

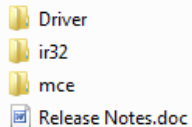
HD PVR MCE Support Release Notes

Version 1.1.28271

9/28/2010

The HD PVR support for Windows Media Center allows you to use the HD PVR to watch, pause and record high definition TV under Windows 7 Media Center from a cable TV or satellite set top box. It operates in a similar way as other Hauppauge TV tuners for Windows Media Center, but the HD PVR records in high definition using H.264 encoding.

This document provides information specific to the indicated version of the HD PVR MCE Support installation package. The package contains all the components you will need to install HD PVR MCE Support. In the package you will find:



- Driver – the latest HDPVR driver.
- ir32 – installation files for IR receive and blaster functionality.
- mce – the HD PVR MCE Support installer (setup.exe)

Minimum Requirements

Formal hardware requirements have not yet been established. The following hardware specifications are for one of the test systems used during development and are provided as a point of reference. This system exhibited 34% CPU utilization with a 1080i source.

- Pentium D 2.8GHz
- 2GB DDR2 533
- nVidia 9500GT ¹
- HD PVR (all revisions)

- Windows 7 Home Premium or higher ²

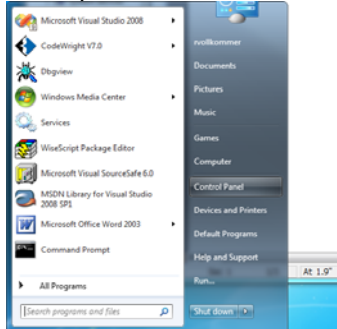
Notes:

1: We strongly recommend using a graphics card supporting hardware acceleration (nVidia 8600 or better or ATI equivalent).

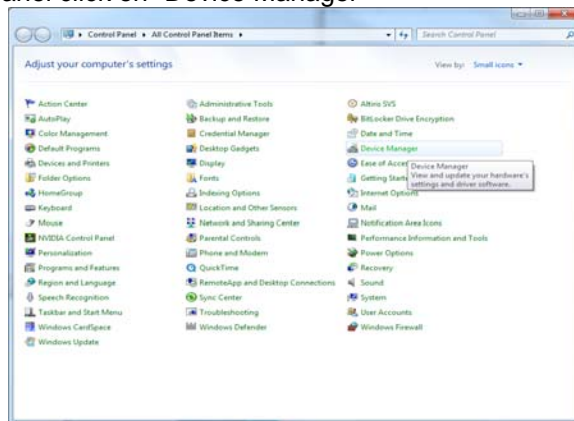
2: HD PVR MCE support requires Windows 7 and will not work with Windows XP Media Center edition or any Windows Vista version.

Installation Instructions:

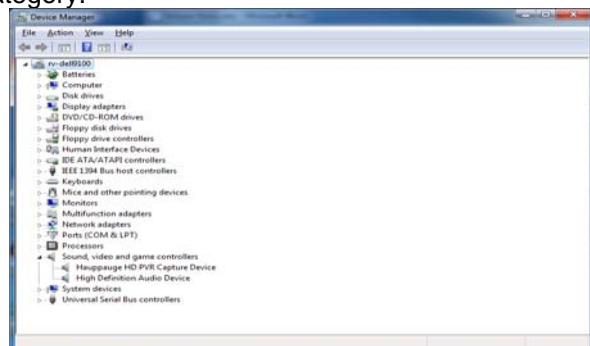
- 1) Uninstall any previous versions (Start->Control Panel->Programs and Features)
- 2) Update the HDPVR driver
 - a) Connect the HDPVR to the PC using the supplied USB cable and apply power.
 - b) Click the Win7 start button and open the “Control Panel”



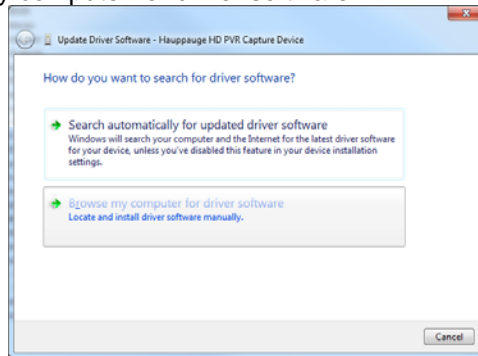
- c) In the Control Panel click on “Device Manager”



