

Q7752B PCMCIA LONWORKS® Card PCC-10 PC CARD

INSTALLATION INSTRUCTIONS

GENERAL

The PCC-10 PC card links any computer equipped with the correct software and a compatible interface to connect to a LONWORKS® network. This allows data transfer between differing media. It has a standard 15-pin connector for linking to communication ports.

SOFTWARE INSTALLATION

Acquiring PCC-10 Driver

The PCC-10 installation software for Microsoft® Windows® XP, 2000 or 98/ME is available in the developers toolbox at the Echelon® web page <http://echelon.com/downloads>. A login or registration is required.

Windows XP/2000 Installation

IMPORTANT

- Install the PCC-10 software before inserting a PCC-10 card into a PC card (PCMCIA) slot. Failure to install the software before inserting the card makes the card unusable until the software is removed and reinstalled.
- Make sure there is a Windows Personal Computer Memory Card International Association (PCMCIA) compliant driver installed on the target PC.

NOTE: Under Windows XP/2000, the PC driver is installed automatically when the PCC-10 card is plugged in (The PCC-10 software must be installed before inserting the PCC-10 card).

1. Close all open programs.
2. Place the PCC-10 installation software for Windows XP/2000 installation diskette inside the PC floppy drive or CD in the CDROM drive. If upgrading from an earlier version of Windows, go to the Echelon web page and download PCLTA-20/PCLTA-10/PCC-10 Installation Software for Windows XP/2000.
3. Click **Start** in the Windows display.
4. Click **Run** in the dialog box.
5. Type `a:setup.exe` or browse to the location of the "Pcx10_20Win2k_Ver2.01_B" file downloaded from the web site. Click **OK** and follow the directions.

NOTE: The letter designated for the disk drive might not be *a*. Type the letter corresponding to the disk drive in use.

6. Select a directory for the software. The default directory is `c:\lonworks`.

NOTE: Choosing a path other than `c:\lonworks` requires the user to specify the PCC-10 image path during PCC-10 configuration.

7. Remove the PCC-10 installation disk from the disk drive.
8. Restart the computer.
9. Plug the PCC-10 card into one of the slots in the PCMCIA bay.
10. Click **Start** in the Windows display and select 'Control Panel' from the Settings menu. The driver installation adds an entry '**LonWorks Plug 'n' Play**' in the Control Panel.
11. Click on this icon.
12. Select **Lon1** in the 'Device selected' combo box. Select "PCC10L7" from the "NI Application" combo box and click on the **Diagnostics** button.
13. Click on **Test** and verify that the CRC errors displays zero and the node state is "Configured." This indicates that the device is in a proper condition. If the test indicates that the PCC 10 is "Unconfigured", select the "Comm" button to configure it.
14. Click on the **diagnostics** button and verify that the device is configured and indicates no errors.

Windows 98/ME Installation

IMPORTANT

- Install the PCC-10 software before inserting a PCC-10 card into a PC card (PCMCIA) slot. Failure to install the software before inserting the card makes the card unusable until the software is removed and reinstalled.
- Make sure there is a Windows Personal Computer Memory Card International Association (PCMCIA) compliant driver installed on the target PC.

NOTE: Under Windows 98/ME, the PC driver is installed automatically when the PCC-10 card is plugged in (The PCC-10 software must be installed before inserting the PCC-10 card).

1. Close all open programs.
2. Place the PCC-10 installation software for Windows 98/ME installation diskette inside the PC floppy drive.
3. Click *Start* in the Windows display.
4. Click Run.
5. Type `a:setup.exe`, click OK and follow the directions or browse to the location of the "Pcx10_20Win2k_95_98_Me_Verxxx" file downloaded from the web site and double click on it and follow the directions.

NOTE: The letter designated for the disk drive might not be *a*. Type the letter corresponding to the disk drive.

6. Click the language desired for the system.
7. Select a directory for the software. The default directory is `c:\lonworks`.

NOTE: Choosing a path other than `c:\lonworks` requires the user to specify the PCC-10 image path during PCC-10 configuration.

8. Click Yes at the 16-bit Application Support prompt. The installation program adds references to the DOS `config.sys` file for the stub device drivers named `PCCLON1` and `PCCLON2`. This allows 16-bit applications to recognize these device names and use the PCC-10 card as a network interface.
9. Click YES to add DOS virtual driver devices.

NOTE: The installation software issues a prompt to add a DOS virtual mode device driver file named `LDVVDD.SYS` to the DOS `CONFIG.SYS` file to support DOS applications calling `LON1`. This allows DOS applications to run in a Windows DOS shell.

10. Remove the PCC-10 installation disk from the disk drive.
11. Restart the computer.
12. Plug the PCC-10 card into one of the slots in the PCMCIA bay.

NOTE: Windows will automatically install the PCC-10 driver when it detects the card.

