WavePro™ WPV10-100™

Camera

User Manual

Part Number: LUM0078AA

Revision: Apr-2016

Safety Information

The products described in this manual can fail in a variety of modes due to misuse, age, or malfunction. Systems with these products must be designed to prevent personal injury and property damage during product operation and in the event of product failure.

Warranty

FreeWave Technologies, Inc. warrants the FreeWave® **WPV10-100**™ Camera (Product) against defects in materials and manufacturing for a period of one year from the date of shipment, depending on model number. In the event of a Product failure due to materials or workmanship, FreeWave® will, at its discretion, repair or replace the Product. For evaluation of Warranty coverage, return the Product to FreeWave® upon receiving a Return Material Authorization (RMA).

In no event will FreeWave Technologies, Inc., its suppliers, or its licensors be liable for any damages arising from the use of or inability to use this Product. This includes business interruption, loss of business information, or other loss which may arise from the use of this Product.

Warranty Policy will **not apply** in the following circumstances:

1. If Product repair, adjustments, or parts replacements are required due to accident, neglect, or undue physical, electrical, or electromagnetic stress.
2. If Product is used outside of FreeWave® specifications as stated in the Product's data sheet.
3. If Product has been modified, repaired, or altered by Customer unless FreeWave® specifically authorized such alterations in each instance in writing.

WPV10-100™ Return Material Authorization (RMA) Policy and Procedures

This policy describes the responsibilities and procedures of the Customer and FreeWave when a **WPV10-100**™ Product return is required.

When a request for a **WPV10-100**™ Product replacement has been verified by FreeWave's Customer Support, FreeWave's policy for processing the device returned due to a fault is to replace the device with a new or refurbished device upon receipt of the reported faulty product.

FreeWave's RMA policy is subject to change without notice.

In-Warranty Replacement Procedure

1. Customer contacts FreeWave Customer Support to report the non-functioning **WPV10-100**™ Product .
2. FreeWave Customer Support:
    a. Verifies that a Product replacement is the appropriate action.
    b. Issues a FreeWave RMA number.
3. The Customer pays the shipping costs to return the **WPV10-100**™ Product to FreeWave.
4. FreeWave sends a new or refurbished **WPV10-100**™ Product to the Customer.

Important!: Any visual or external damage noted on a returned Product may void the warranty.
This will be communicated back to the customer and a Purchase Order (PO) will be requested from the customer for Product replacement.

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Export Notification

FreeWave Technologies, Inc. products may be subject to control by the Export Administration Regulations (EAR) and/or the International Traffic in Arms Regulations (ITAR). Export, re-export, or transfer of these products without required authorization from the U.S. Department of Commerce, Bureau of Industry and Security, or the U.S. Department of State, Directorate of Defense Trade Controls, as applicable, is prohibited. Any party exporting, re-exporting, or transferring FreeWave products is responsible for obtaining all necessary U.S. government authorizations required to ensure compliance with these and other applicable U.S. laws. Consult with your legal counsel for further guidance.

FCC Notifications

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

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

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

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

The content of this guide covers FreeWave Technologies, Inc. models sold under FCC ID: KNYPRW0010WP.

All models sold under the FCC ID(s) listed above must be installed professionally. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This radio must not be co-located or operating in conjunction with any other antenna or radio. Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

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 & your body.

Power Source

Input voltage for the above models is 12V / 1A.

Important!: Input power shall be derived from a single Class 2 power source.

IC Notifications

This device complies with RSS-247 of the Industry Canada Rules. 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.

Ce dispositif est conforme à la norme CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de

brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable..

IC 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 and your body.

Professional Installation Instruction

1. Installation

   This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

2. Installation Location

   The product shall be installed at a location where the radiating antenna can be kept 20 cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

3. External Antenna

   Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of IC limit and is prohibited.

4. Installation Procedure

   Please refer to user's manual for the detail.

5. Warning

   Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

Instructions d'installation Professionnelle

1. Installation

   Ce produit est destine a un usage specifique et doit etre installe par un personnel qualifie maitrisant les radiofrequences et les regles s'y rapportant. L'installation et les reglages ne doivent pas etre modifies par l'utilisateur final.

2. Emplacement d'installation

   En usage normal, afin de respecter les exigences reglementaires concernant l'exposition aux radiofrequences, ce produit doit etre installe de facon a respecter une distance de 20 cm entre l'antenne emettrice et les personnes.

3. Antenn externe.

   Utiliser uniiquement les antennes approuvees par le fabricant. L'utilisation d'autres antennes peut conduire a un niveau de rayonnement essentiel ou non essentiel depassant les niveaux limites definis par IC, ce qui est interdit.

4. Procedure d'installation

   Consulter le manuel d'utilisation.

5. Avertissement

   Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne depasse pas les limites en vigueur. La violation de cette regle peut conduire a de serieuses penalites federales.

Detachable Antenna Usage

This radio transmitter (IC: 2329B-PRW0010WP / Model: WPV10) has been approved by Industry Canada to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 2329B-PRW0010WP / Model: WPV10) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Approved Antenna(s) List

Type	Gain (dBi)			Connector
	2400 MHz	2450 MHz	2500 MHz	
Dipole	1.53	1.51	1.68	RSMA

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R & TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R & TTE Directive 1999/5/EC:

- EN60950-1 /A12:2011+A2:2013 - Safety of Information Technology Equipment
- EN50385:2002 - Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40GHz) - General public.
- EN 300 328 V1.9.1:2015 - Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R & TTE Directive
- EN 301 489-1 V1.9.2:2011 - Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
- EN 301 489-17 V2.2.1:2012 - Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2.4GHz wideband transmission systems and 5GHz high performance RLAN equipment

