



AMD HD3D Technology

Setup Guide



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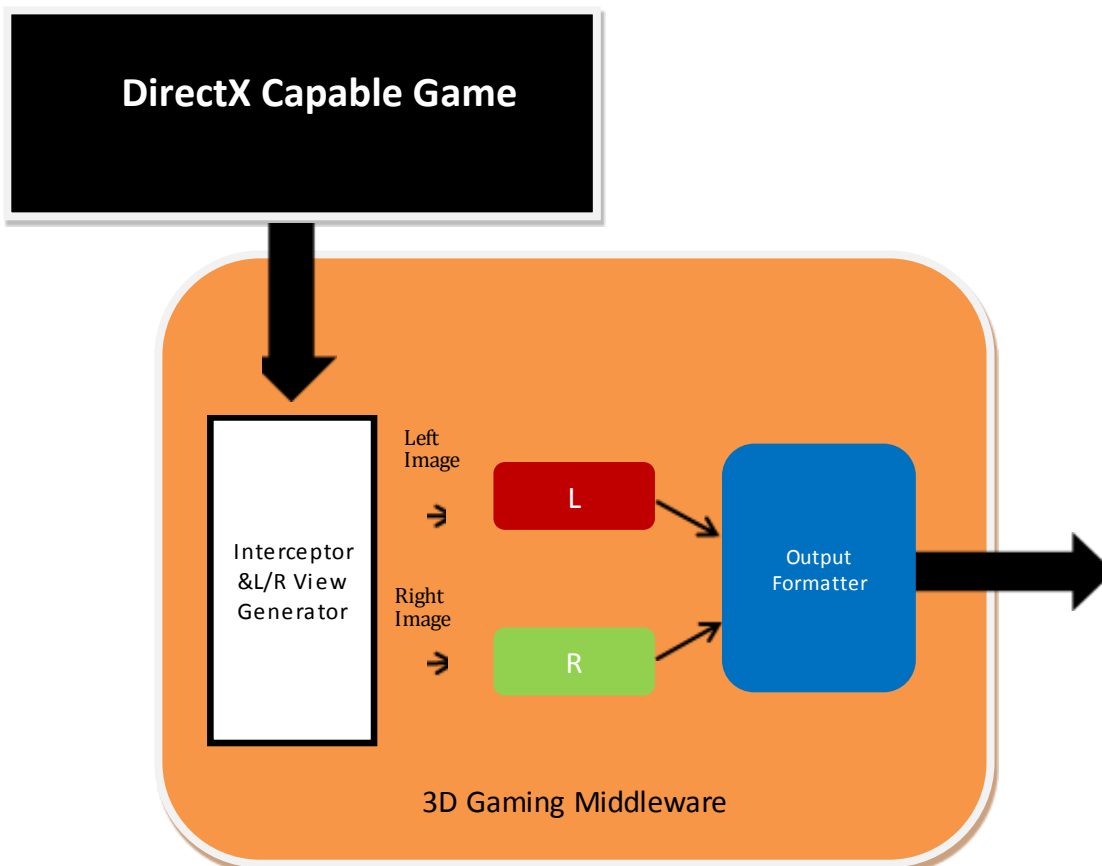
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AMD HD3D Technology

Stereoscopic 3D is a technique of creating the illusion of depth using a stereo image pair. Each image represents the scene as viewed by the left or the right. The illusion of depth is achieved when the display device (along with passive and active glasses in most 3D systems) is able to present the left image only for the left eye and the right image for the right eye. To fully understand how AMD HD3D technology can enable stunning 3D images, it is helpful to take a look at the Stereoscopic 3D gaming pipeline.

