Internet Connection Setup Wizard

This wizard will guide you through a step-by-step process to configure your new D-Link Camera and connect the camera to the Internet.
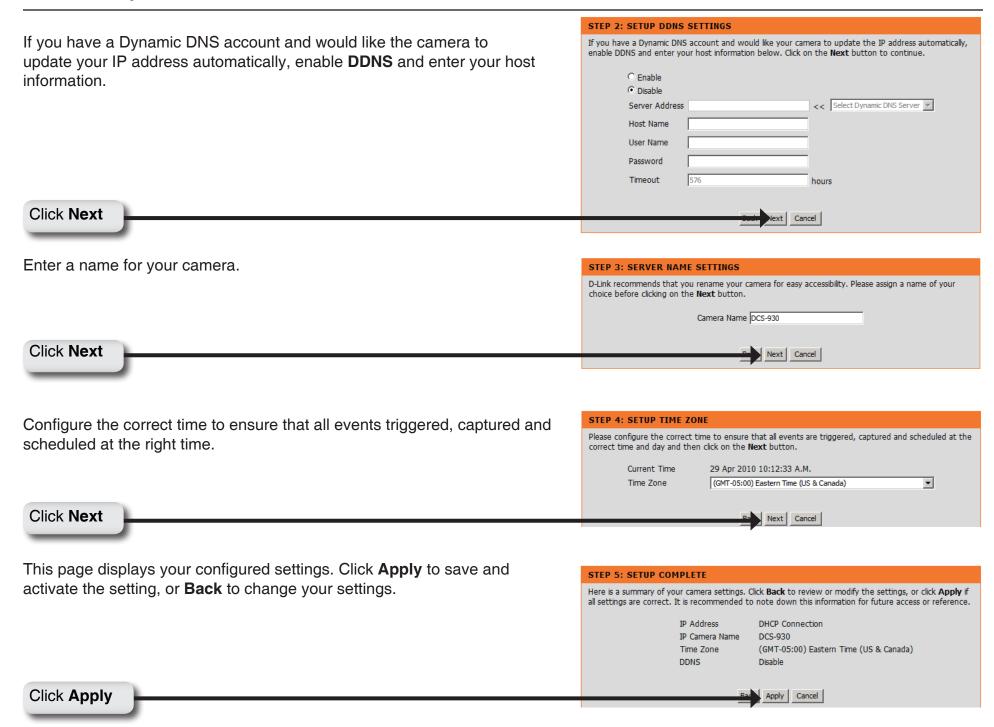
Click **Next**

You may configure your camera using

- **DHCP Connection** (by default), where your DHCP server will automatically assign dynamic IP to your device.
- **Static IP Address** if your ISP has already assigned an IP address to you.
- **PPPoE connection**, where your camera is directly connected to the Internet through a DSL modem.
- * Input the DNS information if you have chosen and assigned a Static IP Address for your camera.

Click **Next**

If you have a Dynamic DNS account and would like the camera to update your IP address automatically, enable **DDNS** and enter your host information.

Click **Next**

Enter a name for your camera.

Click **Next**

Configure the correct time to ensure that all events triggered, captured and scheduled at the right time.

Click **Next**

This page displays your configured settings. Click **Apply** to save and activate the setting, or **Back** to change your settings.

Click **Apply**

Network Setup

This section allows you to configure your network settings.

DHCP: Select this connection if you have a DHCP server running on your network and would like a dynamic IP address to be updated to your camera automatically.

Static IP Client: You may obtain a static or fixed IP address and other network information from your network administrator for your camera. A static IP address will ease you for accessing your camera in the future.

IP Address: The fixed IP address

Subnet Mask: The default value is "255.255.255.0." Used to determine if the destination is the same subnet.

