Wireless-N Internet Home Monitoring Camera

User Guide
Model: WVC80N
About This Guide

Icon Descriptions

While reading through the User Guide you may see various icons that call attention to specific items. Below is a description of these icons:

**NOTE:** This check mark indicates that there is a note of interest and is something that you should pay special attention to while using the product.

**WARNING:** This exclamation point indicates that there is a caution or warning and it is something that could damage your property or product.

**WEB:** This globe icon indicates a noteworthy website address or e-mail address.

Online Resources

Website addresses in this document are listed without http:// in front of the address because most current web browsers do not require it. If you use an older web browser, you may have to add http:// in front of the web address.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linksys</td>
<td><a href="http://www.linksysbycisco.com">www.linksysbycisco.com</a></td>
</tr>
<tr>
<td>Linksys International</td>
<td><a href="http://www.linksysbycisco.com/international">www.linksysbycisco.com/international</a></td>
</tr>
<tr>
<td>Glossary</td>
<td><a href="http://www.linksysbycisco.com/glossary">www.linksysbycisco.com/glossary</a></td>
</tr>
</tbody>
</table>

Copyright and Trademarks

© 2009 Cisco Systems, Inc. All rights reserved. Cisco, the Cisco logo, and Linksys are trademarks or registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries. All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company.
# Table of Contents

**Chapter 1: Product Overview**  
Front Panel .................................................. 4  
Bottom Panel .............................................. 4  
Back Panel .................................................. 4  

**Chapter 2: Installing and Using the Camera Utility**  
Overview .................................................. 5  
Installing the Camera Utility .......................... 5  
Using the Camera Utility for the First Time ......... 6  
Using the Camera Utility ............................... 6  
LiveView .................................................. 6  
View Recordings .......................................... 8  
Setup ...................................................... 9  

**Chapter 3: Advanced Configuration with the Web-based Utility**  
Overview .................................................. 12  
How to Access the Web-based Utility .......... 12  
View Video ............................................. 12  
Setup > Basic ........................................... 14  
Setup > Image ........................................... 15  
Setup > Administration .............................. 16  
Setup > Users .......................................... 17  
Setup > Options ......................................... 17  
Setup > Motion Detection ......................... 19  
Setup > Recording ..................................... 20  
Setup > Status ......................................... 21  
Help ..................................................... 22  

**Appendix A: Troubleshooting**  
Common Problems and Solutions ............... 23  
Frequently Asked Questions ...................... 24  

**Appendix B: Wireless Security Checklist**  
General Network Security Guidelines .......... 26  
Additional Security Tips .......................... 26  

**Appendix C: Specifications** ......................... 27  

**Appendix D: Common Gateway Interface (CGI) Commands**  
Overview .................................................. 28  
User-Level CGI Commands (User level privilege) .. 28  
Admin-Level CGI Commands (Administrator level privilege) . 32  
Base-64 Encoder/Decoder Sample Codes ......... 41  

**Appendix E: Warranty Information** ............ 44  
Limited Warranty ....................................... 44
## Appendix F: Regulatory Information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC Statement</td>
<td>46</td>
</tr>
<tr>
<td>FCC Radiation Exposure Statement</td>
<td>46</td>
</tr>
<tr>
<td>Safety Notices</td>
<td>46</td>
</tr>
<tr>
<td>Industry Canada Statement</td>
<td>47</td>
</tr>
<tr>
<td>Avis d'Industrie Canada.</td>
<td>47</td>
</tr>
<tr>
<td>Wireless Disclaimer</td>
<td>47</td>
</tr>
<tr>
<td>Avis de non-responsabilité concernant les appareils sans fil</td>
<td>47</td>
</tr>
</tbody>
</table>

## Appendix G: Software End User License Agreement

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Products</td>
<td>52</td>
</tr>
<tr>
<td>Software Licenses</td>
<td>52</td>
</tr>
</tbody>
</table>
Chapter 1: Product Overview

Thank you for choosing the Linksys Wireless-N Internet Home Monitoring Camera. The Camera sends live video through the Internet to a web browser anywhere in the world! This compact, self-contained unit lets you keep an eye on your home, your kids, your workplace—whatever’s important to you.

Front Panel

- **Power LED** This LED lights up when the Camera is powered on. It flashes while the Camera is booting up and remains lit when the Camera is ready for use.
- **Microphone** The microphone is used to record ambient sound.

Bottom Panel

- **Reset** This button is used to reset the Camera. To reset, insert an object with a small tip, such as a pen, press the button until you feel it click, then hold for 10 seconds.

WARNING: Resetting the Camera will erase all of your settings, such as encryption information, and replace them with the factory defaults. Do not reset the Camera if you want to retain your settings.

NOTE: The Camera’s factory default settings are.
user name: **admin**
password: **admin**

Back Panel

**Wi-Fi Protected Setup™** If you have an Access Point that supports Wi-Fi Protected Setup™, then you can use this button to automatically configure the Camera’s wireless security for your wireless network.

- **On/Off Button** Press the On/Off button to power the device on or off.
- **Power** The Power port is where you connect the power adapter.
- **Ethernet** The Ethernet port is where you connect the Ethernet network cable.

NOTE: To learn how to set up the Camera, please read the Camera’s Quick Installation Guide.
Chapter 2: Installing and Using the Camera Utility

Overview
This chapter will instruct you on how to install and use the Camera Utility. The Utility allows you to easily view and record the Camera’s video.

If another Internet Camera Utility is already installed, you should uninstall it before installing this Camera Utility.

Installing the Camera Utility
1. Insert the Setup CD-ROM into your CD-ROM drive.
2. The Setup Wizard starts. Click Install Camera Utility.
3. The Setup Wizard begins to install the Camera Utility. Click Next.
4. The Choose Destination screen appears. Click Browse and choose the folder where you would like the Utility installed. Click Next.
5. The Ready to Install screen appears. Click Next.
6. The Setup Wizard installs the Camera Utility. The progress of the installation is displayed.
7. When the Setup Wizard informs you that the installation is complete, click Finish. The Camera Utility starts automatically.

Go to the “Using the Camera Utility for the First Time” section.
Installing and Using the Camera Utility

Chapter 2

Using the Camera Utility for the First Time

The Camera Utility starts up automatically after the Utility is successfully installed. To set up your first camera:

1. Click the **Setup** icon in the upper left corner of the window.

2. The Cameras tab is displayed. Select your Camera from the **Automatically add cameras** list and click **Add to my list**. If your Camera is not listed, click **Refresh** to update the list, or add the Camera manually.

   To manually add a Camera, go to the **Address** field and enter either its web address or its IP address, or to access a camera on the WAN, enter its IP address with port number. Then click **Add to my list**.

3. Complete the **Port Number** and **Stream Type** fields. If you want to access the Camera as an administrator, also complete the **User Name** and **Password** fields. (You may access the Camera without completing these fields if you are logged in as a guest.)

4. The Camera is installed. It appears in the **My camera list** section, and its video output is displayed in **Camera details**.

   To learn how to use the Camera Utility, go to “Using the Camera Utility.”

   Advanced users: If you want to use the Camera’s Web-based Utility, go to “Chapter 3: Advanced Configuration with the Web-Based Utility.”

Using the Camera Utility

After the Camera Utility is installed, its icon is displayed on the Desktop and in the System Tray of the Taskbar. To open the Camera Utility, use either icon as follows:

- Double-click the icon on your desktop
- Right-click the icon in the system tray, then click **Linksys by Cisco Wireless-N Internet Home Monitoring Camera**.

When you are finished using the Camera Utility, close the Utility window by clicking the **X** button in the upper-right corner. The Utility will continue to run in the background, and any scheduled recordings will proceed as planned.

To exit the Utility completely, right-click the Utility’s system tray icon and select **Exit**.

Menu Icons

The utility has three menu icons in the upper left corner: **LiveView**, **View Recordings**, and **Setup**.

LiveView

When you first open the Utility, the **LiveView** window is displayed. The **LiveView** window can also be accessed by clicking the **LiveView** icon. The **LiveView** window contains the viewing area, as well as the **View Layout** and **Controls** sections.
Chapter 2

Installing and Using the Camera Utility

Viewing Area

The viewing area takes up most of the LiveView window. The viewing area can have four different layouts, with video windows for one, four, six, or nine Cameras. The layout is selected using the video layout controls described in “Video Layout” below.

Multiple-Camera Layouts

In a multiple-Camera layout, one of the video windows is always outlined in green. This indicates the currently selected Camera. The Controls section can be used to perform various functions on the video from this Camera. For information on the video control buttons, refer to “Controls” below.

The name of each Camera is overlaid on that Camera’s video window. To specify a different Camera than the selected Camera, click on that Camera’s video window.

Each Camera can be displayed using any of the video windows in the layout. To move a Camera from one video window to another, click and drag the Camera’s video window to another video window. The two Cameras originally assigned to each of the two windows will then swap places. This is especially useful for the six-Camera layout, which has one large video window and five smaller ones. A Camera assigned to one of the smaller windows can be quickly enlarged by dragging it to the large window.

To quickly view any Camera’s video at full scale, double-click that Camera’s video window. The layout will change to a single-camera display of the selected Camera’s video.

View Layout

This section of the LiveView window lets you change the layout of the viewing area. To select a particular layout, click the layout’s icon.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Icon 1" /></td>
<td>Click this icon to display video from one Camera only.</td>
</tr>
<tr>
<td><img src="image2.png" alt="Icon 2" /></td>
<td>Click this icon to display video from up to four Cameras. The video windows are all of equal size.</td>
</tr>
<tr>
<td><img src="image3.png" alt="Icon 3" /></td>
<td>Click this icon to display video from up to six Cameras, with one large video window and five small video windows.</td>
</tr>
<tr>
<td><img src="image4.png" alt="Icon 4" /></td>
<td>Click this icon to display video from up to nine Cameras. The video windows are all of equal size.</td>
</tr>
</tbody>
</table>
Controls

The video controls are located along the right edge of the LiveView window in the Controls section.

These controls act upon the selected Camera as explained below.

<table>
<thead>
<tr>
<th>Control</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Eye icon" /></td>
<td><strong>View</strong> Click this button to view the current video.</td>
</tr>
<tr>
<td><img src="image2" alt="Camera icon" /></td>
<td><strong>Instant Record</strong> Click this button to record the current video.*</td>
</tr>
<tr>
<td><img src="image3" alt="Snapshot icon" /></td>
<td><strong>Snapshot</strong> Click this button to take a snapshot of the current video image.</td>
</tr>
<tr>
<td><img src="image4" alt="Speaker icon" /></td>
<td><strong>Speaker</strong> Click this button to toggle the sound on or off. Move the slider to the left to decrease the volume or to the right to increase the volume.</td>
</tr>
<tr>
<td><img src="image5" alt="Microphone icon" /></td>
<td><strong>Microphone</strong> This feature is not available on the WVC80N.</td>
</tr>
<tr>
<td><img src="image6" alt="Quality icon" /></td>
<td><strong>Quality</strong> Move the slider to the left to decrease the video quality or to the right to increase the video quality.**</td>
</tr>
<tr>
<td><img src="image7" alt="Zoom icon" /></td>
<td><strong>Zoom</strong> Move the slider to zoom into current video display. The zoom factor cycles from 1x to 16x. Click the Up, Down, Left, and Right arrows to navigate within the monitor window.</td>
</tr>
</tbody>
</table>

* The length of the recording is configured in the Setup > Settings screen of the Camera Utility. During recording, the Utility’s System Tray icon turns into an animated icon (arrow moves up and down).

** This option will only be selectable when the MPEG-4/MJPEG Setting is set to Fixed Quality. This setting is found in the Advanced Configuration > Image screen of the Camera’s Web-based Utility.

View Recordings

The View Recordings window is accessed by clicking the View Recordings icon. The View Recordings window is used to play back videos that you have recorded and saved. This window has three sections: Video Controls, Memory Status, and the video playback section.

Video Controls

This section of the View Recordings window allows you to perform basic functions on the video you have selected for playback.
The controls and their functions are described below.

<table>
<thead>
<tr>
<th>Control</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play/Pause</td>
<td>Click this button to toggle the video between play and pause.</td>
</tr>
<tr>
<td>Playback Speed</td>
<td>Click and drag the wheel clockwise to increase the speed of the video playback, or counterclockwise to decrease the speed of the video playback. When the wheel is centered (with the indicator at the top position), the video will play at normal speed.</td>
</tr>
<tr>
<td>Frame by Frame</td>
<td>Click these buttons to go back (left arrow) or go forward (right arrow) exactly one video frame.</td>
</tr>
<tr>
<td>Previous/Next</td>
<td>Click these buttons to view the previous (left arrow) or the next (right arrow) recording.</td>
</tr>
<tr>
<td>Zoom</td>
<td>Move the slider to the right of this icon to zoom into the current video display. The zoom factor cycles from 1x to 16x.</td>
</tr>
<tr>
<td>Snapshot</td>
<td>Click this button to capture a still image of the current video display.</td>
</tr>
<tr>
<td>Print</td>
<td>Click this button to print the current video image.</td>
</tr>
<tr>
<td>Sound</td>
<td>Click this button to toggle the sound off or on. Move the slider to the left to decrease the volume or to the right to increase the volume.</td>
</tr>
</tbody>
</table>

**Memory Status**

This section of the View Recordings window indicates, in hours and gigabytes (GB), how much hard disk space is available for recorded video.

<table>
<thead>
<tr>
<th>Memory Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Left:</td>
</tr>
<tr>
<td>Space Left:</td>
</tr>
</tbody>
</table>

**Video Playback**

The section at the bottom of the View Recordings window is used to locate video for playback.

To locate and play a recording:

1. If you want to see all available recordings, toggle the button above the timeline to View all recordings. If you want to see only those recordings which were triggered by motion detection, toggle the button to View by motion detection only.
2. Using the calendar to the right of the timeline, select the date of the recording you want to view. (Bolded dates have recordings.)
3. The timeline displays blue bars where recordings are available. To display video from a specific time, click and drag the marker above the timeline to any point above a blue bar. The marker will display the date and time of the point you have chosen.
4. The video plays, starting from the point you have chosen.

**Setup**

The Setup screen is accessed by clicking the Setup icon. There are three tabs along the top of the Setup screen: Cameras, Recording Options, and Settings. By default, the Cameras tab is selected when the Setup screen is opened. These tabs display screens whose functions are described below.

**Setup > Cameras**

Click the Cameras tab to set up a network Camera.
Chapter 2
Installing and Using the Camera Utility

My Camera List

The My camera list section of the Setup > Cameras screen contains a list of all Cameras that have been added (up to 9).

