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Group test: Streaming devices

If the rumours are true, Apple has a television in the pipeline that will make streaming movies, music, photos and more from your Mac (and the cloud) easier. In the meantime, here are some alternative multimedia streaming centres, but which one is best? By **Chris Brennan**



Streaming devices


Hard disks can be very dull things, all they do is sit there storing data and making the occasional noise; if you're lucky they'll have a little flashing light on the front. However, with an increasing number of us owning gargantuan movie, music and photo collections, the humble hard disk is making a break for the living room. Thanks to iTunes, the multimedia collections of most Mac users have grown massively over the past few years, so it makes little sense for all that to be held hostage on a Mac.

Rumour has it that an Apple television is in the works but, for now at least, we have only the Apple TV with neither storage nor the option of adding any. Though you can stream movies and music from a Mac, and rent movies

and TV shows on the device, you can't add your own collections to it. The saving grace of the Apple TV right now is probably its ability to stream iOS games to your television, even allowing multiplayer, split-screen gaming. Thankfully there are alternatives available that fill in the gaps left by the Apple TV.

We've looked at six of the best multimedia streaming devices. We'll look at how well they integrate with your existing Mac setup and how easy they are to manage and use, as well as how the design will sit in your living room. The user interface was of paramount importance during our testing, as getting to your music, photos and movies as quickly as possible is, perhaps, the most important aspect of all. There

were other considerations too, such as fan noise and how the remote control helps or hinders the overall experience. The winner of this group test will be able to show the best performance across the full range of our tests, not to mention being good value for money.

Of course, the thorny issue of digital rights management rears its ugly head here, and unlike with CDs there are few completely legal ways to rip a DVD movie. It can be done, however. As the movies you buy from Apple come with DRM, the only way to get them to your big screen is via an Apple TV. Most music and pictures should be fine, though any tracks you bought from iTunes before DRM was removed won't play on a non-Apple device. 



Little limitations The Apple TV may be small and perfectly formed, but Apple's "hobby" product has some shortcomings

Apple TV

It may seem a little unfair to include the Apple TV here, and for once it's not because Apple has an enormous market lead or even the best product in the category. Judged by its specification, the Apple TV is a very poor relation to the rest of the units we have on test here. Yes, it has wireless and wired networking and an HDMI port, not to mention that it's the smallest device here by quite some margin, but that only tells a small part of the story.

Unlike the original Apple TV, this second incarnation has absolutely zero local storage and no ability to add any. The only way for you to watch content through an Apple TV is to stream it. If you have media stored on your Mac, then this has to be turned on and have iTunes running. You can stream rented movies on the Apple TV and view your photo stream, plus there are a few interactive options such as YouTube and Vimeo, but unfortunately the offerings are slim.

The one huge advantage the Apple TV has in this group test is that it can play movies and television shows that you purchase from iTunes, which may well be the one factor that determines a lot of people's purchasing decision. Despite its shortcomings this is the Apple TV's one trump card. It also has AirPlay built in, which means that you can stream your movies, photos and music from your iPad, iPhone or iPod touch as well. Another feature that might help improve the popularity and relevance of the Apple TV is its ability to stream games from the iPad to your TV, allowing multiplayer, split-screen gaming.

As you might expect, the interface of the Apple TV is also a huge point in its favour. Easy to navigate and simple to use, it beats all the others here hands down, including the hard drives that use Boxee's interface, for ease of use and clarity. That said, it has to do a lot less than some of the other devices we look at here.

The Apple TV makes sense if you already have a huge collection of video content purchased from the iTunes Store, or if you have a home setup that includes iOS devices and a Mac you're willing to leave on 24 hours a day. iCloud integration may well end that requirement, but for now the Apple TV remains a flawed product.

Company: Apple, www.apple.com/uk

Pros: Can stream DRM protected content; cheap; great interface

Cons: No local storage; needs a Mac to be turned on and running iTunes to stream content

Price: £99

Star rating: ★★☆☆☆



Think outside the box What the Boxee box lacks in a hard disk, it more than makes up for with its slick interface and TV selection

Boxee Box by D-Link

The Boxee Box is somewhat like the Apple TV in that it lacks any onboard storage. However, it does have the distinct advantage of having two USB ports, so you can add external storage to the device should the need arise. As well as the USB ports there's an Ethernet connection and built-in WiFi. A single HDMI port is the only way to connect the Boxee to your TV. The remote control has a full QWERTY keyboard on one side and a few simple buttons on the other.

