



Wireless networking - it's great. Combine it with a broadband connection and notebook and you've got an application that adds something to your traditional internet use. Watching TV when they mention a website for your favourite show? No need to scribble it down on the back of the *Radio Times* only to forget all about it. Simply fire up your notebook and browse away.

But if we're not careful this fantastic new technology could easily become a messy, complicated and frustrating business. Take 802.11b, for example. The first wireless protocol to hit the streets, it was simple to set up, provided good interoperability between different vendors' hardware while being adequate for the job of surfing, printing and minor file transfer.

The only down side was transfer speed. The maximum 11Mbps (5-6Mbps in reality) was fine, but if you planned to do any hefty file transfer or video streaming then you had to fall back on a traditional wired setup.

The next generation, 802.11g, retained compatibility with 802.11b but boosted the speed to 54Mbps (more like 25Mbps in use). There were some interoperability hiccups when it came to using 802.11b and g at the same time, but nothing too major.

Now we're seeing a raft of Super-G products, touting speeds of up to 108Mbps. Transfer rates actually settle around the 30-35Mbps mark, so consumers will be disappointed with this minimal increase. Interoperability between vendors at the higher transfer rate is another letdown - a card bought from 'Super G' vendor A won't work with a 'G+Max' router from vendor B.

Stick to the standards guys. We're impressed with your technological prowess but, unless you want to spoil it for the rest of us, can you either develop your high-speed systems into a standard that everyone can adopt or just keep it to yourselves? ☒



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Scoring and testing explained

Each review rates a product according to a set criterion. The score is broken down to show how we reached our final verdict. Ratings range from 1 to 10 and fall into the following classifications:

1 to 3 - poor

4 to 6 - average

6 to 8 - good

8 to 10 - excellent

How we rate hardware

- **Features** This score rates the specification of a product by current standards.
- **Build quality** This denotes how well a product is made and the quality of its individual components.
- **Value for money** The price of a product will often be the deciding factor between a good and bad review. Cheaper products won't always win, but a better price/performance and features ratio means a higher score.

How we rate software

- **Ease of use** Rates how easy software is to install and use.
- **Features** Indicates how much the package contains. An office suite that only came with a spreadsheet would score poorly.
- **Value for money** We're looking for lots of features, good performance and a low price.

PC ADVISOR
GOLD

PC Advisor Gold award

Our Gold award honours product excellence and indicates it may enter our charts next month.

Prices

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Power PCs

Mesh Matrix 64 3400+ Ultra-X & Evesham Axis 64 3400+



There's a new chip in town - AMD's Athlon 64 3400+. We were keen to see just how much of an improvement this chip would be on the previous Athlon 64 processors, so we asked two vendors to supply us with the goods.

Mesh Matrix 64 3400+ Ultra-X

Just as we thought, the new chip was faster. Mesh teamed it with a full 1GB of DDR RAM and an Asus K8V Socket 754 motherboard, and it scored a record 146 points in our WorldBench 4 tests. However, as we had also predicted, it wasn't that much faster than the previous record of 144 achieved by a Mesh system using the Athlon 64 FX-51 chip.

Thanks to the incredibly capable 256MB Radeon 9800 XT graphics card, the Mesh also broke the existing records in our graphics and video encoding tests. That said, we encountered one or two problems when running our benchmarks. Even though we got them to work in the end, we think the Matrix does have one or two stability issues that need to be resolved.

Performance aside, the Mesh has plenty of great features such as the Creative Audigy2 ZS Platinum Pro sound card package which includes a breakout box mounted on the front of the tower. An Iiyama ProLite E481S monitor, two 120GB hard drives and a three-year onsite warranty round off the specifications.

Evesham Axis 64 3400+

The Axis was also quick, but a few points behind the Mesh in the WorldBench 4 stakes. Managing 143 points is nothing to be ashamed of, although it is a single point behind the old record set by the Mesh FX-51 system reviewed back in our December 03 issue and three behind the Matrix 64 3400+ Ultra-X.

While the Axis is more than £60 cheaper than the Mesh system, you don't quite get as much for your money. There is a Creative Audigy2 ZS card but no breakout box. The 256MB Radeon 9800 Pro card is an excellent choice but isn't quite up to the standard of the Radeon 9800 XT card in the Mesh.

Where the Evesham does get the better of the Mesh, though, is with its DVD writer. While the Mesh provides dual-format burning capabilities, the Evesham also offers users the choice of backing up to DVD-RAM media, which is a very simple process - essentially just a case of dragging and dropping.