Camera Name Displays the name of the Camera. Selecting a Camera on this list will display its details in the Camera Details section of the screen.

Add Camera to my list

Automatically add cameras Displays a list of currently detected Cameras on your LAN. To add a camera to My camera list, select the Camera from the Automatically add cameras list and click Add to my list. If your Camera is not listed, click Refresh to update the list, or add the Camera manually.

Manually add cameras To manually add a Camera to My camera list, go to the Address field and enter either its web address or its IP address with port number. Then click Add to my list. To erase your entry, click Clear.

Camera Details

The Camera Details section allows you to enter camera information and then displays video and information from the currently selected Camera.

Camera Status Displays the status of the selected Camera.

Camera Name Displays the name of the selected Camera.

IP Address Displays the IP address of the selected Camera.

User Name Displays the selected Camera’s user name.

Password Displays the selected Camera’s password. For security reasons, the password is displayed as “•••••”.

Port Number Displays the selected Camera’s port number.

Stream Type Displays the selected Camera’s stream type. To change the stream type, select either MJPEG or MPEG4 from the drop down list and click Save.

Two buttons are located under the video display. These buttons act upon the selected Camera’s video as explained below.

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flip</td>
<td>Click this button to flip the current video display top-to-bottom.</td>
</tr>
<tr>
<td>Mirror</td>
<td>Click this button to reverse the current video display left-to-right.</td>
</tr>
</tbody>
</table>

Click Advanced Camera Settings to open the Web-based Utility.

Setup > Recording Options

Click on the Recording Options tab to set the recording schedule for a network Camera.

Video Recording Options

To set the selected Camera to continuously record, select Always Record.

To set up a recording schedule for the selected Camera:

1. Select Record on a Scheduled Time Range if you want the Camera to record during the specified dates and times, or select Record on Motion Event in Scheduled Time Range Only if you want the Camera to record only at those (specified) dates and times when movement is detected.

2. Fill in the following fields:

   - Select Days From the drop down menu, select the days on which you want the Camera to record. The choices are One Time, Every Day, Mon-Fri, Sat-Sun, Sun, Mon, Tue, Wed, Thu, Fri, and Sat. (All settings except One Time cause recording to occur on a recurring basis.)
   - Start Date (mm/dd/yyyy) Enter the date to start the recording, in mm/dd/yyyy format, or select the start date using the drop down calendar.
   - Start Time (hh:mm) Select the time to start the recording using the drop down menus.
   - End Time (hh:mm) Select the time to end the recording using the drop down menus.

3. Click Add to list to save the new recording schedule.

4. The scheduled recording appears in the table of scheduled recordings at the bottom of the screen.
To delete a scheduled recording, check the box to the left of the recording, and click **Delete**. To delete all scheduled recordings, check the box in the upper left corner of the table and click **Delete**.

**Memory Requirements for Video Recordings**

You may find it helpful to know how much memory is required to hold a video recording. For information on estimated bit rates for a typical video recording at each available resolution and video, refer to the “Setup > Image” section of “Chapter 3: Advanced Configuration with the Web-Based Utility.”

**NOTE:** In order for the scheduled recordings to occur, the Camera Utility must be running on a networked PC.

**NOTE:** The maximum length of a recording file is one hour. If a recording is more than one hour long, then multiple files will be saved.

**Setup > Settings**

Click the **Settings** tab to configure the Camera Utility’s settings.

**Recording Path**

**Recording** This is the drive and folder where recorded video files will be saved on your computer. The default is `C:\Documents and Settings\<username>\My Documents\storage`, where `<username>` is your Windows user name.

**Instant Recording Time Limit**

**Maximum Time Limit for Instant Recording** This is the maximum length of a recording started by clicking the Record button on the **Monitor** window. Select the length of time from the drop down menu. The options are **1 min, 5 mins, 10 mins, 15 mins, 30 mins, 45 mins, 1 hrs, 2 hrs,** and **4 hrs**. The default is **1 min**.

**Motion Detection**

The following setting applies only if the Motion Detection Recording feature is enabled.

- **Record** This is the length of video prior to and following the detection of motion that will be saved with the recording. Having this additional footage can help to show the motion more clearly when it occurs. Select the length of time from the drop down menu. The options are **5 secs, 10 secs, 15 secs,** and **20 secs**. The default is **10 secs**.

**Disk Space for Each Camera Recording**

**Total Disk Space** This is the total amount of storage space on your hard drive.

**Available Disk Space** This is the total amount of remaining storage space on your hard drive.

**Enable Diskspace Limitation** If you want to limit the amount of disk space used by each Camera, check this box, then complete the fields below.

- **Maximum Allowed Space per Camera** Enter the maximum allowed space per camera (in MB).
- **When allowed space is full** Select the action to take when the space limit is reached: **Overwrite earliest file** (default), or **Stop recording**.

**Initial Settings**

**Launch this utility when Windows starts** Check this box if you want this utility started automatically whenever Windows is started.

**Enable text overlays** Check this box if you want text overlays (such as date, time, and Camera name) enabled in the video display.

Click **Save** to save any settings you have changed, or click **Cancel** to exit without saving your changes.

If you want to use the Camera’s Web-based Utility, go to “Chapter 3: Advanced Configuration with the Web-Based Utility.”
Chapter 3: Advanced Configuration with the Web-based Utility

Overview

Use the Camera’s Web-based Utility to access and alter its settings. This chapter will describe each web page in the Utility and its features. The Utility can be accessed via the web browser of a computer connected to the Camera.

How to Access the Web-based Utility

You can access the Utility using either of these methods.

• Launch Internet Explorer, and enter the Camera’s IP address in the Address field. Then, press Enter.

• From the Monitor window of the Camera Utility, select the Camera, then click the Setup button. (For instructions on how to launch the Camera Utility, refer to “Using the Camera Utility” in “Chapter 3: Installing and Using the Camera Utility.”

The Welcome screen of the Web-based Utility will appear.

View Video

Follow these instructions to view the Camera’s video.

1. Click the View Video tab on the Welcome screen.

   NOTE: To view video and hear audio at the same time, or to make real-time video adjustments (zoom, change resolution, etc.), you must use Internet Explorer version 5.5 or higher.

2. The View Video screen appears, showing the live video from the Camera.

The top of the View Video screen contains a number of controls that are used to adjust the video display. These controls and their functions are described in the sections below.

There are four selectable tabs across the top of the View Video screen: Home, Linksys Web, Help, and Exit.

• Home – Select this tab to return to the Welcome screen.

• View Video – Select this tab to view the Camera’s video. Go to the “View Video” section for more information.

• Setup – Select this tab to alter the Camera’s settings. Go to the “Setup” sections for more information.

• Linksys Web – Select this tab to go to the Linksys website, www.linksysbycisco.com.

• Help – Select this tab to display the Help screen. Go to the “Help” section for more information.

• Exit – Select this tab to close the Utility.
Resolution

Use the Resolution drop-down menu to select the display resolution. Possible values are Auto (default), 640x480, 320x240, or 160x120. The display changes to the new resolution immediately after it is selected.

Zoom Factor

You use the Zoom button to zoom in and out of the displayed video.

When you click the button, the cursor changes to a magnifying glass labeled with the current zoom factor (cycles through 1x, 2x, and 4x). Position the cursor over the part of the image you want to magnify and click once.

Snapshot

You use the Snapshot button to capture a still image of the video display.

When you click this button, the Snap Shot window appears. Click Save to save the image, or click Cancel to exit without saving the image.

Audio

Use the Audio button to toggle the sound on or off from the Camera’s built-in microphone. The button’s appearance indicates whether the sound is on or off. When the sound is on, you can adjust the volume by sliding the volume control to the left to lower the volume, or to the right to increase the volume.
Video Format

To select the video format, click the Video Format button, and the Video Format window appears. Select either MPEG-4 or MJPEG, then click Save. To exit without saving, click the X in the upper-right corner of the window.

Setup > Basic

The Setup > Basic screen appears when you click the Setup tab or Advanced Configuration on the Welcome screen. The Setup > Basic screen allows you to alter the Camera's Device settings, Network settings, Wireless settings, and Security settings.

Edit the settings on this screen as needed. Then, to save your changes, click Apply. To cancel any unsaved changes, click Cancel. To get additional information about the screen's features, click Help.

Device Settings

- **Camera Name** You may assign the Camera any name up to 15 characters long. Unique, memorable names are helpful, especially if you use multiple Cameras on the same wireless network.
- **Description** Enter information about the Camera in this field. You can enter up to 32 characters.
- **LED Operation** This feature allows you to enable or disable the Camera's LED.
- **Current Date/Time** This displays the Camera's current date and time. If it is incorrect, click Sync with PC to use your computer’s date and time.
- **Time Zone** Select the time zone for the Camera's location.
- **Adjust for Daylight Saving Time** Select this to adjust the Camera's current time for Daylight Saving Time.

**NOTE:** You must deselect this option when Daylight Saving Time ends.

Network Settings

To configure the Camera's network settings, select the protocol you wish to use from the dropdown menu: IPv4 only, IPv6 only, or IPv4 and IPv6. The default is IPv4 only.

- **Configuration Type** If you want to automatically assign the Camera an IP address from a DHCP server, then select Obtain Address Automatically (DHCP) (default). If you want to assign the Camera a static IP address, then select Fixed IP Address, and complete the IP Address, Subnet Mask, Gateway, Primary DNS and Secondary DNS fields.
- **Address, Subnet Mask, Subnet prefix length (IPv6 only), Gateway, Primary DNS, Secondary DNS** Complete these fields if you want to assign the Camera a static IP address. You need to enter at least one DNS address.

Wireless Settings

- **SSID** Enter the network’s SSID or network name here.
- **Network Type** Select the network’s mode, Ad-hoc or Infrastructure.
- **Channel No** If the Camera is set to Ad-hoc mode, select its channel setting from the drop-down menu.
- **Security** Click Edit Security Settings to display the Wireless Security screen.

Setup > Basic > Wireless Security

The Wireless Security screen is used to configure the Camera's wireless security settings to match your wireless network settings. The settings are as follows.

**Security Mode** Select the wireless security mode used by your wireless network:
- **Disable** (no wireless security)
- **WEP**
- **WPA/WPA2 Personal**

The method selected determines which other fields are displayed on the screen. The different security modes
and the fields that accompany them are described in detail below.

- **Disable**
  This option implements no security on your wireless network. Data is not encrypted before transmission.

- **WEP**
  WEP is a basic encryption method, which is not as secure as later methods such as WPA-Personal or WPA2 Personal. However, it is supported by all clients.

  - **TX Key** Select the number of the key used on the wireless network.
  - **WEP Encryption** Select the appropriate option for key length based on your network settings.
  - **Passphrase** Type in the passphrase used to generate WEP keys on your network and click **Generate**.
  - **Key 1 - Key 4** Key values can be entered manually or generated from a passphrase.
  - **Authentication** Select the appropriate authentication type used on the wireless network.

- **WPA/WPA2 Personal**
  This method offers TKIP encryption with dynamic encryption keys.

  - **Shared Key** Enter the shared key of 8 to 63 characters that will be used to access the wireless network.

  When you are finished editing the Camera's wireless security settings, click **Apply** to save your changes and return to the Setup > Basic screen. Click **Cancel** at any time to cancel any unsaved changes and return to the Setup > Basic screen. To get additional information about the screen's features, click **Help**.

**Setup > Image**

The Setup > Image screen allows you to alter the Camera's video settings.

**MPEG4 Settings**

- **Resolution** Set the resolution for viewing and recording the Camera's video: **640x480** (high resolution), **320x240** (medium resolution), or **160x120** (low resolution).

- **Video Quality Control**
  - **Constant Bit Rate** Select the bit rate you want for viewing or recording the Camera's video. The range varies from **64 Kbps** to **1.2 Mbps**.
  - **Fixed Quality** Select the level of quality you want for viewing or recording the Camera's video. The range varies from **Very Low** to **Very High**.

- **Max Frame Rate** Select the maximum frame rate for the camera. Reducing this lowers the amount of bandwidth required by the camera. The range is from 1 to 30.

**MJPEG Settings**

- **Resolution** Set the resolution for viewing and recording the Camera's video: **640x480** (high resolution), **320x240** (medium resolution), or **160x120** (low resolution).

- **Fixed Quality** Select the level of quality you want for viewing or recording the Camera's video. The range varies from **Very Low** to **Very High**.
Max Frame Rate  Select the maximum frame rate for the camera. Reducing this lowers the amount of bandwidth required by the camera. The range is from 1 to 30.

NOTE: Video quality and/or performance may be affected by the number of users connected to the Camera.

It may be helpful to know the bit rates for video viewing or recording at different resolutions and image quality levels. The following table lists these estimated bit rates.

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Quality Level</th>
<th>Bit Rate in kbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>640 x 480</td>
<td>Very High</td>
<td>4000</td>
</tr>
<tr>
<td>640 x 480</td>
<td>High</td>
<td>3200</td>
</tr>
<tr>
<td>640 x 480</td>
<td>Normal</td>
<td>1200</td>
</tr>
<tr>
<td>640 x 480</td>
<td>Low</td>
<td>480</td>
</tr>
<tr>
<td>640 x 480</td>
<td>Very Low</td>
<td>160</td>
</tr>
<tr>
<td>320 x 240</td>
<td>Very High</td>
<td>1000</td>
</tr>
<tr>
<td>320 x 240</td>
<td>High</td>
<td>800</td>
</tr>
<tr>
<td>320 x 240</td>
<td>Normal</td>
<td>300</td>
</tr>
<tr>
<td>320 x 240</td>
<td>Low</td>
<td>120</td>
</tr>
<tr>
<td>320 x 240</td>
<td>Very Low</td>
<td>40</td>
</tr>
<tr>
<td>160 x 120</td>
<td>Very High</td>
<td>800</td>
</tr>
<tr>
<td>160 x 120</td>
<td>High</td>
<td>400</td>
</tr>
<tr>
<td>160 x 120</td>
<td>Normal</td>
<td>200</td>
</tr>
<tr>
<td>160 x 120</td>
<td>Low</td>
<td>100</td>
</tr>
<tr>
<td>160 x 120</td>
<td>Very Low</td>
<td>40</td>
</tr>
</tbody>
</table>

Mobile Settings

Enable Mobile Streaming  Select this option to enable video streaming to a mobile device.

Video Adjustments

Power Line Frequency  Select the power line frequency (50Hz or 60Hz) used in your region, to improve the picture quality under fluorescent lighting.

White Balance  Select the desired option to match the current environment and lighting.

Brightness  If necessary, you can adjust the brightness to obtain a better image. For example, if the camera is facing a bright light, the image may be too dark. In this case, you can increase the brightness. You can select a Brightness value between -3 and 3.

