# Push 2 TV Adapter (PTV1000)/Intel Wireless Display User Manual

# NETGEAR®

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It is hereby certified that the Push 2 TV Adapter (PTV1000)/Intel Wireless Display has been suppressed in accordance with the conditions set out in the BMPT-AmtsblVfg 243/1991 and Vfg 46/1992. The operation of some equipment (for example, test transmitters) in accordance with the regulations may, however, be subject to certain restrictions. Please refer to the notes in the operating instructions.

The Federal Office for Telecommunications Approvals has been notified of the placing of this equipment on the market and has been granted the right to test the series for compliance with the regulations.

## Bestätigung des Herstellers/Importeurs

Es wird hiermit bestätigt, daß dasPush 2 TV Adapter (PTV1000)/Intel Wireless Display gemäß der im BMPT-AmtsblVfg 243/1991 und Vfg 46/1992 aufgeführten Bestimmungen entstört ist. Das vorschriftsmäßige Betreiben einiger Geräte (z.B. Testsender) kann jedoch gewissen Beschränkungen unterliegen. Lesen Sie dazu bitte die Anmerkungen in der Betriebsanleitung.

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This equipment is in the Class B category (information equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council for Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential areas. When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling.

## Regulatory Compliance Information

This section includes user requirements for operating this product in accordance with National laws for usage of radio spectrum and operation of radio devices. Failure of the end-user to comply with the applicable requirements may result in unlawful operation and adverse action against the end-user by the applicable National regulatory authority.

**NOTE:** This product's firmware limits operation to only the channels allowed in a particular Region or Country. Therefore, all options described in this user's guide may not be available in your version of the product.

## Europe – EU Declaration of Conformity  $C \in \textcircled{1}$

Marking by the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

EN300 328, EN301 489-17, EN60950

Visit the NETGEAR EU Declarations of Conformity website at:
*http://kb.netgear.com/app/answers/detail/a_id/11621/sno/0*

## FCC Requirements for Operation in the United States

### FCC Information to User

This product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals

### FCC Guidelines for Human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

### FCC Declaration Of Conformity

We NETGEAR, Inc., 4500 Great America Parkway, Santa Clara, CA 95054, declare under our sole responsibility that the model PTV1000 Push 2 TV Adapter (PTV1000)/Intel Wireless Display complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

• This device may not cause harmful interference, and

• This device must accept any interference received, including interference that may cause undesired operation.

### Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
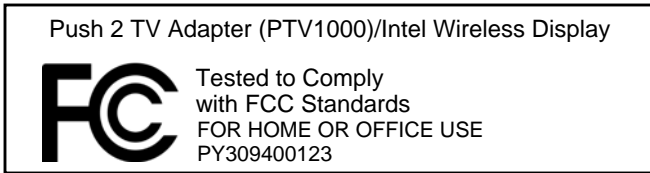
• Reorient or relocate the receiving antenna.

iii

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Push 2 TV Adapter (PTV1000)/Intel Wireless Display

**FC**

Tested to Comply
with FCC Standards
FOR HOME OR OFFICE USE
PY309400123

Modifications made to the product, unless expressly approved by NETGEAR, Inc., could void the user's right to operate the equipment.

## Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Push 2 TV Adapter (PTV1000)/Intel Wireless Display) does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Canada ID: 4054A-09400123

## Product and Publication Details

| | |
|---|---|
| **Model Number:** | PTV1000 |
| **Publication Date:** | November 2009 |
| **Product Family:** | Wireless Adapter |
| **Product Name:** | Push 2 TV Adapter (PTV1000)/Intel Wireless Display |
| **Home or Business Product:** | Home |
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# Contents

## Push 2 TV Adapter (PTV1000)/Intel Wireless Display User Manual

*v1.0, November 2009*

**Appendix A**
**Default Configuration and Technical Specifications**

**Appendix B**
**Related Documents**

# About This Manual

The *NETGEAR® Push 2 TV Adapter (PTV1000)/Intel® Wireless Display User Manual* describes how to install, configure and troubleshoot the Push 2 TV Adapter (PTV1000)/Intel Wireless Display. The information in this manual is intended for readers with intermediate computer and Internet skills.

## Conventions, Formats, and Scope

The conventions, formats, and scope of this manual are described in the following paragraphs:

- **Typographical Conventions**. This manual uses the following typographical conventions::

| | |
|---|---|
| *Italic* | Emphasis, books, CDs, file and server names, extensions |
| **Bold** | User input, IP addresses, GUI screen text |
| Fixed | Command prompt, CLI text, code |
| *italic* | URL links |

- **Formats**. This manual uses the following formats to highlight special messages:

> **Note:** This format is used to highlight information of importance or special interest.

> **Warning:** Ignoring this type of note may result in a malfunction or damage to the equipment.

- **Scope**. This manual is written for the adapter according to these specifications:

| | |
|---|---|
| Product Version | Push 2 TV Adapter (PTV1000)/Intel Wireless Display |
| Manual Publication Date | November 2009 |

For more information about network, Internet, firewall, and VPN technologies, see the links to the NETGEAR website in Appendix B, "Related Documents."

> **Note:** Product updates are available on the NETGEAR, Inc. website at *http://kbserver.netgear.com/products/PTV1000.asp*.

