

↳ **The Labs** Network video players

# Network video players

PLAY YOUR VIDEO, PHOTO AND MUSIC FILES ON YOUR TV FROM A NETWORKED PC. WE PUT SEVEN NETWORK PLAYERS TO THE TEST

**Y**ou've built up a large collection of digital videos, music and photos on your PC's hard disk, but unless the system lives in your lounge it isn't particularly easy or comfortable to watch or listen to it all.

You could spend almost £1,000 investing in a dedicated media-centre system, but a far more affordable option is a network media player. Instead of a large, noisy PC, a compact, silent – or virtually silent – player is much better suited to a living room, and has all the right outputs to connect to your TV and hi-fi while streaming the content from your PC upstairs.

This month, we round up a selection of models that claim to do a great job for a fraction of the price of a media centre. From the Apple TV, Microsoft Xbox 360 and Sony PlayStation 3 to network specialists such as ZyXEL, Linksys and D-Link, there's a wide range of players to choose from.

Apart from the obvious bonus of being competent games consoles, both the PlayStation 3 and Xbox 360 have internal hard disks and so can store media locally, as well as streaming it from a PC. They can also double up as your DVD player, and the PlayStation can even play Blu-ray movies in crisp 1080p. If you want to spend as little as possible, ZyXEL's DMA1000 is more affordable at £111 and has plenty going for it. Find out more on p121.

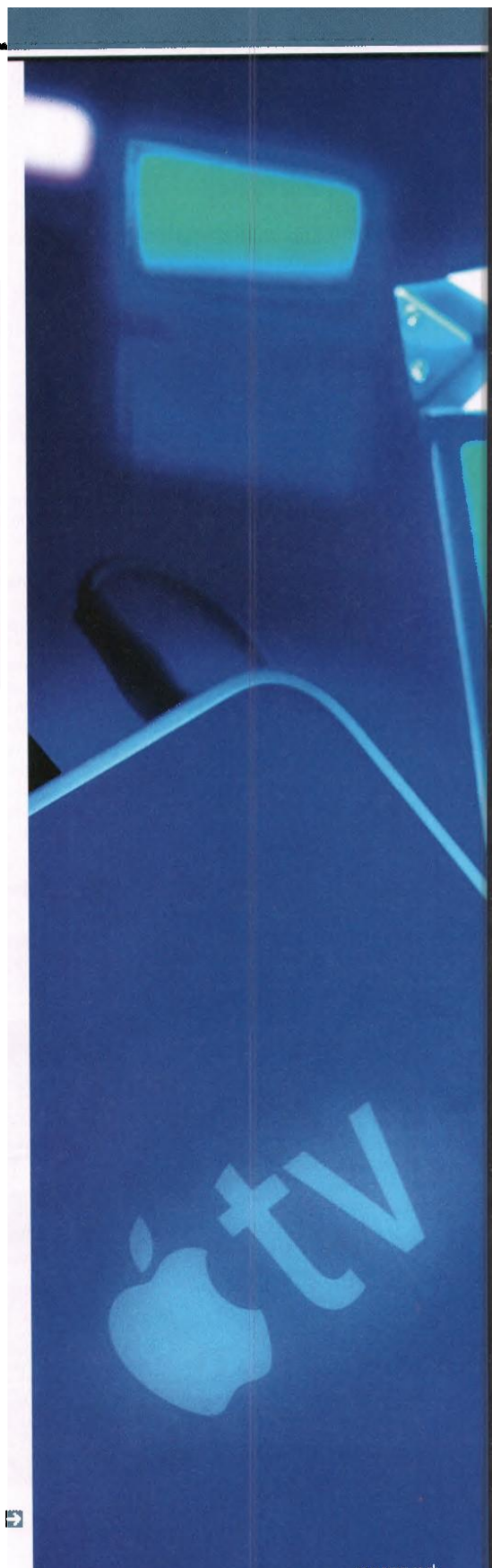
Many of these streamers can handle high-definition "PC" videos such as WMV-HD, DivX and H.264, but none guarantees to be able to stream this wirelessly – indeed, the ZyXEL doesn't have Wi-Fi at all. If you plan to watch HD videos, you'll need to stick with traditional cables; we look at the options in the buyer's guide on p113.