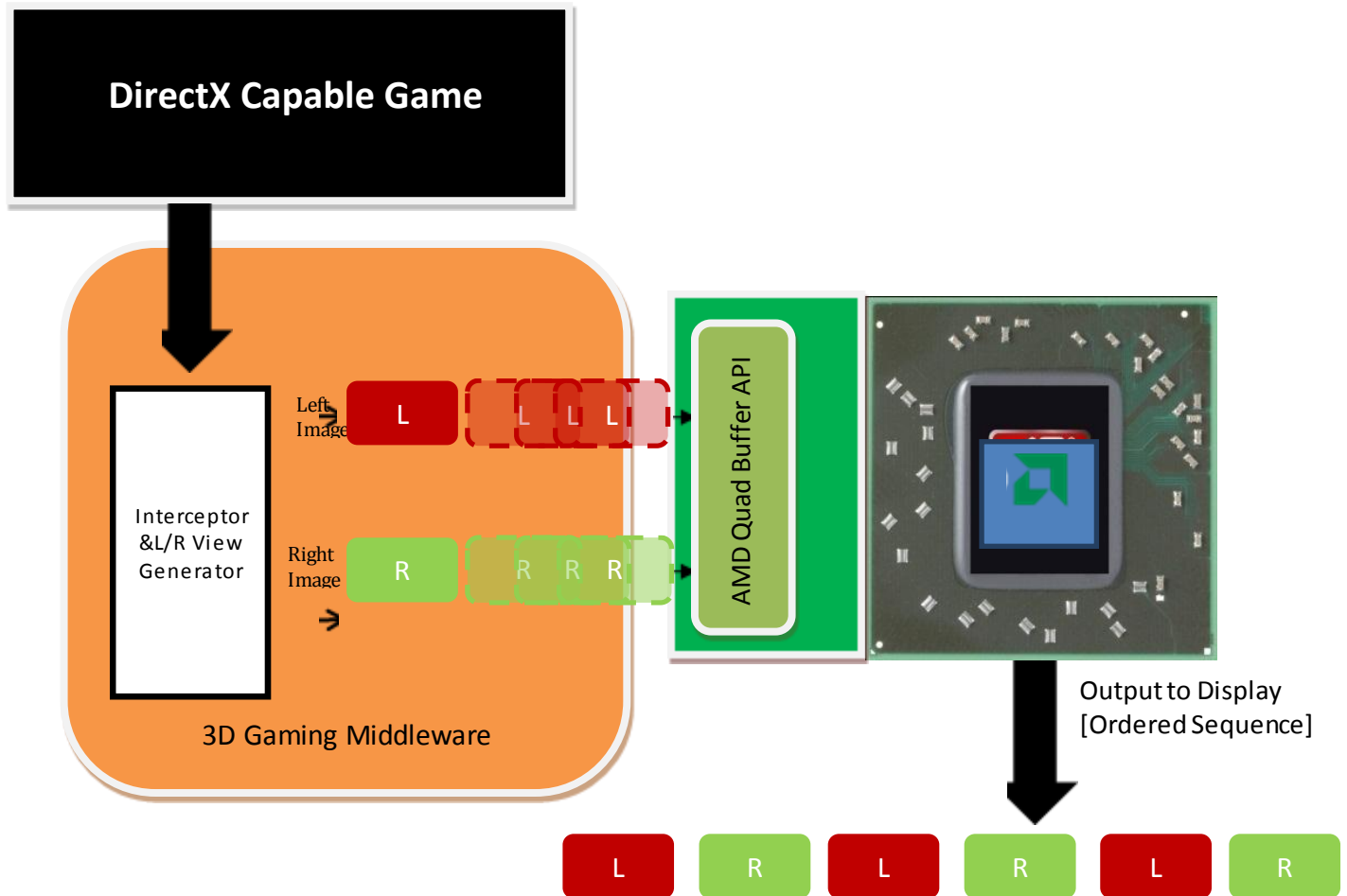
The majority of DirectX® capable games available in the market do not support stereo 3D natively. This means that the stereo image pair must be generated separately from the game engine. AMD has relationships with middleware vendors such as Dynamic Digital Depth and iZ3D, in order to achieve this task of the pipeline.