## Revision History

| Part Number | Version Number | Date | Description |
|---|---|---|---|
| 202-10591-01 | 1.0 | December 2009 | Original publication |

# Chapter 1
# Connecting

Intel Wireless Display allows consumers to use their HDTV as a huge, remote screen for their laptop. With Intel Wireless Display, consumers can connect their laptop to their TV and enjoy and share their personal media collections, latest YouTube videos, downloaded or streamed movies, music, or a variety of other Internet content from the comfort of their couch.

Intel Wireless Display requires the following key elements:

*   Push 2 TV adapter. The adapter receives Wi-Fi signals from the laptop, translates the signals into an image, and sends the image to the TV.

*   A laptop computer with Intel Wireless Display installed. This will be used to manage the connection to the TV through the adapter.

## Using Intel Wireless Display

This section provides instructions for using Intel Wireless Display. For help with installation, see the *Push 2 TV Adapter (PTV1000)/Intel® Wireless Display Installation Guide*.

Follow these steps to set up and use Intel Wireless Display. The side-by-side laptop and TV images shown below correspond to each step and occur at the same time. When a laptop or TV screenshot is the same for multiple steps, the image is left blank.

### Step 1: Opening Intel Wireless Display on the Laptop

To open Intel Wireless Display, click the Windows Start icon on the laptop's taskbar. Type **Intel Wireless Display** into the search field. In the search results click **Intel Wireless Display**. If an auto-connect adapter is set, launching the application this way will invoke a connection attempt, if the adapter is discovered. See "What is Auto-Connect" on page 2-13 for more details on auto-connect.

Some laptops may have a button or key that starts Intel Wireless Display. This key will be located in different places depending on the brand of laptop. It is usually found on or around the keyboard. The key will contain a small version of the symbol below.



**Figure 1-1**

If this is the initial set up continue to Step 2. If this is the not the initial set up, it is not necessary to repeat Steps 2 and 3. Proceed to Step 4.

## Step 2: Windows Firewall Security Alert

In the initial set up, a firewall may block Intel Wireless Display and a firewall alert message may be displayed. If this happens, make sure to allow access for both private and public networks. For firewall help, see "Firewall Issues" on page 2-6 or see your firewall's user manual.

## Step 3: Consenting to the License Agreement

After reading and agreeing to the license agreement, click the **I agree to the terms of this license** button and proceed to the next screen. If you do not agree to the terms of the license, click the **I do not agree** button. You will not be able to continue and the application will close.

At this point, the TV status reads **Ready for connection**.

# Step 4: Scanning for Adapters

After opening Intel Wireless Display (or after agreeing to the license), the application begins scanning for available adapters and the status reads **Scanning for adapters**.
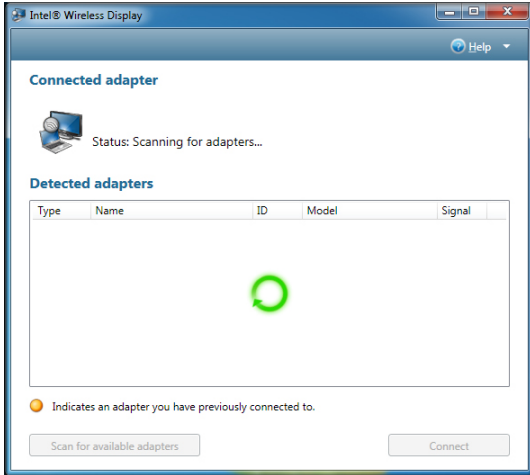


**Figure 1-2**

If the application does not automatically begin scanning, click the **Scan for available adapters** button.

# Step 5: Detected Adapter

After the scan is complete, any adapters in range will be displayed in the **Detected adapters** field. If your adapter is not detected, click the **Scan for available adapters** button. If your adapter still does not appear, see the "There are No Adapters Detected" on page 2-3.

# Detected Adapters Column Information

Headings include: Type, Name, ID, Model, and Signal.

*   **Type**. If this is a first time connection, the circle on the TV icon will be gray. If the connection has been used previously, the icon circle will be orange.

*   **Name**. This refers to the adapter and is initially set by the adapter manufacturer. (If this is the initial set up, you can rename the adapter in a following step. In the example above the adapter has been renamed My Living Room.

- **ID**. If the default name has not been changed, use the ID to distinguish multiple entries and find your adapter.

- **Model**. This is the adapter manufacturer and product model name.

- **Signal**. The number of bars represents signal strength. The scale ranges from one bar (weakest signal) to five bars (strongest signal). The bars turn from green to yellow if the signal strength falls below three bars.

## Step 6: Connecting to the TV

To connect the laptop to the TV, click once on the adapter and then click the **Connect** button. (If there are multiple adapters detected, use the ID to find the adapter.) When connecting, the laptop and TV screens both read **Connecting...** If the laptop status reads **Connecting...** and the TV screen still reads **Ready for Connection**, click the **Cancel connect** button and try connecting again. If this does not work, the connection may be blocked by a firewall. For help allowing the application through a firewall, see "Firewall Issues" on page 2-6. For additional connection help, see "Common Solutions to Many Issues" on page 2-7.

See "What is Auto-Connect" on page 2-13 for information about automatically connecting to an adapter after the first connection has been made.

If this is the initial set up, you will not see Steps 7 and 8. Proceed to "First Time Connection Procedures" on page 1-5.

## Step 7: Connected to the Adapter

After the laptop connects to the adapter, the TV reads **Connected. Please wait**. This message appears for only a few seconds. If the TV reads **Connected. Please Wait** for more than 1 minute, the connection attempt failed. Click the **Disconnect** button and try connecting again.

