



ATI CATALYST

CATALYST™ 3.8 SOFTWARE FEATURES

New 3D Control Panel

1.) Summary

CATALYST 3.8 adds new features and advanced, customizable options to ATI's industry-leading unified software suite. Gameplay, multimedia, 3D applications are extended with new technologies and customizable environments. These features all benefit from intuitive settings, beginning with a user-friendly 3D control panel, shown in Figure 1. The 3D Control Panel makes adjusting 3D settings easier than ever, allowing users to create and save profiles for Direct3D and OpenGL applications.

Custom sections of the control panel can now be used to individually configure 3D settings such as anti-aliasing, anisotropic filtering and SMARTSHADER™ effects. These additions enable gamers to activate exciting pixel shader effects in any Direct3D or OpenGL application.



Figure 1. The new, easy-to-use CATALYST 3D control panel.



2.) Control Panel Features

CATALYST 3.8 offers new features and options engineered to deliver the ultimate in visual experiences:

3D Settings For: users can specify which 3D API settings they'd like to adjust

Main slider: users can adjust general 3D graphics settings to select between overall performance or image quality. The main slider changes individual custom settings to reflect the selection of the main slider.

Use custom settings: custom settings override the main settings slider, giving users access to individual controls within the custom area of the control panel.

Current Settings: displays the current status of each 3D setting.

Profiles for: allows users to save their current 3D configuration into a profile. Loaded profiles will be displayed under the current settings tab.

Custom...: contains the Direct3D or OpenGL custom settings control panel as seen in Figure 2 (depending on which API has been selected), allowing users to adjust individual 3D settings. SMARTSHADER™ Effects tab is located within the custom section of the control panel.

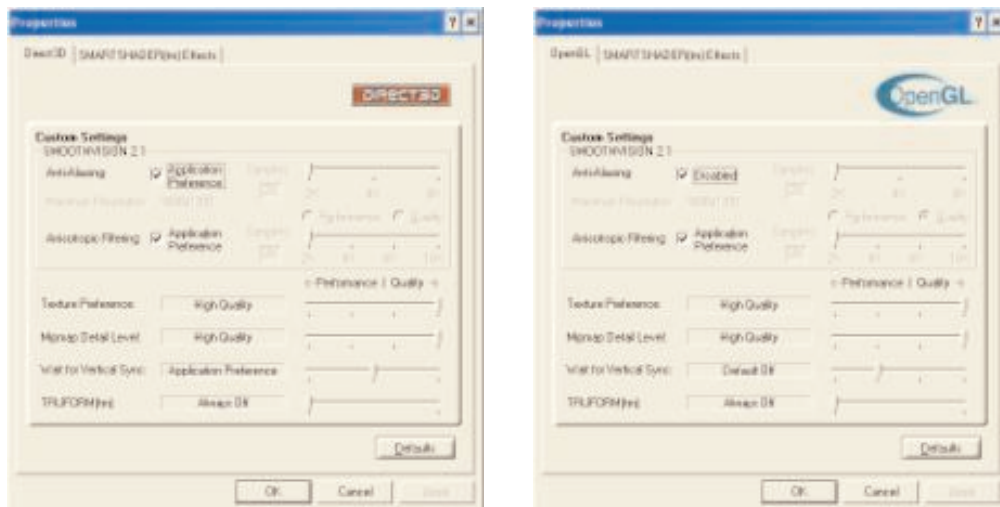


Figure 2. Custom Direct3D and OpenGL control panels.



Anisotropic Filtering: Anisotropic filtering enhances 3D image quality by increasing the number of texture samples taken per pixel, resulting in highly detailed 3D scenes.

SMOOTHVISION/Anti-aliasing: SMOOTHVISION/Anti-aliasing enhances 3D image quality by softening the jagged edges found in 3D scenes, providing smoother, more realistic 3D objects.

Texture Preference: enables users to modify texture quality level by specifying a preference for increased frame rates (the left end of the slider) that may slightly degrade texture quality, or maximum texture quality (the right end of the slider) that may affect frame rates.