The middleware intercepts DirectX calls from the game. Using these calls, the middleware generates the stereo image pair, or the left and right eye view. For certain types of 3D displays, the middleware blends the two views together to form a single frame using a format that the display is expecting (ex. Row interleave, checkerboard, side-by-side, etc.). Once the frame is in the correct format, the middleware instructs the GPU to present and send the frame to the 3D display.



Frame Sequential Displays

Frame sequential 3D displays (also known as page flipped) require special treatment. The difference is that the output of the middleware is also frame sequential which does not need to be formatted in any way. The middleware also requires a new API provided by AMD, known as the Quad Buffer.



The Quad Buffer API provides the infrastructure for middleware developers to support frame sequential 3D displays by creating a double-height buffer using the existing front & back buffer in DirectX. The display engine then reads the content of the quad buffer and ensures that the frames remain in ordered sequence.



Supported 3D Display Hardware

There is currently a large set of 3D TV's, 3D Projectors, and 3D monitors that are available in stores and can be used alongside AMD HD3D technology for stereoscopic 3D gaming. As stereoscopic 3D continues to gain momentum, a slew of new 3D displays are expected to become available. A list of some of the 3D displays currently available can be found at <http://www.amd.com/us/products/technologies/amd-hd3d/pages/supported-hardware.aspx>

AMD Display Drivers

AMD HD3D technology is supported in AMD Catalyst™ software version 10.10 and later. Please visit the following link to download the latest drivers:

<http://sites.amd.com/us/game/downloads/Pages/downloads.aspx>

For support of 3D projectors and the Viewsonic 120Hz LCD monitor, a hotfix driver is currently required. This can be found at:

<http://support.amd.com/us/kbarticles/Pages/AMDCatalyst1012ahotfix.aspx>

Configuration Steps: TriDef Middleware

For the purpose of this guide, TriDef version “TriDef-3D-4.4” was used along with a Sony 1080p 3D TV (120Hz, HDMI 1.4a compliant) for 3D display support.

For further information on 3D displays that are supported by TriDef, please visit

<http://tridef.com/display/profile/all.html> .

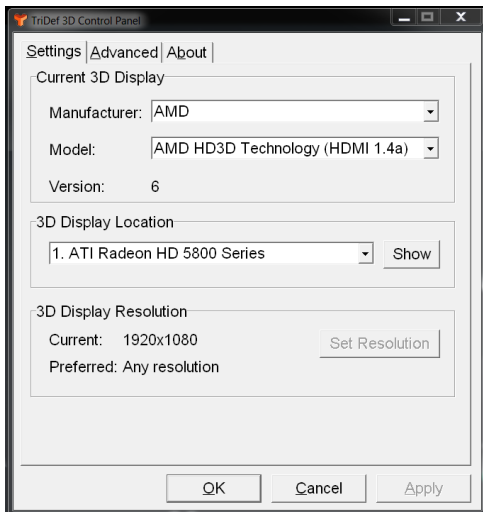
- 1) Install the latest HD3D Enabled AMD Catalyst Driver and set the desktop resolution to the desired gaming resolution (i.e. 720p or 1080p) and reboot the system

Note: 3D Resolution detection is tied to the Windows® desktop resolution.

- 1920 x 1080 resolution is limited to 24 Hz per eye over an HDMI connection.
- 1280 x 720 resolution is limited to 60 Hz per eye over an HDMI connection.

- 2) Install the latest Tri-Def software and follow the prompts. Ensure the “Run TriDef 3D Display Setup” box is checked and activate using supplied code or select the Trial option
- 3) If the 3D Display type is not detected select the following options in the TriDef 3D Control Panel
Manufacturer: AMD

Model: AMD HD3D Technology (HDMI 1.4a)

