modem makes this system ideally suit-

**VERDICT** **B**

- ♦ Spacious cabinet
- ♦ Supports both Slot 1 and Socket 370 processors
- ♦ Average performance
- ♦ Low on RAM
- ♦ 14-inch monitor

Price: Rs 49,000  
 Contact: Logitech Systems  
 Phone: 020-4472268  
 Fax: 020-4477996



Matrix India PC-L

## Packs Punch for its Size



Supporting a very small form factor with its ALX motherboard, this computer (monitor extra) is ideal for the user who is short on space and still needs a powerful computer. It integrates a 32x Creative CD-ROM drive with an on-board

ESS Solo-1 processor and an integrated ATI Rage Pro with 8 MB Video RAM. Other ports like S-video and composite video are also provided. The system supports IrDA. Unlike other systems that feature the connectors on the motherboard without the actual infrared sensor, this computer is completely IrDA-ready.

The audio ports line-in, line-out, headphones and the USB port are situated on the front of the system under a flap. The mouse provided is the Logitech three-button First Mouse. Unfortunately, the system comes without a monitor, which has to be purchased separately.

The space-saving design of the system enables you to move it easily to a different location or hook it up to a television set.

With good overall performance and the option to connect the system to a television, this is a portable solution to the

**VERDICT** **B**

- ♦ Space saving design
- ♦ Integrated 3D acceleration
- ♦ Integrated sound
- ♦ Infrared support
- Slight problem with the cabinet mounting

Price: Rs 40,000 (monitor not included)  
 Contact: Matrix Computers  
 Phone: 022-3084511

# AD 6





### Matrix India PC-D

## Great Combination of the Best Components



**P**acked to the gills with a host of powerful peripherals, this PC is one of the sturdiest available for home entertainment. Cutting-edge components including the ASUS P3B-F motherboard and the ASUS Riva TNT2

Ultra form the heart of the system. The system comes with 128 MB SDRAM, along with a 17-inch Samsung Samtron 75E monitor and a Creative Encore 5x DVD drive. A Dxr2 card is not bundled with the system; all MPEG-2 decoding is done through the TNT2 card itself. Software for playing DVDs is supplied and the video quality is very high, with no signs of framing. The sound system is handled by the Creative PCI128 soundcard with front and rear stereo output and this is perfectly complemented by the Cambridge Four-PointSurround speaker system. Also included is the elegant Microsoft Elite

keyboard.

The construction of the system is sturdy and the interior is very spacious, with the components occupying minimal space. The performance of the system was one of the highest in its range, making this a very good choice for high-end

- ASUS P3B-F motherboard
- Very fast Riva TNT2 ultra card
- Four-channel sound system
- 17-inch monitor
- Rather expensive

Price: Rs 70,000  
Contact: Matrix Computers  
Phone: 022-3084511  
Fax: 022-3011288



### Metrotek Talisman 1

## For Low Intensity Home Use



**T**his Celeron 400-based PC with only 32 MB RAM is an average machine in terms of performance, looks and features. Featuring a rather outdated 440LX motherboard with three PCI and one ISA slot, the best

component in the system is probably the 15-inch LG 520Si monitor. A 4 MB SiS graphics card is responsible for the graphics. The multimedia sub-system comprises a 40x CyberDrive CD-ROM drive (which takes a while to read data), a Crystal ISA soundcard and 160W Techno speakers. Windows 98 OEM pack and drivers for sound and graphics comprise the bundled software. A Seagate Medalist 4.3 GB hard drive, a KeyPower keyboard and a Logitech 3-button mouse make up the rest of the system. Although the price tag is quite wallet-friendly, the system

loses out in comparison to the performance of other machines because of low RAM.

A good choice for the average home user, this system is not suited to intensive tasks like Web browsing and tasks

- 15-inch LG monitor
- Economical price
- No USB
- Average performance

Price: Rs 29,900  
Contact: Metrotek Systems & Solutions  
Phone: 044-8228229  
Fax: 044-6213285



### Metrotek Talisman 2

## Average performance, Unbeatable Price



**O**ne again a P-III 450 processor-based system that could have fared better on the benchmarking tests with 64 MB of RAM. However, apart from the 32 MB RAM that is barely a match for a P-III system, Metrotek

Talisman 2 features a VIA chipset 440ZX motherboard having three PCI slots, one ISA slot and one shared PCI/ISA slot that forms the base of the system. A Seagate U4 hard disk has a storage capacity of 4.3 GB, while an S3 4 MB AGP card along with an LG StudioWorks 15-inch monitor provides reasonably good graphics.

Other components include a 40x CyberDrive CD-ROM, a Yamaha soundcard, Techno 160W speakers, KeyPower keyboard and a Logitech 3-button mouse. Windows 98 OEM pack is bundled and the drivers for sound, graphics

and motherboard are provided on CDs. All the drivers for the motherboard and other peripherals like the sound card are included in the accompanying CD.

Overall, a very average system in terms of both looks and performance which could have been made much bet-

- 15-inch LG monitor
- No USB
- Average in looks
- Average performance.

Price: Rs 39,900  
Contact: Metrotek Systems & Solutions  
Phone: 044-8228229, 8221069  
Fax: 044-6213285



### Minicomputer Cyber PC Celeron Ideal for Office Use



This was one of the few systems to featured a clever motherboard with both the Socket 370 and the Slot 1 interface. The chipset used here is the SiS 5595, which supports Ultra ATA66 on the IDE channels. However,

the Seagate Medalist hard disk used in the system, does not support this new standard and therefore the full potential of data transfer is not realised. There are a host of other peripherals such as the SiS 620 3D graphics accelerator, soundcard, modem and even a 10/100 LAN card on the motherboard this reduces the overall cost and makes the system very well suited to the office user.

Connectors link the interface points from the board to the external ports, which explains why there is only one shared PCI/ISA slot for expansion. All the drivers for the chipset and the inte-

grated components are included on the accompanying CD.

Even though, integrated features and peripherals make this PC a good choice for the corporate user, an ATA-compliant hard disk would have enhanced the performance of the system.

**VERDICT** **B**

- ♦ Peripherals integrated on mainboard
- ♦ ATA66 support
- ♦ Four-channel sound system
- ♦ Only 1 shared PCI/ISA slot

Price: Rs 32,230  
Contact: Minicomputer  
Phone: 022-8367273  
Fax: 022-8362424



### Minicomputer Cyber PC P-III Promising Corporate Workstation



Based upon Intel's 440ZX chipset, the Minicomputer India PC with its P-III 450 MHz processor is a reasonable choice for the business user. The only PC with a 10/100 Mbps LAN card, this computer also features an

internal 56 K PCI modem. However, the only downside is the 32 MB RAM. 64 MB would have been more like it. The AGP adapter, a SiS 6326 with 8 MB video RAM, delivers average 3D performance. Build quality is good and the main cabinet looks very sturdy.

Rounding off the multimedia components is a 40x Acer CD-ROM drive and an ESS 1869 ISA soundcard. The multimedia keyboard has a wrist support, integrates a microphone and features one-touch launch of applications like audio CD control and shortcuts to frequently accessed programs. The 14-inch

Daewoo monitor displayed good clarity at the tested resolution of 800x600 with 16-bit colour and 72 Hz refresh rate.

