

VISIOTECH VC-2 MANUAL



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INTRODUCTION

This manual is applicable for the Visiotech VC-2 Body Camera.

The Visiotech VC-2 is a wearable video recording solution with up to 14 hours of recording time and built-in GPS location recording.

With its AES-256 video encryption coupled with Super High-Definition video and incredible low-light capability, lone workers, law enforcement and security agencies can better protect their people and assets.

With VisioTech's Digital Evidence Management Software and convenient drop-in docking station, charging and management of recorded data is made easy, secure and intuitive.

FEATURES:

RECORD GPS POSITIONING

This lightweight body camera packs a punch with its state-of-the-art features. Press record and capture the truth securely and know your integrity is never questioned. The simple intuitive control allows users to capture video, audio and photographs. Go back in time with the cameras pre-event recording feature which automatically attaches 7 seconds of buffered evidence from before the record button was pressed.

The Visiotech VC-2 Body Camera comes equipped with integrated GPS tracking hardware. Location metadata is recorded with video and is displayed on playback to further enhance the captured evidence.

ADVANCED ENCRYPTION STANDARD (AES256)

Data is stored on the integrated 64GB solid-state drive and encased in a robust IP67 housing that can withstand even the harshest conditions. Trust your stored video with the inbuilt Advanced Encryption Standard (AES-256), adopted by the U.S. government and other intelligence organizations across the world, this high-end encryption standard ensures the integrity of your data. An optional feature of this device is a unique encryption key which can be set for your specific organisation.

FULL 2.7K HD RESOLUTION VIDEO SENSOR

The Visiotech VC-2 Body Camera comes equipped with a 2304 x 1296 pixel resolution 2.7K sensor. That means the body camera records video at over 50 percent more pixels than the standard 1080p. As a result, this bodycam can capture a crystal-clear image of a license plate, faces, features and more from a significantly farther distance than 1080p.

AUTOMATIC INFRA-RED HIGH OUTPUT NIGHT VISION

The Visiotech VC-2 Body Camera is equipped with a low-light HD video sensor that records 2.7k HD colour video and snaps photos at a detailed 32 Megapixels.

Infrared night vision picks up details in complete darkness and with Visible Face Detection up to 10 metres. The camera's 140-degree wide angle lens records peripheral images to avoid important evidence that would otherwise be off camera.

WARNING**SAFETY HAZARD WARNINGS FOR LITHIUM ION BATTERIES:**

The rechargeable Lithium Ion batteries within the Visiotech Body Camera are potentially hazardous and can present a serious FIRE HAZARD if damaged, defective or improperly used. Lithium batteries requiring frequent full discharge cycles require special precautions.

A FIRE IS MOST LIKELY TO OCCUR DURING THE CHARGING PROCESS UNDER THE FOLLOWING CIRCUMSTANCES:

- **THE BATTERY HAS BEEN FULLY DISCHARGED AND IS NOT RECHARGED SHORTLY AFTERWARD.** This potential is aggravated if batteries are damaged, contain an undetected factory defect, are used or stored at temperature extremes, **or are approaching the end of their useful life.** Ideally, batteries should be recharged within 24 hours of a full discharge.
- **CHARGING IS ATTEMPTED AT TEMPERATURES BELOW 40°F (4°C).** Charging below 40°F (4°C), causes a chemical reaction in the battery cells that can cause permanent damage and the possibility of fire or explosion during charging.
- **THE BATTERY HAS BEEN EXPOSED TO LIQUIDS, ESPECIALLY SALTWATER.** Exposure to liquids can cause internal corrosion or damage to the cells or to the Battery Management System (BMS). The BMS protects the battery from overcharging, high self- discharge or imbalanced charging of the cells, any of which can present the possibility of fire during recharging.
- **OPERATING OR CHARGING A BATTERY THAT HAS BEEN DAMAGED FROM DROPPING OR FROM SHIPPING DAMAGE.**
- **USING A CHARGER OTHER THAN SPECIFICALLY DESIGNATED FOR THE PARTICULAR BATTERY.** Lithium Ion battery chargers provide a specific charging voltage and microprocessor current and voltage control.
- **THE BODY CAMERA SHOULD ONLY GET SLIGHTLY WARM DURING CHARGING.** If the camera becomes hot, smokes, or gives off an odour during charging, terminate charging immediately and contact Comvision.