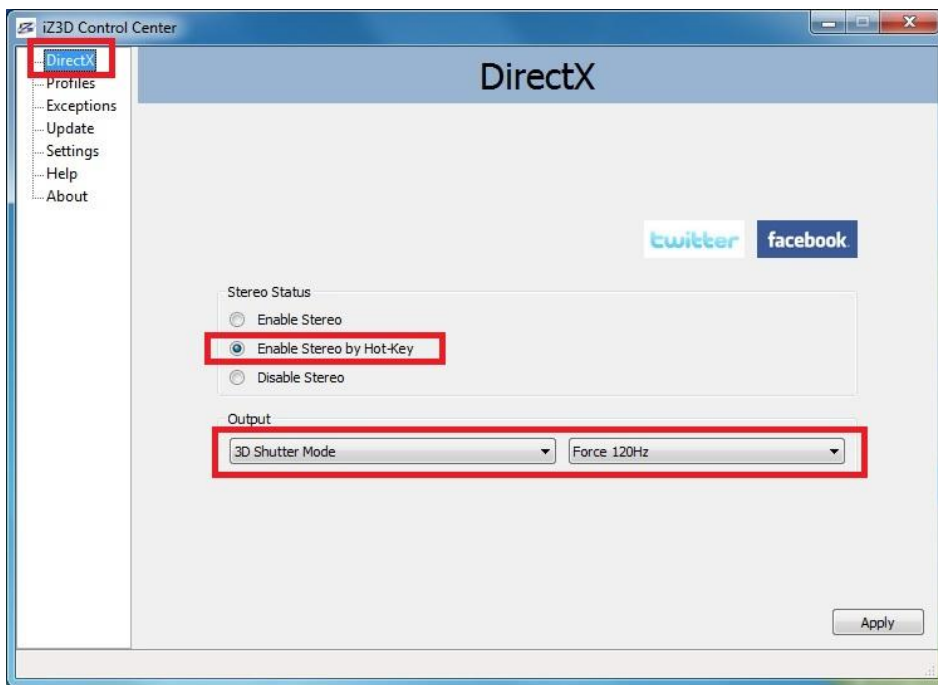


- 4) When launching a title use the TriDef 3D Ignition application. The desired game must be launched from this applications menu. Using the Scan button in the TriDef 3D Ignition application will check the computer for any supported titles and add them to the launcher menu.
- 5) If the desired game is not found automatically it can be manually added via the Add button. When adding a title a TriDef 3D Profile may be available for the desired game. This should be selected under the Game Profile dropdown box. If no game specific Profile is available the “Generic (DDD)” profile should be used.
- 6) Double click the desired game from the TriDef 3D Ignition application to launch it in 3D. Once in the game set the in-game resolution to the desired resolution (must match the desktop resolution as well)

Configuration Steps: iZ3D Middleware

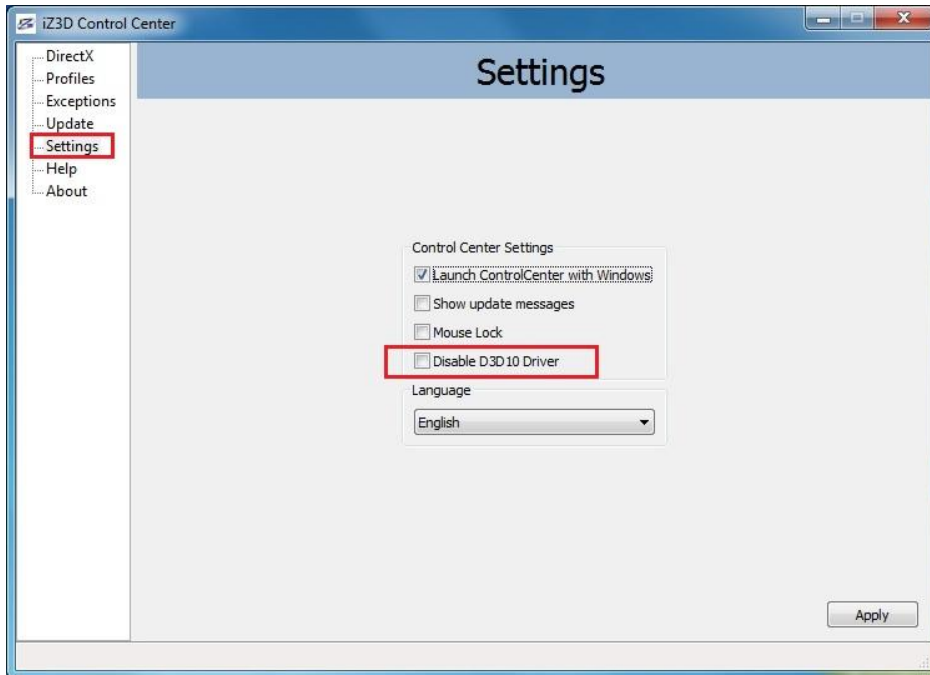
For the purpose of this guide, iZ3D software version “iZ3D 1.11 RC2” was used along with a Viewsonic 120Hz 3D Monitor for 3D display support.

