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Infrared Digital Scouting Camera

*User's Manual*

*Covert Deuce*



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# 1 Instruction


## 1.1 General Description

The Covert Deuce is a surveillance device working automatically with dual light: infrared LEDs and incandescent flash. It is triggered by any movement of humans or animals monitored by a high sensitive Passive Infrared (PIR) motion sensor, and then automatically captures high quality pictures (up to 5M pixels) or records video clips (VGA) according to default settings or preset customer settings.

It integrates infrared LEDs and incandescent flash. When using the infrared LED option at night, it takes clear black and white pictures or video clips without any disturbance to the animals. When using the incandescent flash option, it takes clearly color pictures at night while providing a “flash” like a digital camera.

It has a durable and compact shape with low power consumption. It will take up to 1200 flash pictures and supports up to an 8 GB SD card.

Powered by Eight new AA alkaline batteries, the camera stands-by for about 6 months. Once a motion by human or animals is detected, the digital camera unit will automatically take pictures or videos according to previously programmed settings.

The device is designed for outdoor use and is resistant against water and snow. Furthermore, the camera can be used as a portable digital camera. Pictures or videos can be taken manually by pressing  on the operation panel.

## 1.2 Application

This camera can be used as an automatic surveillance device for guarding and recording unexpected intrusion to homes, shops, schools, offices, cabins, private property, worksites etc. It can also be used as a trail camera for hunting or monitoring animals by recording the traces of wild animals. It can be left alone for weeks and months and it will deliver event records automatically in digital format to the SD card.

## 1.3 Camera Interface

### 1.3.1 Camera Body Interface

The camera has the following interfaces: a 2.0” TFT LCD display screen, operation panel, USB connector, SD-card slot, TV output and external DC power connector. Fig.1 shows the front view of the camera and its function parts. Fig.2 shows the operation panel and display screen. Fig.3 shows the bottom view of the camera and its I/O interface.

Take a few moments to familiarize yourself with the camera controls and displays. It is helpful to bookmark this section and refer to it when reading through the rest of the manual.

