

Power notebook Toshiba Satellite P20

Notebooks used to be primarily for those that needed to work on the move. But with PCs becoming ever more consumer, the desktop replacement market has emerged to suit those that want a powerful, fully featured PC but also want to be able to pack it away out of sight at the end of day.

We've seen desktop replacements before, but none are as accomplished or good looking as Toshiba's Satellite P20. While the idea is you can fold the portable up and put it in its bag when you're finished, you'll probably want to keep the P20 out on display just to invoke jealous looks from anyone that happens to pop by.

Check out the spec

In terms of features you couldn't want more. The Toshiba's 3GHz Pentium 4 processor and 512MB of RAM result in a respectable WorldBench 4 score of 118. And although you'll probably run the device on mains power most of the time, the battery lasted for 147 minutes in our MobileMark 2002 tests. There's also a built-in DVD-RW drive and a massive 80GB hard disk, which is more than enough for everyday use.

And then there's that magnificent 17in widescreen, which makes the P20 a serious desktop replacement. With an nVidia GeForce FX Go 5200 graphics chip the Toshiba can turn its hand to games too, racking up 90fps (frames per second) in our Quake test at a resolution of 1,024x768. Featuring four USB 2.0 ports, FireWire, two PC card slots, S-Video-out, network facilities and a modem, the only thing this notebook misses is a wireless network, although it's upgradable should you need it.

In use the full-sized keyboard is great and there's a useful Windows key (take note IBM). The Satellite works well in operation, but pop in a DVD and you can see what it excels at. The widescreen aspect ratio means you get more screen inches than the average display and the built-in speakers offer decent audio.

Verdict

Rarely do big notebooks look that good, but Toshiba has changed the rules – the Satellite P20 is packed with the latest and greatest technology. If you were wondering how you were going to fit that bulky tower system in your office, it's well worth a look. At nearly £2,300 it's not going to be for everyone, but if you can afford it you won't be disappointed. ■

Will Head



The wider the better

Widescreen has been the buzzword of the television industry for the past few years, with manufacturers eager to get us to dump our tall, fat screens in favour of wide, thin ones. But until fairly recently, when a certain fruit-related manufacturer kick-started the widescreen bandwagon, it had had little impact in the world of PCs.

Widescreen is still unlikely to appear on the desktop, but system builders are currently falling over one another to provide a widescreen notebook, with varying degrees of success.

While it could be seen as just another fad, widescreen does bring a couple of benefits to the notebook user. With the extra width available you can fit two documents side by side, which makes comparing and collating information much easier. There's also a much more fun reason for widescreen – DVDs.

DVDs generally present a film in its cinema aspect ratio and a widescreen-equipped notebook allows you to see more of the image without having to resort to cropping. Movies on notebooks are never going to compare to a home setup, but with a huge screen like the Satellite P20's it's more than practical for use when you're away from house.

Toshiba Satellite P20

- Toshiba: 0870 444 8944
- www.toshiba.co.uk
- £2,299 inc VAT

Specifications

3GHz Intel Pentium 4 processor; 512MB RAM; 80GB hard drive; 17in widescreen (1,440x900); 8x/1x/1x/24x/16x/4x (DVD-ROM/-R/-RW/CD-ROM/-R-RW) drive; 32MB nVidia GeForce FX Go 5200; modem; network; 2 x PC Card slots; 1 x SD slot; S-Video out; 4.5kg; 419x293x47mm

Good points

Feature packed; glorious screen; good looking

Bad points

No wireless network; very expensive

Build quality



Features



Value for money





Budget notebook Toshiba Satellite Pro A10

While Toshiba is well respected in the corporate space and longingly looked on by the home user, its pricing has usually ruled it out of most consumer budgets. This could be a thing of the past if the A10 is anything to go by. Coming in at £586 inc VAT, it seems too cheap to be true. Trust us, though – you too can own a Tosh without having to splash out megabucks.

Don't be greedy, now

Obviously you're not going to get the latest and greatest technology, and it would be greedy to ask for any more at this price, but the Satellite Pro A10 is more than capable.

It doesn't pack a Centrino Mobile Technology solution. Hell, it's not even got a Pentium 4 under the hood. But what the Toshiba has got it makes very good use of. The 2GHz Celeron processor isn't that groundbreaking, but its WorldBench performance score of 95 is certainly nothing to be ashamed of at this price. The A10 even offers a half-decent battery life with a MobileMark score of 161 minutes.

The spec is fairly paired down. There's no CD writer but you will find a DVD-ROM drive. It offers VGA-out but no TV. And there's a mere two USB ports – but they are the faster USB 2.0. The keys feel loose to type on and the touchpad buttons lack that reassuring solid click, but to complain would be looking a gift horse in the mouth.

The Satellite Pro A10 even looks good – something that can be a hit-and-miss affair in the value sector. The audio's fine by notebook standards – providing you don't crank it up to the maximum it should suffice. Then there are clever design touches like the volume wheel located on the front for quick and easy access.

While you couldn't expect integrated wireless at this price, Toshiba's been thoughtful. The Satellite Pro is wireless-ready, so you can add wireless capabilities at a later date without having to mess around with PC cards or dongles.

Verdict

It's too far off April Fools Day, so we're going to take Toshiba on its word that this gem can be yours for the modest sum of £586. The A10 isn't the fastest or most feature-packed notebook, but in terms of essentials per pound it's hard to beat. If you want a basic model that'll perform well and are prepared to sacrifice the bells and whistles, the A10 is the only choice. ■

Will Head



Cheap as chips

If you've only been reading *PC Advisor* for the past year or so, you could be forgiven for asking if Celeron is a new processor from Intel. However Celeron is anything but, making its debut over four years ago.

Celeron is Intel's value processor (or cheap to you and me). The chip is basically a cut-down Pentium 4, which costs far less than its equivalent older brother.

Celeron tends to be a generation or two behind on speed ramps too. The main area of difference is the level 2 cache – fast memory close to the processor used to speed up frequently used operations. Celeron only packs 128KB of the stuff vs 512KB on the Pentium 4. Pentium M (the heart of Centrino) by comparison packs a whopping 1MB.

The reason you see so little of Celeron, however, is that its budget price rarely offsets the performance drop – that is, until you get to the super-cheap category. With processor speeds ramping ever upwards, however, and not that many apps taking advantage of the increased performance, it may well see a resurgence.



