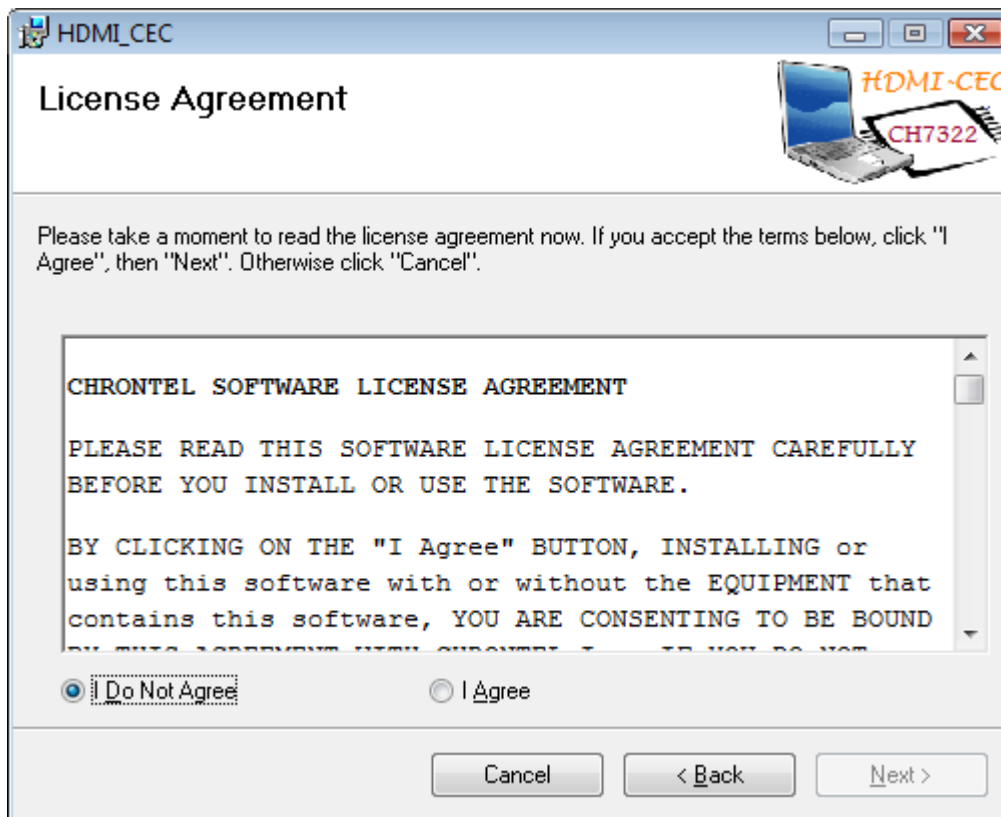


Chrontel HDMI-CEC Center Installation/Usage Guide

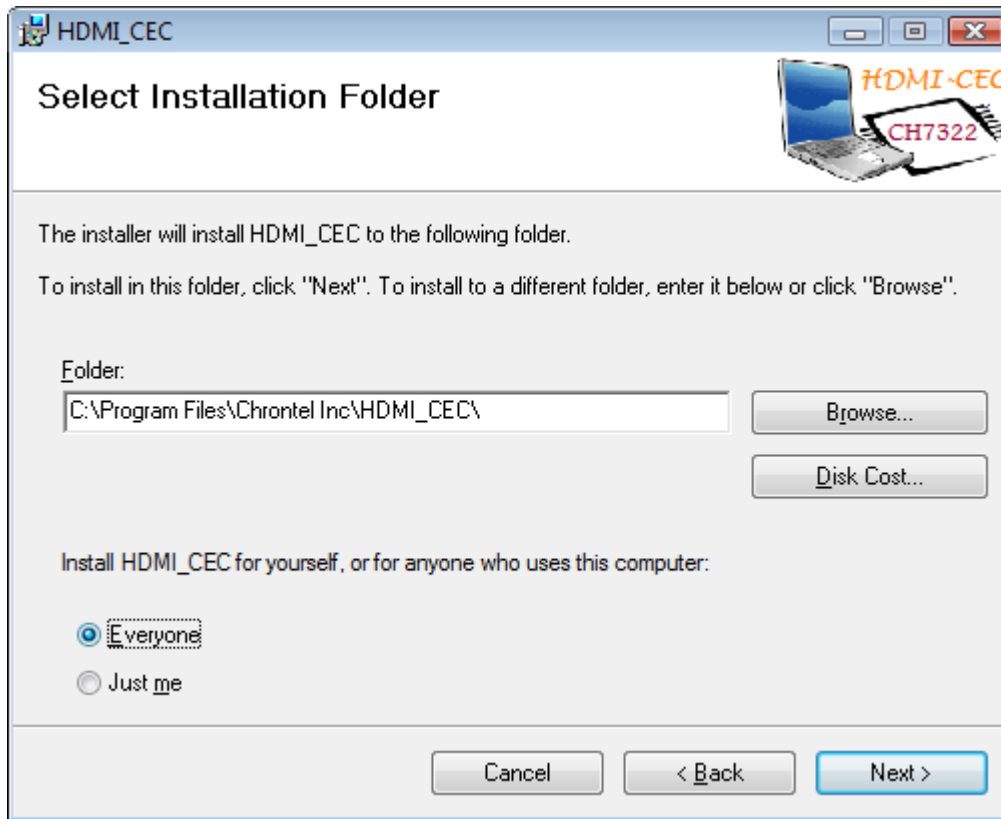
1. Install the HDMI-CEC Driver and CecCenter Application