With a good set of peripherals for the office user, this is a good choice for applications that require a medium-to-high

**VERDICT** **B+**

- ♦ Internal 56 K PCI modem
- ♦ Internal 10/100 Mbps LAN card
- ♦ Only 32 MB of RAM
- ♦ 14-inch monitor
- ♦ ISA soundcard

Price: Rs 42,630  
Contact: Minicomputer  
Phone: 022-8367273  
Fax: 022-8362424



### Mohan's Aristo Celeron 400 Great MIDI and Graphics Performance



A Celeron 400 MHz-based machine with 32 MB of RAM, this system features a 440ZX Intel chipset motherboard as base. The motherboard has two PCI, one ISA and one shared PCI/ISA slot. The benchmarking test

results displayed an average performance, though a SiS AGP card with 8 MB of video memory was responsible for the good graphics. Another noteworthy feature is the 6.4 GB Samsung hard disk, which provides ample storage space for normal home and office applications.

The multimedia components include a Philips 40x CD-ROM drive, a Yamaha PCI soundcard and Samsung speakers. Ideal for MIDI playback and along with very good wavetable playback, the high-quality soundcard is also not intensive on CPU power. The bundled monitor is a 14-inch Philips monitor and the input

devices include a Samsung keyboard and a Logitech 3-button mouse.

The system is appropriate for users who want an economical system and do not use resource intensive applications like extensive gaming and imaging.

**VERDICT** **B+**

- ♦ Economical price
- ♦ Good graphics and sound
- ♦ No USB ports
- ♦ 14-inch monitor
- ♦ Low on RAM

Price: Rs 33,000  
Contact: Mohan Computers  
Phone: 040-846863  
Fax: 040-814172



Mohan's Aristo P-III 450

## Surfer's Choice, Low on RAM



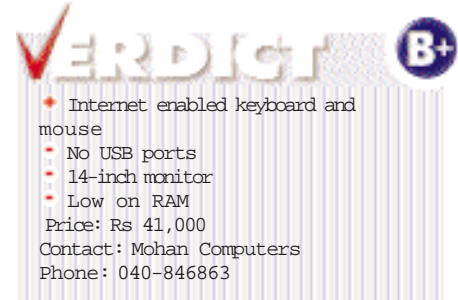
This P-III 450-based system features only 32 MB RAM, thus losing out to other systems in the same category. An Intel chipset 440ZX motherboard forms the base of the system with two PCI slots, one ISA slot and one shared

PCI/ISA slot. The graphics are satisfactory thanks to the 8 MB SiS AGP card (with TV-out), but the machine could be better off with a 15-inch monitor instead of the 14-inch one (Philips). The multimedia sub-system is made up of a Samsung 48x CD-ROM drive, a Yamaha 724 PCI soundcard and Philips 80W speakers.

Other components include a Samsung 4.3 GB hard drive, a Samsung multimedia keyboard and a Philips Net mouse. The keyboard features extra keys for multimedia, Internet and e-mail, apart from the Suspend, Close, DOS prompt, Game menu, Windows Explorer, and three user-

programmable keys.

With an easy-to-use setup of one-touch launch for applications, this is a very accessible system that is appealing to the home and the first-time user. However, with only 32 MB of RAM, the performance does suffer.



NeST Jay 2450P

## High Performance Multimedia System



This high-end system incorporates some of the best hardware available for an entertainment and game machine. An AOpen motherboard with a P-III 450, 64 MB of SDRAM, an S3 Savage 3D accelerator

and a Samsung 6x DVD drive, facilitates sharp and smooth video playback. The card also features video output ports for enabling DVD playback on an external television. The lack of decoder card for DVD playback is compensated by the graphics accelerator, which integrates the DVD decoding hardware and the bundled DVD player to provide commendable picture quality. The 4.3 GB Quantum Fireball CR hard disk features ATA66 compliance, but the chipset again does not support this standard.

What is impressive about this PC is

its speaker system PCWorks, which provides a sound quality that is comparable with most home audio systems. Internet connectivity is provided with the internal PCI 56K Rockwell modem.

With high-performance multimedia components, this is a very good home entertainment and gaming centre.



Oscar OSC 110M

## For Low-end Office Use Only



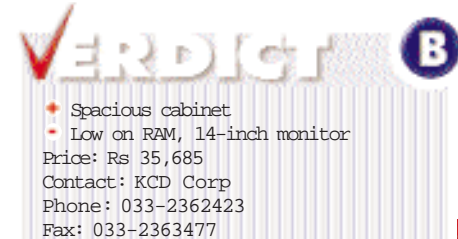
This good-looking P-II 400-based system features only 32 MB of RAM. The base of the system is a 440ZX Intel chipset motherboard with two PCI slots and one slot each of ISA and shared PCI/ISA slot. The ATX cabi-

net is spacious, with the power supply supporting auto-shutdown.

A 14-inch Proview monitor with an external and in-built microphone is bundled along with the system. USB connectors are available at an extra cost. The SiS 4 MB AGP card provides TV-out facility, which is useful for watching video CDs on TV and also for corporate presentations. The necessary drivers for the soundcard and the motherboard resources are included on the accompanying CD.

The Genius 40x CD-ROM drive

delivers good performance and the tray moves very silently. The drivers for sound and graphics are provided on CDs. The machine does not come with a modem or any licenced software and is suitable for home and office users who only need to work on applications that are not very resource-intensive like word processing and spreadsheets





## Pathfinder Psicom Bhaskara

## One Computer for All Home Needs



Based upon a Cyrix MII-300, this is a system that is well suited only to the budget home and office user where performance is not a criterion. With all of 32 MB of RAM, a SiS 6215C PCI graphics

card and 1 MB of Video RAM, this system is very underpowered and is definitely not for the gamer and the power user. The motherboard has a Baby AT form factor with a standard power supply where the system needs to be manually switched off after shutting down Windows. A Yamaha 724 PCI soundcard and Turando-powered speakers take care of the PC's audio capabilities.

This system features special software that load on startup and streamline the performance of the PC but this did not reflect in the tests. The hard disk is a 4.3

GB Seagate Medalist IDE hard disk that delivers average performance. With a choice of very economical components, this is the closest you can get to a one-computer-for-all system. With average overall performance, this computer is

**VERDICT** **B**

- ◆ Plenty of components
- ◆ Fast ATA66 hard disk
- ◆ No 3D graphics support
- ◆ No support for Advanced Power Management

Price: Rs 36,999

Contact: Pathfinder

Phone: 0118-546740



## Pathfinder Psicom Drona

## Over-priced Average Performer



This high-end system is based upon a P-III 450 with 64 MB of RAM and a speedy 4.3 GB Quantum Fireball CR hard disk that features an ATA66 interface. However, the motherboard houses a 440BX-based chipset

that does not support the ATA66 standard, hence the full potential of 66Mbps data transfer is not realised. A 40x CD-ROM drive and a PCI soundcard have been included with 350W (PMPO) powered speakers. The AGP card is a SiS 6326 accelerator with 4 MB of Video RAM. There is a 14-inch monitor with digital controls. This system features Windows 98 pre-installed with the media supplied. With an average selection of components, this system is suited to users who need middle- to high-level performance. However, the 3D performance of the system is not the

best in its class with the absolutely out-dated SiS 6326 AGP graphics adapter.

The Psicom Drona presents a selection of very average components and its performance is average in its class. The price of this system is too high for a machine of this category.