Verdict

Despite the fact that it is more expensive, the Matrix 64 3400+ Ultra-X comes out on top. They're both good systems but the difference in speed, the additional features and the better warranty give the Mesh the edge. **Ben Camm-Jones**

Athlon 64 3400+

It doesn't seem that long since the first desktop 64bit processors hit the market, but AMD has brought out a new chip in the form of the Athlon 64 3400+. Running at 2.2GHz, we are promised that it will take performance levels up a step or two.

According to AMD, the 3400+ is 14 percent faster than a 3.2GHz Pentium 4 processor and eight percent faster than the Athlon 64 3200+. While we at *PC Advisor* obviously can't verify the manufacturer's own tests, the 3400+ does indeed seem to

be faster than any P4 or Athlon 64 3200+ chip we've tested.

There will be some new additions to the Athlon 64 processor family coming soon. Rumour has it there will be an FX-53 chip using a Socket 939 motherboard sometime in the spring, and 3700+ and 4000+ models later in the year. Intel's Pentium 4 Prescott core models should be hitting the market by the time you read this, and although they aren't 64bit chips, it should be interesting to see how they match up to the 3400+.

Mesh Matrix 64 3400+ Ultra-X

- Mesh: 0870 046 4747
- www.meshcomputers.com
- £1,761 inc VAT

Specifications

Athlon 64 3400+ processor; Windows XP Home; 1GB of DDR RAM; 2 x 120GB hard drives; 19in Iiyama ProLite E481S flat-panel monitor; 256MB ATI Radeon 9800 XT graphics card; Creative Audigy2 ZS Platinum Pro sound card; Creative Inspire 7700 7.1 speaker system; 52x/52x/32x CD-RW drive; 12x/4x/2.4x/2.4x/2.4x DVD-R/DVD+R drive; 3-year onsite warranty

Good points

Fast system; great graphics performance; Creative Audigy2 ZS Platinum Pro

Bad points

Unstable; only one drive capable of reading DVD-ROM media; more expensive than the Evesham

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VALUE FOR MONEY



Evesham Axis 64 3400+

- Evesham: 0870 160 9500
- www.evesham.com
- £1,699 inc VAT

Specifications

Athlon 64 3400+ processor; Windows XP Home; 1GB of DDR RAM; 160GB hard drive; 19in ViewSonic VP191S flat-panel monitor; 256MB ATI Radeon 9800 Pro graphics card; Creative Audigy2 ZS sound card; Creative Inspire 7700 7.1 speaker system; 16x DVD-ROM drive; 32x/24x/16x/12x/4x/2x/4x/2.4x/3x CD-RW/DVD-R/DVD+R/DVD-RAM drive; 2-year onsite, 1-year return-to-base warranty

Good points

Excellent monitor; multiformat DVD writer; a little cheaper than the Mesh

Bad points

Not as quick as the Mesh; relatively small hard drive; graphics card not as good as the Mesh

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PC ADVISOR GOLD

Budget notebook

AJP 8355

This month has seen *PC Advisor's* existing performance records broken for both desktop PCs and notebooks. Behind this hike in speed is the latest 64bit family of processors from AMD. The Athlon 64 3200+ Mobile processor housed in the AJP 8355 is certainly quick and, thanks to the PowerNow technology used by all mobile Athlon chips, it is very efficient too.

A WorldBench 4 score of 139 is the highest ever achieved by a notebook, beating the mark set by the Evesham Voyager 64 3200+ two months ago by six points. In fact, it's only seven points behind the new desktop PC record-breaker - the Mesh Matrix 64 3400+ Ultra-X (see opposite page) - which is quite a remarkable achievement.

For a machine designed as a desktop replacement, the AJP also has a pretty good battery life. We got it to run for nearly three hours in our tests, so you should be able to get a good chunk of work done if you're disconnected from the mains for a while. However, its rather hefty weight of 3.6kg means you won't want to be carrying it around with you too much.

LAN rover

The 8355 clearly isn't designed to be a tool for the travelling businessman, as its lack of Wi-Fi facilities proves. You can, however, hook up to a standard LAN, so for office-based workers it's a good space-saving solution. The 60GB hard drive should be large enough to store all your data and for backup there's a CD-RW. There is also the option to upgrade to a DVD writer for an additional £115.

The 15.1in TFT screen gives an excellent image and the keyboard is very good. Most keys are where you would expect them, the Return and Backspace keys are as big as on a standard



desktop keyboard and even the arrow keys are a good size, which is unusual for a notebook.

