



User Manual

For Customer Service, Please Contact:

Cobra Electronics Corporation
6500 W. Cortland Street
Chicago, IL 60707
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drive HD™
Record Your Ride



**SUPER HD DASH CAM
WITH WI-FI**
CDR 900

Printed in China
Part No. 490-958-P
Version B



English

Protect • Re-live • Share



Important Information and Customer Assistance

Introduction

Important Information

Safe Driving

Motorists, as well as operators of emergency or service vehicles, are expected to exercise all due caution while using this product, and to obey all applicable traffic laws.

Security of Your Vehicle

Before leaving your vehicle, always remember to conceal this device in order to reduce the possibility of break-in and theft.

Privacy

This device may not be used to violate the privacy rights of others. In no way will Cobra Electronics or its subsidiaries be responsible for inappropriate use of this product. It is the sole responsibility of the buyer to consult legal counsel for the interpretation of any laws applicable to the area of intended use of this product.

Trademark Acknowledgement

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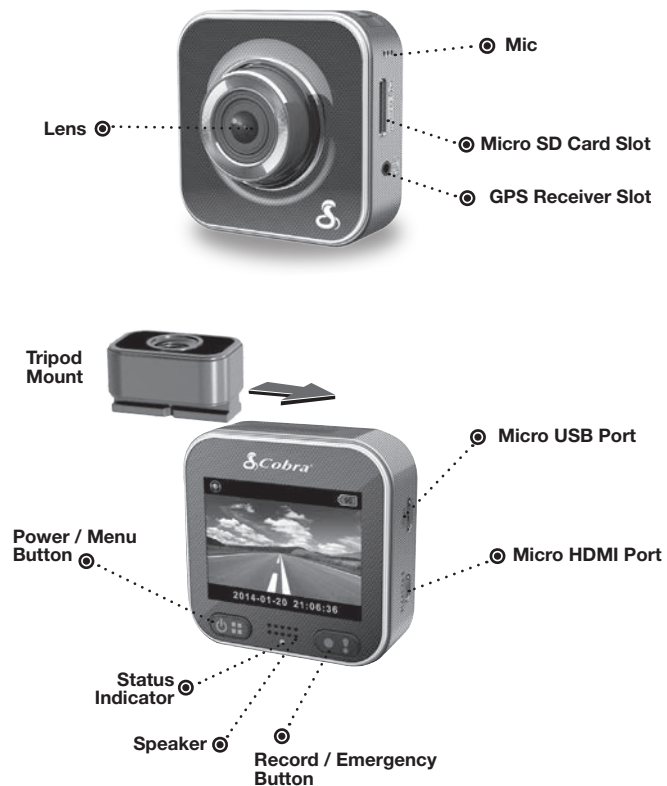
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Controls, Indicators and Connections



Congratulations! You've made a smart choice by purchasing a Drive HD Dash Cam from Cobra. This booklet describes the simple steps for mounting, setting up, and using your dash camera.

Camera Features

Records 1296P Super HD or 1080P Full HD video. Ambarella™ chipset ensures excellent image quality, night time performance, and advanced dynamic range.

WiFi capability allows the CDR 900 to connect wirelessly with the Drive HD™ app for viewing live video, controlling the camera, uploading and sharing videos, adjusting settings, and Cloud Mode on your smartphone.

Ultra wide 160° viewing angle films the entire road and your peripherals without edge distortion.

Continuous Loop Recording overwrites old footage unless you want to save it. A time/date stamp is embedded on all recordings so you'll never miss an event while driving.

Ready to use out-of-the-box. Includes a heavy-duty suction cup to mount the camera to your windshield and an 8GB MicroSD card to Record your Ride.

3-axis G-Sensor senses sudden accelerations and collisions and automatically protects footage surrounding the incident.

