



endace
a c c e l e r a t e d

DAG Software Installation Guide

EDM04-01



Protection Against Harmful Interference

When present on equipment this manual pertains to, the statement "This device complies with part 15 of the FCC rules" specifies the equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission [FCC] Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Extra Components and Materials

The product that this manual pertains to may include extra components and materials that are not essential to its basic operation, but are necessary to ensure compliance to the product standards required by the United States Federal Communications Commission, and the European EMC Directive. Modification or removal of these components and/or materials, is liable to cause non compliance to these standards, and in doing so invalidate the user's right to operate this equipment in a Class A industrial environment.

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Overview

The DAG software package contains the latest device drivers for all current Endace accelerated network monitoring DAG cards. It also includes a suite of DAG tools and utilities which may be used for accessing additional functionality or developing custom applications.

Endace Software is supported on the following operating systems:

- Linux
- FreeBSD
- Windows XP Professional
- Windows Server 2003

For information on the specific versions please see the Release notes for your software version.

Note: For information on installing and working with any of these operating systems please refer to the distributor's documentation or the associated website.

The DAG software is distributed as a source tarball (for Linux or FreeBSD systems) and as an .msi application (for Windows systems) and is shipped on the Endace Software Installation CD.

It is also available to download from the Support section of the Endace website at www.endace.com

Purpose of this Guide

The purpose of this Installation Guide is to describe the process of installing, compiling and configuring the Endace DAG drivers and software. There is a chapter specific to each of the supported operating systems.

For detailed information on installing and configuring the individual DAG cards please refer to the appropriate DAG Card User Guides which are included on the Documentation CD. The DAG Card User Guides may also be downloaded from the Support section of the Endace website at www.endace.com.

System Requirements

The minimum system requirements for the DAG software package are:

- PC with at least Intel XEON 1.8GHz or faster
- Minimum of 1GB RAM
- 60MB free storage space

Custom Applications

The DAG software supports a programming environment which allows you to develop, test and run custom applications using the DAG API which is a native C language Application Programming Interface.

For further information on the DAG API and to obtain a copy of *EDM04-19_DAG_Programming_Guide* please contact Endace Support at support@endace.com

Installing the Software

Note: You must have one of the supported operating systems fully installed on your PC before you begin to install the DAG software.

1. To begin the installation process insert the DAG Installation CD in the CDROM drive of your PC.
2. The welcome page of the CD's GUI displays in your default browser and contains the following information:
 - *Welcome Page* - The page lists the contents of the CD
 - *Getting started* - This page contains instructions on how best to start using your DAG card.
 - *Documents* - This page contains all the appropriate DAG Card and Software User Guides for the current software version in .pdf format.
 - *Support* - This page contains links and instructions to help you access Endace Support.
 - *Software* - This page contains DAG software install files for the current software version.
 - *Release Notes* - This page contains the release notes for this software version in .pdf format.
3. Follow the steps detailed in the following chapters according to your specific operating system to install the DAG software
 - Linux, see page 3.
 - FreeBSD, see page 7.
 - Windows, see page 11.

Note: If you have a version of the DAG software installed that is earlier than version 2.5.x there are some additional steps required to remove the existing installation before you can install the new version.

Please contact Endace Support at support@endace.com for further information.

Pre-requisites

Please read the following notes before installing the DAG software and complete any appropriate action:

- In order to run the DAG software you must have these packages installed, as these are not part of the default Linux installation you may have to install these separately:

<code>readline</code>	<code>flex</code>
<code>readline-dev</code>	<code>pkg-config</code>
<code>libxml2-dev</code>	<code>gcc</code>
<code>libxml2</code>	<code>make</code>
<code>libpcap0.8-dev</code>	<code>libtool</code>
<code>libpcap</code>	<code>g++</code>
<code>bison</code>	

- See the release notes for the DAG software you are installing for detail on what Linux Kernel versions are supported.
- To compile the DAG drivers you must either:
 - Use kernel headers for the running kernel.
Kernel headers may be an additional package to the Linux distribution.
 - Or, configure a set of kernel sources for the kernel being used.
The kernel sources consist of a minimum of an unpacked kernel source tree under `/usr/src/linux` that has been configured and `make dep` has been run.
- If using the 2.6.x kernel, you should have a `kbuild` system installed. The `kbuild` system is either:
 - part of the kernel source, or
 - a separate package (usually if using Linux distribution kernel headers (i.e. Debian).
- On the PC you are to install the DAG software you must have a general C development environment. This environment must be based on `gcc` and include the standard headers of `libc` and the library header files of the packages listed above.
Note: In some distributions of Linux the header files are obtained separately from the basic library.