- 1) Install the latest HD3D Enabled AMD Catalyst Driver and reboot the system.
- 2) Install the latest iZ3D software and follow the prompts. Be sure to select the “Full Installation” option when prompted
- 3) Launch the “iZ3D Control Panel” by double the iZ3D icon in the taskbar
 - Click on the DirectX Tab and select the following options:
 - Stereo status “Enable Stereo by Hot-Key”
 - Output: “3D Shutter Mode” and “Force 120Hz”
 - Click Apply to save the changes



- 4) Click on the “Profiles” Tab and select the following options
 - Select the Game Profile and browse the location to the installed games executable. This should be repeated when adding a new title.
 - Click Apply to save the changes

- 5) Click on the “Settings” Tab and select the following options
 - Ensure “Disable D3D10 Driver” is unchecked
 - Click Apply to save the changes



- 6) Close the iZ3D Control Panel and launch the desired game. Enable 3D by pressing the iZ3D stereo hotkey. By default the key is “Numlock *”.

Recommended AMD HD3D Technology Capable Games

Both iZ3D and TriDef provide excellent support on the websites along with continually updated lists of working games. To find out more about recommended iZ3D or TriDef games, please visit the following websites:

iZ3D: <http://www.iz3d.com/compatible>

TriDef: <http://tridef.com/ignition/3d-games.html>



Blu-ray 3D Playback with Cyberlink PowerDVD 10

CyberLink's PowerDVD 10 is a video playback software package which contains a Hardware acceleration option capable of distributing 3D Blu-ray video playback processing amongst the CPU and GPU, to help ensure smooth video playback.

The following data illustrates the CPU savings when Hardware Acceleration is turned on during 3D Blu-ray playback.

| Video Card | Using CPU only | With Hardware Acceleration enabled | Savings |
|-------------------------|----------------|------------------------------------|---------|
| AMD Radeon™ HD 6870 GPU | 87.3% | 10.2% | 77.1% |
| AMD Radeon™ HD 6850 GPU | 83.2% | 9.4% | 73.8% |

System: Asus M4A785TD-M EVO, AMD Athlon™ II X2 215 (2.7GHz), 4GB DDR3-1600, Windows7 Ultimate RTM 64 bit

There are just a few configuration steps required to get Blu-ray 3D playback working with Cyberlink PowerDVD 10 and an HDMI 1.4a compliant 3D TV.

Configuring Cyberlink PowerDVD 10 for Blu-ray 3D Playback

After installing the software, click on the PowerDVD 10 icon to start the program.

The PowerDVD 10 menu bar is located across the bottom of the application. To configure the application for 3D Blu-ray playback, you will need to use the "Configure PowerDVD Settings" options on the left and the "3D Display Configuration" settings on the right.



Start by clicking on

the "Configure PowerDVD Settings" icon .