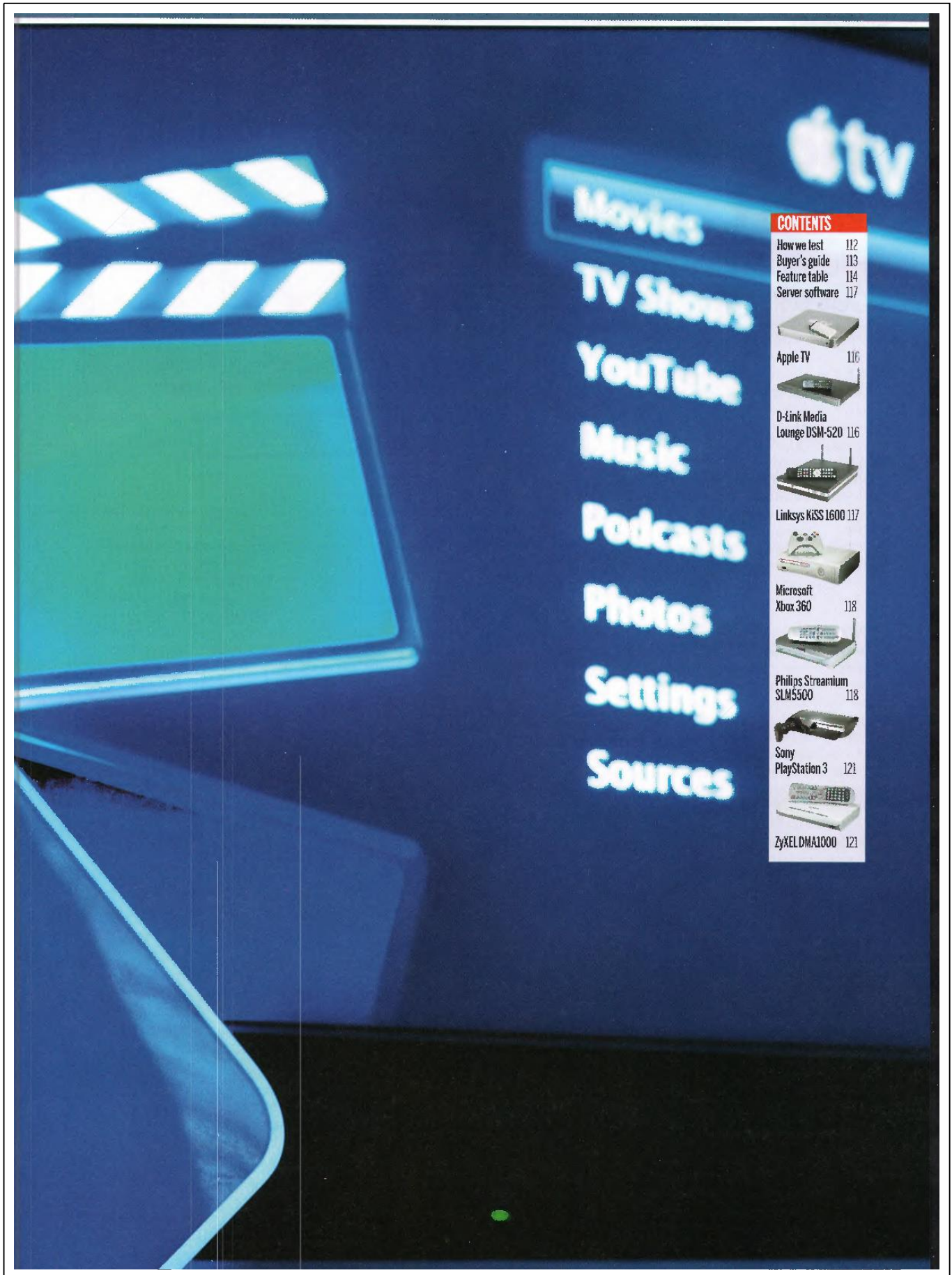
And rather than using manufacturers' bundled software or Windows Media Player, third-party alternatives can widen format support. We look at a popular free option, Tversity, on p117.



**JIM MARTIN**

"When you're spending £100-£300 on a media streamer, you want it to look good and fit into your lounge inconspicuously. But don't overlook the interface. Some look far slicker than others and can be much easier to use. It's just one of the reasons we like the Xbox 360 so much. Of course, there isn't one streamer that suits everyone's needs, so be sure to read all the reviews before making your decision."  
jim@pcpro.co.uk





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# How we test

## Plus, how we work out the ratings



**W**e test network video players by attempting to play a diverse range of video files on each model to find out which has the widest format support. We also test music and photo support, and assess the overall user experience with each device, since format support isn't the only consideration.

At the bottom of each review, you'll find four ratings: Performance, Features & Design, Value for Money and Overall. We don't pluck these out of the air; they're calculated using a mixture of objective and subjective ratings.

### Performance

The Performance score is a combination of each unit's responsiveness to remote-control commands, its image quality and how many of our test files it was able to play. For the tests, we use a Sony VAIO VGN-FE41M notebook as the "server" PC. This runs Windows XP Media Center Edition, and we install Windows Media Player 11 so it has the latest version of Windows Media Connect.

We load the library with around 20GB of music, photos and videos, including standard and high-definition WMV files. The full list of test files is as follows: WMV, WMV-HD (720p), DivX (SD, AVI), XviD (SD, AVI), H.264, VOB, FLV, QuickTime (720p), QuickTime (SD). Naturally, not all these formats are supported by Windows Media Player, so we install the bundled media-server software for each device and check if any extra formats are supported, and whether performance is better or worse.

↑ Not many people exploit the full potential of the Sony PlayStation 3's video streaming capabilities.

### RATINGS EXPLAINED

The star ratings you'll find at the bottom of each review are relative only to the products on test in any particular Labs. A one out of six rating doesn't mean the product is the worst of its type to be made, just the least impressive that month. Likewise, a six out of six score isn't necessarily an indication of perfection.

We connect the notebook to a D-Link DIR-655 wireless router using an Ethernet cable to ensure there are no bottlenecks, and connect each video streamer wirelessly to the router using WPA/WPA2 security.

We then try playing each type of video in turn to find out if it plays smoothly (both video and audio) or if it can't be played at all. Our second test is to view a photo slideshow; we look at the transitions and general responsiveness. Finally, we play a few different music albums, and check whether tracks are listed in the correct order and whether album art is picked up correctly.

We repeat all these tests by accessing the files from a USB flash drive where devices have USB ports, again noting whether the videos stutter or don't play at all.

### Features & Design

Since this Labs is focused on the video-streaming aspect of each device, we give the most weighting to video format support. We take audio and photo support into account, too, as well as looking at the types of playlist that can be used.