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

C E

Language	Description
Česky [Czech]	FreeWave Technologies, Inc. tímto prohlašuje, že tento **WPV10-100**™ je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede FreeWave Technologies, Inc. erklærer herved, at følgende udstyr **WPV10-100**™ overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt FreeWave Technologies, Inc., dass sich das Gerät **WPV10-100**™ in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Language	Description
Eesti [Estonian]	Käesolevaga kinnitab FreeWave Technologies, Inc. seadme **WPV10-100**™ vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, FreeWave Technologies, Inc., declares that this **WPV10-100**™ is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente FreeWave Technologies, Inc. declara que el **WPV10-100**™ cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ FreeWave Technologies, Inc. ΔΗΛΩΝΕΙ ΟΤΙ **WPV10-100**™ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente FreeWave Technologies, Inc. déclare que l'appareil **WPV10-100**™ est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente FreeWave Technologies, Inc. dichiara che questo **WPV10-100**™ è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo FreeWave Technologies, Inc. / izgatavotāja nosaukums] deklarē, ka **WPV10-100**™ atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo FreeWave Technologies, Inc. deklaruoja, kad šis **WPV10-100**™ atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart FreeWave Technologies, Inc. dat het toestel **WPV10-100**™ in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, FreeWave Technologies, Inc., jiddikjara li dan **WPV10-100**™ jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, FreeWave Technologies, Inc. nyilatkozom, hogy a **WPV10-100**™ megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym FreeWave Technologies, Inc. oświadcza, że **WPV10-100**™ jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	FreeWave Technologies, Inc. declara que este **WPV10-100**™ está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	FreeWave Technologies, Inc. izjavlja, da je ta **WPV10-100**™ v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	FreeWave Technologies, Inc. týmto vyhlasuje, že **WPV10-100**™ spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	FreeWave Technologies, Inc. vakuuttaa täten että **WPV10-100**™ tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar FreeWave Technologies, Inc. att denna **WPV10-100**™ står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

GNU License Notification

Some of the software in the firmware is licensed under the GNU General Public License and other Open Source and Free Software licenses. You can obtain corresponding source by contacting FreeWave and requesting the source on CD.

Restricted Rights

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WPV10-100™ Product Safety

WPV10-100™ Conditions of Safe Use

- Provision shall be made to prevent the rated voltage from being exceeded by the transient disturbances of more than 140% of the peak rated voltage.
- The shall be mounted with a **minimum** IP54 ingress protection rating (as defined in EN-60529).
- The **WPV10-100**™ CANNOT be used in an environment greater than pollution degree 2.

Table Of Contents

Preface

Where to Find Additional Information
WPV10-100™ Quick Start Guide

Use the **WP201**™ website, WavePro™ Downloads, to download the latest version of the Quick Start Guide.

Contacting FreeWave Technical Support

For up-to-date troubleshooting information, check the **Support** page at www.freewave.com.

FreeWave provides technical support Monday through Friday, 8:00 AM to 5:00 PM Mountain Time (GMT -7).

- Call toll-free at 1.866.923.6168.
- In Colorado, call 303.381.9200.
- Contact us through e-mail at moreinfo@freewave.com.

Printing this Document

This document is set to print double-sided with a front cover and a back cover. Viewing this document online with a PDF viewer, may show pages intentionally left blank to accommodate the double-sided printing.

Document Styles

This document uses these styles:

- FreeWave applications appear as: **FreeWave**.
- Parameter setting text appears as: **[Page=radioSettings]**
- File names appear as: **configuration.cfg**.
- File paths appear as: **C:\Program Files (x86)\FreeWave Technologies**.
- User-entered text appears as: **xxxxxxxx**.
- 3rd-party names appear as: **Notepad**®.

Caution: Indicates a situation that **MAY** cause damage to personnel, the radio, data, or network.

Example: Provides example information of the related text.

FreeWave Recommends: Identifies FreeWave recommendation information.

Important!: Provides semi-cautionary information relevant to the text or procedure.

Note: Emphasis of specific information relevant to the text or procedure.

Tip! Provides time saving or informative suggestions about using the product.

Warning! Indicates a situation that **WILL** cause damage to personnel, the radio, data, or network.

Documentation Feedback

Send comments or questions about this document's content to techpubs@freewave.com. In the e-mail, include the title of the document or the document's part number and revision letter (found in the footer).

1. WPV10-100™ Camera Overview

Thank you for purchasing the **WavePro™ WPV10-100**™ Camera.

The FreeWave **WPV10-100**™ is a 2-Megapixel Day & Night wireless Bullet Network Camera which adds monitoring and surveillance capabilities to a variety of network environments. With a built-in removable mechanical IR-cut filter, it helps users keep an eye on what matters and get notified by what just happened on demand allowing remote 24/7 monitoring.

The **WPV10-100**™ features:

- Megapixel HD with High speed H.264 encoding ensures high quality image recording.
- LED Infrared Night Vision (to a maximum of 82 feet (25 meters)) with Automatic Activation System to deliver 24/7 non-stop monitoring.
- Wireless 802.11b/g/n Network Compliant with optimum Wi-Fi performance.
- Supports:
  - Two simultaneous stream recording with high speed H.264 encoding.
  - Push Message and Play Back on smart devices triggered by motion.

Notes

- Features and specifications are subject to change without notice.
- Trademarks and registered trademarks are the property of their respective owners.

1.1 System Requirements

These are the system requirements needed to configure the **WPV10-100**™:

- Computer with:
  - an Ethernet interface or wireless network capability
  - **Windows**® 7 or greater.
- Broadband Internet Service (Cable or DSL Modem)
- Web browser (i.e., **Internet Explorer**®, **Firefox**®, **Safari**®, **Chrome**®, **Opera**®).

1.2 **WPV10-100**™ Camera Included Accessories

The **WPV10-100**™ package contains these items:

WPV10-100™ Included Accessories		
Qty	**Description**	**Image Letter**
1	**WPV10-100**™ Quick Start Guide	
1	**WPV10-100**™ Camera	A
1	2.4GHz, 2dBi, Omni-directional, detachable Antenna	B
1	Power Adapter	C
1	Screw Set Kit	D
1	RJ-45 cable	E

Figure 1: WPV10-100™ Included Accessories

1.3 User-supplied Equipment

- Computer with:
  - **Windows**® **7** or greater
  - an Ethernet port
  - Internet browser (**Chrome**®, **Firefox**®, **Internet Explorer**®, **Opera**®, **Safari**®)
- CAT5e / CAT6 Ethernet cable
- Medium Phillips-head screwdriver
- Hammer (for wall installation)
- Drill with 8mm diameter drill bit (for wall installation)