Toshiba Satellite Pro A10

- Toshiba: 0870 444 8944
- www.toshiba.co.uk
- £586 inc VAT

Specifications

2GHz Intel Celeron; 256MB RAM; 30GB hard drive; 14.1in TFT screen (1,024x768); 8x DVD-ROM; USB floppy drive; modem; network; 2.8kg; 332x293x40mm

Good points

Very good price; good design; adequate performance

Bad points

Not the latest and greatest technology – to complain about anything else would be rude

Build quality



Features



Value for money



MP3 Players

Creative Muvo NX and MSI Mega Stick 1

When manufacturers were banging out USB memory key drives left, right and centre, Creative – never one to rest on its laurels – used the format to produce an incredibly easy-to-use, innovative portable music player. When the Muvo hit the market there simply wasn't anything close in terms of size, functionality and affordability.

Times have moved on and this month we've got our hands on Creative's much anticipated follow up, the Muvo NX. We also take a look at MSI's pretender to its crown, the Mega Stick 1.

Move over, Muvo's here

The original Muvo was great and, despite its flaws, left the competition for dust. It was incredibly easy to use and, providing you steered clear of the dreaded 'A-B' button, you need never consult the instruction manual. Plug it in, drop on your tracks and away you go.

But it wasn't without its problems too, most of which have been addressed in the Muvo NX. The NX retains the same simple design – splitting the brains from the battery. To load up your music simply pull the grey bit out of the silver bit, plug it into a free USB port and drop your tracks on the drive that appears in Explorer.

The changes are mainly cosmetic but well received. First up is the scrolling LCD display, so you can see at a glance your loaded tracks. The forward and back buttons have been replaced by a jogdial, making navigation much easier. This is also used to navigate the menu system.

The repeat function has been relegated to a submenu and, at last, the Muvo has a keylock. Navigating though long MP3s was always a hit-and-miss affair with the original player. Once you eventually located the right tune, it was all too easy to put the device in your pocket only to accidentally press next track as you sat down. With the NX, these problems are no more.

The somewhat odd system of ordering tracks on the player by the date they were copied has also been replaced and there are a couple of other nifty features. The Muvo NX remembers the last track at the point when you switched it off, so you can resume that two-hour mix without missing a beat next time you switch on.

Even the bundled earphones aren't so bad. If we have any criticism it's that the updated Muvo is slightly fatter than its older sibling but, then, we're only talking a couple of millimetres.

MSI must try harder

At first glance the Mega Stick offers many of the same features as the Muvo NX – LCD display, jogdial and built-in microphone – as well as a radio. Despite offering the same capacity, more functionality and a cheaper price, the MSI Mega Stick doesn't quite cut it as a Muvo successor.

First up, the design isn't as elegant and the end cap covering the USB plug feels like it will drop off after any sustained use. Second, we thought the headphones could be more discreet. It may seem cool to have your player attached to a short, integrated neckstrap and headphone cord. But walk the streets of London with it hanging round your neck rather than discreetly tucked away in your pocket and you'll be a muggers target in no time at all.

Finally, there's the interface that, while not hard to get to grips with, will have you reaching for the sparse two-sided instruction manual to find out how to operate it successfully.

It's also surprisingly easy to set it to Chinese text... and surprisingly hard to change back.

Verdict

Despite the influx of wannabes, Creative is still king of a market with its Muvo invention.

Others may offer more functionality or a cheaper price tag, but nothing comes close to usability. And after all, music is meant to be about enjoyment not frustration at trying to get your player to work. ■



Creative Muvo NX

- Creative: 0800 376 7954
- <http://uk.europe.creative.com>
- £120 inc VAT

Specifications

Portable USB MP3 player; 128MB RAM; 1 x AAA battery; microphone; 73x36x16mm

Build quality



Features



Value for money



MSI Mega Stick 1

- Scan Computers: 0870 755 4747
- www.msi.com.tw
- £93 inc VAT

Specifications

Portable USB MP3 player; 128MB RAM; 1 x AAA battery; microphone; radio; 95x30x17mm

Build quality



Features



Value for money



Will Head



MP3 player Creative Jukebox Zen NX

If you're in the market for an MP3 jukebox there are only two real choices – Apple's iPod or Creative's new Jukebox Zen NX. Sound quality is equally good on both models, but otherwise they differ in several fundamental ways.

The Zen is the more PC-friendly device of the two. The secret is that Creative has written its own software for the jukebox, rather than relying on the shoddy MusicMatch program packaged with the iPod. Creative's MediaSource is a reasonably easy-to-use package that makes light work of ripping tracks to your hard drive and transferring them to the jukebox.

Thanks to the USB 2.0 connection, we transferred 10.3GB worth of MP3 music to the Zen in under an hour. Like the iPod, the Zen also doubles as a backup device and appears in Windows Explorer as a hard drive.

Where Creative has erred is in the design of the physical unit. Despite being slimmer and lighter than previous versions, the Zen NX is still 68g heavier and 6.3mm thicker than the 10GB iPod – which in our view makes it too bulky to carry around with you.

There's no in-line remote on the Zen NX, which is a shame, and the control system is clunky. The various control buttons seem to be dotted about at random – we particularly disliked the location of the tiny navigational jogdial. The iPod's elegant touch-sensitive dial is infinitely superior. The Zen's display is small, has an ugly green backlight and is difficult to read.

Good points include support for WMA and WAV file formats in addition to MP3 and a user-replaceable, lithium-ion battery that lasts for a maximum 14 hours of playback. The best part, however, is the Zen's low price. At £50 less than the iPod it's a real bargain.

Verdict

If you're looking for an MP3 jukebox to use in the car, while away train journeys or anywhere else you're sitting down a lot then it's worth putting up with the Zen's failings for the money you'll save. If you plan to walk around with your new purchase, the iPod's slimmer proportions make it the better choice. ■

Stan Everett

Creative Jukebox Zen NX

- Creative Labs: 0800 376 7954
- <http://uk.europe.creative.com>
- £250 inc VAT

Specifications

Windows 98 SE/Me/2000/XP;
USB 1.1 or 2.0 port; 76x113x22mm;
226g; up to 14-hour battery life;
132x64 pixels display; MP3, WAV,
WMA file formats; 20GB hard drive

Build quality



Features



Value for money



Flatbed scanner Canon CanoScan Lide 80

We couldn't resist giving a big thumbs up to the CanoScan Lide 80. Despite an extremely modest price tag, this scanner offers crisp scan quality, high performance levels and a string of top-flight features within one beautifully designed package.