**VERDICT** **B**

- ◆ Fast ATA66 hard disk
- ◆ Out-dated Graphics card
- ◆ Low 3D graphics support
- ◆ Very high price tag

Price: Rs 56,999

Contact: Pathfinder

Phone: 0118-546740

Fax: 0118-555677



## PCS Celeron 400

## Above-average System in its Range



Aimed at the home and the office user, the PCS Celeron incorporates a Celeron 400 with 64 MB RAM and a 4.3 GB Seagate U4 hard disk. The processor is mounted on a Socket 370 interface on the board. The system

features a Creative CD drive and a Creative Audio PCI64 soundcard (part of Creative's Vision multimedia kit), though you might get fooled by its nondescript looks.

Sporting a Baby AT form factor, this system is one of the few Baby AT systems that actually feature an external port for USB connectors to the motherboard. An S3 Trio 3D/2X graphics accelerator handles the graphics subsystem. Especially interesting is the case, which reminds you of old 486-based systems with turbo switches and very large LEDs for indicating power, hard disk access and turbo mode.

The system bundles a spill-resistant keyboard and a three-button Logitech mouse, along with manuals and drivers for the motherboard and multimedia components.

Except for the lack of a larger monitor (15-inch, at least), this is a suitable multimedia system with above-average

**VERDICT** **B**

- ◆ External USB ports
- ◆ 14-inch monitor
- ◆ Average looks

Price: Rs 39,700

Contact: PCS

Phone: 022-8521177

Fax: 022-8520193



## Prosyst Desktop 2000

## Certainly Not a Killer Performer



This VCR-sized desktop PC (sold without monitor) integrates a host of features targeted at the office user. Powered by a Cyrix MII 300 MHz processor and 32 MB of RAM, it is not a killer performer but is ideally suited to

general-purpose office use. Setting it up is very simple and the instructions are well-documented in the user manual. There are sections explaining the construction, installation and use of bundled programs. The system is very compact and the component layout is planned for maximal space efficiency.

Unfortunately, the floppy drive in the test machine was misaligned the system had to be opened to extract the floppy disk. Surprisingly, the manual states that USB ports are present, but none were found in the system. In addition to the VGA output, there is also an S-video and

composite video out for display on a TV making this system ideal for presentations. The graphics chip also integrates video capture from external video sources.

With a good range of features, especially for office presentations this compact computer system is a good investment for

**VERDICT** **B**

- ♦ Very compact layout
- ♦ Integrated S-video and composite out
- No USB ports

Price: Rs 20,000 (monitor not included)  
Contact: Prosyst Computers  
Phone: 033-2487452  
Fax: 033-2488443



## QTronix Celeron 400

## Budget Solution for Network Gaming



This system uses the Socket 370 on the same Xcel 2000 all-in-one motherboard. A Celeron 400 MHz processor and 64 MB of RAM provide computing resources. To repeat the motherboard features once again, it has

an onboard SiS 620 graphics with 8 MB of shared video memory, Sound Pro sound, a 56 Kbps HSP-PcTel modem and a Davicom 10BaseT/100BaseTX network adaptor. There is a single shared PCI/ISA slot. A fast infrared port besides two USB, one PS/2, two serial, one parallel and one game port enable connectivity. Drivers for the system are included on the accompanying CD.

The rest of the components are standard a Samsung 4.3 GB hard drive, a Samsung 45 Bn 14-inch monitor, Techno 180W speakers, QTronix keyboard

and mouse. An Altima collar microphone and a QTronix joystick are also bundled with the machine. The system did not fare very well on the benchmarking tests but should work well for people who want an economical system with many

**VERDICT** **A-**

- ♦ All-in-one motherboard
- ♦ Economical price
- 14-inch monitor

Price: Rs 36,500  
Contact: Pushpam Computers and Software  
Phone: 020-515162  
Fax: 020-516455



## QTronix P-III 450

## All-in-one SOHO Solution



The system features a P-III 450 MHz processor and 64 MB RAM installed on an Xcel 2000 chipset-based all-in-one motherboard. The motherboard has an onboard SiS 620 graphics with 8 MB of shared video memory, Sound Pro

sound, a 56 Kbps HSP-PcTel modem and a Davicom 10BaseT/100BaseTX network adaptor. However, a single shared PCI/ISA slot leaves very little room for expansion. The motherboard supports both Slot 1 and Socket 370 processors but you can only have one processor installed at a time. Available ports include a fast infrared port besides two USB, one PS/2, two serial, one parallel and one game port. The bundled monitor is a 14-inch IG 440 Si. A Seagate Medalist 4.3 GB hard drive, an Acer 50x CD-ROM drive, Techno 180W speakers, a QTronix keyboard and a QTronix mouse make

up the rest of the system. An Altima collar microphone and a QTronix joystick is also bundled. The performance on the benchmarks was reasonably high and the system is appropriate for people who want a lot of features at an economical price. The presence of the onboard network adaptor makes it suitable for office

**VERDICT** **A-**

- ♦ All-in-one motherboard
- ♦ Economical price
- 14-inch monitor

Price: Rs 43,500  
Contact: Pushpam Computers and Software  
Phone: 020-515162



## RPTech Celeron 400

## Good Software Bundle, Integrated Peripherals



Targeted at the budget-conscious home user, this computer incorporates good value and reasonably high performance. Comprising a Socket 370 Celeron 400 MHz processor, 64 MB SDRAM and a 4.3 GB Seagate U4

hard disk, it is visually very similar to the P-III systems. This machine has a Baby AT cabinet, and a SiS chipset 440BX-based motherboard. Since all the major components ESS Solo-1 soundcard, and a SiS 620 AGP graphics adapter with 4 MB of video RAM are integrated on the motherboard, there are absolutely no cards in the system, giving the impression of plenty of space within. Hence there is a lot of room for expansion, with 2 PCI, 1 ISA and 1 shared PCI/ISA slot. The package includes Su-Lipi multilingual software for Indian language word

processing. Completing the multimedia package is a pair of powered speakers with a built-in adapter. The monitor is a 14-inch ViewSonic E40, which is sufficient for applications.

With a very good software bundle and a good price, The RPTech Celeron 400 is a good choice for a home user.

**VERDICT** **A-**

- ♦ Affordable price
- ♦ Plenty of room for expansion
- ♦ Audio and video CDs included

Price: Rs 37,500  
Contact: Rashi Peripherals  
Phone: 022-8235360  
Fax: 022-8375458



## RPTech P-III 450

## Excellent Motherboard, No Audio



With a Baby AT form factor, this computer is aimed primarily at the office user. It is built using an impressive set of top-of-the-line components and delivers high performance for the most demanding office applications.

A high-performance ASUS P2B 440BX-based motherboard forms the heart of the P-III 450 MHz system, plus 64 MB SDRAM and a 4.3 GB Seagate U4 hard disk. The graphics subsystem comprises an SiS AGP card with 4 MB display memory and a composite TV out port. The packaging contains all the necessary drivers for motherboard, CD drive and AGP card. Rounding off the package is a Logitech FirstMouse and a Logitech Deluxe 104 keyboard. The internal layout of the system is very tidy and the wires are neatly bound together. Even though the machine comes with a

50x Max Actima CD drive, there is no soundcard included which is not quite okay, even for an office computer.

This is a powerful computer for most home and office applications but considering the power of this machine, a 15-inch monitor would be a much better choice.