Inputs and outputs are rewarded as

well. HDMI is the preferred interface, although a wide range of options is useful, too. We favour standard connectors rather than proprietary interfaces (like the Xbox 360's), as it's cheaper to buy standard replacements. Media-card readers, hard disks, optical drives and network connections are taken into consideration. The quality of the hardware, the noise it produces and the design of the remote control are all also taken into account.

Online services such as radio, movie trailers and YouTube are awarded points, although those that require a paid subscription don't gain much credit. Finally, we reward warranty cover.

### Value for Money

The Value for Money score is based on a weighted combination of the Performance and Features & Design scores. We then factor in the price (including delivery) for a bang-per-buck result.

### Overall

Finally, the Overall score is a straight average of the other three ratings. It may appear slightly higher or lower than expected due to rounding.

### QUALITY RESULTS

	APPLETV	D-LINK DSM-520	LINKSYS KISS 1600	MICROSOFT XBOX 360	PHILIPS SLM5500	SONY PLAYSTATION 3	ZYXEL DWA1000 <sup>2</sup>
DIVX	○/N/A	●/●	●/●	●/●	●/N/A	○/○	●/●
XVID	○/N/A	●/●	○/●	●/●	○/N/A	○/○	●/●
WMV	○/N/A	●/●	●/●	○/○	●/N/A	○/○	●/●
WMV-HD	○/N/A	●/●	●/●	○/○	○/N/A	○/○	●/●
MPEG4/H.264	○/N/A	○/○	○/○	○/○	○/N/A	○/○	○/○
VOB	○/N/A	○/○	○/○	○/○	○/N/A	○/○	○/○
FLV	●/N/A	○/○	○/○	○/○	○/N/A	○/○	○/○
QUICKTIME	●/N/A	○/○	○/○	○/○	○/N/A	○/○	○/○
QUICKTIME HD	●/N/A	○/○	○/○	○/○	○/N/A	○/○	○/○
PHOTO THUMBNAILS	●	○	○	●	○	●	●
AUDIO ALBUM THUMBNAILS	●	○	○	●	○	●	●

Key: ● Yes, ○ No. First result is whether streaming is possible over a Wi-Fi connection using Windows Media Connect (or iTunes for Apple TV). Second result is whether streaming is possible from a local USB flash drive. 1 Via YouTube only. 2 ZYXEL results are via an Ethernet cable and a USB flash drive.



# Buyer's guide

## Connections, file formats and more

**C**hoosing a video streamer is a complicated business. There are many factors to consider, including video formats, whether you want to play files locally as well as remotely, and whether you can route a network cable to your player or need to access files wirelessly. Then, you need to decide if you want a built-in DVD player and whether you'd take advantage of the gaming capabilities of the Xbox or PlayStation.

The number of variables means there's no single video streamer that will suit everyone, so even if the Labs Winner doesn't appeal there may be others that meet your needs.

### Wireless vs wired

If you're planning on using a wireless network connection to stream video, it's worth bearing in mind that none of the devices on test are capable of streaming HD video reliably. Even Apple's TV with its draft-n Wi-Fi couldn't stream an HD QuickTime movie trailer when used with a D-Link DIR-655 draft-n router, and that was just 10m away in the same room. Only the Xbox 360 managed to stream the entire WMV-HD clip flawlessly; others either played sections smoothly but paused every few seconds, or were jerky all the way through.

Essentially, if you want to watch HD videos, you'll need to use an Ethernet cable. If running a cable is out of the question, there are two options. One is to invest in a pair of HomePlug adapters. Then you can use the mains wiring in your house instead of a network cable to link your video streamer to your router. All you need is a spare power socket next to the router and video streamer. Unfortunately, the basic 14Mb/sec HomePlug 1 devices offer a throughput of only around 5-10Mb/sec, so you'll need 85Mb/sec HomePlugs for

throughput that's fast enough for HD video (around 15-20Mb/sec). A pair can be picked up for around £70, so it isn't a cheap option.

Alternatively, look for a video streamer that can play such files locally, either from an internal hard disk or externally from a USB flash drive, hard disk or via DVD. This isn't ideal, though, as it means your videos aren't stored in a central location – a crucial factor if you plan to have multiple video streamers in the house.

### File formats

Another consideration is format support. If you want to watch DivX and XviD files – the most common formats on the internet – your options are limited to the D-Link, Linksys, Philips and ZyXEL. There are ways to convert DivX and XviD videos to other formats on-the-fly (see *Server software on p117*), but these can lead to a drop in quality. The Apple TV has the most limited support, but if you already have a large iTunes library and are happy to buy videos from the iTunes store it may be the best option, partly because the interface is one of the best on test.

### Gaming and user interfaces

Even if you don't particularly want a games console, both the Xbox 360 and PS3 have their advantages as video streamers. The Xbox 360 is a Media Center Extender, which effectively allows you to locate your PC running either XP Media Center Edition or Vista Media Center in a different room, yet still see the same interface on your TV. You can also make use of any digital TV tuners

installed on the PC to watch Freeview channels on an analogue TV, or watch recorded shows stored on its hard disk.

The PS3, on the other hand, has a Blu-ray drive, so can replace your existing DVD player as well as play Blu-ray movie discs. It also has media-card readers for playing files locally and four USB ports so you can plug in a keyboard and mouse for internet browsing.

The Xbox's interface is leagues better than D-Link, KiSS and ZyXEL's, and noticeably better than the PS3's, too. It might sound trivial, but the user interface can make a huge difference to the overall usability of a streamer. For example, it's incredibly fast to find the album you want to play in Media Center (or using Apple TV) because thumbnails of the album cover are shown. But others that don't show album art can be harder to navigate.