Mipmap Detail level: enables users to adjust mipmap quality levels, which are a set of texture maps used to represent a given texture. Maximize performance by moving the slider to the left, or enhance image quality by moving the slider to the right.

Wait for Vertical Sync: limits the frame rate of applications to the refresh rate of your display device. Users may select Always Off, Application Preference, and Always On in the Direct 3D panel, or Always Off, Applications Preference (Default Off), Application Preference (Default On), and Always On in the Open GL panel.

TRUFORM: applications that support TRUFORM use higher order surface geometry to generate more detailed and realistic terrain and character models. This feature is only available on the RADEON 8500 and later line of products only.

SMARTSHADER™ Effects: as shown in Figure 3, switching the SMARTSHADER™ Effects tab lets users apply different pixel shader effects to their Direct3D and OpenGL applications. Figure 4 and Figure 5 demonstrate the visual quality made possible with SMARTSHADER Effects.

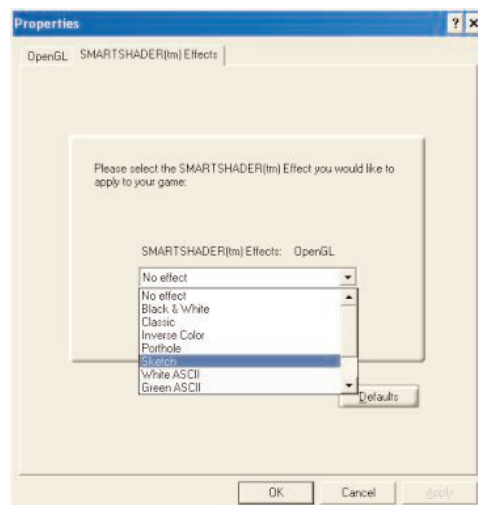


Figure 3. OpenGL SMARTSHADER Effects Control Panel



Figure 4. Quake™ 3 with the "Sketch" SMARTSHADER Effect enabled



Figure 5. 3DMark03™ with the "Classic" SMARTSHADER™ Effect enabled

Compatibility Settings: users can resolve incompatibilities in a limited number of older applications, as shown in Figure 6. Compatibility settings in both Direct3D and OpenGL will change depending on which ATI graphics accelerator is installed. These settings should be left at defaults unless the user experiences issues with a particular application.

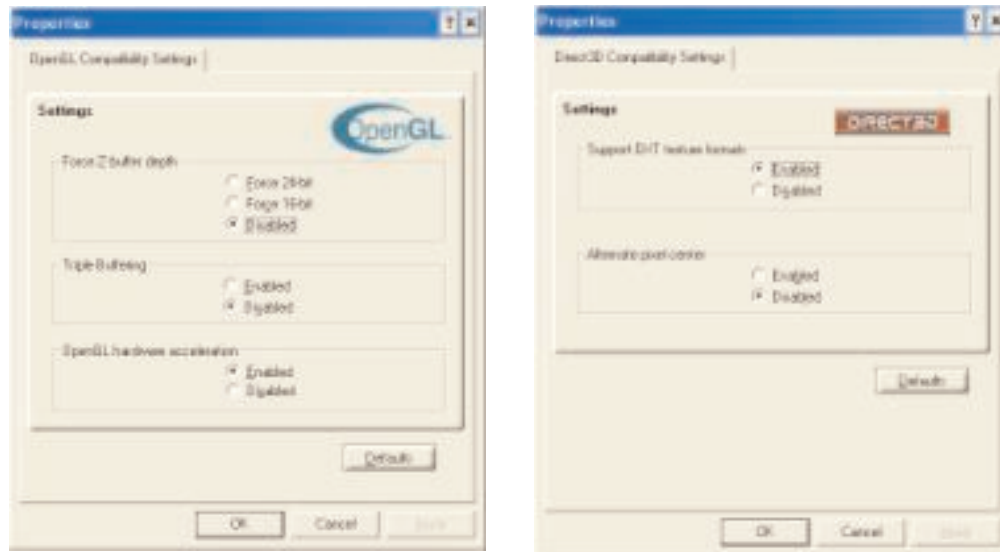


Figure 6. The Direct3D and OpenGL compatibility settings control panels.