GENERAL CARE:

- Read the user manual carefully before using the equipment, follow the operation instructions strictly.
- Please take care during transportation and use of the body camera.
- All installation and maintenance must be performed by professionally trained qualified persons.
- To avoid overheating, keep the Body Camera and docking stations well ventilated.
- If the Body Camera produces smoke, smell, or unusual noise, please turn off the power immediately and unplug the power cord and contact Comvision.
- If the Body Camera is not working properly, please contact Comvision. Do not disassemble or modify the Body Camera in any way in order to maintain your warranty.
- Do not charge at high temperature. The overheating of the battery may cause an explosion; high temperature refers to not more than 45 degrees.
- Physical damage to this product may result in data loss and void the warranty.
- This product is only IP67 rated when the rubber protection covers are in place. Water entering the device will damage it and void the warranty.
- Please keep the front lens clean to ensure clear video footage.
- Avoid placing equipment in direct sunlight, poorly ventilated areas, or near heat sources such as heaters (ignoring this may lead to fire hazards).
- Please take good care of your username and password.

PRODUCT OVERVIEW

Main features of the Body Camera:

1. Super 2.7K HD Video
 2. Wide Angle Lens
 3. Built in Wi-Fi
 4. AES-256 Encryption
 5. Built in GPS
 6. Large 4000mAH battery
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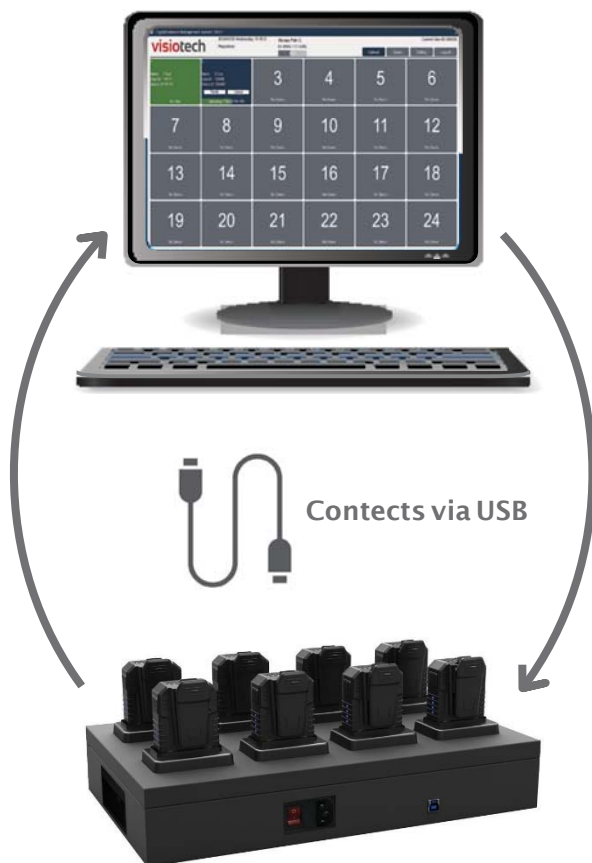
PRODUCT SPECIFICATION