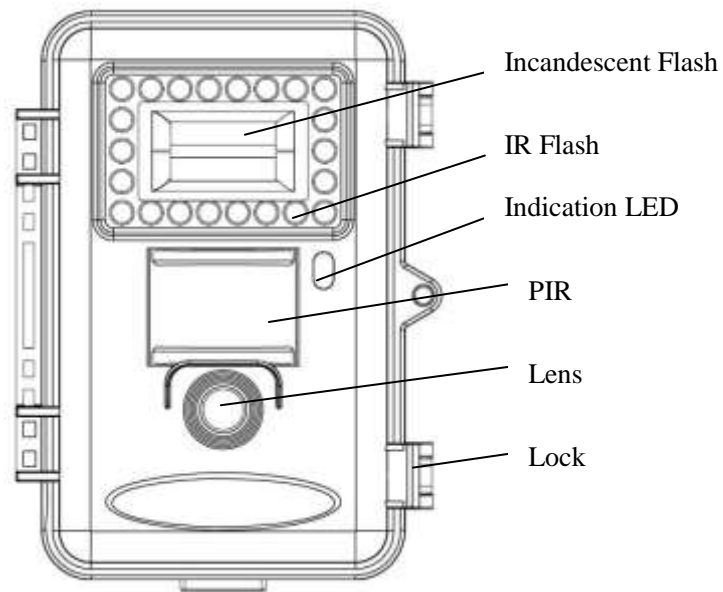


Figure 1: Front view

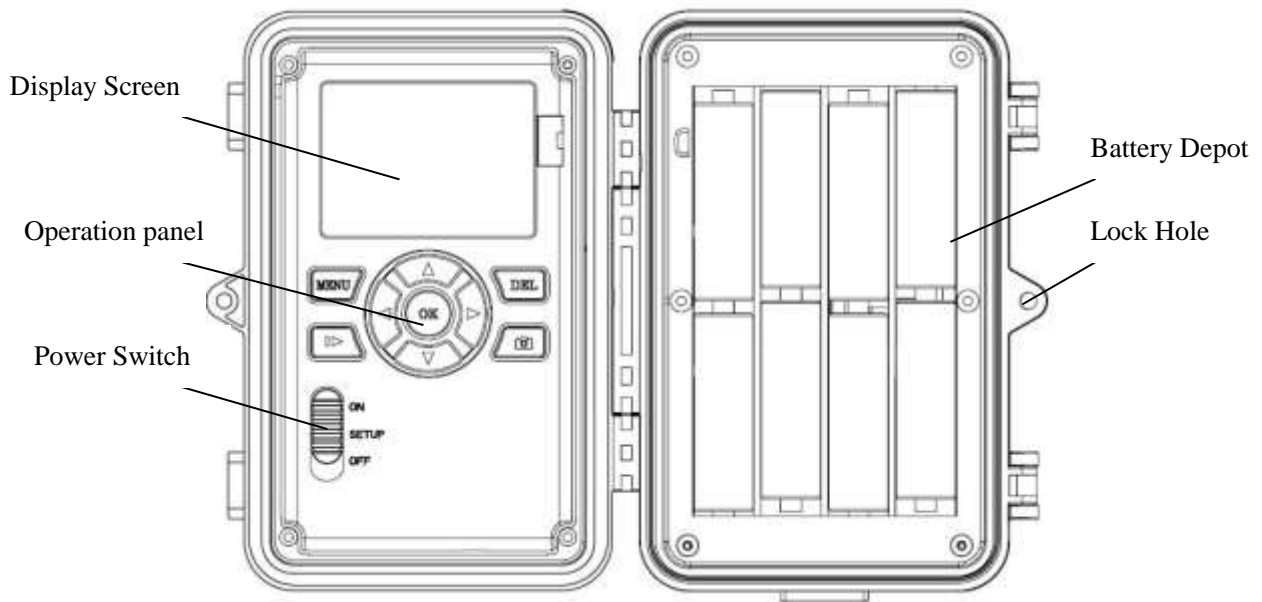


Figure 2: Operation interface

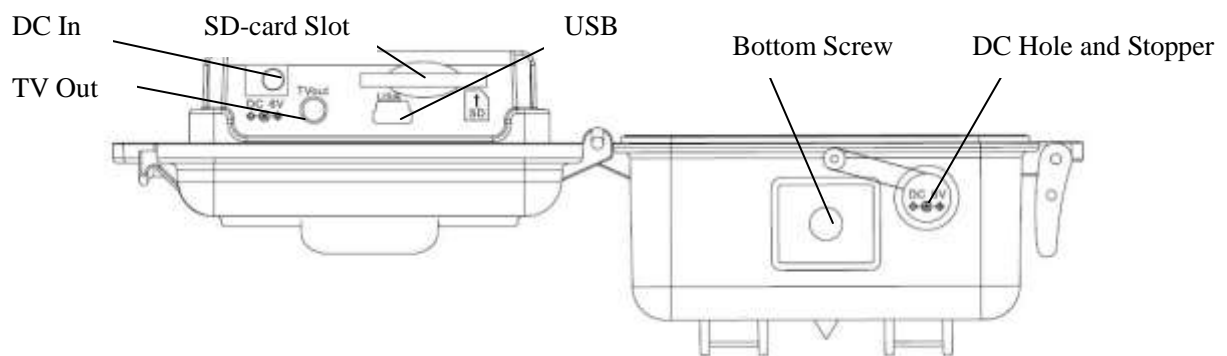


Figure 3: Bottom view

### 1.3.2 Key Notes

“MENU” : to enter the program menu in preview mode;

“▲”“▼”“◀”“▶” : for parameter settings as described in the user’s manual.