1.4 WPV10-100™ Camera Hardware Layout

This image identifies the hardware layout of the **WPV10-100**™:
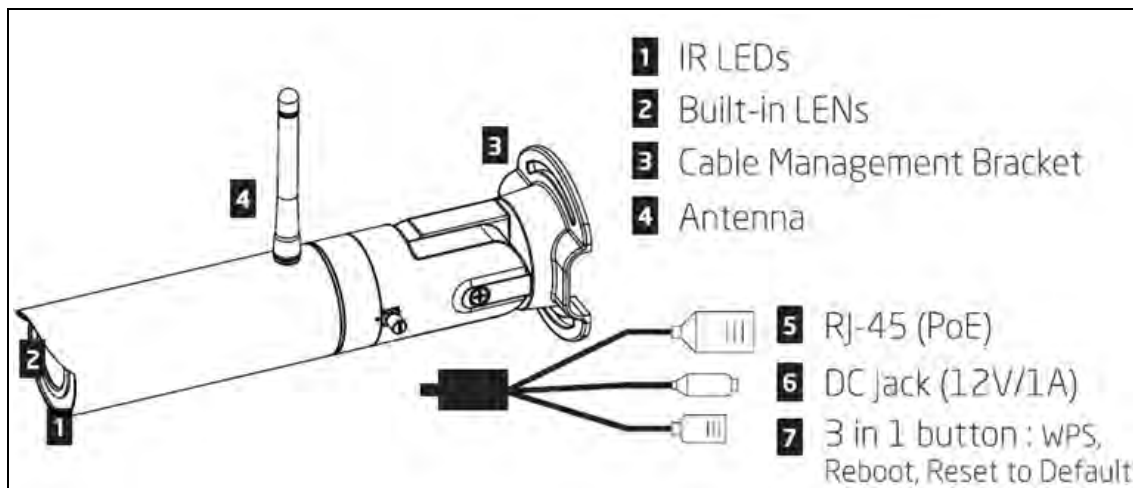
Figure 2: WPV10-100™ Camera Hardware Layout

> **Note**: See WPV10-100™ Camera Included Accessories (on page 13).

2. **WPV10-100™** Camera Installation and Setup

This section provides procedure information about installation and initial setup of the **WPV10-100™**.

2.1 Connect to the WPV10-100™ Camera

1. Screw the antenna onto the WPV10-100™.
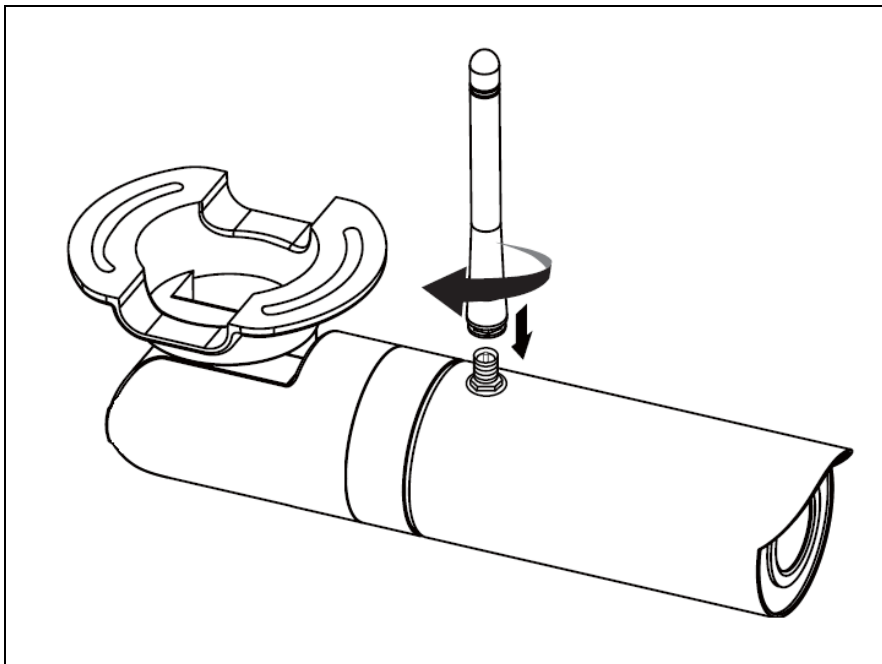
Figure 3: Antenna on the WPV10-100™

2. Connect the camera to the computer using the Ethernet cable.
3. Connect the supplied power cable from the camera to a power outlet.
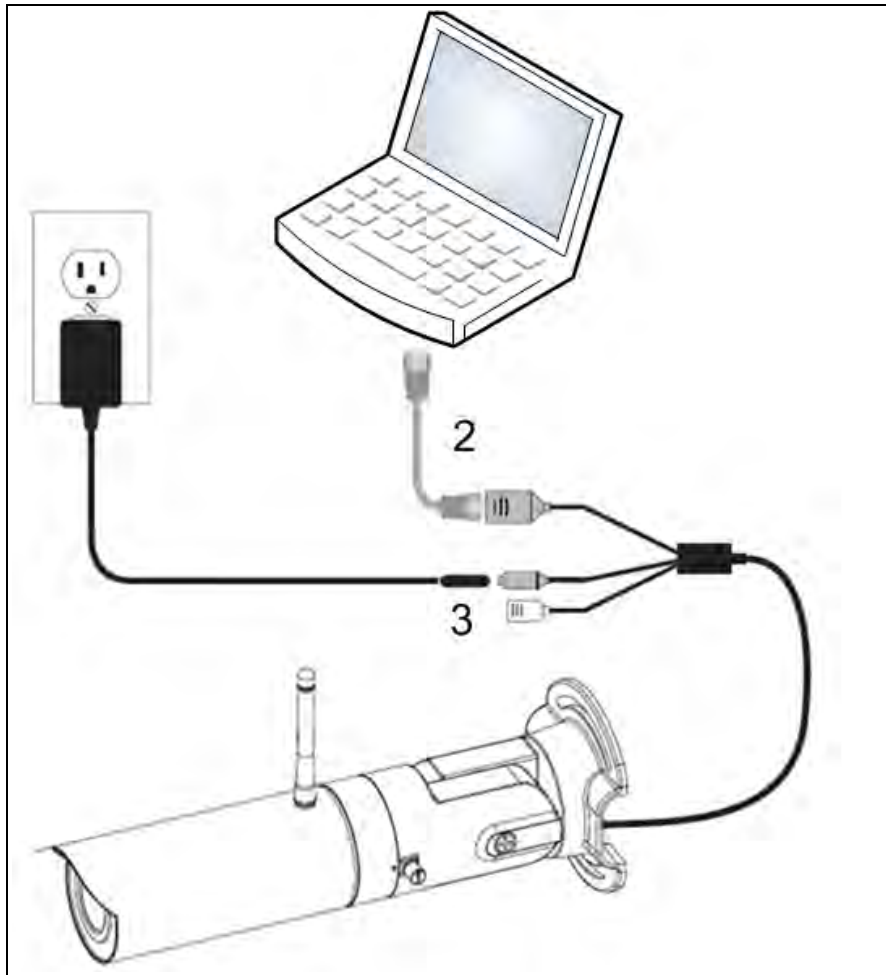
Figure 4: WPV10-100™ Connect to Power Outlet and Computer