3.) User Benefits

- a.) Users can now create profiles for Direct3D and OpenGL applications
- b.) Users have the flexibility to quickly adjust overall performance/quality experience with the main slider or use the custom settings control panel
- c.) The SMARTSHADER™ Effects control panel will allow gamers to enable a exciting pixel shader effects in Direct3D or OpenGL applications.

4.) Usage Scenario

When playing *Quake 3™*, users may enable a profile featuring 6X anti-aliasing and set wait for vertical sync to 'always off'. When playing *Max Payne™*, users may prefer 4X anti-aliasing and set wait for vertical sync to 'always on'. Profiles, which can be easily created, saved and loaded, eliminate the need to adjust individual 3D settings every time games are switched.



New Options Control Panel

1.) Summary

The new options page seen in Figure 7 contains detailed information about the driver and also allows users to enable display and control panel options. Selecting the details button provides a list of detailed graphics accelerator specs.

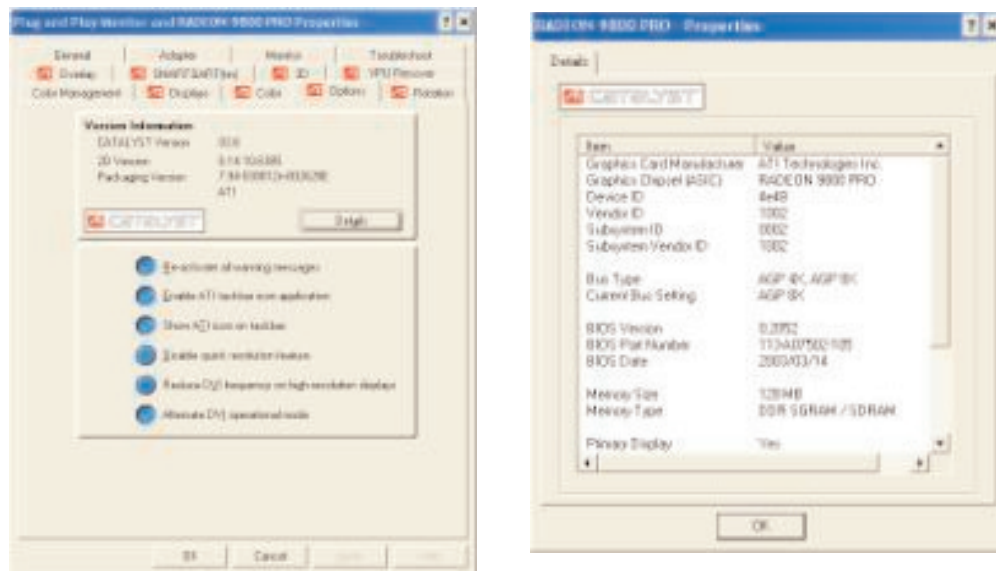


Figure 7. The new Options and Details control panel pages.

2.) Feature Description

Users can find detailed information on the ATI software and hardware installed using the options page. The options page also contains a few display settings, and control panel / taskbar options.

3.) User benefits

- Users can confirm which CATALYST and control panel version is installed.
- Users can enable/disable some taskbar and display settings.
- Users can check the hardware details of their graphics accelerator with the details page.

4.) Usage Scenario

The options panel displays which version of CATALYST is installed, allowing users to quickly confirm the software version downloading a CATALYST driver / control panel from ATI.com.



New Color Control Panel

1.) Summary

The new color control panel, as seen in Figure 8 gives end users advanced control over color settings for both desktop and 3D applications. Advanced color settings can be saved as profiles and even changed in real-time from within any 3D application.