Additional Features:

Emergency Record Button

Motion Sensor

Built-in Microphone & Speaker

Auto-Record and Auto-Power Off

Optional waterproof case (not included)

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Customer Information

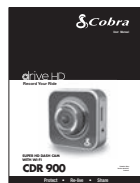
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What's in the box



Dash Cam (Model # CDR 900)



Product Manual



Heavy Duty Suction Cup Mount



8GB Micro SD Card (installed)



Cigarette Lighter Adapter



Micro USB to USB Cables (1 foot power/data & 12 foot power only)



Tripod Connector



Lanyard and Lanyard Mount



NOTE: While the 12 foot and 1 foot cables look similar, they have different functions. The 12 foot cable is for power only and enables Auto-Power ON and Auto-Record. The 1 foot cord is for data transfer to a computer.

Installation

Where to Mount Your Unit

You will get optimum performance from your camera if you mount it on the front windshield, behind the rear-view mirror. This will minimize the impact on the driver's line of sight. You'll also want to keep the camera centered and angle the bracket to optimize the camera's view of the road ahead.

Windshield Mounting

Peel the plastic film off of the suction cup.

Screw the tripod mount onto the base of the suction cup mount.

Slide your CDR 900 onto the tripod mount using the channel on the top of the unit.

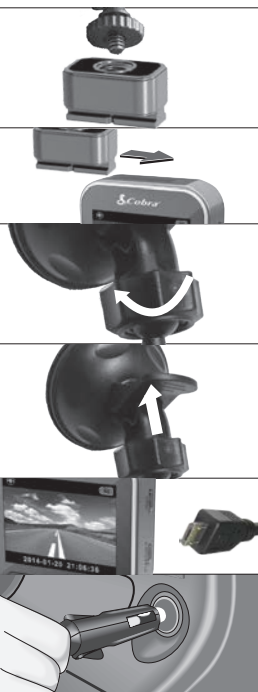
To adjust the angle to the road, loosen the angle locking ring, turn the camera so that it has a clear view of the road ahead and tighten the knob.

Press the Suction Cup firmly onto the windshield. Push down on the lever to lock the suction cup in place.

Plug the 12 foot Micro-USB cable into the camera.

Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.

You can temporarily remove the camera by sliding it off the tripod mount.



Charging the device

You can charge the device with the included car charger, or with any micro USB cable.

When the system is **OFF**, the status indicator flashes **orange**.

When the system is **ON**, the unit will charge in the background without any icon shown.

Inserting and removing the Memory Card

Your camera comes with an 8GB Micro SD Card preinstalled, but it can support up to 64GB Micro SD cards (not included).

To remove the memory card, push the Memory card forward gently until you hear a click, and the card should release.

To insert a different memory card, orient the card as shown and press it in until you hear a click.



Dash Cam Mode vs Action Cam Mode





The CDR 900 has two recording modes for different applications:



Dash Cam Mode: Shoots continuous loop and emergency videos.



Action Cam Mode: Shoots normal videos.




Mode	Action Cam		Dash Cam	
	Normal	Continuous Loop	Emergency	
To Start Recording	Press  in preview		<ul style="list-style-type: none"> Car impact Select  during loop recording 	
Recording Duration	Unlimited	Three Minute Segments	One min. section (30 seconds before and after the event)	
Display Info	 00:06:36 Remaining on SD card		 2014/01/01 21:06:35 Current date & time	




Continuous Loop Recording: Once the memory card is full, this camera will continuously overwrite the oldest footage recorded.



G-Sensor: The G-Sensor is an accelerometer that can detect an impact caused by an accident. If the G-Sensor is triggered the camera will automatically save the footage 30 seconds before and after the incident to a protected file that will not be overwritten by loop recording.






NOTE: By default, the CDR 900 formats the SD card so that 50% of the memory is used for Action Cam Mode and 50% is reserved for Dash Cam Mode. This allocation can be modified through settings in the App.



To Start recording video	
Press  to turn the camera on.	Visual Display The camera screen turns on to show a live preview of the camera image.
Press  to begin recording.	Recording begins and the letters REC flash in red.
While recording, press  to stop recording.	The recording stops and letters REC disappear.


To make an Emergency Recording	
While recording, press  and then  .	Visual Display The  icon flashes on the top bar and shows a progress percentage of the locked file being recorded.







To cancel an Emergency Recording	
While in an emergency recording, press  . Press  to confirm.	Visual Display The emergency recording will stop and the camera will return to standard recording mode.