The Boxee service offers a slick user interface and options to connect to the world of internet-based content. Often websites that stream content are designed primarily for computer use and never quite work when they're shoehorned onto a living room television set. The Boxee aims to rid you of that problem by giving you a quick and easy way to grab online content without having to use an interface that's been designed for a computer.

There's an excellent range of television programmes on offer, and unlike many other free-to-view services, the Boxee option includes shows you'll have actually heard of, such as *Friends*, *Pan Am*, and a host of others. Boxee has a number of content partners in the UK including the BBC, Channel 4, Channel 5, and ad-supported movie services. The movie selection is a little less impressive, but Netflix is due to arrive in the UK soon, so this should improve.

The lack of local storage might put you off, but with hard disks being so cheap nowadays adding your own isn't too bad a compromise. Accessing your local stuff is easy enough and given it's USB ports, upgrading and increasing storage in the future will be incredibly easy.

There were a few irritations though, such as when websites don't push the video full screen and you have to manually click on the full-screen option. This might not sound that bad, but controlling a mouse pointer with a remote control is trickier than you might think.

The Boxee Box by D-Link is a great compromise if you already have plenty of content stored on hard disk and want to easily show it on your television, with the added benefit of a slick interface and internet content that's totally free.

Company: D-Link, www.dlink.co.uk

Pros: Fantastic online services; great user interface; decent remote control, option to add local storage

Cons: Not many movies yet; minor bugs, like sites not showing full-screen video

Price: £149

Star rating: ★★☆☆☆



Value for money Simple yet effective, the Emtec Movie Cube does exactly what you want it to without any fuss

Emtec Movie Cube K220H

Emtec has been producing multimedia hard drives for a while now. The Movie Cube K220H is a fairly simple full HD multimedia player, with 1TB or 2TB hard disk options.

To connect the Movie Cube to your TV there's an HDMI port and composite connections for older TVs, though naturally this gives poorer video quality. On the side of the unit there are two USB ports. One of these allows you to connect the drive to your Mac to copy across movies, music and video, while the other lets you easily add storage. If you have media on a USB memory key, you can also plug it into the Movie Cube and show it on your TV. The remote control is, as with many non-Apple designed remotes, a sea of buttons that don't all quite make sense. However, once you've mastered it you'll realise the buttons you need are easy to get to.

Emtec has done a good job with the interface, and though it's fairly simplistic, it looks good and responds quickly to commands. The design of the unit itself is very basic with an almost slab-like look; there's just a single break for the power button. The Movie Cube will fit in among the set-top boxes and DVD players you have under your TV very well.

If price is one of your main considerations, then the Emtec is sure to appeal to your wallet. We found the 1TB version of this drive online for about £100. That's not a bad price for just a simple 1TB hard disk, let alone one with the added features and benefits that the Movie Cube has. The quality of the Emtec drive certainly hasn't suffered by the lower price point either, as it feels like a very robust well-built device.

The Movie Cube may well lack networking features and flashy internet-based services, but it does what it does incredibly well. The construction is impressive, and though we'd have preferred the USB ports to be on the rear and not the side of the unit, this is a minor niggle. We really like the interface and the design; though very basic it's good. The only real downside is that to copy movies and music you'll have to plug your Mac into it physically, as there are no networking options. If this isn't an issue for you though, the Emtec represents incredible value for money and is impressively easy to use.

Company: Emtec, www.emtec-international.com

Pros: Simple to use; neat, usable interface; very cheap; solid construction; fast and quiet

Cons: No networking options or internet-based services

Price: £144 2TB

Star rating: ★★★★★



Excellent integration The Iomega TV with Boxee is a great-looking device, but it is quite pricey

Iomega TV with Boxee

The Iomega TV with Boxee is a multimedia 1TB or 2TB hard drive with a difference. Its specifications are impressive, with wireless and wired Ethernet connections, HDMI out and two USB ports. The remote control is a two-sided affair that has simple controls on the top and a full QWERTY keyboard on the rear. However, the real difference is the interface. Rather than create an interface in-house, Iomega has employed the services of Boxee to do it. Boxee is a well-established web-to-TV service provider, well regarded for ease of use and capabilities. We applaud Iomega for integrating the service with its hard drive. Essentially what you're getting is a Boxee Box (reviewed opposite), but with an Iomega disk and design.

