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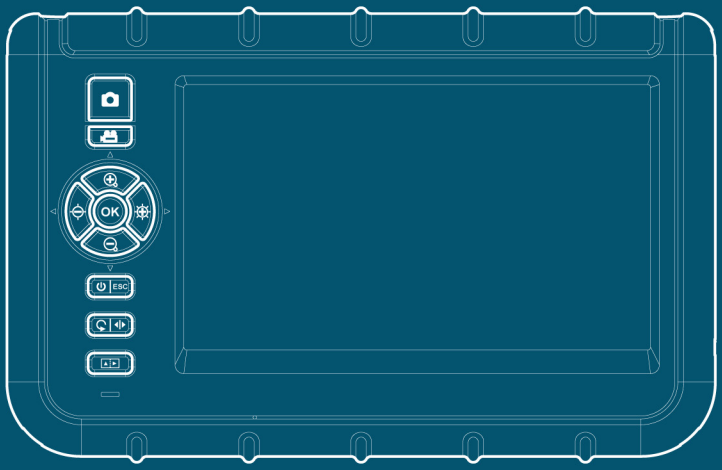
VIDEOSCOPE SYSTEM

User Manual



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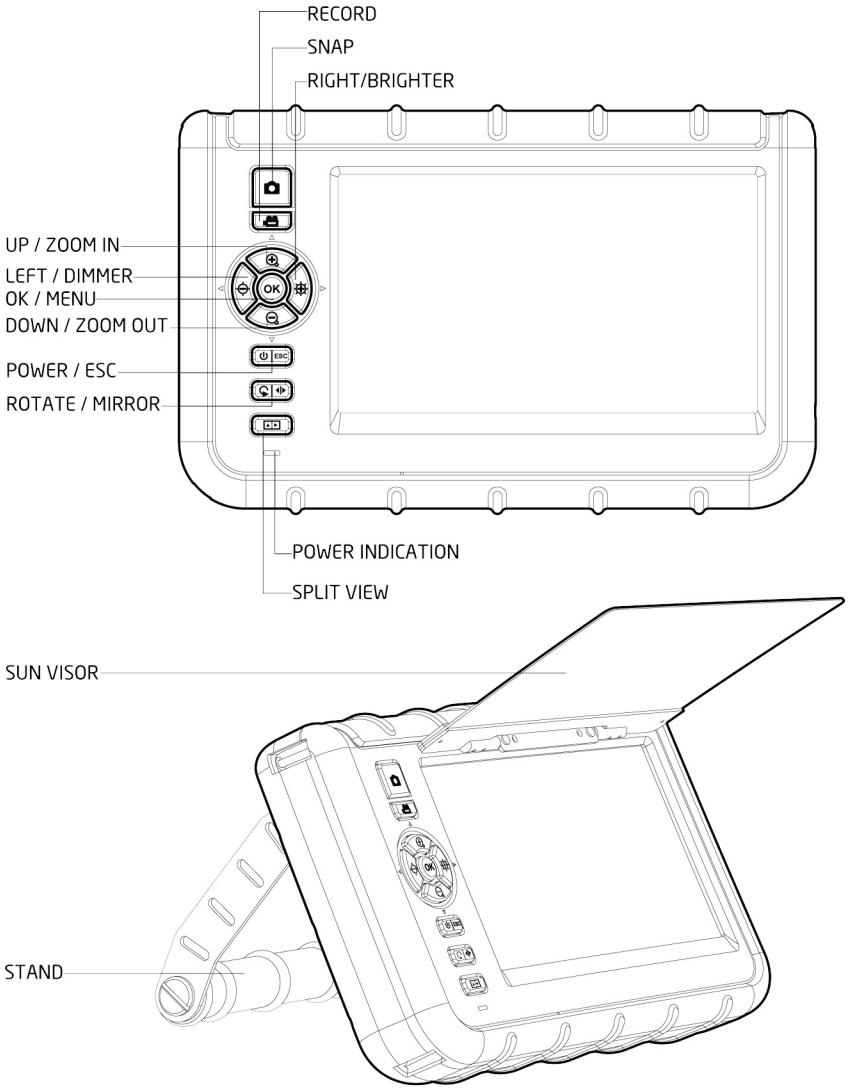
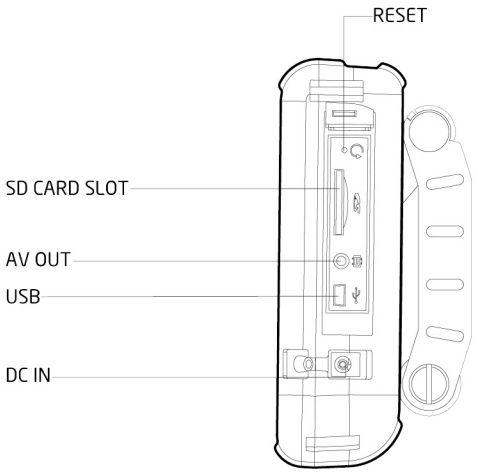
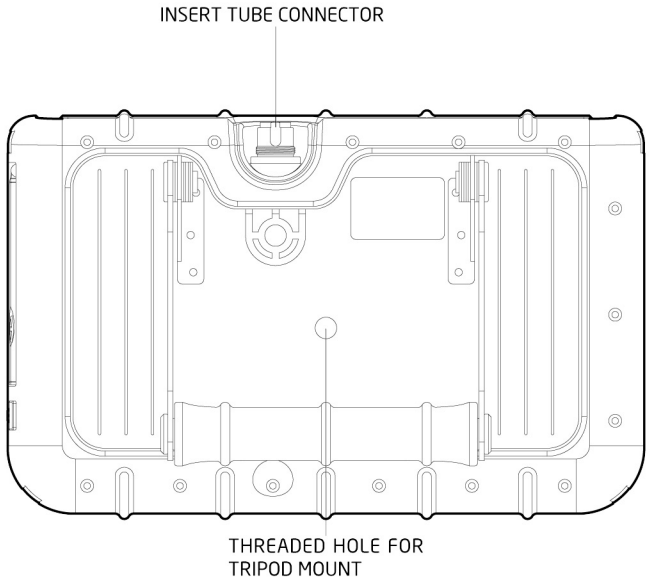
INTRODUCTION