Encryption	AES-256 Video Encryption
Password Protection	Restricted File Deletion
Watermark	User ID, Date/Time Stamp, GPS coordinates embedded into video. Includes 7-digit Device ID and 6-digit User ID
GPS Tracking	Supported in recording
Camera	<p>Capture crystal clear recording of license plates, faces and features together with high quality audio on this Super High Definition Day/Night Camera.</p> <ul style="list-style-type: none"> • One Button Touch Recording Operation • 32 Megapixel snap photos while recording • Wide angle of view, 140Degrees • H.264 Video Compression • G.711 / G.726 Audio Compression • WDR technology, Electronic Image Stabilisation, Electronic Shutter • Dewarp processing for wide angle lens
Recording Resolution	Main stream: 2304x1296p@30fps; 1920x1080p@30fps; 1280x720@30fps & 60fps Recording content: Video and Audio
Pre-Event Recording	Configurable
Storage Capacity	64GB
Night Vision	Auto/Manual IR LED • Up to 10 Metres with Visible Face Detection, light Sensitivity 0.0LUX with IR
Battery	<ul style="list-style-type: none"> • Continuous recording Time: 11-14 hours • Charge time: 3.5 hours • Built-in 4000mAh Li-ion Battery • Battery charge LED indicators
Transmission	Wi-Fi 802.11 a/b/g/n 2.4G
Data Port	Docking port
Interface Protocol	RTSP
Ruggedised Case	<p>The rugged ballistic shell made for law and security agencies is weather resistant and can handle the most extreme conditions. Its rugged clip attaches to any pocket, belt, lapel, collar, placket, and most protective armor.</p> <ul style="list-style-type: none"> • Light weight 164 Grams (inc battery) • IP66 weather resistant Case • Working temperature -20 to +60 Degrees Celsius • 360 degrees Rotatable Clip
Dimensions	H81mm x W56mm x D27mm
Drop-in Dock	Single and 8 Port Docking Stations Available
OS	Linux with NTK chipset
Standard Accessories	USB Cable, Drop-in Dock Charger, Rugged Clip
Optional Accessory	8-Port Docking station (model DS8PVC)





PRODUCT APPLICATION

The Visiotech VC-2 high-definition Body Camera is a highly integrated device specially developed for the law enforcement industry. The equipment supports photo snap shots, video and audio recording, local storage and infrared night vision.

The body camera uses a docking process to charge the body camera batteries and manage the footage on the camera. The Visiotech DEMS Dock Software is loaded on a PC that contains adequate Hard Disk capacity to keep the incident footage for the preferred amount of time. Body cameras connect to the DEMS Dock PC via a USB connection. The Visiotech single USB docking stations and the 8 port docking stations connect to the PC via USB, the DEMS Dock software detects a new connection and automatically starts the charging and file management process. The DEMS Dock software is protected by user level passwords with general users only having the ability to dock and undock body cameras. Higher level users are programmed for access to view and playback incident footage, management encrypted files, export and delete files.



BODY CAMERA BUTTONS

Button Name	Icon	Method	Function
Power key		Long press	A long press of the “Power key” (3 seconds) will turn the body camera on and off.
Record key		Short press	In ON state, short press the “Record key” to start recording.
		2 Short Presses	In ON state, double short press the “Record key” to stop recording.
Photo key		Short press	In ON state, a photo can be taken by pressing the “Photo key”. During video recording, a photo can be captured and saved by pressing the “Photo key”.
		Long press	In ON state, long press the “Photo key” to turn on Wi-Fi. To turn Wi-Fi off, long press the “Photo key” again. Note, Wi-Fi should not be left on to conserve battery life.
Function Button		Short Press	In ON state, the Battery life indicator (4 LED’s on the side of the camera) can be displayed by short pressing the “Function key”. These LED’s automatically turn off after 7 seconds.
		Long Press	In ON state, long press the “Function key” to turn on Audio recording (without video). Long press again to turn off Audio recording.

BODY CAMERA LED STATE DESCRIPTION

LED Indicator state Colour	State description
Green	Camera is in the On State
Red	Video recording On
Flashing Red	Video Pre-Record On
Orange	GPS On
Flashing Orange	Finding GPS
Purple	WIFI On / Charging
Battery Life Indicator	<p>4 blue LED's on the side of the body camera indicate battery life. These lights indicate the following:</p> <ul style="list-style-type: none"> • 4 LED's ON – 100% charged • 3 LED's ON – 75% charged • 2 LED's ON – 50% charged • 1 LED's ON – 25% charged • 0 LED's ON – 0% charged <p>Pressing the "Function key" brings up the battery life indicator function.</p>

TURNING THE CAMERA ON AND OFF

Press and hold the “Recording key” button located on the front of the body camera (under the camera lens) for 3 seconds to turn the body camera on. The unit will emit ONE audio chirp and long vibration. A green indicator on top of the unit will turn on and remain green while the unit is powered on.