Make sure the ADD2 card or graphics with Chrontel CH7322 HDMI-CEC is installed on the system motherboard.

Run the SETUP.EXE in the installation package, and the application will install the driver and application to the specified directory. It will also create a shortcut in the STARTUP group in the Windows Start Programs so that the CEC application will automatically start when system boot up and user login.



You need agree the EULA to install the HDMI CEC Center application.



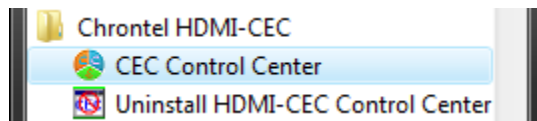
Choose the directory where you want to install the HDMI-CEC package. The SETUP.EXE will copy the CecCenter application and install the driver for HDMI-CEC control and CEC Human Interface Device.

During the installation process, the system may show a warning message that the driver is not signed. You can simply continue the driver installing. If the system being installed is not supported by the CEC control bus driver, or the Chrontel CEC device can't be located successfully, you may get the warning message box as below:

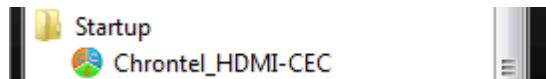


You can force the installation to continue by clicking "YES", or quit the setup by clicking "NO".

If the hardware is installed correctly, the installation will run smoothly without showing the warning message as above. After the installation process, it will create the items in "Program Files" folder:

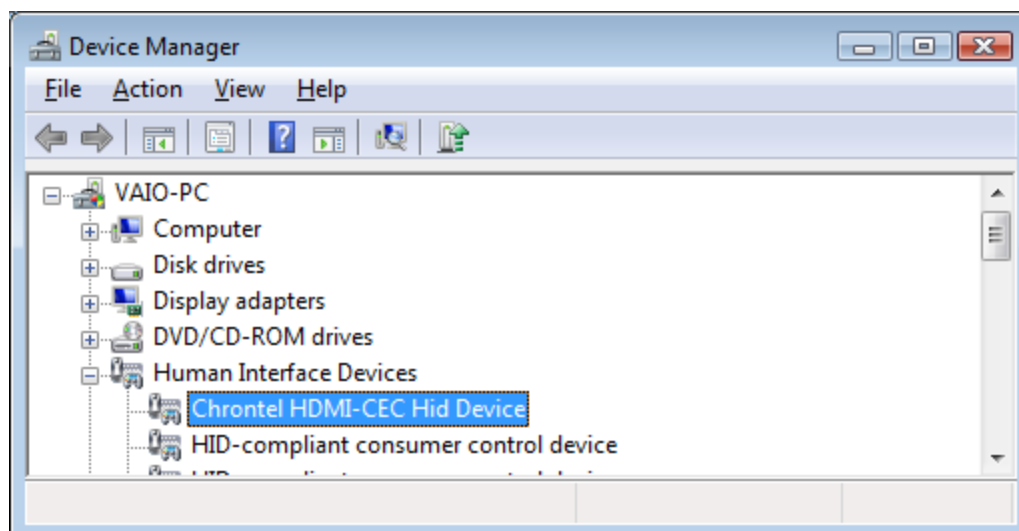
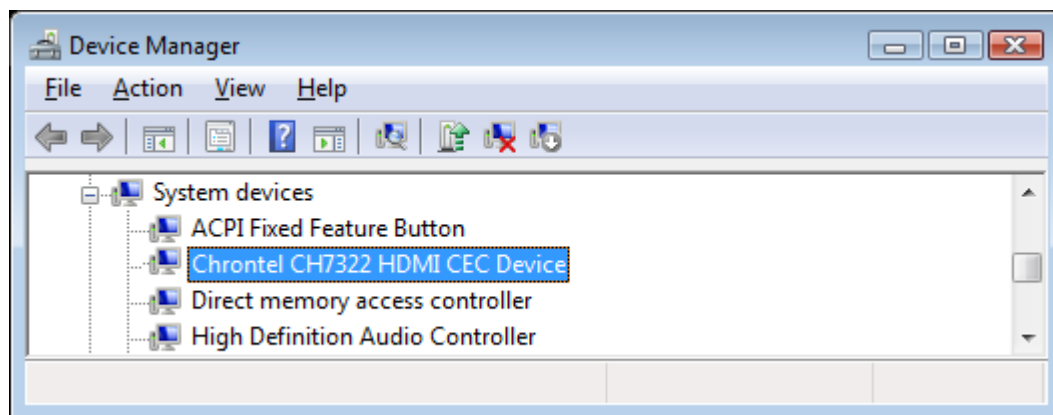