2.2 Setup the Computer IP Address Configuration

Note: The images in this example procedure are for (missing or bad snippet).

1. On the computer, click the **Windows**® **Start** button and select **Control Panel**.
2. View the **Control Panel** window by **Category** and click **Network and Internet > View Network Status and Tasks**.
3. Click the **Change Adapter Settings** link.

Figure 5: Change Adapter Settings Link

4. Double-click the **Local Area Connection** link.
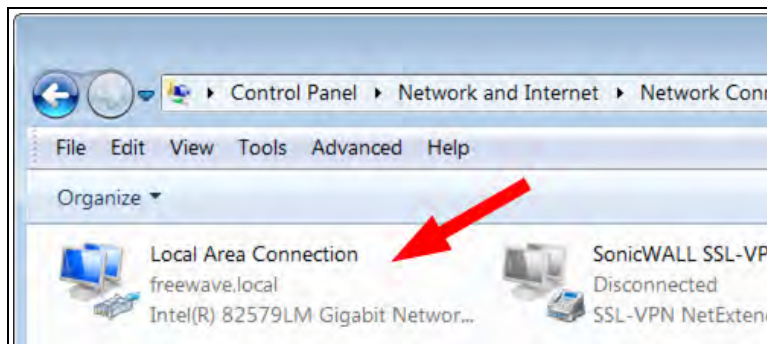
Figure 6: Local Area Connection Link

The **Local Area Connection Status** dialog box opens.
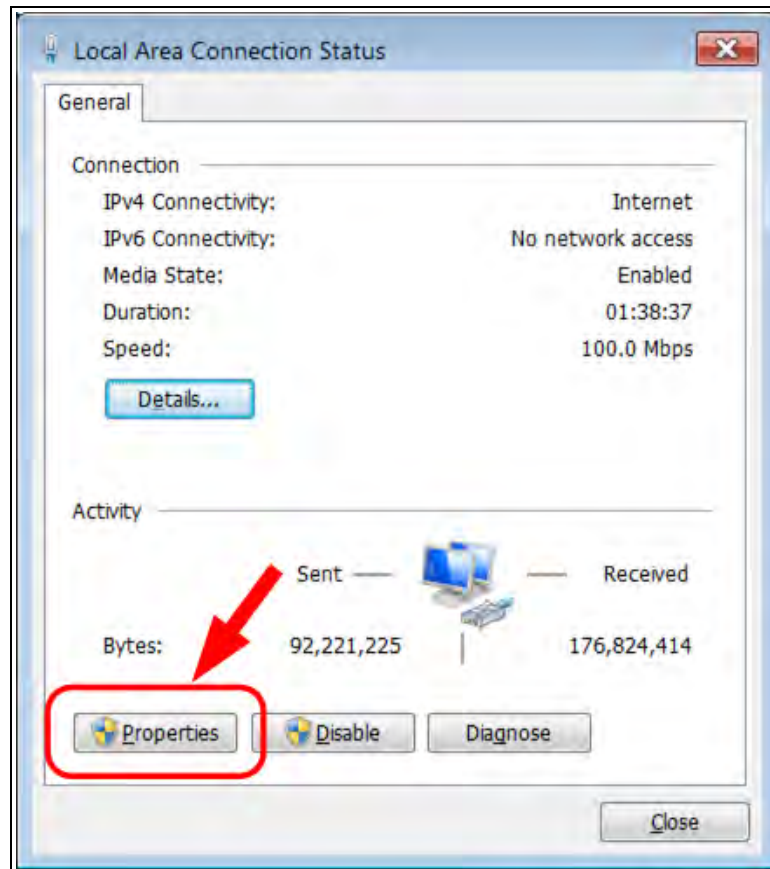
Figure 7: Local Area Connection Status dialog box

5. Click **Properties**.
   The **Local Area Connection Properties** dialog box opens.
6. Select the **Internet Protocol Version 4 (TCP/IPv4)** option.
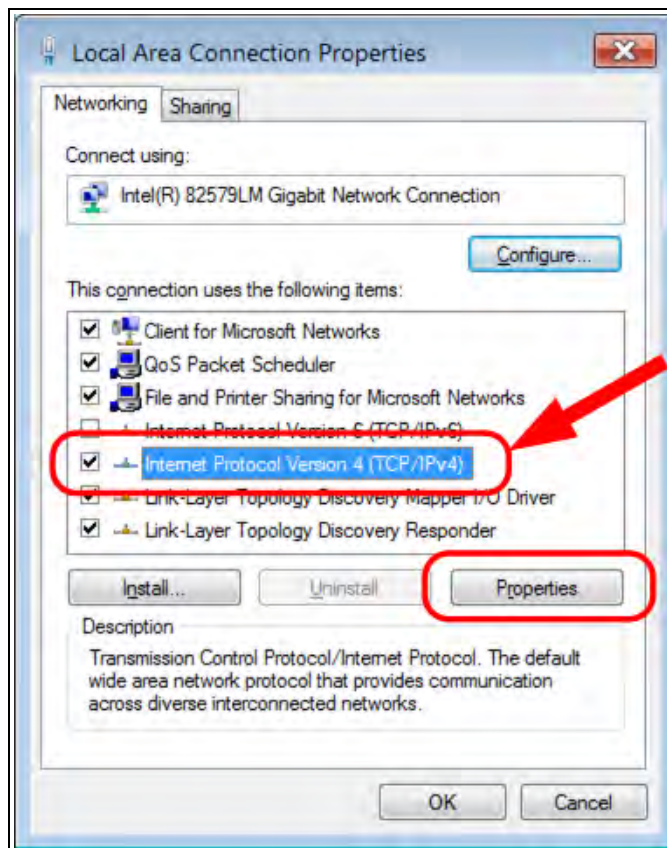
Figure 8: Local Area Connection Properties dialog box