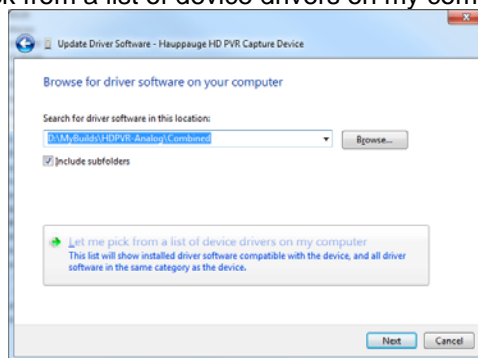
- d) If the HDPVR driver is not currently installed the HDPVR will appear under the “Other devices” category. If an HDPVR driver is installed the HDPVR will appear under the “Sound, video and game controllers” category.



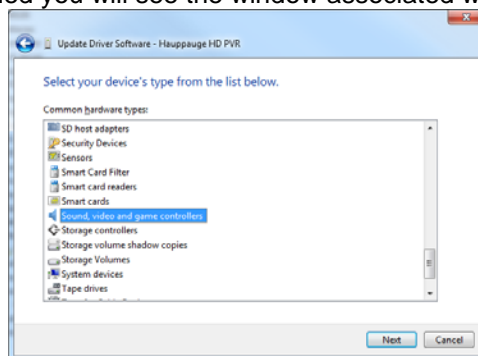
- e) Right click on the HD PVR Device and select “Update Driver Software”
- f) Click on “Browse my computer for driver software”



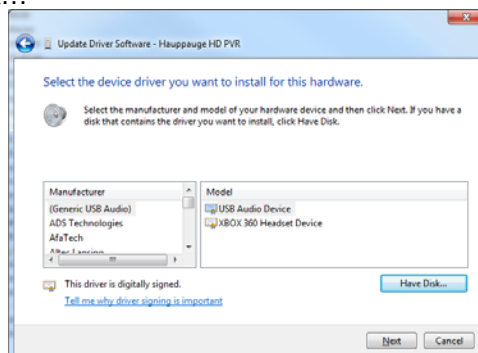
- g) Click on “Let me pick from a list of device drivers on my computer”



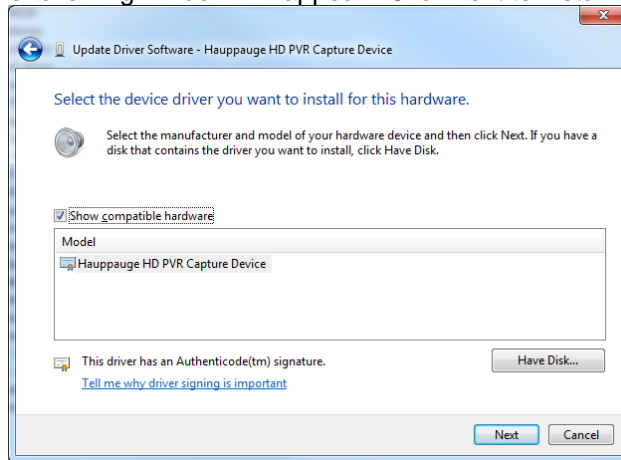
- h) If the HDPVR driver is not currently installed you will see the window below. Click “Next”. If the driver is installed you will see the window associated with the next step.



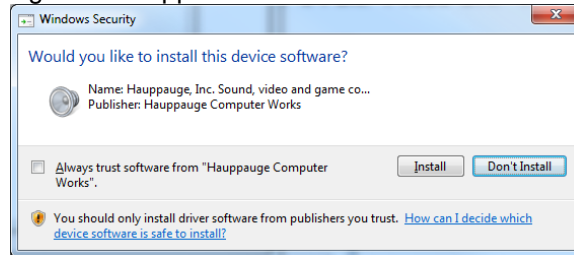
- i) Click on “Have Disk...”