SYSTEM OVERVIEW

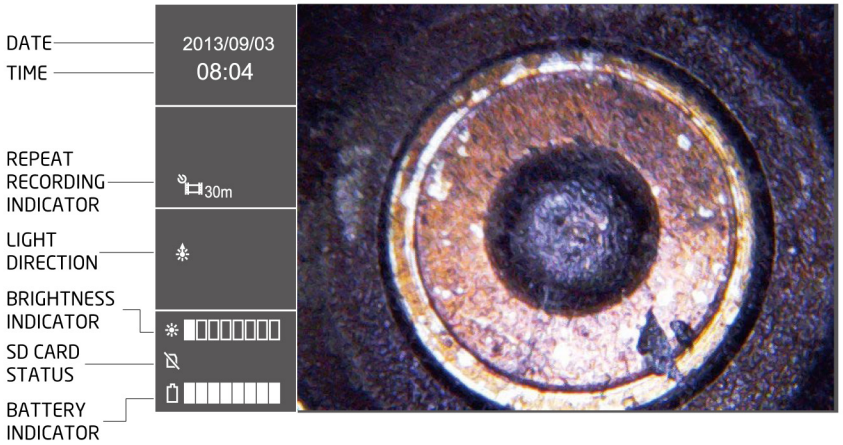
System Unit







Screen Display



Frequent operations

Setting Up the System

1. Remove the Insert Tube and the system unit from the case.
2. Attach the to the system unit
   - Connect the tail cord connector of the Insert Tube to the input connector of the system unit, screw tight the sealing nut.
3. Power on the system by press and hold the **ESC** for 3 seconds.
4. Insert the SD card
   - Open the peripheral cover on the side of the system unit and insert the SD card.

Capturing Images

1. Guide the probe to the inspection area.
2. Aim the camera
   - Deflect the probe tip by rotating the control wheel.
3. Capture the image.
   - Press to capture desired image.
   - Hold to keep freezing the frame.

Recording Video

- Press to start recording video.
- Press again to stop recording.

Review Images or Videos

- Press **ESC** to enter browse mode.
- Press **OK** to start playing recorded video.

Turn Off the System

- Press and hold **ESC** for 3 seconds to turn off the system.

About the battery

The system is powered by a non-interchangeable Li-Polymer battery, which provides approximately 6 hours capacity while fully charged. It takes about 3 hours for the battery to be fully charged from empty. The system must be charging at room temperature for best charging capacity.

About the SD card usage

The 7 inch videoscope system uses SD card to storage captured images and videos. The estimated total images and video length on a par with SD card capacity is shown below:

SD card Capacity	4 GB	8 GB	16 GB	32 GB
Totol Images	31130	62259	124518	249037
Video Length	135 mins	270 mins	539 mins	1079 mins

LEGAL AND OTHER NOTICES

This product is warranted to be free from defects in material and workman shop for 1 year from the date of purchase. Manufacturer agrees to repair or replace the product, at its own option and at no charge. This warranty shall not apply to any product, which has been subject to connect to a faulty accessories, alteration, negligence, accident or to any product which has been installed other than in accordance with these instructions.

Warranty is subject to void under unauthorized attempt to disassemble the system unit, insert tubes or modification of any kinds, even attempted only, of the system. will not be responsible for damages caused by following situations:

- Defaced, modified or removed serial number label or warranty seal
- Modifications of components without manufacturer authorization
- Damages caused by natural phenomena or uncontrollable forces, such as lightning, flooding, fire, earthquake...etc.

WEEE NOTICE

- The cross-out wheeled bin symbol indicates that according to the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment, this product must be collected in a separated way instead of being disposed of as unsorted municipal waste.
- Contact your local dealer for procedures of recycling this equipment.

CE NOTICE

The 7 inch Videoscope System is in conformance with the following standards:

- 1999/5/EC Radio and Telecommunications Terminal Equipment Directive.
- 2004/108/EC Electromagnetic Compatibility Directive

FCC NOTICE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation

Federal Communications Commission Statement

Note - This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

English - This device complies with Industry Canada licence-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.