One shortcut is also created in “Startup” group so the CEC control center application will automatically run after system start and user log in.



You may also check the “Device Manager” to see that the device drive for HDMI-CEC is correctly installed:

- a) The below shows the CEC control bus driver and CEC HID driver installed successfully on Window Vista:



- b) The below shows the CEC control bus driver and CEC HID driver installed successfully on Window XP:



Note: Since the HDMI-CEC chip will be reinitialized after the driver installed. Before you run the CEC control center, you need unplug then plug in your HDMI TV if you connected TV before the installation. Or you can simply reboot the system.

2. Running the Application:

The CecCenter application shows the two-way control can be done by using the Chrontel HDMI-CEC on PC system running Windows XP or Vista.

After the CEC application is installed, you can run the “CECCENTER.EXE” from the folder that the CecCenter application is installed. Or click the shortcut in the STARTUP group to run the CEC. It will be safe to do reboot after the installation.

After the CecCenter application loaded, it will minimize to the tray:



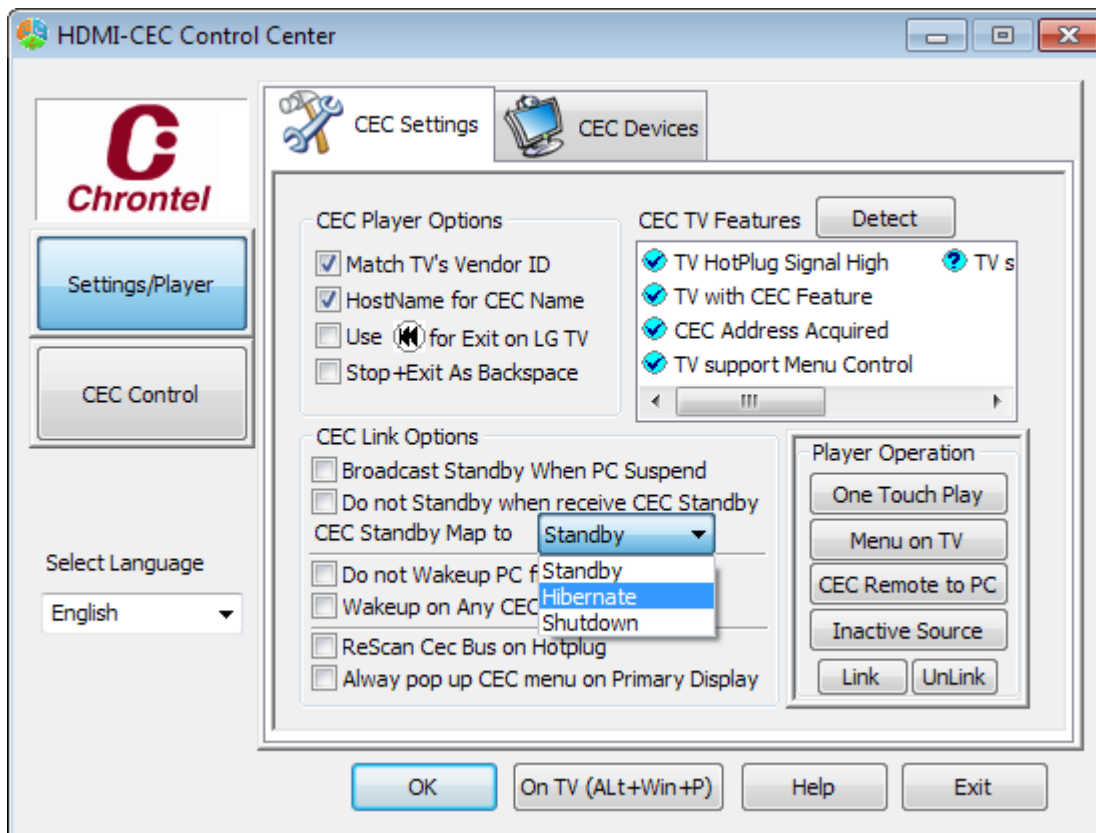
Right click the tray icon can activate the tray context menu.