Note, if the video pre-record is setup on the camera. The Green LED will only display for 5 seconds after bootup before it turns to flashing Red to indicate the unit has started pre-recording.

To turn the camera off, long press the "Power Key" for 3 seconds. All LED's will turn off.

VIDEO RECORDING

After the body camera is turned on, the camera enters the On state. To record video, short press the “Record key” located on the front of the device (under the camera lens). The unit will emit 1 vibration.

A Red LED record indicator on the top of the unit will turn on (solid) and remain red during recording. Double- press the “Record key” to stop recording; the unit will emit TWO audio chirps and vibrations.

Note, if the “Record Notification” function is turned on, the body camera will vibrate periodically to indicate recording is on. The period is programmable in the body camera setup.

TAKE A PHOTO

In the On state, press the “Photo key” located on the right side of the device. The unit will emit 1 audio chirp and vibration. The yellow LED indicator on top of the unit will turn on, then turn off after the photo has finished.

GPS FUNCTION

In the On state, the GPS function can be activated by holding both “Photo key” and the “Function key” for 3 seconds. The GPS orange indicator LED will blink until a signal is received, at which point the orange GPS LED will turn on solid. The camera location coordinates will be embedded into the video during recording. The GPS metadata (body camera position) will also be displayed during playback on the Visiotech DEMS Docking software.

Long pressing both the “Photo key” and the “Function key” again will disable GPS function. The orange LED will turn off.

Note: Disabling the GPS function will increase the battery life dramatically.

WI-FI FUNCTION

In the On state, long press the “Photo key” to turn on the Wi-Fi, a purple LED indicator on the top of unit will turn on when Wi-Fi is on. To turn off WiFi, press and hold the “Photo key” button for 3 seconds, the purple LED indicator will turn off.

CHARGING THE BODY CAMERA

Place the camera in the Visiotech single or 8 port docking station. The docking station hardware is connected via USB to the docking station PC with the Visiotech DEMS dock software loaded.

When the camera is being charged, the charging indicator located on top of the unit will be blue. After fully charged, the charging indicator will be off.

FACTORY RESETTING THE BODY CAMERA

If you are having problems with your device, please try and reset the camera using the reset button on the back of the camera.

Note: Use a paper clip to press the reset button. You will hear a "click" after the button is pressed.

PRODUCT INSTALLATION**BODY CAMERA BOX CONTENTS LIST**

Order Number	Name	Number Quantity
1	Visiotech Body Camera	1
2	Body Camera Clip	1
3	USB Cable	1
4	Single Charger Docking base	1

EQUIPMENT UPGRADE

Please contact Comvision.

SOFTWARE INTRODUCTION

SOFTWARE OVERVIEW

The management software for the Body Camera (hereinafter referred to as the Management Software) is an application developed to communicate with the Visiotech Body Camera. It communicates with the Body Camera through the docking station USB to a computer running the Management Software. The Management Software is used for the configuration of video parameters, WiFi parameters and central parameters. After logging in successfully, the device can enter U disk mode, and the playback and export of video data can be done.

SOFTWARE FEATURES

1. Device logon management, user password modification.
2. It supports the acquisition and modification of the coding parameters.
3. Time synchronization of the Body Camera.
4. The acquisition and modification of user information.
5. Modification of network parameters such as WiFi.
6. Acquisition and modification of video recording parameters.
7. Acquisition and modification of other device parameters.

SOFTWARE INSTALLATION AND OPERATION

- Access the software package by downloading from the Comvision web site. Users will need to contact Comvision for a download web link.
 - Files include
 - Cam_manager.exe
- Copy all files onto your computer.
- Right click the Cam_manager.exe file and run the program as an administrator.

SOFTWARE OPERATIONS GUIDE

LOG ON INFORMATION

- Use the USB cable to connect the device to the computer via the docking station hardware.
- **To Login:**
 - The **default User Name is: Admin**
 - The **default password is: 000000**
- **Change password:** click change password, the user can modify the login password by entering a 6 digit number.

