

Double the speed of common Ethernet



Review



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CNET Editors' Rating



Excellent

Average User Rating



1 user review

The good: The ZyXel PLA4205 HD power line adapter offers stellar network data transfer speed and is easy to use.

The bad: The bulky adapter may obstruct nearby wall receptacles, and doesn't have a pass-through power socket.

The bottom line: The ZyXel PLA4205 power line adapter is an excellent alternative to using regular Ethernet or Wi-Fi to connect more devices to a home network.

The ZyXel PLA4205 HD power line adapter is the fastest I've seen yet, thanks to the combination of the Powerline AV 500 standard and Gigabit Ethernet.

It offers more than twice the speed of a regular Ethernet connection, which is all the more reason you should get a pair of these instead of running network cable to that far corner of the house where your Wi-Fi signal can't reach.

The PLA4205 isn't perfect since it doesn't come with a pass-through power socket. The adapter itself could also stand to slim down a bit to keep the wall socket area clear, or use power cable to connect to the wall, instead of the current snap-on design.

At the street price of around \$50 per unit or around \$80 for a kit of two, however, the ZyXel PLA4205 is one of the best deals for those wanting to build or expand a power line home network. Not only does it save you setup time, it also offers speed closer to that of a Gigabit Ethernet network than any of its peers.

Quick Specifications

Networking type	Bridge
Dimensions (W x D x H)	2.8 in x 2.6 in x 3.7 in
Connectivity technology	Wired
Data transfer rate	500 Mbps
Data link protocol [Jan 18, 2013 from CDS: Networking]	Ethernet Gigabit Ethernet HomePlug AV (HPAV) Fast Ethernet
Weight	4.7 oz



By Dong Ngo

CNET editor Dong Ngo has been involved with technology since 2000, starting with testing gadgets and writing code for CNET Labs' benchmarks. He now covers networking and storage, and also writes about other topics from online security to new gadgets and how technology impacts the life of people around the world.

Design and features

The ZyXel PLA4205 is quite large, about twice the size of the recently reviewed **Actiontec PWR500**. On the bottom, toward one of its sides, it has a two-prong power connector that goes into a wall socket. This snap-on design is convenient but also means that the adapter will obstruct access to any adjacent receptacles. And since the adapter doesn't come with a pass-through power socket, you shouldn't use it in a place where there's only one wall socket.

On the far side from the two prongs, the PLA4205 has a Gigabit Ethernet (1,000Mbps) port. This is an important difference from the Actiontec PWR500, which has only a regular Ethernet 100Mbps port. This means the PLA4205 can offer the real benefit of the Powerline AV 500 standard it supports, which caps at 500Mbps. The Actiontec PWR500 also theoretically supports Powerline AV 500, but because of the speed at which its port caps, that of the regular Ethernet standard, which is only 100Mbps.



On top of the ZyXel PLA4205 are an Encrypt button and a recessed Reset button. Pressing the Encrypt button of multiple units within a two-minute period will create a secure power line network in between them. This is a helpful feature in case you live in an apartment building and don't want neighbors to tap in to your home network by using an adapter. This is quite a real risk since the ZyXel PLA4205 is compatible with basically all power line adapters on the market. The Reset button restores the adapter to its default settings, in which no security feature is used.

Note that the adapter's security feature works only with other power line devices from ZyXel. In an environment in which power line devices from different vendors are used, it's better to have the security feature turned off so the adapter can work with others.

There's nothing to setting up the ZyXel PLA4205. If you already use power line adapters at home, just plug the adapter into a wall socket, then connect it to a device such as a computer or a set-top box via a network cable, and you're done. If this is your first, you will need two adapters to create the first power line connection. In this case, using network cables, connect the first adapter to the router, then the second to a network device. After that just plug the two into their wall sockets and you're set. The network device is now part of your home network.

Note that, like all other powerline adapters, the ZyXel PLA4205 needs to be plugged directly into a wall socket, not a power surge protector or power strip, to work well.

Performance

The ZyXel PLA4205 offered stellar performance in my testing. For the testing, I used two PLA4205 units. One of them is connected to a Gigabit Ethernet router and the other to a computer with a Gigabit Ethernet network port. The connection consistently registered a sustained speed of 213Mbps, by far the fastest I've seen with power line adapters. For example, the second-fastest adapter is the [Netgear XAV5501](#), which scored about 161Mbps.

CNET Labs power line adapter performance results (in Mbps)

(Longer bars indicate better performance)

Throughput

ZyXel PLA4205	213.2
NetgearXAV5501	160.8
D-LinkDHP-540	147.68
D-LinkDHP-501AV	141.2
ActiontecPWR511K01	90.32
ZyXel PLA4231	90.3
TrendnetTPL-401E2K	79.2
NetgearXAVNB2001	56.2
D-LinkDHP-1320	45.8
Western Digital Livewire	40
Linksys PLK300	32.5
NetgearXAV2001	22.9
Plaster Networks PLN3	22.6
Reference 802.11N 2.4GHz Wi-Fi	20

Note that power line networking's performance depends on the type and quality of the electrical wiring, so you might get a different experience at your place. Overall, I found the ZyXel PLA4205's performance to be the best I've seen. A power line network connection is very similar to a regular Ethernet connection that uses network cable. This means it's generally a lot stabler than a Wi-Fi connection, especially in terms of latency.

Conclusion

Despite the relatively bulky design and the lack of a pass-through socket, the ZyXel PLA4205 power line adapter is an excellent choice thanks to its stellar performance and ease of use.