

EIDEMAX™ II

Plug n' Play Disk Drive Upgrade
& IDE Port Expansion Card

User's Manual



www.promise.com

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NOTICE TO BACK UP DATA

PROMISE highly recommends following the industry standard practice of backing up all data and program files when installing a new hard drive or controller. It is your responsibility to back up your computer or otherwise save important data BEFORE installing any such product and to continue to back up your important data regularly.

About This Guide

This guide describes how to install, configure and troubleshoot the EIDEMAXII. All information regarding PC requirements, contents and installation issues will be found in this User's Guide.



The latest installation information can be found on the README.TXT file. If any of the information differs from this user's guide, follow the instructions in the README.TXT file.

Style Conventions

Table 1 and Table 2 describe the following text and icons used throughout the users guide.

Table 1 Icons

Icon	Type	Description
	Information Note	Important Information or instructions.
	Caution/Warning	Directions you should follow to avoid personal injury or system damage.
	Technical Tip	Technical Information

Introduction

Table 2 Text Conventions

Convention	Typeface
Screen Display	Typeface is used to represent what is seen on Terminal Display.
Caution or Warning	Typeface used for typed commands (ie. <code>a:pnputil.exe [Enter]</code>)
New Terms	Typeface used for new terms or for emphasis

Key Features

Below are a few key features of EIDEMAXII:

- 1) Allows attaching up to 4 Ultra ATA*/EIDE/IDE hard drives.
- 2) EIDEMAXII BIOS allows existing controller to access drives with capacities up to 128GB.
- 2) Supports extended Int 13 for Windows 95/98. This enable users to access capacity of drives greater than 8.4GB whether drives are attached to existing motherboard/add-in controller or EIDEMAXII.
- 3) Supports both PnP and non-PnP modes for maximum device compatibility. Conflict-free installation for PnP operating systems such as Windows 95/98.
- 4) Allows attaching ATAPI devices to EIDEMAXII. For non-PnP operating systems, user must have device driver from ATAPI device manufacturer. For Windows 95/98/NT users, there is no need to have the manufacturer driver.

* Supports storage capacity of Ultra ATA drives only, not performance or error-checking features of Ultra ATA/DMA specification.

Section 1

Getting Started

This section is designed to help you prepare the EIDEMAXII for installation into your personal computer.

Please read through this chapter carefully before attempting to install your EIDEMAXII. Users should record their current CMOS settings before making any changes.

Unpacking your EIDEMAXII



CAUTION IN HANDLING AND INSTALLING!

The EIDEMAXII, like any other valuable part on your PC, is subject to damage caused by static electricity. Be sure to take proper precautions before installing the EIDEMAXII.

When unpacking your EIDEMAXII, the package should contain the following items:

EIDEMAXII Controller
EIDEMAXII User's Manual
EIDEMAXII Driver Diskette
One IDE Cable



If ANY of the contents are missing or damaged please contact your dealer or distributor immediately.

Section 1

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Getting to Know the Card

Please examine the diagram below of the EIDEMAXII for connectors and jumper block placement. These will be referred to throughout the manual.

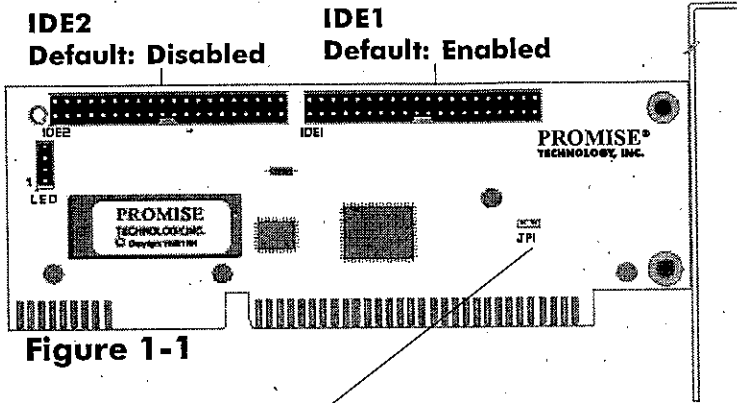


Figure 1-1



The jumper JPI is reserved for troubleshooting only. See Troubleshooting Section ("System does not boot when EIDEMAXII is installed") for proper use. Improper setting of this jumper may adversely affect performance.

The default settings for the EIDEMAXII are as follows:

- 1) PnP mode*
- 2) IDE1 channel is programmed as **ENABLED**
- 3) IDE2 channel is programmed as **DISABLED****

* If your motherboard BIOS does not support PnP devices, you need to use the provided PnP utility Software to re-configure the device as Non-PnP. Refer to Section 3 Advanced Install.

** This channel is programmed Disabled to minimize using extra system resources. You may enable IDE channel 2 using the provided PnP Utility software.

EIDEMAXII Install



Before beginning with the installation, be sure to unplug the power to the system and properly ground yourself. PROMISE recommends you wear an anti-static strap when performing the installation.

The EIDEMAXII Install section is for users of Windows 95 or MS-DOS 5.x and above. If you are using any other operating system, please see Section 3, Advanced Install.

1 Check for default jumper settings

The jumper at JP1 should be in the open position. See figure 1-1.

2 Install the EIDEMAXII into the PC

The EIDEMAXII needs to be installed into an available 16-bit ISA slot. Please be sure that the card is seated securely in the slot.

3 Installing New Drives

The BIOS on the EIDEMAXII will support drives attached to your existing add-in IDE controller card or integrated motherboard controller.

PROMISE recommends attaching hard drives to the existing IDE controller for performance considerations. If there is no existing controller, or it is fully occupied, drives can be attached to the EIDEMAXII.



Drives being attached to the EIDEMAXII should first be connected to the IDE1 connector. To attach drives to the IDE2 connector, be sure to enable the port with EIDEMAXII configuration utility.



If you need assistance attaching your drives, please see Section 5, EIDE Disk Installation.

Note: Generally motherboard system settings for hard drives do not recognize drives or devices attached to the EIDEMAXII. This is normal. EIDEMAXII BIOS automatically detects these devices.

Section 2

4 Finishing the Hardware Installation

You have now finished the hardware installation portion of the EIDEMAXII. You may safely cover the system and attach all external cables.

5 Power on the System

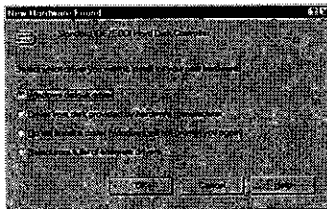


! You should see the PROMISE BIOS load BEFORE the operating system starts. Do not enter the EIDEMAXII BIOS Utility at this time. If this BIOS does not load, please see Section 3, Advanced Install.

6 Windows 95 Driver Install

Windows 95 will automatically detect the controller if the EIDEMAXII default settings are used. If these settings have been changed, please refer to section 3, Advanced Install. When prompted to select which driver to install, choose "Windows default driver" and click "OK."

Screen may alter depending on different Win 95 versions.



! Prior to use, newly-installed hard drives must be partitioned and formatted with the FDISK and FORMAT commands.

Advanced Install

Please follow these instructions if you are installing the EIDEMAXII in a non-Plug n' Play computer (non-PnP), or using a non-PnP Operating System.

1 Run the Plug n' Play Configuration Utility

At a DOS prompt, type :

```
a:\>pnputil.exe [Enter]
```

2 Select EIDEMAXII card

The utility supports multiple EIDEMAXII cards in your system. Choose the appropriate card for configuration.

3 Disable PnP Mode

Use the spacebar to toggle between the options.

4 Manually configure the card

By default, Port 1 is set to "Tertiary" (110h base port address) and Port 2 is "Disabled." The external ROM address is set to D800h. If these settings conflict with existing system resources, use Standard PnP Setup or Advanced PnP Setup options to configure the EIDEMAXII (see next page).



Users of non-PnP Operating System (such as DOS, OS/2 or Windows NT) must set the ports using the Standard Setup only. These operating systems will not support ports using any other resources. For more information regarding drivers, please see your Operating System documentation.

Standard PnP IDE Setup

The Standard Setup screen allows you to configure each port on the EIDEMAXII. Below are the options and their resource usages:

TABLE 3-1

Setting	IRQ	Port Address
Primary	14	01F0-01F7h
Secondary	15	0170-0177h
Tertiary	11	01E8-01EFh
Quaternary	10	0168-016Fh
Disabled	N/A	N/A

**For maximum compatibility, PROMISE recommends you use Standard Settings.



Many Sound Blaster compatible sound cards with an IDE/CD-ROM controller will use either tertiary or quaternary settings for its port. This will cause conflicts with a port set on the EIDEMAXII with the same settings. Please disable or reconfigure the port in conflict.

Advanced PnP IDE Setup



Modifying these settings requires complete information on existing resources. Improper settings may cause the system to malfunction.

In the Advanced Setup screen, you may choose to configure each port manually as follows:

IRQ: Choose any IRQ from 9-12, 14, 15.

Base Port Address: Ranging from 0108-01F8h (skips 1C0,1C8,1D0,1D8 & 1F8 which conflict with existing resources).

External ROM Address: Choose any from D000-DC00h.

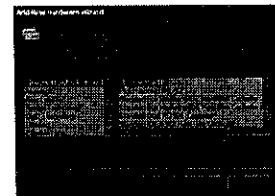
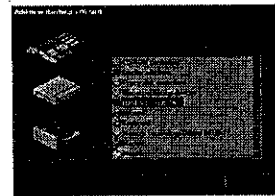
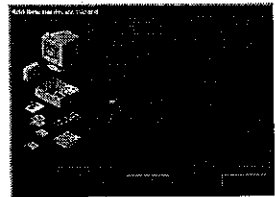
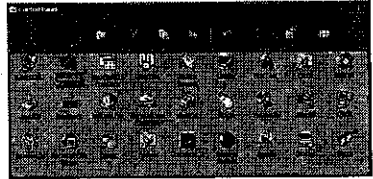
For more information, please refer to Section 4, Plug n' Play Configuration Utility.

5 Install Windows 95 Driver

Before installing the driver, PROMISE recommends recording the base address and IRQ settings which you selected using the EIDEMAXII BIOS Setup. Refer to README.TXT for more detailed instructions.

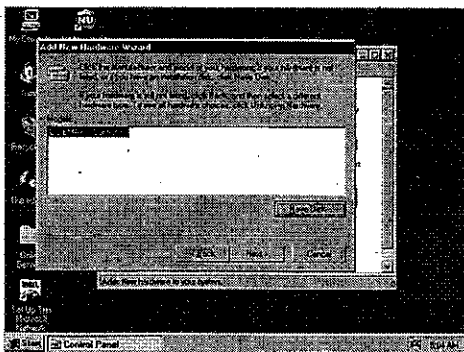
Windows 95 Plug n' Play (PnP) features will not identify ports which have Non-PnP settings. You must use the supplied Promise driver (INF file) for these ports.

1. To install the driver, go to the Add New Hardware Wizard in the control panel.
2. After clicking "Next" button, Windows 95 will prompt you if you would like auto-detection. Select "No" and click "Next."
3. At next window, select "Hard Disk Controllers", then click "Next."
4. Windows 95 will now prompt you to choose your controller card type. Please insert the supplied PROMISE Utility Diskette and click "Have Disk."
5. When prompted to "Copy Manufacturer's Files from:"
6. Type: a:\win95\
7. Click "OK"



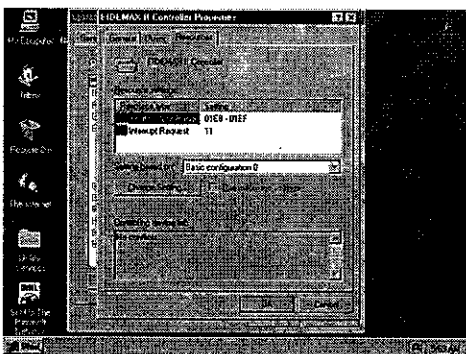
Section 3

8. Windows will display "EIDEMAXII Controller"
9. Select the EIDEMAXII card & press NEXT button.
10. Insert Win '95 CD-ROM or requested Win '95 installation diskette. System will copy correct driver.
11. When prompted to reset system, choose No.



i The IRQ and Port address assigned for the EIDEMAXII card must be changed to match the settings recorded during the Advanced Setup Menu procedure.

12. From Win '95 Start Button, choose Control Panel/System/System Properties.
13. Select 'Device Manager' tab and open the 'Hard Disk Controllers' list.
14. Select 'EIDEMAXII controller and click Properties button.
15. Select Resources tab.
16. Highlight Input/Output and click Change Settings button. Select the same setting that match the recorded information.



17. Type the correct port address range after "Value:" appears or click up/down arrow to select address. (ex. Value: 0110-0117) Click OK button.
18. Highlight Interrupt Request and click Change Settings button. Select the same setting that match the recorded information.
19. Type the correct Interrupt Request Setting after "Value:" appears or click up/down arrow to select address.. (ex. Value: 11) Click OK button.
18. At controller properties window, click OK.
19. Restart Win '95 when prompted.

Plug n' Play Configuration Utility

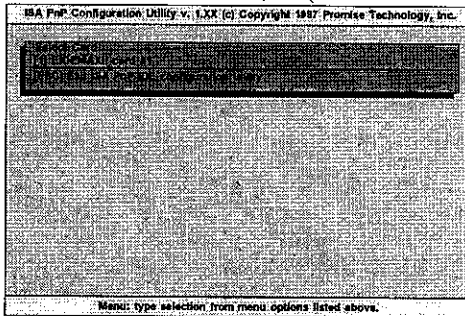
This section describes the Plug n' Play (PnP) Configuration Utility for the EIDEMAXII. The setup utility is used for both PnP and non-PnP controller settings. Descriptions of different menus and their options are given below.

Entering the PnP Configuration Utility

At the DOS Prompt type:

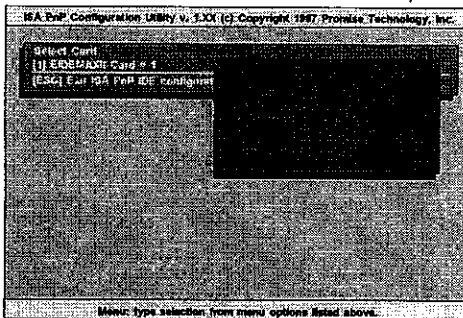
```
a:\>pnputil.exe [Enter]
```

Note: The Plug n' Play utility must be run from a MS-DOS prompt. You can boot off a clean MS-DOS floppy and execute the utility if you use a different Operating System.



Choose PnP Mode (Enable/Disable)

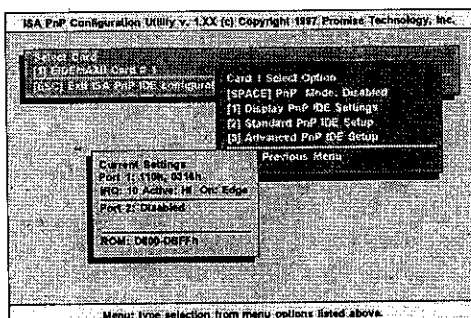
By default, the PnP mode is set to enable. Setting it to disable will display other options.



Section 4

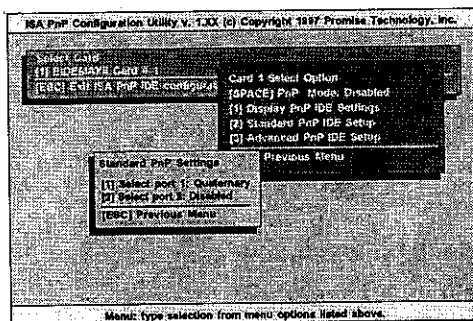
Display PnP IDE settings

This menu option will display the current EIDEMAXII settings. To change these settings, use either Standard PnP IDE setup or Advanced PnP IDE setup.



Standard PnP IDE setup

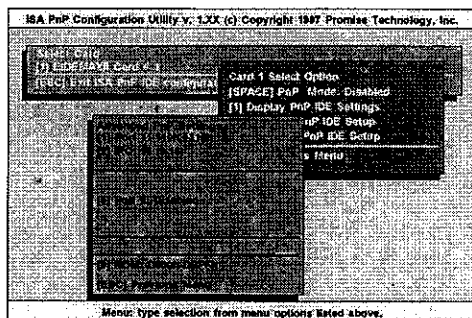
This menu will allow you to choose which port on the EIDEMAXII to configure. Choose which port to configure ([1] or [2]) and use the spacebar to change.



Many Sound Blaster compatible sound cards with an IDE controller will use quaternary resources for its port. This will cause conflicts with a port set to quaternary on the EIDEMAXII. Please disable or reconfigure the port in conflict.

Advanced PnP IDE setup

Advanced PnP setup allows you to change each resource usage on each port.



Port #: Allows you to select from several port address for the first or second port on the EIDEMAXII, between 0108-01F8h (skips 1C0,1C8,1D0,1D8,1F8 to avoid conflicts)

IRQ: Choose any IRQ from 9-12, 14, 15.

ROM: Choose the BIOS ROM address, ranging from D000-DC00h.

ESC until asked to Save Changes

SAVE, YES

EXIT, YES

EIDE Disk Installation

This simple four-step installation guide outlines how to install EIDE disks. All information found in this section can also be found in your documentation provided with the EIDE Disk drive(s).

1 Configure jumper settings on EIDE drive(s)

If this is the only drive on the cable, it should be set to either 'SINGLE' or 'MASTER.' If it is a second drive, it should be set to 'SLAVE'.

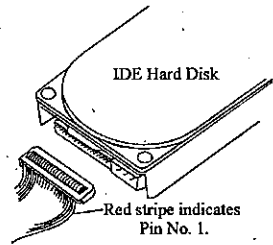
If you are installing the new drive as a slave, be sure to check the jumper settings of the existing drive. If it is set to 'SINGLE,' it needs to be changed to 'MASTER.'



Some manufacturers use the same driver jumper setting for single and Master drive for a two-drive combination

2 Attach data cable to drive(s)

Make sure pin 1 on the cable (labeled with a red stripe) lines up with pin 1 on the drive and the card. The pin 1 on the IDE disk is usually near the power connector of the drive.



3 Attach power to drive(s)

Troubleshooting

The following section is used to assist installation problems. Also refer to the "README.TXT" file on the EIDEMAXII driver and utility diskette for more recent information as well as the PromiseOnline™ services listed in Appendix A.

Problem: During first time installation, the Promise BIOS does not load.

The EIDEMAXII is shipped with factory defaults to enable full PnP ISA support. This requires a PnP compatible system BIOS. For systems NOT equipped with a PnP BIOS, the card MUST be reconfigured to PnP disabled. Please see Section 4, Plug n' Play Configuration Utility, for more information.

Problem: Hard Drive is not seen on the EIDEMAXII card.

Make sure the drive is properly installed and there is no hardware conflicts with the EIDEMAXII. For PnP/PCI system BIOS, make sure resources are available for the EIDEMAXII. See motherboard documentation for IRQ routing information.

Problem: The system does not boot when the EIDEMAXII is in the system.

The resources of one of the ports of the EIDEMAXII may conflict with existing hardware. Please place the reset jumper on JP1 and reboot the system. This should allow you to enter the A:pnputil.exe from the floppy and change the settings on the card. When changes are complete, power off the system and remove the JP1 jumper.

Problem: EIDEMAXII finds all new hard drives, but Windows Explorer does not have a letter assigned to them.

You MUST partition and format a new drive using FDISK and then FORMAT commands.

Problem: The PnP utility skips over certain port address ranges when manually configuring the card.

This is normal. Five port addresses that have been intentionally left out from the PnP Utility because these addresses will conflict with other devices. These addresses are 1c0h,1c8h,1d0h,1d8h and 1f8h.

Problem: The CD-ROM on the EIDEMAXII is not recognized.

- 1) Most real mode device drivers for CD-ROM's may not scan PnP ports. If you choose to use a CD-ROM attached to the EIDEMAXII, you must select from either primary, secondary, tertiary or quaternary port settings. If the card is in PnP mode or has been switched to a non-default setting, the CD-ROM will only be seen in a PnP Operating System (Win 95, Win NT 5.0).
- 2) If the port the CD-ROM is attached to is set as quaternary, this may conflict with a sound card that has an IDE port. Please either disable the port on the sound card, or change the resources on the EIDEMAXII. The CD-ROM may also be attached to the sound card directly.
- 3) There may be an IRQ conflict between the EIDEMAXII and another device. Please reconfigure the port on the EIDEMAXII.
- 4) If the card is in non-PnP mode with default setting, you may have attached the CD-ROM to a disable port (IDE 2). Please enable the port.

Problem: MS-Windows NT 4.0 does not see the EIDEMAXII card.

MS-Windows NT 4.0 is not a PnP operating system and will not identify a PnP device. The EIDEMAXII must be set to PnP mode "Disabled" to be identified in Win NT.

When in non-PnP mode, these ports must be set to either primary, secondary, tertiary, or quaternary. For more information on how to set these up, please see Section 4, Plug n' Play Configuration Utility.

Appendix A

Contacting Technical Support

Promise Technical Support provides several support options for PROMISE users to access information and updates. We encourage using one of our electronic services which provide product information updates for the most efficient service and support.

If you decide to contact us, please have the following information available before reaching a Promise Technical Support technician:

1. Product Model & Serial #
2. BIOS and Driver Version Numbers (check the EIDEMAXII BIOS banner and floppy label for version information)
3. Description of Problem
4. System Configuration
 - √ Mainboard and CPU type
 - √ Hard Drive Models
 - √ IDE drives/devices
 - √ Other Controllers

These are the available Technical Support sources:

Internet E-mail Support	PromiseOnline™ World Wide Web
support@promise.com	http://www.promise.com ftp://ftp.promise.com Tech Support Documents, Drivers, Utilities
24 Hour Bulletin Board Service	24Hour FAXBack Document Service
(408) 452-1267 Modem Settings 8/N/1 @14.4K Baud	(408) 452-9160 Call from FAX Phone Handset
PROMISE Technical Support	Fax Technical Support
(408) 452-1180 7:30 am - 5pm PST	(408) 452-9163 Attention Technical Support
Compuserve	If you would like to mail us:
GO PROMISE	Promise Technology, Inc. Attn: Technical Support Dept. 1460 Koll Circle San Jose, CA 95112