Unpack the Tarball

The DAG software for Linux is supplied as a compressed tar file. It contains all the necessary source code except the firmware code which is proprietary to Endace Technology Limited.

1. Move to directory `/usr/local` and untar the tarball using the following command:

```
tar xfvz dag-<software version>.tar.gz
```
2. Create a symlink called `dag` to the unpacked source directory. For example:

```
ln -s dag-<software version> dag
```
3. Move to the `dag` directory to which you created the symlink using:

```
cd dag
```
4. Check it contains the following sub-directories:

<code>doc</code>	DAG documentation as .pdf files
<code>drv</code>	Driver source code
<code>filtering</code>	Hardware IP filtering utilities
<code>include</code>	Header files for C and assembler code
<code>lib</code>	Library to access DAG cards
<code>scripts</code>	Example DAG initialization scripts
<code>tools</code>	DAG capture tools and utilities
<code>xilinx</code>	Loadable firmware images (.bit files)

Compile the Software

The DAG software for Linux is supplied with a `configure` script which accepts the following arguments:

<code>--prefix=PREFIX</code>	Architecture independent install path prefix Default is <code>/usr/local</code>
<code>--exec-prefix=EPREFIX</code>	Architecture specific install pathprefix.
<code>--with-kern=DIR</code>	override automatic kernel source detection
<code>--with-config=FILE</code>	override automatic kernel <code>.config</code> file detection
<code>--with-pcap=DIR</code>	override automatic pcap header detection
<code>--disable-gcc-detect</code>	override automatic gcc kernel compiler detection

Based upon the kernel version currently running, the `configure` script attempts to find a kernel source tree and `.config` file first. The detected version is always displayed in the output of `configure`.

1. To compile the DAG software on Linux, type the following script:

```
./configure
make
make install
```
2. By default the `libdag` library installs into `/usr/local/lib`. However on some Linux distributions this directory is not scanned as part of the default library path. This can cause problems for programs using a shared version of `libdag`. There are two methods for resolving this. They are:
 - In `bash`, set the environment variable to:

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/local/lib
```

 For automation purposes this can be added to the user's login file
 - Make the library available to all users by editing the `/etc/ld.so.conf` file to add `usr/local/lib` to the system library path.
 In this case, you must run `ldconfig` to update the library cache.

Install the Drivers

The DAG software uses the memory in the host computer for the DAG card's capture buffer.

A driver `dagmem` loads when the kernel is booted, detects the number of DAG cards installed and reserves memory for each accordingly. Each card must be allocated a minimum of 8MB of memory. After it is compiled, `dagmem` is installed in the `modules` directory of the running kernel.

1. The procedure for installing `dagmem` differs according to which version of Linux you are installing on. For example:

- Debian Linux edit the file `/etc/modules` to add an entry for `dagmem` as follows:
`dagmem dsize=128M`

Note: If these files do not already exist you need to create them. Ensure the `rc.modules` file is executable, e.g. `chmod u+x /etc/rc.modules`.

Note: It is also possible to specify memory allocation for individual devices or by device type. This command will assign 64M to `dag0`, and 128M to `dag1`:

```
modprobe dagmem csize="64M:128M"
```

And this command will assign 128M to all 3.7GEs and 64M to all 8.1SXs:

```
modprobe dagmem device_id_map="378e:128M,8101:64M"
```

2. Reboot the host PC.

During the boot process, a `dagmem` message displays reporting the number of DAG cards installed, their interrupt and I/O address assignments and the amount of memory reserved for each card.

An example message from `dsmege` for two DAG 4.3GE cards is shown below:

```
dagmem: module license 'Proprietary Endace Measurement Systems Ltd'
taints kernel.
dagmem: memory of size 134217728 for dag #0 at 0x100b7c00000
dagmem: memory of size 134217728 for dag #0 at 0xb7c00000
dagmem: memory of size 134217728 for dag #1 at 0x100afc00000
dagmem: memory of size 134217728 for dag #1 at 0xafc00000
dag: Version 2.5.7.5
ACPI: PCI interrupt 0000:02:03.0[A] -> GSI 28 (level, low) -> IRQ 209
dag0: Setting latency timer to 64
dag0: DAG 4.3GE Rev 1 at 0x00000000dd200000 irq 209 buf 128MB
dag0: starting clock at 1169518202.000000 (1169518202)
ACPI: PCI interrupt 0000:07:01.0[A] -> GSI 96 (level, low) -> IRQ 233
dag1: Setting latency timer to 64
dag1: DAG 4.3GE Rev 1 at 0x00000000dd500000 irq 233 buf 128MB
dag1: starting clock at 1169518203.000000 (1169518203)
```

3. Once you have loaded `dagmem` you must load the DAG drivers using:

```
dagload
```

Note: MSI (Message Signaled Interrupts) may be needed on your computer if your DAG card is sharing interrupts. To enable MSI at driver load time run `dagload` with the following arguments:

```
dagload use_msi=1
```

Or to enable MSI if you are loading the driver manually:

```
modprobe dag msi_use=1
```

APIC must be enabled and Linux kernel may require the boot up parameter `pci=msi`

Note: Because the DAG driver uses a dynamic major number, you should use `dagload` rather than `insmod` or `modprobe`.

Configure Memory

The maximum amount of memory used for DAG card capture buffers depends upon the host computer architecture and the memory model you selected at the time you compiled the Linux kernel.

Although you can share as much as 512MB between all the DAG cards in one system, there is no real benefit to be gained from allocating a very large buffer to `dagmem`. If your disk processing rate is not fast enough to keep up with the rate of capture data then you will eventually get loss. A large buffer will only delay you from seeing this but will not prevent it happening. 128MB per card is normally more than enough.

Memory reserved by the `dagmem` driver is not available to other processes on the host computer even if the DAG driver is not loaded. However if you need to release the reserved memory for general use you can unload the `dagmem` driver. To reload `dagmem` you should first reboot the host computer to avoid any potential problems caused by memory fragmentation.

Pre-requisites

Before beginning to install the DAG software you should note the following:

- See the release notes for the DAG software you are installing for detail on what FreeBSD Kernel versions are supported.
- Endace recommends that you use the latest available kernel.
- Although you do not need to compile a kernel specifically for the DAG drivers it may be best practice to do so.
- You must have available on the PC on which you are installing the software a C development environment i.e. `tar`, `gcc`, `make` and header files.

Unpack the Tarball

The DAG software for FreeBSD is supplied as a compressed `tar` file. It contains all the necessary source code except the firmware code which is proprietary to Endace Limited.

1. Move to directory `/usr/local` and `untar` the tarball using:

```
tar xfvz dag-<software version>.tar.gz
```
2. Create a symlink called `dag` to the unpacked source directory using for example:

```
ln -s dag-<software version> DAG
```
3. Move to the `dag` directory to which you created the symlink using:

```
cd dag
```
4. Check that it contains the following sub-directories:

<code>doc</code>	DAG documentation as <code>.pdf</code> files
<code>drv</code>	Driver source code
<code>filtering</code>	Hardware IP filtering utilities
<code>include</code>	Header files for C and assembler code
<code>lib</code>	Library to access DAG cards
<code>scripts</code>	Example DAG initialization scripts
<code>tools</code>	DAG capture tools and utilities
<code>xilinx</code>	Downloadable Xilinx images

Compile the Software

The DAG software for FreeBSD is supplied with a `configure` script which accepts the following arguments:

<code>--prefix=PREFIX</code>	Architecture independent install path prefix. Default is <code>/usr/local</code>
<code>--exec-prefix=PREFIX</code>	Architecture specific install path prefix Default is <code>PREFIX</code> .
<code>--with-sysmod=DIR</code>	location of kmod sources. Default is <code>/sys/modules</code> .
<code>--with-pcap=DIR</code>	override automatic pcap header detection

Based upon the the kernel version currently running, the `configure` script attempts to find a kernel source tree and `.config` file first. The detected version is always displayed in the output of `configure`.

1. Type the following script:

```
./configure
gmake
gmake install
cd /sys/modules/dagmem
make
make install
cd /sys/modules/dag
make
make install
make nodes
```

Note: You can execute the `/configure` and `gmake` commands as a normal user. To execute the remaining commands you must be a superuser.

Note: In some versions of FreeBSD, `make nodes` may not be necessary.

2. The `make install` target install files in the following locations:

```
Documentation:    PREFIX/share/doc/DAG
Firmware:        PREFIX/share/dag/xilinx
Binaries:        PREFIX/bin
Libraries:       PREFIX/lib
Headers:         PREFIX/include
Drivers:         /sys/modules/dag
                 /sys/modules/dagmem
```

Install the Drivers

The DAG software uses the memory in the host PC for the DAG card's capture buffer.

A driver called `dagmem` loads when the kernel is booted, detects the number of DAG cards installed and reserves memory for each accordingly. Each card is allocated the same amount of memory and must be a minimum of 8MB. After it is compiled, `dagmem` is installed in the `modules` directory of the running kernel.

1. Edit the file `/boot/loader.conf` to add an entry for `dagmem` as follows:

```
dagmem_size="134217728"
dagmem_load="YES"
```

This allows you to change the amount of memory reserved per card to 128 MB.

2. Reboot the host computer.

During the boot process a `dagmem` message displays reporting the number of DAG cards installed, their interrupt and I/O address assignments and the amount of memory reserved for each card.

An example message from `dmesg` for two DAG 4.3GE cards is shown below:

```
dag0: <Endace DAG 4.3GE> mem 0xfccb0000-0xfccbffff irq 24 at device 3.0 on
pci2
dag0: [GIANT-LOCKED]
dag0: starting clock at 1170814891.000004 (1170814891)
dag1: <Endace DAG 4.3GE> mem 0xfcef0000-0xfceffffff irq 72 at device 1.0 on
pci5
dag1: [GIANT-LOCKED]
dag0: starting clock at 1170814892.000004 (1170814892)
dag1: starting clock at 1170814893.000003 (1170814893)
```

3. Once the drivers are installed and the PC has been rebooted, the `dagmem` and `dag` drivers need to be loaded:

```
cd /sys/modules/dagmem
make load
cd /sys/modules/dag
make load
```

Note: If you wish to unload the drivers, this can be done with the following script:

```
cd /sys/modules/dagmem
make load
cd /sys/modules/dag
make load
```

4. Edit the environment script (`.bashrc`) to include the following path:
`PREFIX/bin`

Configure Memory

The maximum amount of memory used for DAG card capture buffers depends upon the host computer architecture and the memory model you selected at the time you compiled the Linux kernel.

Although you can share as much as 512MB between all the DAG cards in one system, there is no real benefit to be gained from allocating a very large buffer to `dagmem`. If your disk processing rate is not fast enough to keep up with the rate of capture data then you will eventually get loss. A large buffer will only delay you from seeing this but will not prevent it happening. 128MB per card is normally more than enough.

Memory reserved by the `dagmem` driver is not available to other processes on the host computer even if the DAG driver is not loaded. However if you need to release the reserved memory for general use you can unload the `dagmem` driver. To reload `dagmem` you should first reboot the host computer to avoid any potential problems caused by memory fragmentation.

Installing on Windows

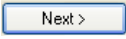

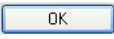

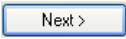
Pre-requisites

Before beginning to install the DAG software you should note the following:

- The software has been tested on Windows XP Professional and Windows Server 2003. While every effort has been made to ensure compatibility with other versions of Windows, operation on other systems can not be guaranteed. However use of Windows 2000 Server is unlikely to create any problems.
- You must have available on the PC on which you are installing the software a C development environment i.e. `tar`, `gcc`, `make` and header files.

Install the Software

The DAG software for Windows is supplied as a `.msi` file. It contains all the necessary source code except for the FPGA code which is proprietary to Endace Limited.

1. Using Windows Explorer to browse the DAG Installation CD go to the *Windows* folder and double click on the `.msi` file.
The first screen of the DAG Software Setup Wizard will display. The DAG software uses the standard Windows file download and installation process.
2. Click  to display the available installation options.
3. Note: By default the DAG drivers and tools are installed in *Program Files/Endace/dag<software version>*. Endace recommends that you accept the default installation options.
To check you have enough free disk space available on the PC, click  and a list of available drives and disk space will display. Click  to close the window.
4. Select the radio button next to *Just me* or *Everyone* depending upon who you want to have access to the DAG software once installed.
Click  to specify a different destination folder.
Click  to accept the settings.
5. Follow the on screen instructions to complete the installation.
A shortcut to the documents folder called *Endace DAG Documents* will be created on the desktop of the host PC.

Configure Memory

The maximum amount of memory used for DAG card capture buffers depends upon the host computer architecture. In Windows, only half the available contiguous memory can be used by the DAG drivers.

Although you can share as much as 512MB between all the DAG cards in one system, there is no real benefit to be gained from allocating a very large buffer to `dagmem`. If your disk processing rate is not fast enough to keep up with the rate of capture data then you will eventually get loss. A large buffer will only delay you from seeing this but will not prevent it happening. 128MB per card is normally more than enough.

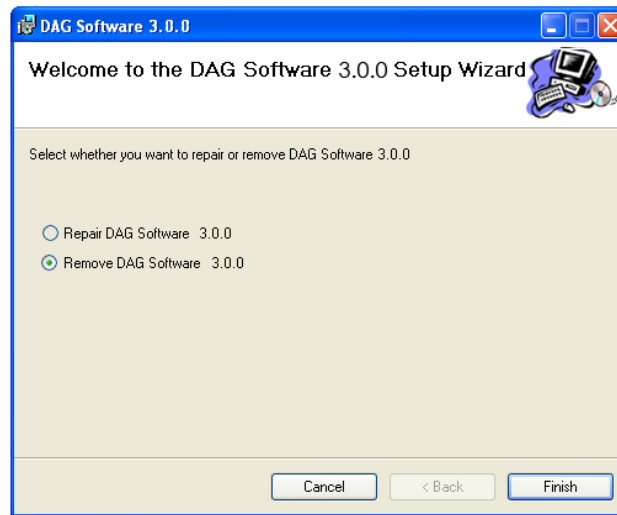
To allocate more memory than is assigned to the DAG drivers, go to *Start > Run... >* Type *regedit* and click *OK*. Search for and change all the values of 'HoleSizeMSB' and 'HoleSize' to be the desired amount. For instance, if you want 256M assigned; 'HoleSizeMSB' should be 2 and 'HoleSize' should be 56.

Uninstalling the Software

The DAG Installation CD also allows you to uninstall the DAG software.

1. Using *Windows Explorer* to browse the DAG Installation CD go to the *Windows* folder and double click on the *.msi* file.

A screen similar to the following displays:



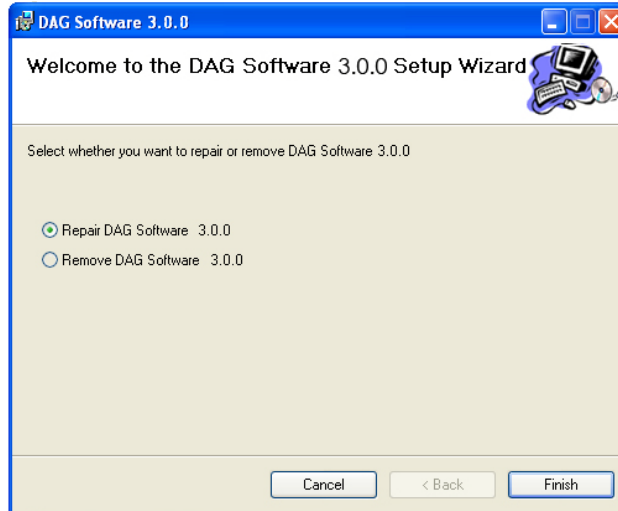
2. Select *Remove DAG Software* and click . All DAG software files will be removed from the PC.
3. Click  to exit.


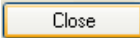
Repairing the Software

The DAG Installation CD also contains a repair utility for repairing the DAG software files in the event that one or more becomes corrupted for any reason.

1. Using Windows Explorer to browse the DAG Installation CD go to the *Windows* folder and double click on the *.msi* file.

A screen similar to the following displays:



2. Select *Repair DAG Software* and click . The existing files will be overwritten.
3. Click  to exit.
4. Follow the steps detailed in the [Windows](#) section of [Updating the Software](#) (page 14) to complete the repair of the software.

Overview

From time to time Endace may release updates to the DAG software.

If you have a support contract with Endace you can access updates using your Support account login at www.endace.com

Linux and FreeBSD

The initial procedure for updating the DAG software is the same for Linux and FreeBSD operating systems.

1. Ensure there is a configured set of kernel sources for the kernel being used. This consists of a minimum of an unpacked kernel source tree under `/usr/src/linux` that has been configured and `make dep` has been run.
2. Move to the directory to which the tarball for the previous version of software was untarred. This is commonly `/usr/local`.
3. Untarr the update tarball using:

```
tar xfvz dag-<new version number>.tar.gz
```

This creates a new directory called:
`dag-<new version number>`
4. Edit the existing `dag` symlink which was created at the time of the previous installation using for example:

```
ln -s dag-<new version number>
```
5. Move to the `dag` directory to which you created the symlink using:

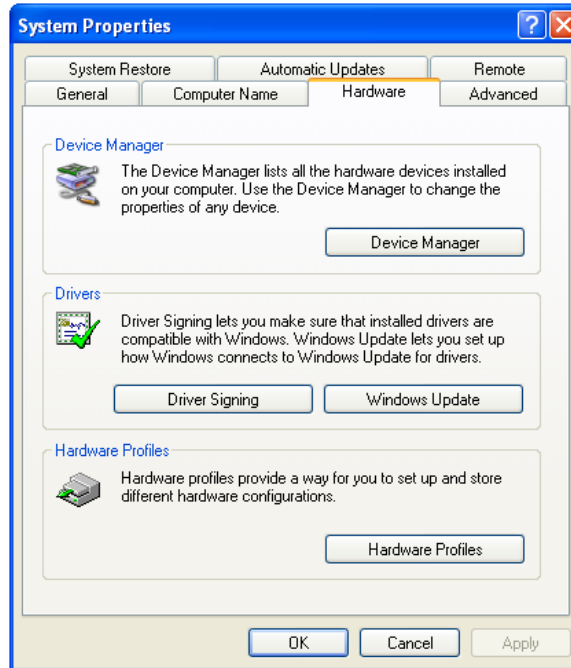
```
cd dag
```
6. Follow the steps described in [Installing on Linux](#) (page 3), or [Installing on FreeBSD](#) (page 7) as appropriate to compile the new software and complete the installation.

Windows

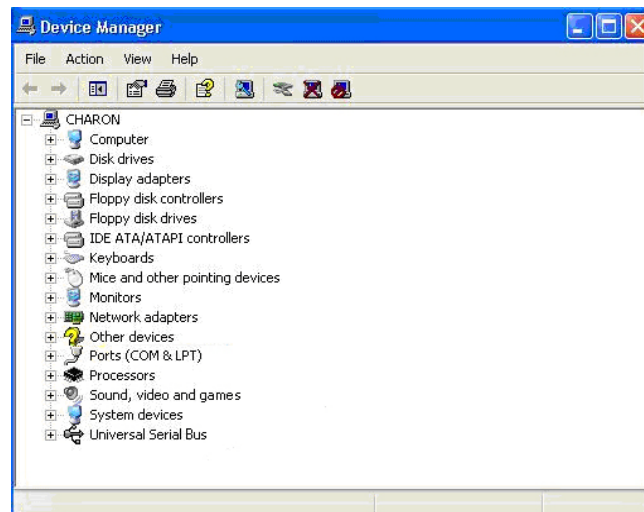
To update the DAG software on a Windows system, follow the steps below:

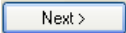
1. Locate the *Device Manager* by either:
 - *Start Menu>Settings>Control Panel>System* and selecting the *Hardware* tab, or
 - on the Desktop right-click on *My Computer* and selecting *Properties* then the *Hardware* tab.

A screen similar to the following displays:



2. Click  to display a screen similar to following:



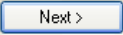
3. Select *Other Devices* and then right-click on *Network Controller*.
4. Select *Update Driver* from the pop-up menu.
Note: For Windows 2000 Server, select *Properties* from the pop-up menu, then click the *Driver* tab to access the *Update Driver* option.
5. If the following screen displays, select *No, not this time* and click .



Note: For Windows 2000 Server, the *Upgrade Device Driver Wizard* screen displays instead of the *Hardware Update Wizard* screen.

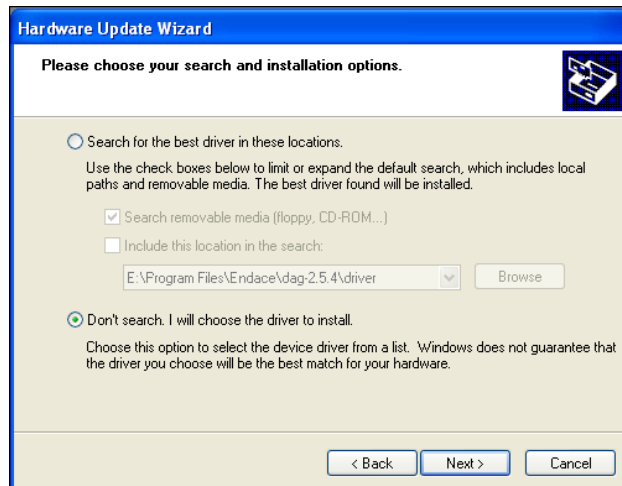
A screen similar following displays:



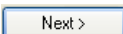
6. Select *Install from a list or specific location (Advanced)* and click .

Note: For Windows 2000 Server, select *Display a list of the known drivers for the device so that I can choose a specific driver*.

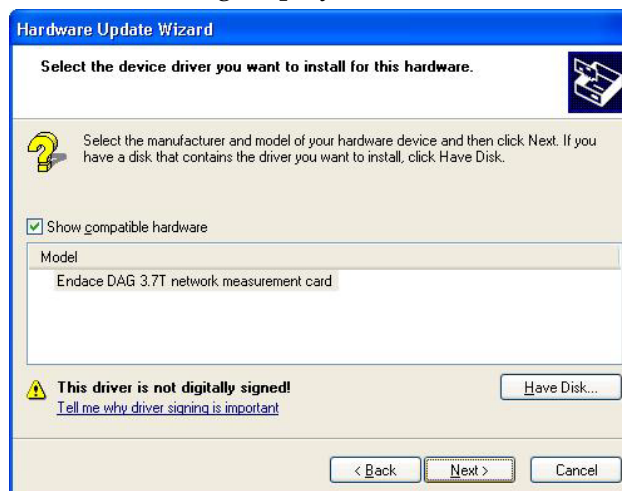
A screen similar to the following displays:



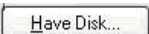
Note: This screen does not display in Windows 2000 Server.

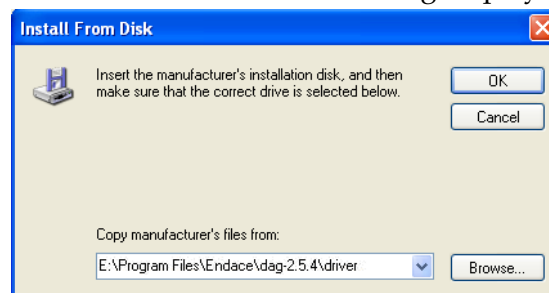
7. Select *Don't search. I will choose the driver to install.* and click .

A screen similar to the following displays:

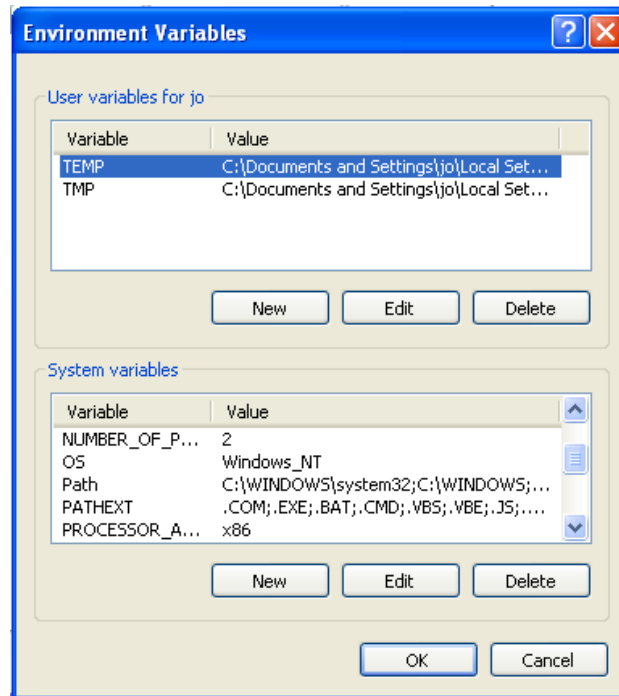


Note: For Windows 2000 Server extra options display at the bottom left of this screen. Choose *Show compatible hardware* and then proceed as described next.

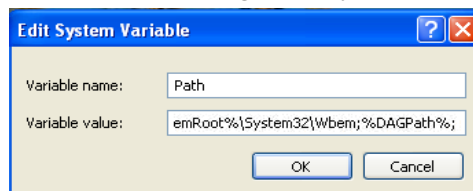
8. Click . A screen similar to the following displays:



9. Click and locate the DAG software installation files using the path specified during installation as described in [Install the Software](#) on page 11.
10. Click to return to the previous screen
11. Click and choose *Continue Anyway*.
Note: For Windows 2000 Server the *Continue Anyway* option may not display.
12. Click again and then click to complete the installation.
13. If a message displays asking if you want to overwrite old files with newer ones, select the *Overwrite* option.
14. Go to *Control Panel>System>Advanced>Environment Variables*.
 A screen similar to the following displays:



15. Select the *Path* variable from the list and click .
 A screen similar to the following displays:



16. Add the string, %DAGPath% to the variable value by typing it into the text box as shown.
17. Reboot the computer.

Support

In the event that you experience problems with any aspect of the DAG software it is recommended that you visit the Endace website at www.endace.com. This includes a *Support* page which offers a range of online assistance options including the option to submit a problem report online via the *Online Case Submission* link.

If you have a support contract with Endace you can login using your support username and password which provides access to the secure area of the website. This contains the latest versions of software, device drivers, firmware, user manuals, and release notes.

For more information about the Endace Support Package, or how to obtain, or change, your secure support website login details, please contact sales@endace.com

If you are unable to resolve a problem using the website you can email Endace Technical Support at support@endace.com for further assistance.

Reporting Problems

When reporting problems you should supply as much information as possible to enable Endace Technical Support to be more effective in their response to you. Although the exact information available to you may be limited by the nature of the problem you are experiencing, the following information will assist with a quick resolution.

- DAG card[s] model and serial number.
- Host PC type and configuration.
- Host PC operating system version
- DAG software version package in use
- Any compiler errors or warnings when building DAG driver or tools
- For Linux and FreeBSD, messages generated when DAG device driver is loaded. These can be collected from command `dmesg`, or from log file `/var/log/syslog`.

Problem

FreeBSD Configure Script fails

Possible Cause

The default version (2.95.3) of `gcc` is being used or the directory `usr/local/include` is not in the compiler header file search path

Solution

If this occurs, a message similar to the following will be displayed:

```
checking for iconv.h... no
configure: error:
cannot find iconv.h header file.
```

If this file is present then add the path to the directory containing `iconv.h` to the `CFLAGS` environment variable, e.g:

```
CFLAGS="-I/usr/local/include" ./configure
```

Otherwise download and install `libiconv` from:

<http://www.gnu.org/software/libiconv/> or via the usual system software update mechanism.

Problem

DAG driver fails to load on Linux

Possible Cause

When the host PC boots up it may perform a file system check or `fsck`. This occurs before the `dagmem` driver is loaded and can fragment memory to the extent that there is insufficient contiguous memory available

Solution

Reboot the Linux host PC again. With no file system error the `fsck` will not reoccur and the `dagmem` driver will load normally.

Version History

Version	Date	Reason
1-7		Early versions
8	March 2006	Minor layout changes
9	February 2007	Merged with EDM04-02 Windows Software Installation Guide and renamed to DAG Software Installation Guide. Major layout and formatting changes. Rationalization and update of content.
10	September 2007	New template and corrected some sections.
10.1	September 2007	Corrected installation section.
11	June 2008	Correct information in the Install the drivers section for Red hat (Bugzilla 344)
12	November 2008	Revised majority of document. Configuring memory in Windows added.
13	November 2008	Changed front matter. Noted dagload options.