7. Click **Properties**.
   The **Internet Protocol Version 4 (TCP/IPv4) Properties** dialog box opens.

8. Make a note of the current settings (to reverse this procedure later).

9. Select the **Use the following IP address** option button.

10. In the **IP Address** text box, enter an IP Address that is **in the same subnet range but a DIFFERENT IP Address** than the **WPV10-100**™ AND **different than the computer** IP Address.

   Note: The default **WPV10-100**™ Camera IP Address is **192.168.1.200**. The default subnet mask is **255.255.255.0**.

   Example: Enter an **IP Address** from **192.168.1.1 to 192.168.1.254** (but NOT **192.168.1.200**) and the **Subnet Mask** to **255.255.255.0**.
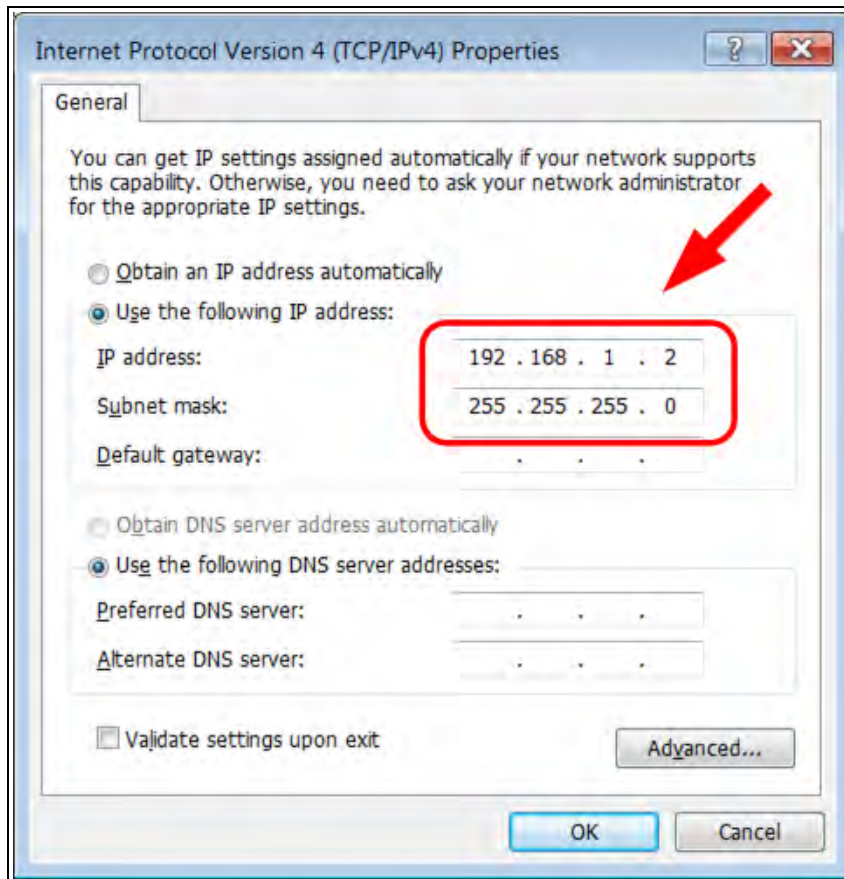
Figure 9: Local Area Connection Properties dialog box

> **Note**: An IP Address is NOT required in the **Default Gateway** text box.

11. Click **OK** to save the changes and close the dialog box.

12. Click **Close** twice to close the **Local Area Connection Properties** and **Local Area Connection Status** dialog boxes.

2.3 Access the WPV10-100™ Camera

1. On the computer connected to the WPV10-100™, open a web browser.
2. In the address bar of the browser, enter the default WPV10-100™ IP Address: 192.168.1.200.
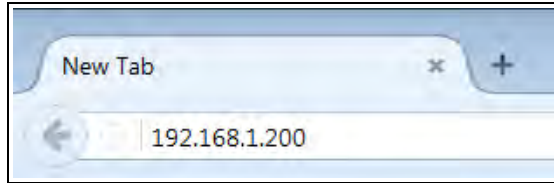
Figure 10: Entered IP Address

3. Press <Enter>.
   The **Login** window opens.
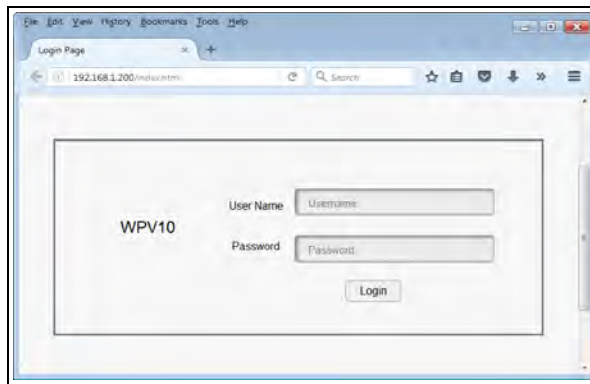
Figure 11: WPV10-100™ Login window

