

WinTV-HVR-2250 Kit for Windows Media Center

Quick Installation Guide

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1. Contents of the WinTV-HVR-2250 MC-Kit

- **WinTV-HVR-2250** dual tuner PCI Express board, with on-board TV antenna splitter and dual hardware MPEG-2 encoders
- **Audio/Video input board with cable**
- **WinTV-HVR Installation CD-ROM**

For Windows Media Center kits, you will also find:

- **Media Center Remote Control transmitter** and two AA batteries
- **Media Center Remote control receiver/blaster cable**



2. What is ATSC digital TV, and how does the WinTV-HVR-2250 work?

The Hauppauge WinTV-HVR-2250 supports three types of TV reception:

- analog cable TV channels
- over-the-air ATSC digital TV channels
- 'clear QAM' digital cable TV channels

ATSC digital TV is over-the-air digital TV for North America and typically requires an antenna for reception. ATSC is currently broadcast in 200 cities, with over 1500 TV stations. **Note:** ATSC digital TV is NOT digital cable TV or digital satellite TV.

Digital cable TV, broadcast "in the clear", is called Clear QAM. Windows 7 Media Center or Windows Media Center 'TV Pack 2008' can receive digital cable TV but earlier versions of Windows Media Center cannot receive clear QAM cable TV. **Note:** some cable operators do not provide clear QAM digital TV. Check with your local cable operator for the availability of clear QAM channels.

ATSC and clear QAM digital TV is broadcast in several resolutions, from "standard definition" which is similar to cable TV, up to high definition which has about 16 times the resolution of normal cable TV. In any resolution, ATSC digital TV gives sharper pictures than analog cable TV and near CD quality sound.

WinTV-HVR-2250 has a built-in analog cable TV and digital ATSC/QAM TV tuner. It uses your PC or laptop's CPU for displaying both analog and digital TV programs on your PC screen. The decoding of high definition ATSC is very processor intensive, and the smoothness of high definition TV programs depends upon how fast your PC or laptop system is. Other PC activities that consume CPU resources might affect the display of ATSC digital TV. Slow video, jerky video and momentary pausing of video are all results of a CPU which is temporarily being used by other activities.

For the best ATSC digital TV reception, a roof top 'Wideband' or 'High gain' antenna is recommended. A good ATSC digital antenna selector can be found at TitanTV.com under **Resources**.

Windows Media Center for the U.S. supports all TV formats in the Media Center Electronic Program Guide (EPG). A connection to the Internet is required for the downloading of EPG guide data.

Media Center for Canada currently supports only over the air analog TV channels and analog cable TV channels. There is a built-in Electronic Program Guide (EPG) for these channels in Media Center. A connection to the Internet is required for the downloading of EPG guide data.

At this time, Media Center for use in Canada only supports analog over-the-air TV channels and analog cable TV channels. To receive over-the-air ATSC digital TV or 'clear QAM' digital cable TV broadcasts in Canada, you will need to use a TV application such as Hauppauge's WinTV v6 or WinTV v7 (available from the Hauppauge website).

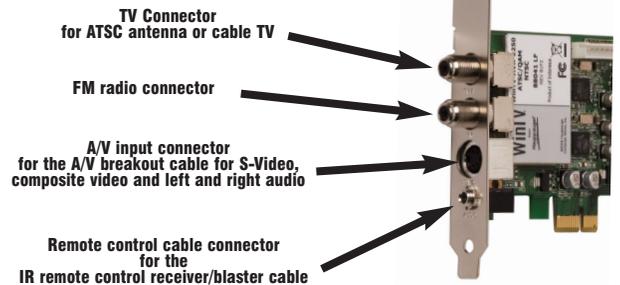
3. Installing the WinTV-HVR-2250 Media Center Kit

The WinTV-HVR-2250 MC-Kit will work with Microsoft's Windows Media Center application in Windows 7 or Vista Home Premium or Ultimate. It will also work with the Hauppauge WinTV v6 or WinTV v7 applications in Windows XP and Windows Vista (all versions).

To install, switch off the computer and remove the computer cover. The manufacturer of your PC supplies instructions on removing the PC cover.

Note: Your PC could be damaged by electrostatic discharge. Avoid this by contacting the earthed chassis of your PC, before you open it or touch the pci card.

WinTV-HVR-2250 Board connectors



- **Locate a free PCIe slot.** Unscrew and remove the metal cover plate which covers the back of the empty slot.
- **Plug the WinTV-HVR-2250 board into the PCIe slot,** and screw the WinTV-HVR-2250 metal cover plate to the PC.
- Replace the computer cover.