Sharpness  Select the desired option for the sharpness. You can select a Sharpness value between -3 and 3.

Options

Enable Microphone  Select this to enable audio. Using Audio increases the bandwidth requirements slightly.

Enable Time Stamp  Select this to display a time stamp on the video.

Enable Text Display  To display text on the video, select this, then enter up to 20 characters in the field.

To save your changes, click Apply. To cancel any unsaved changes, click Cancel. To get additional information about the screen's features, click Help.

Setup > Administration

The Setup > Administration screen allows you to change the Camera’s login name and password, reset the factory defaults, upgrade the firmware, and set the language.

Login

These fields are used to change the login name and password used to access the Camera. For security purposes, you should change these from the default values (both set to admin).

Login Name  Enter the login name for the Camera.
Password  Enter the password for the Camera.
Verify Password  Re-enter the password to verify.

Restore Factory Defaults

Restore Defaults  To restore the Camera to its factory default settings, click Restore Defaults.

NOTE: This will overwrite the Camera’s settings with the factory defaults. Any changes you made to the Camera’s settings will be lost; you will not be able to recover them.
Chapter 3

Advanced Configuration with the Web-based Utility

Firmware Upgrade

**Upgrade Firmware** New firmware versions are posted at [www.linksysbycisco.com](http://www.linksysbycisco.com) and can be downloaded for free. If the Camera is functioning satisfactorily, there is no need to download a newer firmware version, unless that version has a new feature that you want to use. Loading new firmware onto the Camera does not always enhance its performance.

Linksys recommends that you upgrade the Camera's firmware within your network; in other words, use a computer within the Camera's local network. If you attempt to upgrade the Camera's firmware from a remote location—using a computer outside of the Camera's local network—the upgrade will fail.

To upgrade the firmware:

1. Go to the Linksys website, [www.linksysbycisco.com](http://www.linksysbycisco.com), and download the firmware upgrade file for the Camera. Then extract the file.
2. From the Setup > Administration screen, click **Upgrade Firmware**.
3. You will see the **Upgrade Firmware** screen. Click **Browse** to find the extracted file, and then double-click it.
4. Click **Start Upgrade**, and follow the on-screen instructions. To cancel the upgrade, click **Cancel**.

Setup > Users

The Setup > Users screen lets you designate access rights for the Camera's users.

**Users Settings**

Use this to assign access rights to the Camera's users.

**Allow access by** Select how access is to be granted, either **All users** or **Only users in database**. If you select **Only users in database**, edit the user database as needed, as described below.

**Users** This lists the user database (the users who have access to the Camera).

Editing the Database

To add a user to the database:

1. Enter the user’s name in the **User Name** field.
2. Enter the password in the **Password** and **Confirm Password** fields.
3. Click **Add User** to save the user in the database.

To edit a user's record in the database:

1. Select the user from the **Users** list, then click **Edit**.
2. Edit the User Name and/or Password as needed.
3. Click **Add User** to save the updated information.

Other operations:

- **Clear** While editing a user’s information, click **Clear** to clear the **User Name**, **Password**, and **Confirm Password** fields and start over.
- **Delete** To delete a user’s record from the database, select the user from the list, then click **Delete**.
- **Delete All** To clear the database, click **Delete All**, then click **OK** to confirm.

To save your changes, click **Apply**. To cancel any unsaved changes, click **Cancel**. To get additional information about the screen's features, click **Help**.

Setup > Options

The Setup > Options screen allows you to set up and configure DDNS Service, UPnP configuration, and Alternate Port settings. DDNS (Dynamic Domain Name System) lets you assign a fixed host and domain name to a dynamic Internet IP address.

**DDNS**

**Enable DDNS** Select this option to enable DDNS service with the Camera.

**Service Provider** This is the DDNS service provider, which is preset to TZO.
Domain Name Enter the domain name assigned to you by your DDNS service provider.

E-Mail Address Enter the E-mail address used to register the DDNS service.

TZO Key Enter the TZO key provided by your DDNS service provider.

Update Period Use this to set the schedule for checking whether the Internet IP address has been changed. Specify how often to check, from Every 15 mins to Every 24 hrs, as well as the time to start checking, in hh:mm format.

![NOTE: If you use the Camera's DDNS feature, then you must also configure the port forwarding feature on your network router. Go to www.linksysbycisco.com/portfwd for instructions on how to configure a Linksys router. For other routers, refer to your router’s documentation.]

![NOTE: Go to www.tzo.com/linksys to set up your Camera for remote access.]

To save your changes, click Apply. To cancel any unsaved changes, click Cancel. To get additional information about the screen’s features, click Help.

UPnP

Enable/Disable When enabled, the Camera’s Universal Plug and Play (UPnP) feature allows a UPnP-enabled computer to easily detect the Camera. The Camera’s UPnP feature is disabled by default. If your computer is UPnP-enabled, select this option.

Alternate Access Web Port

Enable/Disable If you want the Camera to be able to use an alternate port for communications, select this option. Then, enter the desired port number in the range from 1024 to 65534 in the Port Number field. The default port number is 1024.

If you already have a Web Server on your LAN, then you should enable the Alternate Port and use this port number instead of port 80.

RTSP/RTP

The Real Time Streaming Protocol (RTSP) is a network control protocol that establishes and manages multimedia sessions between a media server and a client. The media data format in these sessions is defined by the Real-time Transport Protocol (RTP). You can view a Camera’s live video stream using various multimedia player applications such as QuickTime, RealPlayer, or Windows Media Player, or using a mobile phone that supports RTSP. To do this, first configure the RTSP/RTP settings in this section as needed, then open the multimedia player, then point the player to the appropriate URL listed below (where <Camera IP Address> is the IP address of the Camera you want to view).

- QuickTime or RealPlayer: rtsp://<Camera IP Address>/img/video.sav
- Windows Media Player: rtsp://<Camera IP Address>/img/video.asf
- Mobile phone with RTSP support: rtsp://<Camera IP Address>/img/video.asf

RTSP Port To change the RTSP Port number, enter the desired number in the range of 1024 to 65535. The default is 554.

RTP Data Port To change the RTP Data Port, enter the desired number in the range of 1024-65514, even values only.

Max RTP Data Packet To change the maximum length of RTP data packets, enter the desired maximum length in the range of 400 to 1400.

Multicast RTSP/RTP

Multicast RTP/RTSP allows a large number of clients to see the camera’s media stream while conserving bandwidth. This is accomplished by sending the camera's media stream to a single multicast address for each client to retrieve, instead of directly sending a copy of the media stream to each client.

Enable/Disable Select Enable to enable the Multicast RTP/RTSP feature, or Disable to disable the feature.

Video Address To change the Video Address, enter the new address in the field provided. The default Video Address, 224.2.0.1, can be used for multicasting and does not normally need to be reconfigured. If this address needs to be changed, contact your network administrator.

Video Port To change the Video Port, enter the new port number (even values only, from 1024 to 65534) in the field provided. The default Video Port, 2240, can be used for multicasting and does not normally need to be reconfigured. If this port number needs to be changed, contact your network administrator.

Audio Address To change the Audio Address, enter the new address in the field provided. The default Audio Address 224.2.0.1, can be used for multicasting and does not normally need to be reconfigured. If this address needs to be changed, contact your network administrator.
Audio Port  To change the Audio Port, enter the new port number (even values only, from 1024 to 65534) in the field provided. The default Audio Port, 2242, can be used for multicasting and does not normally need to be reconfigured. If this port number needs to be changed, contact your network administrator.

Time to Live  Enter the maximum length of time (usually measured as the number of network routers that can be passed before the data arrives at its destination or is dropped) within which the data must reach its destination. The value must be from 1 to 255. The default value is 16.

To save your changes, click Apply. To cancel any unsaved changes, click Cancel. To get additional information about the screen's features, click Help.

Setup > Motion Detection

The Setup > Motion Detection screen allows you to configure the Camera's motion detection settings.

Trigger Motion Detection

Enable Motion Detection  Check this box to enable Motion Detection.

Attachment Type  Select the type of attachment to be sent, either JPEG or Video. If JPEG is selected, a series of images will be attached to the e-mail as individual files. If Video is selected, a single video file will be attached.

Frame Rate  If the Attachment Type field is set to JPEG, select the frame rate (number of frames to be captured per second), from 1 to 5. The default value is 1.

Video Format  If the Attachment Type is set to Video, select the video format, either ASF, MPEG-4, or 3GP.

Pre-Capture Length  This refers to video footage up to the moment when motion is detected. Select how many seconds' worth of this video will be saved. This value must be between 0 and 4 seconds.

Post-Capture Length  Select how many seconds' worth of video will be saved starting from the moment motion is detected. This value must be between 1 and 5 seconds.

Interval  Enter the time in minutes that must pass between motion detection events. Valid values are 0-5, 10, or 15. The default is 2. A value of 0 indicates no delay between events.

Action(s)  Select the action(s) to be performed upon motion detection. Select E-Mail to send an e-mail with a video attachment to a selected recipient, or select FTP to send the video to a selected FTP server.

E-Mail Alert

If the Action(s) field is set to E-Mail, fill in the following fields:

Send To  Enter the e-mail address where e-mail will be sent upon motion detection. You can optionally specify up to three addresses.

Show “From” as  Enter the e-mail address to be used as the From field in the e-mail to be sent.

Subject  Enter the Subject field for the e-mail, consisting of 48 alphanumeric characters or less.

SMTP Port Number  Enter the SMTP port number from 1 to 65535. The default is 25.

SMTP Mail Server  If you want to use an SMTP mail server, check the box next to Specify a SMTP Mail Server. Then enter the mail server’s name in the field provided.

My Mail Server Requires Authentication  If you are using an SMTP mail server that requires authentication (you must log in with a username and password), check this box, then fill in the Account Name and Password fields.

Test E-Mail  Click this button to send a test e-mail to the address indicated by the Send To field.

FTP

If the Action(s) field is set to FTP, fill in the following fields:

FTP Server  Enter the FTP server name.

Port  Enter the FTP server's port number.

Login Name and Password  Enter the login name and password for the account on the FTP server.

Passive Mode  Select Enable (default) to enable passive mode, or Disable to disable it.

File Path Name  Enter the path to the location where the file will be saved on the FTP server.
Set Sensitivity Area

Set Sensitivity Area If you want to specify the sensitivity area settings for motion detection, click this button to display the Set Sensitivity Area window. The Set Sensitivity Area window lets you specify the area of the video screen that is used to detect motion. This is either the full screen, or up to three user-defined custom areas within the full screen.

NOTE: In order to set the Camera’s sensitivity area, you will need to access the Web-based utility using Internet Explorer 6 or higher.

The following fields appear on the left side of the Set Sensitivity Area window for each sensitivity area. Specify the settings as needed, then click Apply.

- **Full Screen or Window 2-4** This is the name of the sensitivity area, either Full screen by default, or if Setting Custom Area is selected, Window 2, Window 3, or Window 4 (custom areas). To change a custom area name to a more appropriate name, such as Front Door, enter the new name in this field.

- **Setting Custom Area** To specify custom area(s) within the full screen, check this box, then configure up to three custom sensitivity areas. By default only one area, Window 2, is selected. To create an additional area, check the box next to its name. You can move or resize each area as needed. Custom areas may also overlap.

- **Threshold** Slide this to the left to reduce the area’s sensitivity, or to the right to increase sensitivity.

New Motion Trigger Schedule

This section allows you to create a schedule that determines when motion detection will be active. To do this, you define one or more “trigger” events, or periods during which motion detection will be in effect. For each trigger event, fill in the following fields.

**Trigger Motion Detection** Specify how often this trigger event occurs: Every day, Weekdays (Mon - Fri), or on specific days of the week (Sunday to Saturday).

**Start Time and End Time** Specify the start and end times for the event.

**Add** Click Add to add the new event to the schedule.

**Clear** Click Clear to clear the schedule of all events.

**Delete** To delete an event from the Schedule List, select the event, then click Delete.

**Schedule List** This displays all of the scheduled trigger events that you have defined and saved. It is empty by default.

To save your changes, click Apply. To cancel any unsaved changes, click Cancel. To get additional information about the screen’s features, click Help.

Setup > Recording

The Setup > Recording screen allows you to record video to Samba compatible devices such as your Mac or PC’s shared folder, or to a NAS (network-attached storage) on your network.

**Enable** Check this box to enable the Camera’s recording features.
Browse  Click **Browse** to select the Samba server where your video files will be saved. Browse to the location where you wish to save your video files and click **Apply**.

**Samba Server**  This displays the address of your Samba server.

**Upload Path**  This displays the upload path to your Samba server. Your saved video files are found in this directory.

**User Name**  Enter your Samba server user name here.

**Password**  Enter your Samba server password here.

**File Name Prefix**  The contents of this field are added as a prefix to each of the saved video filenames. The default value is *record*.

**Maximum Duration**  Select the number of minutes of video each saved recording file will contain. This value must be between 1 and 120 minutes. The default value is *10*.

**Enable adding timestamp to files**  Check this box to enable adding a timestamp to the end of your saved video files. The format is *yy:mm:dd:hh:mm*.

**Start Recording now/Define Recording Schedule**  To enable immediate recording, select **Start Recording now**.

To enable scheduled recording, select **Define Recording Schedule**. Specify the start and end times using the dropdown menus in the **Start at** and **Stop at** fields.

---

**Setup > Status**

The **Setup > Status** screen allows you to view the Camera’s status information and log.

**System Status**

**Firmware Version**  The version of the current firmware installed.

**MAC Address**  The MAC Address of the Camera is displayed here.

**Camera Name**  The name you gave to the Camera is displayed here.

**Description**  Information about the Camera, such as location, is displayed here.

**Date/Time**  The current date and time are shown here.

**Network**

**Network Type**  The wireless network’s mode is shown here.

**IP Version**  The IP version in use is displayed here.

**IP Address**  The Camera’s IP Address is displayed here.

**Subnet Mask**  The Camera’s Subnet Mask is shown here.

**Gateway**  The Camera’s Gateway address is displayed here.

**Wireless**

**SSID**  The wireless network’s SSID or name is shown here.

**Domain**  The wireless network’s region is displayed here.

**Channel No**  The wireless network’s channel setting is displayed here.

**Security**  The wireless network’s encryption level is displayed here.
Log

System Log  This shows the Camera’s activities. To empty the log, click Clear Log.

To get the Camera’s most up-to-date information, click Refresh. To get additional information about the screen’s features, click Help.

Help

Through the Help screen, you’ll find links to additional resources for the Camera and its Utility. If you select the Help tab directly from the Welcome screen, then you will see the User Help screen and will only be able to access these resources. If you first log in to access the Camera’s Setup and then select the Help tab, you will see the Administrator Help screen and will be able to restore factory defaults and upgrade the Camera’s firmware.

