



Model DHN-520  
10-Mbps Home Phonenumber  
Network Adapter  
User's Guide

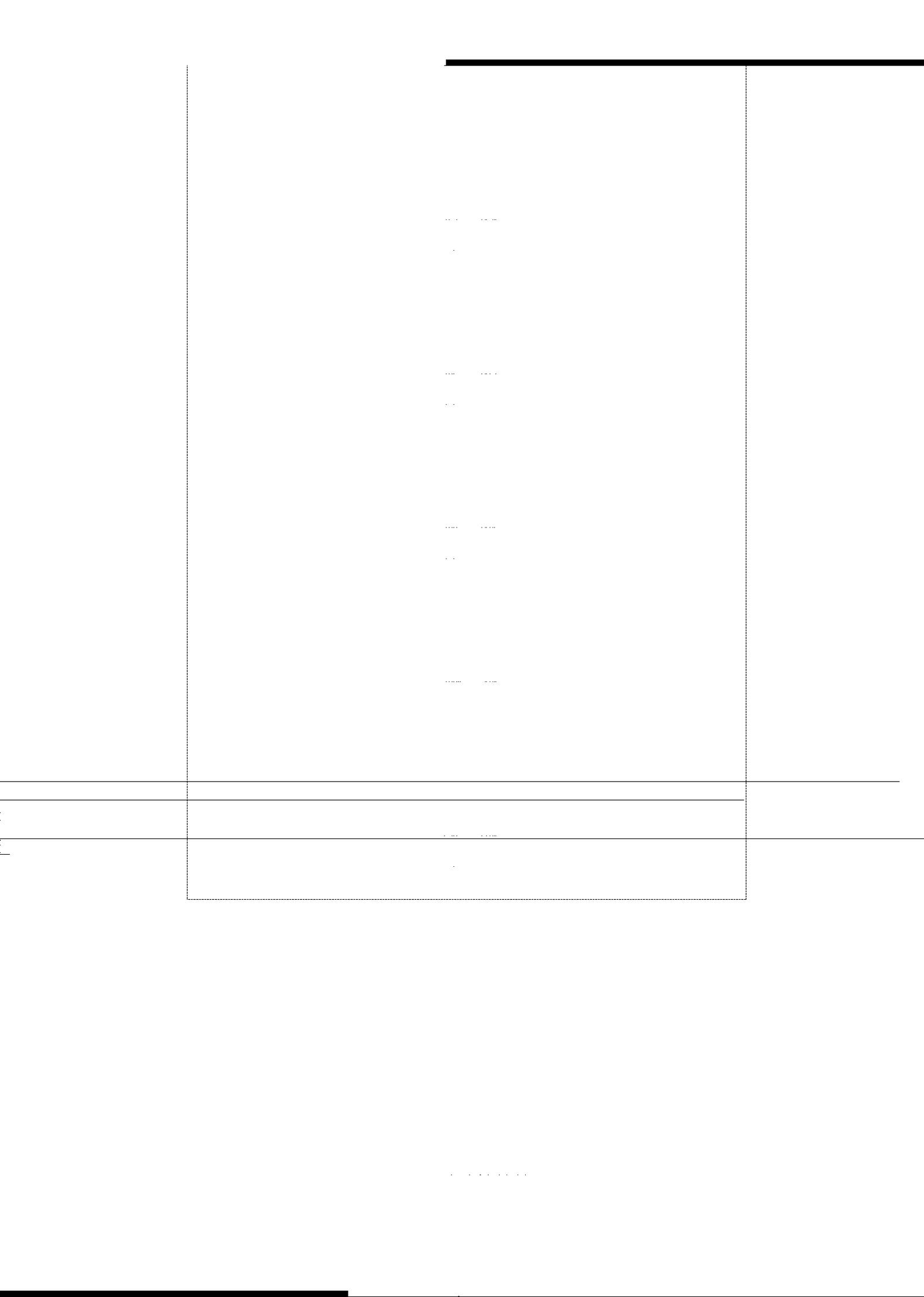
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## ***Introduction***

Thank you for choosing the D-Link DHN-520. As a leading network manufacturer, D-Link is dedicated to making the best cost/performance adapter on the market. This introduction will be useful if you are new to phoneline networking and other new technologies featured in the D-Link DHN-520. For more information on D-Link and D-Link products go to <<http://www.dlink.com>>.

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### **About Phonetline Networking**

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HomePNA 1.0 is a standard defined and ratified by the Home Phonetline Networking Association (HomePNA). Currently HomePNA 2.0 is scheduled to be ratified in the fourth quarter of 1999. The DHN-520 was designed around the proposed iLine10™ standard, which was accepted by the HomePNA on July 27, 1999 as the basis for HomePNA 2.0. At the time of this manual's printing HomePNA 2.0 has not been officially ratified.

Home Phonetline Networking allows a home user to build a network utilizing their standard home phonelines. It removes the need to install separate hardware or specialty cables as is required by other networking technologies. With a full 10 megabits per second (Mbps) of bandwidth,

the data throughput speed is effectively 150-200 times faster than a V.90 modem.

This technology will allow a Microsoft Windows 95 OSR2, Windows 98 or Windows NT (and the future Windows 2000) user to quickly share files and printers. Users can play multi-player network games and share Internet access by using additional software.

