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## Bridging the TV/PC Gap

ARTICLE DATE: 04.13.07

By [Tim Gideon](#)

When Apple TV was released in March, the big question a lot of consumers had was: What exactly is it? I like to call products like Apple TV and its competition "media extenders." These set-top boxes have the power to turn your television into a true multi-media center, usually by streaming digital content from your computer via Ethernet or a wireless network. Apple TV, for instance, streams iTunes videos and music from your Mac or PC to modern widescreen sets. Netgear's Digital Entertainer HD EVA8000 is a more versatile competitor, but it involves a set-up process about as graceful as its name. And then there are the gaming consoles that also have networking and media capabilities, letting you to connect to the Internet and in some cases access computer-based multimedia.

Of course the clear favorite, especially among iPod owners, is the Apple TV. If your music and video files live in iTunes, Apple TV is your best bet, but the system isn't without its shortcomings. Video resolution is not the crispest I've seen, even though the unit is aimed at HD and ED TV owners. Netgear's box surprised me by streaming iTunes DRM-protected music (not video, though). For BitTorrent users with HD video files and a potpourri of music formats, the Netgear may be the better choice, but buyer beware: it often crashes and is complicated to set up.

Microsoft's Xbox 360 seems like the obvious selection for gamers who want to stream video and music from their PC. The 360 can access media files on Windows PCs running Media Player 11, Zune, and Windows Media Connect software. But the PlayStation 3 should not be overlooked. Though not a true media extender since it can't stream content from your PC, the PS3 is loaded with multimedia features. It can play CDs, MP3s, DVDs, Blu-ray discs and even has a built in Web browser.

These are the best options out there right now, but in the months ahead there will be a lot of new devices on store shelves that will help you move media round your home. Read-on for our in-depth reviews and check back as we continue to cover this growing segment.

### In This Roundup:

#### Apple TV

Small and capable, the Apple TV will stream iTunes-purchased video and iTunes-compatible music to your TV wirelessly, or store it on its 40 GB hard drive.

#### Netgear Digital Entertainer HD EVA8000

This wireless extender is a nightmare to set up, but the pay off is huge including HD video streaming, iTunes DRM-compatibility (music only), access to online Flickr and YouTube content.

#### Xbox 360

Streams HD video, all manner of music, photo and video files, TV, and recorded TV, from a Media Center Edition PC...oh, yeah, it plays games, too.

#### PlayStation 3

Though not a pure media extender, the PS3 has plenty to offer your TV. It's a Blu-ray player, Web browser, digital video-and-photo viewer, and 1080p HD compatible console system that supports online gaming in Hi-Def.

## Netgear Digital Entertainer HD EVA8000

REVIEW DATE: 04.05.07

### BOTTOM LINE:

Setting it up was a nightmare, the device crashed easily, and it isn't attractive, to boot. Still, when it's up and running, the product has an impressive feature set. If Apple TV is for the iPod-familiar, hands-off user, then the Netgear is for the patient, hands-on BitTorrent addict.

### PROS:

Very versatile media extender. Plays lots of DRM-protected files. Can access YouTube and Flickr over the Internet.

Records TV via your computer. Plays content directly off USB drives.

**CONS:**

Crashes more than Billy Joel. The complex setup process may prove tricky even for networking pros. Interface graphics and device itself are ugly. No hard drive. Can't auto-update its media library.

**COMPANY:**

Netgear

**SPEC DATA**

**Price:** \$399.00 List  
**Ethernet Interface:** Yes  
**Networking Options:** 802.11g  
**Hard Drive:** No  
**Supports MP3:** Yes  
**Supports WMA:** Yes  
**Shows Photos:** Yes  
**Plays Internet Radio:** Yes  
**Shows Video:** Yes  
**Has On-screen TV Display:** Yes  
**Rips CDs:** No

**EDITOR RATING:** ●●●○○

By [Tim Gideon](#)

Suddenly, with the advent of Apple TV, it seems everyone wants a wireless media extender to stream files from a computer to the TV. Apple TV is easy to set up, fairly small, and an excellent product for iTunes users. By contrast, the Netgear Digital Entertainer HD is tough to install, but it offers folks not tied to iTunes the freedom to watch their potpourri of legal, illegal, high-quality, and pirated content on their TVs. Positively loaded with features, from HD video playback (480i to 1080p) to online access of YouTube and Flickr accounts via your television, the Entertainer HD even plays iTunes DRM-protected files. Now if you need to live in an iTunes-level world of user-friendliness, this product isn't for you. But for those patient types who don't mind rolling up their sleeves and getting their hands a little dirty, the Digital Entertainer HD has plenty to like.

Really a wireless media extender that streams audio, video, and photos, the Netgear Digital Entertainer HD connects to the Internet (in a limited capacity), if you attach it to a wireless router that has access to your computer's media library. The device can also read content directly off a USB drive or be wired via Ethernet cable to boost its Wi-Fi 802.11g speed (54 Mbps) to 100 Mbps. And unlike Apple TV, Netgear doesn't require an HD or EDTV, since it'll format content for your 480i set. It can also play HD content on a 1080p set—another feat Apple TV can't perform—and all non-HD content is automatically upscaled to HD for HD screens.

Sadly, though, this flat rectangular device is ugly. It's much bigger than the Apple TV, less sleek, and even the graphics for the user interface are drab. Given that there are hordes of graphic and computer designers out there, this amateurish menu system baffles and annoys me. That said, the remote is a *real* remote, larger than Apple TV's (which I think is a plus) with several more options than Apple's provides.

The worst problem is that the Digital Entertainer HD was a nightmare to set up. Unlike Apple TV's slick streamlined process that communicates with both Macs and PCs (provided they are running iTunes 7.1.1) in a matter of minutes, the Netgear box requires a convoluted setup that killed a good 12 hours. First, it had trouble seeing my wireless network. (Apple TV worked immediately with the same network.) Once that was resolved, the Entertainer saw only a small portion of my available content (the fix: keeping all content in folders with file sharing turned on). After I did this, the device recognized that my files were there and displayed their names, but, unfortunately, it was "unable to play" them. The cure for this problem not only entailed rebooting the Entertainer HD and reconnecting all my networked computers and the Netgear box to the wireless router, but also turning off all firewall protection—both Microsoft Windows' protection *and* Norton's. Many people are going to be uncomfortable with this scenario. Simply put, with the firewall on, the Netgear box had serious trouble finding and streaming all of my files.

Another frustration is that, unlike Apple TV, the Entertainer HD cannot automatically update its library. That means that every time you add a new movie or song to your shared folder, you have to "scan for new media" on the Netgear TV menu. This isn't a terribly long process, but it's by no means as convenient as Apple's self-updating library system, and a couple times, my unit crashed while scanning.

Well, after hours of frustration trying to get my entire test library streaming wirelessly to the box, I finally had success, and, aside from the aforementioned crashes (caused by raising the volume when video was streaming or trying to search a menu while something was playing), it was a pure joy to use. I logged into my Flickr account using the remote and watched my vacation pictures and photos from my friend's account scroll across the widescreen TV here in PC Magazine Labs. I checked out the top videos on YouTube, and when they seemed too pixilated for our huge screen, I used the zoom and page up/down functions on the remote to adjust their size for sharper viewing. I also surfed Internet radio stations and compiled a favorites list. Apple TV's Internet connectivity is much more limited and not nearly as useful.

Somehow, the smart minds at Netgear found a way around Apple's DRM (not videos, though). You can listen to any audio content that plays in iTunes and any content that plays in Windows Media Player. Even the

iTunes album art is displayed. This feature delightful to use—a rare example of iTunes material playing properly, without being ripped, on a non-Apple device. Since this wasn't done in cooperation with Apple, the sneaky tactic probably involves intercepting the audio output from iTunes before it reaches your PC's output. I downloaded a few songs from Napster and had similar success, and when I downloaded 1080p HD footage, the picture was crisp and the audio perfect. It should be noted, however, that while the Netgear box is compatible with Macs, it plays DRM and YouTube content only if you are using a PC. (The same is true for live television using a PC-based tuner, which can be recorded and even preprogrammed.)

The Netgear Entertainer HD's list of compatible files is impressive. For video, the device handles AVI, DivX, Xvid WMV, MOV, M4V, VOB, MPG, MP1, MP2, and MP4 (video codecs: MP1/2/4, Xvid, DivX3/4/5/HD, VC-1/WMV-9, AVC/H.264, OpenDivX—all to 1080p). For audio, you can listen to MP1/2/3, WMA, WMA-Pro, AAC, AC3, FLAC, AIFF, WAV, and PCM files. Compatible photo formats include JPG, BMP, TIFF, and PNG. Playlist formats supported are: PLS, M3U, WPL, ASX, WAX, WVX, RMP. Tag formats (metadata) are ID3 v1, ID3 v2, WMA, WMV, AVI, DivX, Xvid, FLAC, EXIF, MOV, M4A, M4P, and M4V. The device also supports Dolby Surround playback for digital audio ports and down-mixes to stereo for analog outputs.

At time though, the Entertainer falls victim to its limited streaming capabilities. It plays 1080p HD footage, but until I viewed those images directly off a USB drive, I ran into some serious sputtering issues. The same video clip in 720p did not suffer from any sputtering, however, and was automatically scaled to fit the screen. Also, when my wireless signal strength was a bit low, music playback sputtered too. So if your wireless signal isn't healthy, don't expect much from this device. And unlike Apple TV, the Entertainer HD has no hard drive, so you can't revert to hard drive playback when there are streaming problems.

To be perfectly honest, I'm torn. I want to love the Netgear Digital Entertainer HD, but I can't. This machine has great versatility, incredible file compatibility, and fun Internet features. Its HD playback also makes a compelling argument for moving your computer files closer to your widescreen TV for viewing. My sincere hope is that firmware updates will continue to improve the Entertainer HD and solve the crashing and sharing annoyances that currently plague it. Fix the bugs and allow users to stream without disabling their firewalls, Netgear, and you'll have one fantastic product.

*More media hub reviews:*

## Sony PlayStation 3

ARTICLE DATE: 11.16.06

### **BOTTOM LINE:**

Setting it up was a nightmare, the device crashed easily, and it isn't attractive, to boot. Still, when it's up and running, the product has an impressive feature set. If Apple TV is for the iPod-familiar, hands-off user, then the Netgear is for the patient, hands-on BitTorrent addict.

### **PROS:**

Very versatile media extender. Plays lots of DRM-protected files. Can access YouTube and Flickr over the Internet. Records TV via your computer. Plays content directly off USB drives.

### **CONS:**

Crashes more than Billy Joel. The complex setup process may prove tricky even for networking pros. Interface graphics and device itself are ugly. No hard drive. Can't auto-update its media library.

The PS3 is, quite possibly, the biggest console gaming system ever. At twice the size—and price—of its predecessor, the PS3 makes Sony's lofty ambitions pretty clear: This is much more than a gaming system. Sure, playing games is still the primary function—and drifting around corners in Ridge Racer 7 at 1080p is heart-stopping—but this system is clearly designed to do more than that. From replacing your DVD player to enabling you to view pictures, play music, and watch YouTube videos on your TV easily, this is a set top box for the next generation.

Read the full review: [Sony PlayStation 3](#)

## Apple TV

ARTICLE DATE: 03.22.07

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Since the late nineties, Apple has attempted to make the technically complex simple. The iMac did it for personal computing, and the iPod is a paragon of portable consumer electronics. Now Steve Jobs and company want to simplify your home entertainment experience with the \$299 Apple TV. But what, exactly, is it? The basic concept of this product is straightforward: It can wirelessly stream content from the iTunes libraries of up to five computers as well as play content directly from the box's 40 GB hard drive. This means you can enjoy almost anything on your PC, be it movies, photos, podcasts, or music, on your enhanced-definition and high-definition widescreen televisions. Apple's slogan says, "if it's on iTunes, it's on Apple TV"—and this is mostly true. Those who don't mind hooking up a few cables and thinking a little about the setup will enjoy this wireless extension to iTunes. Overall, it does a pretty damn good job, despite some limitations.

Read the full review of the Apple TV.

## Xbox 360

**ARTICLE DATE:** 03.22.07

### **BOTTOM LINE:**

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Microsoft has estimated it will sell three million Xbox 360s in the next three months. It may be right. Except for a few design issues, we were very impressed with the console and its accessories. We get goose bumps thinking about what games will be like when the power of the 360 is fully unleashed.

For those of you who are trading up from the original Xbox, you'll be happy to know you can play most existing Xbox titles on the 360, including Halo. Unfortunately, Microsoft includes no instructions on how to transfer saved games from an original Xbox to the 360, and we haven't been able to accomplish that yet either. And you will need new controllers, either wireless or USB-connected.

Read the full review: [Microsoft Xbox 360](#)

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