The Canon is one of the most stylish scanners around, but its slim casing and polished silver livery aren't its only strengths. The CanoScan is as useful as it is aesthetically pleasing. Canon's proprietary Z-Lid technology means that the hinge of the lid folds upwards, allowing the Lide 80 to produce perfect scans of bulky items like hardback books. The scanner can also be mounted on its side. While the majority of users will find it easier to use the Lide 80 lying flat on the table, the ability to conserve desk space is a useful option.

The main reason for the Canon's compact size is that it rejects the tried-and-tested CCD approach and is instead built around Lide (LED InDirect Exposure) technology. By reducing the number and size of components, Lide allows for a much smaller frame. The CanoScan's low

power requirements also means that you won't need an external power supply.

The CanoScan works through a USB 2.0 interface and its perfectly pitched specifications list stretches to 48bit colour depth and an optical resolution of 2,400x4,800dpi (dots per inch). A transparency adapter is included as standard, making this a great choice for professionals needing a 35mm film-capable scanner.

Capable of scanning a 600dpi A4 image in just 39 seconds, this model is fast enough for most occasions. Scan quality is good with colours faithfully reproduced and clean image detail, while its Fare level 2 technology can partially restore images from damaged and faded originals. The software bundle is also generous.

Verdict

If you're in the market for a mid-range scanner, the CanoScan is an excellent choice. Whether you're looking at its versatile design, strong performance or juicy features list, the CanoScan stands out from the rest. ■



Canon CanoScan Lide 80

- Creative Labs: 0870 514 3723
- www.canon.co.uk
- £139 inc VAT

Specifications

Windows 98/Me/2000/XP; USB 2.0 support; A4 max scanning area; 48bit colour depth; optical res 2,400x 4,800dpi; software interpolated res 9,600dpi; transparency adapter; 258x374x38mm; 2kg; 1-year warranty

Build quality



Features



Value for money



Robin Morris

Video jukebox Archos AV320

Forget the iPod – this year’s most exciting hard drive jukebox is one that can play video as well as audio. Archos is known for being a bit of a jukebox pioneer. While other manufacturers are debating how, when and even if they will graft video capability on to their existing audio products, this French company has already taken the plunge. The jukebox can play MP3 music files, Mpeg-4 SP video files, record conversations and display JPG images. For a first-generation product, the AV320 is surprisingly good. However, as with all first-generation products, there are plenty of flaws.

The Archos is a bulky and heavy device, but that’s understandable considering what it can do. Movies look decent on the 8in colour screen – picture quality is about the same as VHS. The screen is only good enough for viewing indoors and you need to look at it square-on to see it properly. This is annoying, particularly as there’s no built-in stand – you must hold it in your hands even if you’re sat at a table.

Watch and learn

The idea is that you record TV shows directly to the device, which will then be ready to view later on in exactly the same way you use a video recorder. To do this, you attach a TV module (included in the package) to the side of the jukebox and then plug the video source (like a Freeview box) into the composite or S-Video connections. You can set it to start and stop recording automatically, as well as display whatever’s playing on the jukebox on the TV.

Transferring video and audio files from a USB 2.0-equipped PC is easy – just drag and drop them using Windows Explorer. If you’re armed with a DVD ripping program, it’s possible to transfer them to the jukebox, ready to watch on the bus or train.

Fussy reader

Equally, you can watch video files downloaded from the internet. This is actually less practical than it sounds, as the Archos is very fussy about the file types it will play. You have to convert any Mpeg-4 files into ‘simple profile’ format.

There’s an easy-to-use utility on Archos’ website to do this but it takes ages. To convert a DVD movie into a format the Archos can understand is an overnight job, even for the most powerful of machines.

The device itself is fairly tricky to get to grips with. It’s difficult to work out which of the three soft buttons on the righthand side does what and the joystick is one of the least ergonomic we’ve tried. Battery life, on the other hand, is impressive: around three-and-a-half hours of video playback and 10 hours of MP3 time.

However, the MP3 side of things is poor. The AV320 doesn’t display tag information – instead you get a list of confusing filenames. Audio quality is good, though, even if it means replacing the cheap-and-cheerful headphones.

Verdict

The AV320 is incredibly impressive product and the only decent choice if you want to watch Mpeg-4 videos while in the car or on the train. But problems with execution and a very high price mean that the smart buyer would be advised to wait until Media2Go devices are released before purchasing. Archos is certainly on the way to producing a decent video jukebox, but it isn’t quite there yet. ■

Stan Everett



Archos AV320

- Archos: 01793 441 510
- www.archos.com
- £549 inc VAT

Specifications

3.8in screen; 20GB hard drive; USB 2.0; connectors: digital SPDIF line-in/-out; composite; S-Video via add-on; built-in microphone; MusicMatch; rechargeable lithium-ion battery; 60x54x30mm; 45g

Good points

Reasonable video jukebox; decent battery life; one of a kind

Bad points

Poor MP3 jukebox; high price; flaky design and interface

Build quality



Features



Value for money



What's the deal with Media2Go?

Archos won't be the only provider of video jukeboxes for very long. In January Bill Gates announced a joint project with Intel, codenamed Media2Go. Since then the two companies have been designing hardware and software that will power a glut of devices with similar functions to the Archos AV320.

Initial models are likely to feature a 20GB hard drive, high-quality colour screens and play Microsoft's Windows Media 9.0 video and audio files in addition to MP3. DRM (Digital Right Management) will feature heavily, which could help persuade movie companies to sell videos to you directly over the internet, safe in the knowledge that you won't be able to copy it and pass it on to friends. Creative is expected to be the first manufacturer to launch a Media2Go product in the UK, either just before Christmas or in the new year.

Smartphone Orange SPV E100

We may have raved about it in our original review of the SPV back in March, but prolonged use has revealed some irritating flaws with this phone. Although integration with Outlook was good, the SPV proved to be ergonomically challenged. Put bluntly, it was awkward to use as a phone. And this, after all, is its primary function.

Just nine months down the road, Orange has released an improved version, the SPV E100, whose basic specification is the same but which addresses these shortcomings.

The more things change...

Our main issue was with the diminutive, poorly shaped buttons on the SPV's keypad. Orange has taken this into account, giving the E100 larger keys on a bigger keypad. The four-way navipad or 'action key' was also awkward and remarkably imprecise. It's now been replaced by a stubby joystick which is infinitely better to use.

The next major change is the screen. The original SPV colour display was no slouch but it's eclipsed by the new transreflective display found on the E100. Colours are bright and contrast well, with a wide viewing angle. Generally it delivers an all-round better experience than the earlier reflective unit, which looks faint and washed-out in comparison.

What's more, for a limited period only the SPV E100 is being bundled with the ElekSen flexible keyboard. This useful accessory normally carries a £50 price tag and helps you make good use of the SPV E100's email and web capabilities, not to mention SMS texting.