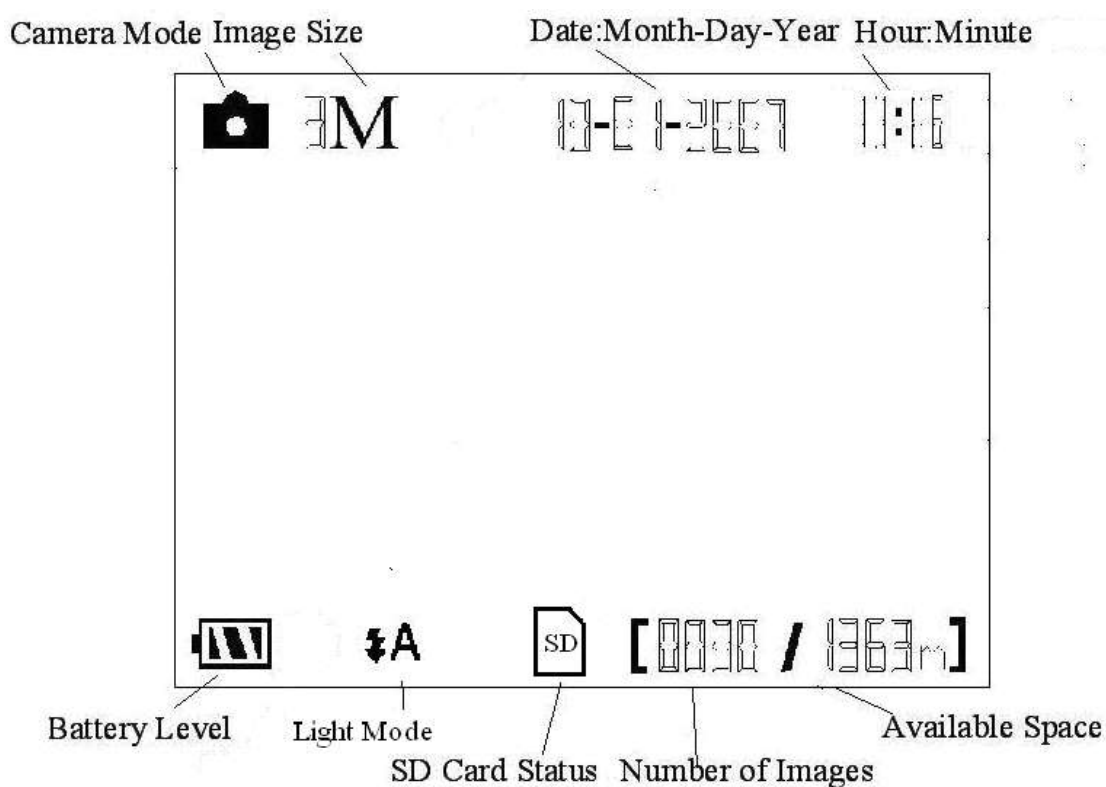
“OK” : to save parameter settings and play back videos.

“▶” : to exchange between playback mode and preview mode;

“DEL” : to delete an image

“📷” : to capture a photo or record a video manually.

### 1.3.3 Shooting Information Display



### 1.4 Saving Images or Videos

The Camera uses a SD-card to save images (in .jpg format) and videos (in .avi format). Before inserting the SD-card be sure that the SD card is unlocked. The camera is compatible with SD-cards from 8MB to 8GB.

## 2 Cautions

- ★ The working voltage of the camera is 6V. The camera is supplied by four or eight AA batteries.
- ★ Please install batteries according to shown polarity.
- ★ Please unlock the write-protect before inserting the SD-card.
- ★ Please insert the SD-card when the power switch is at the **OFF** position before testing the camera. The camera has no internal memory for saving images or videos. If no SD-card is inserted, the camera will shut down automatically after a continuous indication sound.
- ★ Please do not insert or take out the SD-card when the power switch is at the **ON** position.
- ★ It is recommended to format the SD-card by the camera when used for the first time.
- ★ In the **SETUP** mode, the camera will shut down automatically after 3 minutes if no operation is done. Please turn on the power again if you want to continue to work with the control.

## 3 Quick Start Guide

### 3.1 Power Supply

Use 8 or 4 AA batteries or 6v external battery for power supply.

Install the fully charged batteries into the depot according the polarities sign shown. The following batteries with 1.5V output can be used:

1. High-density and high-performance alkaline batteries (Recommended)
2. Rechargeable alkaline batteries
3. Rechargeable NiMH batteries

When in a low-battery state, the camera will be automatically shut down after the indication LED's signal a warning with a period of quick flashing. Please change the batteries at this time.

### 3.2 Insert the SD-card

The camera has no internal memory for saving images or videos. If no SD-card is inserted or SD-card is locked, the camera will not function properly.

### 3.3 Power on and Entering into the ON Mode

The Camera has three basic operation modes:

1. **OFF mode:** to turn off the camera.
2. **SETUP mode:** to set operational parameters, or to playback the photos or video clips via display screen or via TV.
3. **ON mode:** to work in surveillance state.

