

Optical Broadband Data Transmission in the Home

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Gigaset Optical LAN Adapter Duo

Siemens and Infineon have developed a simple broadband transmission system for use in home networks. The system uses optical polymer cables that can be laid and installed without requiring any special skills.

As is the case with fiber optics, the new system uses light waves to transmit data. Today's optical transmission technology can easily maintain a constant data transmission rate of 100 megabits per second (Mbit/s), making it suited for Internet TV, HDTVs and video-on-demand.

The picture quality is just as good as with copper wires. Because plastic

cables are unaffected by electromagnetic waves, electrical devices in the vicinity do not interfere with the data flow. Since the polymer cables are only about 1.5 millimeters thick, they can easily be laid underneath carpets, for example. The data cables are easy to install: Users merely have to measure the desired length, cut the cables with the tool that is supplied and stick the ends into the appropriate sockets. Plugs are therefore not required.

Deutsche Telekom markets the complete Speedport OptoLAN set, consisting of two optical LAN adaptors, LAN cables and a 30-meter polymer cable, for €149. The set enables users to equip individual routes with polymer cables. The LAN adaptors convert electrical signals into optical ones and vice versa. Developers are now working on incorporating such adaptors into set-top boxes and DSL routers.

Researchers from Siemens Corporate Technology in Munich and Infineon are meanwhile working on a polymer cable system for even larger bandwidths. In the lab, they have already achieved a transmission rate of one gigabit per second over a distance of 100 meters. Research is now underway to optimize polymer cables for even larger data volumes of up to ten gigabits per second.

Source: Siemens

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