13. Click Start in the Windows display and select 'Control Panel' from the Settings menu. The driver installation adds an entry 'LonWorks Plug 'n' Play' in the Control Panel.
14. Double click on this icon.
15. Select `PCCLON1` in the 'Device selected' combo box. Select "PCC10L7" from the "NI Application" combo box and click on the Diagnostics button.
16. Click on Test and verify that the CRC errors displays zero and the node state is "Configured". This indicates that the device is in a proper condition.
17. If the test indicates that the PCC 10 is "Unconfigured":
 - a. Select the "Comm" button to configure it.
 - b. If you are unable to configure the PCC-10:
 - (1) Verify that there is only one device driver "Device=c:\Lonworks\bin\LDVVDD.SYS /D1" being loaded.
 - (2) If there are multiple drivers being loaded, "REM" (remark out) the other drivers.
 - c. Restart the computer.

18. Click on the diagnostics button and verify that the device is configured and indicates no errors.

Adding Additional Stub Device Drivers

If the PC has more than two PC card slots, the user can add two additional stub drivers manually by typing the following text to the `config.sys` file:

```
DEVICE=C:\LONWORKS\BIN\LDVSTUB.SYS /D:PCCLON3.
DEVICE=C:\LONWORKS\BIN\LDVSTUB.SYS /D:PCCLON4.
```

NOTES:

- To access the PCC-10 card, use the `PCCLONn` network interface naming convention. This directs the software to run the PCC-10 device driver in Windows instead of DOS.
- The installation software installs a new `WLDV.DLL` file that is fully backward compatible with all previous versions of the `WLDV.DLL` file.
- If the installation software discovers a `SYSTEM.INI` entry that loads the ISA-bus driver `ECHLMPA.386`, the software comments out the entry and displays the following message: SETUP has modified your `SYSTEM.INI` file by removing the following entry, `device=echlmpa.386`. Do not use the ISA-bus protocol analyzer card and the PCC-10 card on the same PC.

HARDWARE INSTALLATION

IMPORTANT

Software installation must be completed before beginning this procedure.

The PCC-10 card conforms to the PCMCIA standard for a hot plug-in. The PCC-10 card is not harmed if inserted into or removed from a PC card slot that conforms to this standard. The PCC-10 also is UL listed and designed for use with UL listed equipment.

Do not force the PCC-10 card into the PC card slot. The PC card is keyed. It can be inserted one way into the PC card slot.

Windows systems sound a low tone followed by a higher tone when a PCC-10 card is inserted. The tones are reversed when the card is removed. If the property window in the System Control panel is open, the tones occur after closing the System Control panel.

NOTES:

- Reboot the computer before installing the PCC-10 card into the PC Card slot.
- In Windows 98 or later versions, the PCC-10 device driver loads when the card is installed. To uninstall the PCC-10 device driver, go to device manager and select the "LonWorks Interface" entry and select remove. Remove the PCC-10 card from the system.
- Double click the PCC-10 CS Client icon to open the LONWORKS PCC-10 Card services client.
- If the PCC-10 CS Client icon does not appear, double click `LONCSME.EXE` in the PCC-10 installation \bin directory. This allows the user to view allocated resources and control Interrupt Request (IRQ) assignments.

- Each PCC-10 card requires a single, dedicated IRQ and four connected bytes of I/O (Input/Output) address space starting on a modul0-4 based address.
- Do not remove the PCC-10 card while running an application using the PCC-10 card. Select the “PC Card (PCMCIA) Status” icon in the system tray and click on “Stop PCC-10 LonWorks® Network Interface”. Windows will display a message stating that it is safe to remove the card.
- Two windows are used the first time a PCC-10 card is used in Windows 98 or later versions. One window displays Echelon Corp. PCC-10. The other displays the status while the PC writes the device information. Configure new hardware after the PC finishes writing the device information.

TROUBLESHOOTING FOR WIN98/ME INSTALLATION

If you are unable to communicate with devices on the network after completing installation, go the LONWORKS Plug n Play utility in the Control Panel. If the following error appears when you select LONWORKS Plug n Play, the following procedure usually resolves the problem:

Error Message:

The registry key for the network interface could not be opened. You cannot modify the configuration settings until at least one network interface has been inserted and recognized by the system.

Procedure:

1. Remove the Win98/ME PCMCIA driver.
 - a. In the Device Manager, select and remove the PCMCIA driver.
 - b. Remove the PCMCIA devices from slots 1 and 2.
2. Reinstall the Win98/ME PCMCIA driver and reboot the computer. Win98/ME finds the PCMCIA socket and automatically reinstalls the drivers.
3. Install the Echelon PCC-10 driver according to the PCMCIA SLTA Installation Instructions in this manual.

Using PCC-10 and SLTA on the same computer

The PCC-10 and the SLTA device drivers in the config.sys cannot both be active at the same times. The config.sys must be modified to allow proper operation of the device.

REM out the device driver not being used in the config.sys.

NOTE: The computer must be rebooted to recognize changes in the config.sys.

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