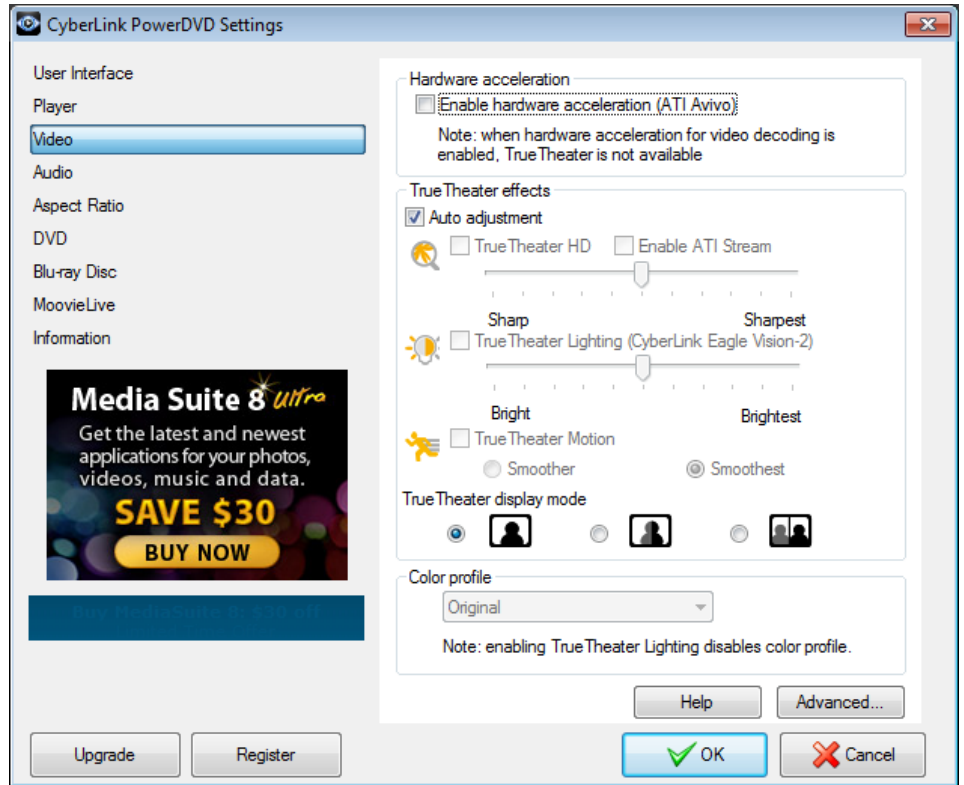



Once the Settings menu appears click on “Video”.

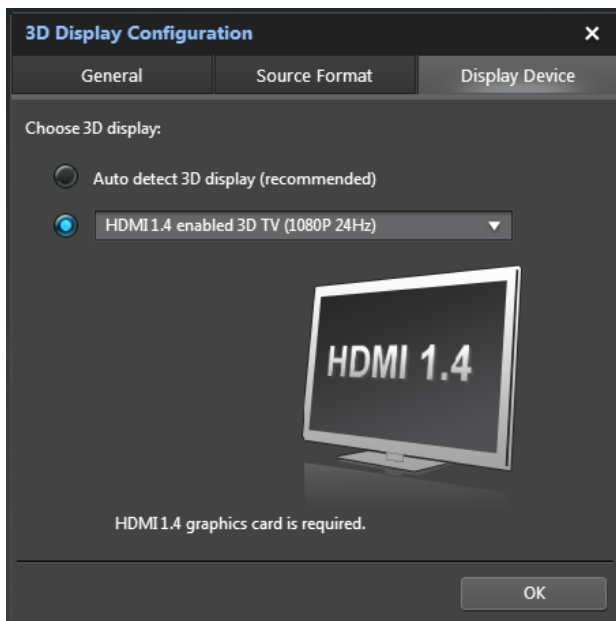
The uppermost option on the “Video” page is “Hardware acceleration”.

Check or uncheck this option depending on the test you are conducting.

Click “OK” to apply the settings and exit the menu.



Next, click the “3D Display Configuration” icon  on the far right. Please note that this icon is *just* the down arrow to the right of the blue “3D” icon.



Once the “3D Display Configuration” menus appear, click on the “Display Device” tab on the far right.

In the “Choose 3D display” options, click on the second button, and then use the drop down arrow on the right to select your display. Ensure that the “HDMI 1.4 enabled 3D TV” option is selected for use with an HDMI 1.4a 3DTV.

Click the “OK” button to exit the page.