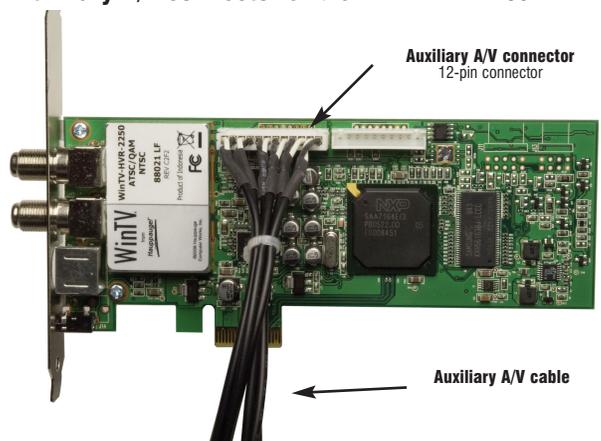
Plug either a **rooftop TV antenna** or **cable TV** into the **TV In** connector. A **FM radio antenna** can be plugged into the FM connector.

Install the A/V breakout cable (optional)

The **A/V breakout cable** can be used to bring audio/video from a satellite TV or cable set top box. Plug the A/V breakout cable into the **A/V input connector**.

Install the Auxiliary A/V panel (optional)

The **Auxiliary A/V panel and cable** can add a second set of audio/video inputs to the WinTV-HVR-2250. Install the Auxiliary A/V panel in a slot on the back of your PC. Plug the cable into the **12 pin Auxiliary A/V connector** on the WinTV-HVR-2250.

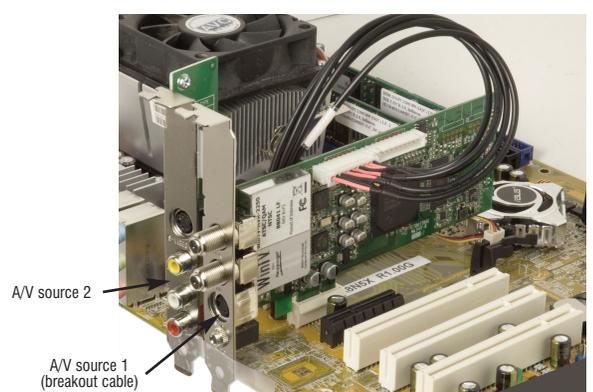


Connecting an external Audio/Video source (optional)

You can connect up to two external audio/video sources, such as satellite or cable TV set top boxes.

A/V Source 1 would be connected to the **A/V breakout cable**.

A/V Source 2 would be connected using the **Auxiliary A/V panel**.



4. Installing the WinTV-HVR-2250 driver

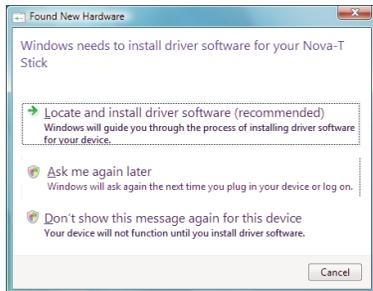
Note: the latest WinTV-HVR-2250 software can be found at www.hauppauge.com/site/support/support_hvr2250.html

Installing the WinTV-HVR-2250 Windows Vista driver

After plugging the WinTV-HVR-2250 into your PC, turn on your computer. Windows Vista will load. The **Found New Hardware** window will appear.

Insert the **WinTV-HVR Installation CD-ROM** in your PC's CD-ROM drive. **Note: If the CD auto play opens a window, close this window.**

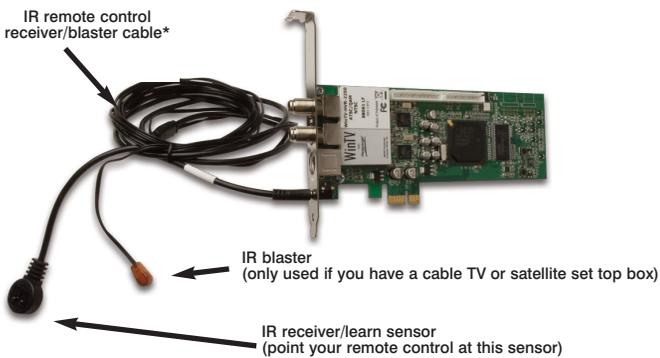
Click **Locate and install driver software (recommended)**. Then click **Don't search on-line**. Click **Next**. When the driver is installed, click **Close**.



5. Install the Media Center Remote control receiver/blaster (only for WinTV MC-Kits)

On the WinTV-HVR-1850 with the Hauppauge Media Center compatible remote control, the IR remote control receiver/blaster cable is plugged into the **Remote control connector**. Add the supplied batteries to the Remote control transmitter.

Note: The use of the IR Blaster is optional. It is only needed if you have a cable TV or satellite set top box and want Media Center to change the channels on your set top box. If you are not using a set top box, you should still connect the IR remote control receiver/blaster cable, but you will not use the IR blaster.