If you want to play games then the 8355 should do a sterling job. Using the latest Mobility Radeon 9600 card (otherwise known as the M10) the AJP breezed through our graphics tests, achieving a frame rate of 96.5fps (frames per second) in the Annihilator demo in Quake III.

The machine comes with a three-year warranty but is only covered for labour, not parts, after the first year. Another criticism of the 8355 is that it doesn't have a PS/2 port - a minor point, but worth considering if you only have PS/2 peripherals.

Verdict

This is the fastest notebook we have seen and by quite some margin. An ideal desktop replacement, the AJP should handle anything you throw at it with ease, and with its 64bit processor it's futureproofed as well. All in all, the 8355 is a worthy Gold award winner. **Ben Camm-Jones**

Mobile Athlon 64 processors

Mobile Athlon processors have in the past used a power management scheme called PowerNow to regulate the chip's energy usage. The technology means a notebook only draws on the power it needs so it uses more when performing complex tasks and less while it is sitting idle. In principle at least, it is similar to the Speedstep technology used by Intel's Mobile Pentium 4 and Pentium M processors, with the net result that battery life can be stretched out for as long as possible.

Of course, not all notebooks need great battery life because they are primarily used as desktop replacements. With such notebooks, it's performance that counts and as the AJP 8355 proves, the Athlon 64 Mobile processors can certainly deliver. However, fast processors often get quite hot and require plenty of cooling.

PowerNow technology should also reduce the need for noisy cooling systems in notebooks by regulating how much power the processor uses. We have noticed in the past that some notebooks using Athlon XP-M processors have been quite loud, but this system at least doesn't have that problem.

AJP 8355

- AJP: 020 8208 9710
- www.ajp.co.uk
- £1,145 inc VAT

Specifications

AMD Athlon 64 3200+ Mobile processor; Windows XP Home; 512MB DDR RAM; 60GB hard drive; 15.1in TFT display; 64MB ATI Mobility Radeon 9600 graphics card; 24x/24x/10x/8x CD-RW/DVD combo drive; 3.6kg; 332x285x41mm; one-year parts and labour, 2-year labour-only warranty

Good points

Fast; great price; good graphics performance

Bad points

No Wi-Fi facilities; heavy; no PS/2 port

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Mobile phone
Sierra Wireless Voq

Sierra Wireless isn't a well-known brand when it comes to mobile phones, but it's no newcomer to wireless technology. Products such as its AirCard 750 (reviewed November 02) pack the guts of a mobile phone into a PC Card format, providing a data connection to notebook users on the move.

The AirCard was targeted firmly at the business user and, although mobile phones are generally consumer focused, the Voq Professional is built with the business user in mind. The most notable feature is the flipout keyboard hidden below the numeric keypad (see *The keyboard* below), but there are other bundled functions to tempt the professional.

Mailing marvels

The phone runs the latest version of Microsoft's mobile operating system, Smartphone 2003. Rather than rely on the bundled Pocket Outlook for email, however, Sierra Wireless has developed its own VoqMail application, which adds the ability to connect to Imap4 mail accounts. This is available in two flavours: Personal and Professional.

The former version is free, while the price for the Professional edition has yet to be decided. The main difference between the two is that Professional includes a VPN (virtual private network) client, for connecting to a corporate network. As it connects over GPRS, VoqMail can poll your mailbox and automatically deliver new mail to your handset without any intervention. You can also specify how often it polls depending on the time of day.

Also included is the MyVoq application, which starts automatically when you open the keyboard or can be called manually from the MyVoq key below the joystick. The aim of the application is to allow you to type something

and then decide what to do with it. MyVoq searches for the text you've written within the built-in applications and presents a list of things you can do. For example, type 'John' and it'll find any contacts called John in your address book. Alternatively, start typing and you're given the options to send it as a text message or save it as a note.

Small, compact and fiddly

While MyVoq works well, the limited display space can make it look confusing, and while it saves a few key presses here and there it doesn't save that much time if you're already fairly familiar with the Smartphone software.

One annoyance with the hardware is the close proximity of the buttons around the joystick. At times it was all too easy to hit the Dial button when you were instead going for Home or the soft key. The joystick was also a little hard to operate and could benefit from some sort of grip, but the unit we saw was a pre-production model so this may be fixed on shipped devices.