You can use mouse left click or hot key (ALT+WIN+F9) to bring the application shows in normal.

The CecCenter supports two-way controls between Windows Vista/XP and devices on HDMI network. You can control the layer application running on Windows Vista/XP by using the CEC TV remote, or you can use the PC as an alternate control console to control other HDMI devices.

a) Use CEC TV Remote to control PC player application

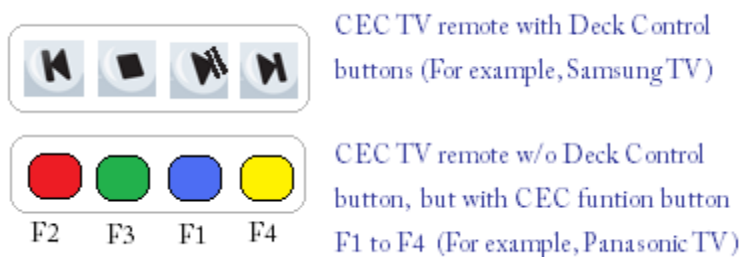
The CEC control center will automatically start after user log in, or you can launch it from “Program Files” menu.



One kind of control is sending control from CEC TV remote to the player program running on PC (Windows Media Center, Windows Media Player, PowerDVD, and WinDVD). The CEC menu can be activated by press “STOP” or “Green” function button twice on TV remote. You can also click the “Menu On” on player pages then use the TV remote to browse the menu.

Note: *You can always use the hot key “WIN+ALT+P” to send CEC One-Touch-Play from PC to CEC TV, so the TV will automatically switch input to PC HDMI.*

The buttons below shows the buttons on CEC TV remote generally used to do playing control for the player application on Windows XP/Vista.



The “STOP” or “F3” button also used to pop the CEC control menu by pressing twice.



Depending on the keys available on the CEC TV remoter controller, the following remote keys can be used to control the player application on PC from CEC TV.

- 1) If the CEC TV doesn't support "CEC menu control" or "Remote Control Passthrough" function, then the CEC TV remote can't be used to control PC Player.
- 2) Some keys on TV Remote may not be sent as CEC controls, then it can't be used to control PC player.


Note: To check which button on your CEC TV remote is available for CEC control, you can use the "Remote Scan" function in "Control Center" page to check which CEC control button is available. You can also click "Detect" on "Settings" page to check "CEC TV Features" for verifying CEC menu-control support.

CEC TV Remote Keys	Function on PC Player application
PLAY/Pause , F1 (Blue)	Play/Pause audio/video/picture "Left Click" in "Mouse Key" mode
STOP, F3(Green)	Stop audio/video playing. Press twice will trigger CEC Menu pop up.
SKIP, F4 (Yellow)	Skip to next song/chapter. Double click becomes Fast Forward. Use as TAB key in browser application (Internet Explorer and Firefox).
PREV, F2 (Red)	Skip back song/chapter. Double click becomes Rewind. Use as Shift-TAB key in browser application (Internet Explorer and Firefox). "Right Click" in "Mouse Key" mode.
RETURN, EXIT	Exit menu, or the "go back" function in Widows Media Center. Quit the "Mouse Key" mode if already entered by menu.
SubMenu, Return(Samsung TV only)	Toggle full screen display for the player application
Menu	Some CEC TV's menu can choose the CEC device and then trigger CEC Menu on PC to pop up.
Cursor keys, OK/SELECT	Move/select menu control. Or move mouse cursor in "Mouse Key" mode.