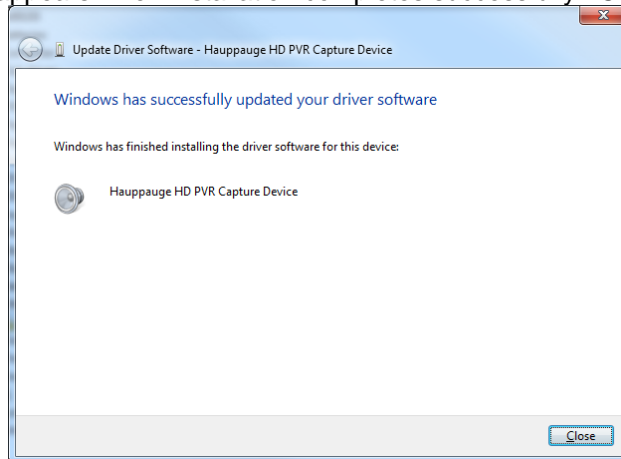
- j) Browse to the “Driver” folder in the installation package and double click on “hcwhdpvr.inf” for Win7 32bit systems and” hcwhdpvr_64.inf” for Win7 64bit systems. Press OK. The following window will appear. Click next to install the driver.



- k) When the following window appears click “Install”.



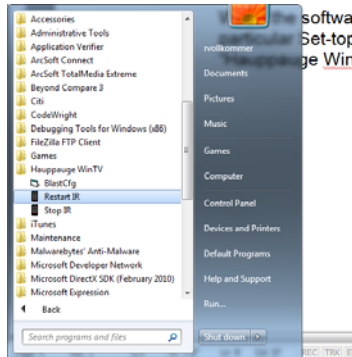
- l) This window appears when installation completes successfully. Click “Close”



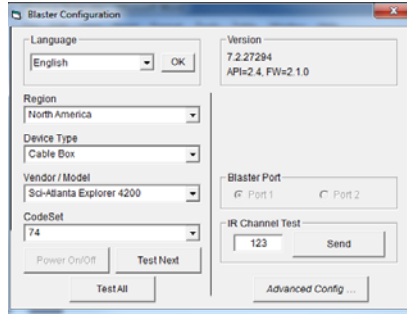
3) Install and configure the IR software

Run the two executables found in the “ir32” folder of the installation package (IR32.exe and IRBlast.exe). Each executable will guide you through the installation process. If you previously installed older versions of this software you must update to this version or the MCE software will not function.

When the software is installed you must configure the IR blaster software to work with your particular Set-top box. To configure the IR blaster launch the “BlastCfg” application in the “Hauppauge WinTV” start menu folder.



- a) The BlastCfg window will open. Configure for your particular STB and test by clicking on the “Send” button. The STB should tune to the indicated channel (123 by default).



- b) If your STB is not listed you will have to “learn” the numeric keys on your remote. Click on “Advanced Config...” then “Learning...”. Click on the key you want to learn and follow the on screen prompts. Note: It is important that you hold the remote ~1 inch from the HDPVR IR window during learning. When you have learned all the numeric keys test the configuration as described above.



4) Run the HD PVR MCE Installer

Run the executable found in the “mce” folder of the installation package. Follow the installer prompts and reboot the PC if directed.

Operation

The HD PVR MCE driver provides seamless integration with the Windows 7 Media Center environment. Run MCE “TV Setup” and configure the HDPVR as you would with any other tuner device.

- a) Media Center detects the HDPVR as a “Digital Cable” tuner



- b) If you encounter any issues with the software please email: hdpvr@hauppauge.com

Known Issues

- 1) This release only supports a single HDPVR
- 2) You may notice prolonged hard disk activity at times during the setup process. We found that continuing the setup process during this activity may cause setup to fail. After selecting the TV provider lineup you are asked to confirm the configuration. We suggest you do not click on next until you see minimal hard disk activity for 15 seconds.



- 3) The scanning percent complete indicator is not working. The indicator will show 100% however the channel discovery process is still in progress. We suggest you wait until the channel count does not increment for 15 seconds and minimal hard disk activity is observed before clicking on "Next".