• Setup  Click any of the topics in the bar on the left to get help information.

• Linksys Support Page - Download Latest Viewer/Recorder Utility  Click this link to download the most recent version of the Camera Utility from the Linksys website, www.linksysbycisco.com.

• Click here to learn how to configure Port Forwarding in your Linksys Router  If you are going to use the DDNS Service, you need to set up port forwarding on your router. For instructions on how to configure a Linksys router, click this link. If you have a different router, refer to your router’s documentation.

• Adobe website (software for viewing PDF documents)  If you do not have Adobe Acrobat Reader, click this link to download it.
Appendix A: Troubleshooting

This appendix consists of two parts: “Common Problems and Solutions” and “Frequently Asked Questions.” This appendix provides solutions to problems that may occur during the installation and operation of the Wireless-N Internet Home Monitoring Camera. Read the description below to solve your problems. If you can’t find an answer here, check the Linksys website at www.linksysbycisco.com.

Common Problems and Solutions

I can’t view the Camera’s video using Internet Explorer.

Make sure the OCX plug-in was correctly installed. If you’re not sure, re-install the plug-in by following these instructions:

- On the Welcome screen of the Camera’s Web-based Utility, click View Video.
- A screen mentioning a security warning about an OCX plug-in will appear. Click Yes to allow the plug-in to be installed.
- You should then be able to view the Camera’s streaming video.

If you still cannot view the video, make sure you have the rights to install the plug-in in your PC’s Internet Explorer. If not, log into your computer as an administrator and install the plug-in.

Then you can check if the OCX plug-in has been installed. Follow these instructions:

- From Internet Explorer, go to Tools and Internet Options.
- On the General screen, click Settings under Temporary Internet files.
- Click View Objects. You should see a file named NetCamPlayerWeb Control installed.

The OCX plug-in is installed in Internet Explorer, but I cannot view any video.

Make sure Microsoft Internet Explorer 5.5 or higher is installed. Then delete the OCX plug-in by following these instructions:

- From Internet Explorer, go to Tools and Internet Options.
- On the General screen, click Settings under Temporary Internet files.
- Click View Objects.
- You should see a file named NetCamPlayerWeb Control installed. Delete this file from the list.

- The next time you click View Video from the web browser, you will be prompted to re-install the OCX plug-in.

When powering on the Camera, I can’t immediately access the Camera from my computer.

Make sure the Camera’s LED is continuously lit. When it is flashing, the Camera is initializing.

I’m not able to play my recording video files.

Make sure you have Microsoft Windows Media Player 7 or higher. If you don’t, you can download the latest version from www.microsoft.com.

I have two Cameras and see two WVC80Ns listed in my Camera Utility. When I click to view both Cameras, I see the video of only one Camera.

Make sure that the Cameras have different camera or device names. You can change this by using the Web-based Utility or running the Setup Wizard. If you use the Web-based Utility, log in and click the Setup tab. Then on the Basic screen, change the Camera Name.

When I view video remotely via the Internet, the video is very slow.

Video performance is greatly affected by your Internet connection speed. You can lower the Camera’s image quality to speed up the video. Through the Camera’s Web-based Utility, click the Setup and Image tabs, and then lower the image quality on the Image screen.

I cannot access the Setup tab of the Camera’s Web-based Utility.

Make sure you have administrator rights. Only an administrator can change the Camera’s settings.

I want to access the Camera when I’m away from home, but somehow I can’t connect.

If your network uses a dynamic IP address supplied by your ISP, then the IP address you use to reach the Camera will change as well. You need to use the TZO DDNS Service, so you can access the Camera using its domain name while the service keeps track of the IP address changes. To set up a Dynamic Domain Name Service (DDNS) account, click the Setup tab of the Camera’s Web-based Utility, then click the Options tab. Then configure the settings in the DDNS section of the screen.

Important: To allow remote access to the Camera, you will also have to use the port forwarding feature on your network router.
Frequently Asked Questions

Can I view video using a Macintosh or Netscape Navigator?

The Camera is designed for computers running a Windows operating system and Internet Explorer 5.5 or higher. You cannot view video on a Macintosh. If you only have Netscape, you can view video using the Camera Utility. See “Chapter 3: Installing and Using the Camera Utility.”

Can I directly connect the Camera to wired and wireless networks at the same time?

No. Before powering on the Camera, you should decide if you want to connect the Camera to a wireless network via an access point or to a wired network. If your wireless and wired networks are bridged, then you can access the Camera from any networked computer, but the Camera must be directly connected to only one of the networks.

To connect the Camera to a wireless network, power on the Camera with no network cable attached. The Camera will be ready for use when the LED is lit continuously.

To connect the Camera to a wired network, connect the network cable to the Camera, and then power it on. The Camera will be ready for use when the LED is lit continuously.

Can I install the Camera outdoors?

No, the Camera was not designed for outdoors usage.

I’ve recorded video for a few hours. Why do I see multiple files saved on my computer?

The recording function saves video in chunks; each chunk is a maximum of one hour in duration. For example, if you have recorded five continuous hours, then you will see five files saved on your computer. This keeps files from getting too large.

Do I need to install the Linksys Multi-Camera Viewer and Recorder Utility?

Installation is optional. You can view video using Microsoft Internet Explorer 5.5 or higher. If you don’t want to use the recording function, then you don’t need to install the Multi-Camera Viewer and Recorder Utility.

Can I specify who gets to view the Camera’s video?

Yes. Access the Camera’s Web-based Utility, and click the Setup tab. After you log in, click the Users tab. You will be able to restrict access to users you have entered in the database. See “Chapter 4: Advanced Configuration with the Web-based Utility.”

Can I add a time stamp to the video?

Yes. Access the Camera’s Web-based Utility, and click the Setup tab. After you log in, click the Image tab. You will be able to add a time stamp as well as descriptive text to the video. See “Chapter 4: Advanced Configuration with the Web-based Utility.”

How many users can view the Camera’s video at the same time?

Users at four different PCs can simultaneously view the Camera’s video.

What is the IEEE 802.11b standard?

It is one of the IEEE standards for wireless networks. The 802.11b standard allows wireless networking hardware from different manufacturers to communicate, provided that the hardware complies with the 802.11b standard. The 802.11b standard states a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz.

What is the IEEE 802.11g standard?

It is one of the IEEE standards for wireless networks. The 802.11g standard allows wireless networking hardware from different manufacturers to communicate, provided that the hardware complies with the 802.11g standard. The 802.11g standard states a maximum data transfer rate of 54Mbps and an operating frequency of 2.4GHz.

What is the IEEE 802.11n standard?

It is one of the IEEE standards for wireless networks. The 802.11n standard allows wireless networking hardware from different manufacturers to communicate, provided that the hardware complies with the 802.11n standard. The 802.11n standard states a maximum data transfer rate of 600Mbps and an operating frequency of 2.4GHz or 5GHz.

What IEEE 802.11b features are supported?

The product supports the following IEEE 802.11b functions:
- CSMA/CA plus Acknowledge protocol
- Multi-Channel Roaming
- Automatic Rate Selection
- RTS/CTS feature Fragmentation
- Power Management
**What IEEE 802.11g features are supported?**

The product supports the following IEEE 802.11g functions:
- CSMA/CA plus Acknowledge protocol
- OFDM protocol
- Multi-Channel Roaming
- Automatic Rate Selection
- RTS/CTS feature
- Fragmentation
- Power Management

**What is ad-hoc mode?**

When a wireless network is set to ad-hoc mode, the wireless-equipped computers are configured to communicate directly with each other. The ad-hoc wireless network will not communicate with any wired network.

**What is infrastructure mode?**

When a wireless network is set to infrastructure mode, the wireless network is configured to communicate with a wired network through a wireless access point or router.

**WEB:** If your questions are not addressed here, refer to the Linksys website, www.linksysbycisco.com
Appendix B: Wireless Security Checklist

Wireless networks are convenient and easy to install, so homes with high-speed Internet access are adopting them at a rapid pace. Because wireless networking operates by sending information over radio waves, it can be more vulnerable to intruders than a traditional wired network. Like signals from your cellular or cordless phones, signals from your wireless network can also be intercepted. Since you cannot physically prevent someone from connecting to your wireless network, you need to take some additional steps to keep your network secure.

1. Change the default wireless network name or SSID

Wireless devices have a default wireless network name or Service Set Identifier (SSID) set by the factory. This is the name of your wireless network, and can be up to 32 characters in length. Linksys wireless products use **linksys** as the default wireless network name. You should change the wireless network name to something unique to distinguish your wireless network from other wireless networks that may exist around you, but do not use personal information (such as your Social Security number) because this information may be available for anyone to see when browsing for wireless networks.

2. Change the default password

For wireless products such as access points, routers, and gateways, you will be asked for a password when you want to change their settings. These devices have a default password set by the factory. The Linksys default password is **admin**. Hackers know these defaults and may try to use them to access your wireless device and change your network settings. To thwart any unauthorized changes, customize the device’s password so it will be hard to guess.

3. Enable MAC address filtering

Linksys routers and gateways give you the ability to enable Media Access Control (MAC) address filtering. The MAC address is a unique series of numbers and letters assigned to every networking device. With MAC address filtering enabled, wireless network access is provided solely for wireless devices with specific MAC addresses. For example, you can specify the MAC address of each computer in your home so that only those computers can access your wireless network.

4. Enable encryption

Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA/WPA2) and Wired Equivalent Privacy (WEP) offer different levels of security for wireless communication.

A network encrypted with WPA/WPA2 is more secure than a network encrypted with WEP, because WPA/WPA2 uses dynamic key encryption. To protect the information as it passes over the airwaves, you should enable the highest level of encryption supported by your network equipment.

WEP is an older encryption standard and may be the only option available on some older devices that do not support WPA.

General Network Security Guidelines

Wireless network security is useless if the underlying network is not secure.

- Password protect all computers on the network and individually password protect sensitive files.
- Change passwords on a regular basis.
- Install anti-virus software and personal firewall software.
- Disable file sharing (peer-to-peer). Some applications may open file sharing without your consent and/or knowledge.

Additional Security Tips

- Keep wireless routers, access points, or gateways away from exterior walls and windows.
- Turn wireless routers, access points, or gateways off when they are not being used (at night, during vacations).
- Use strong passphrases that are at least eight characters in length. Combine letters and numbers to avoid using standard words that can be found in the dictionary.

WEB: For more information on wireless security, visit [www.linksysbycisco.com/security](http://www.linksysbycisco.com/security)
## Appendix C: Specifications

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>WVC80N</td>
</tr>
<tr>
<td>Standards</td>
<td>IEEE 802.3u, 802.11g, 802.11b, draft 802.11n</td>
</tr>
<tr>
<td>LEDs</td>
<td>Power, Wi-Fi Protected Setup™</td>
</tr>
<tr>
<td>Ports</td>
<td>Power, Ethernet</td>
</tr>
<tr>
<td>Buttons</td>
<td>Power, Reset, Wi-Fi Protected Setup™</td>
</tr>
<tr>
<td>Cabling Type</td>
<td>Cat 5</td>
</tr>
<tr>
<td>Number of Antennas</td>
<td>1</td>
</tr>
<tr>
<td>Detachable (y/n)</td>
<td>No</td>
</tr>
<tr>
<td>Modulations</td>
<td>802.11b: CCK/QPSK, BPSK 802.11g: OFDM/BPSK, QPSK, 16-QAM, 64-QAM 802.11n: OFDM/BPSK, QPSK, 16-QAM, 64-QAM</td>
</tr>
<tr>
<td>RF Power (EIRP) in dBM</td>
<td>802.11b: 18 dBm (typical) @ 11Mbps 802.11g: 16 dBm (typical) @ 54Mbps 802.11n: 15dBm (typical) @ 65Mbps (HT20), 135Mbps (HT40)</td>
</tr>
<tr>
<td>Receive Sensitivity in dBM</td>
<td>802.11b: -87dBm (typical) @ 11Mbps 802.11g: -72dBm (typical) @ 54Mbps 802.11n: -70dBm (typical) @ MCS7, -65dBm (typical) @ MCS7</td>
</tr>
<tr>
<td>Antenna Gain in dBi</td>
<td>1.5 dBi</td>
</tr>
<tr>
<td>UPnP able/cert</td>
<td>UPnP Advertise</td>
</tr>
<tr>
<td>Wireless Security</td>
<td>WEP, WPA, Wi-Fi Protected Access™ 2 (WPA2)</td>
</tr>
<tr>
<td>Security key bits</td>
<td>Up to 128-bit encryption</td>
</tr>
<tr>
<td>OS Requirements</td>
<td>Windows XP, Vista, or Vista 64-bit edition with latest updates (for Setup Wizard only)</td>
</tr>
<tr>
<td>Effective Focus</td>
<td>50cm to unlimited</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>6.0V/Lux-sec</td>
</tr>
<tr>
<td>Field of View</td>
<td>61.2 degrees</td>
</tr>
<tr>
<td>Compression Algorithm</td>
<td>MPEG-4 part 2 and MJPEG</td>
</tr>
<tr>
<td>Record File Format</td>
<td>ASF, AVI</td>
</tr>
<tr>
<td>Brightness</td>
<td>Auto/Manual Adjustment</td>
</tr>
</tbody>
</table>

### Environmental

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>3.54” x 4.72” x 1.46” (90 x 120 x 37 mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>4.59 oz (130 g)</td>
</tr>
<tr>
<td>Power</td>
<td>5V, 1A</td>
</tr>
<tr>
<td>Certification</td>
<td>FCC, UL/cUL, ICES-003, RSS210</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>32 to 95°F (0 to 35°C)</td>
</tr>
<tr>
<td>Storage Temp.</td>
<td>-4 to 140°F (-20 to 60°C)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>10 to 80% Noncondensing</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>0 to 90% Noncondensing</td>
</tr>
</tbody>
</table>

### Minimum System Requirements

#### For Setup

Windows PC with Internet Explorer 6 or higher for browser-based configuration, or Setup Wizard software requires CD or CD/DVD drive and up-to-date Windows XP, Vista, or Vista 64-bit Edition

#### For Viewing Video

Windows PC with included Monitoring Utility, or any computer with Internet Explorer 6, Safari 3, or Firefox 2 or higher, or a stream-enabled video player (VLC, Quicktime Player, Windows Media Player version 9 or higher, etc.), or smartphone with advanced web browser or RSTP
Appendix D:
Common Gateway Interface (CGI) Commands

Overview

CGI (Common Gateway Interface) is a simple method to send or receive data from a program or application through a web interface. The WVC80N supports a multitude of CGI commands that can be passed to it via HTTP from your client PC or mobile phone. This will allow you to perform basic functions such as view the camera's video stream, capture a snapshot or retrieve the camera's status information. This appendix details all the supported CGI commands for this camera.