It's a shame that the smartphone doesn't come with a Notepad-like application, although third-party versions are available. The fabric-based keyboard is perfectly adequate to use when you're on the go and features a collapsible stand for the phone so that you can see the screen properly.

Although you can plug in the power lead, there's no facility for synching with the phone plugged in to the keyboard. And when you're done with it, you simply fold it up and stick it in your pocket. The ElekSen will also work with the original SPV once you've done an Orange Update.

...the more they stay the same

Despite the improvements, the SPV E100 retains some of the more serious shortcomings of its predecessor. The 1000 mAh lithium-ion battery

remains unchanged from the original SPV, so battery life is feeble by comparison with normal phones: you're lucky to get two days' use out of it and the SPV E100 really needs to be returned to its cradle every night. This isn't too surprising given the large, bright backlit colour screen.

Battery life is further hampered if you make any serious use of Windows Media Player to play MP3s – it can drop to a couple of hours. The most recent firmware update, v1.35, significantly increased battery life but only to a 'barely acceptable' level.

Firmware upgrade

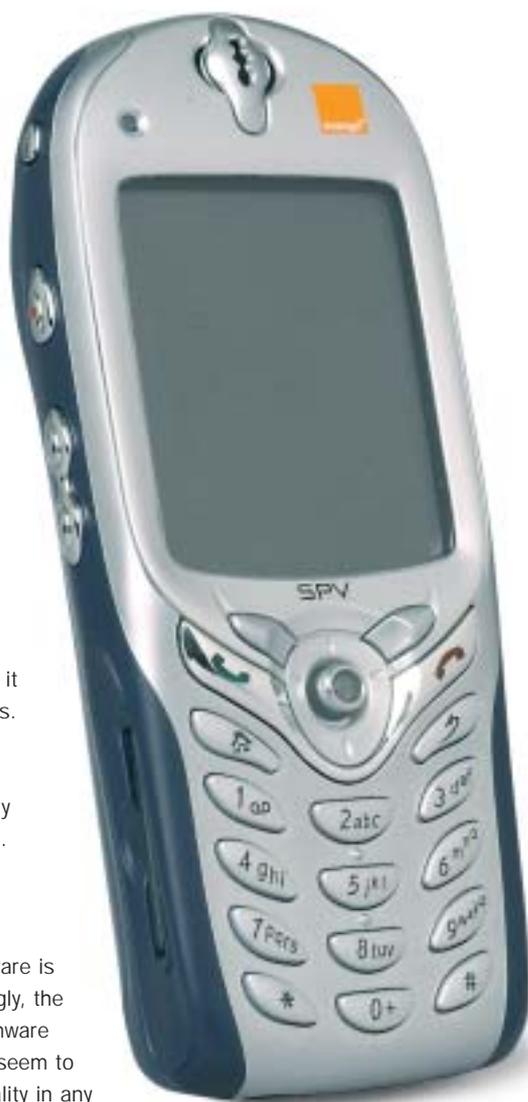
If you have an original SPV, upgrading to the latest firmware is an absolute must. Interestingly, the E100 has a more recent firmware release though this doesn't seem to add to the phone's functionality in any obvious way.

The other weakness is the glaring absence of Bluetooth. To be fair, Pocket PC 2002 for smartphones doesn't include integrated support for Bluetooth – we'll have to wait for the imminent release of the 2003 edition for this. But the phone's memory card slot is SDIO-capable and so can handle plug-in Bluetooth cards similar to those for the Palm range of PDAs. Sadly, so far, none is available. Some old bugs remain – for example, if you import numbers from Outlook prefixed with the UK international '+44' dialling code, the phone won't dial them.

Verdict

The E100 is the phone Orange should have released nine months ago and there will be legions of aggrieved SPV users as a result. It represents a significant improvement over the SPV and despite the E100's shortcomings, it still packs a connectivity punch, at a relatively low price that few mobile phones can match. ■

Roger Gann



Orange SPV E100

- Orange: 0800 801 080
- www.orange.co.uk
- £130 with contract

Specifications

ARM 710 processor; 16MB RAM; 32MB ROM; 176x200 colour TFT display; triband; POP3/Imap-4 email; SD/MMC slot; 50x120x23mm; 120g

Good points

Improved display; ElekSen flexible keyboard comes free for a limited time; low price

Bad points

No Bluetooth support; very poor battery life

Build quality



Features



Value for money



Power notebook Dell Inspiron 8600

Pentium M chips punch well above their weight and this means you can expect a great deal from Centrino notebooks in terms of both performance and battery life. This is perfectly illustrated in the Dell Inspiron 8600. Not only did it notch up a very respectable WorldBench 4 score, it also achieved the best MobileMark 2002 battery life test we have ever seen.

A WorldBench 4 score of 130 is a result many systems in the Power PCs chart would be proud of. It's worth noting that only one system we've seen with a desktop 3GHz Pentium 4 processor – notebook or PC – has beaten this score. When we ran the WorldBench 4 tests after disconnecting the Inspiron from the mains, it achieved exactly the same result.

Battery life is a major consideration when buying a notebook, especially if you plan on using it when you're travelling or commuting. It took four hours and 14 minutes to run down the battery on the Inspiron in our tests – 20 minutes more than the previous record-holder, the ACI Centurion.

But if you do want to use it while on the train, you might not be impressed by the bulk. It's not exactly super-heavy at 3.3kg but it is 36cm wide which could prove too big for comfortable use on public transport.

The reason that it is so large is because it has a 15.4in widescreen. If you want to watch DVD movies this is great, but if not it could be considered overkill.