With the interface sorted by Boxee, Iomega has done the rest and it's certainly an impressive bit of kit. The device itself is chunky, but it's solidly built and feels like a quality piece of equipment. It's slightly larger and heavier than the other units on test, but it's not too big. In the box there's a stand that allows you to use the Iomega TV in the upright position too.

Connecting to your local drives is simple and getting access to your content is easy, but don't expect the interface design panache that you get from Apple. To transfer your music, movies and other content to the Iomega disk you need to connect to it over the network, but that's a straightforward procedure as you just drag and drop to the disk.

There's a lot to like about the Iomega drive, the specification is great and the Boxee integration is good. Add in the wireless and wired network capabilities, and the package is even better. The two-sided remote control is a good compromise, making the web browsing experience all the better. Personal cloud sharing is a neat feature too.

However, the Iomega didn't stand head and shoulders above the rest of the pack, which we would have expected for the extra cash. Yes, the Boxee integration is excellent and all the additional services that Boxee brings make the Iomega an attractive proposition, but other than the inclusion of a WiFi dongle there's not a great deal to separate the Iomega TV from the rest of the pack.

Company: Iomega, www.iomega.co.uk

Pros: Boxee integration; wired and wireless connectivity; solid construction; good remote control

Cons: Expensive; not much to offer over and above competition

Price: £350 1TB

Star rating: ★★★★★



Cinema goer The Seagate GoFlex Cinema is small despite its huge capacity, but there are some failings with the drive

Seagate GoFlex Cinema

The GoFlex Cinema tops our group test with the largest capacity here – up to 3TB. That 3TB behemoth will take you some time to fill up with movies, music and photos. Yet the GoFlex Cinema isn't large, in fact the box is smaller than some of the others we looked at here.

On the back the connections are simple; a single HDMI port and the older composite type, with yellow for video and red and white for audio, as well as an optical out for digital audio connections. The USB ports on the side allow you to connect the disk to your Mac for copying data across and for extending the storage capacity.

The only real letdown of the GoFlex is the interface. It's not that the Seagate design doesn't work, it's just a bit basic. In and of itself that's not terrible, but put it up against the other units on test here and it's clear that the other manufacturers have put a bit more thought into it.

As the Seagate is part of the GoFlex range, you'll be able to update it at a later stage. Simply unplug the video end of the device and plug it into a new GoFlex compatible disk. This means that in a few years when 50TB disks are available, you'll be able to easily upgrade the storage capacity of this drive; the caveat being that this requires a Seagate drive and the GoFlex range to continue for years to come. Another advantage of the GoFlex system is that you can upgrade the connectivity, so if in a few years you want to add Thunderbolt for faster transfer speeds that should be possible.

There are no network ports on the Seagate and it doesn't have WiFi either, so this is another drive that you'll have to connect to your Mac physically to copy your media across. This also means that there are none of the interactive online services available either.

The 3TB capacity of the Seagate might well appeal to you, as the larger the disk the more you're going to be able to store on it – more movies, more photos and more music in one place. However, the GoFlex Cinema is a fairly basic affair and the inability to connect to a network may well put you off. It's nicely designed and comes from a well-respected name in hard disks, but the price might be a little too high for some.

Company: Seagate, www.seagate.com

Pros: Enormous storage capacity; GoFlex system is a great idea; hard disk can be upgraded at a later date

Cons: No networking capability; user interface is very basic

Price: £279 3TB

Star rating: ★★☆☆☆



Macworld Editors' Choice

Good impression The Western Digital Live Hub is nicely designed and has a good balance of features too

WD TV Live Hub

Bringing your digital life to the big screen is how Western Digital describes its WD TV Live Hub, and we'd be hard pushed to disagree.

The drive is well specified with HDMI, composite and component video out. It has two USB ports, one on the front and one on the rear. There's also an Ethernet port that allows you to connect the WD TV Live Hub to your network for easy sharing and access to online features. You can use one of the USB ports mentioned above to add wireless capability to the Live Hub, with an optional adaptor if wired networking isn't your thing.