OR

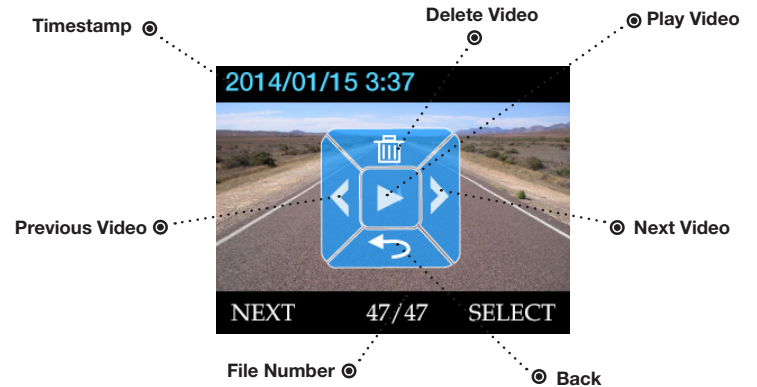
To cancel an Emergency Recording	
While in an emergency recording, press  and then  . Press  to confirm.	Visual Display The emergency recording will stop and the camera will return to standard recording mode.

To Toggle the Microphone on / off (while recording)	
Press  to bring up the recording menu.	Visual Display The bottom bar changes to show controls for Microphone Mute and File Lock.
Then, immediately press  to toggle the sound recording.	The microphone icon will appear or disappear from the top bar.

To Power the device off	
Note: In dash cam mode the device will power off automatically when power is disconnected from the unit. The length of time is determined by the Delay Power Off setting in the App.	
Press and hold  for 2 seconds.	Visual Display The device will power off and the screen will go dark. If the device is still connected to USB power, the orange LED may flash to indicate the battery is charging.

<p>Video playback:</p> <p>If you're currently recording video, you need to stop recording video first.</p>	
<p>Press  to bring up the main menu:</p>	<p>Visual Display</p> <p>The main Menu will appear:</p> 
<p>Select  and use the buttons to view Action Cam  or Dash Cam  files.</p>	<p>Playback Selection Screen will appear:</p> 

Using the Playback Screen




The diagram shows a playback screen with the following elements and callouts:









- Timestamp:** 2014/01/15 3:37
- Delete Video:** Trash can icon
- Play Video:** Play button icon
- Previous Video:** Left arrow icon
- Next Video:** Right arrow icon
- File Number:** 47/47
- Back:** Back arrow icon
- Screen Labels:** NEXT, SELECT

Use the **NEXT** and **SELECT** soft keys to select, play and delete files or return to the main menu screen.

Videos can also be viewed and managed using the **Drive HD™ App** or a computer (explained later in this manual).

Adjusting the Main Menu Settings

Press  to open the main menu.
Use the NEXT and SELECT soft keys to navigate and toggle settings.

Menu Settings		
	Playback	This will take you to the Playback selection screen, allowing you to play back video you've recorded.
	Action Cam/Dash Cam	Switches between Action Cam and Dash Cam modes. Action Cam mode allows you to shoot videos of any length and the G-Sensor is ignored. Dash Cam mode will run continuous loops of 3 minute videos, and delete the oldest videos automatically.
	Wi-Fi	Enable/disable WiFi for wireless connection.
	Cloud Mode	Note: To use this feature, you must first use our Smartphone app to connect your camera to the cloud by providing it the name and password to connect to a WiFi network.
	Voice Record	If you do not want this device to record audio with its internal microphone, turn this setting off (Dash Cam mode only).
	Auto Record	If this setting is turned on, The camera will automatically start recording video when it receives power from the car charger (Dash Cam mode only).
	Screen Auto Off	If this setting is turned on, the screen will automatically go dark after 60 seconds of inactivity. The camera will continue recording (Dash Cam mode only).
	Settings	Select this option if you want to reset your camera to factory settings, or format your SD card.

These are basic settings only. More advanced settings can only be changed through the mobile App.