## Step 8: Ready to Use Intel Wireless Display

After the **Connected. Please Wait**. message disappears, the laptop and TV screen are the same and your adapter is displayed in the **Connected adapter** field. You are now ready to enjoy and share your favorite pictures, videos, and music. If you want to move Intel Wireless Display out of the display area, use the **minimize** button instead of the **close** button.

# First Time Connection Procedures

This section continues from the end of Step 6 in the Using Intel Wireless Display section. Follow the steps below to complete the initial set up.

## Changing the TV Input

Different TV brands have various methods of changing the TV input. Five of the most common processes are covered here. If these options do not cover your TV, consult your TV owner's manual for additional help.

- Some TV remote controls have buttons labeled HDMI, HDMI 1, HDMI 2, A\V, and so on. Push the appropriate button to choose the TV input.

- Other TV remote controls include a button labeled Input, Source, TV, or TV/Video. Press this button to cycle the TV through the input options.

- Pressing the **Input** button on some remote controls results in a list of inputs on the TV screen. Simply select the desired input.

- Input selection happens on some TVs by pressing the **Input** button on the front or side panel of the TV screen. Simply press the button until the desired input is selected.

- Sometimes the inputs are located beneath the regular channels on the TV. Try selecting the lowest TV channel and then going down one channel.

# Step 1: Entering a Security Code

When the Enter security code screen appears, type the security code shown on the TV.



**Figure 1-3**

The security code numbers shown above are for example only! The numbers on your TV will be different. Type the numbers from your TV into the field displayed on your laptop screen:
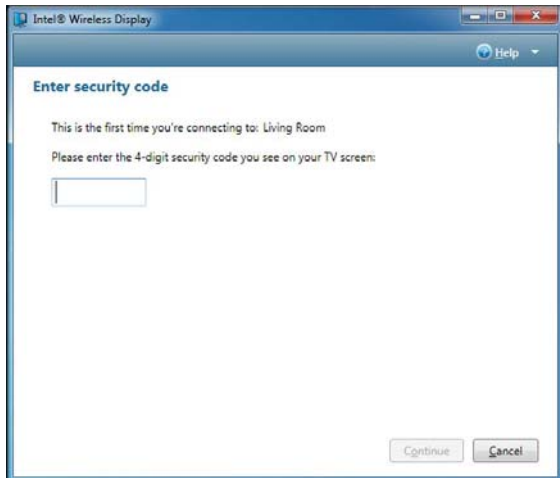


**Figure 1-4**

On your TV, click the **Continue** button after typing the security code. To stop the set up process click **Cancel**. For security code questions, see "Security Code Issues" on page 2-3.

## Step 2: Security Configuration Successful

The Security configuration successful TV message indicates a correct security code entry.

## Step 3: Adapter is Connected

After the laptop connects to the adapter, the TV shows **Connected. Please wait**. This message appears for only a few seconds. If the TV reads **Connected. Please wait** for more than 1 minute, the connection attempt failed. For help, see the .

## Step 4: Rename Adapter

After entering the security code, you may type a new descriptive name for the adapter.
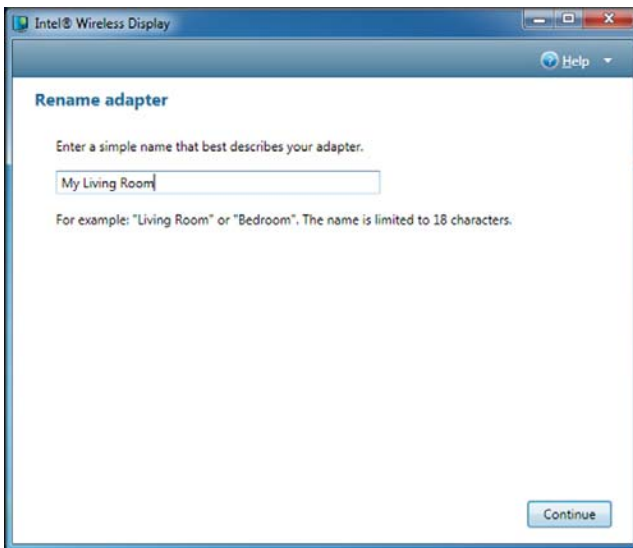


**Figure 1-5**

The example above has the name My Living Room. This new name will be used in all future connections from the laptop to this adapter. If you have more than one adapter, changing the default name makes it easier to identify each adapter. When finished click the **Continue** button.

> **Note:** The valid character set for adapter names are upper and lower case letters A through Z, numbers and punctuation marks, also defined as ASCII characters 32 through 126.

## Step 5: Finishing the Initial Set Up Process

After the **Connected. Please wait** message disappears, the laptop screen and TV screen are the same. Congratulations! You have successfully completed the set up process! Click the **Register** link to register your adapter and receive product support and software updates. When you are done registering your product, click the **Finish** button to exit the set up process.

If the laptop and TV are not displaying the same image, see "Common Solutions to Many Issues" on page 2-7.

If the screen needs adjusting, click the **Adjust your display settings** link. For help, see "How do I Adjust the TV Display Image?" on page 2-11.

## Initial Set Up Troubleshooting

- If the TV display shows areas of black around the edges or appears too big, click the **Adjust your display settings** link. For screen adjustment help, see "How do I Adjust the TV Display Image?" on page 2-11.

- If the TV image is rough, frozen, or delayed, close the application and try connecting again. If this does not help, see "TV Image is Rough, Frozen or Delayed" on page 2-3.