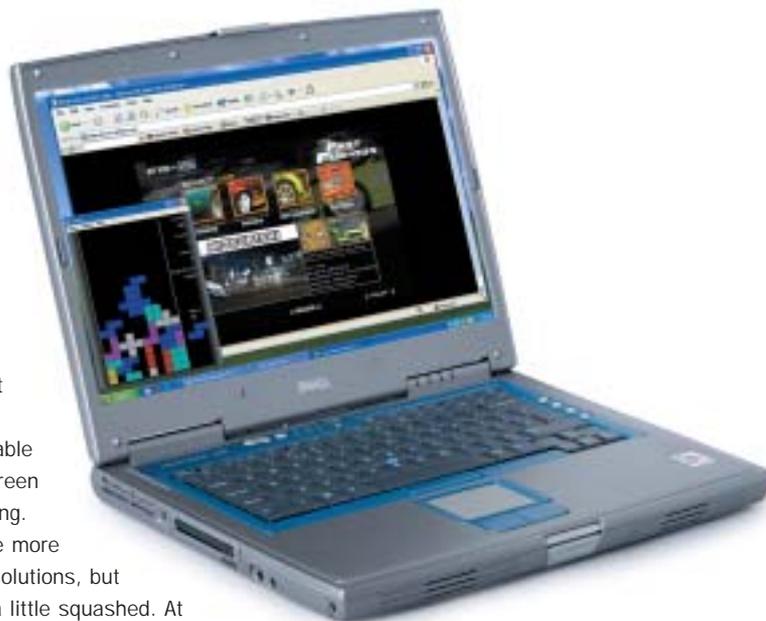
The highest resolution is 1,920x1,200 – you'll need the eyesight of a fighter pilot to be able to use a screen at this setting. You can see more at lower resolutions, but things are a little squashed. At 1,024x768, still the favoured setting for many users, it looks quite strange. The best setting seems to be 1,280x800 but it may still have you reaching for your reading glasses.

For backup and storage there's a reasonable 80GB of hard drive space and a DVD writer. Unfortunately it will only write to DVD+R/RW media, which is slightly more expensive than DVD-R/RW, but you still have the option to backup large amounts of data quickly and easily.

Verdict

At nearly £1,900 inc VAT the Inspiron 8600 isn't cheap but it's a very powerful notebook and the battery life is the best we've seen. The wide screen may not be to everyone's liking but it does give a good image which is complimented well by the graphics card. ■

Ben Camm-Jones



Dell Inspiron 8600

- Dell: 0870 152 4615
- www.dell.co.uk
- £1,880 inc VAT

Specifications

1.7GHz Intel Pentium M processor; Windows XP Home; 512MB DDR RAM; 80GB hard drive; 24x/16x/10x/8x/1x/1x CD-RW/DVD+RW combo drive; nVidia GeForce FX Go 5650 graphics card; 15.4in widescreen maximum resolution 1,920x1,200; 3.3kg; 359x274x38mm; 3-year return-to-base warranty

Good points

Fast; good battery life; DVD writer

Bad points

Big footprint; no ideal screen resolution; no PS/2 port

Build quality



Features



Value for money



Mobile gaming

Gaming and notebooks are not comfortable bedfellows – small screens and miniaturised keyboards aren't ideal for adrenaline-pumping first-person shooters. Serious gamers still shun notebooks in favour of desktop systems with big CRT screens and six- or seven-channel surround sound. However, the Inspiron 8600 could suit gamers who are after mobility too.

Many notebooks use an onboard graphics solution with user-definable memory. Those with dedicated graphics cards use either ATI's Mobility Radeon cards or the GeForce FX Go from nVidia. A graphics chip with more than 64MB of dedicated memory on a notebook is a rarity and the Inspiron 8600 is the first notebook we've seen with a 128MB graphics card.

We ran the Quake III Annihilator demo on the Inspiron and were stunned by the results – at a resolution of 1,024x768 the GeForce chip managed 88.8fps (frames per second). When we upped the resolution to 1,280x1,024, the Inspiron achieved 86.5fps. These are more the sort of figures that we'd expect to see on high-end desktop systems.

There is plenty of screen space too – a whole 15.4in of it to be precise – so this could well be the ideal mobile gaming platform. Dell provides two USB ports for plugging in a joystick or joypad, but note that you'll have to opt for a USB mouse as this laptop doesn't come with a traditional PS/2 port.



Budget notebook Samsung X05 XTC 1400

This striking notebook from Samsung is the perfect embodiment of how Centrino technology has managed to blend power with portability. Scoring a massive 123 in our WorldBench 4 tests and weighing in at just 2kg, the X05 XTC 1400 is a little piece of perfection.

Maybe perfection is too strong a word but when a notebook is fast, light, and has a long battery life – more than three and a half hours – it's difficult to see where any compromises have been made. It also looks great as it's sleek, silver and has a very slim profile.

With just 256MB of fast DDR RAM and a 1.4GHz Pentium M processor, the WorldBench 4 test result proves that size isn't everything. The graphics are handled ably by the Intel 855 chipset and displayed on the 14.1in TFT screen. Though it only stretches to a resolution of 1,024x768 it still gives a decent image and won't have you squinting to see it.

Light bite

The weight and size of the notebook will be attractive to anyone who is constantly on the move – it won't cause you an injury when you're carrying it, and it'll sit comfortably on your lap on the train. One problem that many ultra-portable notebooks suffer from is the tiny, squashed keyboard. Not so with the Samsung – the keyboard is a joy to use, with decent-sized Enter and Backspace buttons. The arrow keys are frustratingly small, though.

The touchpad is good if not exceptional, but what surprised us most was the scroll wheel. It's not often you see them on notebooks and we

thought this was a nice touch. Windows XP Professional edition is bundled and Norton AntiVirus comes as standard.

But there are some down sides. There are no serial, parallel or PS/2 ports, and there are only two USB 2.0 ports and one FireWire. The hard drive is also relatively small – 30GB is a lot of storage space but if you like to archive video or music files you might fill it up quite quickly.

The sound isn't fantastic either, with just two tiny speakers at the front of the chassis which you'll be covering up with your wrists as you type anyway.

For backup, there's a 24/24/10-speed (read/write/rewrite) CD-RW that also doubles up as a DVD-ROM drive. The one-year warranty is a slight disappointment, however.

Verdict

At just under £1,300 the X05 XTC 1400 is a steal – it might not have the biggest hard drive or the most memory but it can certainly perform. Battery life is excellent and the X05 should prove to be the perfect travelling companion thanks to its manageable weight and size. ■

Ben Camm-Jones



Centrino: less power, more speed

Over the last few months Centrino technology has changed the shape of mobile computing. It offers low power consumption, good performance and the ability to connect to wireless networks. It doesn't have to be expensive, either, as the X05 XTC 1400 shows.

There are three strands to the Centrino offering – the processor, the chipset, and the wireless network connectivity. The Pentium M processor ranges from 900MHz to 1.7GHz and uses SpeedStep technology used by the Mobile Pentium 4 chips. With a System Bus Frequency of 400MHz and 1MB of level 2 cache, it's fast but the Mobile Voltage Positioning technology means that it doesn't use up that much power.

The Intel 855 chipset is the second part of the Centrino package. Able to support up to 2GB of fast DDR RAM and with intelligent power consumption, the chipsets play a vital part in maximising the speed and minimising the power intake of Centrino systems.