4. Enter the default **Username** and **Password** (admin for both) and click **Login**.

> **Note**: When accessing the WPV10-100™ the first time, the WebCMS download window opens.
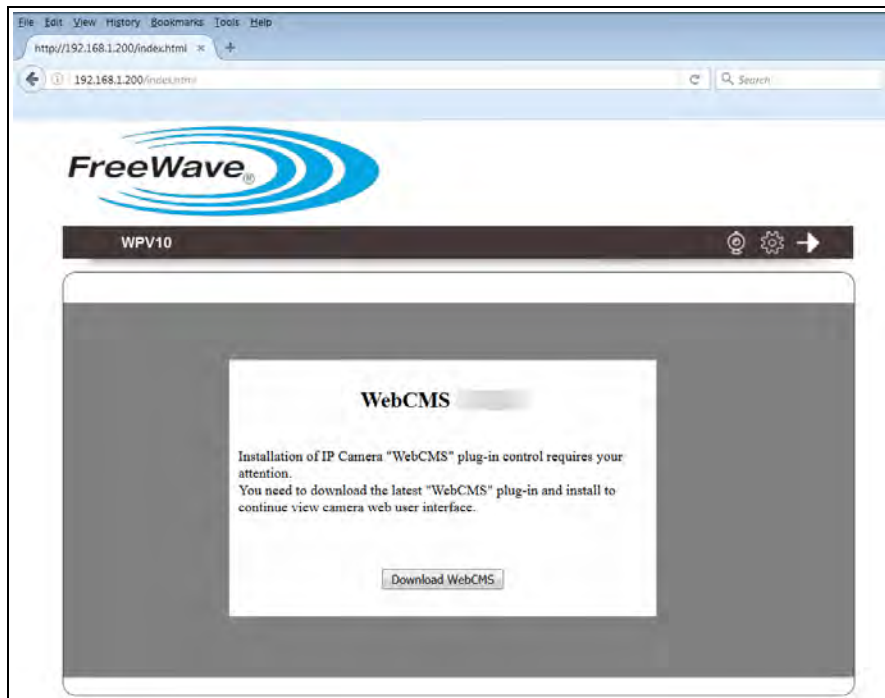
Figure 12: WebCMS Download window

5. Click the **Download WebCMS** button.
   The **Opening webCMS_n.n.n.n.exe** dialog box opens.
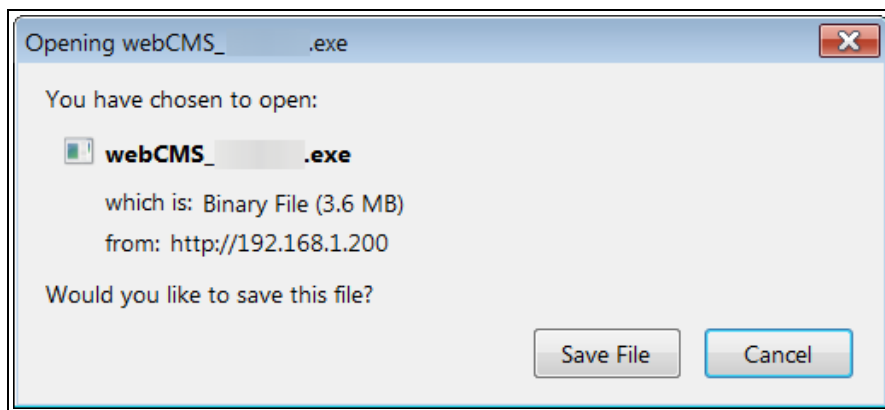
Figure 13: Opening webCMS_n.n.n.n.exe dialog box

6. Click **Save File**.
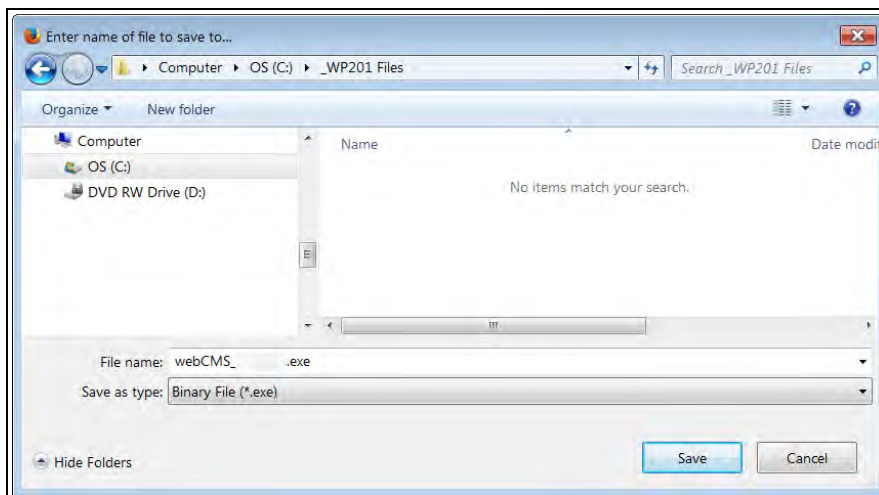   The **Enter name of file to save to** dialog box opens.

Figure 14: Enter name of file to save to dialog box

7. Click **Save**.
   The **Enter name of file to save to** dialog box closes.
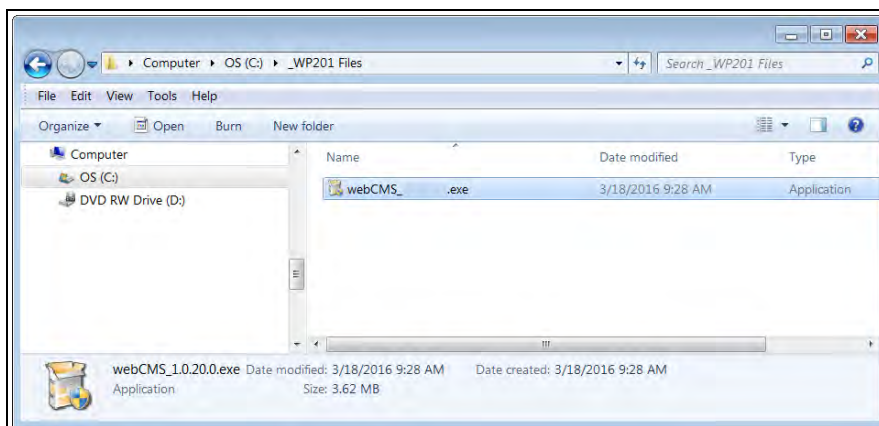8. Open the location where the **webCMS_n.n.n.n.exe** file was saved.