- If the audio is not correct, adjust the volume using the TV remote. If this does not solve the issue, see "How do I Adjust the Audio?" on page 2-11.

- If both the application and the TV screen show that you are connected, but they are not showing the same image, the laptop's firewall may be stopping the connection. For firewall help, see "Firewall Issues" on page 2-6.

- If the TV screen is blank, the application may have learned an incorrect display setting. For help, see "How do I Train My Displays?" on page 2-12. The TV screen may also be blank if the adapter is too warm after being used for a long time. (The adapter is not designed to be connected for more than four hours.) If this is the case, do not use the adapter until it has cooled down.

## Disconnecting

To disconnect from the adapter, click the **Disconnect** button.

# Exiting

To exit Intel Wireless Display, click the **Disconnect** button, wait until the adapter disconnects, and click the **Close Window** button (red x) in the upper right corner of application window. If you click the **Close Window** button while still connected, you are asked if you want to close the connection. Click **Yes** to exit or **No** to cancel exiting. To not view this screen again, select the **Don't ask me next time** check box.

If you would like to turn off Intel My WiFi Technology after closing the application, click the Intel My WiFi Technology icon in the Windows taskbar and choose **Disable Intel My WiFi Technology**.

# Chapter 2 Troubleshooting

Look through the Troubleshooting contents for a topic that comes closest to describing your problem. If you are unable to resolve the problem after reading through the Troubleshooting topics, search the FAQ topics. For additional help, visit *http://kbserver.netgear.com/products/PTV1000.asp.*

## Initial Set Up Problems

### Cords and Cables

The power cord connects to the rear panel of the adapter. Plug the other end of the power cord into an electrical outlet. The HDMI cable connects to the rear panel as shown:
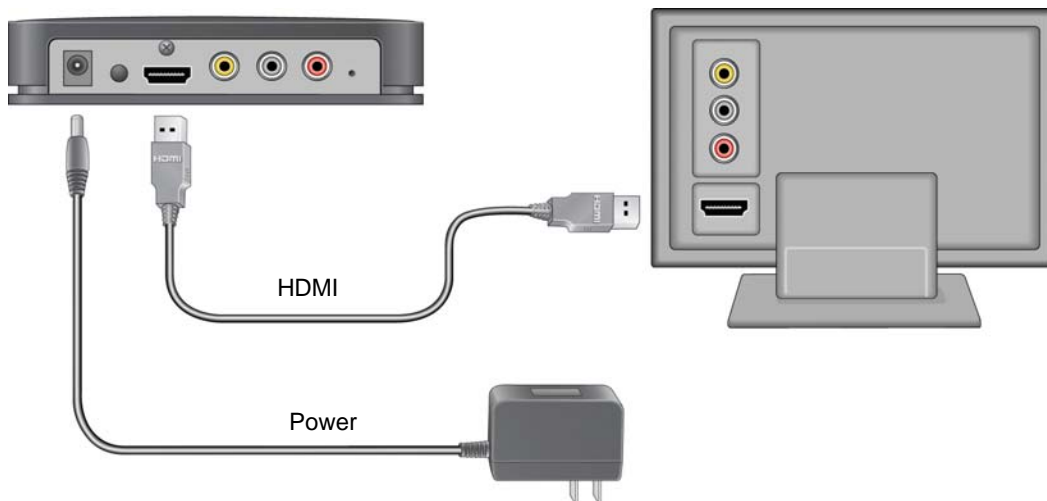


**Figure 2-1**

Only connect either the HDMI cable or the audio/video cable, not both. An HDMI cable will produce higher quality images than an audio/video cable. An HDMI cable is provided in the package with the Push 2 TV adapter. (Audio/video cables can be found at electronics stores.) If you use an audio/video cable, match the connectors to the correct colors on the adapter (yellow,

2-1

white, and red). Connect each cord and cable into their correct inputs on the TV. (See your TV owner's manual if needed.) Once plugged in, make sure the cords and cables are pushed all the way into their correct input positions.

Using the composite video cable (the yellow input on the Audio/Video cable) may cause the TV image to be off-centered. Consult the TV owner's manual for image adjustment.

## On/Off Button

The On/Off button is located on the back of the adapter.



**On/Off**

**Figure 2-2**

If the adapter is not turning on, make sure the power cord is pushed all the way into both the wall outlet and the adapter. If power is not getting to the adapter, there might be a faulty power cord.

## Changing the TV Input

Different TV brands have various methods of changing the TV input. Five of the most common processes are covered here. If these options do not cover your TV, consult your TV owner's manual for additional help.

* Some TV remote controls have buttons labeled HDMI, HDMI 1, HDMI 2, A\V, and so on. Push the appropriate button to choose the TV input.

* Other TV remote controls include a button labeled Input, Source, TV, or TV/Video. Press this button to cycle the TV through the input options.

* Pushing the Input button on some remote controls results in a list of inputs on the TV screen. Simply select the desired input.

* Input selection happens on some TVs by pressing the Input button on the front or side panel of the TV screen. Simply press the button until the desired input is selected.

- Sometimes the inputs are located beneath the regular channels on the TV. Try selecting the lowest TV channel and then go down one channel.

## Adapter Encountered a Problem on Startup

The adapter is experiencing technical difficulties. First turn the adapter off and back on again. If this does not resolve the issue, see "Adapter Does Not Work" on page 2-6.

## There are No Adapters Detected

It may be necessary to scan multiple times. If rescanning does not solve the issue, make sure the adapter is on and the TV is displaying the **To get started** screen.