Built-in Wi-Fi technology means you can connect to wireless networks quickly and easily, whether they are in the office or in an airport or hotel. You won't be able to transfer data at the claimed 11Mbps (megabits per second) but it's still a fast connection that will work over a range of about 150 feet.

Samsung X05 XTC 1400

- Samsung: 0800 072 2242
- www.samsungelectronics.co.uk
- £1,295 inc VAT

Specifications

Intel 1.4GHz Pentium M processor; Windows XP Professional; 256MB DDR RAM; 30GB hard drive; 24x/24x/10x/8x CD-RW/DVD-ROM Combo drive; 14.1in TFT LCD maximum resolution 1,024x768; 2kg; 316x259x24mm; 1-year warranty

Good points

Lightweight; fast; good battery life

Bad points

Screen resolution only stretches to 1,024x768; relatively small hard drive; few ports

Build quality



Features



Value for money





DVD writer Sony DRU-510A

If the name of Sony's DVD writers website (www.sonyisstorage.com) is anything to go by, the electronics giant isn't afraid to blow its own trumpet. A quick look through previous issues of *PC Advisor*, however, reveals that Sony's claims are backed up by plenty of evidence.

The DRU-500A reigned supreme for over half a year, and Sony's latest drive, the DRU-510A, looks quite capable of matching this feat. Indeed, the drive even impresses visually, and its polished front panel instantly draws attention.

As with most new DVD writers, the DRU-510A supports both DVD+R/RW and DVD-R/RW. Unlike last month's LG Super Multi DVD Writer, the user-friendly DVD-RAM standard has been omitted, but with DVD+RW and DVD-RW both supported, users are unlikely to find media becoming obsolete any time soon.

Part of the reason for the success of the DRU-500A was its huge 8MB memory buffer. Four times as large as the 2MB versions that you tend to see in other drives, this buffer easily offered enough breathing space for the Sony to keep its burn times high. The proprietary

PowerBurn technology should serve to eradicate further errors.

Superior specifications equate to better write times, and this Sony drive is a very fast DVD writer capable of writing 3GB of files to a DVD+RW in just 16 minutes and 31 seconds, and to a DVD+R in 9 minutes and 41 seconds.

Sony has spurned Ahead Software's Nero Burning Rom package (arguably the most intuitive CD/DVD burning program available), and has instead bundled a suite of Veritas titles. The various titles offer a host of facilities, from data backup to advanced video editing and DVD authoring. As a whole, the software may not be as easy to use as Nero, but the features come thick and fast, and overall software performance is perhaps marginally faster.

Verdict

Despite excellent performance, this is one of the cheaper models available. Combine this with dual-format support and you have a first-class drive that's going to take some beating. ■

Robin Morris



Sony DRU-510A

- Sony: 0870 243 0056
- www.sonyisstorage.com
- £200 inc VAT

Specifications

DVD+R/+RW/-R/-RW drive; 4x DVD+R; 4x DVD+RW; 4x DVD-R; 2x DVD-RW; 12x DVD read; EIDE interface; 8MB buffer; 32x/24x/16x CD (read/write/rewrite); Veritas RecordNow DX recording software; Sonic MyDVD; Cyberlink Power2Go; Veritas DLA packet writing software; 940g; 200ms access time; 1-year warranty

Build quality



Features



Value for money



DVD writer Iomega Dual DVD



Iomega Dual DVD

- Iomega: 020 7365 0527
- www.iomega.co.uk
- £215 inc VAT

Specifications

DVD+R/+RW/-R/-RW drive; 4x DVD+R; 2.4x DVD+RW; 4x DVD-R; 2x DVD-RW; 12x DVD read; EIDE interface; 2MB buffer; 40x/16x/10x CD (read/write/rewrite); Iomega HotBurn Pro; Sonic MyDVD; Sonic CinePlayer; 0.95g; 230ms access time; 2-year warranty

Build quality



Features



Value for money



Iomega is one of a host of manufacturers finding it harder and harder to resist jumping into the burgeoning DVD writer market.

Unfortunately, whereas devices like the Iomega Zip and HDD drives offer something different to rival products, the Dual DVD looks likely to be lost in the scrap for top placings.

The specifications are mostly fine, and the Dual DVD wisely supports both DVD+RW and DVD-RW formats – although not DVD-RAM. Speeds are in keeping with (although not better than) the competition, and the drive offers quad DVD+R/-R, 2.4x DVD+RW and dual DVD-RW.

CD-R/RW facilities are also fairly standard, offering 16/10-speed respectively. The small 2MB data buffer and lack of advanced writing technologies pose potential problems though, and the drive fails to provide any compelling reason for high speed.

Against top performers like the Sony, above, the Iomega struggles to get off the ground. On paper, its quad-speed DVD+RW/-RW capabilities allow it to match the Sony and Plextor (see page 59) drives, but in real-world testing it falls short.

Writing our 3GB of test files to DVD+RW in 18 minutes and 2 seconds, the Dual DVD was comfortably beaten by the competition's drives. DVD-R performance was no better, trailing the Plextor by almost 45 seconds.

To be fair, part of the problem may have been down to the software. The ageing and rather frustrating Iomega Hot Burn Pro does little to create a favourable impression and, when used in preference to Ahead Software's Nero package, writing to DVD appeared to take between 20 and 25 seconds longer. Good backup facilities are provided though, and the solid authoring facilities of Sonic MyDVD are partial compensation.

Verdict

Marred by disappointing burning software, this drive fails to compete with its rivals. Even with third-party software, the drive is slower than the Sony and Plextor models. Had the Iomega's price significantly undercut the Sony's, this might have been worth considering. As it is, however, there are definitely better deals to be had. ■

Robin Morris

External DVD writer Plextor PX-504UF

With new DVD writers hitting the streets, it's becoming harder for manufacturers to distinguish their products from the competition. With the PX-504UF, Plextor would appear to have found a strong selling point, and for users wanting a DVD writer on several different machines, or who simply don't like the idea of opening up their PC, the external PX-504UF will fit the bill. Capable of being connected to either a USB 2.0 or an IEEE1394 (FireWire) interface, the drive is extremely easy to install.



Plextor hasn't stinted on speed, and the drive's 4x DVD+R and 2.4x DVD+RW facilities compare favourably with the fastest internal models. Unfortunately, there's no support for the DVD-RW or DVD-RAM formats, so buying this drive means gambling on DVD+RW media continuing to be available in the future. Buffer underrun protection technology is reasonable, although otherwise the Plextor's specifications are capable without rising above the crowd. The 2MB data buffer, for instance, pails in comparison with the Sony DRU-510A's 8MB (see page 58).