You are now ready to watch your 3D Blu-ray disc. Simply place it into your Blu-ray drive, sit back and enjoy!

Blu-ray 3D Playback with ArcSoft TotalMedia Theatre 5

ArcSoft's TotalMedia Theatre 5 is a video playback software package which contains a Hardware acceleration option capable of distributing Blu-ray 3D video playback processing amongst the CPU and GPU, to help ensure smooth video playback.

There are just a few configuration steps required to get Blu-ray 3D playback working with ArcSoft TotalMedia 5 and an HDMI 1.4a compliant 3D TV.

Configuring Your System for Blu-ray 3D Playback

After installing the software, click on the TotalMedia Theatre 5 icon to start the program.

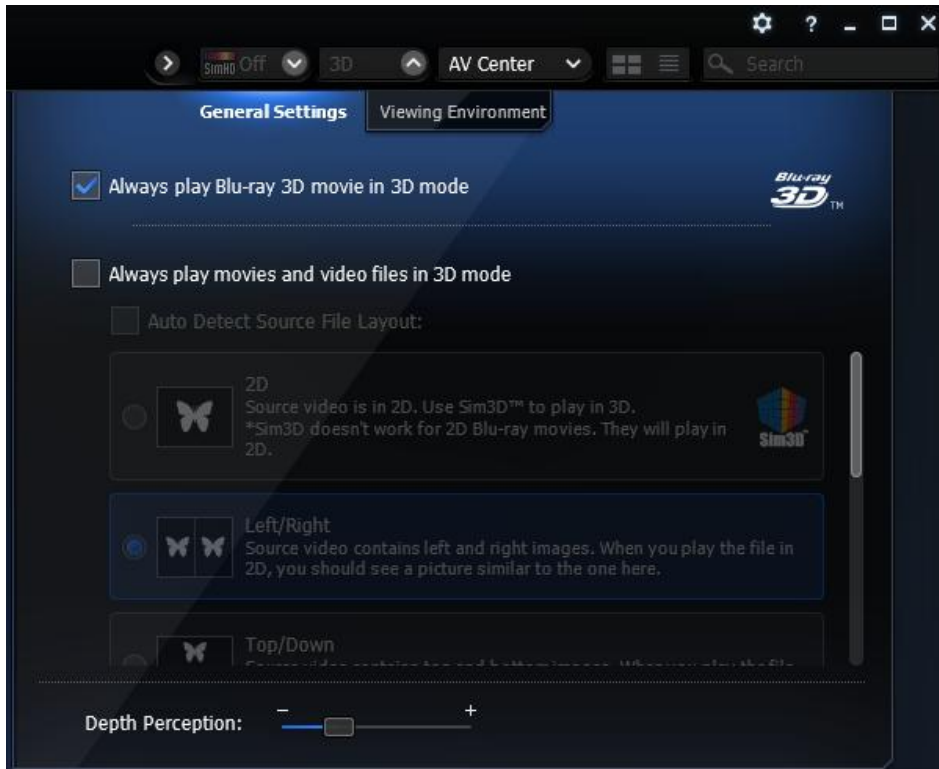
The TotalMedia Theatre 5 menu bar is located across the top of the application. To configure the application for 3D Blu-ray playback, you will need to use the "3D" and "AV Center" options on the right.

Start by clicking on the "AV Center" button, and navigate to the "Display" tab.



Ensure that the option for "Hardware Acceleration" is checked.

Next, click on the "3D" button and navigate to the "General Settings" tab.



Ensure that the “Always play Blu-ray 3D movie in 3D mode” is checked.

Next, click on the “3D” button and navigate to the “Viewing Environment” tab.



Ensure that the “AMD HD3D Technology” option is selected for use with an HDMI 1.4a 3DTV.

You are now ready to watch your 3D Blu-ray disc. Simply place it into your Blu-ray drive, sit back and enjoy!



Contact Information

For any further information, questions or anything else not included in this guide, please contact Bernard Fernandes at bernard.fernandes@amd.com.

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