Also, try moving the laptop or the adapter to different places in the room. The adapter and TV should be in the same room to work properly. If this does not work, see "Common Solutions to Many Issues" on page 2-7.

## Security Code Issues

The phrase, **That security code is not correct..**. in the Security Code section, means the wrong security code has been entered. Make sure to type the code exactly as shown on the TV screen. The security code number will change after an incorrect entry.

If the connection fails right after a correct security code is entered, it is necessary to connect again and retype the security code.

## TV Image is Rough, Frozen or Delayed

To fix a rough, frozen, or delayed image try each of the following steps individually.

- Check the laptop's CPU status. Right-click on the taskbar and choose **Start Task Manager**. In the Task Manager window click the Processes tab. Under the CPU heading, check **WiDiApp.exe**. If the **WiDiApp.exe** CPU number is 80 or above, save documents, and close unused applications.

- Check the network link speed. Right click on the taskbar and choose **Start Task Manager**. In the Task Manager window click the Networking tab. The link speed should be higher than 36 Mbps. If not, try moving the adapter to a different position that is farther away from other electronic equipment, or closer to the laptop. If this does not help, try disconnecting the adapter and connecting again.

- Change the channel on the wireless router. See the router's manual for channel changing instructions. (If you are not using a router, see the next solution.)

- If you are not connected to a router change the wireless channel. Open Intel My WiFi Utility by clicking on the **Intel My WiFi Technology** icon in the taskbar and selecting **Open Intel My WiFi Utility**. Use the help document in Intel My WiFi Utility and search for **Access Points**. In the results, click **Advanced Settings** and follow the instructions.

## Your Video Mode has Changed...

The video display resolution may change while using Intel Wireless Display. This can happen regardless of whether you change the display resolution manually or it is changed by another application. On the **Your Video Mode has Changed...** screen, click the **Restore settings and resume connection** button to allow the application to automatically reset the display to the correct settings. Choosing **Keep settings and close connection** results in the display session ending. The supported video display settings are: Screen resolution (in landscape or portrait mode) = 1280 x 720, 1280 x 768, or 1280 x 800. Color depth = 32-bit. Intel Wireless Display does not support extended or remote display modes.

## Unsupported Audio Mode

The laptop must have specific audio settings for Intel Wireless Display to work correctly. Adjusting these settings to a unsupported audio mode is not recommended. The **Unsupported audio mode** screen appears if the audio display settings need adjusting. To restore the audio settings to the correct values:

1. In the Unsupported audio mode window click the **Adjust audio settings** button.

2. In the Sound window, double click **Speakers**.

3. On the Advanced tab choose either **16 bit, 44100 Hz (CD Quality)** or **48000 Hz (DVD Quality)** and click **OK**. (Unpredictable results may occur if different audio modes are used.)

## Intel Wireless Display Requires a Different Security Profile

## Security Profile is Incorrect

The wireless security settings have been reconfigured using the Intel My WiFi Utility. To allow the application to automatically choose the correct profile:

1. Right-click the **Intel My WiFi Technology** icon on right end of the taskbar.

2. Select **Disable Intel My WiFi Technology**.

**3.** Click the **Scan for available adapters** button on Intel Wireless Display. While scanning, the application automatically enables Intel My WiFi Technology and selects the correct security profile.

## Manually Setting the Correct Security Profile

If the steps above do not automatically select the correct security profile, click the Intel My WiFi Utility icon in the taskbar and select **Open Intel My WiFi Utility**. Use the help document in Intel My WiFi Utility and search for **Security**. In the results, click **Security Settings** and follow the instructions.

## Your Wireless is Off

Normally, Wi-Fi allows the laptop to connect to the router for wireless Internet access. A new feature included with Intel Wireless Display uses Wi-Fi to wirelessly connect the laptop to the TV through the adapter.

For this new Wi-Fi connection to work correctly, three switches must be turned on. The first switch is the hardware switch. It is usually located around the edge of the laptop or above the keyboard. It may be identified by a pole with two half circles on each side. Check the laptop manual for the exact location. Turn the switch on and scan again.

When needed, the other two switches are automatically turned on by the application. If it is still impossible to connect because the application is not automatically turning the other switches on, see "Common Solutions to Many Issues" on page 2-7.

## Intel My WiFi Technology is Disabled

Intel My WiFi Technology allows the laptop to become a Wi-Fi access point for other laptops. If the laptop screen reads **Intel My WiFi Technology is disabled**, click the **Scan for available adapters** button to automatically enable Intel My WiFi Technology. If the Wi-Fi is already on, Intel Wireless Display will automatically enable Intel My WiFi Technology. If the Wi-Fi is off, the application asks if you would like to turn on Intel My WiFi Technology. Select **Yes** and scan again. If this does not work, see "Common Solutions to Many Issues" on page 2-7.

## Unsupported Laptop Hardware

For Intel Wireless Display to run, Intel My WiFi Technology must be installed, and the laptop must have an Intel Core i7, i5, or i3 processor with Intel Graphics Media Accelerator HD.

## Firewall Issues

Sometimes the laptop's firewall will block the Wi-Fi connection between the laptop and the adapter. If this is the case, the laptop's firewall settings must be changed. The following instructions apply to a Microsoft Windows Firewall. To allow Intel Wireless Display through a different firewall, see that firewall's product manual. There may be inconsistent results allowing the application through a firewall that is not a Microsoft Windows firewall.