WIN+ALT+'P'	Trigger One Touch Play, so the TV will set the input to PC HDMI output
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- **Player Application Selecting**



You can launch/select the supported player application from the “Player Program” menu. To close the launched player program, select “ Close Current Program” in “Player Program” menu, then next time menu pop up will show “Player Program” menu selects “Not Specified”. The “Not Specified” item means no specified player program is controlled. The current application runs in foreground will be targeted.

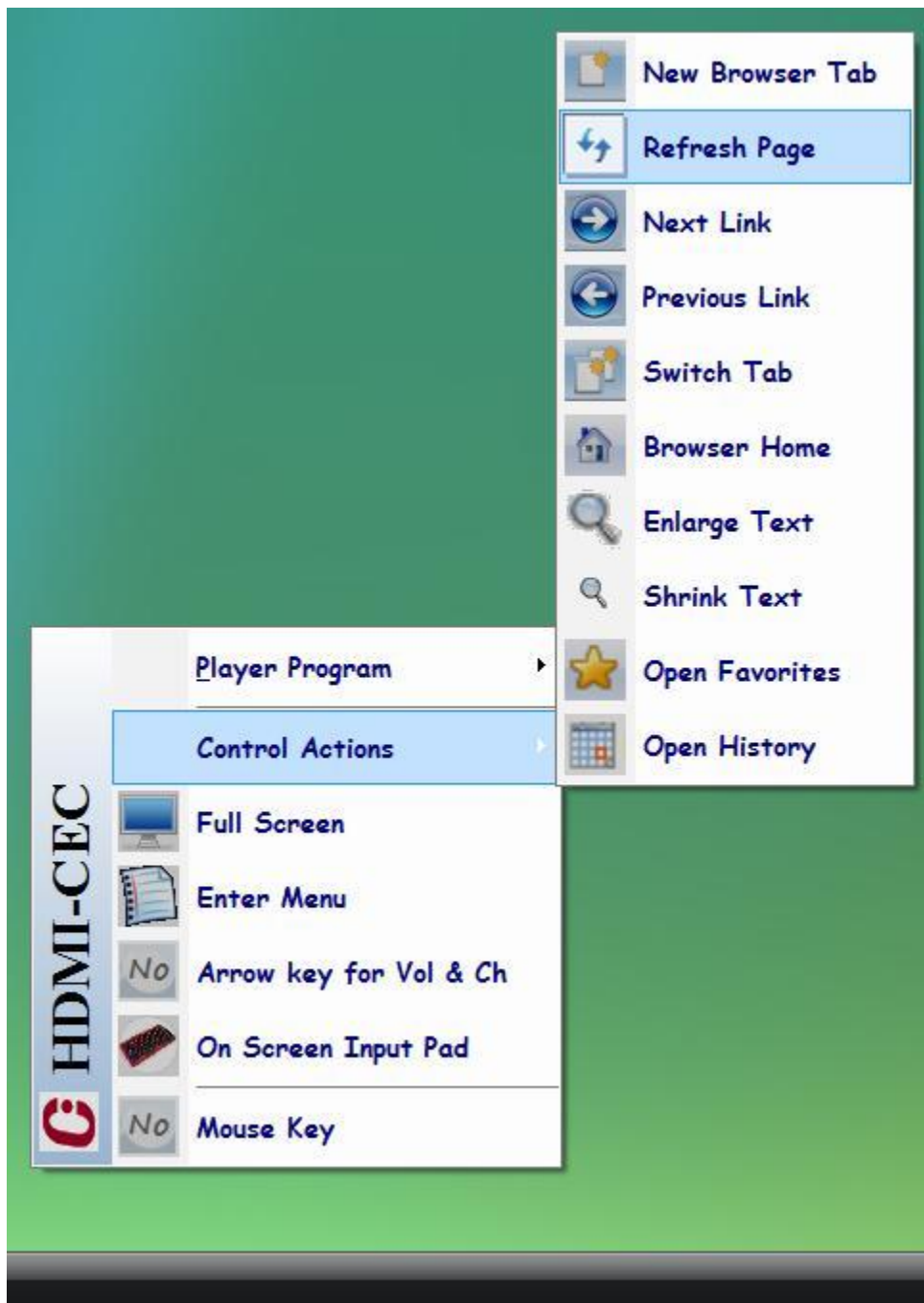
- **Player Application Control**



The player application can be controlled from menu item as above. It can also be controlled from “Deck Control” or function button F1 to F4 on CEC TV remote. The “Full Screen” can toggle the player screen between windowed mode and full screen mode. The “Full Screen” control can also be toggled from the “Setup” button on Panasonic TV remote and “Return” button on Samsung CEC TV.



- **Internet Browser Application Control**

When the chosen application is Microsoft Internet Explorer or Mozilla Firefox, the “Control Actions” menu will automatically change to the browser control operations as below:



The IE and Firefox can be controlled through the control actions. The “Full Screen” can toggle IE and Firefox to fit the whole CEC TV display screen. To input an Internet URL address for IE or Firefox browser, you can do it in three ways:


- 1) Use the favorites menu on IE/Firefox and choose the address
- 2) Use the history menu on IE/Firefox to choose the address