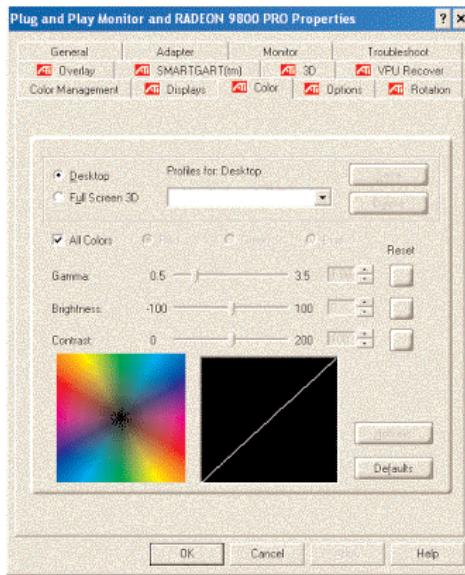


Figure 8. New color control panel

2.) Feature Description

The new color control panel allows users to save their desktop and Direct3D/OpenGL settings, so that color settings do not need to be adjusted on a regular basis. Hotkeys allow users to adjust color settings dynamically within 3D programs so that they no longer have to quit the application to make adjustments.

Additional new settings include gamma and contrast sliders, high precision adjustments and the ability to enter exact values. Brightness, contrast, and gamma can also be adjusted on a per color basis or simultaneously. As the value of brightness, contrast and gamma are changed the new color curve dynamically indicates the changes making color collaboration much easier.



3.) User benefits

- a.) Users can adjust gamma, brightness, and contrast using either sliders or spin controls.
- b.) Users can save/delete profiles for their desktop color settings and 3D color settings.
- c.) Users can use hotkeys to adjust their 3D color settings, save the settings into a profile, or switch between profiles in real-time while using a 3D application.

4.) Usage Scenario

There is a library of games installed on your system, many of which appear too dark when played. With ATI's new color control panel, profiles can be created and tweaked while playing any game to ensure that the ideal color settings are configured properly.

SMARTGART™

1.) Summary

Many AGP bus errors occur when the large variety of different AGP bus controllers (chipsets) and motherboards are not compatible with one another, causing video corruption or systems to hang. To solve this problem, ATI has developed a software testing and diagnostics tool known as SMARTGART™, see Figure 10. SMARTGART™ performs a variety of AGP-related tests to determine the optimal AGP settings and ensure system stability.

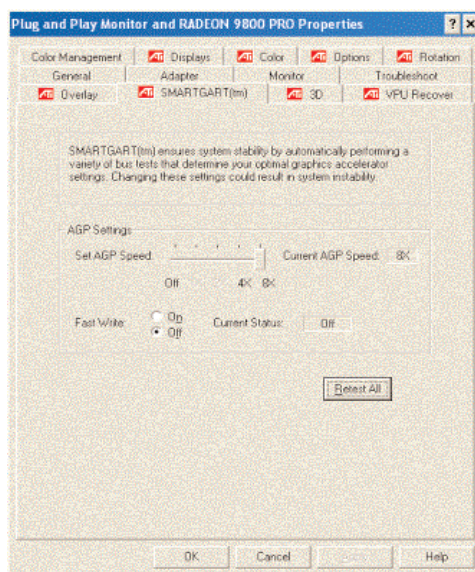


Figure 10. SMARTGART™ control panel



2.) Feature Description

SMARTGART™ automatically tests the AGP compatibility upon initialization of the display driver, dynamically determining the proper AGP bus speed and whether AGP Fast Writes, AGP Reads and AGP Writes should be enabled. If a new AGP setting is required and the system must be restarted, the driver will automatically set the new AGP configuration on the next reboot.

The diagnostic tests will only be run on the system when the driver is installed for the first time, or when the system configuration is changed.

3.) User Benefits

- a.) Users will no longer experience visual artifacts or system crashes as a result of AGP compatibility issues.