NOTE: Using CGI commands is only recommended for advanced users.

User-Level CGI Commands (User level privilege)

Video and Image commands

Stream MPEG-4 Video and Audio
Method: GET
URL: http://<ip>/img/video.asf or http://<ip>/img/video.asx (Windows Vista)
Return: A “video.asf” file is returned through the HTTP protocol.

HTTP/1.0 200 OK
...
content-type: application/octet-stream
...
<MPEG-4 video data>

Stream M-JPEG Video

HTML page for the end user
Method: GET
URL: http://<ip>/img/mjpeg.htm
Return:

HTTP/1.0 200 OK
...
content-type: text/html
...
http://<ip>/img/video.mjpeg
...
Appendix D

CGI Commands

Snapshot
Method: GET
URL: http://<ip>/img/snapshot.cgi?[size=<value>][&quality=<value>]

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>size</td>
<td>Image resolution</td>
</tr>
<tr>
<td></td>
<td>1: 160x120</td>
</tr>
<tr>
<td></td>
<td>2: 320x240</td>
</tr>
<tr>
<td></td>
<td>3: 640x480</td>
</tr>
<tr>
<td>quality</td>
<td>Quality level</td>
</tr>
<tr>
<td></td>
<td>1: Very high</td>
</tr>
<tr>
<td></td>
<td>2: High</td>
</tr>
<tr>
<td></td>
<td>3: Normal</td>
</tr>
<tr>
<td></td>
<td>4: Low</td>
</tr>
<tr>
<td></td>
<td>5: Very low</td>
</tr>
</tbody>
</table>

Snapshot (continued)
Example 1: To snapshot a 640x480 very high quality JPEG image from network Camera 192.168.0.99,
http://192.168.0.99/img/snapshot.cgi?size=3&quality=1
Example 2: To snapshot a JPEG image from network Camera 192.168.0.99 (with current resolution and quality),
http://192.168.0.99/img/snapshot.cgi
Example 3: To snapshot a low quality JPEG image with current resolution from the network Camera 192.168.0.99,
http://192.168.0.99/img/snapshot.cgi?quality=4
Return: A JPEG image is returned to the client with the user specified resolution and quality.

HTTP/1.0 200 OK
...
content-type: image/jpeg
...
<JPEG image data>

SDP (MPEG-4 video only, not for MJPEG video)
Method: GET
URL: http://<ip>/img/media.sdp
Return: A SDP file is returned.

HTTP/1.0 200 OK
...
<SDP data>

RTP/RTSP (MPEG-4 video only, not for MJPEG video)
The user can stream video and audio through the following URLs.
  Video and audio: rtsp://<ip>/img/media.sav
  Video only: rtsp://<ip>/img/video.sav
  Audio only: rtsp://<ip>/img/audio.sav

Wireless-N Internet Home Monitoring Camera
If the client player is the QuickTime player, the latency is always approximately 3 second. If there is no audio content in the streaming, you can use the extension parameter “[?&]latency=no” to push the QuickTime player to play the streaming video without any latency, but this method causes the frame rate to be unstable.

Example: \texttt{rtsp://<ip>/img/video.sav?latency=no}

Note that the camera is able to support the following four RTP protocols, but the user needs to specify the desired RTP protocol in the player.

- Unicast RTP
- Multicast RTP
- RTP over RTSP (RTP over TCP)
- RTP over RTSP over HTTP (HTTP tunnel)

Return: Video and/or audio is returned.

\textbf{Player Commands}

\textbf{Query}

Method: \texttt{GET}

URL: \texttt{http://<ip>/util/query.cgi[?extension=value]}

This command retrieves the hardware capability, component setting or current status. For example, you can query whether the camera has a speaker, I/O port, etc.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>extension</td>
<td>Extension value</td>
</tr>
<tr>
<td></td>
<td>yes: extension is enabled, the extended data as below will be extended to generic responses</td>
</tr>
<tr>
<td></td>
<td>fw_ver=V1.0.0 build 01\n</td>
</tr>
<tr>
<td></td>
<td>ip_addr=192.168.1.12\n</td>
</tr>
<tr>
<td></td>
<td>netmask=255.255.255.0\n</td>
</tr>
<tr>
<td></td>
<td>gateway=192.168.1.1\n</td>
</tr>
<tr>
<td></td>
<td>current_time=07/02/2008 10:12:10\n</td>
</tr>
<tr>
<td></td>
<td>timezone=4\n</td>
</tr>
<tr>
<td></td>
<td>http_port=80\n</td>
</tr>
<tr>
<td></td>
<td>rtsp_port=554\n</td>
</tr>
</tbody>
</table>

Return: \texttt{HTTP/1.0 200 OK \n \n ... \n content-type: text/plain\n \n <parameter pair>\n <parameter pair>\n ....}
Here are the details of the parameter pairs:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hostname</td>
<td>Camera name, example: MyCamera</td>
</tr>
<tr>
<td>description</td>
<td>Camera description, example: Hello camera</td>
</tr>
<tr>
<td>defname</td>
<td>Camera's default name, example: default name</td>
</tr>
<tr>
<td>mac</td>
<td>Camera's MAC address, example: 00C002123456</td>
</tr>
<tr>
<td>company_name</td>
<td>Camera's company name, example: Cisco</td>
</tr>
<tr>
<td>model_number</td>
<td>Camera's model number, example: WVC80N</td>
</tr>
<tr>
<td>resolutions</td>
<td>The resolutions camera support, valid values: [640<em>480,320</em>240,160*120]</td>
</tr>
<tr>
<td>mpeg4_resolution</td>
<td>Current MPEG-4 resolution setting, valid values: [640,320,160]</td>
</tr>
<tr>
<td>mjpeg_resolution</td>
<td>Current JPEG resolution setting, valid values: [640,320,160]</td>
</tr>
<tr>
<td>mic_in</td>
<td>Current MIC in setting, valid values: [on,off]</td>
</tr>
<tr>
<td>speaker_out</td>
<td>Current Speaker out setting, valid values: [on,off]</td>
</tr>
<tr>
<td>ptctrl</td>
<td>PT HW capability, valid values: [on,off]</td>
</tr>
<tr>
<td>ioctrl</td>
<td>IO HW capability, valid values: [on,off]</td>
</tr>
<tr>
<td>serial</td>
<td>RS485 capability, valid values: [pelco,off]</td>
</tr>
<tr>
<td>privacy_button</td>
<td>Privacy button HW capability, valid values: [on,off]</td>
</tr>
<tr>
<td>pir_sensor</td>
<td>PIR sensor HW capability, valid values: [on,off]</td>
</tr>
<tr>
<td>wled</td>
<td>White light LED HW capability, valid values: [on,off]</td>
</tr>
<tr>
<td>irled</td>
<td>IR LED HW capability, valid values: [on,off]</td>
</tr>
<tr>
<td>wps_pin_code</td>
<td>WPS PIN code value, example: 00000048</td>
</tr>
<tr>
<td>wireless</td>
<td>Wireless HW capability, example: [on,off]</td>
</tr>
</tbody>
</table>

URL:  [http://<ip>/img/query.cgi](http://<ip>/img/query.cgi)

This command retrieves the accessed user's privilege with some hardware features. For example, the user may be able to use Speaker Out, but can't control the I/O ports.

Return:

```
HTTP/1.0 200 OK 
...
content-type: text/plain

mic_in=[on|off]r
speaker_out=[on|off]r
ptctrl=[on|off]r
ioctrl=[on|off]r
```
Admin-Level CGI Commands (Administrator level privilege)

**Query FW Version**
Method: GET
URL: `http://<ip>/adm/sysinfo.cgi`
Return: The Camera returns a Web page that contains the following messages:

```
HTTP/1.0 200 OK \\
...
content-type: text/plain \\
\
Firmware Version: v1.0.00 build 01 \\
Serial Number: SQJ00G100001 \\
```

**Reboot**
Method: GET
URL: `http://<ip>/adm/reboot.cgi`
Return:

```
HTTP/1.0 200 OK \\
...
content-type: text/plain \\
\
OK \\
```

**Restore to Factory Defaults**
Method: GET
URL: `http://<ip>/adm/reset_to_default.cgi`
Return:

```
HTTP/1.0 200 OK \\
...
content-type: text/plain \\
\
OK \\
```

**Get/Set Group Parameters**

**Get group parameters**
Method: GET
URL: `http://<ip>/adm/get_group.cgi?<parameter>=<value>[&<value>...]`
### CGI Commands

#### Parameter Value and description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
</table>
| group     | 1. To get all group settings  
            group_name (The group name is not case sensitive.)  
            2. To get a specific setting from a group  
            group_name.parameter_name  
            3. To get the settings from multiple groups  
            group_name&group_name... |

Return: All group settings or one group setting is returned as follows:

```plaintext
HTTP/1.0 200 OK
...
content-type: text/plain
...
[group1]
<parameter pair>
<parameter pair>
...
[group2]
<parameter pair>
<parameter pair>
...

Where <parameter pair> is <parameter_name>=<parameter_value>.

### Set Group Parameters

**Method:** GET

**URL:** 

http://<ip>/adm/set_group.cgi?<parameter>=<value>[&<parameter pair>...]

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>group</td>
<td>Group name is specified here. (The group name is not case sensitive.)</td>
</tr>
</tbody>
</table>

Return: A successful request returns all group parameters or the specified parameters as below:

```plaintext
HTTP/1.0 200 OK
...
content-type: text/plain
...

OK
```
Get/Set System Date and Time

Method: GET

URL: http://<ip>/adm/date.cgi?action=<value>[&<parameter pair>…]

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>action</td>
<td>Get/Set the system date and time</td>
</tr>
<tr>
<td>get=</td>
<td>Get the system date and time</td>
</tr>
<tr>
<td>set=</td>
<td>Set the system date and time</td>
</tr>
<tr>
<td>time_zone</td>
<td>The index value in time zone table (Read-only)</td>
</tr>
<tr>
<td>year</td>
<td>Year (2005~2037)</td>
</tr>
<tr>
<td>month</td>
<td>Month (1~12)</td>
</tr>
<tr>
<td>day</td>
<td>Day (1~31)</td>
</tr>
<tr>
<td>hour</td>
<td>Hour (0~23)</td>
</tr>
<tr>
<td>minute</td>
<td>Minute (0~59)</td>
</tr>
<tr>
<td>second</td>
<td>Second (0~59)</td>
</tr>
</tbody>
</table>

Return: A successful request returns all group parameters or the specified parameters as below:

HTTP/1.0 200 OK

... content-type: text/plain

...
OK
<parameter pair>
<parameter pair>
...

Upgrade Firmware

Method: POST

URL: http://<ip>/adm/upgrade.cgi

Message body:

...
...
<boundary=...>
...
<FW binary data>

The client must wait at least 5 minutes to make sure the upgrade is complete.

Return: A Firmware Upgrade Progress window is returned.
**Upload/Download Configuration**

**Download Configuration Content**

**Method:** GET

**URL:** `http://<ip>/adm/admcfg.cfg`

**Return:**

```
HTTP/1.0 200 OK 
...
content-type: application/configuration

<configuration content encoded in Base64 format>
```

All data in the configuration is encoded in a Base64 format. Please refer to the encoder/decoder sample codes at the end of this appendix.

To validate the data, there is a hidden checksum inside the configuration content. Because the dword-aligned checksum algorithm is used, the last data misaligned by dword can be ignored.

**Upload Configuration Content**

**Method:** POST

**URL:** `http://<ip>/adm/upload.cgi`

**Message body:**

```
...
<boundary=...>
<configuration content encoded in Base64 format>
```

All data in the configuration is encoded in a Base64 format. Please refer to the encoder/decoder sample codes at the end of this appendix.

The Camera automatically reboots after receiving and loading the configuration content.

**Return:**

```
HTTP/1.0 200 OK 
...
content-type: text/plain

OK
```


**Download Logs**

Method: GET  
URL: http://<ip>/adm/log.cgi

Return:

HTTP/1.0 200 OK

...  
content-type: text/plain

...  
<log data>

**Motion Detection Commands**

You can configure the motion detection sensitivity area to be either the entire screen or up to three specific areas. Each area can have its own name and threshold setting. Once the moving indicators exceed the user-configured threshold, a motion detection event will be triggered.

This is the definition of the sensitivity area coordinates on a 640x480 resolution image.

The home (0, 0) position is located at the left-top corner. The horizontal position, x, will be expressed as an integer value from 0 to 639 (left to right). The vertical position, y, will be expressed as an integer value from 0 to 479 (top to bottom).

\[(X1, Y1) = (0, 0)\]

\[(X2, Y2) = (639, 479)\]

The left-top corner is the start position. The right-bottom corner is the stop position.

Whatever the current streaming resolution is, the replied coordinate always maps to the 640x480 scale.

**Get Motion Detection Settings**

Method: GET  
URL: http://<IP>/adm/get_group.cgi?group=MOTION

(Please refer to Get Group Parameters command.)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>group</td>
<td>Motion</td>
</tr>
<tr>
<td></td>
<td>(Required) This notifies the CGI that the request is for &quot;motion detection&quot; group.</td>
</tr>
</tbody>
</table>
Return: All group settings or one group setting is returned as below:

```
HTTP/1.0 200 OK

... content-type: text/plain
...