### Physical considerations

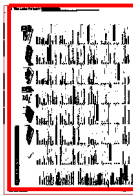
It's important to choose a player that matches the audio and video connections on your TV and hi-fi, since adapters aren't usually included in the box and can be expensive. HDMI is the most convenient interface, since it carries both video and audio in one cable. If you have an older TV, component is the best alternative for HD signals (audio has to be connected separately), while scart is the most common connection for non-HD TVs (this also carries video and audio). Setting both the player and TV to RGB scart mode will provide the best quality.

You'll get the best quality audio from a digital S/PDIF interface, but make sure your amplifier has a matching input, since there are two types: optical and coaxial. All but the Philips have stereo phono outputs, which almost all amplifiers have. The Philips only has a scart output, for which you'll need an adapter to phono audio.

Lastly, don't forget about noise. All but the Xbox and PS3 are essentially silent, as they don't have any fans. The PS3 has a fairly quiet fan that's easily masked when you're listening to music, playing games or watching videos, but the Xbox 360's din could prove annoying. The fans in the main unit have a relatively low pitch, but the huge power supply has a small, high-pitched fan. As long as you can place this well away from where you're sitting, however, it shouldn't be audible.

↓ The ZyXEL comes with DiXiM media server software, which allows it to support extra file formats.





**The Labs Network video players**

**FEATURE TABLE Network video players**



	Apple TV	D-Link Media Range (DSM-E20)	Linksys WGS1600	Microsoft Xbox 360	Philips Streamium SLM5500	Sony PlayStation 3	ZyXEL MA000
<b>OVERALL RATING</b>	★★★★	★★★	★★★★	★★★★★	★★★	★★★★★	★★★★★
<b>Part code</b>	N/A	DSM-E20	WGS1600-UK	N/A	SLM5500	DMA1000	DMA1000
<b>Price (inc VAT)</b>	£162 (E198)	£141 (E166)	£65 (E190)	£213 (E240)	£117 (E132)	£340 (E399)	£111 (E130)
<b>Delivery (inc VAT)</b>	Free	£4 (E5)	Free	Free	£5 (E6)	Free	£5 (E6)
<b>Supplier's website</b>	<a href="http://www.apple.com">www.apple.com</a>	<a href="http://www.pureitadigital.co.uk">www.pureitadigital.co.uk</a>	<a href="http://www.broadbandbuyer.co.uk">www.broadbandbuyer.co.uk</a>	<a href="http://www.amazon.co.uk">www.amazon.co.uk</a>	<a href="http://www.dhcs.com">www.dhcs.com</a> (code: 48G003)	<a href="http://www.amazon.co.uk">www.amazon.co.uk</a>	<a href="http://www.pcpco.co.uk">www.pcpco.co.uk</a>
<b>Manufacturer's website</b>	<a href="http://www.apple.com">www.apple.com</a>	<a href="http://www.dlink.co.uk">www.dlink.co.uk</a>	<a href="http://www.linksys.com/uk">www.linksys.com/uk</a>	<a href="http://www.amazon.co.uk">www.amazon.co.uk</a>	<a href="http://www.philips.co.uk">www.philips.co.uk</a>	<a href="http://http://uk.playstation.com">http://uk.playstation.com</a>	<a href="http://www.zyxel.co.uk">www.zyxel.co.uk</a>
<b>Basic warranty</b>	1yr RTB	2yr RTB	2yr RTB	3yr RTB (3yr C&R for general system failure)	3yr RTB	1yr RTB	2yr RTB
<b>Dimensions (WxDH)</b>	197 x 197 x 28mm	425 x 286 x 39mm	230 x 345 x 125mm	310 x 260 x 89mm	207 x 153 x 105mm	320 x 280 x 100mm	190 x 130 x 35mm
<b>BASIC SPECIFICATIONS</b>							
<b>MPEG support</b>	H.264/MPEG-AVC, protected H.264	MPEG1/2/4, AVI (MPEG4 only)	MPEG4	MPEG4	MPEG1/2	MPEG1/2/4/AVC/H.264	MPEG1/2/4/H.264
<b>WMV support</b>	○	WMV9, WMV-HD	WMV9, WMV-HD	WMV9, WMV-HD	○	○	WMV9, WMV-HD
<b>DVX support</b>	○	DVX, XviD	○	○	DVX, XviD	○	DVX, XviD
<b>QuickTime support</b>	○	○	○	○	○	○	○
<b>Other video support</b>	○	VOB	DVD, VOB, Nero Digital	DVD, DVDRMS	○	DVQ, Blu-ray, AVC/HD, AVI (Motion JPEG)	○
<b>Highest video resolution</b>	1080i	1080i	1080p (VGA only)	1080p (VGA only)	1080p	1080p	1080p
<b>Audio standards supported</b>	Audio: protected AAC, MP3, Apple Business, MP3, WAV	MP3, WMA, WMA9, AAC, Windows Media Connect, MP3, AAC, MP3	MP3, WMA, WMA9, AAC, WAV, DGG	Audio CD, WMA, WMA9, MP3, AAC, AAC from iPod, Xbox hard disk or USB flash drive only	MP3, PCM, WAV, WMA, WMA9, WMA DRM	MP3, WMA, WMA9, AAC, LPCM, AT-RAC	MP3, WMA, WMA9, AAC, LPCM
<b>Photo standards supported</b>	JPEG, BMP, GIF, TIFF, PNG	JPEG, JPEG2000, TIFF, GIF, BMP, PNG	JPEG, PNG, BMP, GIF	JPEG, GIF, TIFF, PNG, BMP	JPEG	JPEG, GIF, PNG, TIFF, BMP	JPEG, BMP, PNG, TIFF, GIF
<b>Windows Media Connect support</b>	○	○	○	○	○	○	○
<b>DHMA certified</b>	○	○	○	○	○	○	○
<b>Internal storage</b>	40GB hard disk	○	DVD-ROM drive	DVD-ROM drive, 20GB hard disk	○	Blu-ray BD-ROM drive, 60GB hard disk	○
<b>NETWORK &amp; PORTS</b>							
<b>Network port</b>	10/100Mb/sec	10/100Mb/sec	10/100Mb/sec	10/100/1,000Mb/sec	10/100Mb/sec	10/100/1,000Mb/sec	10/100Mb/sec
<b>Wi-Fi support</b>	802.11b/g	802.11b/g	802.11b/g	Optional 802.11b/g adapter, £60	802.11b/g	802.11b/g, Bluetooth 2 + EDR	○
<b>Wi-Fi security</b>	WEP, WPA, WPA2	WEP, WPA	WEP, WPA, WPA2	64/128 bit WEP, WPA	WEP, WPA, WPA2	WEP, WPA, WPA2	N/A
<b>USB ports</b>	1 x rear (diagnostic use only)	1 x front	1 x rear	2 x front, 1 x rear	4 x front	4 x front	1 x rear
<b>Media card support</b>	○	○	○	2 x Xbox memory card slots	○	SD, MS, CF	○
<b>VIDEO CONNECTIONS</b>							
<b>HDMI (video + audio)</b>	1 x 1.2	1 x 1.2	○	○	○	1 x 1.2	1 x 1.2
<b>Component</b>	○	○	○	○	○	○	○
<b>Scart</b>	○	○	○	○	○	○	○
<b>S-video</b>	○	○	○	○	○	○	○
<b>Composite video</b>	○	○	○	○	○	○	○
<b>AUDIO CONNECTIONS</b>							
<b>Phono</b>	○	○	○	○	○	○	○
<b>Optical S/PDIF</b>	○	○	○	○	○	○	○
<b>Coaxial S/PDIF</b>	○	○	○	○	○	○	○
<b>SOFTWARE AND ACCESSORIES</b>							
<b>Media server software</b>	Tunes (DOME download)	D-Link Media Server	KISSPC IHW 3	○	○	○	○
<b>Cables included</b>	Power	Power, Scart, composite, phono audio, audio/video cables	Power, Scart, composite, remote control	Power, Ethernet, HD video/audio cable	Power, scart	Power, scart, Ethernet, Ethernet crossover	Power, scart, Ethernet, Ethernet crossover
<b>Other</b>	Remote control	Remote control, antenna	2 x antenna, remote control	Wireless controller, headset	Remote control	Wireless controller	Remote control