After switching the camera to the ON position, the motion indication LED (red) will blink for about 10s. This time interval is for you to make the Camera ready for automatic surveillance operation, e.g., to close the bottom cover and to lock it, to fix the camera on a tree and to walk away. The Camera will take pictures or videos automatically according to the previous programmed settings when human or animals enter into the monitoring region.

### 3.4 Enter into the TEST Mode

There are 3 states in TEST Mode: preview state (preview the scene in the front of the camera), setting state (make customer settings), and playback state (view Photos or videos via 2.0" TFT display).

#### 3.4.1 Preview

After switching the camera to TEST Mode, it enters into the preview state.



Press  to exchange between playback mode and preview mode;

#### 3.4.2 Customer Settings

Press **MENU** to manually customizing the camera settings which displayed on the

screen or external TV monitor. The detailed operations will be described in “Advanced Operations” chapter.


### 3.4.3 Manual Capturing

Press  to manually capture photos or record videos. It is also  to stop the manual capturing of the video.


### 3.4.4 View Images or Videos

There are two ways to view the captured images or videos:

1. LCD screen on the control
2. TV monitor which connect to camera with TV cable

Press  to view images or videos. The latest image or video will be shown in the LCD screen on the control or TV monitor. Press “▲” or “▼” to view the previous or next image or video.

### 3.4.5 Delete Images or Videos

Press **DEL** to delete images or videos. Note: the **DEL** button will only work in the Playback state. So if it’s in Preview state, you should press  to enter into the Playback state.

## 3.5 Power Off

Switch the camera to **OFF** position to power off the camera. Please note that even in the **OFF** mode, the camera still consumes certain power. Therefore, please remove the batteries if the camera will not be used for a long period of time.



## 4 Advanced Operations

After you're familiar with the basic operations of the Camera, you are now ready for advanced operations. The options and parameters of the Camera are explained in more detail.

### 4.1 Settings Menu

To view the camera settings menu, press **MENU** in the **TEST** mode (Power switch is at **TEST** position). The settings menu will be shown on the LCD on the camera or the external TV monitor (only when the camera is connected to a TV).

#### 4.1.1 Set the Camera Mode

There are two modes: Camera or Video. There are two ways to set the camera mode: 1. Via shortcut key; 2. Via setting menu.

1. Via shortcut key: You can set camera mode to "video" by pressing the "▲" key and set camera mode as "camera" by pressing the "▼" key in TEST mode.

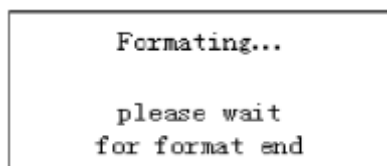
2. Setting menu: The following shows how to set the camera mode to **Video**, provided that the previous option is **Camera**:

- a) Press **MENU** to display the setting menu.
- b) Press "▲" or "▼" to select **Mode**.
- c) Press "▶" to select **Video**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to cancel setting and return to info display.

#### 4.1.2 Format SD-Card

The system will delete all images or videos stored in the SD-card after formatting, so make sure that you have made a backup of important data.

- a) Press **MENU** to display the setting menu.
- b) Press "▲" or "▼" to select **Format**.
- c) Press **OK** to choose **Enter** to enter into submenu.
- d) Press "▶" to select **Yes**. **Yes** will be highlighted.
- e) Press **OK** to start formatting the SD-card. During formatting, the display screen will show a message "Formatting..." as below.  
Press **MENU** to return to info display.



#### 4.1.3 Set Photo Size

This parameter has two values: 5 mega pixels (5M Pixel or 5MP) and 3 mega pixels (3M Pixel or 3MP). The default value is 5 mega pixels.

The following shows you how to set pixel size as "3M Pixel" provided that the

previous value is “5M Pixel” at MENU state:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Photo Size**.
- c) Press “▶” to select **3MP**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to return to info display.

#### 4.1.4 Set Video Size

This parameter has two values: 640X480 (VGA) and 320X240 (VGA). The default value is “640x480” (VGA).

The following shows how to set video size as **320×240** provided that the previous option is **640×480**:

- e) Press **MENU** to display the setting menu.
- f) Press “▲” or “▼” to select **Video Size**.
- g) Press “▶” to select **320×240**.
- h) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to return to info display.