[MOTION]
md_mode=[0|1] ← 0=Off, 1=On
md_point=X,Y
md_switch1=[0|1] ← 0=Off, 1=On
md_name1=Window_1 ← 12 ASCII characters
md_window1=X1, Y1, X2, Y2 ← Relative to 640x480 resolution
md_threshold1=125 ← Threshold: 0 ~ 255
md_switch2=[0|1]
md_name2=Window_2
md_window2=X1, Y1, X2, Y2
md_threshold2=125
md_switch3=[0|1]
md_name3=Window_3
md_window3=X1, Y1, X2, Y2
md_threshold3=125
md_switch4=[0|1]
md_name4=Window_4
md_window4=X1, Y1, X2, Y2
md_threshold4=125
```

Set Motion Detection Settings

Method: GET

URL: `http://<IP>/adm/set_group.cgi?group=MOTION&<parameter>=<value>...`

(Please refer to Set Group Parameters command.)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>md_mode</td>
<td>Motion detection</td>
</tr>
<tr>
<td></td>
<td>0 = Off</td>
</tr>
<tr>
<td></td>
<td>1 = On</td>
</tr>
<tr>
<td>md_point</td>
<td>The position of motion under PT mode</td>
</tr>
<tr>
<td></td>
<td>Format: X,Y</td>
</tr>
<tr>
<td></td>
<td>Range: X = -63 to 63 (by model)</td>
</tr>
<tr>
<td></td>
<td>Y = -36 to 28 (by model)</td>
</tr>
<tr>
<td>md_switch1</td>
<td>Motion detection window</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>md_switch4</td>
<td>Motion detection window</td>
</tr>
<tr>
<td></td>
<td>0 = Off</td>
</tr>
<tr>
<td></td>
<td>1 = On</td>
</tr>
</tbody>
</table>
Appendix D

CGI Commands

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>md_name1</td>
<td>Name of the motion detection area 1 – 4 (12 ASCII characters)</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>md_name4</td>
<td></td>
</tr>
<tr>
<td>md_window1</td>
<td>The coordinates of motion detection window N (relative to resolution 640x480) X1, Y1, X2, Y2</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>md_window4</td>
<td></td>
</tr>
<tr>
<td>md_threshold1</td>
<td>The threshold of motion detection window N (0 - 255)</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>md_threshold4</td>
<td></td>
</tr>
</tbody>
</table>

Return:

HTTP/1.0 200 OK 
...
content-type: text/plain
\r\nOK\r

Notes: The first motion window is used for full screen.

- Use “md_switch1” as the switch for “full screen” or “sub-windows”.
- The md_window1 is always set to 640x480 resolution.

If “md_switch1=1”, then the Camera will detect the entire video screen. With this setting, the remaining windows (sub-window 1~3) cannot be configured.
If “md_switch1=0”, then the Camera will detect the “md_window2~4” areas.

**Wireless Commands**

**Wireless status query**

Method: GET

URL: **http://<ip>/adm/wireless_status.cgi**

Return: The Camera returns a Web page that contains the following messages:

HTTP/1.0 200 OK 
...
content-type: text/plain
\r\nsignal_strength=100\r
# Wireless signal, RSSI, Integer type, the value can be 1~100, 100 is the strongest.
\r\nOK
SMB/CIFS Server/SharedFolder Commands

SMB/CIFS Server Survey

Method: GET

URL: `http://<ip>/adm/smb_survey.cgi?[?parameter=value[&parameter=value...]]`

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>timeout</td>
<td>(Optional) The timeout in seconds of the CGI. The CGI will stop surveying and return the result if it times out. Valid values: 5-120 (default is 30)</td>
</tr>
<tr>
<td>action</td>
<td>(Optional) This CGI will terminate survey action. stop</td>
</tr>
</tbody>
</table>

Return: The result will be returned in XML format (the content size depends on how many servers are in the network). A successful request returns the result of the Samba site survey as shown below (this is case sensitive):

```xml
<?xml version="1.0" encoding="utf-8"?>
<List>
  <WorkGroup>
    <Name></Name>
    <List>
      <Server>
        <Name></Name>
        <Comment></Comment>
      </Server>
    </List>
  </WorkGroup>
</List>
```

XML tag description:

<table>
<thead>
<tr>
<th>Parameter (WorkGroup)</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The work group name (up to 15 characters)</td>
</tr>
<tr>
<td>Name (Server)</td>
<td>The PC name of the server (up to 63 characters)</td>
</tr>
<tr>
<td>Comment (Server)</td>
<td>The description of the server (up to 256 characters)</td>
</tr>
</tbody>
</table>
SMB/CIFS SharedFolder Command

Method: GET

URL: `http://<ip>/adm/smb_dirctrl.cgi?server=value[&parameter=value...]`

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server</td>
<td>Server address (up to 64 characters)</td>
</tr>
<tr>
<td>path</td>
<td>(Optional, depends on the parameter “cmd”) The operation folder (up to 128 characters)</td>
</tr>
<tr>
<td>cmd</td>
<td>(Optional) Valid values are: mkdir: create a new folder, given by the “path” parameter rmdir: delete a folder, given by the “path” parameter If this parameter is omitted, the CGI will survey the shared folder list in the given URL.</td>
</tr>
<tr>
<td>user</td>
<td>(Optional) The username to login to the server</td>
</tr>
<tr>
<td>pass</td>
<td>(Optional) The password to login to the server</td>
</tr>
</tbody>
</table>

Return: A successful request returns the following case sensitive result. The <List> content is included only when the status is ok.

```
HTTP/1.0 200 OK

...
Content-type: text/xml
...