**VERDICT** **A-**

- ♦ Powerful ASUS P2B motherboard
- ♦ Attractive price
- ♦ No soundcard
- ♦ 14-inch monitor

Price: Rs 45,000  
Contact: Rashi Peripherals  
Phone: 022-8235360  
Fax: 022-8375458



## SAM7 Celeron 400

## Good Upgradability, Poor Expandability



This budget computer is based on a 440ZX chipset and is a good alternative to more expensive BX-based systems. Running on a Celeron 400 MHz with 32 MB of 100 MHz SDRAM, this machine is suited to home and low-power

office applications such as Internet surfing and word processing. Sporting a space-saving Baby AT form factor, the expansion capabilities are very limited with only 2 PCI, ISA and one shared slot. Like the P-III versions, this computer also has a Samsung hard disk with a capacity of 4.3 GB. There is an ACER 40x CD-ROM drive along with a Yamaha PCI soundcard. Other components include a Samsung Samtron 45Bn monitor, a SiS 6326 AGP graphics card and Cambridge SBS20 speakers. As the Celeron 400 processor is a Socket 370 chip, a Slot-1 to Socket 370 adapter is included. This will

come in handy if you wish to upgrade to a P-III eventually. Drivers for motherboard, soundcard and graphics card are bundled with the system.

With straightforward features and a welcome capability to upgrade the processor, this is a good computer for

**VERDICT** **B**

- ♦ Small footprint
- ♦ Can be upgraded to a P-III
- ♦ 14-inch monitor

Price: Rs 39,999  
Contact: Sam7  
Phone: 022-6301386  
Fax: 022-6301385  
E-mail: sampathi@vsnl.com



## SAM7 P-III 450

## Well-equipped for Expansion



**T**his machine with an ATX form factor is based on a P-III 450 MHz with 64 MB RAM and an ample 8.4 GB Samsung IDE hard disk. Running on a 440ZX board, this machine is ideal for general applications for the home and the

office. The graphics subsystem is average, and comprises an SiS 6326 AGP card featuring S-video and composite video ports. The computer can be used for office presentations, which can also be displayed on a TV.

Sound is admirably handled by a Creative Ensoniq PCI soundcard and Cambridge SBS 20 powered speakers. With a 5-Watt RMS power output, this speaker system is ample for most homes. The multimedia subsystem is completed by a Creative 32x CD-ROM drive. Particularly impressive about this system is the capability for expansion with 3 PCI, 2

ISA and one shared slot. A 265-Watt power supply is included this makes it suitable for taking on the load of additional devices. Other peripherals are a Logitech keyboard and mouse with roller wheel. The monitor is a 14-inch Samtron 45Bn, part of the new flat screen range.

With a good capability for expansion, this is a very good choice for the home

**VERDICT** **B**

- ♦ Many slots for expansion
- ♦ 14-inch monitor

Price: Rs 49,999  
Contact: Sam7  
Phone: 022-6301386  
Fax: 022-6301385



## Siemens Scenic 600

## Raw Performance for the Corporate User



**W**ith a desktop form factor, this is one of the best machines for the office user. Powered by a P-III 500 with 64 MB of SDRAM and a Matrox G200 with 8 MB of Video RAM, this machine gave an impressive. A

good choice of hardware and an impeccable screwdriver-free construction make for a very good build quality. A special moulded structure is placed inside the system beneath the power supply fan. This blows air directly on to the processor heat sink, eliminating the need for an additional fan for the P-III. There is also a special intrusion detection switch that monitors if the casing has been opened. A sliding panel covers the floppy and expansion bays and the grey-beige combination gets very well with the office environment. The machine has plenty of room for expan-

sion. Even though the test system did not have a CD-ROM drive and a soundcard, Toshiba 40X CD drive with a Terratek sound card are provided with the system.

Excellent build and good performance make this system a very good choice for the office.

**VERDICT** **A+**

- ♦ Excellent build
- ♦ Added security with intrusion detection
- ♦ No speakers included

Price: Rs 78,400  
Contact: Siemens Information Systems  
Phone: 022-4936264  
Fax: 022-4960035



## Siemens Scenic 800

## Great-looking Good Performer



**D**esigned for the office user, this PC sports a tower casing that does not have any screws on the slot interfaces, enabling you to add new components effortlessly.

The system's well-planned compo-

nent layout makes for a spacious interior. Like the first range of P-III processors, this one features only a heat sink while the fan on the power supply handles the cooling. A duct directs air towards the CPU heat sink. A special intrusion detection switch monitors the status of the cabinet and can trigger an alarm reminding you to close the casing of the computer before you set down to work.

The multimedia components consist of a 32x Creative CD-ROM drive and a SoundBlaster PCI64 card. However, speakers are not supplied with the sys-

tem. A Matrox G200 with 8 MB of Video RAM, though not the best in its class, delivers adequate performance for the office user.

Impeccable build quality and a good choice of components make this PC a very good choice for most corporate applications that demand robust

**VERDICT** **A+**

- ♦ Excellent casing
- ♦ Added security with intrusion detection
- ♦ Fast ATA66 hard disk

Price: Rs 75,200  
Contact: Siemens Information Systems  
Phone: 022-4936264



## Sparsh Touch Celeron

## Low on 3D Graphics, Average Sound



**B**ased on a 366 Celeron and 32 MB of RAM, this computer is a fairly powerful system that integrates a good set of components for the home and the office user. The graphics is han-

dled by an SiS 6326 graphics card providing average 3D graphics performance. Though not the best choice for an avid gamer, this system is ideal for general-purpose applications. The Socket 370-based motherboard utilises the 440LX chipset. There is a 14-inch Touch monitor and a three-button mouse with a standard keyboard.

The multimedia comprises a rather low-end Yamaha OPL3-SAX soundcard and a 40x Acer CD-ROM drive. The Intex-powered speakers provide good quality sound. This system uses a 4.3

GB Samsung IDE hard disk. Especially evident in this system is the build quality, where attention is paid to details like grouping the wires and cables within the system.

With good overall performance, this

**VERDICT** **B**

- ♦ Good expansion capabilities
- ♦ Good build quality
- ♦ Low-end 3D graphics
- ♦ Low-end soundcard

Price: Rs 31,500  
Contact: Sparsh India  
Phone: 0118-541716  
Fax: 0118-543401



## Sparsh Touch P-III

## Ample Attention to Detail



**B**ased on a Mercury 440ZX motherboard, this system comprises a P-III 450 processor with 32 MB of RAM. In looks and peripherals, this system is similar to the Celeron-based

Touch computer. There are a 40X Philips CD-ROM drive and a 4.3GB Samsung hard disk. The monitor supplied with this system is a 14-inch Vintaron monitor and the keyboard is a standard 104-key Windows keyboard. Here too, the internal build quality of the system shows through in the neatly tied and bound connectors and cables within the system. The speakers, like the Celeron-based system is also by Intex and these are powered speakers that provide adequate sound for personal use. All manuals and driv-

ers for the system components are included with the package.

For the office user that is interested in a good quality system, this is a good choice. However, an additional 32MB of RAM would have greatly increased the scores of this system.

**VERDICT** **B+**

- ♦ Good build quality
- ♦ Only 32 MB RAM

Price: Rs 42,500  
Contact: Sparsh India  
Phone: 0118-541716  
Fax: 0118-543401



## SuperComp P-III 450

## Memory Rich, Great Sound



**T**his P-III 450-based system has an ample 128-MB of RAM providing very good performance. The system uses a 440ZX Intel chipset motherboard with two PCI slots, one ISA slot and one shared PCI/ISA slot. The

machine is very stable and the build quality is very good. The multimedia subsystem comprises a high-performance Sony 40x CD-ROM drive, a Yamaha XG PCI soundcard and Mercury Turando 240W speakers. The speakers have extra ports for connecting a microphone and a pair of headphones.