To connect your camera to a Computer

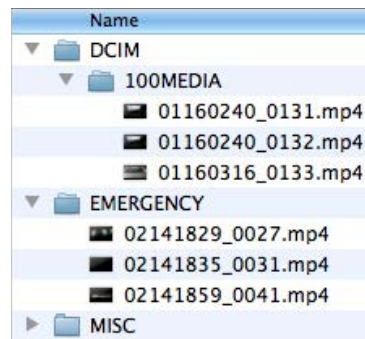
Connect the camera to your computer using the included USB to Micro-USB Cable.



By default, your device connects to your PC in Mass Storage mode, and acts like a flash drive. Videos are stored in the MP4 format. These files can be opened with the video player that came with your operating system, or with many third party video players.

Videos that are locked can be found in the "Emergency" folder, and Videos that are not locked can be found in the "DCIM" folder.

Note that while in Dash Cam mode, if the Memory card gets full, videos that are not locked will be overwritten to make room for new videos. If you want to save any videos that are in the DCIM folder, you should copy them to your computer, or lock the files.



To connect your camera to a TV

If your TV supports HDMI input, you can connect a Micro HDMI to HDMI cable (not included) between the camera and the TV.

The camera screen will be duplicated on your TV screen.



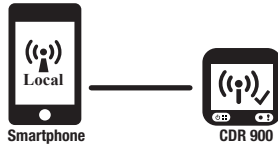
The WiFi capability of the CDR 900 allows you to view live video, control the camera, upload and share videos, or adjust settings; all from your smartphone. The first step to connect your smartphone with the CDR 900 is to download and install the **Drive HD™** App, available for Android™ on the Google Play Store and for iOS on the App Store.



The camera can connect to the App in two ways:

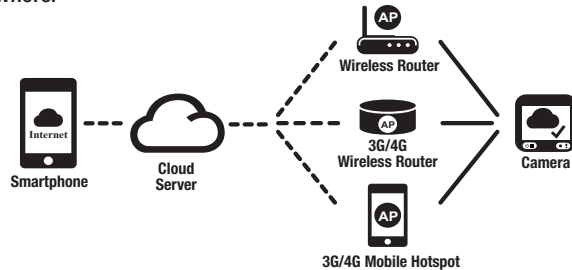
1. Local Direct Connection

The smartphone connects to the CDR 900 directly via WiFi for remote control, live view, album management and camera setup.



2. Cloud-Based Internet Connection

The CDR 900 connects to a wireless access point and uploads live video to the internet cloud server, which can be viewed with your smartphone from anywhere.



To connect your camera to the App - Local Mode

On the Camera, make sure recording is stopped. Go into the main menu settings and turn ON the Wi-Fi Local option.



Back on the video preview screen, you should now see a white Wi-Fi icon in the upper left corner of the camera screen. This means your camera's Wi-Fi hotspot is active.




Go to the Wi-Fi settings on your smartphone and look for a new network that starts with "Cobra —." Connect to this network.

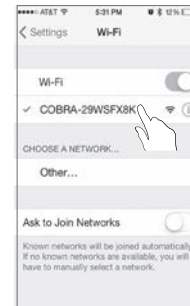
On your smartphone, launch the Drive HD™ App. It will present you with two options: Local and Internet. Choose Local, and then choose the Cobra camera from the list.



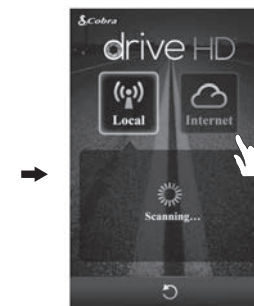
NOTE: It may take up to a minute after you have connected to the camera for it to show up on the App's device list.

If the Cobra camera is not appearing in the list, press the  button to refresh.

In rare cases, you may also have to reboot both the smartphone and the camera to get them to connect the first time.



iOS Settings Page









Main Page







Camera View Page

The WiFi Local connection on the Drive HD™ App has three tabs across the bottom. The buttons in each tab, and their functions, are described below.