Default Gateway: The gateway used to forward frames to destinations in a different subnet. Invalid gateway settings may cause the failure of transmissions to a different subnet.
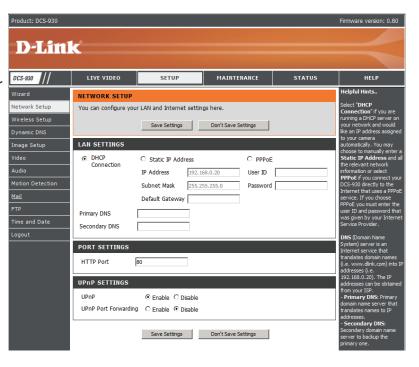
Primary DNS: Primary domain name server that translates names to IP addresses.

Secondary DNS: Secondary domain name server to backup the Primary DNS.

PPPoE Settings: If you are using a PPPoE connection, enable it and enter the User Name and Password for your PPPoE account. You can get this information from your Internet service provider (ISP).

Port Settings: You may configure a Second HTTP port that will allow you to connect to the camera via a standard web browser. The port can be set to a number other than the default TCP ports 80. A corresponding port must be opened on the router. For example, if the port is changed to 1010, users must type "http://192.168.0.100:1010" instead of only "http://192.168.0.100".

UPnP Settings: Enable this setting to configure your camera as an UPnP device in the network.

Setup > Wireless

This section allows you to setup and configure the wireless settings on your camera.

Wireless Interface

SSID: Service Set Identifier, an identifier for your wireless network.

Channel: The default setting is channel 6. Select the same channel that is using by other wireless devices within your network. When there is interference from the wireless networks that overlap with one another, you may change the channel to obtain maximum performance for your connection.

Connection Mode: **Infrastructure** is a wireless connection using an access point as a transmission point of all wireless devices. **Ad-Hoc** is a wireless connection used without an access point, where your DCS-930L_A2 directly connecting to your PC. This is done using the on-board wireless adapter on the DCS-930L_A2 nnected to a wireless adapter on the PC.

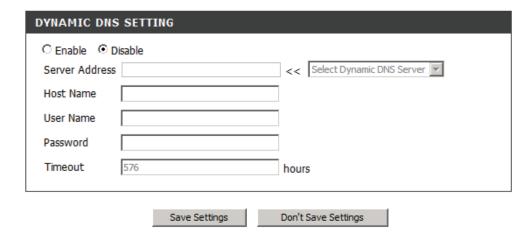**Site Survey:** This page will allow you to select a wireless network that the DCS-930L_A2 as able to detect.

Wireless Security Mode: For security, there are three choices; **None**, **WEP**, and **WPA-PSK / WPA2-PSK**. Select the same encryption method that is being used by your wireless device/ router.

WPA-PSK / WPA2PSK Settings: An appropriate **Preshared Key**, which is needed in order to connect to the wireless network..

Setup > DDNS

This section allows you to configure the DDNS setting for your camera. DDNS will allow all users to access your camera using a domain name instead of an IP address.

DYNAMIC DNS SETTING

○ Enable ⊙ Disable

Server Address [   ] << [Select Dynamic DNS Server ▼]

Host Name [   ]

User Name [   ]

Password [   ]

Timeout [576] hours

[Save Settings] [Don't Save Settings]

DDNS: (Dynamic Domain Name Server) will hold a DNS host name and synchronize the public IP address of the modem when it has been modified. The username and password are required when using the DDNS service.

Enable: Click to enable the DDNS function.

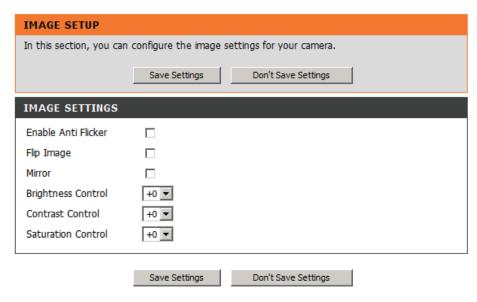**Server Address:** Select your Dynamic DNS Server from the pull down menu.