- 3) Go to the address input box by press “” or “” on CEC TV remote (as TAB key), or switch to “Mouse Simulating Mode” and click the address input box. Then use the “On Screen String Input Pad” to input the Internet address.


The TAB key moving can be speedup by quickly press the TAB key on CEC TV remote.

- **Cursor Key for Volume & Channel Control**

Normally the cursor (arrow) buttons on CEC TV remote are used to move cursor. When the


“ **Arrow key for Vol & Ch**” is set to “Yes”, the cursor button changes the function to control volume and channel tuning on player application like Media Center. When the feature is “Yes”, the left and right cursor button are used for volume control, the up and down remote buttons are used to increase/decrease tuner channel number on Media Center PC.

- **Mouse Simulating Mode**

The “ **Mouse Key**” can turn the CEC TV remote arrow keys to mouse cursor movement. The “PLAY” or “F1” key used for mouse LEFT button, and “PREV” or “F2” button is used for mouse RIGHT key button.

In the mouse simulating mode, the cursor key on CEC TV remote moves the mouse cursor, the cursor moving on one direction can speed up by quickly press the same cursor button.

- **On Screen String Input Mode**

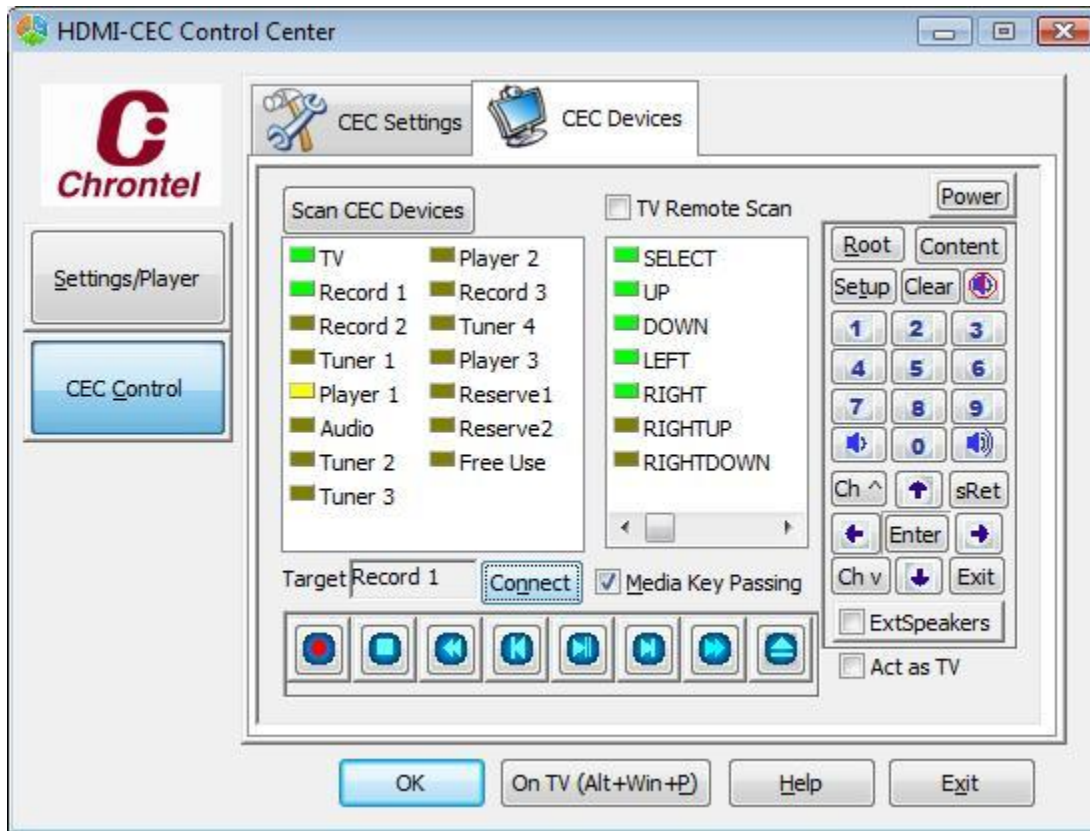
The “ **On Screen Input Pad**” can pop the input pad so you can use the CEC TV remote cursor keys to input string and send it to the active application before the CEC menu pop up. You can also use the “mouse key” to activate an application and then switch to “Input pad” mode to input string.