Verdict

The Voq Professional is a good first effort at a mobile phone, but it lacks the styling and panache of handsets from more well-known manufacturers. The price, which is yet to be set, will depend on how the operators wish to sell it. The addition of the flipout keyboard and VoqMail makes it well suited to the business environment, but the design and ergonomics are likely to put off consumers. ☒ Will Head



Sierra Wireless Voq

- www.voq.com
- Price TBC

Specifications

Triband (900, 1800, 1900MHz) mobile phone; Microsoft Smartphone 2003 operating system; 200MHz Xscale processor; 48MB Memory (20MB available to user); 32MB RAM (16MB available to user); flipout Qwerty keyboard; 55x132x23mm

Good points

Flipout keyboard, additional bundled software, large screen

Bad points

Can be fiddly to operate, lacking in style, large

BUILD QUALITY



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The keyboard

Flip open the keypad, and Sierra Wireless presents you with a full Qwerty keyboard. It is designed for thumb operation and is relatively easy to use for basic input, but the small size of the keys can make it prone to typos.

Most keys also double as symbol characters when you press one of the yellow function keys. Given the already small size of the keys, squeezing on both the letter and symbol can make some symbols a little difficult to find.

There are also no tactile identifiers - like raised bumps found on the F and J keys on most keyboards - so you'll often find yourself



staring at the keys and not what you're writing. The keyboard is a novel addition, but the requirement for two-handed use means that it's sometimes quicker to resort to the predictive text.

Digital media adapter
SMC Networks EZ-Stream

Like many digital media adapters, the EZ-Stream allows you to send media including video, audio and still image files from your networked host PC directly to your TV or hi-fi. However, the EZ-Stream is different in that it supports the faster 802.11g wireless networking standard, theoretically giving it a key advantage over slower but more commonplace 802.11b systems (see *Easy as ABG*, right).

We'd be surprised to find anyone buying this product for its looks because it's extremely unlikely to match up with your existing home entertainment system. In fact, it doesn't even match with SMC Networks' own wireless broadband router, with its flimsy feel and pair of distractingly bright blue LEDs on the front.

Failed connections

Hooking up the EZ-Stream to your network is a chore, particularly when using the remote control to key in network configuration data such as SSIDs, WEP security codes and IP addresses. In our case this was compounded by the fact that the base unit repeatedly failed to connect to the server, even though the server itself could see it on the network - a problem that was only rectified when we used the server software to address the base unit directly.

Even when you're past the setup stage, the EZ-Stream can take more than a minute to boot up and the onscreen menu system is unresponsive and awkward. Irritatingly, the next/previous track buttons on the remote control only work when you're playing back files on a playlist.

Even when you select a track from the Album view, the EZ-Stream drops back to the menu once it's played out, so you'll need to create playlists for each album if you want to listen to them right the way through. Equally annoying is the fact that it bundles all your video files into the same list, leaving you dependent on scrolling or laboriously keying in a search to find a specific file.

Transfer trouble

While the EZ-Stream supports a variety of media formats (JPG, BMP, MP3, Mpeg-1 and Mpeg-2) and MP3-based streaming internet radio, it resolutely ignores common alternatives such as WMA, WMV, AVI (including Divx/Mpeg-4), MOV, GIF, TIF, WAV or



MP3Pro. Not only that, but the claimed maximum bandwidth allowed for Mpeg-2 transfers is 4Mbps, so the EZ-Stream takes absolutely no advantage of the extra data transfer rate provided by its support for 802.11g wireless networks.

We tested the product on both a 802.11b and 802.11g network and found no perceptible difference in performance on either; a 5Mbps Mpeg-2 file suffered from the same dropped frames and stuttering audio on both setups. In fact, we failed to get smooth playback even for 4Mbps files, regardless of the network type or signal strength. We found a more realistic bit rate for video files was in the region of 2-3Mbps, which is fine for audio transfers but not enough for anything except low-quality video.

Having said all this, asking for an S-Video output seems useless because it's unlikely you'd see much of an increase in quality over the supplied composite video connection. But SMC could at least have thrown a composite-to-Scart adapter into the box to save you having to add one to this product's already hefty price tag.

Verdict

There are so many ways in which the SMC EZ-Stream could be improved - better menu navigation, improved file support, data transfer rates that actually justify the use of an 802.11g network or even just a better-looking box. As it is, the EZ-Stream does its job to the best of its abilities. In other words, poorly. ☒ Laurence Grayson



Easy as ABG

There are three flavours of wireless network available - 802.11a, b and g, with b being the most widely accepted standard.

