

AMD Driver Pack

Release Notes - Version 2.1.0

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1. About AMD Driver Pack

AMD Driver Pack provides drivers for motherboards with the AMD-8111, AMD-8151 AGP 3.0 Graphic Tunnel and/or AMD-8131 PCI-X Tunnel.

Windows 95 is not supported.

All drivers are WHQL Certified.

AMD AGP Miniport Driver is not supported in Windows NT 4.0.

AMD IRQ Driver is only supported in Windows 98 and Windows 98se.

2. Installation

AMD Driver Pack is used to install and uninstall all drivers for motherboards with the AMD-8111, AMD-8151 AGP 3.0 Graphic Tunnel and/or AMD-8131 PCI-X Tunnel. AMD Driver Pack detects the current operating system and hardware in the system and installs the correct drivers.

To install drivers using AMD Driver Pack:

- 1) Log in as an administrator (NT 4.0 and above)
- 2) Run Setup.exe
- 3) At the Welcome Screen click the Next button to continue.
- 4) Read the License Agreement, click I Agree and click the Next button.
- 5) Read the Readme.txt file displayed and click Next to continue.
- 6) Select the destination path and click Next to continue.
- 7) Select the drivers to install/uninstall and click Next to continue.
- 8) Click Next to begin driver installation/uninstallation.
- 9) Click Finish when the operations are complete.
- 10) The system must be rebooted to complete the operations.

Important Notes:

If a driver was previously installed, it is highly recommended you uninstall this driver before continuing. By default, if a driver is already installed Driver Pack will not attempt to reinstall. Using Driver Pack to re-install without fully removing the previous version is not recommended or supported.

3. AMD AC'97 Audio Driver

Release Notes - Version 1.8.7

The AMDAC97.INF installs the drivers necessary to enable basic AC'97 Audio functionality for the AMD-768 and AMD-8111 controller.

Q: Will the driver ever support features beyond those listed in the AC'97 specification?

A: No. To obtain drivers that take advantage of your audio codec's features, visit your audio codec's manufacturer website.

4. AMD AGP Miniport Driver

Release Notes - Version 8.1.2

The AMD AGP driver is designed to support the AMD-8151 Graphics Tunnel.

To check the version of the miniport driver:

- 1) Using explorer, right click on the driver (amdmp8x.sys, amdagp8k.sys or amdagp8p.sys) file, select "Properties".
- 2) Select the "Version" tab. The "File Version" field at the top of the screen shows the current version.

5. AMD EIDE Bus Master Driver

Windows 2000, XP and Windows Server 2003 - Version 8.2.2

Windows 98SE, ME and NT 4.0 – Version 1.8.4

The AMD EIDE Bus Mastering driver is designed to maximize the performance of all IDE devices attached to an AMD controller. It does this by automatically turning on DMA for all devices.

Warning: The driver does not support CD-ROM Changers.

NOTE: Always *UNINSTALL* the EIDE driver before upgrading your Windows Operating System. This will ensure a smooth upgrade. After the new Windows Operating System is functioning, install the AMD EIDE driver for optimal performance.

Q: How do I know if the driver is performing DMA mode?

A: Using the device manager, click on the Primary or Secondary IDE Channel. Click on the tab labeled Primary Channel or Secondary Channel. This will show you the current transfer mode and allow you to modify the current speed.

Q: Using Windows 98, looking at a hard disk device from the Device Manager, the DMA box has disappeared?

A: The DMA box can only be used with the standard Microsoft driver. When a third party driver is installed (such as the AMD EIDE Driver), the DMA box will no longer appear. However, the driver is programmed to use all devices in their most optimal configuration. Therefore, if DMA is available for that particular device, the driver will use it.

Q: Using Windows 98, the device has a check box for DMA. When I check the box and reboot, the box does not stay checked?

A: The DMA box can only be used with the standard Microsoft driver. When a third party driver is installed (such as the AMD EIDE Driver), the DMA box will not work as intended. If you check the box, when the operating System reboots, the box appears unchecked. However, the driver is programmed to use all devices in their most optimal configuration. Therefore, if DMA is available for that particular device, the driver will use it.

Q: Under Windows 98, using MSCDEX.EXE for my CD-ROM device slows down the system, and/or disables the CD-ROM?

A: You cannot use both MSCDEX.EXE and the AMD IDE Driver. Using MSCDEX will slow the performance of your system, and may cause incompatibility with some programs.

Q: Using Windows 98, how do I change the drive letter assigned to my CD-ROM?