View Tab

	Rec / Stop	Tap this button to start and stop recording. These files will be saved on the camera's SD card memory, not on your smartphone.
	Video to smartphone	Tap this button to start and stop recording video. These files will be saved to your smartphone's camera roll (on iOS) or Photo Gallery (on Android).
	Still image to smartphone	Tap this button to take a still picture. This file will be saved to your smartphone's camera roll (on iOS) or Photo Gallery (on Android).
	Talk from smartphone to camera	Tap this button to turn on your smartphone's microphone and send the audio over Wi-Fi to be played on the camera's speaker.
	Multi-Camera view	If you have multiple Cobra cameras in your system, tap this button to see them all at the same time. Tap one of the camera images to go back.
	Flip Vertical	Flip the image upside down. This is best if the camera is mounted on a tripod.

Album Tab

	Dash Cam tab	Tap on this tab to view the list of videos taken in the dash cam mode.
	Action Cam tab	Tap on this tab to view the list of videos taken in the action cam mode.
	Playback buttons	Tap on one of these buttons to play back any video from the list.
	Trash icons	Tap on one of these buttons to delete a video. This cannot be undone.



NOTE: Video files are very large so it may take some time for videos to update.

Setup Tab

Camcorder Name	You can rename your Camcorder here and set a password if you wish.
Date and Time	Here you can send your phone's system time to the Camera with just one tap.
Resolution	This sets the level of detail in the video. FHD is the default value and records in 1080P Full HD. SHD is 1296P Super HD, which provides higher resolution video. Note that not all players support 1296P.
Operation Sound	Toggle the Dash Cam's button tone on/off.
Factory Settings	Select this option if you want to reset your camera to factory settings. This will NOT erase the videos you have stored on your SD card.
Format SD Card	Here you can fully erase the videos on your SD Card, and adjust how much space you want to make available to cyclical recording in Dash Cam mode. Drag the slider from left to right to set the ratio.
Language	Choose your preferred language for the CDR 900.
Internet settings	Here you can register a free cloud account so you can access your camera from your smartphone from anywhere in the world.
Voice Record	If you do not want this device to record audio with its internal microphone, turn this setting off (Dash Cam mode only).
Auto Record	If this setting is turned on, The camera will automatically start recording video when it receives power from the car charger (Dash Cam mode only).
Screen Auto Off	If this setting is turned on, the screen will automatically go dark after 60 seconds of inactivity. The camera will continue recording (Dash Cam mode only).
Motion Detector	If this setting is turned on, the camera will automatically start recording video if it detects movement in view of the camera. Video recording stops when there is no movement.
Delay Power Off	Here you can select how long the camera waits to shut down after power is removed. Select 10 second delay, or immediately off.
Impact Sensor	Sets the sensitivity of the Impact Sensor (G-Sensor). Options include High, Low, and Off. The impact sensor, when triggered, will automatically lock files to prevent them from being automatically deleted by continuous loop recording.

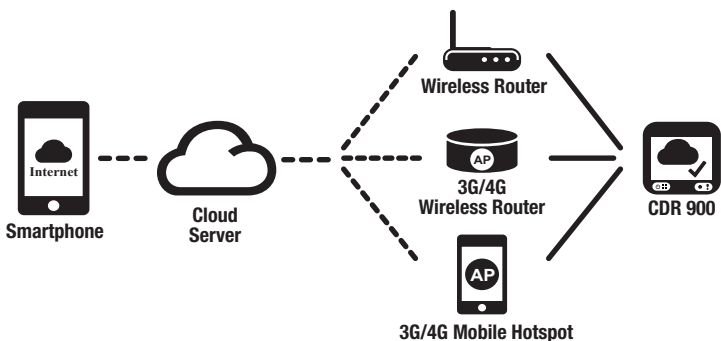
To connect your camera to the Cloud

Because your camera has Wi-Fi, it can be connected to the internet (the Cloud). Once connected, your camera can be accessed from anywhere you carry your smartphone. This is useful if you want to check on the status of your home or loved ones while you are away. If your home already has a Wi-Fi network, then you'll need to put the SSID (network name) and password into the Cobra Drive HD app, and then your camera will connect to the internet.

If the location where you are using your camera does not have a Wi-Fi network yet, consider a wireless router, or Mobile hotspot product to get your camera connected to the internet.