Figure 15: Designated folder in Windows® Explorer

9. Select and double-click the **webCMS_n.n.n.n.exe**.
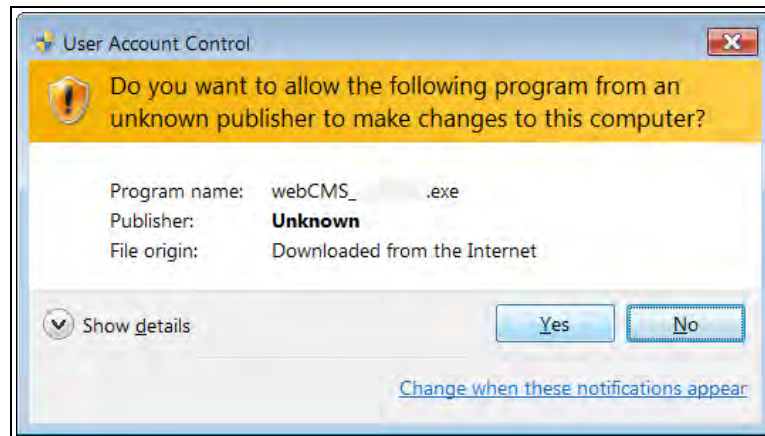   The **User Account Control** message opens.

Figure 16: User Account Control message

10. Click **Yes**.

> **Note**: If the browser is still open, a WebCMSLive message appears.
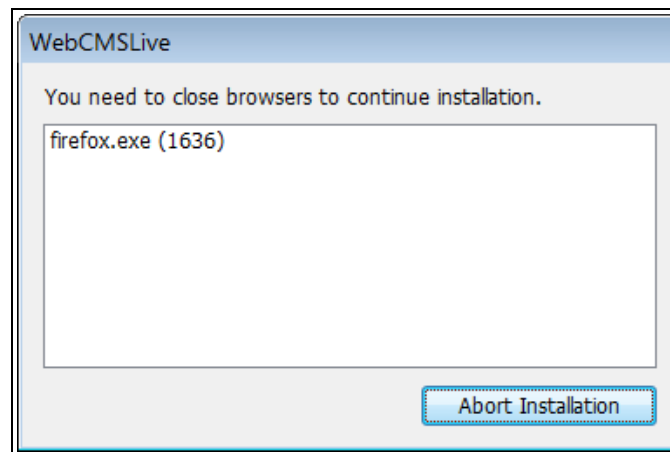

Figure 17: WebCMSLive message

11. Close any open browsers and repeat Steps 9 and 10.
    The **WebCMSLive Setup: Installing** window opens showing the installation process has started.
    When installation is completed, the **WebCMSLive Setup** message appears.

> **Note**: The installation and setup happens very quickly. The software is installed here:
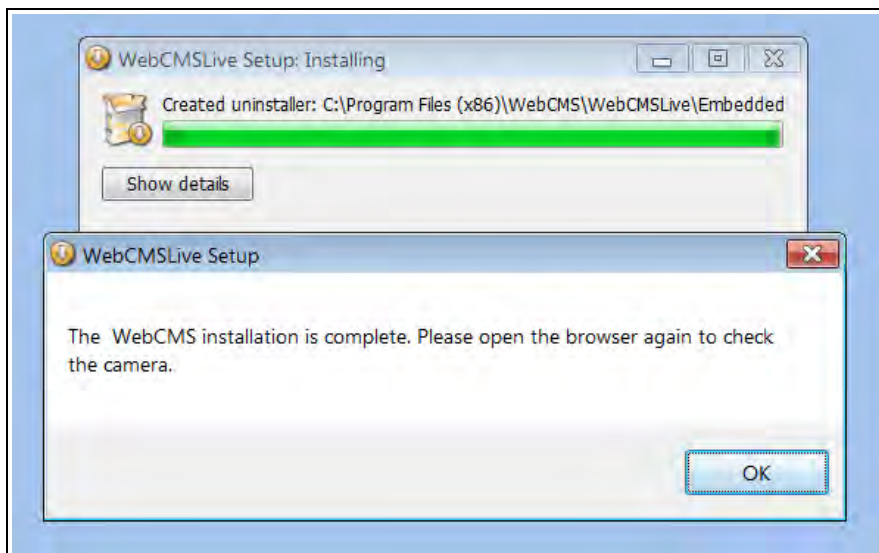> **C:\Program Files (x86)\WebCMS**.

Figure 18: WebCMSLive Setup message

12. Click **OK** to close the messages.
13. Open a web browser.
14. In the address bar of the browser, enter the default **WPV10-100**™ IP Address: **192.168.1.200**.
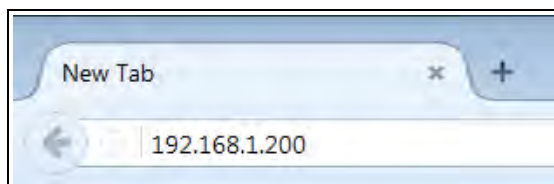