If you have a set top box and would like the Media Center remote control receiver/blaster to change channels on the set top box, position the other end (the transmitter end) over the **IR receiver on your set top box**. The **IR remote control receiver/blaster cable** has two ends: the IR receiver/learn sensor and the IR blaster:

- Position the **IR receiver/learn sensor** in a spot on your PC where it will be able to receive infra-red commands from the Media Center remote control device. Use the Velcro dot (on the back of the IR receiver) to position the IR receiver and learn sensor.
- **Optional: If you have a cable TV or satellite set top box** and would like Windows Media Center to change channels on the set top box, position the IR blaster end over the **IR receiver on your set top box**.

To test the IR Remote control receiver, click the **Start button** in the middle of the remote control. Windows Media Center should open.

Then run the TV Tuner Set up under Media Center (see below).

6. TV Tuner Setup in Windows Media Center

The WinTV-HVR-2250 has two tuners and can be used to watch one analog or ATSC digital channel in Media Center while recording another channel of the same type.

To set up the TV tuner in the Vista Media Center application: go to **Tasks / Settings / TV / Set up TV signal**.

To set up the TV tuner in Windows XP Media Center: in the main Media Center menu go to **Settings / TV / Set up TV**

Signal.

You will see a message: **Set Up Your TV Signal**. Click **Next**.

In **Confirm your Region**, make sure your region is selected. Click **Next**.

You will see **Automatic TV Signal Setup**. We recommend selecting **Configure my TV signal automatically**. Click **Next**.

You will then see a message saying **Examining your TV signal**. Media Center is determining the type of TV connection you have. When it is finished, it will tell you whether you have a cable TV, antenna or set top box connection.

After determining the type of signal, you will see **You are Done!**

Now you need to set up the Electronic Program Guide. You will see a message: **Set Up Your Program Guide**. Click **Next**. The **Program Guide Set Up Wizard** will move you through the completion of the Program Guide set up.

When you are finished with the Program Guide Setup, click the **TV** button on your Media Center remote control to start watching TV.

Troubleshooting

Some notes on system compatibility

Decoding high definition HD TV is very CPU intensive. A graphics card with at least 64MBytes of memory and the latest graphics driver from the manufacturer makes the decoding task easier. Typically a 2.2 GHz Pentium 4 processor or equivalent with a graphics card having 64MBytes of memory is required to properly decode ATSC digital TV on your PC. A 1.6GHz AMD Sempro laptop computer tested in the Hauppauge lab used 50% of the CPU for playing ATSC 640i format, and 90% of the CPU when playing ATSC 1080i, the highest definition ATSC format.

In some cases, either a faster processor or more graphics memory might be required. Slow or jerky video and a noisy TV picture indicate system performance problems.

Jerky video with live ATSC digital TV

Jerky or distorted video can be caused by two things in your PC or laptop: a slow CPU which cannot decode the ATSC TV signal fast enough, and a graphics system which cannot keep up with the high data rates of ATSC TV.

Many times, improving the performance of the graphics display will fix the jerky video display of ATSC digital TV. Here are some tips on improving graphics performance:

- **Use the latest graphics driver:** graphics drivers are often 'tweaked' to improve performance, especially the built-in graphics on laptops. Check the Microsoft Windows update site to download the latest graphics driver for your computer. For Dell computers, check the Dell website for the latest graphics driver.

- **Use Hauppauge's Primary program to optimize graphics performance:** If you are using the Hauppauge WinTV application, **Primary.exe** can be used to change the display mode of a graphics card for TV watching. This does not affect any other Windows program. **Primary.exe** is found in the Hauppauge WinTV program group. The default mode used by WinTV is **Force Primary**. **Force Primary** uses your processor to move the digital TV image into the graphics memory. It is more CPU intensive but often fixes display problems on some laptops.

To use hardware graphics acceleration, close your TV application, then run Primary. Click **Allow VMR**. Close Primary and rerun your TV application. The Allow VMR setting will allow your graphics system to use hardware acceleration for video decode. **Note:** graphics hardware acceleration does not work on all systems.

If this setting does not help, or if your TV application does not respond after a channel change, then your graphics system cannot use hardware graphics acceleration.

In this case, re-run **Primary**. Click **Force Primary** and **Close**.

Only some channels are found during ATSC channel scan

If you are only receiving some known TV channels when scanning, it means your TV antenna is not adequate to pick up the channel. You will need either an antenna signal booster (a Radio Shack antenna amplifier will work) or a high gain antenna. Here's a link to an ATSC antenna selector:

FCC Statement

FCC ID: H90WINTV CE Statement: This equipment has been tested and complies with EN 55013, EN 55020 and IEC 801-3 part 3 standards. CAUTION: Changes or modifications not expressly approved by the party responsible for compliance to the FCC Rules could void the user's authority to operate the equipment.

Supplementary Television Broadcasting Receiving Apparatus - Appareils supplémentaires de réception de télévision, Canada.