1. Click on the Windows Start icon and type in the search field **Allow a program through a Windows Firewall**.

2. In the search results, click **Allow a program through Windows Firewall**.

3. In the firewall control panel, make sure the **Name**, **Private**, and **Public** check boxes are selected for both **WiDiApp** and **Wireless PAN DHCP Server**.

4. When done, click **OK** and connect again.

## Windows Power Saving

Microsoft Windows software may be set to dim the display or put the computer to sleep after a period of time. To avoid the laptop's screen dimming while using Intel Wireless Display, change the laptop's power settings by following these steps:

1. Click the Windows Start icon.

2. Type **Power Options** in the search field and click the **Power Options** result.

3. Under the Select a Power Plan heading, make sure the **Balanced** radio button is selected.

4. Click **Change Plan Settings** next to the current plan.

5. Change the **Dim the display**, **Turn of the display**, and **Put the computer to sleep** options under either **On Battery** and **Plugged in** headings to a longer time setting.

## Could Not Obtain a Network Address

To correct this issue, try closing Intel Wireless Display and restarting the laptop. The laptop's firewall could be blocking the adapter's request for a network address. To allow the address request through a firewall, see "Firewall Issues" on page 2-6. If this does not resolve the issue, see "Common Solutions to Many Issues" on page 2-7.

## Adapter Does Not Work

If the adapter is not working, try the solutions found in "Common Solutions to Many Issues" on page 2-7 before following the instructions below.

If the adapter will not turn on, or it is impossible to update the firmware, perform a factory reset.
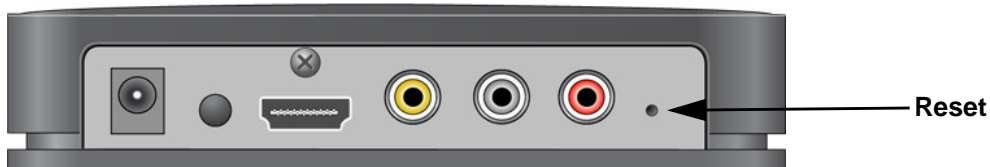


**Figure 2-3**

Press and hold the Reset button while pushing the power button off and then on. Continue to hold the Reset button down until the adapter LED begins flashing. Try connecting again. After the factory reset, the adapter connection settings will be erased and the firmware will need to be updated.

## Checking the Access Point Frequency

Intel Wireless Display only works at 2.4GHz on both the PAN connection to the TV and LAN connection to the Internet via a home wireless router. The Wi-Fi standard uses both 2.4GHz and 5GHz frequency bands. Most home wireless routers are only 2.4GHz and have no interoperability issue with Intel Wireless Display. Some newer 802.11n home wireless routers are starting to include support for both frequency bands. When using Intel Wireless Display, while also connected to the Internet via your wireless router, make sure the connection to the router is set to 2.4GHz.

After making the changes required, it may be necessary to disable/enable Intel My WiFi Technology using the following steps:

1.  Right-click the **Intel My WiFi Technology** icon on right end of the taskbar.

2.  Select **Disable Intel My WiFi Technology**.

3.  Click the **Scan for available adapters** button on Intel Wireless Display. While scanning, the application automatically enables Intel My WiFi Technology.

## Common Solutions to Many Issues

This section describes five procedures to try if the other troubleshooting sections have not helped. Try each solution one at a time starting with Step 1. For additional help, visit *http://kbserver.netgear.com/products/PTV1000.asp.*

1.  Close Intel Wireless Display, reopen the application, scan for available adapters, and connect.

**2.** Shut down the laptop, restart, open the application, scan for available adapters, and connect.

**3.** Reset the adapter, scan for available adapters, and connect. For help resetting the adapter, see "How do I Reset the Adapter?" on page 2-9.

**4.** Check the laptop's firewall settings. A firewall may be blocking the application. For firewall help, see "Firewall Issues" on page 2-6.

**5.** Try updating the firmware. For firmware update instructions, see "How do I Update the Firmware?" on page 2-9.

## Known Issues

This section lists known Intel Wireless Display issues and workarounds.

- After disconnecting from the application, it may be necessary to manually enable the laptop's sound. For audio help see "How do I Adjust the Audio?" on page 2-11.

- The application will usually not work if it is located in the Windows startup group.

- Wait until Microsoft Windows has fully booted before opening Intel Wireless Display.

- If the media application in use can only be set to mute or unmute both the laptop and TV at the same time, it is recommended to use a different media application.

- Pressing **Control** + **Alt** + **Delete** on the laptop might freeze the TV image.

- For analog TVs, the adapter does not support NTSC (National Television System Committee) format 4.43 variations on the composite interface. See the TV owner's manual for NTSC variation information.

- Changing the wireless LAN or connection settings when Intel Wireless Display is connected may cause momentary disruption of or end the connection.

## FAQs

Look through the FAQ contents for a topic that comes closest to describing your problem. If you are unable to resolve the problem after reading through the FAQ topics, search the Troubleshooting topics. For additional help, visit
*http://kbserver.netgear.com/products/PTV1000.asp*

# How do I Change the Adapter Display Language

To change the adapter display language, use the recessed button (7) while the adapter is on the ready screen shown.

• A short press (less than half a second) will step forward through the languages.

• A long press (more than half but less than one and a half seconds) will step backward through the languages.

> ⚠ **Warning:** Pressing the button for more than 5 seconds will clear the security profiles saved in the adapter, which will require you to repeat the first-time connection procedure.

The language change will immediately be reflected on your TV screen.