However, while 802.11b is more than enough to share a broadband internet connection between the PCs in your home, it can struggle when faced with heavy jobs like piping full-screen video to media receivers such as the EZ-Stream. This is despite claiming an 11Mbps maximum transfer rate as, in real terms, the best you'll get is approximately 6Mbps.

Using a network based on the 802.11g standard should, theoretically, give you more headroom but again, the 54Mbps maximum transfer rate is misleading, and drops down to around 20Mbps in practice. This is due to measures taken by 802.11g hardware to ensure compatibility with the more common 802.11b clients. Just to make things worse, hooking up a single b device on a g network will slow everything down to the b transfer rates, making your g hardware virtually redundant.

SMC Networks EZ-Stream

- SMC Networks: 0871 277 9802
- www.smc-europe.com
- £234 inc VAT

Specifications

Windows 98 SE/Me/XP; 802.11g wireless media receiver; IR remote control; supports Mpeg-1 (352x288, max 2Mbps); Mpeg-2 (720x576, max 4Mbps); Jpeg, BMP, MP3 (16-320Kbps); internet radio MP3 only; RJ-45 ethernet connector; composite video/RCA audio output; 32g; 164x162x69mm

Good points

802.11g (.11b compatible); 10/100Mbps wired ethernet; video, still and audio radio streaming

Bad points

Flimsy build quality; composite video only; limited media and bit rate support; dreadful UI

BUILD QUALITY



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Personal digital assistant

Fujitsu-Siemens Pocket Loox 610 BT/WLAN

It's been a while since Fujitsu-Siemens released the Pocket Loox 600 (see November 02 for full review), but now it's back with an updated model of the PDA.

The first noticeable difference with the new 610 is the styling. It's sleeker and seems less bulky than the previous model, measuring 78x135x18mm, and is finished in a silver and dark grey colour scheme. It's a nice design and the only thing that ruins the lines is the short stubby aerial that protrudes 11mm from the top of the unit.

Wireless wonder

Like its predecessor, the Pocket Loox features a 400MHz Intel XScale processor and built-in Bluetooth facilities. For the 610, however, Fujitsu-Siemens has gone the extra mile and included Wi-Fi capabilities on the top-of-the-range model, catering for all your wireless connectivity needs (see boxout below). Bear in mind, though, that you can only use one of the technologies at a time - a Bluetooth-only model is available for £50 less.

The Pocket Loox 610 runs the latest version of Microsoft's Mobile OS, Pocket PC 2003, but there are a couple of extra apps thrown in. Connect2Air handles wireless connectivity, making configuration a simple and straightforward process, while SpeedMenu provides quick access to programs.

It includes a docking station as standard, so charging and synchronising with your PC is a matter of dropping it in the cradle. You can also detach the cable and dispense with the cradle - ideal when travelling.

Claimed battery life is 12 hours in use, 300 hours standby, although liberal exploitation of the wireless facilities is likely to significantly reduce this. Both CompactFlash and Secure Digital expansion cards are catered for and there's an eject mechanism to aid removal of CF cards.

One nice feature is the battery lock mechanism that secures the cell in place so it won't slide off and lose your data in the process accidentally.

Verdict

As a successor to the 600, this model offers a nicer design and better features for around the same price. But Fujitsu-Siemens isn't the first to bundle both Wi-Fi and Bluetooth in a PDA. It may be reasonably priced compared to the competition, but it doesn't offer anything outstanding.

Will Head



Fujitsu-Siemens Pocket Loox 610 BT/WLAN

- Fujitsu-Siemens: 0800 004 003
- www.pocketloox.co.uk
- £437 inc VAT

Specifications

400MHz XScale processor; Windows Mobile 2003 for Pocket PC; 64MB ROM; 128MB RAM; 3.5in TFT 240x320 colour screen; SD & CF slot; IrDA port; lithium-ion battery; microphone & speaker; Wi-Fi 802.11b; Bluetooth; USB sync cradle; 205g; 78x135x18mm

Good points

Integrated Bluetooth and Wi-Fi; nice design; battery lock mechanism

Bad points

Doesn't offer anything outstanding compared to the competition

BUILD QUALITY



FEATURES



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Take two wireless technologies into the shower?

Although it seems a little silly to have two wireless technologies in existence, there are reasons for this situation. Put simply, they aren't competing technologies. Bluetooth is a short-range, low-power, cable-replacement technology while Wi-Fi, with its greater range and higher speed, is there for one thing and one thing alone: wireless LAN access.

Both technologies require widespread adoption to succeed. After all, there's no point shelling out extra cash for Bluetooth if you haven't got another device to connect it to. Likewise, without an access point or hotspot, built-in Wi-Fi is redundant.

