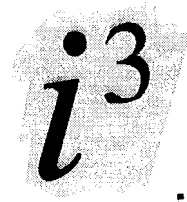

Using a PC card with your i₃ Ethernet card



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Application Note

Scope: This application note relates to the use of i₃ Ethernet cards with the following products:

- *The PC card ("second processor" card) supplied with the Acorn Risc PC, or the Acorn PC card purchased as an upgrade to a Risc PC. In this case the card software will be called !PCcard.*
- *An Aleph One PC card ("second processor" card) purchased as an upgrade to a Risc PC. In this case the card software will be called !PC.*
- *A 486 PC podule card, for use in a podule slot on an A5000 or Risc PC computer, purchased from Acorn Computers. In this case the card software will be called !PC486.*
- *A 486 PC podule card, for use in a podule slot on an A5000 or Risc PC computer, Purchased from Aleph One. In this case the card software will be called !PC.*

Note that for network use these cards require the PCNE2 network driver; this must be purchased as an upgrade from the supplier of your card.

Background: *The documentation supplied with these cards, and in particular the information contained in the various ReadMe files on the card software discs, relates to the use of the cards with the Atomwide/ANT Ethernet cards, and the older Acorn Ethernet cards; these cards are often described as Ether3 cards. This Application Note describes the differences in the installation procedures when the PC card is to be used with an i' Ethernet card, or a current Acorn Ethernet card. It should be read in conjunction with the following files supplied with the PC card software:*

netlinks.Net ReadMe
netlinks.ReadMe_wgd

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General

- The module name for the 13 Ethernet driver is EtherH. Wherever *Ether3* is used in the PC card documentation and ReadMe files it should be read as EtherH.
- The driver name for the 13 Ethernet driver is eh. Wherever *ea*, *eb* or *et* is used in the PC card documentation and ReadMe files it should be read as eh. Note that the eh driver can only be used with a unit number of 0 (see notes below).
- References to the *Eth_ReadMe* file should be ignored; there is no information relevant to the use of 13 Ethernet cards in this file.

Important advice

Network use of the PC card requires the use of the latest versions of Acorn's networking software, and the corresponding 13 software. The PC card documentation details how you need to configure the PC software to ensure that the necessary network software is loaded; this can be a fairly complicated process, since certain software modules need to be started up in a particular order. You can ensure that appropriate software modules are automatically available by upgrading to the latest version of the 13 software - we strongly advise you to carry out such an upgrade. Without this upgrade there may be difficulties in supporting your system. The standard AUN upgrade is available, free of charge, off Acorn's (Internet) ftp server. If you do not have access to this, you can obtain a copy from your 13 dealer. Note that Access+ upgrades can only be obtained through an 13 dealer.

Installation Overview

The principal description of the installation process will be found in the *netlinks.Net_ReadMe* file supplied with your PC card software; note that the information in this file appears to be more up-to-date than the section on Installation in the *netlinks.ReadMe_wgd* file. This Overview will consider each section of the description given in *netlinks.Net_ReadMe*.

1. Requirements

See the comments under General above. Note, also, that the Mmanager module is always required. This (Acorn) module is included in the upgrade referred to in the previous section. With this upgrade you should not need to 'soft-load' any software modules.

2. Installation

See the comments under General above. You will need to modify the !Run file of your PC card software, as described in this section. In this Note, as in the ReadMe file, this software is referred to as the !PC software - see the Scope notes on the front of this Application Note if you need to check the name of the software supplied with your card.

Assuming you have upgraded your 13 software, the only module you *will need* to copy into the !PC application is PCNE2_ the EtherH and Mmanager modules are both included in the 13 software upgrade; if you have copies of the other modules you may wish to copy them, as a safeguard.

You will need to modify the !PC.!Run file, by removing the 1 character from the start of the various lines, as described. The two lines relating to the Ethernet module need to be modified to read:

```
RMEnsure EtherH 4.06 RMLoad <Obey$Dir>.EtherH
RMEnsure EtherH 4.06 Error <Obey$Dir>.EtherH not found or too old
```

and the first line referring to the PCNE2 module needs to be changed to:

```
RMEnsure PCNE2 1.83 RMLoad <Obey$Dir>.PCNE2 -deh0
```

More information on adding options to the end of the RMLoad <Obey\$Dir>. PCNE2 file is given in Section 5 of the notes (not in section 2.3 as indicated in the notes).

You then need to run the !PC software, configuring it as described. This configuration is vital. Note that i3 interface cards can always use an Interrupt (IRQ) number of 5; the section on Interrupt Number Options (Section 4) can safely be ignored. The Setup Examples given are equally suitable for use with i3 interface cards.

3. Soft-loading (the Ethemet module)

As noted earlier, installing the i3 software upgrade should remove the need for this soft-loading. If, for some reason, you need to soft-load the modules you can follow the guidance given in this section, remembering that the Ethernet module is EtherH rather than Ether3. You should always load the latest (DCI4) modules.

To clarify the information given towards the end of this section, the given file which does a series of RMKills followed by some RMReinits (either version) is saved:

- as \$.!Boot on any computer other than a Risc PC or A7000 - in which case one or other of the desktop lines is required at the end of the file.
- as \$.!Boot.Choices.Boot.PreDesk.!Run on a Risc PC or A7000_ in which case neither of the desktop lines is required at the end of the file.

4. Interrupt Number Options

This section has no relevance to the use of i3 interface cards.

5. PCNE2 module options

This section does apply. Note that with 0 interface cards the -d parameter must always be used as -deh0; this parameter must always be included in the RMLoad command.

6. Alternative Novell Netware Configurations

This section applies "as is".

7. Ether3 Module Options

This section must be ignored.

Simultaneous use of PC and RISC OS tasks

With the current release of the i3 software you can access the network simultaneously from a PC card application and from a 'native' RISC OS applications provided the two applications are using different network protocols. This will often be the case _ these days you are most likely to be using LANManager protocols (Netware o, Netware Liteo, Windows for Workgroups o) with the PC application, while most Acorn applications (including AUN and Access+) use TCP/IP. To allow this dual working you will have to select the appropriate PCNE2 module options, as described in Section 5 of the PC software release note; a suitable `start-up' line (see Section 5.1) might be:

```
RMEnsure PCNE2 1.83 RMLoad <Obey$Dir>.PCNE2 -deh0 -pISO -pTCPIP
```

In some situations you may wish to run simultaneously, on the PC card and in RISC OS, applications which use the same network protocols. This is most likely to occur if you are using LANManager protocols from the PC card, and want to use !Omnicient (a RISC OS application) to access a LANManager service at the same time. This is not possible with the current release of the i3 software, although an upgrade to allow this will be released in the first quarter of 1996. Your i3 dealer should be able to advise you as to whether the RISC OS networking applications you wish to run will clash with your PC card network use.

In theory, if you wish to swap from a PC card network application to a RISC OS one which uses the same protocols (or vice-versa), you should be able to do so by quitting the first application, re-initialising the network modules and then starting the second application. However, this is much more difficult in practice - the order in which the modules are initialised is highly critical _ and we would recommend shutting down and re-starting the computer between quitting the first application and starting the second.

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