# How do I Update the Firmware?

If the firmware needs updating, there will be an **Update available** button on the Adapter Properties page. (The Properties button is only available if you are currently connected to an adapter.) Click the **Update available** button to begin the update process. Once the update begins the TV screen will read **Updating adapter. Please wait**. After the procedure is complete, the adapter automatically disconnects from the laptop. Scan again to connect to the adapter.

# How do I Reset the Application Settings?

Resetting reverts the application back to its out-of-the-box state. To reset, click **Help** and select **About**. Click **Reset Settings**. To proceed with the reset, click the **Yes** button on the Reset Intel Wireless Display settings page.

After starting Intel Wireless Display, all detected adapters will be displayed as not previously connected. However, it will not be necessary to enter a security code since the security settings are stored in the adapter.

# How do I Reset the Adapter?

If the adapter is not responding correctly, and resetting the application has not helped, try restarting the adapter. Push the power button once to turn the adapter off, and push it again to turn it on. After the **To get started** screen appears on the TV, rescan before trying to connect.

# How do I Clear the Adapter Memory?

Clearing the adapter's memory erases security settings and the user modified adapter name. This is helpful if you choose to sell your adapter, or if a neighbor came to your house and connected to your adapter, but now you do not want them to accidentally connect from their house.

To clear the adapter's memory, press and hold the Reset button on the back of the adapter for more than 5 seconds or until the LED starts blinking. Clearing the adapter memory requires you to enter the security code displayed on the TV in order to connect again.

# Can I Close the Laptop Lid and Still Use Intel Wireless Display?

Closing the lid of the laptop may put the system to sleep or turn it off, and as a result, end the Intel Wireless Display session. To close the lid and continue using the application:

1. Click the Windows Start icon and type **Closing the lid** in the search field.

2. Click the **Change what closing the lid does** link.

3. Next to the When I close the lid heading and under both the On battery and Plugged in headings, select **Do nothin**g.

4. Click the **Save changes** button.

# What are Adapter Properties?

### Adapter Properties Definitions

- **Adapter Name**. This is either the default factory name or the name you choose in the initial set up process. It is okay to change the name at anytime. Just type a new name. If the default "Name" is deleted and the field is left empty, the application will restore the name to the previous value. NOTE: The valid character set for adapter names are upper and lower case letters A through Z, numbers and punctuation marks, also defined as ASCII characters 32 through 126.

- **Network address**. This is the IP (Internet Protocol) address.

- **Adapter ID**. A preset and unchangeable number set by the adapter.

- **Adapter Model**. This is the model name of the adapter currently connected.

- **Adapter firmware version**. The version of the application. If a Web update is required, click the **Update Available** button.

- **Show the cursor**. By default, Intel Wireless Display enables the cursor to be shown on the TV. To make the mouse cursor disappear on the TV, clear this check box. Resetting Intel Wireless Display will return the cursor to its default setting.

- **Automatically connect**. Allows this adapter to be set as the auto-connect adapter. See "What is Auto-Connect" on page 2-13 for more details.

- **Register**. Register your adapter to obtain support and get the latest software updates.

## Audio/Visual Tuning

If the laptop display is cropped or not filling the entire TV screen, see "How do I Adjust the TV Display Image?" on page 2-11. To troubleshoot audio problems, see "How do I Adjust the Audio?" on page 2-11.

## Why does My Laptop's Color Look Different on My TV?

Sometimes colors on the TV screen and the laptop may be a slightly different. To match the colors, change the TV settings until the screens are the same. (See your TV manual for color adjustment help.)

## How do I Adjust the TV Display Image?

If the laptop display is cropped or not filling the entire TV screen, the image needs to be adjusted. To adjust the TV image click the **Properties** button. In the Adapter properties page click the **Resize TV picture** button. On the next page, click the plus icon to increase the size, or the minus icon to decrease the size. When the image is correct, click **OK** to return to the previous page. If the image still does not fit the entire TV screen, try adjusting the TV settings.

## How do I Adjust the Audio?

Once a connection begins, the laptop's sound is muted. When the connection ends, the laptop's sound is enabled.

## Sample Audio Testing

When connected, clicking the **Test audio** button on the Adapter properties page takes you to an audio test page. If you do not hear audio after clicking the **Play sample** button, increase the volume on the TV speakers by using the TV remote.

# Global Volume Control

Usually, the laptop's sound is muted after connecting to Intel Wireless Display. Sometimes, however, other applications may automatically turn on the laptop's sound. This will result in hearing the same sound from the laptop before hearing it from the TV. To turn the volume off, click the little speaker icon located on the far right of the taskbar. This will bring up the Global Volume Control pop up window. Click the speaker icon just below the slider to mute the laptop's sound. If the laptop's sound keeps coming back on, try turning the volume all the way down using the slider in the pop up window instead of muting. Moving the volume slider will automatically unmute the laptop's speakers.

# Windows Audio Mixer

Attempting to change audio settings in the Windows Audio Mixer while using the application, may result in a connection disruption. (The Windows Audio Mixer is found by clicking the **Mixer** link in the Global Volume Control.) Usually the connection will automatically reestablish. The TV image may flicker during this time. If the connection does not automatically reestablish, manually reconnect.

# Changing the Sound using the Windows Control Panel

To bring up the audio device window go to the start menu, type **audio device** in the search field, and press the **Enter** key. On the Playback tab, make sure the green circle with a check mark is on local speakers.