A: Go to Device Manager (right click on My Computer and select Properties), and select the CD-ROM. Using the dialog box, the user can select the letter, or range of letters available for the CD-ROM device.

6. AMD 10/100 Ethernet Driver

Release Notes – Version 2.0.7

The AMD-8111, 10/100 Integrated Ethernet Controller driver is designed as an NDIS5 driver. Version 2.0.7 supports Windows 98, 98SE, ME, Windows 2000, Windows XP and Windows Server 2003.

CONFIGURING ADVANCED PROPERTIES:

The driver support several advanced configuration parameters under all the supported Microsoft operating systems. These configuration parameters can be accessed through Device Manager or Network Properties icon in control panel.

To access advanced properties through Device Manager:

1. Right-click my computer icon on desktop and select properties on the pop-up menu.

2. Select Hardware Tab on the Dialog box that appears and click the Device Manager Button
3. Expand the Network Adapters icon in the Device Tree shown in Device Manager Window.
4. Right click AMD-8111 10/100 Integrated Ethernet Controller icon and select properties on the pop-menu.
5. Select "Advanced" tab on the properties Dialog box.
6. The list box in the "Advanced" tab lists all the advanced configuration parameters the driver supports.

To configure a parameter, select the parameter you want to change, the right side of the list box display different values applicable for that parameter.

Listed below are the various configuration parameters the driver support:

Dynamic IPG - Default Enable

This parameter allows user to enable/disable Dynamic IPG feature implemented in driver. This is useful under half-duplex environment where high collisions can occur. Dynamic IPG modifies Inter Packet Gap (IPG) dynamically to get better throughput under the current network traffic pattern.

Interrupt Moderation - Default Enable

This parameter allows user to enable/disable Interrupt Moderation feature implemented in driver. Interrupt moderation, if enabled, helps to reduce number of interrupts per packet, which reduces CPU utilization, while maintaining the same throughput. This feature is useful under heavy network traffic conditions. Some benchmarks may not report good throughput results under Interrupt Moderation Enabled. In those cases, the user may disable Interrupt Moderation.

Maximum Transmission Unit - Default 1500 bytes

This parameter enables user to assign different values to Maximum Packet Size (in bytes) that the adapter can send or receive. Different values allowed for this parameter are 1500, 4000 and 9000. Only recommended if all components in your LAN (including switches and adapters) support large size MTU's.

Network Address - Default: Not Present

This parameter allows user to use different Hardware Address, other than the one programmed in the adapter. This parameter should only be used with caution, as more than one adapter using the same MAC address can result in network disconnection. The driver will accept any valid IEEE MAC address. It is recommended that the user keeps this parameter set to "Not Present" and use the default hardware MAC address.

Speed/Duplex - Default: Auto Detect

This parameter helps user to assign different speed and duplex settings to the PHY. The available options are: Auto Detect, 100 Full Duplex, 100 Half Duplex, 10 Full Duplex, 10 Half Duplex. User can select the appropriate value from this list. Auto Detect will work well for most cases and will negotiate the appropriate speed with the device on the other end of the network (a switch or a hub). In case you do force a value, please ensure that the other side of the network (for example, your switch) is forced to the same value as well.

Receive Buffers - Default: 64

This parameter allows the user to modify the number of Receive Descriptors (Buffers) that the driver use internally to store network data received from network, before indicating to the OS. Values allowed for this parameter are 16,32,64 and 128. User has to choose one from this list. Higher number of receive buffers gives driver more storage space, helping to reduce packet-processing overhead for the OS.

Transmit Buffers - Default: 64

This parameter allows the user to modify the number of Transmit Descriptors that the driver uses internally to submit data to the hardware to send over network. Values allowed for this parameter are 16,32,64 and 128. User has to choose one from this list. Higher number of transmit buffers gives driver more internal storage, helping to reduce packet processing overhead for the hardware.

VLAN/Priority - Default: Disabled

This parameter enables or disables VLAN and Priority packet tagging. If enabled, this feature allows hardware to process packets sent or received with VLAN or Priority tag on it.

7. AMD IRQ Driver

Windows 98 & Windows 98SE - Release Notes Version 1.8.0

This driver addresses a specific issue that only occurs on system running Windows 98 or Windows 98SE in APM mode.

The issue occurs when a user exits to MS-DOS from Windows and returns. Upon returning to Windows, certain PCI devices are unable to map an IRQ and are disabled by the device manager. This driver remaps the IRQs, which prevents the device manager from disabling the device.

Q: What does this driver do on the system?

A: This driver will route IRQ #'s for PCI devices on the system to the AMD-8111.