The “Cap” button is used to toggle upper case and lower case. The “Del” button deletes current char. The “Exit” quit without doing anything. The “Set” button closes the input pad and sends the string to the last activate application. The “SetCr” does same thing as “Set” button but append one more “Return” char to the edited string and sends to last activate application.

b) Control Other HDMI device on the CEC network

The PC can be an alternate control center to control other HDMI devices like DVD player/recorder/camcorder/speakers. Normally the CEC TV remote has limited controls to enable all CEC features on certain CEC device. The “Control Center” page in CecCenter can scan the device, connect the device, enabled the deck control and menu function on the CEC device, so the user can control other CEC device by using the keyboard/mouse on PC.



Double click the device in green icon, then click “Connect”, the display on TV will switch to the selected device, and the Menu control /deck control buttons will control the CEC device. The media keys on PC keyboard will also be directed to control the HDMI CEC device.

When the external HDMI CEC device is connected and switched successfully, the PC keyboard/Mouse or the Media Center PC remote can be used to control the external HDMI CEC device. ***Please make sure NOT uncheck the “Media Key Passing” on the Control Center Page.***

The below lists the PC keys and buttons mapped to HDMI CEC control functions:

PC Keyboard keys, Media Center Remote, or buttons on control center page	External HDMI CEC device
Media Keys on keyboard or Media Center remote	Control external HDMI-CEC device deck control and playing function. The control bar buttons in the control page also can be used.
“Root” button, F8, Home key	Trigger the external HDMI CEC device display its CEC root menu if it supports.
“Setup” button, F7, Ins key	Trigger the external HDMI CEC device display its CEC setup (control) menu if it supports.

Cursor button, Arrow keys	Move the menu item on the external CEC device.
“Enter” button, Enter key	Select CEC menu item
“Ret” button, Backspace key	CEC exit menu function
Escape key	CEC clear menu
‘0’ to ‘9’, ‘.’ keys	CEC menu control or remote keys
F1 to F4 keys	CEC function key F1 to F4

To switch the display back to PC, use the “One Touch Play” button on the player page. Or use the hotkey “WIN+ALT+P”.

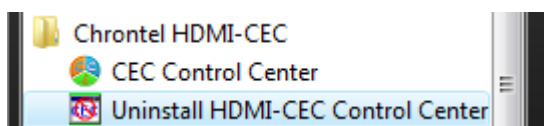
“Remote Scan”

The “Remote Scan” is a function you can use to test/check which CEC user control codes (refer to the table 27 in HDMI 1.3a specifications) are available from your CEC TV and it’s remote. When you check the “Remote Scan” in the control page, all the CEC user code send from CEC TV will not be used to control PC player application or CEC menu, the received CEC key/user_control_code will be shown highlight on the “Remote Scan” tab.

***Note:** Always remember to uncheck “Remote Scan” on the control page after you did the remote scanning, otherwise all the CEC menu and player application control function are blocked!*

3. Uninstall the HDMI-CEC Driver and CecCenter Application

The uninstalling of the driver and application package are simple and directly. You can run the shortcut from “Program File” menu:



Or you can use “Add/Remove Program” in XP Control Panel, the “Program and Features” in Vista Control panel:

