

PCAnswers

GOOD BETTER BEST!

Christian Hall looks at three power-line alternatives to Wi-Fi

Although Wi-Fi is the most popular route to networking your home, it isn't the be-all and end-all. Thick walls and oddly shaped rooms can play havoc with wireless radio signals and there's also the need to ensure that your network is secure. All that changes with power-line networks. These use cables like traditional wired networks, but don't require laying new wires all over your house because it utilises the existing electrical cables of a 240V ring main. Power-line network is the very definition of "plug and play": just connect the devices to your power sockets and flick the switch. They then plug into Ethernet sockets on your PC equipment and are easier to set up than many Wi-Fi routers.

Advantages of power-line networks

Because it requires no new wiring, and the network adds no cost to your electric bill (as you're not really drawing power from it), power-line networking is the cheapest method of connecting PCs in different rooms. It can also be faster, more reliable and even more secure than wireless. In fact, it's a wonder that power-line isn't more popular than it is today. What's kept power-line in the dark is a lack of devices. Thankfully, the networking market has an abundance of power-line adaptors and we've chosen three of the best to look at in this test. We concentrated on ease-of-use, speed, features and build quality.

Not all power-line kits are made equal and there are two different standards in use. The one that's emerged as the winner is the HomePlug Alliance – it's the breakthrough that power-line needed and its PowerPacket technology has some real advantages. It's fast, theoretically up to 200Mbps, but it's more like 14-80Mbps, depending on the model – which is still good.

Power-line networking makes use of 56-bit data encryption and each wall-mounted adaptor has its own default key so it's almost impossible to be hacked. If you've struggled with wireless setups and unreliable routers, check out these homeplug solutions.

True or false?

Europe is ahead of the US in power-line adoption because of better voltages.

What does it all mean?

GOOD Something that, for its money, delivers a decent quality service that'll raise few complaints

BETTER This product will have a few more features to play with, but for a bit more of your dosh

BEST A top-of-the-range number that'll have everything you need and is well worth splashing out for



GOOD BUY

Panasonic HD-PLC Ethernet Adaptor

Not only are they great connectors, they're also the sexiest-looking homeplugs on the market

Making a wall-mounted power-line adaptor not look like an AC charger is a difficult task, apparently. Most power-line manufacturers have serious design issues when it comes to producing power-line networking with style. It's important after all because these units will stick out of your walls. Panasonic has brought out these nice-looking devices that also happen to be great performers and a real alternative to the new wireless N specification.

The Panasonic BL-PA100KT adaptors only need electricity and essentially can extend the range of your network indefinitely. Setup lives up to the hype and takes just a few seconds: plug both devices next to each other and they pair automatically. You can then split them up and use them throughout the house. As with other power-line devices we've looked at, real-world speeds didn't reach anywhere near 200Mbps, but we could still transfer a few MB per second, so streaming is as good as you would come to expect from draft N wireless devices.

Sensible solution

The throughput rate of the Panasonic BL0PA100KT is more than fast enough for sharing a broadband Internet connection, and it should be sufficient for transmitting high-definition video content, too. However, speeds weren't constant, especially with other devices sucking up power at the same time, and at £90 for a pair we would expect a slightly more reliable connection. If you've had real problems with wireless reception because of your home's construction then the BL-PA100KT could be the solution you need and won't give you the setup and maintenance headaches associated with some wireless hardware.



DETAILS

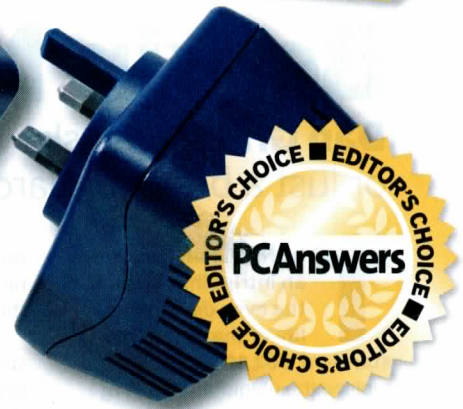
- Model: **Panasonic HD-PLC Ethernet Adaptor (BL-PA100KT)**
- Expect to pay: **£90**
- Contact: **Panasonic**
- Web: **www.panasonic.co.uk**

FEATURES

- **Up to 190Mbps**
- **Connect up to 16 adaptors**
- **128-bit encryption**
- **Status LEDs**

RATING ★★★★★

*It's true...
in the US it's common for a small transformers to serve just a few houses, whereas in Europe larger transformers are used.*



BETTER BUY

D-Link DHP-301 Powerline HD kit

D-Link goes for the HD selling point and produces a cracking set of plugs

Competing Wi-Fi routers and power-line kits share much of the same functionality, but D-Link has gone for the unique selling point of HD content to pull consumers towards the company's latest offering.

D-Link's adaptors conform to the DS2 standard (www.ds2.es), allowing for interoperability with other power-line kits. In real terms, though, you're unlikely to want to chop and change your devices, so we suggest sticking with one manufacturer.

The plugs were easy to initialise, but didn't quite follow the simple instructions supplied and resets were required. After connection a software setup is required: this pairs the devices and ensures that they're secure. We did like the LED display and found it helpful during the setup process and for general use.

Speed issues

This kit has a cited speed of 200Mbps, but as with wireless be prepared for a lot less. Something around 35Mbps is more realistic, which is faster than most broadband connections and so

is ample for most purposes. With power-line your network is only as good as your home wiring. If you don't have modern wiring then expect a bandwidth reduction, and with multiple devices hammering your electricity expect speeds to dip. We found the D-Link to remain fairly constant, although it took a few restarts to establish the highest speed.

So the DHP-301 is a good performer, but what of the HD label? It's actually a bit of a misnomer because any homeplug is capable of streaming HD if your hardware supports it. Whatever brand of adaptor you use, if you can get above the 40Mbps mark then you'll enjoy simultaneous streams of two or even three HD movies.



DETAILS	
■ Model:	D-Link DHP-301
■ Expect to pay:	£100
■ Contact:	D-Link
■ Web:	www.dlink.co.uk

FEATURES	
■	Up to 200Mbps
■	SNMP support (to manage encryption key)
■	Remote software upgrade (FTP-based)

RATING ★★★★★

BEST BUY

Solwise HomePlug AV 200Mbps

Great speeds and the ability to buy individual units means that Solwise is a winner

The power-line networking holy grail is 200Mbps. Solwise has been brave enough to label its latest adaptors as 200Mbps versions, knowing full well these speeds are theoretical. But we'll forgive Solwise here because the HomePlug AV beats all the others in this test hands down.

The Solwise HomePlug AV PL-200AV are compact units, and in this test had the best socket fit of them all and produced the best overall results. Although the HomePlug AV units are smaller than most, they're still too big for most multi-sockets and really do belong in the wall.

Setup went without a hitch – it's all plug and play so no device drivers are needed, and 30Mbps speeds were achieved on the first run. In independent tests these adaptors have been known to go over 100Mbps, so if your wiring's top notch then the Solwise PL-200AV's are the adaptors to get the most out of the technology.

Weak software

The software bundled with each PL-200AV is basic, and is limited to providing a means to update the

firmware and change the password that's automatically used to encrypt data sent between the adaptors. You can view basic network information but it doesn't really tell you anything Windows won't.

While the Solwise PL-200AV plugs don't come as a pack, they are excellent value and the ability to buy each of them separately is ideal for getting the number you want. Power-line can save power, but these plugs are even more efficient than most because they go into Power Saving Mode after 15 minutes when the Ethernet connection is off. Overall, the PL-200AVs are power-line devices at their best and at £50 each you can't go wrong.



DETAILS	
■ Model:	Solwise HomePlug AV PL-200AV
■ Expect to pay:	£50
■ Contact:	Solwise
■ Web:	www.solwise.co.uk

FEATURES	
■	Up to 200Mbps
■	Can be bought as individual units
■	128-bit encryption
■	Power saving when idle

RATING ★★★★★

UPGRADE