

PowerLine Networking adapters



By HDA Member
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Practically all dental offices are computerized to some extent. A large portion of these offices also use more than one computer. A key component of using multiple computers is the ability for them to

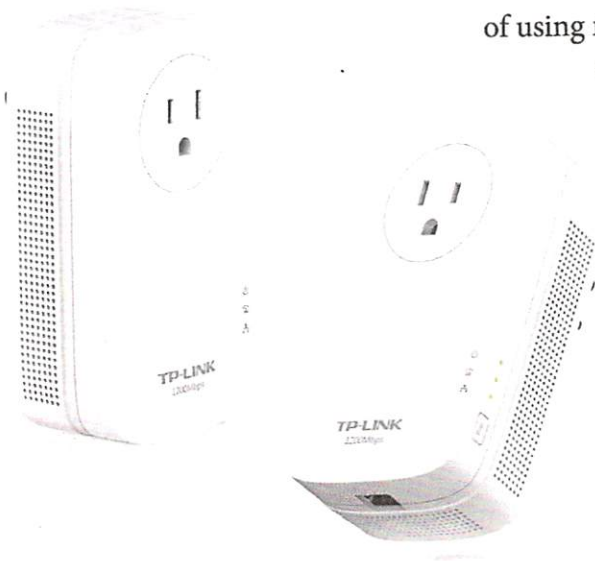
communicate with each other, otherwise known as networking. The “gold standard” for networks is laying down computer cable (ethernet) from one room to another and joining them all in one central location where your data is stored. The cable is ideally placed within walls, or at least tucked away externally on the walls. The

first option may be too difficult since access to crawlspaces in the ceiling or walls may not be possible, while the second option simply doesn’t have a “clean” look with the cable running down a wall.

A new option is available called powerline ethernet adapters. They are based on a new standard released in 2014 called Homeplug AV2 and are extremely easy to use.

You are required to have a minimum of two and they are usually sold in pairs anyhow. Essentially, you plug the powerline adapter into any 3-prong electrical outlet. Then you simply connect it with a regular ethernet cable to your router or switch. You also plug in the second powerline adapter into an electrical outlet where you want another computer, and connect an ethernet cable from it to your computer. The two powerline adapters automatically transmit to each other once plugged into an outlet.

The main drawback is sometimes it may not work if you have multiple electrical circuits within your office since the signal cannot jump across circuits. Another negative aspect is that the connection usually isn’t nearly as fast as using ethernet cable. Some adapters can be large and may block the second socket in most outlets, rendering most wall sockets unusable for anything else to plug in. The cost is also much higher — at around \$100 for a pair of adapters, not including any more adapters needed for other locations. The adapters also must plug directly into the wall socket and not through a surge protector or battery backup since those will filter out your signal.



If you can plug in a lamp, you can install these adapters.

The positives include an incredibly simple setup without any computer knowledge necessary. If you can plug in a lamp, you can install these adapters. The new Homeplug AV2 standard allows current adapters to theoretically reach speeds up to 1200Mbps, although real world speeds are much lower. I usually get download speeds around 30 – 50 Mbps which is more than adequate for most networks. By comparison, Netflix recommends 5 Mbps to stream High definition movies and 25 Mbps for ultra high definition(4k) content.

I would opt to lay down ethernet cable whenever possible since the theoretical speed is usually around 1000 Mbps. If installing cable is not possible for whatever reason, powerline adapters are a great alternative with the new Homeplug AV2 standard.

I recommend Zyxel Powerline AV1200 PLA5405 adapters since they are small and don't block the second socket in most wall outlets. I have also used TP-Link TL-PA8010 AV1200 adapters which are much larger, but have a passthrough making the outlet that it's plugged into still useable.



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