It's no surprise, then, that the Plextor didn't manage to keep up with the Sony in our real-world tests. However, its performance is still extremely acceptable – producing a 3GB DVD+RW in 17 minutes and 12 seconds, and a DVD+R in just over 10 minutes – making the Plextor the second fastest drive, albeit between 30 and 40 seconds slower than the Sony. The 16x CD-R facilities are also good, and a 650MB CD-R was produced in just over five minutes.

Ahead Software's Nero Burning Rom package isn't quite as popular among drive manufacturers as it used to be (the Plextor is the only drive this month to feature this package), but that's no reflection on the quality of the software. Indeed, Nero is still the easiest package (not to mention one of the quickest), while Pinnacle Studio offers a good introduction to DVD authoring.

Plextor PX-504UF

- Dabs: 0870 4293010
- www.plextor.be
- £265 inc VAT

Specifications

DVD+R/+RW drive; 4x DVD+R; 2.4x DVD+RW; 12x DVD read; USB 2.0 and FireWire interfaces; 2MB buffer; 40x/16x/10x CD (read/write/rewrite); Ahead Nero; Pinnacle Studio; Cyberlink PowerDVD; Ahead InCD packet writing software; 940g; 140ms access time; 2-year warranty

Build quality



Features



Value for money



You'll also find one blank DVD+R and one blank DVD+RW thrown in.

Verdict

If all you want is a fast DVD writer, the Sony should be your first port of call – the Plextor isn't quite as fast, costs more, and doesn't support DVD-RW. However, this is still a strong overall package and, for anyone needing the convenience of an external interface, this drive has plenty to offer. ■

Robin Morris

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Digital camcorder Canon DM-MVX3i

The long-standing divide between three-chip and single-chip digital camcorders is disappearing. You can buy a three-chip product for under £1,000, and now Canon has launched the MVX3i, a single-chip MiniDV camcorder with the kind of features you'd expect from a three-chip model.

It's the first in the MVX range to use a horizontal form factor, which allows it to accommodate a large and extremely clear 3.5in LCD viewfinder, as well as making it more comfortable to use for long periods. The 10X optical zoom rating is nothing to get excited about, but the f1.6 lens is faster than most and this model is one of the few to feature an OIS (optical image stabiliser) – see *Losing the shakes* below.

Filter factor

Behind this, you'll find a high-resolution, 2.2Mp (megapixel) image sensor combined with Canon's new DSP (Digic digital signal processor). It's not the first 2Mp CCD (charge-coupled device) in a camcorder, Sony got there first with the DCR-IP220, but it's certainly the first with an RGB (red, green, blue) filter in place of the usual complementary filter – sometimes called MYCG after its magenta, yellow, cyan and green filters.

As a result, there's no need for colour conversion calculations, making it less prone to image noise and providing more accurate colour data capture – much like a three-chip image sensor. The results are clean images, vivid colour and accurate exposure without harsh, over-sharpened edges in high-contrast areas. Flesh tones tend to be over-saturated, however, making people look a little flushed.

Widescreen image

The MVX3i uses more of the CCD to capture widescreen images, producing a sharper picture than cameras that just crop the top and bottom of a standard 4:3 frame. It has also acquired some of the professional tools found on Canon's three-chip XL1S and XM2 models, including zebra stripes to indicate over-exposed areas in the viewfinder.

The switchgear on the lens barrel is also familiar, with a manual focus toggle, digital effects selector and a jog control that lets you tweak manual settings without taking your eye off the subject.

The MVX3i also shapes up pretty well as a digital still camera, with a maximum capture of 1,632x1,224 pixels, a pop-up flash and an AF (AutoFocus) illuminator LED at the front – though this lacks the range of Sony's hologram AF. You can record email-sized Mpeg-4 clips to the supplied 8MB SD card, and Canon's DV Messenger software lets you control the camera remotely or use it as a webcam.

Verdict

While there's more that can be said about the MVX3i, it's safe to say that we like it a lot. If you can't quite stretch your budget to reach Canon's three-chip XM2, then this is about as close as you'll get in terms of features and performance. ■

Laurence Grayson



Canon DM-MVX3i

- Canon: 08705 143 723
- www.canon.co.uk
- £1,300 inc VAT

Specifications

2.2Mp single-chip CCD; MiniDV tape format; F1.6; 10x optical zoom lens; 540 lines video resolution; 1,632x1,224 pixel still resolution; 3.5in LCD viewfinder; DV In/Out; S-Video In/Out; Secure Digital card; intelligent accessory shoe; 80x90x201mm; 725g

Good points

2.2Mp CCD with RGB colour filter; large LCD; comprehensive manual controls; high-end features only previously found on three-chip models

Bad points

Tends to over-saturate flesh tones; bottom loading tape compartment; tape transport controls can't be seen at same time as LCD

Build quality



Features



Value for money



Losing the shakes

It's generally accepted that OIS (optical image stabilisation) is better than the DIS (digital image stabilisers) you'll find in most consumer camcorders, but to understand why requires a closer look.

While DIS systems look at the detail around edges of the frame to work out whether the image is shifting, the MVX3i's OIS has motion sensors within the lens itself. When these detect camera movement, they trigger a small actuator that makes tiny adjustments to an internal lens, redirecting the incoming light and helping to reduce wobbly footage often found in handheld recording.

It's a better system because it can't be fooled by motion at the edges of the subject, it doesn't lose any image data, and it will work with both widescreen 16:9 video and still capture – which is more than can be said of its digital counterpart. Don't expect miracles, though. If you're as wobbly as Ozzy Osbourne, you'll still need a tripod.

Multimedia PC Iridium AVPC

After we looked at the Hi-Grade Xperian in our May 03 issue, we expected to see a flood of Multimedia PCs hit the market. However, this hasn't exactly been the case – in spite of all the hype about the digital lifestyle revolution that's supposedly on its way.

You'd think that you'd have to pay through the nose for a system that isn't just a PC but an entertainment centre as well. But PCs that do more than just compute don't have to be pricey, as Iridium has shown with this model.

With the AVPC you can listen to the radio, CDs and MP3 files, watch DVDs and even normal television programs and you don't need to boot up Windows to do this – it's just as quick as using a standard TV, DVD player or stereo system.

It's not difficult to imagine the AVPC in the middle of your living room. The silver casing is compact and the keyboard folds up when it's not in use. Two speakers frame the 15in LCD screen and the footprint is relatively small so if you ever did want to put it out of sight you could do so easily. But we don't see why you'd want to as the AVPC is pretty stylish.