Host Name: Enter the host name of the DDNS server.

User Name: Enter your username or e-mail used to connect to the DDNS.

Password: Enter your password used to connect to the DDNS server.

Setup > Image Setup

This section allows you to configure the image settings for your camera.

Image Settings

Enable Antiflicker: Select this box to enable antiflicker.

Flip Image: Select this box to vertically rotate the video. If the camera is installed upside down, Flip Image and Mirror should both be checked.

Mirror: Horizontally rotates the video.

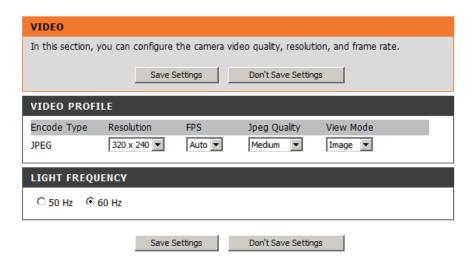**Brightness Control:** Allows you to adjust the brightness level.

Contrast Control: Allows you to adjust the contrast level.

Saturation Control: Allows you to adjust the saturation level.

Setup > Video

This section allows you to configure the video settings for your camera.

VIDEO

In this section, you can configure the camera video quality, resolution, and frame rate.

| Save Settings | Don't Save Settings |

VIDEO PROFILE

Encode Type	Resolution	FPS	Jpeg Quality	View Mode
JPEG	320 x 240	Auto	Medium	Image

LIGHT FREQUENCY

○ 50 Hz   ⊙ 60 Hz

| Save Settings | Don't Save Settings |

Video Configuration

Video Profile: This section allows you to change the **Encode Type**, **Resolution**, **FPS**, and **Quality**.

Encode Type: The compression format used when viewing your camera.

Resolution: Select the desired video resolution from three formats: 640x480, 320x240, and 160x120. The higher setting can obtain better quality. However, it will use more resource within your network.

FPS: Select the optimal setting depending on your network status. Please note that the higher setting can obtain better quality. However, it will use more resources within your network.

JPEG Quality: Choose one of five levels of image quality: Highest, High, Medium, Low, and Lowest.

View Mode: Select the mode for viewing the camera image. Select Image for a still images, ActiveX for Internet Explorer, or Java for other web browsers.

Light Frequency: Select the proper frequency (50Hz or 60Hz) to reduce image flicker.
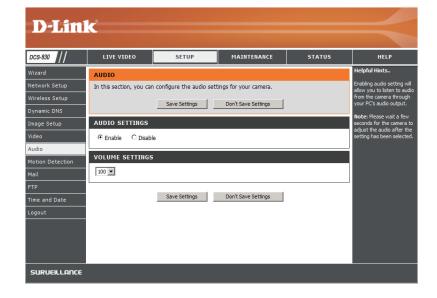
Setup > Audio

Enabling audio setting will allow you to listen to audio from the camera through your PC's audio output.

Note: Please wait a few seconds for the camera to adjust the audio after the setting has been selected.

Audio Settings: You may **Enable** or **Disable** the camera audio feed.

Volume Settings: Select the desired volume percentage level.

Setup > Motion Detect

Enabling Video Motion will allow your camera to use the motion detection feature. You may draw a finite motion area that will be used for monitoring.

Motion Detection: Select this box to enable the motion detection feature of your camera.

Sensitivity: Specifies the measurable difference between two sequential images that would indicate motion. Please enter a value between 0 and 100.

Detection Areas: Use your mouse to click on the blocks that you would like to monitor for motion.

Setup > Mail

Email Account

This section allows you to configure the email notification settings for your camera.