4.) Usage Scenario

You've put together a system that sometimes crashes when playing games. Downloading and installing the newest CATALYST™ software suite will use SMARTGART™ to automatically configure your system so that the AGP bus is configured to the most stable setting.

VPU Recover

1.) Summary

Hardware crashes may occur when a hardware device and the corresponding software device driver are no longer able to communicate with each other. VPU Recover prevents many of these situations from happening and turns system reboots into a last measure solution.

2.) Feature Description

VPU Recover enables the ATI display driver to detect when the graphics processor is no longer able to respond to display driver commands. When this situation arises, the display driver will reset the graphics hardware. Depending on the current state of the system when VPU Recover is activated, applications that are running may be able to fully recover from the graphics processor reset. In other cases, running applications may be closed and the user will be returned to the Windows desktop.

When VPU Recover is activated a dialog box will prompt the user if s/he would like to submit an automatically generated error report to ATI. This error report will help ATI to determine the cause of the hang, lead to faster resolution of the issue, and result in a more stable driver. Users may still choose to deactivate this feature from within the VPU Recover control panel, as seen in Figure 11.



3.) User Benefits

- a.) VPU Recover significantly reduces the number of system crashes caused by graphics hardware hangs, delivering fewer gameplay interruptions and situations where work can be lost, as well as increasing system stability.

4.) Usage Scenario

A graphics hardware crash occurs while you are working on an unsaved file. VPU Recover will most likely be able to recover from the crash by resetting the graphics hardware, preventing a system reboot and enabling you to save your files.

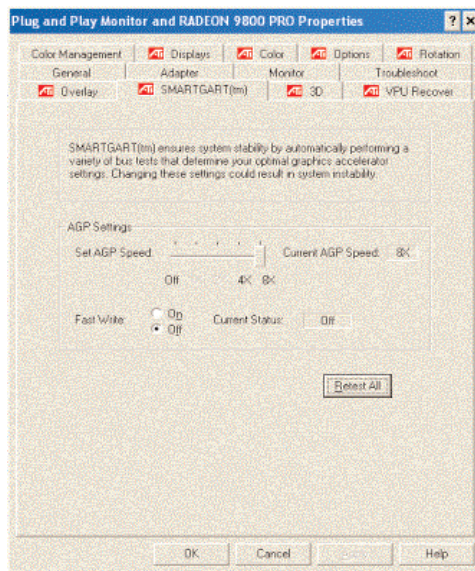


Figure 11. The VPU Recover Control Panel

OVERDRIVE™ (Currently available on the RADEON 9800 XT only)

1.) Summary

The new OVERDRIVE™ control panel will enable users to safely maximize the visual experience by dynamically and safely increasing graphics processor performance.



2.) Feature Description

The OVERDRIVE™ control panel, as seen in Figure 12, provides users with a safe and intelligent graphics processor clocking utility. OVERDRIVE™ constantly monitors the graphics processor, pushing its frequency to the maximum, while always ensuring that the processor temperature stays at a safe level. If the temperature of the graphics processor ever gets too hot, OVERDRIVE™ will automatically decrease the clock until a safe temperature is reached. OVERDRIVE™ will never reduce the graphics processor speed below the factory-set default clock speed.

3.) User Benefits

- a.) The new OVERDRIVE™ control panel will give users the ability to improve the performance of their graphics processor; as the temperature is lowered, the faster the graphics processor can run. This gives users, especially those with custom cooling solutions in their systems a significant performance boost.

4.) Usage Scenario

You'd like to squeeze a little more performance out of your graphics processor without the risks of a manual over-clocking application that could damage your hardware. Using OVERDRIVE™, everything occurs dynamically, ensuring that your graphics processor performance is maximized.