# How do I Train My Displays?

### Training Two Displays

While using a laptop and a TV, sometimes the laptop's display settings may be inadvertently changed. This may result in the TV showing a blank screen after connecting. If this is the case, simultaneously push the **Windows** button and the letter **P** on the keyboard. Select **Duplicate** in the popup window to make both laptop and TV screens the same.

### Training Three Displays

While using a laptop, a TV, and an external monitor sometimes the laptop's display settings may be inadvertently changed. This may result in the TV showing a blank screen after connecting. The laptop is capable of only displaying on two screens at the same time including its own. The TV screen needs to be one of the two selected screens.

To select which screens to use:

1. Simultaneously push the **Windows** button and the letter **P** on the keyboard. Select **Duplicate** in the popup window. If your laptop screen is not duplicated on your TV, proceed to the next step.

2. Click the Windows Start icon.

3. In the search field, type **Adjust screen resolution** and press **Enter.**

4. Next to the heading Display, select the option other than Multiple Monitors.

5. Next to the heading Multiple displays, choose either one of the duplicate combinations.

6. To try the new settings, click **Apply**.

7. If the laptop screen is showing on the desired combination of displays, click the **Keep changes** button in the pop up dialog box then click **OK**. Otherwise, click **Revert** and go back to Step 4 and choose the other combination in Step 5.

## Can I play DVDs with Intel Wireless Display?

Many DVDs and Blu-ray discs include copy protection mechanisms which prevent playback over unprotected outputs. Intel Wireless Display is currently an unprotected output; and as a result, many DVDs and Blu-ray Discs will not work. However, personal content (pictures, home movies, etc) that you have burned to DVDs and Blu-ray Discs are not protected in the same manner and will work with Intel Wireless Display.

## How do I Contact Customer Support?

Contact your computer or adapter manufacturer to get support for your specific product.

Visit *http://www.intel.com/go/wirelessdisplay* to access general Intel Wireless Display support forums.

## What is Auto-Connect

This is a feature which enables you to set an adapter as your default adapter for an automatic connection. This action is somewhat similar to selecting a default printer. Only one adapter at a time can be set as the auto-connect adapter. In addition, the auto-connect feature can only be enabled after you have successfully connected the first time and completed the security configuration. Auto-connect is only an attempt to connect, and it may fail in the same ways that a manual connection could fail.

There are two instances where the auto-connect is attempted.

1. If the auto-connect adapter is discovered after initial launch, a connection attempt will be made

2. If the auto-connect adapter is already in the list when the application is relaunched including pressing the bezel button, a connection attempt will be made. In this case, if a connection is made it will typically be faster than in case 1, because the application is already running and a new scan is not performed.

There are two ways to select the auto-connect adapter.

1. On the Adapter properties page, there is an **Automatically connect to this adapter** check box. If this check box is selected, this adapter will be chosen as the auto-connect adapter. Note that any other adapter that was previously selected for auto-connect will no longer have its auto-connect property set.

2. In the **Detected adapters** list on the Intel Wireless Display home screen, right clicking on an adapter that has previously been connected shows an Auto-connect property in the context menu (popup menu). A check indicates if this adapter is currently set as the auto-connect adapter or not. Selecting that menu item will change the auto-connect state of the adapter.

# Appendix A
# Default Configuration and Technical Specifications

This appendix describes the factory default settings, supported media file formats, and technical specifications for the adapter.

## Restoring Factory Settings

To restore factory configuration, power off the unit from the rear power switch, then power on the unit. Wait for the LED to blink orange, then press and hold the Restore Factory Settings button.

The following table lists the default settings of your adapter.

**Table A-1. Default Configuration Settings**

| Feature | Description |
|---------|-------------|
|         |             |
|         |             |
|         |             |
|         |             |

## Technical Specifications

**Table A-2. Technical Specifications**

| Feature | Description |
|---------|-------------|
| Compatible laptops | Intel Core i3, i5, or i7 processor<br>Intel Graphics Media Accelerator HD graphics adapter<br>Intel WiFi Link wireless networking adapter<br>Microsoft Windows 7 operating system<br>Intel Wireless Display software |
| Network interface | IEEE 802.11 b/g wireless |

**Table A-2.  Technical Specifications (continued)**

| Feature | Description |
|---|---|
| Power | 12V/1A |
| Physical dimensions (d x w x h) | 106 mm x 138 mm x 32 mm |
| Weight | 180 g |
| Operating temperature | 0 to 40º C (32 to 105º F) |
| Electromagnetic compliance | CE mark, Commercial; FCC Part 15, Class B; EN 55 022 (CISPR 22) Class B, C-Tick |
| Power adapter safety approval | CE mark, Commercial UListed (UL 1950), C-Tick |

# Appendix B
# Related Documents

This appendix provides links to reference documents you can use to gain a more complete understanding of the technologies used in your NETGEAR product.

| Document | Link |
|---|---|
| Windows XP and Vista Wireless Configuration Utilities | *http://documentation.netgear.com/reference/enu/winzerocfg/index.htm* |
| Internet Networking and TCP/IP Addressing | *http://documentation.netgear.com/reference/enu/tcpip/index.htm* |
| Wireless Communications | *http://documentation.netgear.com/reference/enu/wireless/index.htm* |
| Preparing a Computer for Network Access | *http://documentation.netgear.com/reference/enu/wsdhcp/index.htm* |
| Virtual Private Networking (VPN) | *http://documentation.netgear.com/reference/enu/vpn/index.htm* |
| Glossary | *http://documentation.netgear.com/reference/enu/glossary/index.htm* |