With a Seagate U4 4.3 GB hard disk, the system is targeted at the home segment and has enough of resources and high power for home entertainment and gaming. Windows 98 OEM pack is bundled along with the system and all relevant drivers for the motherboard

resources and other peripherals like the soundcard are given on CDs.

With plenty of RAM and very good performance, this is a very good choice for the home user interested in performance computing. However, a higher performance graphics card would have made this system much better on

**VERDICT** **A-**

- ♦ Good performance and looks
- ♦ 14-inch monitor

Price: Rs 48,500  
Contact: Supertan Electronics  
Phone: 033-2823089  
Fax: 033-2823874





## Vetri Pentium III

## For the Budget-conscious Home User



This average-looking P-III 450 system comes with a 15-inch Samsung 55E monitor and a Trident 4 MB AGP card with TV-out ports that provide reasonable graphics; the RAM though is a mere 32 MB. The 440ZX Intel chipset

motherboard has two PCI, one ISA and one shared PCI/ISA slot. The system features a 4.3 GB Seagate U4 hard disk and a Creative multimedia kit which includes a Creative 48x CD drive, a Creative Ensoniq PCI soundcard and Creative SBS 20 speakers, delivering commendable sound quality. A TVS Champ keyboard and a Logitech 3-button mouse comprise the input devices. Despite the rather low RAM, this system makes a reasonable home multimedia PC. The machine has no USB ports. There is no bundled software except for the relevant device drivers on the CD. The system displayed average perform-

ance in the benchmark tests.

With a PIII-450 processor, the manufacturers should have provided 64 MB of RAM at least. This system is suited to the home and office user who is not going to use this system for extensive

**VERDICT** **B**

- ♦ Good sound output
- ♦ Stable system
- ♦ No USB ports
- ♦ Average looks
- ♦ Low on RAM

Price: Rs 43,300  
Contact: Vel Computer Services  
Phone: 044-4992615  
Fax: 044-4991035



## Vintron Elixir 1000

## A Very Neat PC



This Celeron 400-based system with 64 MB of RAM has a VIA chipset 440LX motherboard with three PCI and two ISA slots, allowing room for expansion. Again, the cabinet sports good looks care has been

taken to arrange the cables neatly and seal the connectors with plastic. The soundcard supports a 4-point surround system, although the speakers provided by the manufacturers are the Vintron two-channel speakers with an output of 160W (PMPO). A Logitech scroll mouse is also provided. The system provides reasonably good performance at a reasonable price and is suitable for both home and office users. USB connectors are available optionally at extra cost. New Millennium Encyclopedia is provided free along with various drivers and user manuals for the devices.

With extremely competitive pricing and with good build quality, this is a very good system for the home and office user who does not run very intensive applications. Unfortunately, there are no USB ports in the system and this is a definite disadvantage.

**VERDICT** **A-**

- ♦ Cables neatly arranged and sealed
- ♦ 4-point sound capable soundcard
- ♦ No USB ports
- ♦ 14-inch Monitor

Price: Rs 27,715  
Contact: Vintron Industries  
Phone: 011-6814520  
Fax: 011-6810382



## Vintron Elixir 3000

## Much Power at a Reasonable Price



Based on a P-III 450 with 64 MB of RAM, this stable PC sports good looks and a spacious cabinet. With 4 MB SiS graphics, an Acer 40x CD-ROM drive and an Audio Excel PCI soundcard that supports 4-point sur-

round sound system, this machine is an excellent choice for home entertainment. The motherboard is a 440BX Intel chipset motherboard with two slots each of PCI and ISA and one shared PCI/ISA slot.

The cables inside the cabinet are neatly tied together, while the connectors are sealed with plastic at points where they plug into the drives and the motherboard. Very convenient, especially when you would need to shift the PC. A 14-inch Vintron monitor and a Logitech scroll mouse are also bundled, so is an extensive user manual for the

system. New Millennium Encyclopedia on two CDs is bundled free along with drivers for sound, graphics and main-board. USB connectors are available at an extra cost.

In terms of both price and performance, this system is a very good choice

**VERDICT** **A+**

- ♦ Cables neatly arranged and sealed
- ♦ 4-point sound capable soundcard
- ♦ No USB ports
- ♦ 14-inch Monitor

Price: Rs 36,899  
Contact: Vintron Industries  
Phone: 011-6814520  
Fax: 011-6810382



## Waves Homer 4503

## Cool Low-priced Choice for Gamers



This trendy-looking P-III 450-based system performs well and features good graphics using a SiS graphics accelerator with 8 MB of video RAM. The card also has an S-video and composite video-out facility. The 440BX

Intel chipset motherboard has two USB ports with three PCI slots, one ISA slot and one shared PCI/ISA slot providing ample space for extra cards. The Yamaha XG PCI soundcard and the 340W Waves speakers provide good sound quality especially in MIDI playback. One of the speakers has extra ports for connecting a microphone and headphones. Drivers for the motherboard resources are included with the system on the accompanying CD and manuals are included that detail the specifications and usage of the system.

The ATX cabinet is spacious enough

to accommodate extra drives and also has good airflow. This machine did very well on the benchmark tests. Overall an excellent system offering good features and performance at a reasonable price, it would have been better if given along with at least a 15-inch monitor instead of a

**VERDICT** **B+**

- ♦ 8 MB graphics memory
- ♦ Good performance
- ♦ 14-inch monitor

Price: Rs 40,900  
Contact: Waves Infotech  
Phone: 033-2480359  
Fax: 033-2103218



## Xpress Xtreme 5100

## Extremely Impressive Graphics



Performance cannot get any better than this. With a selection of the best peripherals available, the Xtreme 5100 uses Intel's new SR440BX motherboard that integrates the Riva TNT graphics card with 16 MB of video RAM and a Sound Blaster PCI 64V.

Oodles of processing power is delivered by the Pentium III 500 MHz and 64 MB SDRAM. Since the motherboard is based on the Baby AT form factor, there is very good utilisation of space. An internal PCI LanBit 56 K modem is included. Multimedia is handled by an Acer 40x CD-ROM, and powered Samsung SMS 7841 4-Watt RMS speakers provide average sound quality and is prone to distortion at high volumes. The hard disk is a monstrous 8.4 GB Seagate Medalist, and the monitor is a Samsung Samtron 55E 15-inch with a flat screen. Also enclosed in the box is the Windows 98 CD, a tabletop microphone, a Logitech FirstMouse,

SuperVoice software and dust covers for the computer.

With a very powerful video and processing subsystem, the Xpress Xtreme is one of the most obvious choices for applications like graphics and multimedia.

**VERDICT** **A+**

- ♦ High performance components
- ♦ Integrated Riva TNT with 16 MB VRAM
- ♦ No AGP slot for upgrading
- ♦ Sound distortion at higher volumes

Price: Rs 67,995  
Contact: Compu-Tech  
Phone: 022-3852070



## Xpress Xtreme Performance 3200

## Good for the Home User



Based on the new Intel 810 chipset, this computer integrates features like 3D graphics and audio directly on the motherboard. Running a speedy Celeron 433 MHz with 64 MB SDRAM and a 6.4 GB Seagate U4 hard

disk, this is a sufficiently powerful computer for the home user. An impressive feature is the support for the new Ultra ATA/66 standard, but the hard disk provided is unfortunately a standard ATA/33 device.

Unlike the P-III-based computer from Xpress, this one has a standard tower system with other peripherals. This includes a 40x CD-ROM drive and a PCI 56 Kbps LanBit modem. All the drivers for the motherboard and the peripherals are provided in the accompanying box. The internal layout of the machine is well-planned with most of the components

integrated on to the motherboard. Interestingly, Intel has excluded ISA slots from this motherboard and there are only 4 PCI slots present. With a good choice of components and advanced features such as Ultra ATA/66 compliance, the Xpress per-

**VERDICT** **A-**

- ♦ Support for ATA/66
- ♦ Integrated 3D graphics and sound
- ♦ No ISA slot for older cards
- ♦ Sound distortion at higher volumes
- ♦ 14-inch monitor

Price: Rs 46,695  
Contact: Compu-Tech  
Phone: 022-3852070  
Fax: 022-3872626



## Zenith One-Up Celeron

## Great Multimedia Components



With a very good choice of components, the Zenith One-Up PC incorporates a good selection of hardware. It is based on an Intel SE440BX motherboard and features extensive expansion options. Even with

the PCI soundcard installed, there are four PCI slots and one ISA slot for further addition of peripherals. Also, up to 512 MB of RAM can be installed with the four DIMM slots in the board. Especially impressive is the Fujitsu MPD3043AT ATA66 compliant hard disk.

The rest of the multimedia kit consists of the Acer 48x CD-ROM drive and an ESS Solo-1 PCI soundcard. A 14-inch monitor features sharp display quality and push-button control of screen features is included. However, a 15-inch monitor would have been a

better choice. All the drivers and the documentation are included with the package. However, there is no listing of the specifications of the system in the user's manual.

With decent components, though slightly low on 3D graphics power with the SiS 6326 card, this is a good choice

**VERDICT** **A-**

- ◆ Good expansion capability
- ◆ Fast ATA66 hard disk
- ◆ Low on 3D graphics processing

Price: Rs 34,000  
Contact: Zenith Computers  
Phone: 022-8377300  
Fax: 022-8364859



## Zenith One-Up P-III

## Room for Expansion, Average 3D Graphics



Bearing a close resemblance in the choice of components (right from the motherboard to the cabinet) as well as looks, this PC houses the P-III 500, and other components such as

the SiS 6326AGP card, the ESS Solo-1 soundcard and the ACER CD-ROM drive. As in the One-Up Celeron, the Fujitsu MPD3043AT hard disk provides very good data transfer performance, though the motherboard provided does not support Ultra ATA66. Had it been the case where both the hard disk and the motherboard complied with this standard, the combination would have been good. All the drivers for the motherboard and the manuals are provided. The standard 14-inch monitor displays good clarity at 800x600 but gets a little blurry at higher resolutions and refresh-

rates. The powered speakers provided are powerful enough for personal use.

While the SE440BX motherboard allows for expansion, the SiS 6326 graphics card cuts down on the PC's 3D graphics capabilities. But for the absence of a 3D accelerator card, the Zenith One-Up P-III is a powerful sys-

**VERDICT** **A-**

- ◆ Good expansion capability
- ◆ Fast ATA66 hard disk
- ◆ Low on 3D graphics processing

Price: Rs 55,350  
Contact: Zenith Computers  
Phone: 022-8377300  
Fax: 022-8364859



## Z s Tech P-III 450

## Average Performance, Out-dated Soundcard



This P-III 450 MHz-based system has 64 MB of RAM on an Intel 440ZX motherboard, which also houses three PCI slots, one ISA slot and one shared PCI/ISA slot. The cabinet used is an ordinary looking

Microtek mini tower, which has limited space for expansion. There are no USB ports in this system. Other components of the machine include a 4.3 GB Seagate U4 hard drive, an SiS 4 MB AGP card, a Creative 48x CD-ROM drive, a Samsung 45Bn 14-inch monitor, Typhoon 220W speakers, Samsung keyboard and a Logitech 3-button mouse. All the necessary drivers for components like the chipset and soundcard are included on the accompanying CD.

The ISA Yamaha soundcard provided is rather outdated; besides it is

known for being very resource-hungry. The Windows 98 OEM pack (with media) is bundled with the system. The machine performed reasonably well on the benchmarks and with a powerful processor and a good amount of RAM, is appropriate as a home multimedia

**VERDICT** **B+**

- ◆ Reasonable performance
- ◆ No USB
- ◆ 14-inch monitor

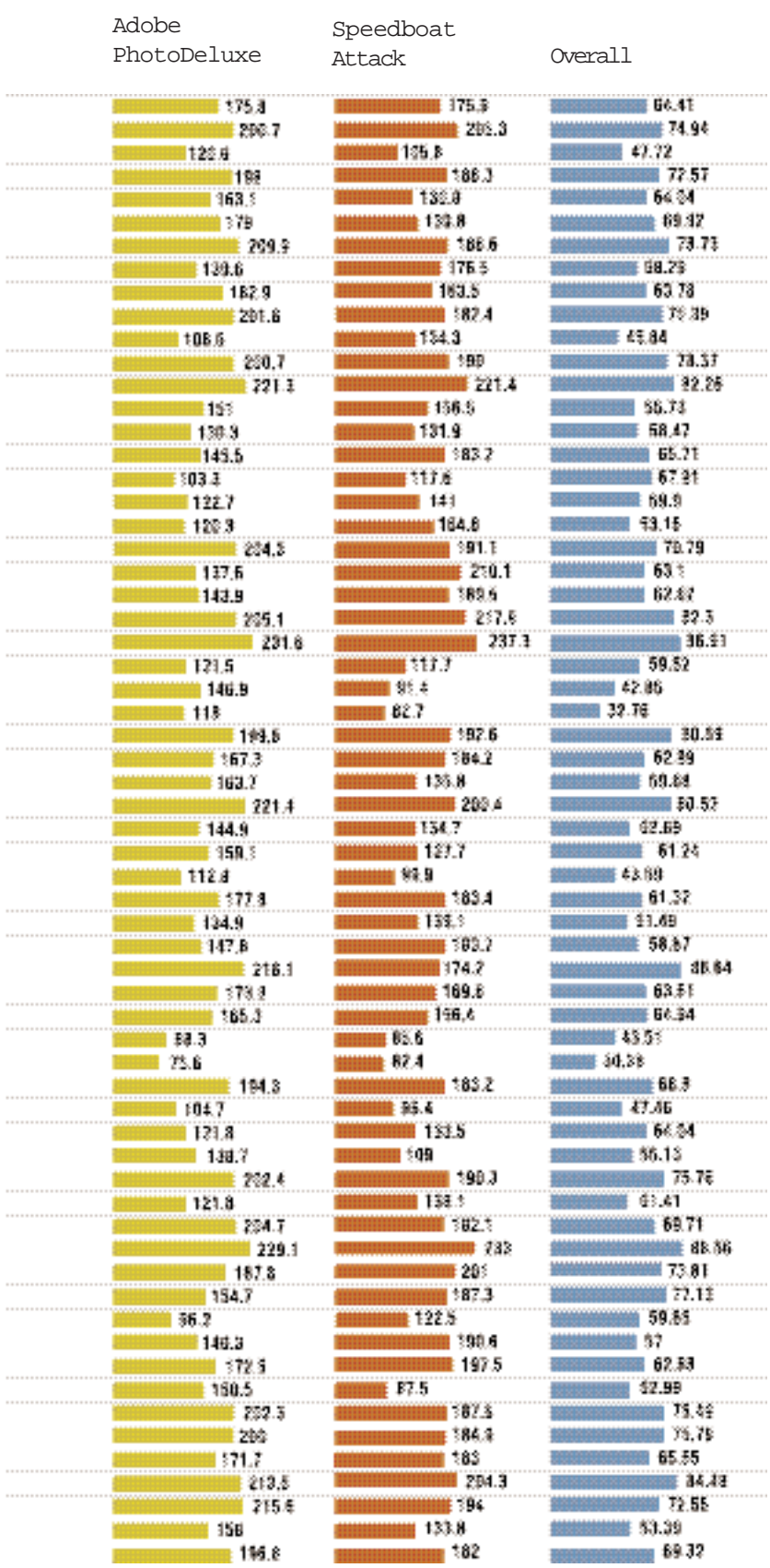
Price: Rs 45,000  
Contact: Z s Tech Systems  
Phone: 020-261559  
Fax: 020-5653147

# hardware

## Comparison Test

### Vital Statistics

	W instone	MS Works W ord	MS Works Spreadsheet	MS Works Database	Indeo Interactive
Alpha Data Celsius	17.5	118.9	129.1	144.9	97.1
Alpha Data P-II 400	19.1	128.8	146.9	174.3	174.3
APC Celsius	12.1	114	120.1	118.7	80
APC P-II	18.7	135.5	148.1	149.8	156
Big Apple P-II 550	17.1	131.2	139.8	149.5	125.7
Big Apple P-II 450	18.3	145.1	164.9	174.7	136
Box System	15.8	150.7	201	211.1	151.9
Box Ultima	13.2	140.7	138.3	150	128.7
CCS Space P-II 400	17.1	128.2	117.8	118.6	113.6
Compaq P-II 450	20	137.4	146	148.6	172.4
Compaq Presario 4010	18.5	116.7	127.5	120.2	181.2
Compaq Presario 4016	19.1	144.4	158.4	207.7	185
Desktop Festival 2-PC	21.3	166.3	198.3	217.1	118.4
Desktop Festival PS	19.6	130.9	136.8	138.9	82.7
Delta Celsius 400	16.9	109.5	103.3	111.1	103.2
Delta P-II 400	17	133.4	133.9	126.8	137.3
Green Valley P-II 450	18.6	142.2	158.8	177.3	136.7
Grey P-II 386	17	109.9	94.1	111.4	126.3
HP Business	12.7	115.9	117	115.1	120
HP Business 3300	19.2	131.4	128.6	135.3	125.9
HP Desktop 2000	13.9	116.4	147.5	168.2	185.1
Hewlett-Packard Pavilion 4000	14.3	129.9	138.1	143.7	174.3
Hewlett-Packard Pavilion 5500	20.8	161.3	197.4	209.5	176.2
Hewlett-Packard Pavilion 5510	20.6	158.6	216.7	237.4	167.6
IBM Alpha E Series 210	15.5	148.4	143.8	148.2	104.9
Induson (Delta P-II) 4500	13.2	68.9	63.5	60	62.2
Induson Trendy 3260	9.11	62.1	61.1	65.3	62.3
Lampo P-II 450	20.2	159.6	196.7	207.9	176.6
Logic 2000 P-II 450	14.6	130.4	133.1	136.7	169.4
Marcinica PC-4	16.9	113.2	111.2	123.6	135.9
Marcinica PC-5	19.4	161.7	149.1	203.4	181.7
Melrose Talisman 1	13.1	110.2	112.7	116.2	117.3
Melrose Talisman 2	14.3	151.8	166.2	176.9	123.5
Microcomp Cyber PC Celsius	11.1	157.7	104.1	97.8	72.7
Microcomp Cyber PC P-II	14.4	131.2	124.8	132.9	146.2
Minerva Amis Desktop 400	12.7	113.6	111.8	117.3	151.5
Netwiner Amis P-II 450	13.4	138.1	129.6	140.4	137.3
Net3 Jet 2460P	21.7	183.2	208.8	220.8	199.7
Oracle CSC 1100	16.5	132.7	125.6	135	194.4
PCS Celsius	17.1	128.1	136.7	140.2	128.4
Prosys Desktop 2000	11.7	102.5	104.6	108.5	53.6
Pathfinder P-IIcom (Macintosh)	8	94	63	58.5	59.6
Pathfinder P-IIcom (Linux)	18.1	141.1	120.7	122.6	141.1
QTrack Celsius	13.4	112.7	101.3	97.7	61.4
QTrack P-II 450	17.1	157.5	157	163.2	92.8
RP Tech Celsius 400	18.5	110.7	122.3	117.7	84.3
RP Tech P-II 450	20.1	138.5	139.2	148.5	188.6
SAMI Celsius 400	12.5	117.5	107.2	114.5	119.9
SAMI P-II 400	18.6	130.4	127.9	152.7	137.3
Siemens Scorpio 800	22	178.6	223.4	237.4	184.1
Siemens Scorpio 800	18	150.8	165.1	186.2	143.3
SuperCup P-II	21.2	137.8	135.6	141.9	180
Spanish Touch Celsius	18.2	110.5	101	88.4	101.8
Spanish Touch P-II 450	19.7	116.2	110.5	122.3	129.4
Vista P-II	15	130.9	169.2	176.2	93.8
Victory Epic 1000	18	121.6	61.8	94.8	77
Victory Epic 2000	19.9	137.9	139.6	148.4	173.8
Waves Home 4000	20.1	139.9	139.9	149.1	172.5
Xerox XSeries Performance 3000	15.7	139.1	158.7	163.6	98.5
Xerox XSeries 5130	21.4	173.8	212.5	225.6	150.6
Zenith One-Up Celsius	19	132.8	130.1	134.4	158.6
Zenith One-Up P-II	13.6	113	106.9	126.5	112.5
Zs Tech P-II 450	18.3	128.8	128.2	130.3	146.6

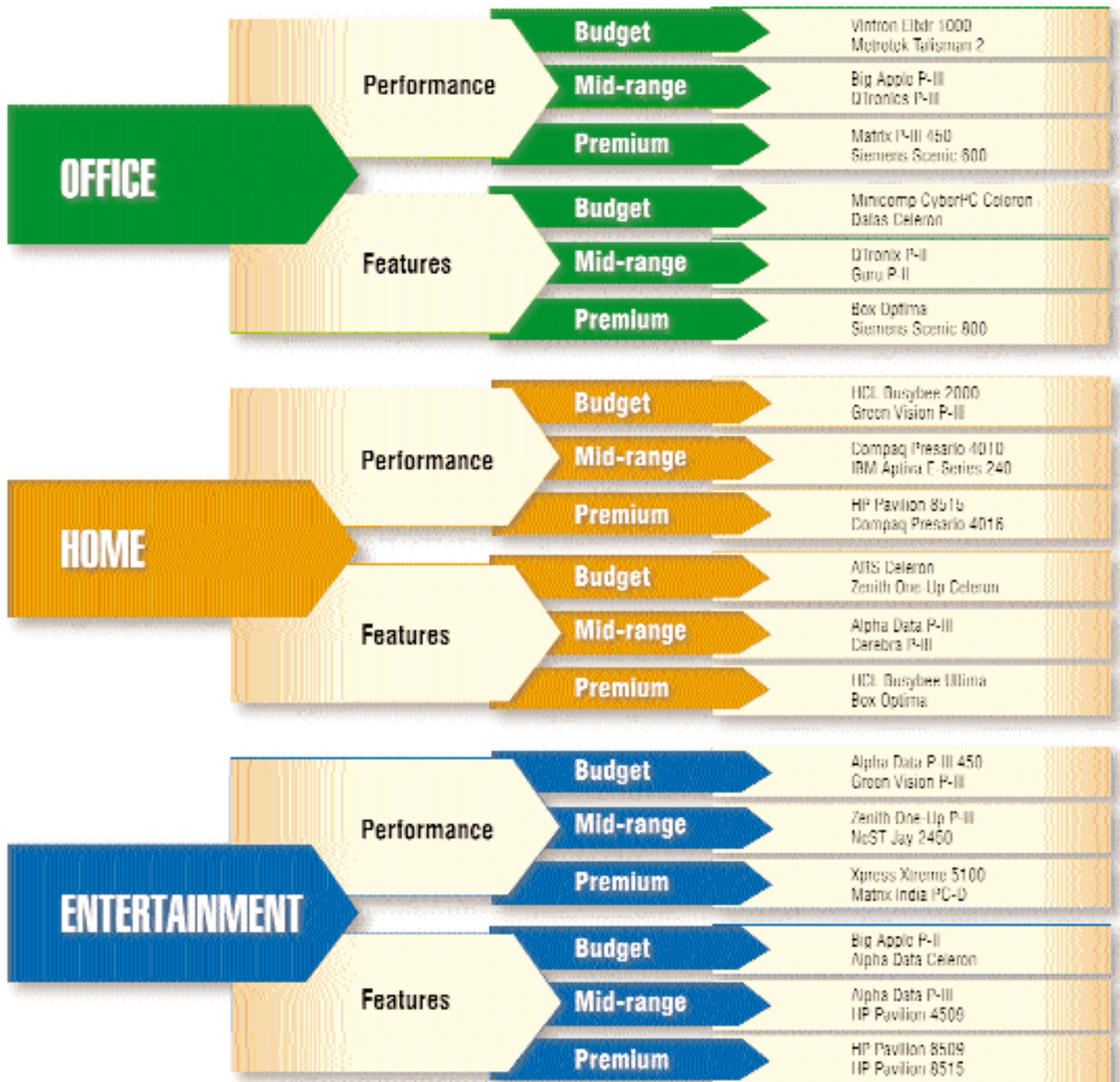


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DECISION MAKER

Find the right PC for yourself

What do you need a PC for? We have identified three types of users Home users, Office users, and those who want a PC only for entertainment (games and multimedia) purposes. After you have decided that, it is time to consider what is more important performance of the PC or the features. Finally, see the price range which suits you. The test has been divided into three categories: Budget (sub-Rs 40,000), Mid-range (Rs 40,000 to Rs 60,000) and Premium (above Rs 60,000). This final parameter brings you to the right PC.



## CONCLUSION

CHIP

## Peripherals and Price make the Difference

This roundup of PCs covered an entire range of systems varying greatly in price, performance and in configuration. Apart from the raw performance, real world factors such as build quality, layout of internal components, ease-of-use and other useful, unusual or interesting features contributed in choosing the winners.

### Budget PCs

In the sub-Rs 40,000 range, which covered

the graphics accelerator. Even though there were many other much cheaper systems than this, none included so many peripherals for the same price.

### Mid-range PCs

In the mid-range PC segment, we reviewed 33 computers and the Best Performance award was bagged by the feature-rich NeST Jay 2450. Highlights of this PC include a very good set of integrated peripherals like the P-III 450 with 64 MB,


free cabinet, this system was definitely one of the systems with the best construction. Featuring a P-III 500 with 64 MB of RAM, a Matrox Millenium G200 and a Quantum Fireball CR hard disk with ATA66 compliance, the performance in the Office suites test was the highest in its range. Especially impressive were the features for the corporate user, like cabinet intrusion detection and a SmartCard security system, making this PC an ideal high performance workstation.

In the Value category, Box Optima was the winner with an overall performance of 78.23 percent ten percent behind the fastest system. However, with components like a P-III 450 with 64 MB of RAM, an ASUS 440BX motherboard and a fast ATI Rage Fury All-In-Wonder TV tuner card, this system enables good 3D graphics performance with TV tuner functionality built in. What is noteworthy is the choice of multimedia peripherals a Pioneer 6x DVD drive with the slot-in interface. Additionally, there is an Aztech 56K internal modem with a 17-inch monitor and an Altec Lansing speaker system.

### Honourable mentions

In the Entertainment category, the Datamini Festiva E-FX, HCL Busybee 2000 and the Alpha Data P-III fared very well in gaming. For Video playback, the Matrix P-III 450 with its fast Riva TNT2 and 5x DVD drive, provided excellent quality. Finally, for office applications like word processing and spreadsheets, the Xpress Xtreme Performance 5100 and the Supercamp P-III were two of the best performers in this category.

With processors getting faster and with system configurations now in the realm of what were once only high performance servers, PC buyers are now in a buyer's utopia. Many critical components are being used, both by multinational PC manufacturers and your local assembler. This has levelled the playing field and the fastest PC today is not necessarily by the manufacturer with the most facilities, but is instead with the one with the most in-depth understanding of his components and system integration.

 BUDGET	 MEDIUM	 PREMIUM
<b>BEST PERFORMANCE</b>	<b>BEST PERFORMANCE</b>	<b>BEST PERFORMANCE</b>
 Vintron Elixir 3000	 NeST Jay 2450	 Siemens Scenic 600
<b>BEST VALUE</b>	<b>BEST VALUE</b>	<b>BEST VALUE</b>
 Big Apple P-II	 Green Vision P-III	 Box Optima P-III

a total of 21 PCs, the Best Performance award went to the Vintron Elixir 3000. It scored 75.49 percent in the overall performance 10 percent more than its nearest competitor. It also scored the highest in its category in the Winstonefi 99, the Microsoft Works Word Processor, Spreadsheet and in the Video Playback tests. This makes it the best choice for the office and the home user. Incorporating a P-III 450 with 64 MB RAM and a soundcard that is capable of driving two stereo channels, in Vintron Elixir 3000 you have a very good home entertainment system.

The Best Value prize was bagged by the Big Apple P-II, this 350-based system was third in its category and stands out as a good bargain. This PC incorporates 64 MB of RAM and a whopping 8.5 GB IBM hard disk, with a motherboard that houses almost all the system peripherals such as a 56K modem, a soundcard and

a Quantum Fireball hard disk, an S3 Savage 3D graphics accelerator, a Samsung 6x DVD drive and the internal 56K modem.

The Best Value award went to the Green Vision P-III 450-based PC. With a good choice of components like the Intel SE440BX motherboard, the Creative 5x DVD drive and the Intel i740 graphics accelerator, this is a very good computer for the average and the power user alike. In the Performance segment, the system figured as a medium performance machine in its range and this was primarily due to its low performance in the office suite tests.

### Premium PCs

In the crême de la crême range the Best Performance award was bagged by the Siemens Scenic 600. With very impressive build quality and features like a tools-