Quick-quick, slow-slow

If you want an ultra-fast PC, then this isn't for you. It achieved a WorldBench 4 score of 101, making it just one point faster than our control PC. However, if you don't expect too much, the AVPC can accomplish most everyday tasks very easily.

Word processing, surfing the internet and image-editing won't make this system break into a sweat, but it might struggle if you were to run too many applications at once.

It certainly wouldn't be much good for games – running the Quake III Annihilator demo the Iridium only managed to produce 12.1fps (frames per second). The graphics chip is built in and only has 32MB of memory, so it was never going to set the world on fire.

The optical mouse connects to the system via one of the rear-mounted USB 2.0 ports. The keyboard is pretty good, with a numeric keypad on the right, although the spacebar could have been a little bigger and the Enter button is an unusual shape which will take getting used to. Also, as it's attached to the main unit, it could become awkward to use for any length of time.

The warranty is only one year long but there is a good manual and software bundle, including an antivirus package and Ability Office 2002.

Verdict

It's the versatility of the AVPC that makes it a winner. It doesn't do any one thing outstandingly well, but it's an overall acceptable performer and with many tasks it doesn't even need to boot into Windows. For under £1,000, the Iridium really is a great deal. ■

Ben Camm-Jones



Iridium AVPC

- Iridium: 0870 066 0222
- www.avpc.tv
- £999 inc VAT

Specifications

2.4GHz Intel Pentium 4 processor; Windows XP Home; 512MB DDR RAM; 80GB hard drive; 24x/24x/10x/8x CD-RW/DVD-ROM drive; 15in TFT max resolution 1,024x768; 4-in-1 card reader; Ability Office 2002; Panda AntiVirus Titanium; 1-year warranty

Good points

Good design; 4-in-1 card reader

Bad points

Not good for gaming; hard drive could be bigger for storing media files; screen only stretches to 1,024x768

Build quality



Features



Value for money



TV on your PC

TV Tuner cards have been available for some while now, enabling users to tune in television and radio broadcasts. It is still relatively unusual to see PCs that are able to do this straight out of the box, though.

Watching TV isn't all you can do – you can record it on to your hard drive. However, as one minute of a broadcast at decent quality will take up about 40MB of space, recording something like a football match is going to take up around 3.5GB of hard disk space. The AVPC has an 80GB hard drive and this is possibly a little small if you want to have a good selection of media files stored. You can also pause live broadcasts to watch at your own pace, so the telephone or doorbell ringing need never spoil your enjoyment of Countdown.

The screen itself only stretches to a resolution of 1,024x768 but gives a better picture than your average portable television. The built-in speakers are adequate for what they are but if you want high-quality surround sound you'll need a separate speaker system.

Compact PC

HP Compaq d330 DG285A MicroTower

Choosing a PC isn't always a simple matter of trying to get the most components for the least amount of money. The HP Compaq d330 MicroTower aims straight for the business market, which means that, in place of high-performance graphics capabilities and thunderous audio output, we have strong Intel Pentium 4 technology that never misses a beat, has speedy network communications and a compact case design that saves on desk space.

What we don't have, however, is any kind of display unit. If you don't have a spare monitor or flat-panel, you'll need to add the cost of one to the d330's £795 asking price.

Less is more

It's hard to review the DG285A as a single PC, since this model is just one of 14 different PCs in the d330 range. What connects them all is the HP MicroTower case. Essentially a slimmed-down version of a standard desktop PC, this case won't actually save you a great deal of desk space, but it does make more sense than the unnecessarily huge boxes which house some of today's machines.

Furthermore, the speakers are built into the PC, and while the sound quality isn't going to have audiophiles purring, the additional space saved is likely to please those working in cramped offices. Not surprisingly, the PC isn't too spacious internally, but you can get to most of the important areas without too much difficulty, and the case can be opened without the need for a screwdriver.

High calibre technology might not be the top priority in the home-based office, but the d330's specifications aren't too shoddy. The 2.6GHz Intel Pentium 4 isn't the fastest of chips, but it does offer plenty of stability to Windows users and it supports HT (hyperthreading) technology (see the boxout below).

Networking

Network facilities are extremely strong, since not only does the 865G chipset support high-speed gigabit ethernet technology, but it also allows it to reach almost its full potential by adding the new CSA (communications streaming architecture) bus.

The chipset supports dual 64bit DDR memory channels although, for smooth Windows XP performance, the 256MB of PC3200 RAM should ideally be doubled. Most office PCs would be more than well served by the HP's 40GB hard drive, and the Smart III Ultra ATA/100 interface cuts down on potential bottlenecks.

If you do look to play the odd game on the d330, you'll be disappointed by the poor frame rates generated by the integrated Intel Extreme 2 Graphics solution – even at low resolutions, the d330 struggled to remain above 30fps (frames per second) in our Quake III tests.

But perhaps of greater concern will be the disappointing CD drive options – no DVD or CD-RW facilities are included with this model. Software amounts to Microsoft Windows XP Professional and Norton AntiVirus.

Verdict

Slightly more compact than a standard desktop PC, the d330 comes with reliable Intel Pentium 4 technology, fast network connectivity, the promise of Multi-Threading and good aftersales support from HP Compaq. However, most of the d330's components are rather lacklustre, and considering that a monitor isn't even included in the asking price, this amounts to a fairly expensive office PC. ■

Robin Morris



HP Compaq d330 DG285A

- HP: 0845 270 4222
- www.hp.com
- £795 inc VAT

Specifications

2.6GHz Intel Pentium 4; 256MB DDR RAM; 40GB hard drive; 48x CD-ROM; integrated graphics (up to 64MB); SoundMax integrated sound; integrated speakers; Windows XP Professional; Norton AntiVirus; 3-year warranty (1-year onsite); 100x383x365mm; 10kg

Good points

Smaller than average desktop PC; reliable Intel Pentium technology; fast network connection

Bad points

Expensive; poor memory and CD-ROM facilities; no monitor

Build quality



Features



Value for money



Hyperthreading

The thinking behind HT is that a huge amount of processing power is wasted by giving one gigantic chip a single set of instructions to process. By making a virtual duplicate of the Pentium 4 chip and fooling the PC into thinking that it actually has two processors onboard rather than one, HT technology can hand out tasks to both 'processors' at the same time.

Just as humans perform most tasks more efficiently by using two hands rather than one, HT ensures that as much of the processor's resources are being used as possible. As more and more applications are designed to take advantage of HT, the technology should become more indispensable and, should it take off in the future, d330 owners will be well placed.