<?xml version=”1.0” encoding=”utf-8”?>
<List>
  <Status></Status>
  <Folder>
    <Name></Name>
    ...
  </Folder>
</List>
```

Xml tag description:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Value as following (all are in lower case): ok → Create the folder successfully. invalid → Invalid input parameters unauth → Need username/password denied → Denied , resource occupied file-exist → There is the file, reject the operation. error → Error happened</td>
</tr>
<tr>
<td>Name</td>
<td>The folder name</td>
</tr>
</tbody>
</table>
Base-64 Encoder/Decoder Sample Codes

/** Standard BASE64 table
// char keyStr[] = "ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/=";
/** SerComm BASE64 table
char keyStr[] = "ACEGIKMOQSUWYBDFHJLNPRTVXZacegikmoqsuwybdfhjlnprt vxz0246813579=+/";

// Description: Encrypt the input data with the base64
// Input: char i_buf[] - input buffer
// Output: char o_buf[] - output buffer
// Return: encrypted string length

int encode64(char i_buf[], char o_buf[])
{
  char chr1 = (char)0;
  char chr2 = (char)0;
  char chr3 = (char)0;
  //These are the 3 bytes to be encoded

  int enc1 = 0;
  int enc2 = 0;
  int enc3 = 0;
  int enc4 = 0; //These are the 4 encoded bytes
  int i = 0, j = 0; //Position counter

  do { //Set up the loop here
    chr1 = i_buf[i++]; //Grab the first byte

    if(i < strlen(i_buf))
      chr2 = i_buf[i++]; //Grab the second byte

    if(i < strlen(i_buf))
      chr3 = i_buf[i++]; //Grab the third byte

    //Here is the actual base64 encode part.
    //There really is only one way to do it.

    enc1 = chr1 >> 2;
    enc2 = (chr1 & 3) << 4 | (chr2 >> 4);
    enc3 = (chr2 & 15) << 2 | (chr3 >> 6);
    enc4 = chr3 & 63;
    if(chr2 == (char)0) {
      enc3 = enc4 = 64;
    }

    o_buf[j++] = keyStr[enc1];
    o_buf[j++] = keyStr[enc2];
    o_buf[j++] = keyStr[enc3];
    o_buf[j++] = keyStr[enc4];
  }
  while (i < strlen(i_buf));

  o_buf[j] = 0;
  return j;
}
else if(chr3 == (char)0) {
    enc4 = 64;
}

o_buf[j++] = keyStr[enc1];
o_buf[j++] = keyStr[enc2];
o_buf[j++] = keyStr[enc3];
o_buf[j++] = keyStr[enc4];

// OK, now clean out the variables used.
chr1 = chr2 = chr3 = (char)0;
enc1 = enc2 = enc3 = enc4 = (char)0;
} while (i < strlen(i_buf)); //And finish off the loop

//Now return the encoded values.
return j;
}

// Description:   decrypt the input data with the base64
// Input:
//                 char i_buf[] - input buffer
// Output:
//                 char o_buf[] - output buffer
// Return:
//                 decrypted string length
//----------------------------------------------------------------------
int decode64(char i_buf[], char o_buf[]) {
    //These are the 3 bytes to be encoded
    char chr1 = (char)0;
    char chr2 = (char)0;
    char chr3 = (char)0;

    //These are the 4 encoded bytes
    int enc1 = 0;
    int enc2 = 0;
    int enc3 = 0;
    int enc4 = 0;

    int i = 0, j = 0; //Position counter

do { //Here's the decode loop.
    //Grab 4 bytes of encoded content.
    enc1 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    if(i < strlen(i_buf))
        enc2 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    if(i < strlen(i_buf))
        enc3 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    if(i < strlen(i_buf))
        enc4 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    
    o_buf[j++] = keyStr[enc1];
    o_buf[j++] = keyStr[enc2];
    o_buf[j++] = keyStr[enc3];
    o_buf[j++] = keyStr[enc4];

    // OK, now clean out the variables used.
    chr1 = chr2 = chr3 = (char)0;
    enc1 = enc2 = enc3 = enc4 = (char)0;
} while (i < strlen(i_buf)); //And finish off the loop

    //Now return the encoded values.
    return j;
}

//----------------------------------------------------------------------
// Description:   decrypt the input data with the base64
// Input:
//                 char i_buf[] - input buffer
// Output:
//                 char o_buf[] - output buffer
// Return:
//                 decrypted string length
//----------------------------------------------------------------------
int decode64(char i_buf[], char o_buf[]) {
    //These are the 3 bytes to be encoded
    char chr1 = (char)0;
    char chr2 = (char)0;
    char chr3 = (char)0;

    //These are the 4 encoded bytes
    int enc1 = 0;
    int enc2 = 0;
    int enc3 = 0;
    int enc4 = 0;

    int i = 0, j = 0; //Position counter

do { //Here's the decode loop.
    //Grab 4 bytes of encoded content.
    enc1 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    if(i < strlen(i_buf))
        enc2 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    if(i < strlen(i_buf))
        enc3 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    if(i < strlen(i_buf))
        enc4 = (int)(strchr(keyStr, i_buf[i++]) - keyStr);
    
    o_buf[j++] = keyStr[enc1];
    o_buf[j++] = keyStr[enc2];
    o_buf[j++] = keyStr[enc3];
    o_buf[j++] = keyStr[enc4];

    // OK, now clean out the variables used.
    chr1 = chr2 = chr3 = (char)0;
    enc1 = enc2 = enc3 = enc4 = (char)0;
} while (i < strlen(i_buf)); //And finish off the loop

    //Now return the encoded values.
    return j;
}
// Heres the decode part. There's really only one way to do it.
chr1 = (enc1 << 2) | (enc2 >> 4);
chr2 = ((enc2 & 15) << 4) | (enc3 >> 2);
chr3 = ((enc3 & 3) << 6) | enc4;
o_buf[j++] = (char)chr1;

if (enc3 != 64) {
o_buf[j++] = (char)chr2;
}

if (enc4 != 64) {
o_buf[j++] = (char)chr3;
}

// now clean out the variables used
chr1 = (char)0;
chr2 = (char)0;
chr3 = (char)0;

enc1 = 0;
enc2 = 0;
enc3 = 0;
enc4 = 0;
} while (i < strlen(i_buf)); // finish off the loop

// Now return the decoded values.
return j;
Appendix E: Warranty Information

Limited Warranty

FOR CONSUMERS WHO ARE COVERED BY CONSUMER PROTECTION LAWS OR REGULATIONS IN THEIR COUNTRY OF PURCHASE OR, IF DIFFERENT, THEIR COUNTRY OF RESIDENCE, THE BENEFITS CONFERRED BY THIS WARRANTY ARE IN ADDITION TO ALL RIGHTS AND REMEDIES CONVEYED BY SUCH CONSUMER PROTECTION LAWS AND REGULATIONS. THIS WARRANTY DOES NOT EXCLUDE, LIMIT OR SUSPEND ANY RIGHTS OF CONSUMERS ARISING OUT OF NONCONFORMITY WITH A SALES CONTRACT. SOME COUNTRIES, STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION MAY LAST, SO THE LIMITATIONS OR EXCLUSIONS DESCRIBED BELOW MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY COUNTRY, STATE OR PROVINCE. THIS LIMITED WARRANTY IS GOVERNED BY AND CONSTRUED UNDER THE LAWS OF THE COUNTRY IN WHICH THE PRODUCT PURCHASE TOOK PLACE.

Linksys warrants the hardware in this Linksys product against defects in materials and workmanship under normal use for the Warranty Period, which begins on the date of purchase by the original end-user purchaser and lasts for the period specified below:

- One (1) year for new product
- Ninety (90) days for refurbished product

Your exclusive remedy and Linksys’ entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

Linksys additionally warrants that any media on which the software may be provided will be free from defects in materials and workmanship under normal use for a period of ninety (90) days from the date of original purchase. Your exclusive remedy and Linksys’ entire liability under this limited warranty will be for Linksys, at its option, to (a) replace the software media, or (b) refund the purchase price of the software media.

Exclusions and Limitations

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non-Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

EXCEPT FOR THE LIMITED WARRANTY ON MEDIA SET FORTH ABOVE AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ALL SOFTWARE AND SERVICES PROVIDED BY LINKSYS WITH THE PRODUCT, WHETHER FACTORY LOADED ON THE PRODUCT OR CONTAINED ON MEDIA ACCOMPANYING THE PRODUCT, IS PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND. Without limiting the foregoing, Linksys does not warrant that the operation of the product, software or services will be uninterrupted or error free. Also, due to the continual development of new techniques for intruding upon and attacking networks, Linksys does not warrant that the product, software or services, or any equipment, system or network on which the product, software or services are used will be free of vulnerability to intrusion or attack. The product may include or be bundled with third party software or service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party’s service for which this product’s use or operation may require.

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED.

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, LOSS OF THE ABILITY TO USE ANY THIRD PARTY PRODUCTS, SOFTWARE OR SERVICES, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT, SOFTWARE OR ANY SERVICES PROVIDED IN RESPECT OF SUCH PRODUCT, SOFTWARE OR SERVICE, EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY
OF SUCH DAMAGES. TO THE EXTENT NOT PROHIBITED BY
APPLICABLE LAW, IN NO EVENT WILL LINKSYS’ LIABILITY
EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT.
The foregoing limitations will apply even if any warranty
or remedy provided under this limited warranty fails of its
essential purpose.

No Linksys employee, agent or reseller is authorized to
make any verbal or written modification, extension or
addition to this warranty, and Linksys expressly disclaims
any such change to this warranty. If any portion of this
limited warranty is found to be void or unenforceable, its
remaining provisions shall remain in full force and effect.

Obtaining Warranty Service

If you have a question about your product
or experience a problem with it, please go to
www.linksysbycisco.com/support where you will find a
variety of online support tools and information to assist
you with your product. If the product proves defective
during the Warranty Period, contact Linksys Technical
Support (or, if you purchased your product from a service
provider, contact the service provider) for instructions on
how to obtain warranty service. The telephone number
for Linksys Technical Support in your area can be found
by clicking the “Contact Us” link on the home page of
www.linksysbycisco.com. Have your product serial
number and proof of purchase on hand when calling. A
DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO
PROCESS WARRANTY CLAIMS. If you are requested to
return your product, you will be given a Return Materials
Authorization (RMA) number. You are responsible for
properly packaging and shipping your product at your
cost and risk. You must include the RMA number and
a copy of your dated proof of original purchase when
returning your product. Products received without a
RMA number and dated proof of original purchase will
be rejected. Do not include any other items with the
product you are returning. Defective product covered
by this limited warranty will be repaired or replaced and
returned to you without charge. Customers outside of
the United States of America and Canada are responsible
for all shipping and handling charges, custom duties,
VAT and other associated taxes and charges. Repairs or
replacements not covered under this limited warranty will
be subject to charge at Linksys’ then-current rates.

Technical Support

This limited warranty is neither a service nor a
support contract. Information about Linksys’ current
technical support offerings and policies (including
any fees for support services) can be found at
www.linksysbycisco.com/support.

Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine,
CA 92623.
Appendix F: Regulatory Information

FCC Statement

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 product has been tested and complies with the specifications 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 according to 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 is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver’s
- Consult a dealer or an experienced radio/TV technician for assistance

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. IEEE 802.11b or 802.11g operation of this product in the USA is firmware-limited to channels 1 through 11.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 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.

Safety Notices

**WARNING:** Do not use this product near water, for example, in a wet basement or near a swimming pool.

**WARNING:** Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

**WARNING:** This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.
**Industry Canada Statement**

This Class B digital apparatus complies with Canadian ICES-003 and RSS210.

Operation is subject to the following two conditions:

1. This device may not cause interference and
2. This device must accept any interference, including interference that may cause undesired operation of the device. This device has been designed to operate with an antenna having a maximum gain of 1.5 dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

**Industry Canada Radiation Exposure Statement:**

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

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

**Vire Wireless Disclaimer**

The maximum performance for wireless is derived from IEEE Standard 802.11 specifications. Actual performance can vary, including lower wireless network capacity, data throughput rate, range and coverage. Performance depends on many factors, conditions and variables, including distance from the access point, volume of network traffic, building materials and construction, operating system used, mix of wireless products used, interference and other adverse conditions.

**Avis de non-résponsabilité concernant les appareils sans fil**

Les performances maximales pour les réseaux sans fil sont tirées des spécifications de la norme IEEE 802.11. Les performances réelles peuvent varier, notamment en fonction de la capacité du réseau sans fil, du débit de la transmission de données, de la portée et de la couverture. Les performances dépendent de facteurs, conditions et variables multiples, en particulier de la distance par rapport au point d’accès, du volume du trafic réseau, des matériaux utilisés dans le bâtiment et du type de construction, du système d’exploitation et de la combinaison de produits sans fil utilisés, des interférences et de toute autre condition défavorable.

This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:

---

**English - Environmental Information for Customers in the European Union**

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

---

**Čeština (Czech) - Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie**

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem označeným symbolem na produktu ani na jeho obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol uvádí, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prostřednictvím určených sběrných míst stanovených vládou nebo místními úřady. Správná likvidace a recyklace pomáhá předcházet potenciálním negativním dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.

---

**Dansk (Danish) - Miljøinformation for kunder i EU**


---

**Deutsch (German) - Umweltinformation für Kunden innerhalb der Europäischen Union**

Eesti (Estonian) - Keskkonnaalane informatiisoon
Euroopa Liidu asuvatele klientidele


Español (Spanish) - Información medioambiental para clientes de la Unión Europea

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este sÍmbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Ελληνικά (Greek) - Στοιχεία περιβαλλοντικής προστασίας για πελάτες εντός της Ευρωπαϊκής Ένωσης

Σύμφωνα με την Κοινοτική Οδηγία 2002/96/EC, ο εξοπλισμός που φέρει αυτό το σύμβολο στο προϊόν ή/και τη συσκευασία του δεν πρέπει να απορρίπτεται μαζί με τα μη διαχωρισμένα αστικά απορριμμάτα. Το σύμβολο υποδεικνύει ότι αυτό το προϊόν θα πρέπει να απορρίπτεται ξεχωριστά από τα συνήθη οικιακά απορριμμάτα. Είστε υπεύθυνος για την απόρριψη του παρόντος προϊόντος και άλλων ηλεκτρικού και ηλεκτρονικού εξοπλισμού μέσω των καθορισμένων εγκαταστάσεων συγκέντρωσης απορριμμάτων, οι οποίες ορίζονται από το κράτος ή τις αρμόδιες τοπικές αρχές. Η σωστή απόρριψη και ανακύκλωση συμβάλλει στην πρόληψη ενδεχόμενων αρνητικών επιπτώσεων στο περιβάλλον και την υγεία. Για περισσότερες πληροφορίες σχετικά με την απόρριψη του παλαιού σας εξοπλισμού και άλλων ηλεκτρικών και ηλεκτρονικών εξοπλισμών, αναλογικά ελέγχετε και τις υπηρεσίες αποκομιδής απορριμμάτων της Ευρωπαϊκής Ένωσης.

Italiano (Italian) - Informazioni relative all’ambiente per i clienti residenti nell’Unione Europea

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sullo stesso non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiutano a prevenire conseguenze potenzialmente negative per l’ambiente e per la salute dell’essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

Latviešu valoda (Latvian) - Ekoloģiska informācija klientiem Eiropas Savienības jurisdikcijā

Regulatory Information

Wireless-N Internet Home Monitoring Camera

Appendix F

Lietuviųkai (Lithuanian) - Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams

Europos direktyva 2002/96/EC numato, kad įrankos, kuri ir Σ kurios pakuotė yra pažymėta šiuo simboliu (iveskite simbolį), negalima šalinti kartu su nerūšiuotomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminių reikia šalinti atskirai nuo bendro buitiniojų atliekų srauto. Jūs privalate užtikrinti, kad ši iki elktros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimą sistemą. Tinkamai šalinant ir perdirbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiau informacijos apie įrankio šalinimą ir šalinti ši gaminį gali pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybą arba pardavėjo, kuriose įsigijote tą gaminį.

Malti (Maltese) - Informazzjoni Ambjentali għal Klijenti fl-Unjoni Ewropea


Polski (Polish) - Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem Σ znajdujący się na produkcji i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwym sposób i jego recykling pomaga zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb oczyszczania miasta lub sklepu, w którym produkt został nabyty.

Nederlands (Dutch) - Milieu-informatie voor klanten in de Europese Unie

De Europese Richtlijn 2002/96/EC schrijft voor dat apparaatje die Σ op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparaatje via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparaatje voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparaatje neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaft.

Norsk (Norwegian) - Miljøinformasjon for kunder i EU

Português (Portuguese) - Informação ambiental para clientes da União Europeia

A Directiva Europeia 2002/96/CE exige que o equipamento que exibe este símbolo não no produto e/ou na sua embalagem seja eliminado junto com os resíduos municipais não separados. O símbolo indica que este produto deve ser eliminado separadamente dos resíduos domésticos regulares. É da sua responsabilidade eliminar este e qualquer outro equipamento eletrónico através das instalações de recolha designadas pelas autoridades governamentais ou locais. A eliminação e reciclagem corretas ajudarão a prevenir as consequências negativas para o ambiente e para a saúde humana. Para obter informações mais detalhadas sobre a forma de eliminar o seu equipamento antigo, contacte as autoridades locais, os serviços de eliminação de resíduos ou o estabelecimento comercial onde adquiriu o produto.

Română (Romanian) - Informaţii de mediu pentru clienţii din Uniunea Europeană


Slovenčina (Slovak) - Informácie o ochrane životného prostredia pre zákazníkov v Európskej unii

Podľa európskej smernice 2002/96/ES zariadenie s týmto symbolom na produkte a/alebo jeho balení nesmie byť likvidované spolu s netriedeným komunálnym odpadom. Symbol znamená, že produkt by sa mal likvidovať oddelene od bežného odpadu z domácnosti. Je vašou povinnosťou likvidovať toto i ostatné elektrické a elektronické zariadenia prostredníctvom špecializovaných zbierkovaných zariadení určených vládou alebo miestnymi orgánmi. Správna likvidácia a recykľácia pomôže zabrániť prípadným negatívnym dopadom na životné prostredie a zdravie ľudí. Ak máte záujem o podrobnejšie informácie o likvidácii starého zariadenia, obráťte sa, prosím, na miestne orgány, organizácie zaobľučujúce sa likvidáciou odpadov alebo obchod, v ktorom ste si produkt zakúpili.

WEB: For additional information, please visit www.linksysbycisco.com
Appendix G: Software End User License Agreement

Cisco Products

This product from Cisco Systems, Inc. or its subsidiary licensing the Software instead of Cisco Systems, Inc. ("Cisco") contains software (including firmware) originating from Cisco and its suppliers and may also contain software from the open source community.

Any software originating from Cisco and its suppliers is licensed under the Cisco Software License Agreement contained at Schedule 1 below. You may also be prompted to review and accept the Cisco Software License Agreement upon installation of the software. Separate terms and features of Network Magic, a Cisco Software product, are set forth in Schedule 2 below.

Any software from the open source community is licensed under the specific license terms applicable to that software made available by Cisco at www.linksysbycisco.com/gpl or as provided for in Schedule 3 below. By using the Software, you acknowledge that you have reviewed such license terms and that you agree to be bound by the terms of such licenses. Where such specific license terms entitle you to the source code of such software, that source code is available upon request at cost from Cisco for at least three years from the purchase date of this product and may also be available for download from www.linksysbycisco.com/gpl. For detailed license terms and additional information on open source software in Cisco products please look at the Cisco public web site at: www.linksysbycisco.com and www.linksysbycisco.com/gpl/ respectively. For your convenience of reference, a copy of the Cisco Software License Agreement and the main open source code licenses used by Cisco in its products are contained in the Schedules below.

Schedule 1
Cisco Software License Agreement

License. Subject to the terms and conditions of this Agreement, Cisco grants the original end user purchaser of the Software a nonexclusive license to (i) use the Software solely as embedded in, as a stand-alone application or (where authorized in the applicable documentation) for communication with such product, each solely at Cisco's discretion; (ii) if the Software is purchased separately from any Cisco Product, install the Software on personal computers within a single household or business location according to the maximum number of licenses you have purchased; and (iii) make one copy of the Software in machine-readable form and one copy of the Documentation, solely for backup purposes. This license may not be sublicensed, and is not transferable except to a person or entity to which you transfer ownership of the complete Cisco product containing the Software or complete Software product, provided you permanently transfer all rights under this Agreement and do not retain any full or partial copies of the Software, and the recipient agrees to the terms of this Agreement.

This SOFTWARE END USER LICENSE AGREEMENT IS A LEGAL AGREEMENT BETWEEN YOU AND CISCO. READ IT CAREFULLY BEFORE INSTALLING AND USING THE SOFTWARE. IT PROVIDES A LICENSE TO USE THE SOFTWARE AND CONTAINS WARRANTY INFORMATION AND LIABILITY DISCLAIMERS. BY CHECKING THE "NEXT" BOX, DOWNLOADING, INSTALLING OR USING THE SOFTWARE, OR USING THE PRODUCT CONTAINING THE SOFTWARE, YOU ARE CONFIRMING YOUR ACCEPTANCE OF THE SOFTWARE AND CONSENTING TO BE BOUND BY THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL OF THESE TERMS, THEN DO NOT CLICK ON THE "NEXT" BUTTON AND DO NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE. YOU MAY RETURN UNUSED SOFTWARE (OR, IF THE SOFTWARE IS SUPPLIED AS PART OF ANOTHER PRODUCT, THE UNUSED PRODUCT) FOR A FULL REFUND UP TO 30 DAYS AFTER ORIGINAL PURCHASE, SUBJECT TO THE RETURN PROCESS AND POLICIES OF THE PARTY FROM WHICH YOU PURCHASED SUCH PRODUCT OR SOFTWARE.

IN THE EVENT THAT YOU HAVE ELECTED TO OBTAIN A SUBSCRIPTION LICENSE, AS INDICATED IN YOUR ORDER, YOU ADDITIONALLY AGREE TO BE BOUND BY THE "TERMS OF SERVICE" SET FORTH IN SCHEDULE 2 IF APPLICABLE.

Software Licenses

The software licenses applicable to software from Cisco are made available at the Cisco public web site at: www.linksysbycisco.com and www.linksysbycisco.com/gpl/ respectively. For your convenience of reference, a copy of the Cisco Software License Agreement and the main open source code licenses used by Cisco in its products are contained in the Schedules below.

Schedule 1
Cisco Software License Agreement