Q: How do I know if driver is running?

A: From the "Start Menu, Run" box, run the program "drwatson.exe". A small icon will appear in the lower right corner of toolbar, next to the clock. Double click on the icon and a snapshot will be taken of the system. Select "Advanced View" from the View pulldown. Select "Kernel Drivers" tab. This is the 5th tab from the right. You will now see a full list of all kernel drivers running on the system. Click once on the "Drivers" column to sort the drivers by name. Look for the driver with the name "amdirq" in the "Drivers" column.

Q: I am experiencing problems with some PCI cards and the driver is running.

A: Check to see what IRQ each of those cards is assigned. If any other device is sharing the same resource, verify the other devices are completely installed properly and function. i.e. NIC cards must have a data line connected to them to be completely installed properly.

Q: How can I tell if I need to install the driver?

A: Under the "Control Panel, System properties, Device Manager" tab, A PCI based card is listed as not working properly. The following message is in the Device status area of the device's properties: "This device is disabled because the BIOS for the device did not give it an IRQ (Interrupt Request). Code 29".

Q: Why else might I need to install the driver?

A: Under the "Control Panel, System properties, Device Manager" tab, The PCI bus device has IRQ steering disabled. IRQ steering information is a tab under the PCI bus properties. The IRQ Routing Status describes that IRQ table was read, IRQ miniport data was processed successfully and an error was encountered with the IRQ Miniport.

Q: How do I know if IRQ Steering is enabled on my system?

A: To determine if your computer is using IRQ Steering, follow these steps:

1. Click Start, point to Settings, click Control Panel, and then double-click System.
2. Click the Device Manager tab.
3. Double-click the System Devices branch.
4. Click on the "+" beside "System Devices"
5. Double-click PCI Bus. This will open PCI Bus Properties. The third tab inside of "PCI Bus Properties" is "IRQ Steering". Click on the "IRQ Steering".

The bottom half of "IRQ Steering" has four listings:

- a) IRQ Routing Enabled
- b) IRQ read from (where it is read from)
- c) IRQ mini-port loaded successfully
- d) IRQ mini-port Data Processed successfully.

Q: I've tried enabling the IRQ steering checkbox, but it still says, "IRQ Steering disabled".

A: IRQ Steering may be disabled for any of the following reasons:

- 1 The IRQ routing table that must be provided by the BIOS to the operating system may be missing or contain errors. The IRQ routing table provides information on how the motherboard is configured for PCI IRQ's.
- 2 The Use IRQ Steering check box is not selected.
- 3 The "Get IRQ table from Protected Mode PCIBIOS 2.1 call" check box is not selected.
- 4 Your computers BIOS may not support PCI bus IRQ steering. For more information, contact the manufacturer of your BIOS.

Q: What is APM?

A: APM stands for Advanced Power Management. This power saving initiative was the precursor to the latest power saving initiative – Advanced Configuration and Power Interface (ACPI).

Q: Why is this driver for Windows 98 and Windows 98SE in APM mode only?

A: This driver addresses a specific issue that only occurs on system running Windows 98 or Windows 98SE in APM mode.

For more information on the subject of IRQ Steering, please refer to the Microsoft article at:

<http://support.microsoft.com/support/kb/articles/Q182/6/04.ASP>

8. AMD PCI-X Hot Plug Driver

Release Notes – Version 1.3.2

This INF file installs the AMD-8131 PCI-X Tunnel bus-filter driver and hot-plug applet utility.

Upon completion of the installation, the hot-plug applet utility will appear in the control panel.

9. AMD High Precision Event Timer

Release Notes – Version 1.0.0

This INF file removes the unresolved hardware detection (YELLOW BANG! associated with devices that do not have the proper driver installed) only. Currently, there is no driver associated with this INF file.

10. AMD IOAPIC INF

Release Notes – Version 1.8.0

This INF file removes the unresolved hardware detection (YELLOW BANG! associated with devices that do not have the proper driver installed) only. Currently, there is no driver associated with this INF file.

11. AMD System Management INF

Release Notes - Version 1.8.1

This installation enables Power Management on AMD Platforms

This INF file removes the unresolved hardware detection (YELLOW BANG! associated with devices that do not have the proper driver installed) only. Currently, there is no driver associated with this INF file.

12. AMD SMBus 2.0 INF

Release Notes – Version 1.0.1

This INF file removes the unresolved hardware detection (YELLOW BANG! associated with devices that do not have the proper driver installed) only. Currently, there is no driver associated with this INF file.