CAMERA INFORMATION

- **Device ID:** Set a 7-digit ID (should be unique for each device for your system).
- **User/Police ID:** Set a 6-digit ID (should be unique for each device for your system).
- **Firmware Version:** Will show Firmware version installed

TIME SYNCRONISATION

- Click on **“Sync Date and Time”** to Sync the time between your PC and the body Camera.

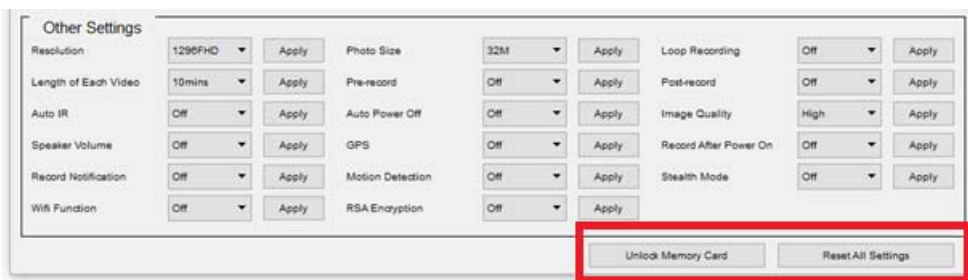
OTHER SETTINGS:

Other Settings								
Resolution	1296FHD	Apply	Photo Size	32M	Apply	Loop Recording	Off	Apply
Length of Each Video	10mins	Apply	Pre-record	Off	Apply	Post-record	Off	Apply
Auto IR	Off	Apply	Auto Power Off	Off	Apply	Image Quality	High	Apply
Speaker Volume	Off	Apply	GPS	Off	Apply	Record After Power On	Off	Apply
Record Notification	Off	Apply	Motion Detection	Off	Apply	Stealth Mode	Off	Apply
Wifi Function	Off	Apply	RSA Encryption	Off	Apply			

- **Resolution:**
 - Select the resolution you wish to record. Options include: VGA, 720P, 1080P or 1246P
- **Length of Each Video:**
 - Select how long each file should be. Choose from 10, 15 or 30 min
- **Auto IR:**
 - Select if IR comes on automatically or not.
- **Speaker Volume:**
 - To change the volume settings
- **Record Notification:**
 - Vibrates the camera periodically when recording is on. The period of time is set in the drop-down options.
- **Wi-Fi Function:**
 - Turn On or OFF Wi-Fi for the camera
- **Photo Size:**
 - Select the file size for the camera photos (Still Shots). Select from, 3, 5, 8, 10, 12, 16, 21, 32 Mb
- **Pre-Record:**
 - To turn ON or OFF Pre-Record
- **Auto Power Off:**
 - To enable Auto-Power off after a selected amount of time
- **GPS:**
 - To turn ON or OFF the GPS feature
- **Motion Detection:**
 - Not supported on the VC-2 model
- **RSA Encryption:**
 - To enable RSA Encryption (See Visiotech DEMS Installation Manual)
- **Loop Recording:**
 - Enable record over older footage once the on-board storage is full
- **Post-Record:**
 - Set an amount of time for camera to continue recording after the stop record button is pressed.

- **Image Quality:**
 - Sets the bit rate for the recorded video, the “high” setting provides the best quality video recording
- **Record After Power ON:**
 - Set to record once camera is turned on
- **Stealth Mode:**
 - When enabled, all lights on camera turn off. Function vibration alerts still work.

ENTER USB MODE



- Enter the camera USB mode by clicking on the “Unlock Memory Card”. This allows you to access the files on the camera as a normal USB device from your PC.

TROUBLE SHOOTING

UNABLE TO DOCK

- First check whether the docking equipment is on
- Remove the camera from the dock and plug back in
- Check the connection of USB cable
- Remove the USB cable and reconnect

Note: Some parameter settings do not take effect immediately and you need to restart the body camera for these to take effect.

DEVICE RESTART

Unplugging the USB or removing the camera from the docking station will automatically turn the body camera off. The camera's power button can be used to power the unit back on.

Alternatively, when in the "On state", restart the body camera by holding the power button down for 3 seconds. After it powers down, press the power button again (for 3 seconds) to start the body camera.