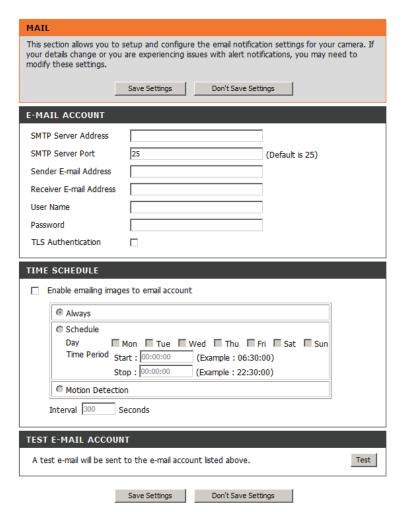**SMTP Server Address:** This is the domain name or IP address of your external e-mail server.

Sender e-mail Address: This is the e-mail address of the person sending the camera snapshots.

Receiver e-mail Address: This is the e-mail address of the recipient.

User Name: If the SMTP server uses authentication, you must enter your user name here.

Password: This is the password that corresponds to your user name to connect to the SMTP server.

Time Schedule

Enable e-mail image to e-mail account: Choosing **Always** will start sending snapshots to the recipient's e-mail account right away. Choosing **Schedule** will allow you to schedule when to start and stop the sending of snapshots to the recipient's e-mail account.

Interval: The frequency of the snapshot interval can also be configured from 1 to 65535 seconds.

Test E-mail Account: This will send a snapshot to the e-mail account that you have configured in the **E-mail** section. If you have configured the SMTP account correctly, you will be able to send a test file to the e-mail account of the recipient.

Setup > FTP
FTP Server

This section allows you to configure a FTP server to receive images from the camera.

Host Address: This is the IP address of the FTP server that you will be connecting to.

Port Number: Default is port 21. If changed, external FTP client program must change the server connection port accordingly.

User Name: Specifies the user name to access the external FTP server. If you are to upload snapshots to an FTP server you will need to fill in the Domain name or IP address of your external FTP server. The following user settings must be correctly configured for remote access.
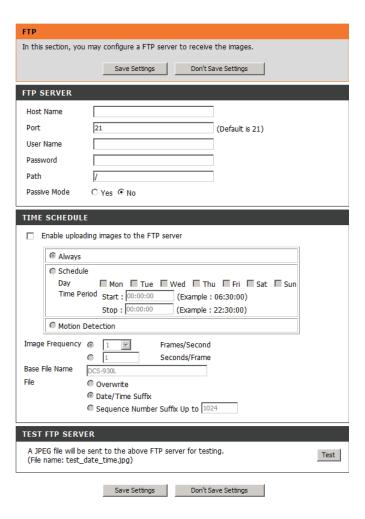
Password: Specifies the password to access the external FTP server.

Directory Path: Specifies the destination folder in the external FTP server.

Passive Mode: Enabling passive mode will allow access to an external FTP server if your camera is behind a router protected by a firewall.

Time Schedule

Enable upload image to FTP server: Checking this box will enable video uploads to the FTP server you have selected.

Always: Selecting this option allows snapshots to be uploaded to your FTP as soon as you click **Apply**.

Schedule: Selecting this option allows you to configure specific times when you want the snapshots to be uploaded to your FTP server.

Video Frequency: Users can select in frames per second (1, 2, 3 or auto, in auto this could go to 4). The user can also select a duration for each frame from 1 to 65535 seconds.

Base File Name: This will be the name that precedes the time, for example DCS9302010072116425101.jpg. This means that the camera took a snapshot in the year 2010, July 21 at 16th hour (4 o'clock), 42 minutes and 51 seconds and it is picture number one.

File: If **Overwrite** is selected, only a few images will be constantly refreshed, depending on how many snapshots you choose to have sent. Select **Date/Time Suffix** and the pictures will be named with a date and time also. An example of this can be seen above under the **Base file name** category. Select a **Sequence Number Suffix** up to 1024 and all the pictures will be numbered from 1-1024. Up to 1024 pictures can be configured. Picture number 1025 will reset to number 1.

Test FTP Server: This will send a snapshot to the FTP server that you have configured in the **Upload** section. If you have configured the FTP correctly, you will be able to see a test file on your FTP server.