Thanks to the network capability not only can you share and copy data to the drive easily, but you can access a number of online services as well. Vimeo, YouTube, Facebook and TuneIn Radio are all capable of being accessed through the Live Hub. BBC iPlayer isn't currently available, which may be a problem for some, however, we expect that more services will be added over time.

With one of the best interfaces on test, the TV Live Hub makes a great first impression. Western Digital has managed the impressive feat of taking a fairly mundane and uninteresting task, and making it look good and be useful and easy to use at the same time. Though animated menus might seem a little trite, they work well and make the experience that much better.

The WD TV Live Hub is very well specified and has a host of extras that make it better value for money. There's a free app for iPads and iPhones that allows you to upload your pictures and movies directly to the Western Digital drive from wherever you have access to the internet. Little extra features like this all add value.

We really like the Live Hub, it brings together a decent set of online services, and shares well between all your Macs while giving you access to your media on your TV. Though some may not like the limitation to wired networking as standard out of the box it's not a massive shame, and wireless can be added at a later date anyway. With a 1TB disk and the online services built in, the Western Digital Live Hub really is a very compelling product.

Company: Western Digital, www.wdc.com

Pros: Great user interface; small; well specified; integration with iOS apps, 1TB hard disk

Cons: No wireless connection built in

Price: £189

Star rating: ★★★★★



Group Test: Multimedia streaming devices

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"The WD TV Live Hub is very well specified and has a host of extras that make it better value for money"

Macworld's buying advice

This group test really did highlight some very accomplished products. It's telling of how confused the market is over video streaming that not all of them do exactly the same thing. A couple of the manufacturers went for simple hard drives that you can plug into your TV, while others added networking capabilities. Two didn't offer any storage out of the box whatsoever. It's clear that the market for multimedia in the living room is still very much up for grabs, and still a complex conundrum for users and manufacturers alike.

Though it might seem obvious that Apple should win this sort of group test hands down given the iTunes integration and great user experience, the device has too many flaws for our liking. Yes, steaming from iCloud is a potential new feature, but as yet it isn't here and the built-in services are few and far between. There's

no BBC iPlayer or any of the other main channels online programming available, for example.

This leaves the field wide open, but rather than making things simpler it makes everything a bit more complex. It really depends on what you want and how your home cinema setup works as to which of the devices on test is a winner. If your Mac isn't near your TV then the drives without networking capabilities are probably redundant. However, if the Mac and TV are in the same room then connecting over USB isn't a problem.

Finding an outright winner was tough and some of the reasons for the losers dropping points seemed harsh, but there has to be just one winner. As we've outlined above, the Apple TV has some real shortcomings and was discounted early on. The Seagate GoFlex Cinema lost out because of the user interface, despite its huge

3TB storage capacity. The Iomega TV with Boxee lost out on account of its high price.

This left us with the Boxee Box, WD TV Live Hub and the Emtec Movie Cube. We liked all three of these, but it was the Western Digital drive that just topped out over the others to become the winner for us. The networking capability, storage and integration of other services of the WD TV Live Hub makes the best all round balance of form and function.

The Western Digital drive is small, lightweight and easy to use, the user interface is well thought out and connecting it to your existing network is easy. It's priced well too.

However, it's worth considering exactly how you'll be using your multimedia content and what your setup is before discounting completely any of the units on test. **MW**

How they shape up

Macworld Editors' Choice

Product	Apple TV	Boxee Box by D-Link	Emtec Movie Cube K220H	Iomega TV with Boxee	Seagate GoFlex Cinema	Western Digital WD TV Live Hub
Price	£99	£149	£144	£350	£229	£189
Storage capacity	N/A	N/A	2TB	1TB	3TB	1TB
Ethernet	Yes	Yes	No	Yes	No	Yes
WiFi	Yes	Yes	No	Yes	No	No
USB	No	Yes	Yes	Yes	Yes	Yes
Additional storage Option	No	Yes	Yes	Yes	Yes	Yes
HDMI	Yes	Yes	Yes	Yes	Yes	Yes
Composite video	No	No	Yes	Yes	Yes	Yes
Digital audio	Yes (optical)	Yes (optical)	Yes (coaxial and optical)	Yes (optical)	Yes (optical)	Yes (optical)
Star rating	★★★★☆	★★★★☆	★★★★☆	★★★★☆	★★★★☆	★★★★★