Figure 19: Entered IP Address

15. Press <Enter>.
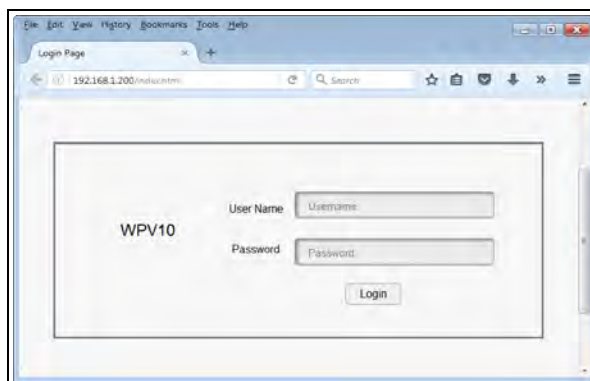The **Login** window opens.

Figure 20: WPV10-100™ Login window

16. Enter the default **Username** and **Password** (**admin** for both) and click **Login**.
17. Press <Enter>.

The **WPV10-100**™ **Camera Home Page** opens showing a live-action stream to the computer.
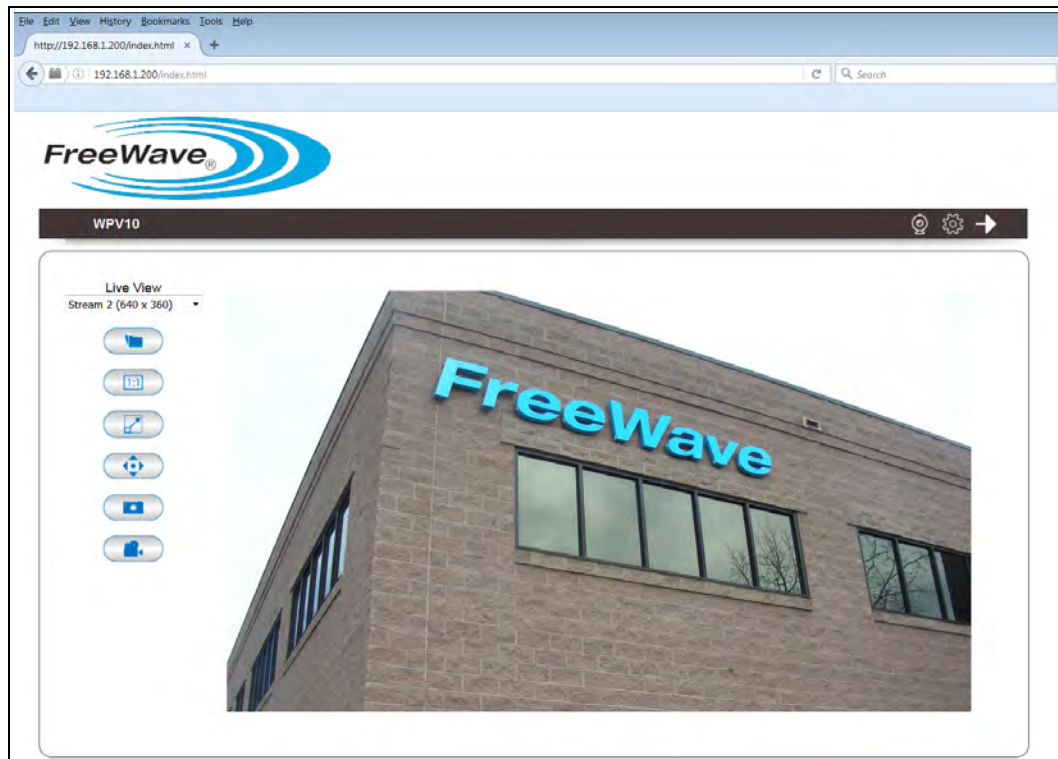

Figure 21: WPV10-100™ Camera Home Page

Note: See the Window Components for detailed information about the options in the window.

Note: : If a gray color is visible in the viewer, it is because the camera has detected insufficient of light in the room and enabled night vision mode automatically. Point the camera to a brighter area, to see it switched to normal color mode.

Tip! Try a few places to see how the switch from normal color mode to night vision works.

Appendix A: WPV10-100™ Camera Technical Specifications

Specifications may change at any time without notice. For the most up-to-date specifications information, see the product's data sheet available at www.freewave.com.

WPV10-100™ Camera Technical Specifications	
Specification	**Description**
Camera	
Image Sensor	1/2.7", 1920x1080 pixel, Progressive Scan CMOS
LENs	Fixed Focal, f=2.8mm / F1.8
F.O.V.	120°
Day / Night	Removable IR-cut filter
Minimum Illumination	• Color (IR-off): 0.1Lux / F1.8 • B/W (IR-On): 0 Lux / F1.8
IR Illuminator	12 IR LEDs with a maximum of 25m range
Shutter Time	1/2 sec. to 1/10,000 sec
Video	
Compression	H.264 / MJPEG / MPEG4
Frame Rates	A maximum of 30fps at 1920x1080
Image Settings	• Image Size • Brightness • Quality • Contrast • Bit Rate • Saturation

WPV10-100™ Camera Technical Specifications	
Specification	**Description**
	- Flip and Mirror - AGC / AWB / AES - Day / Night, Manual or Auto Mode - Text Caption Overlay - Sharpness - Exposure - Time Stamp
Web Browser	- **Chrome**® - **Firefox**® - **Internet Explorer**® - **Opera**® - **Safari**®
View Clients	Live viewing for a maximum of 2 clients.
Alarm and Event / Recording	
Event Trigger	- Motion or Audio-In Detection - Pre-alarm and post-alarm (5 sec)
Event Notification	Email / Push-Notification
Event Actions	- Schedule Recording - File upload to SAMBA / FTP
Networking	
Network	10/100 Mbps Ethernet, RJ-45
PoE	802.3af Class2
Security	- Admin / User Account Level, Password Protected - WEP / WPA / WPA2-PSK
Protocol	- 3GPP - DDNS - DHCP - DNS - FTP - HTTP - IPv4 - NFS / Samba client - NTP - PPPoE - QoS / DSCP - RTP - RTSP - SMTP - TCP - UDP - UPnP
External Antenna Gain	1.68dBi
RF Connector	Reverse SMA plug
Wireless Interface	IEEE 802.11b/g/n
Power	

WPV10-100™ Camera Technical Specifications	
Specification	**Description**
Power Requirements	• Power Supply: 12VDC, 1.0A (power from adapter) • PoE: 54VDC, 0.6A, 802.3af
Power Consumption	8W
Environmental	
Operating Temperature	-20°C to 50°C -4°F to 122°F
Humidity	Up to 100%, Condensing
Dimensions	Length (including bracket): 9.25 inches (23.5cm) Diameter of Bracket: 3.0 inches (7.62cm) Diameter of Camera: 1.75 inches (4.45cm)
Weight	7 lbs 3.2kg
Interface Cable	• RJ-45 1 x 10/100BASE-T(802.3af PoE) • DC Jack (12V / 1A) • Reset Button
Compliance Standards	
Radio Approvals	• 47 CFR Part 15 • IC RSS-247 • CE
Material Compliance	• RoHS • IP66 Enclosure

Appendix B: WPV10-100™ Camera LEDs

These are the **WPV10-100**™ LEDs:

WPV10-100™ Camera LEDs		
Function	**Button**	**LED**
WPS	1~5 sec	Green – Blink (RJ45)
Reset	6~10 sec	Orange – Solid (RJ45)
Reset to Default	10 sec or above	Orange – Blink (RJ45)