Setup > Time and Date

This section allows you to configure the settings of the internal system clocks for your camera.

Test FTP Server: Select the time zone for your region from the pull-down menu.

Synchronize NTP Server: Network Time Protocol will synchronize your camera with an Internet time server. Choose the one that is closest to your camera.
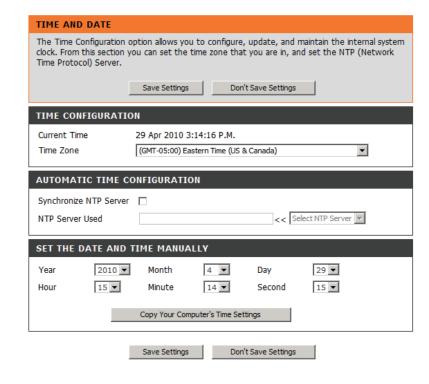
Copy your Computer's Time Settings: Click to synchronize the time information from your PC.

Set the Date and Time Manually: Select this to set the time manually.

Maintenance > Admin

This section allows you to change the administrator's password and configure the server settings for your camera. You can also manage the user account(s) that access to your camera.

Camera Name: Specity a name for your camera

LED Control: Select **Normal** to enable the LED on the front of the device, or select off to disable the LED.

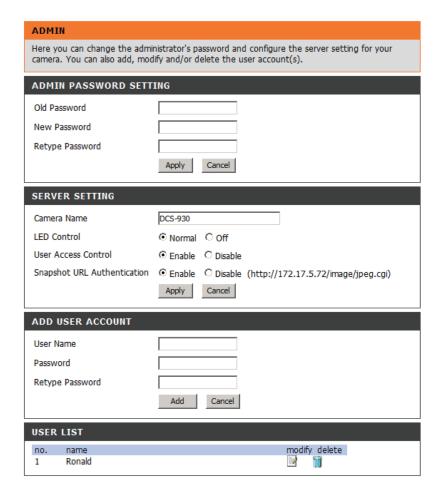**User Access Control:** Select **Enable** to enable user access control or Disable to allow only the administrator account to access the camera.

Snapshot URL Authentication: Select **Enable** to allow access to the current camera snapshot via the web address indicated.

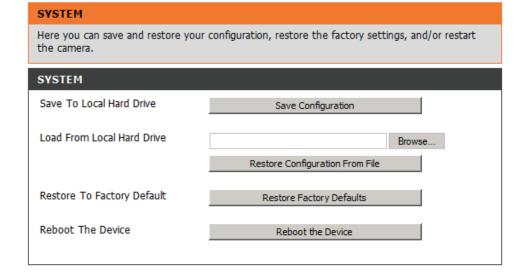**Add User Account:** Create new user for accessing the video image. Enter the user name, password, and password confirmation, and click **Add**. A maximum of 8 user accounts can be added into the user list.

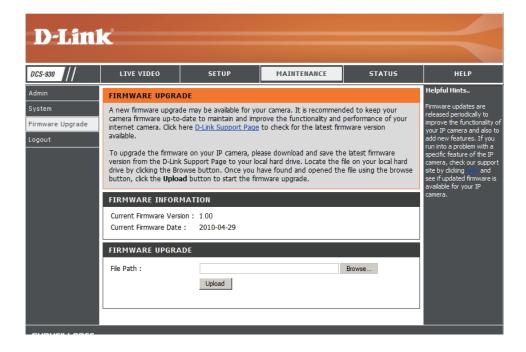**User List:** Displays the account names of authorized users.

Maintenance > System

This section allows you to save and restore your configuration, restore the factory settings, and/or restart the camera.

Maintenance > Firmware Upgrade

Your current firmware version and date will be displayed on your screen. You may go to the D-Link Support Page to check for the latest firmware versions available.

To upgrade the firmware on your DCS-930L_A2 please download and save the latest firmware version from the D-Link Support Page to your local hard drive. Locate the file on your local hard drive by using the **Browse** button. Then, open the file and click the "**Upload**" button to start the firmware upgrade.

Status > Device Info

This section displays all the details information about your device and network settings.

DEVICE INFO

All of your network connection details are displayed on this page. The firmware version is also displayed here.

BASIC INFORMATION

Camera Name	DCS-930
Time & Date	03 May 2010 11:06:11 A.M.
Firmware Version	0.80 (2010-04-29)
IP Address	172.17.5.72
Subnet Mask	255.255.255.0
Default Gateway	172.17.5.254
Primary DNS	192.168.168.250
Secondary DNS	192.168.168.201
DDNS	Disable
FTP Server Test	No test conducted.
E-mail Test	No test conducted.

WIRELESS STATUS

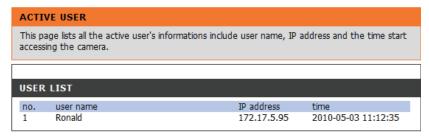|	
Connection Mode	Infrastructure
Link	No
SSID	dlink (MAC : 00 00 00 00 00 00)
Channel	6
Encryption	WPA2PSK-AES

Refresh

Status > Active User

This page lists all the active user's information including the User Name, IP address, and the time that camera access began.

Using & Configuring the DCS-930L_A2

D-Link's DCS-930L_A2 a versatile and cost effective Network Camera for video monitoring. It can also serve as a powerful surveillance system in security applications. The DCS-930L_A2 can be used with any wired or 802.11n wireless router. This section explains how to view the camera from either the Internet or from inside your internal network.

Materials Needed:

- 1 DCS-930L_A2 Network Camera
- 1 Ethernet Cable
- A Wired or Wireless router such as the D-Link DI-624 Wireless Router
- Ethernet based PC for system configuration

Setting Up the DCS-930L_A2 or Use Behind a Router

Installing a DCS-930L_A2 etwork Camera on your network is an easy 4–step procedure:

1. Assign a Local IP Address to Your Network Camera

2. View the Network Camera Using Your Internet Explorer Web Browser

3. Access the Router with Your Web Browser

4. Open Virtual Server Ports to Enable Remote Image Viewing

This section is designed to walk you through the setup process for installing your camera behind a router and enable remote video viewing. For the basic setup of the DCS-930L_A2 follow the steps outlined in the Quick Installation Guide.

After you have completed the setup of the DCS-930L_A2 outlined in the Quick Installation Guide you will have an operating camera that has an assigned IP Address. Because you are using a router to share the Internet with one or more PCs, the IP Address assigned to the Network Camera will be a local IP Address. This allows viewing within your Local Area Network (LAN) until the router is configured to allow remote viewing of the camera over the Internet.

1. **Assign a Local IP Address to Your Camera**

Run the Setup Wizard program from the CD included with the DCS-930. Follow the steps in the Quick Installation Guide to configure the DCS-930L_A2 The camera will be assigned a local IP Address that allows it to be recognized by the router. Write down this IP Address for future reference.
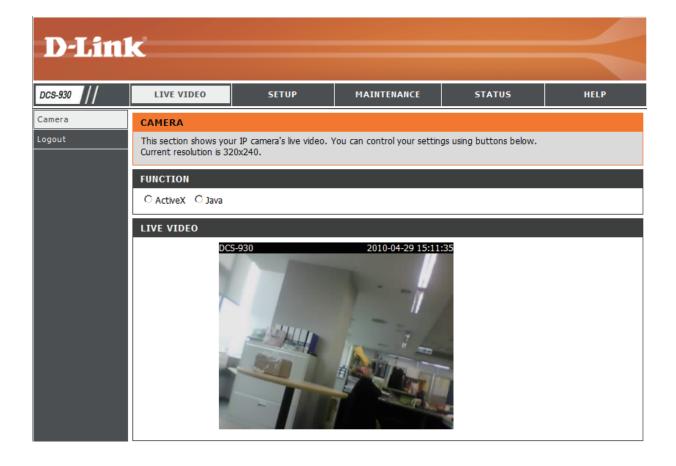
This is the IP Address assigned to your camera (192.168.0.120 is only an example). You will probably have a different IP Address.