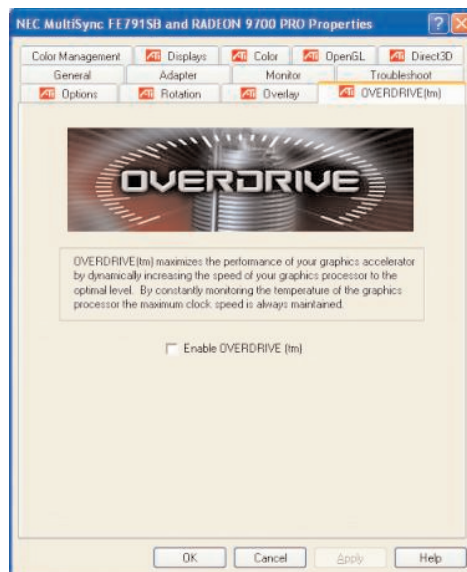


Figure 12. The OVERDRIVE™ Control Panel



HYDRAVISION™ Basic Edition

1.) Summary

ATI introduces an easy-to-use, intuitive version of HYDRAVISION™. Using a redesigned user interface as seen in Figure 13, HYDRAVISION Basic Edition provides users with the ability to configure and operate a multiple display setup.

2.) Feature Description

HYDRAVISION™ Basic Edition enables users to activate multiple display setups with a simple check box, adding the flexibility to move applications between displays using the application taskbar and restoring minimized applications to any display. The control panel features options to limit all application windows to a single display, maximize application child windows to a single display and add HYDRAVISION maximize buttons to window title bars. 'my dialog boxes' can be positioned where the cursor is located or on a user selectable display.

3.) User Benefits

- a.) Users can easily move and restore applications to any display with the taskbar options available in HYDRAVISION™ Basic Edition.
- b.) Users have full control over how many displays an application should expand across.
- c.) Users have full control where dialog boxes should appear.

4.) Usage Scenario

You've recently decided to add a second display in your home office to improve efficiency. HYDRAVISION™ Basic Edition will make using and setting up a second display a straightforward and intuitive experience.



Figure 13. HYDRAVISION™ Basic Edition



MULTIMEDIA CENTRE™ 8.7

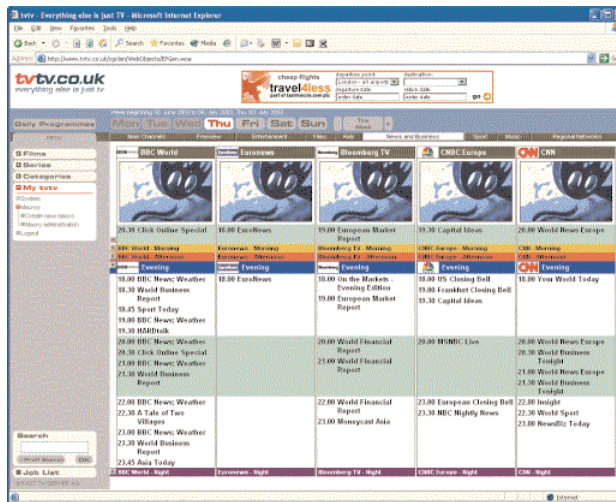
1.) Summary

An award winning suite of applications, ATI's Multimedia Center 8.7 adds important additions to its award-winning suite of applications. European and North American users will benefit from regional features that add value to Built by ATI RADEON, TV WONDER and ALL-IN-WONDER users.

2.) Feature Description

Key new features of MMC 8.7 include:

Teletext in EAZYLOOK™ - European users of ALL-IN-WONDER products gain integrated control and on screen display of Teletext information in EAZYLOOK™, ATI's user interface for distance viewing. Preconfigured key button assignments on ATI's REMOTE WONDER™ remote control device will display, scan, and save current pages to bitmap format with onscreen indicators and integrated Help.



Fast TVTV™ integration – Fast TVTV™ web based service lets users browse listings for regional broadcasters and schedule recording events. Channels that are not automatically mapped may be updated by the user to provide accurate station / listing connections so that scheduled recordings may be set at any time. A free six month trial of the FAST TVTV web service is included with ALL-IN-WONDER products shipping with MMC 8.7.