**PRICE**  
 £162 (£190 inc VAT)  
**SUPPLIER**  
[www.play.com](http://www.play.com)

## Apple TV

Beautifully designed with a clear interface, but format support is limited

We've already reviewed the Apple TV (web ID: 113177), but it's a true contender that deserves its place in this Labs – and with its new firmware, it's even better than before.

There are no buttons on this diminutive device – it's entirely controlled by the tiny Apple remote. Setup is simple, too: connect a power cable, hook it up to a TV using the HDMI output, and you're immediately greeted by a slick introduction video that makes you feel you've spent your money wisely. A foolproof wizard steps you through connecting to a wired or wireless network and draft-n is built in, making the Apple TV the most future-proof device here.

The interface is simply superb – it's crisp and clean with large, easily readable text. The new firmware adds a YouTube item to the menu, and makes it easy to search for videos. You can also watch movie and TV trailers from the

iTunes store, and we found the experience flawless and lag-free. Prices for full shows seem reasonable, but they're almost double what American users pay, which rankles a bit. Fast-forwarding and rewinding videos is a little unwieldy, but works better than other devices.

Although the Apple TV does its job well, it misses out on an award for several reasons. The first is that you're stuck with using iTunes as the source of your media. This is understandable – and could even be a bonus if all your music and videos are already organised in an iTunes library – but it's a pain if your albums are all in WMA format.

Worse, video format support is the most limited here: only QuickTime or H.264/MPEG4 files can be imported. Indeed, during our testing we even found several MOV files that wouldn't sync with



the Apple TV iTunes claimed their format wasn't supported by the hardware.

Next, although there's a hard disk for local storage it offers only a paltry 32GB of usable space. There's a 160GB version if you need more capacity, but this ramps up the cost to £270. And, despite the price, no cables are included to connect the Apple TV to your TV: all you get is a power cable. The lack of fans means the device is silent, which is great for the front room, but it did become extremely hot during our tests.

Despite its limitations, the Apple TV is a well-built, easy-to-use product, and relatively good value for what it does. Give it a look if you don't have an existing collection of DivX videos or WMA audio files.

