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Atomwide Pocket Ethernet Adaptor

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Hardware installation

Introduction

This document describes how to install the Atomwide Pocket Ethernet Adaptor and its supporting software. This will allow you to use the Pocket Ethernet Interface with the Acorn TCP/IP Protocol suite or Acorn's Level 4/AUN suite.

As well as this manual, your Pocket Ethernet Adaptor pack should include the following:-

1 Pocket Ethernet Adaptor
1 Power supply

Installing the Atomwide Pocket Ethernet Adaptor

The Atomwide Pocket Ethernet Adaptor (PEA) works on any Acorn 32bit computer with a bi-directional parallel port. It needs either Acorn AUN or the Acorn TCP/IP suite version 2.0 to operate.

Installing the hardware.

The PEA connects to the parallel port of the 32bit Acorn computer. It may be firmly attached to the machine by turning the black screw knobs on the side In a clockwise direction when viewed from the back of the machine. Connect the network to the network connector on the back of the PEA. The PEA is powered from an external power supply. The power supply provided works with 220-240VAC, 50-60Hz (other power supplies may be shipped with units sold outside Europe).

ONLY USE A POWER SUPPLY PROVIDED BY ATOMWIDE

Connect the power supply to the socket on the back of the PEA and to the mains. It does not matter if the PEA is powered up before or after the computer, however if the network software is to be started by the machine's boot sequence, it will be easier if the unit is habitually powered up first.

Network connection

A single connector joins the adaptor to your network. This will be either a BNC plug, or a 'telephone-type' socket, depending on whether you have a 10base2 or 10baseT network.

Testing & software configuration

Installing the software -

With AUN or TCP/IP suite version 2:

Before the PEA can be used the software driver must be installed with the network software. Follow the instruction with the Acorn software to make a copy of the AUN or TCP/IP software for everyday use. The driver for the PEA is supplied on a disc with the PEA. To install the driver open the application !BootNet (for AUN) or !Internet (for TCP/IP) by holding down the shift key and double-clicking on the application. Within the application there is a directory called 'drivers'. Open this directory and copy the driver file called 'EtherP' from the floppy disc provided to the driver directory, Now follow the installation instructions for the network software as described !n the manual shipped. The installation procedure will refer to the driver name, for the PEA this is 'EtherP'.

With the Acorn TCP/IP suite version 1:

The Acorn TCP/IP Protocol Suite version 1 contains an application called !Internet at the heart of which is a single module called Internet. This module provides the user with two services. Firstly it **provides access to the Acorn Ethernet card and secondly it contains the TCP/IP protocols themselves. Since publishing the TCP/IP suite Acorn have changed the software so that the Internet module only provides the protocols and the access to the Ethernet hardware is done by a separate module - In the case of the Acorn cards the modules are called Etherl and Etheril for the two types of Acorn Ethernet card. To use the Atomwide PEA you must upgrade the Internet module in your TCP/IP suite to the new version (supplied) and use the EtherP module to give the Internet module access to the PEA.**

Before you start to modify the TCP/IP release discs from Acorn, stop and take a copy of the disc. If you are going to run the TCP/IP suite on a machine with a hard disc then take a copy of the software onto your hard disc. Leave the original disc write protected (the tab In the rear left corner of the disc should be open).

Locate the !Internet application, either on the hard disc or on the copy of the release floppy, and open the application directory by holding down the shift key and double clicking on the !Internet icon with the left-hand mouse button. Inside the application you will find a file called !Run: load this into an editor such as !Edit by dragging it. Locate the line in the! Run file that reads:

```
rmensure Internet 1.01 rmload Inet:rm.Internet
```

Testing & software configuration

The version number must be changed so that the line reads:
```
rmensure Internet 1.05 rmload Inet:rm.Internet
```

On the line following insert the text:
```
rmensure EtherA rmload Inet:rm.EtherP oldinet
```

Then save the !Run file back to the !Internet directory. Once you have done this open the directory called 'rm' inside the! Internet directory. There will be two files, Internet and RouteD. Delete (or rename) the file called Internet. Put the Atomwide PEA software disc supplied into the floppy disc drive. On this disc you will find a file called Internet and a file called EtherP. Copy these two files into the directory !Internet.rm. Once this is done you may set up the !Internet application as described in the Acorn documentation. This Involves editing the !Configure file in the !Internet directory to specify the machine name, IP address and IP address mask for the machine being set. If you have not already done so, read the booklet 'TCP/IP protocol suite installation guide' that comes with the Acorn TCP/IP suite.

Troubleshooting the Atomwide Ethernet Adaptor

If at any time when the Atomwide Ethernet software !s installed you need to know about the status of the card you may enter the command `EPInfo` at the command line prompt. This will display the number of data packets the interface has sent and received, along with the Ethernet address of the card. In addition to this information a variable number of extra information entries may appear telling you of unusual occurrences on the network.

The most important of these is the count of the number of 'collisions' on the network line and the count of the number of times 16 collisions occurred while trying to send the same packet. Collisions happen when two Ethernet Interfaces try to send data at the same time. This should happen very infrequently and if the number of collisions is more than 1% of the number of packets sent then you should ask your network manager about reorganising the network. If the count for the number of time 16 collisions occurred on one packet is shown at all (i.e. It has a non-zero value) it may be an indication of a fault In the wiring of the network.