File Player Enhancements –MMC 8.7 gives users the power to create a slide show of still captures from TV shows or movies with an *.MP3 file added from the MMC Library. Users may also select transitions between images and display their creation through EAZYLOOK™ for fullscreen display of music-enabled slide on large screen display device.

Other key Features

Recently introduced features that enhance the use of Multimedia Center include:

FM Player with FM-ON-DEMAND - ALL-IN-WONDER 9600 PRO contains an integrated graphics, TV and FM radio tuner that works with an-MMC provided FM Player. ALL-In-WONDER 9600 PRO users can enjoy FM radio broadcasts through their PC, constantly buffering received radio programming to allow for pausing and restarting of live broadcasts and export to *.MP3 format. Alarm and sleep functions, 10 preset station buttons, mute and scheduled recording events are also integrated into the player.



Channel Surf in EAZYLOOK™ - Introduced with MMC 8.5, EAZYLOOK provides a comprehensive user interface for MMC and ATI's RF REMOTE WONDER™. Within EAZYLOOK, users are free to Channel Surf while watching TV as an onscreen grid displays thumbnail shots taken from current programs found during the autoscan. For systems receiving more than 24 channels, the grid displays a 4 x 6 lineup (2 x 3 for less than 24 channels), with channel number and program information displayed in the media info bar. This feature is available in North America only, for use with the Gemstar GUIDE Plus+ TV Listings).





Export from EAZYLOOK™ - ATI's TV-ON-DEMAND timeshifting feature provides the industry-leading flexibility to pause, replay, review or permanently capture programs. Providing the unique feature of preserving the TV-ON-DEMAND buffer between channel changes, users can highlight a TV-ON-DEMAND file, and press the Record button on their REMOTE WONDER to capture a show.



Media Burning from the MMC Library - From the MMC Library, users may now select captured content, choose a video format and menu style to create archived discs of favorite shows or home videos. Media types supported include burnable CD-ROM and DVD-ROM. MMC Library automatically calculates image size and allows users to remove files that exceed disc capacity, managing the media for efficiency.

3.) User Benefits

From industry leading TV-ON-DEMAND functionality, advanced recording options, and closed caption features found in no other product, ATI now offers superior control through the REMOTE WONDER, and advanced archive capability through media burning in MMC Library. MMC offers more display options and support for user preferences through features such as THRUVIEW™, translucent desktop or window, advanced aspect ratio selection (desktop or EAZYLOOK™), and video desktop, with choices of user interfaces from desktop skins to the advanced functionality of EAZYLOOK™. The unique management capabilities offered in MMC Library, enhanced by the ability to burn to media provide users ultimate control over captured multimedia content. Included with BUILT BY ATI RADEON graphics and ALL-IN-WONDER products, and available as an upgrade, this suite of multimedia applications provides an unparalleled value for home entertainment.

4.) Usage Scenario

MMC offers users a variety of advantages in multimedia playback enjoyment, capture or archive. Some of the various scenarios MMC 8.7 enables include:

- European users may now enjoy enhanced recording functionality provided by integration with Fast TVTV. Scheduled recordings provide content to be viewed when convenient, or archived for longer term usage.



- Integrated Teletext with EAZYLOOK™ provides fullscreen display and REMOTE WONDER™ control over teletext information. Users may save pages to bitmap format files for later printing, or to share with others. Colour coding on the REMOTE WONDER II matches the standard teletext pages to provide rapid access to frequently used pages. On screen indicators provide instant feedback on selections, giving users the ability to know their entries are being selected.
- ALL-IN-WONDER® 9600 PRO installed with a DVD +RW and 120GB drive provides an excellent multimedia capture and archive platform for TV or FM content. Files can be easily edited with Pinnacle Studio 8.0 ATI Version and organized for archiving to media.
- Using Component, Composite or S-video inputs allow content from existing VHS tapes or digital recorders to be cleanly recaptured using VIDEOSOAP™ filters for high quality video content. The addition of exporting to MP3 format through the FM Player provides users with audio archiving capabilities for live broadcasts.
- REMOTE WONDER™ and EAZYLOOK™ provide excellent on screen information and control over TV, DVD and captured content playback. Integrated Help files for the REMOTE WONDER provide users with information on specific button functionality, reducing the learning curve, and helping users pause, replay, record and export from the TV-ON-DEMAND buffer with integrated Channel Surfing.
- Media burning and file management additions to the MMC Library provide a unique, full featured multimedia content management solution. MMC Library allows easy burn-to-disk features and advanced options for digital still images, video clips and audio files found in no other utility provided by a multimedia suite of applications.