When you're done, your final network will look something like the chart below.




To configure Cloud Mode
Connect your camera to the App using the Local Mode instructions on page 13.
Inside the app, tap on the "Setup" tab at the bottom, and scroll down to "Internet settings."
Under Access Point (AP) tap the button labeled "Click here to Add Cloud AP"
Tap your home network name from the list. If your home network name does not show up in the list, tap "other" and enter your network name (SSID) and password manually.
Tap the "Setup" button in the upper left to go back to setup.
In the Email Box, Enter your email address. This is needed to help protect your privacy, so only you can access your camera over the cloud.
Tap the Green save button, and hit OK.
Exit the smartphone app, and your camera should return to the video preview screen.
Turn on Wi-Fi Cloud in the Main Menu settings of the camera.
After you exit the settings, the camera will show the video preview screen with a green cloud icon in the upper left corner.
Make sure your smartphone is now connected to the internet, via the cellular network or via Wi-Fi.
Open the Cobra Drive HD app, and tap on the Cloud Icon that says "internet."
Your camera will appear in the list. Tap it. After a short while, your camera's image will be visible.

If you ever need to get back into your camera settings again, follow the instructions on page 13 to get back into Local Wi-Fi Mode.

Motion Detector Setup

If this setting is turned on, the camera will automatically start recording video if it detects movement in view of the camera. Video recording stops when there is no movement.


1. Go to App ⇒ (Setup) ⇒ (Car DVR Settings), Turn on (Motion Detector) ⇒ Tap (Save).
2. The CDR 900 will show  on the standby screen.
3. When the power cord is removed from the unit or the switched power supply turns off, select (Active) to start Motion Detector mode.



Camera Specifications:

Visual Angle	160 degrees
Sensor	3 MP CMOS
Video resolution	Super HD 1296P, 2304 x 1296 30 fps Full HD 1080P 1920 x 1080 30 fps
Video Format	MP4
White Balance	Auto
Color Effect	Auto
Continuous Loop Recording	Supported
Motion Detection	Supported
Date and Time	Supported
Media Supported	SD Card - 8GB Included (64GB Max)
Sound Recording	Synchronous video and sound record
Sound Recording can be disabled	Supported
Player Software	Use Operating System's video player
USB Interface	USB 2.0
Display Screen	2.0" TFT
Battery Capacity	700 mAh

Troubleshooting

Situation	Cause/Solution
Camera cannot turn on	Power is low. Recharge battery
Camera is frozen	Press and hold  for 5 seconds to force shutdown; press again to turn on
Camera cannot record	<ul style="list-style-type: none"> No microSD card or microSD card is full microSD card cannot be recognized Format microSD card or replace microSD card
Camera cannot connect to AP or could server	<ul style="list-style-type: none"> Invalid AP name or password Weak WiFi signal or not in WiFi coverage No internet or cloud server is temporarily unavailable Connection may be blocked by a firewall
Smartphone cannot find camera	<ul style="list-style-type: none"> Camera WiFi is disabled or not in WiFi coverage Smartphone WiFi is disabled For iOS users, camera name is not selected in WiFi settings Tap [Refresh] button on Drive HD™ App Wait 1-2 minutes for WiFi connection to fully establish Turn both the phone and camera off, and then try again
Smartphone cannot watch live view	<ul style="list-style-type: none"> Weak WiFi signal Camera is recording Camera is connected to another smartphone
Smartphone cannot connect to cloud server	Check mobile 3G/4G or WiFi internet connection
Forget camera password	Enter camera settings menu and select [Settings] → [Factory Reset] to set to default.

For detailed and up-to-date FAQ's, please visit www.cobra.com/support/faqs.

NOTE: This device complies with part 15 of 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: Modifications or parts not approved by Cobra Electronics Corporation may violate FCC Rules and void authority to operate this equipment.

This device complies with Industry Canada license-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

CAN ICES-3(B)/NMB-3(B)

IC RF Exposure Compliance (SAR)

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Industrial Canada for an uncontrolled environment.

WARNING: This product contains chemicals know to the State of California to cause cancer and birth defects or other reproductive harm.

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