License. Subject to the terms and conditions of this Agreement, Cisco grants the original end user purchaser of the Software a nonexclusive license to (i) use the Software solely as embedded in, as a stand-alone application or (where authorized in the applicable documentation) for communication with such product, each solely at Cisco's discretion; (ii) if the Software is purchased separately from any Cisco Product, install the Software on personal computers within a single household or business location according to the maximum number of licenses you have purchased; and (iii) make one copy of the Software in machine-readable form and one copy of the Documentation, solely for backup purposes. This license may not be sublicensed, and is not transferable except to a person or entity to which you transfer ownership of the complete Cisco product containing the Software or complete Software product, provided you permanently transfer all rights under this Agreement and do not retain any full or partial copies of the Software, and the recipient agrees to the terms of this Agreement.

“Software” includes, and this Agreement will apply to (a) the software of Cisco or its suppliers purchased separately or provided in or with the applicable Cisco product, and (b) any upgrades, updates, bug fixes or modified versions (“Upgrades”) or backup copies of the Software supplied to you by Cisco or an authorized reseller (whether or not for a fee), provided you already hold a valid license to the original software and have paid any applicable fee for the Upgrade.

“Documentation” means all documentation and other related materials supplied by Cisco to you pursuant to this Agreement.
License Restrictions. Other than as set forth in this Agreement, you may not (i) make or distribute copies of the Software or its related Documentation, or electronically transfer the Software or Documentation from one computer to another or over a network; (ii) alter, merge, modify, adapt, decrypt or translate the Software or related Documentation, or decompile, reverse engineer, disassemble, or otherwise reduce the Software to a human-perceivable form (except to the extent expressly permitted by law notwithstanding this provision); (iii) share, sell, rent, lease, or sublicense the Software or related Documentation; (iv) modify the Software or create derivative works based upon the Software; (v) if you make a backup copy of the Software and Documentation, you must reproduce all copyright notices and any other proprietary legends found on the original Software and Documentation; (vi) use the Software for management of a business network with more than 8 computers; (vii) use the Software under any circumstances for competitive evaluation, including developing competing software; (ix) to the extent permitted under applicable law, assign, sublicense or otherwise transfer the Software unless the prospective assignee, sublicensee or transferee expressly agrees to all the terms and conditions under this Agreement.

The Software and Documentation contain trade secrets and/or copyrighted materials of Cisco or its suppliers. You will not disclose or make available such trade secrets or copyrighted material in any form to any third party.

In the event that you fail to comply with this Agreement, the license granted to you will automatically terminate, at which time you must immediately (i) stop using the Cisco Product in which the Software is embedded, or (ii) uninstall the Software and destroy all copies of the Software and Documentation where the Software is purchased separately. All other rights of both parties and all other provisions of this Agreement will survive this termination.

Ownership. The Software and Documentation are licensed and not sold to you by Cisco and the relevant third parties set forth in Schedule 3. Cisco and its licensors retain all right, title and interest, including all copyright and intellectual property rights, in and to, the Software and Documentation and all copies and portions thereof. All rights not specifically granted to you in this Agreement are reserved by Cisco and its licensors. Your use of any software product from an entity other than Cisco that may have been recommended by Cisco is governed by such software product’s end user license agreement.

Third Party Services, Links and Advertising. Cisco may provide from within the Software links to websites or third party software products. In addition, third party services may be provided with the Software which may be subject to terms and conditions from the provider of the service. Cisco makes no representations as to the quality, suitability, functionality, or legality of any sites or products to which links may be provided or third party services, and you hereby waive any claim you might have against Cisco with respect to such sites or third party software products or services. Your correspondence or business dealings with, or participation in promotions of third parties found through the Software and any other terms, conditions, warranties, or representations associated with such dealings, are solely between you and such third party. You agree that Cisco is not responsible or liable for any loss or damage of any sort incurred as the result of any such dealings or as the result of the presence of such third party links, products or services in the Cisco Software, and Cisco may discontinue or modify the services or links offered at any time.

Collection and Processing of Information. You agree that Cisco and/or its affiliates may, from time to time, collect and process information about your Cisco product and/or the Software and/or your use of either in order (i) to enable Cisco to offer you Upgrades; (ii) to provide support and assistance with your product and/or the Software; (iii) to ensure that your Cisco product and/or the Software is being used in accordance with the terms of this Agreement; (iv) to provide improvements to the way Cisco delivers technology to you and to other Cisco customers; (v) to provide reports regarding the status and health of the network, including network traffic and application usage; (vi) to enable Cisco to comply with the terms of any agreements it has with any third parties regarding your Cisco product and/or Software; and/or (vii) to enable Cisco to comply with all applicable laws and/or regulations, or the requirements of any regulatory authority or government agency. Cisco and/or its affiliates may collect and process information that does not identify you personally. You agree that Cisco has no responsibility or liability for the deletion of or failure to store any data or other information related to your Cisco product, Software or related Services.

The reports feature of certain Software allows you to monitor the activity of computers running the Software in your home or small office. You must activate this feature in order to receive reports. If you activate the reports feature, you agree to the following: (a) the Software tracks and monitors the following components and activities in your home or office: network traffic (e.g. megabytes per hour), application usage (the foreground window is tracked and the time each application is in the foreground during active usage of the computer) and internet history. (b) For all computers on which reports feature is enabled, the above information is transmitted to servers at Cisco and/or a third party at periodic intervals while the computer is online. This information is associated and stored with the email address supplied by you when you activated the reports feature. This information is summarized into a formal report and is emailed to the identified email address. © Any computer on the network running the
Software can enable any other computer (on the same primary network) to generate reports. When a computer is enabled, that computer shows a notification that it is being monitored. As long as that computer is enabled, each time the Software is started the user of that particular computer will see a notification that it is being monitored by the reports feature. Any computer on the network with the Software installed can enable or disable any other computer from the reports feature.

In addition, Cisco may collect and store detailed information regarding your network configuration and usage for the purpose of providing you technical networking support. The information is associated with you only when you provide a unique ID number to the support representative while you are receiving help. The unique ID is generated randomly on your computer upon installation and is completely under your control.

Your use of your Cisco product and/or the Software constitutes consent by you to Cisco’s and/or its affiliates’ collection and use of such information and, for European Economic Area (EEA) customers, to the transfer of such information to a location outside the EEA. Any information collected by your Cisco product and/or the Software is done and utilized in accordance with our Privacy Policy available at Privacy Statement. Your election to use the Cisco product and/or Software indicates your acceptance of the terms of the Cisco Privacy Policy, so please review the policy carefully and check the Web site above to review updates to it.

**Software Upgrades etc.** If the Software enables you to receive Upgrades, you may elect at any time to receive these Upgrades either automatically or manually. If you elect to receive Upgrades manually or you otherwise elect not to receive or be notified of any Upgrades, you may expose your Cisco product and/or the Software to serious security threats and/or some features within your Cisco product and/or Software may become inaccessible. There may be circumstances where we apply an Upgrade automatically in order to comply with changes in legislation, legal, security or regulatory requirements or as a result of requirements to comply with the terms of any agreements Cisco has with any third parties regarding your Cisco product and/or Software. You will always be notified of any Upgrades being delivered to you. The terms of this license will apply to any such Upgrade unless the Upgrade in question is accompanied by a separate license, in which event the terms of that license will apply.

**Changes to Browser Settings and Error Processing.** By installing the Software, you acknowledge and agree that the Software may change certain settings in your Internet browser software, including the default settings for search provider and source of DNS error pages and may direct erroneous URLs to an error landing page hosted by Cisco. You may opt out of these settings by not accepting them as part of the installation process or by requesting a change to your software settings in the error process. Installing the software and changing these software settings may conflict with license agreements you have entered into with other entities, such as your Internet service provider.

Error queries that are libelous, slanderous, defamatory or that may violate the intellectual property rights of others may not be processed by Cisco or its suppliers.

**Term and Termination.** You may terminate this License at any time by destroying all copies of the Software and documentation. Your rights under this License will terminate immediately without notice from Cisco if you fail to comply with any provision of this Agreement.

**Limited Warranty.** Cisco additionally warrants that any media on which the Software may be provided will be free from defects in materials and workmanship under normal use for a period of ninety (90) days from the date of original purchase. Your exclusive remedy and Cisco’s entire liability under this limited warranty will be for Cisco, at its option, to (a) replace the Software media, or (b) refund the purchase price of the Software media.

EXCEPT FOR THE LIMITED WARRANTY ON MEDIA SET FORTH ABOVE AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ALL SOFTWARE AND SERVICES PROVIDED BY CISCO ARE PROVIDED “AS IS” WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND. Without limiting the foregoing, Cisco does not warrant that the operation of the product, software or services will be uninterrupted or error free. Also, due to the continual development of new techniques for intruding upon and attacking networks, Cisco does not warrant that the product, software or services, or any equipment, system or network on which the product, software or services are used will be free of vulnerability to intrusion or attack. The product may include or be bundled with third party software or service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party’s service for which this product’s use or operation may require.

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, NONINFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary by jurisdiction.
Disclaimer of Liabilities. TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL CISCO BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT, SOFTWARE OR ANY SERVICES PROVIDED IN RESPECT OF SUCH PRODUCT OR SOFTWARE, EVEN IF CISCO HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL CISCO’S LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. IF YOU LIVE IN THE EUROPEAN UNION, REFERENCES TO “SPECIAL, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES” SHALL MEAN ANY LOSSES WHICH (i) WERE NOT REASONABLY FORESEEABLE BY BOTH PARTIES, AND/OR (ii) WERE KNOWN TO YOU BUT NOT TO US AND/OR (iii) WERE REASONABLY FORESEEABLE BY BOTH PARTIES BUT COULD HAVE BEEN PREVENTED BY YOU SUCH AS, FOR EXAMPLE (BUT WITHOUT LIMITATION), LOSSES CAUSED BY VIRUSES, TROJANS OR OTHER MALICIOUS PROGRAMS, OR LOSS OF OR DAMAGE TO YOUR DATA. The foregoing limitations will apply even if any warranty or remedy provided under this limited warranty fails of its essential purpose.

Technical Support. This limited warranty is neither a service nor a support contract. Information about Cisco’s current technical support offerings and policies (including any fees for support services) can be found at www.linksysbycisco.com/support.

Export. Software, including technical data, may be subject to U.S. export control laws and regulations and/or export or import regulations in other countries. You agree to comply strictly with all such laws and regulations.

U.S. Government Users. The Software and Documentation qualify as “commercial items” as defined at 48 C.F.R. 2.101 and 48 C.F.R. 12.212. All Government users acquire the Software and Documentation with only those rights herein that apply to non-governmental customers. Use of either the Software or Documentation or both constitutes agreement by the Government that the Software and Documentation are “commercial computer software” and “commercial computer software documentation,” and constitutes acceptance of the rights and restrictions herein.

General Terms. This Agreement will be governed by and construed in accordance with the laws of the State of California, without reference to conflict of laws principles. The United Nations Convention on Contracts for the International Sale of Goods will not apply. If any portion of this Agreement is found to be void or unenforceable, the remaining provisions will remain in full force and effect. This Agreement constitutes the entire agreement between the parties with respect to the Software and supersedes any conflicting or additional terms contained in any purchase order or elsewhere.

Linksys, Cisco and the Cisco Logo and other trademarks contained in the Software and Documentation are trademarks or registered trademarks of Linksys, Cisco, its licensors and third parties, as the case may be. You may not remove or alter any trademark, trade names, product names, logo, copyright or other proprietary notices, legends, symbols or labels in the Software and Documentation. This Agreement does not authorize you to use Cisco’s or its licensors’ names or respective trademarks.

END OF SCHEDULE 1

Schedule 2

Network Magic Features

Network Magic License Restrictions. Other than as set forth in this Agreement or as otherwise permitted by Cisco, you may not install or execute the Network Magic Software on any non-personal computer product, including, but not limited to, a Web appliance, set top box, handheld device, phone, Web pad device, or any device running the Microsoft Windows CE operating system.

Terms of Service for Subscription Licenses. These Terms of Service only apply if you have obtained a subscription license to Network Magic as specified in your order. Such subscription licenses may subject you to fees which you are responsible for paying in order to continue to subscribe to the Services.

1. Network Magic Cancellation. You may cancel the Services at any time. If you cancel the Services, Cisco will not be obligated to provide you any Network Magic product Upgrades. If you cancel the Services, Cisco may delete data relating to you or your use of the Services from Cisco or its suppliers’ servers. To the extent not prohibited by applicable law, you understand and agree that cancellation of your Services is your sole remedy with respect to any dispute with Cisco.

2. Modifications. Cisco may modify or cancel the terms of this Agreement or the price, content, or nature of the Services (including discontinuing the Services program), upon notice to you. If Cisco modifies any of these terms, you may cancel the Service by providing written notice to Cisco via www.networkmagic.com/support of such cancellation and uninstalling the Software and discontinuing the use of the Service. Cisco may provide notice by e-mail, via Network Magic, or by publishing the changes on its Web site.

3. Email Notification. Cisco may send you email from time to time to let you know about new products and services that are available to you. You will be able to opt-out of receiving these emails using the link provided within the email. Cisco reserves the right, however, to
send you Service related email messages as long as you are a subscriber to the Service. If you wish to opt-out of receiving Service related email messages, you may cancel the Service by providing written notice via www.networkmagic.com/support to Cisco of such cancellation and uninstalling the Software and discontinuing your use of the Service.

END OF SCHEDULE 2

Schedule 3
Open Source and Third Party Licenses

Schedule 3-A

If this Cisco product contains open source software licensed under Version 2 of the “GNU General Public License” then the license terms below in this Schedule 3-A will apply to that open source software. The license terms below in this Schedule 3-A are from the public web site at http://www.gnu.org/licenses/old-licenses/gpl-2.0.html

 GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright © 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors’ reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The “Program”, below, refers to any such program or work, and a “work based on the Program” means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term “modification”.) Each licensee is addressed as “you”.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.
1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program. You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
   a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
   b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
   c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
   a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
   b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
   c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.
4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients’ exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES

END OF TERMS AND CONDITIONS

END OF SCHEDULE 3-A

Schedule 3-B

If this Cisco product contains open source software licensed under Version 2.1 of the “GNU Lesser General Public License” then the license terms below in this Schedule 3-B will apply to that open source software. The license terms below in this Schedule 3-B are from the public web site at http://www.gnu.org/licenses/old-licenses/lgpl-2.1.html

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright © 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages—typically libraries—of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General
Appendix G
Software End User License Agreement

Public License permits more lax criteria for linking other code with the library.

We call this license the “Lesser” General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a “work based on the library” and a “work that uses the library”. The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called “this License”). Each licensee is addressed as “you”.

A “library” means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The “Library”, below, refers to any such software library or work which has been distributed under these terms. A “work based on the Library” means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term “modification”)

“Source code” for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
   a) The modified work must itself be a software library.
   b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
   c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
   d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.
Appendix G

Software End User License Agreement

Wireless-N Internet Home Monitoring Camera

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead of if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “work that uses the Library”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a “work that uses the Library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a “work that uses the library”. The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a “work that uses the Library” uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a “work that uses the Library” with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:
a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user’s computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the Library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients’ exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

END OF SCHEDULE 3-B
Appendix G

Software End User License Agreement

Wireless-N Internet Home Monitoring Camera

Schedule 3-C

OPENSSL LICENSE

If this Cisco product contains open source software licensed under the OpenSSL license:

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([http://www.openssl.org/](http://www.openssl.org/)).

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

In addition, if this Cisco product contains open source software licensed under the OpenSSL license then the license terms below in this Schedule 3-C will apply to that open source software. The license terms below in this Schedule 3-C are from the public web site at [http://www.openssl.org/source/license.html](http://www.openssl.org/source/license.html).

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

The OpenSSL License

Copyright © 1998-2007 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgment: “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([http://www.openssl.org/](http://www.openssl.org/))”
4. The names “OpenSSL Toolkit” and “OpenSSL Project” must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
5. Products derived from this software may not be called “OpenSSL” nor may “OpenSSL” appear in their names without prior written permission of the OpenSSL Project.

6. Redistributions of any form whatsoever must retain the following acknowledgment: “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit ([http://www.openssl.org/](http://www.openssl.org/))”

This SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT `AS IS` AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Original SSLeay License

Copyright © 1995-1998 Eric Young (eay@cryptsoft.com) All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com).

The implementation was written so as to conform with Netscape’s SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to.

The following conditions apply to all code found in this distribution, be it the RC4, RSA, Lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young’s, and as such any Copyright notices in the code are not to be removed.

If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

   “This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)”

   The word ‘cryptographic’ can be left out if the routines from the library being used are not cryptographic related.

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: “This product includes software written by Tim Hudson (tjh@cryptsoft.com)”

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The license and distribution terms for any publicly available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license [including the GNU Public License.]

END OF SCHEDULE 3-C