2. View the Network Camera Using Your Internet Explorer Web Browser

Run your Internet Explorer Web browser. In the address bar, type in the IP Address that was assigned to the Network Camera by the Installation Wizard program. The DCS-930L_A2 Home Page appears with a window displaying live video from the camera. You are able to view this screen from any PC running Internet Explorer on your LAN.

Click on the Configuration button on the left side of the display. Scroll to the bottom of the Network Configuration page to display the ports used by HTTP and Streaming video.

Technical Specifications

SYSTEM REQUIREMENTS

- Operating System: Microsoft Windows XP, Vista, Windows 7
- Internet Explorer 6 or above , Firefox 3.5 or above, Safari 4

NETWORKING PROTOCOL

- IPV4, ARP, TCP, UDP, ICMP
- DHCP Client
- NTP Client (D-Link)
- DNS Client
- DDNS Client (Dyndns and D-Link)
- SMTP Client
- FTP Client
- HTTP Server
- PPPoE
- UPnP Port Forwarding
- LLTD
- UPnP-X1

BUILT-IN NETWORK INTERFACE

- 10/100BASE-TX Fast Ethernet
- 802.11b/g/n WLAN

WIRELESS CONNECTIVITY

- 802.11b/g/n Wireless with WEP/WPA/WPA2 security

WIRELESS TRANSMIT OUTPUT POWER

- 16 dbm for 11b, 12 dbm for 11g, 12 dbm for 11n (typical)

SDRAM

- 32 MB

FLASH MEMORY

- 4 MB

RESET BUTTON

- Reset to factory default

VIDEO CODECS

- MJPEG
- JPEG for still images

VIDEO FEATURES

- Adjustable image size and quality
- Time stamp and text overlay
- Flip and Mirror

RESOLUTION

- 640 x 480 at up to 20 fps
- 320 x 240 at up to 30 fps
- 160 x 120 at up to 30 fps

LENS

- Focal length: 5.01 mm, F2.8

SENSOR

- VGA 1/5 inch CMOS Sensor

MINIMUM ILLUMINATION

- 1 lux @ F2.8

VIEW ANGLE

- Horizontal: 45.3°

- Vertical: 34.5°

- Diagonal: 54.9°

DIGITAL ZOOM

- Up to 4x

3A CONTROL

- AGC (Auto Gain Control)

- AWB (Auto White Balance)

- AES (Auto Electronic Shutter)

POWER

- Input: 100-240 V AC, 50/60 Hz

- Output: 5 V DC, 1.2 A

- External AC-to-DC switching power adapter

DIMENSIONS (W X D X H)

- Including the bracket and stand:
  65.8 x 65 x 126 mm

- Camera only:
  27.2 x 60 x 96 mm

WEIGHT

- 76.9 g (without bracket and stand)

MAX POWER CONSUMPTION

- 2 W

OPERATION TEMPERATURE

- 0 ˚C to 40 ˚C (32 ˚F to 104 ˚F)

STORAGE TEMPERATURE

- -20 ˚C to 70 ˚C (-4 ˚F to 158 ˚F)

HUMIDITY

- 20-80% RH non-condensing

EMISSION (EMI), SAFETY & OTHER CERTIFICATIONS

- FCC Class B

- IC

- C-Tick

- CE

FCC Notices

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.

CAUTION: Change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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 or more 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.

CAUTION:
Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning
This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance."

Canada Notices

Industry Canada regulatory information

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.

The user is cautioned that this device should be used only as specified within this manual to meet RF exposure requirements. Use of this device in a manner inconsistent with this manual could lead to excessive RF exposure conditions.