**PERFORMANCE**  
 ★★★★★  
**FEATURES & DESIGN**  
 ★★★★★  
**VALUE FOR MONEY**  
 ★★★★★  
**OVERALL**  
 ★★★★★

**PRICE**  
 £141 (£166 inc VAT)  
**SUPPLIER**  
[www.purelygadgets.co.uk](http://www.purelygadgets.co.uk)

## D-Link Media Lounge DSM-520

Unresponsive menus mar good format support and connectivity

D-Link's Media Lounge sports a distinctly different casing to the other devices on test this month: while its rivals take the form of consoles or set-top boxes, the DSM-520's width means it will sit more comfortably alongside hi-fi equipment. Its mirrored front panel is attractive, too – except for the ugly front-facing USB port – and you get HDMI (up to 1080i), scart, S-Video and composite video outputs at the rear. Audio is also well catered for, with optical and coaxial S/PDIF plus phono outputs. The only noticeable absentee is component video, which means you can't use the DSM-520 to feed a high-definition signal to older TVs without HDMI.

It's well equipped on the networking front, with both wired and wireless networking built in, and a setup wizard

to guide you through initial configuration. Its menus are unattractive and unresponsive compared to the Xbox 360's, though, and there are no thumbnails of photos, albums or videos. The search function is particularly clunky, and there's no internal hard disk – though that's no surprise given the price.

When it comes to streaming media, you have a choice of D-Link's own server software, Windows Media Connect or a UPnP AV-compatible media server. You can also play direct from a USB hard disk or USB flash drive, access online radio from Live365.com and watch videos from Totalvid.com (a month's trial is included).

While the DSM-520 is officially able to decode and play more formats than

other devices, when it came to music it rejected some of our MP3s, and played albums in the wrong order, ordering tracks alphabetically rather than by track number. We were also unimpressed to see that album art isn't supported.

Overall, the D-Link looks good on paper, but lacks the finesse of the consoles and the Apple TV. True, it has an elegant case, a good selection of outputs and support for a decent range of media formats; but for a device like this, slick, responsive menus and flawless playback are vital. Until D-Link delivers them, we can't recommend the DSM-520.



**PERFORMANCE**  
 ★★★★★  
**FEATURES & DESIGN**  
 ★★★★★  
**VALUE FOR MONEY**  
 ★★★★★  
**OVERALL**  
 ★★★★★



## Linksys KiSS 1600

Lots of connections, good format support and a built-in DVD player, but menus are basic

Linksys' KiSS 1600 is another video streamer we've seen before (web ID: 113178). Although we weren't fond of its basic interface, it sports a useful DVD-ROM drive.

Crucially, it also supports DivX and XviD natively – the most common formats on the internet. That means you can plug in a USB flash drive or hard disk and play these formats directly. Alternatively, both formats – and all others the 1600 supports – can be played from a DVD. In fact, the only major format not supported is QuickTime, and it's the only player here to support Nero Digital (software is included to encode files to this format). Like the Xbox 360 and PS3, the 1600 can upscale standard-definition DVDs to 720p or 1080i over the HDMI 1.2 interface, but it's also locked to region 2.

At the rear are all the connections you'll need. It's just a shame that – like the ZyXEL – the single USB port is at the back, which is inconvenient if you

want to play files from a flash drive.

There's wired and wireless networking, but the 802.11g radio proved inadequate to stream our WMV-HD clip without pausing every 30 seconds or so. Needless to say, the H.264 clip wouldn't play smoothly over Wi-Fi, either. Fortunately, WMV, DivX, XviD and VOB files played fine, but the 8GB file-size limit may mean HD videos have to be split into two files.

The KiSS's remote is fairly well designed, but the next/previous buttons double up as fast-forward and rewind, which takes some getting used to. With the latest firmware, you can fast-forward and rewind digital video, but it's far from instant. On occasions, we had to wait up to 30 seconds for the video to start playing again after rewinding, but at



least there's a counter on the front panel to help you keep an eye on progress.

Our other gripe concerns music playback. Even though our test albums were correctly tagged, the 1600 would only play tracks in alphabetical order, and album art wasn't shown. However, controlling photo slideshows was more intuitive than with the Philips.

Being as deep as a standard DVD player, but only half as wide, the 1600 may not sit well with your existing hi-fi equipment, but it's still better looking than the Philips and ZyXEL. Overall, the 1600 is a decent choice at this price if you can live with the basic menus.

PRICE  
£165 (£194 inc VAT)

SUPPLIER  
[www.broadbandbuyer.co.uk](http://www.broadbandbuyer.co.uk)

PERFORMANCE  
★★★★★  
FEATURES & DESIGN  
★★★★★  
VALUE FOR MONEY  
★★★★★  
OVERALL  
★★★★★

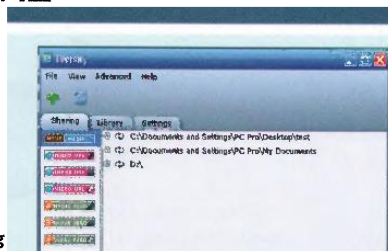
## SERVER SOFTWARE

We've tested the video streamers with their own software and Windows Media Connect, but there are other options open to you. Take TVersion, which is a completely free media server, available from <http://tversion.com>

Not only has it shown itself to be more reliable than most of the other software we tested this month, but it's also capable of doing more. For example, it can transcode video on-the-fly, so even if your video streamer doesn't support a particular video format chances are TVersion can transcode it to a format it does support. This is done on-demand, so there's no need to convert the file before playing it. It's great news for devices like the Xbox 360, which can't handle XviD or DivX files, even when acting as a Media Center Extender.

Of course, the quality of the transcoded video will depend on the power of the PC that TVersion is running on. You can alter the resolution of the converted video and adjust it until you find the optimal setting for your system. You need a dual-core CPU for HD video.