#### 4.1.5 Set Date and Time

You can change the date and time of the device by setting this parameter when necessary, e.g., after every battery change. The date format is **month/day/year**, the time format is **hour: minute: second**. The valid value for year is between 2009 and 2050.

Provided that the date and time are needed to be set to November 15th, 2010 and 10:30, the steps are as following:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Set Clock**.
- c) Press **OK** to **enter** into submenu.
- d) Press “▶” to select item, press “▲” or “▼” to change the value.
- e) Press **OK** to save all current setting and return to info display.  
Press **MENU** to return to info display.

#### 4.1.6 Set Photo Burst

This parameter affects the number of pictures taken for each triggering in the camera mode. It has three values: “1 Photo” “2 Photos” and “3 Photos”. Its default value is “1 Photo”. Note: When using the incandescent flash, the camera just can take 1 photo each time.

The following shows how to set continuous capture number to **3 Photos** provided that the previous option is **1 Photo**:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Capture Number**.
- c) Press “▶” to select **3 Photos**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to return to info display.

#### 4.1.7 Set Video Length

This parameter is effective and can be adjusted only when the device is in the video mode for the ON mode. Its value extends from 1 to 60 seconds with a step of one second. The default value is 10 seconds. Press “◀” and “▶” to decrease or increase the value by 1 second.

The following shows how to set video length to **15 Seconds** provided that the previous value is **1 Seconds**:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Video Length**.
- c) Press “▶” to increase to **15 Seconds**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to exit.

#### 4.1.8 Set PIR Sensitivity

This parameter defines the sensitivity of the PIR. There are three parameters: High, Normal, and Low. The default value is “Normal”. The higher degree indicates that the Camera is more easily triggered by motion, taking more pictures or recording more videos. The sensitivity of the PIR is strongly related to the temperature. Higher temperature leads to lower sensitivity. Therefore it is suggested to set a higher sensitivity for high temperature environment. On high, the camera will trigger more easily. We recommend the **High** setting for temperatures exceeding 95 degrees Fahrenheit. Use the **Low** setting for temperatures below 35 degrees Fahrenheit to reduce false triggers. For normal use of the camera, the **Normal** mode is recommended and is the default setting.

The following shows how to set PIR sensitivity as **Low** provided that the previous option is **Normal**.

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Sensitivity**.
- c) Press “▶” to select **Low**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to return to info display.

#### 4.1.9 Set PIR Triggering Interval

This parameter means how long the PIR (Passive Infrared motion sensor) will be disabled after each triggering in the ON mode. During this time the PIR of the device will not react to the motion of human (or animals). The minimum interval is 0 seconds and means the PIR works all the time. The maximum interval is 1 hour. It means the PIR will be disabled for 1 hour after each triggering. The default value is 1 minute. Press “◀” and “▶” to decrease or increase the value .

The following shows how to set triggering interval time to **5 Minutes** provided that the previous value is **1 Minute**.

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **PIR Interval**.
- c) Press “▶” to decrease or increase to **5 Minutes**.

- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to cancel setting and return to info display.

#### 4.1.10 Set Time Stamp

This parameter defines whether the date and time is stamped in the pictures and video clips. The following shows you how to set time stamp as “Off” provided that the previous value is “On” in MENU state.

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Time Stamp**.
- c) Press “▶” to select **Off**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.  
Press **MENU** to cancel setting and return to info display.

#### 4.1.11 Set Timer Switch

This parameter defines a certain time lapse in a day when the camera can be triggered. In the rest of the time the device is shut off. The effective value ranges from 00:00:00 to 23:59:59.

Timer Switch OFF means the camera works all the time according to the preset settings; Timer switch ON means the camera works only during the time lapse according to the preset settings.

Please note that the Timer switch functions only when the timer is set as **On**. Provided that the camera works from 08:00 a.m. to 17:00 p.m., the steps are as follows:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Timer Switch**.
- c) Press “▶” to select **On**.
- d) Press **OK** to enter into submenu.
- e) Press “▶” to select item, press “▲” or “▼” to change the value until the start time changes to 8 and the stop time changes to 17.
- f) Press **OK** to save all current setting and the option will be un-highlighted.  
Press **MENU** to return to previous menu.