- 4) The software can be installed on a PC with an existing Arcsoft TME installation, however you will need to reboot after using TME or the HDPVR may no longer operate under MCE.
- 5) Currently the Dish Network electronic program guide is not supported. You can still watch and record TV from a Dish box, but the EPG is not supported.

Comments and Feedback

If you would like to comment or provide feedback on this documentation or your experience with this software please email the development team at:

hdpvrb@hauppauge.com

Revision History

1.0.28145

- Initial release

1.0.28171

- Fixed IR blaster failed after system resume.
- Fixed video glitch when connected to PAL capable PS3

1.0.28193

- Include latest WHQL'd HDPVR analog driver (1.5.7.0).
 - Fix HDPVR hang when configured for AAC audio and 720p video and transitioning between the XBOX360 dashboard and a game
 - Fixed sleep/resume hangs
 - Fixed video "flicker" when connected to EU version of PS3.
 - Several changes to improve general reliability.
- Include latest IR support for compatibility with other Hauppauge products.
- Added delay load of IR Blaster DLL which allows service to start if IR software is not installed or an older version than required for the HDPVR MCE software is installed. This prevents channel scan hangs caused by a stopped service.
- Added "Blaster" registry key

[HKEY_LOCAL_MACHINE\SYSTEM\PSWTuner\SWT_HDPVR\Blaster]

And several values to control blaster operation (defaults shown):

- "ActiveBlaster"=dword:00000001
 - 0 - no blaster
 - 1 - use HDPVR blaster
 - 2 - launch external blaster application

This is a bitwise value so multiple bits can be set. When "external" is enabled the application specified by "ExtAppName" will be launched with the command line parameters specified by "ExtAppArgs".

- "FlushOnChannelChange"=dword:00000001
0 - internal queues are not flushed after blasting
1 - flush internal queues after blasting
- "PauseOnChannelChange"=dword:00000001
0 - encoder is not paused before blasting
1 - pause encoder before blasting
- "IntOpenMode"=dword:00000000
0 – internal blaster port is opened once and handle saved for subsequent use.
1 – internal blaster port is opened/closed on each use

Opening the blaster once provides faster operation but the saved handle will be invalidated if any other application accesses the blaster hardware. Once the handle is invalid the MCE software will not be able to blast. For example, if you test the blaster operation using BlastCfg.exe you must reboot the PC (or restart the service) or the blaster will fail when MCE next tries to change the channel.

- "ExtAppName"="D:\MyTests\blast.exe"
Used to specify the full path and name of an external blaster application. External blaster mode must be enabled in "ActiveBlaster" for the application to be executed. Do not include opening and closing quotes in the value you specify.
- "ExtAppArgs"="-c%c"
Used to specify the command line parameters passed to the application specified in "ExtAppName". The MCE software will replace the first occurrence of %c in the command line with the channel number to be blasted.

1.0.28201

- Changed graph building logic to be independent of OS localization. Graph build failures were causing channel scans to hang at 0%.
- Changed HD PVR Tuner naming convention to be independent of legacy devices. Potential for naming conflicts to cause channel scans to hang at 0%.

1.1.28271

- Streamlined transport data handling code for improved stability.

- Eliminated the queuing of transport data and deprecated the “FlushOnChannelChange” registry key.
- Minimized variance in channel change times. Expect channel change times of ~15 seconds with the internal blaster.
- Eliminate “weak signal” messages due to transport handling issues.

Note: Because the HDPVR utilizes a hardware H.264 encoder, it behaves differently than typical tuner based devices. The HDPVR encoder must be reset whenever the input video resolution or bit stream audio type changes. Additionally, the HDPVR encoder may reset due to input video dropouts or errors in bit stream audio. The HDPVR stops streaming at the onset of the reset and resumes ~ 2-4 seconds after the return of stable audio and video.

MCE displays a “Weak signal” message when it sees “bad” or “no” transport data from a source for a predetermined time. The reset time of the HDPVR encoder appears to fall just within the threshold to trigger a weak signal message.

The changes in V28271 address disruptions in the transport stream artificially induced due to software issues. Weak signal messages may still occur:

- 1) During channel change
- 2) During video/audio dropouts from the source