TVersion isn't just limited to video and music, either. It can also play internet radio,



TVersion greatly expands the number of file formats a streamer can play.

internet TV, podcasts and RSS/RDF/ATOM feeds on your TV using your video streamer. It's fast at searching through large libraries and supports keywords, too.

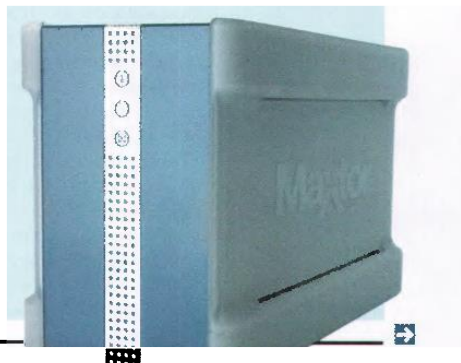
### Serving without a PC

If the media streamers on test have a flaw, it's that they require a networked computer to be left on at all times. If you're storing all your media on a notebook, it won't be available if someone takes it away from the house.

The alternative is to use a NAS (network attached storage) drive, which has an UPnP media server built in. Most NAS drives come

with UPnP media server, and the whole device will consume far less power than a PC or notebook. If the NAS drive has a DLNA logo, it's also UPnP compatible.

The A-Listed Maxtor Shared Storage II is one example of an UPnP NAS drive. The 1TB version costs £200 exc VAT from [www.it247.com](http://www.it247.com) and, as it uses a RAID1, all your data is backed up automatically. It can also play protected AAC files, as it's an iTunes server. We can also recommend Synology's DS-106 and DS-207 barebones NAS drives, having used them as media servers for over 12 months.





**PRICE**  
 \$213 (\$250 inc VAT)

**SUPPLIER**  
[www.amazon.co.uk](http://www.amazon.co.uk)

**PERFORMANCE**  
 ★★★★★  
**FEATURES & DESIGN**  
 ★★★★★  
**VALUE FOR MONEY**  
 ★★★★★  
**OVERALL**  
 ★★★★★

## Microsoft Xbox 360

A Media Center Extender, upscaling DVD player and great games console

The Xbox 360 is an accomplished games console, yet relatively few people take advantage of its capabilities as a Media Center Extender. If you have a Windows Media Center PC, you can use the Xbox as a remote interface to it. We tested it with both Vista and XP and, in each case, the interface was identical to each version of Media Center, complete with sounds and menu animations.

Impressively, the Xbox was able to play the WMV-HD file smoothly over 802.11g, but the bad news is you have to fork out £60 extra for the wireless USB adapter – it isn't included as standard. If you don't want to shell out for the wireless adapter, there's a Gigabit Ethernet port.

It's a shame DivX or XviD files can't be played through Media Center, even if you have the right codecs installed on your PC. Tversity (see p117) overcomes this limitation, though. And you can

watch recorded TV shows in Media Center's DVR-MS format as well.

If you don't have a Media Center PC, you can still use Windows Media Connect to stream videos, music and photos to the Xbox 360. Generally, the menu system is easy to navigate (it doesn't show photo options in the video category like the PS3, for example) and it's good to see music albums being played in the correct order. Slideshows are pretty, too, and it's easy to select the folder of photos you want to see.

There are two further ways to access media: from a USB flash drive or the internal 20GB hard disk. Downloading a free 2.3MB update through Xbox Live adds the ability to play MPEG4 video and unprotected AAC files from the hard disk or flash drive, and the 360 played the high-definition H.264



clip from a USB flash drive flawlessly.

And while the DVD-ROM drive can't match the PS3's Blu-ray drive, it can still upscale DVDs, and they look great on a 720p LCD TV. Also, an HD cable (component video and phono audio combined) is included, and it sports an optical S/PDIF output for surround sound – you just need an external decoder and speakers.

The Xbox 360 may be the noisiest device here, but the slick interface (including the main blade-style menu) makes it a joy to use. If you have a Media Center PC and are happy to connect via a network cable, it's great value.

**PRICE**  
 \$112 (\$132 inc VAT)

**SUPPLIER**  
[www.dabs.com](http://www.dabs.com)  
 (code: 4BGG01)

**PERFORMANCE**  
 ★★★★★  
**FEATURES & DESIGN**  
 ★★★★★  
**VALUE FOR MONEY**  
 ★★★★★  
**OVERALL**  
 ★★★★★

## Philips Streamium SLM5500

A reasonable option if your budget is tight, but you get what you pay for

Given Philips' vast experience in AV products, it's odd that the SLM5500 looks more like a wireless router than a serious piece of AV kit. And since the remote uses infrared rather than RF, you'll have to put the box near your TV.

On the rear, you'll find scart, component and coaxial S/PDIF outputs, with a switch to change between the video outputs. The only way to obtain analogue audio output with component video is to buy a scart adapter, as there isn't one in the box.

Turning the box on for the first time, you're greeted by a setup wizard to step you through connecting to a wired or wireless network, with a choice of WEP or WPA security. You'll have to create a user account to use the internet services, which include radioIO, Live365 and

BlueBeat for music and BornToShoot, a slightly strange library of travel and nature images.

The SLM5500 is intended to be used with Windows Media Connect, and therefore supports the audio and video formats that Windows Media Player does. If you have DivX and XviD codecs installed, you can stream these formats, too, although our XviD movie wouldn't play at all. The WMV-HD video kept pausing as the SLM5500 rebuffered, making it unwatchable. There's no way to play files locally, since there's no hard disk, USB port or media-card reader, but you can attach an Ethernet cable to the RJ-45 port at the rear.