#### 4.1.12 Light Mode

This parameter defines the light mode of this dual light camera. There are two light modes: **Xenon**, **Infrared**.

In **Xenon** mode, the camera takes color pictures using incandescent flash when the lighting is insufficient. Note: If the camera is in **Video mode**, and the Light mode is **Xenon**, the camera will automatically turn to **Infrared** mode to take IR video clips. In **Infrared** mode, the camera will take photos or video clips with the infrared LEDs. The default value is **Infrared**.

The following shows how to set light mode to **Xenon**, provided that the previous option is **Infrared**:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Light Mode**.
- c) Press “▶” to select **Xenon**.
- d) Press **OK** to save the current setting and the option will be un-highlighted.

- e) Press **MENU** to cancel setting and return to info display.

#### 4.1.13 Reset to Default Settings

To reset the setting to the default values, the steps are as follows:

- a) Press **MENU** to display the setting menu.
- b) Press “▲” or “▼” to select **Reset**.
- c) Press **OK** to reset to default settings and return to info display.  
Press **MENU** to cancel setting and return to info display.

## 4.2 Default Settings and Live Monitoring

When the Camera leaves the factory, most parameters are set as default. Please refer to table 1.

Parameter name	Default	Other settings
Camera Mode	Camera	Video
Image Size	5M Pixel	3M Pixel
Video Size	640×480	320x240
Capture Number	1 Photo	2 Photos, 3 Photos
Video Length	Avi 10 Second	1-60 seconds
Light Mode	Infrared	Xenon
Sense Level	Normal	High, Low
PIR Interval	1 Minute	0-59 seconds, 1-60 minutes
Timer Switch	Off	On (00:00 – 23:59)
Time Stamp	On	Off

Table 1: Default settings of the Camera

## 4.3 Firmware Upgrade

This camera is equipped with an automatic upgrade function for you. Upgrading is needed only when an improved firmware is available.



## 5 Mounting the Camera

When you want to use the ON mode of the camera outside, such as hunting and monitoring the living habits of wild animals, you must mount the device on a certain place properly. To get the optimal picture quality, the tree can be 15 feet away from the place to be monitored, and at a height of 3-6 feet.

There are two ways to mount the camera: using a band shaped belt or with the bottom screw.

- **Using the belt:** To use the belt to fix the camera on a tree is illustrated in Fig. 4. Adjust the belt to go through the two back holes of the camera. At the end, tie it off to secure the camera properly.
- **Using bottom screw.**



Figure 4: Fixing the camera with belt

## Appendix I : Technical Specifications

<b>Image Sensor</b>	5MP Color CMOS
<b>Lens</b>	F/NO=3.1mm FOV(Field of View)=52°
<b>Infrared/Xenon</b>	10-12m
<b>Display Screen</b>	2.0" TFT
<b>Memory Card</b>	From 8 MB to 8 GB
<b>Picture Resolution</b>	5MP = 2560×1920 3MP = 2048×1536
<b>Video Resolution</b>	640×480 (16fps) 320×240 (20fps)
<b>PIR Sensor</b>	Multi Zone
<b>PIR Sensitivity</b>	Adjustable (High/Normal/Low)
<b>Trigger Time</b>	1.2s
<b>Weight *</b>	0.26kg
<b>Operation/Storage Tem.</b>	-20 - +60°C / -30 - +70°C
<b>Interval</b>	1s – 60 min.
<b>Photo Burst</b>	1–3
<b>Video Length</b>	1–60s
<b>Power Supply</b>	8× AA (recommend),4× AA(urgent)
<b>Stand-by Current</b>	< 0.3 mA (<7mAh/Day)
<b>Power Consumption</b>	150 mA(+450mA when IR-LED lighted)
<b>Low Battery Alert</b>	LED Indicator
<b>Display Screen</b>	LCD display
<b>Mounting</b>	Rope/Belt/Python lock
<b>Dimensions**</b>	140x 80x 50 mm
<b>Operation Humidity</b>	5% - 90%
<b>Security authentication</b>	FCC, CE, RoHS

\*without battery

## Appendix II : Parts List

<b>Part Name</b>	<b>Quantity</b>
Digital Camera	One
Wired control	One
USB Cable	One
Belt	One
User Manual	One