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## **Features**

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Designed for versatility and performance, the D-Link DHN-520 provides the following features:

- Backward compatibility with older 1-Mbps HomePNA 1.0 certified hardware
- Operates in a PCI Bus Master slot of a Pentium/Pentium Pro/Pentium II computer, independent of CPU speed.
- PCI Bus Master memory access, for high throughput and low CPU demand.
- Plug-and-play installation.
- 10-Mbps throughput over standard home phonelines
- Three LED indicators: Link, Activity
- Drivers for Windows 95 OSR2, Windows 98, Windows NT, and beta drivers for Windows 2000.

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## **Installation**

Installation of a D-Link DHN-520 10-Mbps Home Phonenumber Network Adapter requires hardware installation first, then software installation.

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### **Unpacking and Inspection**

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**CAUTION:** *Under ordinary circumstances, your D-Link DHN-520 will not be affected by static charges such as may be received through your body during handling of the unit. In special circumstances where you might carry an extraordinarily high static charge, it is good practice to reduce the charge by touching a grounded object before handling the adapter.*

Open the shipping carton and carefully remove all items. In addition to this user's guide, ascertain that you have:

- One DHN-520 home phonenumber network adapter.
- One DHN-520 software CD.
- One phonenumber cable.
- One *D-Link DHN-520 User's Guide* (this manual)

## **Installing the Adapter**

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1. Shut down the computer, unplug its power cord, and remove the cover.
2. Insert the DHN-520's board-edge contacts into any available PCI Bus Master expansion slot. Press the adapter firmly into the slot, making sure the contacts are firmly seated.
3. Install the bracket screw that secures the card to the computer chassis.
4. Replace the computer's cover.
5. Reconnect the computer's power cord and turn the computer on. If your computer's BIOS is plug-and-play compliant, it will automatically configure the DHN-520 upon power-up.

**NOTE:** *Due to a fault in some plug-and-play BIOS programs, it happens occasionally that a newly installed adapter is assigned an interrupt number which is already assigned to another device. In such a case, the conflict of interrupt number will cause faults in the behavior of both devices. Then it is necessary to run the CMOS setup utility and manually assign a non-conflicting interrupt number. Refer to the Windows User's Guide for more information and instructions on changing the interrupt number settings.*

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## **Connecting the Phonetline Cable**

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Standard phonetline cable can be used to either connect the adapter to a phonetline wall jack, or to another adapter. It is important to note that when two adapters are connected directly, a second cable must be used to connect the computers to an active phonetline. The adapter requires the voltage running in an active phonetline to operate properly.

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## **Software Installation**

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On account of the great variety of network environments for which the DHN-520 may be used, and revisions of those network systems, the instructions for software installation are given as HELP files on the DHN-520 Software CD. Review the root directory HELP for overview information, and for full installation details, see the HELP and referenced instruction files in the sub-directory appropriate to your network operating system.

Additionally, on the Driver CD we have provided an HTML manual designed for our DHN-910 10-Mbps Home Phonetline Network in a Box. It is an HTML rendered copy of the full Quick Starter Guide that accompanies the network kit. Simply open the StartHere.htm file in the /Manual subdirectory provided on the CD to launch and view through your web browser.



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## ***Troubleshooting***

If you experience any problems with the adapter, first verify that the appropriate driver is loaded and that the cables are properly connected.

1. Ascertain that the adapter is fully and firmly seated in the slot connector.
2. Check the cables. You might wish to plug a standard phone into an active phone jack to test both the line and cable.
3. Ascertain that the adapter's PCI slot is not deactivated at the BIOS level. The CMOS setup utility in PCI computers ordinarily provides the option to activate or deactivate PCI slots. Refer to the motherboard's user guide for more information.
4. Replace the adapter in question with a verified adapter and run NIC (software) diagnostic tests.
5. Install the questioned adapter in another PCI computer and run the tests again.
6. Remove all other PCI adapters from the computer and run the tests again. If the verification/diagnostic run is not normal, then there is probably an interrupt number conflict, which will have to be resolved manually by

running the CMOS setup utility after you have reinstalled all of the expansion cards.

The DHN-520 Adapter features two LED indicators to assist in the resolving of network diagnostics:

- LINK Indicator  
A steady *green* LED indicates good linkage between one DHN-520 and another.
- ACTIVITY Indicator  
A flashing *green* LED indicates that the adapter is sending or receiving data.



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## ***Specifications***

**Network Type:**

- 10-Mbps Home Phonetline  
Proposed iLine10, HomePNA 2.0 specification

**Jumperless Hardware**

**Auto-negotiation functionality**

**Media interface: RJ-11**

**EMI Compatibility:**

FCC Class B  
VCCI Class B  
CISPR B  
Canada ICES-003, Class B  
CE Certification, Class B  
C-Tick

**Host interface: PCI 2.1 Bus (Bus Master)**

**Physical Dimensions: 120 x 39 mm**

**Environment:**

Storage: -25° to 55°C, (-13° to 131° F)  
Operating: 0° to 50° C, (32° to 122° F)  
Humidity: 10% to 90% non-condensing

**Power Consumption: 1.1 watts (maximum)**

**PCB Layers: 2**

D-Link DHN-520 10Mb Home Phoneline Network Adapter for the PCI Bus

**Software drivers for:**

- √ Microsoft Windows NT3.51, NT4.0
- √ Microsoft Windows 95, 95B (OSR2), 98
- √ Microsoft Windows 2000 (beta)