Phone manufacturers now bundle Bluetooth as standard - you can even get a free upgrade to a Bluetooth-equipped phone if you're lucky. And if you're in a major town then it shouldn't be hard to find a coffee shop that offers Wi-Fi facilities.

Fujitsu-Siemens' approach with the Pocket Loox 610 fits with the view that Bluetooth and Wi-Fi are complementary, rather than competing, technologies. You can be either Bluetooth- or Wi-Fi- enabled, but not both at the same time. This makes sense: if you're surfing the web over Wi-Fi, there's no need to use the Bluetooth connection and vice versa.

Ultra-portable notebook

JVC Mini Note MP-XP731

Ever since Intel released its Centrino mobile chip/wireless card combo, JVC's super-dinky Mini Note has been crying out for it. With the MP-XP731, its prayers have been answered. The model's design differs only slightly from its predecessor's (the MP-XP7230, reviewed July 03). Its measurements are the same and it weighs just 905g. The Secure Digital card slot has gone, but JVC has thoughtfully included a USB SD card reader.

You still get two USB 2.0 ports and one FireWire. There's a modem, ethernet connection, a Type II PC Card slot, headphone, microphone and VGA facilities. The changes are primarily under the hood. The 1GHz P4 chip boosts performance, resulting in a WorldBench 4 score of 85. It's low compared to other notebooks on the market, but adequate for everyday use.

The Mini Note houses 256MB of RAM and a 40GB hard drive. The 8.9in widescreen offers a 1,024x600 resolution and the small keyboard is fine for use on the move. The Centrino badge means you get a built-in wireless adapter, so connecting to a WLAN should be no trouble.

The Mini Note comes with two batteries as standard: one built in to the body of the unit



and an optional cell that clips on and extends battery life to a massive 221 minutes. The accessory bundle has also been beefed up and now includes a USB 2.0 DVD/CD-RW combo drive and USB port replicator, providing two PS/2 and two USB ports as well as one each of serial, parallel and ethernet.

Verdict

With its improved specs, the £1,645 Mini Note retains its crown as the best ultra-portable notebook on the market. If you've got the money and are after a small device for life on the move then it's hard to beat. Will Head

JVC Mini Note MP-XP731

- JVC: 0870 330 5000
- www.jvc.co.uk
- £1,645 inc VAT

Specifications

1GHz Intel Pentium M; 256MB RAM; 40GB hard drive; 8.9in 1,024x600 LCD; two USB 2.0 ports; one FireWire port; modem; 10/100 ethernet; 802.11b wireless LAN; Type II PC Card slot; combo DVD/CD-RW drive; port replicator; 225x152x29mm; 905g

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Beginner digital camera

Panasonic D-Snap SV-AS10

Continuing the trend for ultra-light, ultra-portable and downright sexy media devices is Panasonic's SV-AS10. Part of the D-Snap range, the SV-AS10 is a digital still camera but with features like audio/video recording and media playback squeezed into its slim chassis. It's equipped with a 2.1Mp (megapixel) image sensor, giving you 1,600x1,200 pixel stills - though you can reduce this to fit more on the miserly 8MB Secure Digital card.

Unexpected features such as burst mode, white balance, exposure compensation and ISO settings are also provided, though probably not enough to satisfy the control freaks among you.

To be blunt, the SV-AS10's optics are poor. The fixed-focus 4.5mm f4 lens requires bright conditions if you're to avoid using the flash. The minimum range is 50cm (10cm in macro) while the lens head swivels through 270 degrees for those awkward angles. This is only without the flash, though, as it's fixed on the camera body.

If you want to capture video, the Mjpeg recording function gives you a QVGA clip. Audio is courtesy of the mono microphone, so the D-Snap can function as a voice memo recorder. It's also a digital audio player, supporting WMA, MP3 and AAC files, and comes with a wired remote and earbud headphones.

While you can drag and drop files to the SD card when the D-Snap is in its USB 2.0 docking station, all music tracks need to be inconveniently uploaded using the supplied management software.

Access to the D-Link's many functions and settings is via a touch-sensitive paddle beneath the 1.5in LCD. What lets the SV-AS10 down, however, is image quality. Even at their best, stills are no match for a dedicated 2Mp digicam.

Verdict

The SV-AS10 is a classic case of 'jack of all trades, master of none', as it fails to excel in any aspect of its operation. It's certainly pretty to look at and easy enough to use, but you'll need to add a much larger memory card to the already slightly high price to get the best from it. Laurence Grayson



Panasonic D-Snap SV-AS10

- Panasonic: 08705 357 357
- www.panasonic.co.uk
- £250 inc VAT

Specifications

2.1Mp CCD (2Mp effective); 1,600x1,200 max res; fixed-focus 4.5mm f4 lens; 8MB Secure Digital card; Mjpeg video recording; audio recording & playback; MP3, WMA and AAC support; swivel head; built-in flash; remote/ headphones; rechargeable lithium-ion battery; 52x104x14mm; 74g

BUILD QUALITY



FEATURES



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DLP projector
Toshiba TDP-P6

If the perfect mobile projector was all about size, Toshiba's new 0.9kg model would have a strong claim to the top spot. With its lightweight sawn-off design, the TDP-P6 requires little desk space. But portability isn't just a matter of dimensions. It's also about convenience and versatility, and here the Toshiba isn't quite at the top of its game.

For a start, there's the lack of brightness put out by the TDP-P6 - it only offers 1,000 Ansi lumens which may not be enough to project a sharp and vivid image. Toshiba's decision to use this brightness rating is a surprising one because the more locations you visit, the less likely it is that you'll always be able to control the amount of light streaming into the presentation room.

The Toshiba has an in-depth menu system but the layout is convoluted. Add to this the fact that it can be slow to react to button presses and you have a projector that isn't as easy to set up in a rush as it ought to be.


Loud projector humming is rarely a problem in an office environment, although those who require peace and quiet will find the 37dB noise rating rather irritating. Economy mode cuts the

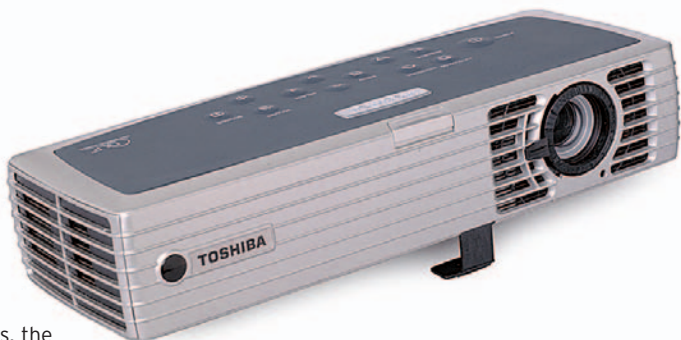
noise to 34dB and is also useful for extending the 2,000-hour lifetime claimed by the 120W lamps.

Despite a few faults, the TDP-P6 manages to rescue the situation with the quality of its output. The projector is built around dual-speed DLP technology and the huge 2,000:1 contrast ratio allows for sharp pictures packed with vibrant colours. Resolution support is also good and, although the native resolution is a competent 1,024x768 (XGA), the projector is happy working at 1,280x1,024.

Verdict

The TDP-P6 isn't far from being a superlative mobile projector. It's light to carry and offers rich image quality and sharp output. With just a little more attention to the brightness rating and a smoother menu system, the Toshiba would have been a true contender.

As it is, the rather high £2,344 price tag may put off those in pursuit of portable perfection.  **Robin Morris**



Toshiba TDP-P6

- Toshiba: 01932 828 828
- www.toshiba.co.uk
- £2,344 inc VAT

Specifications

DDR DLP technology; brightness 1,000 Ansi lumens; 120W lamp; 2,000-hour lamp life; replacement bulb £390; 0.9kg; max res 1,024x768 (XGA); 247x52x93mm; DVI connector; contrast ratio 2,000:1; 37/34dB; economy mode; 3-year warranty

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DLP projector
HP Digital Projector MP 3130

While with its TDP-P6 (above) Toshiba takes the approach of simply cutting a projector in half, HP has decided that the MP 3130 must stand on its own three feet. The upright design of the MP 3130 ensures that it takes up even less desk space than the diminutive Toshiba; even so, the TDP-P6 weighs far less. The HP's 1.6kg is hardly flabby, but it does feel heavier than you'd think.


On the plus side, the MP 3130 looks colourful and its bold casing makes it hard to ignore - even if it's not to everybody's taste. The HP also corrects several of the Toshiba's shortcomings. The brightness rating, for example, is a generous 1,800 Ansi lumens ensuring that the 3130 will project a strong image in a variety of environments.