REMOTE WONDER™ II

1.) Summary

ATI's REMOTE WONDER™ II offers exciting remote control for PCs, applications, and Multimedia Center players. New key layout, more programmable buttons, improved key touch response and a wide selection of plug-ins provides users with the ultimate in flexibility and options in PC remotes.

2.) Feature Description

New features of the REMOTE WONDER II:

- Up to 60 feet range
- Four additional Auxiliary buttons may be mapped to focus on certain MMC features, plug-ins, or other applications.





- Customize your launch button with a personal pic or sticker
- New mouse control pad for better tactile feel
- Accept/Cancel buttons have been separated from mouse pad to reduce accidental contact
- Colour coded buttons at the bottom of the remote correspond to the Teletext page color coding found on European televisions
- I button allows users to easily access additional program or context sensitive information

New Software Abilities of the Remote Control:

- REMOTE WONDER II provides full support for ATI's Multimedia Center, including EAZYLOOK, the Remote Control user Interface introduced with MMC 8.5 for one-button access to TV or DVD for instant full screen, high quality content.
- New AUX buttons can be mapped to other applications on the users system, even if they are not in focus. Users listening to streaming audio may assign AUX1 to control that application, adjust volume, tracks or close the application without having it take it over the Desktop.
- REMOTE WONDER II with 2.0 drivers provides control over FM Player. Users may start radio, use the presets to change or tune stations, start a recording, or control alarm functions through the keypad.

3.) User Benefits

The REMOTE WONDER II, building on the best features of the original REMOTE WONDER, is an RF remote that delivers complete control of your PC through walls, floors and around corners to unleash a more complete multimedia experience on your PC.

4.) Usage Scenario

Whether you use the Remote Wonder II to control your personal music jukebox, as a portable notebook presentation tool, a home video server controller, or a full-on home-theater remote, the power is now in your hands.

Conclusion

CATALYST 3.8 features upgrades, expansions and innovative solutions to 3D applications, multimedia, gaming and home entertainment that deliver the ultimate in visual experiences. With an emphasis on advanced stability and customizable features, CATALYST 3.8 continues the tradition of ATI's industry-leading unified software suite.



ATI TECHNOLOGIES INC.
1 Commerce Valley Drive East
Markham, Ontario, Canada L3T 7X6
Telephone: (905) 882-2600
Facsimile: (905) 882-2620
www.ati.com

**ATI TECHNOLOGIES
SYSTEMS CORP.**
4555 Great America Parkway
Suite 501, Santa Clara, CA
95054-1208
Telephone: (408) 572-6500
Facsimile: (408) 572-6305

**ATI TECHNOLOGIES
(EUROPE) GMBH**
Keltnering 13
D-82041 Oberhaching, Germany
Telephone: +49 89 665 15-0
Facsimile: +49 89 665 15-300

**ATI TECHNOLOGIES
(JAPAN) INC.**
Kojimachi Nakata Bldg 4F
5-3 Kojimachi, Chiyoda-Ku
Tokyo 102-0083, Japan
Telephone: +81 35275-2241
Facsimile: +81 35275-2242

ATI TECHNOLOGIES INC.
8F, 148, Sec. 1, Hsin Sheng S. Rd.
Taipei, Taiwan, R.O.C.
Telephone: 886-2-2396-7711
Facsimile: 886-2-2351-3030