Menus are easy to navigate and responsive, but it's a shame album tracks are listed in alphabetical order



and our album art thumbnails weren't displayed. Format support is a little limited, but WMA-DRM files can be played, of course. Photo slideshows have no effects or transitions, but you can browse shared folders to find the images you want in addition to searching by date taken, keywords or ratings.

The Philips' main problem is the Zyxel, which boasts a better selection of outputs for the same price. This also has a USB port for playing files locally, and played our XviD file with no problems. It doesn't have Wi-Fi, though, so the SLM5500 may be a better choice if a network cable is out of the question.

# Sony PlayStation 3

Video support isn't the best, but the PS3 remains a superb piece of kit

At £340, the PlayStation 3 is by far the most expensive device in this Labs. Of course, you're not simply getting a video streamer for your money, though. Quite apart from the Xbox 360-beating gaming capabilities, it also betters the Xbox by including a Blu-ray drive, so you can watch HD movies, and the drive also supports Super Audio CD.

Another bonus is built-in 802.11g Wi-Fi – an optional extra on the Xbox 360 – and Bluetooth. It's good to see an HDMI port in addition to a proprietary AV output, and there are also optical S/PDIF and Gigabit Ethernet interfaces. At the front are four USB ports, which can either be used to charge the wireless controller, or to plug in a USB hard disk or flash drive. A flip-up cover conceals useful media-card readers.

Inside is a 60GB hard disk (three times the capacity of the Xbox 360's and easily upgradable) and you can use



this to store game data, music, photos and videos.

Format support is wider than the Xbox, with MPEG1, 2 and 4 (H.264 and AVCHD) on the menu. Sadly, it can't play DivX or XviD, but you can stream these and other formats from a PC if you use TVerseity (*see p117 for more*).

Menus aren't quite as easy to navigate as the Xbox's, particularly when browsing the PlayStation store. To stream media, you have to select the server from either the Photo, Music or Video menus, but in each case it incorrectly offered us a submenu of all media types, even though it would only let us access the type of media we'd selected from the main menu. Menus are, however, vastly more attractive than the D-Link and Philips', showing thumbnails for photos,

music albums and videos. Photo slideshows are stylish as are music visualisations, and it's easy to fast-forward and rewind videos.

Like the Apple TV, it's simple to watch movie trailers, and there's even a built-in web browser, which works surprisingly well with the wireless controller; you can even plug in a standard USB keyboard and mouse for a more PC-like experience. The PS3 isn't silent, but it's certainly quieter than the Xbox.

Viewed simply as a video streamer, the PS3 is poor value, but if you already have a 1080p HDTV the Blu-ray player alone makes it worth the price. If not, the Xbox is £127 cheaper and – when paired with a Media Center PC – offers the best video-streaming experience on test.

**PRICE**  
 £340 (£400 inc VAT)

**SUPPLIER**  
[www.amazon.co.uk](http://www.amazon.co.uk)

**PERFORMANCE**  
 ★★★★★☆  
**FEATURES & DESIGN**  
 ★★★★★☆  
**VALUE FOR MONEY**  
 ★★★★★☆  
**OVERALL**  
 ★★★★★☆

# ZyXEL DMA 1000

It lacks Wi-Fi, but is otherwise an excellent budget video-streaming choice

Although ZyXEL is new to digital media streaming, the firm knows a thing or two about network devices. It isn't surprising, then, that the brand-new DMA 1000 looks more like one of ZyXEL's wireless routers than a piece of hi-fi equipment, but it's still a shame the compact white box may not blend in with your existing gear.

It's also a surprise that there's no Wi-Fi built in – the only connection is a 10/100Mb/sec Ethernet port. This is partly because ZyXEL wants to offer the best possible streaming experience, and partly because it also sells a range of power-line networking products that you could use to connect the DMA 1000 to a router in another room.

On the rear are HDMI, S-Video, coaxial S/PDIF and phono audio outputs, plus a USB port. A cable is included in the box to convert the S-Video and phono audio connectors to a scart

interface, but you don't get an HDMI cable, although that isn't unusual at this price.

While you can use the DMA 1000 with Windows Media Connect, it also comes with DiXiM media server, which allows it to support a few extra formats such as DivX and XviD; these can be played directly both from a USB flash drive or hard disk, too. Our H.264 clip refused to play and the VOB file played for only 30 seconds at a time before a "Playback failed" error message appeared. But we liked the fact that if you do stop a video file halfway through, the next time you play it you can continue from the same point. Fast-forwarding and rewinding were also flawless, even with HD clips.

Music playback is solid, too, with albums being played in the right order



using either Windows Media Connect or DiXiM, and album art appearing when you begin playing a track. Likewise, photo slideshows are intuitive and have simple, yet elegant, dissolve transitions.

There are no internet radio or YouTube functions, but you do get access to DivX's video-on-demand service, although this wasn't working in our early test sample. Another gripe, which we hope will be remedied in a future firmware update, is font size. Unless you have a huge TV, you might struggle to read the button labels and media listings.

But as long as the lack of Wi-Fi doesn't pose a huge problem, the ZyXEL is great value and does its job well.

**pc  
PRO**  
**BEST  
VALUE**

**PRICE**  
 £111 (£130 inc VAT)

**SUPPLIER**  
[www.peworld.co.uk](http://www.peworld.co.uk)

**PERFORMANCE**  
 ★★★★★☆  
**FEATURES & DESIGN**  
 ★★★★★☆  
**VALUE FOR MONEY**  
 ★★★★★☆  
**OVERALL**  
 ★★★★★☆