Elsewhere, ease of use is the key. The menu system is clear and easy to follow and the design of the remote control is particularly cunning. Lots of buttons are provided to cover the various aspects of operating the projector, but most of these can be quickly shut away to leave you with only the minimum required for a presentation. You'll quickly learn to appreciate such simplicity when you're trying to concentrate on what you're saying rather than doing.

As with the Toshiba, the 3130 is fairly noisy but you're unlikely to be bothered by this in an office environment. However, while the 3130 boasts similar DLP technology and the same 2,000:1 contrast ratio as the Toshiba, the results were less spectacular. The image was inconsistent and, despite our best attempts, the colour palette was gloomy and indistinct.

Verdict

With its small footprint and high brightness rating, the MP 3130 looks to be an ideal portable projector. Unfortunately, though, it lacks the sharp picture of the Toshiba.

To be fair to HP, if office apps and PowerPoint presentations are likely to be the main subjects then this is more than adequate. But on anything involving graphics (particularly video), there are definitely better models - and many of them cost less to boot.  **Robin Morris**



HP Digital Projector MP 3130

- HP: 0870 547 4747
- www.hp.com
- £2,231 inc VAT

Specifications

DDR DLP technology; brightness 1,800 Ansi lumens; 180W lamp; 2,000-hour lamp life; replacement bulb £390; 1.6kg; max res 1,024x768 (XGA); 74x229x198mm; DVI connector; contrast ratio 2,000:1; 37/35dB; economy mode; 3-year warranty

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IP camera
D-Link DCS2100+

Webcams are 10 a penny nowadays, and anyone that wants to broadcast their life to the web every hour of the day can do so for as little as £30 and an internet connection.

Although D-Link's DCS2100+ is essentially a webcam, the company is targeting the device at the home security market. Most webcams need to be attached to a computer to work - if the PC isn't on then you won't be able to see the picture. The DCS2100+ doesn't require a PC to function and connects directly to the network, which can be either wired or wireless.

The device has got a built-in web server, so once it's on the network you can simply connect directly to it to view the camera. Combine that with an always-on broadband connection and you can remotely monitor your home any time you choose.


For setup you're advised to use the wired network connection initially. Once hooked up to the network, you can then use the bundled IP Installer software to locate and configure the camera. The webcam needs an IP address so you can connect to it later on. And if you intend to use the wireless facilities then you'll also need to enter the relevant settings.

When you've configured the D-Link with an IP address, it's simply a matter of entering that address into a web browser to view the image. As it's designed as a security camera, rather than a 'hey look at me' camera, it includes functions to password-protect the images. There's also a motion-detection setting and you can configure the device to email you an image when it detects a change.

In addition to the web interface, there's also a bundled application called IP Surveillance. Once installed on a PC, this allows you to control multiple cameras (up to 16) and record video at specified intervals or based on motion detection.

The software works but the interface is somewhat basic and unintuitive - it insists on being the only app running on screen. Basic operations such as viewing a camera are also harder to achieve than they need be. So, for example, rather than just click on the relevant number you have to drag it on to the viewing area. There's also a playback application so you can review any recorded footage at a later date.

Verdict

Hardware-wise, D-Link's DCS2100+ provides everything it promises and the addition of wireless networking means the camera can be placed anywhere you like provided there's adequate wireless coverage. However, it's the software side that lets it down. The web interface is functional but unintuitive and the bundled IP Surveillance application is ugly and hard to use.  **Will Head**



D-Link DCS2100+

- D-Link: 020 8731 5550
- www.dlink.co.uk
- £258 inc VAT

Specifications

Wireless IP camera; 802.11b-compatible; 10/100 ethernet; 640x480 resolution; H.263+ (Mpeg-4 short header mode) compression; audio & motion detection; 89x135x57mm; 240g

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KVM switch
Aten Masterview USB

If you're short on desk space but need to use multiple machines then a KVM switch provides a convenient solution, allowing you to use the same keyboard, monitor and mouse to control many PCs.


Masterview's two-port USB model provides support for both USB and PS/2 connections. There are two USB cables in the box, but if you need PS/2 then you'll have to buy an additional cable. The switch also supports audio and has two ports for USB peripherals such as a printer or scanner.

You can change from one PC to another using the switch at the front or a hotkey combination on your keyboard. If you switch using the latter option, you can



also decide whether or not to change the USB peripherals between machines at the same time.

Verdict

Aten's Masterview USB provides a convenient and tidy solution for anyone with more than one PC.  **Will Head**

Aten Masterview USB

- www.aten.com
- £76 inc VAT

Specifications

USB KVM switch; hotkey switching; audio switching; USB peripherals supported; two cables supplied

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