French - 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.

RoHS NOTICE

The 7 inch Videoscope System is in conformance with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive. This means that our product is both lead-free and without the hazardous substances either in the manufacturing process or in the final product

CONTACT INFORMATION

Please contact the store you purchased for assistance if you have any question about this product.

CHEMICAL COMPATIBILITY

All insertion tubes had passed following liquid immersion test:

- Water
- Engine oil
- Brake fluid oil
- Gasoline
- Diesel Fuel
- Transmission oil

SAFETY GUIDE

USER MUST PAY ATTENTION TO THE INFORMATION PROVIDED HERE TO ENSURE SAFETY.

We suggest you read the following statements carefully before using the system.

WARNING If this product is used without observing the information given under this symbol, it might cause injuries or loss of life.

CAUTION If this product is used without observing the information given under this symbol, it might cause to this product.

WARNING HAZARD ENVIRONMENT

- Do not use this system in explosive environments such as gasoline or alcohol storage tank.

WARNING FLAMMABLE GASES

- Do not use this system near flammable gases.

WARNING INDUSTRIAL USAGE ONLY

WARNING INTENSIVE LIGHT MAY CAUSE EYE INJURY

- Avoid looking at the probe head while LED is on.

CAUTION CERTAIN SUBSTANCES MAY DAMAGE THE PROBE

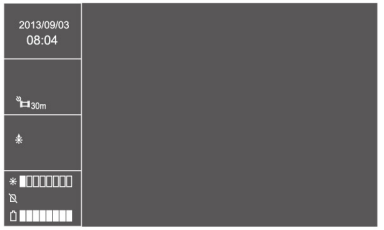
- Please refer to Chemical Compatibility section on page 10 please contact the store you pruchased for unsure chemical solutions for further information.

INSPECTION AND CAPTURING FUNCTIONS

ADJUSTING THE BRIGHTNESS

To adjust the brightness of live image, press ⊖ to decrease brightness and press ⊕ to increase the brightness. There are total 8 levels of brightness, the bottom 5 levels are of normal exposure time while the top 3 levels are of lengthened exposure time. The lengthened exposure time brightness level are useful when operating in very dark environment, it might reduce frame rate due to the longer expzosure time.

- Press ⊖ decrease brightness
- Press ⊕ increase brightness



ZOOMING

When viewing in live image, you can zoom in and zoom out by pressing ⊕ and ⊖ . The zoom ratio is linearly scale from 1.0x to 4.0x. Since the zooming is digital, the pixelation will become obvious when zoom in.

- Press ⊕ zoom in
- Press ⊖ zoom out

ROTATING AND INVERTING

Sometimes you need to rotate the live image without twisting the probe, or flip live image horizontally when work with reflection mirrors,

To Rotate

- Press ↻

To Flip Horizontally

- Press and hold ↻

CAPTURING AN IMAGE / FREEZING LIVE IMAGE

When the current live image is the one interest you, you can capture the image by pressing . The captured image file name will be shown on the information box on the left sidebar. If is kept being held, the live image freeze until is released.

- Press Capture an image
- Press and hold Freezing live image

RECORDING A VIDEO

Recording Operation

You can start recording a video anytime during inspection. Press once will start the recording session while press again to stop it. The recorded video file name will be shown on the information box. It is also possible to record voice comment via built-in microphone.

- Press Start recording video
- Press again Stop recording video

Note: Rotate / filp and all image manipulation functions are not available during recording.

Repeat Recording

Repeat recording is useful when you want to record videos repeatedly, and each clip is sliced by a pre-defined time length. If the repeat recording function is disabled, the recording operation will cease either when the button is pressed or by the time video length reaches 30 minutes.

To enable repeat recording:

<MAIN MENU> <REPEAT RECORDING> <5 MINUTES> or <10 MIUTES> or <20 MINUTES> or <30 MINUTES>

To disable repeat recording:

<MAIN MENU> <REPEAT RECORDING> <OFF>

PLAYBACK FUNCTIONS

SINGLE FILE DISPLAY

To display the last captured file on the LCD monitor:

- Press **ESC** button

To navigate through files:

- Press button for previous file
- Press button for next file
- Press button scrolls back 10 files.
- Press button scrolls next 10 files.

For close-up inspection (image only):

- Press **OK** button to change the close-up ratio.
- Use to move the ROI (Region of Interest).

To playback video :

- Press the **OK** button.

To delete current file:

- Press button.
- Use to select <YES> and press to confirm.

To switch to album style:

- Press the button

ALBUM STYLE FILE DISPLAY

The album style mode displays file thumbnails in 3 x 3 grids. Which is convenient for finding a particular file and deleting multiple files simultaneously.

To enter album style mode:

<MAIN MENU> select <ALBUM>

- Or press the during single file display

To erase multiple files:

1. Move selection box to the file you intend to erase.
2. Press to tag the file of current selection
3. When all files intended to be deleted are tagged, press .
4. Use to select <YES> and press **OK** to confirm

VIDEO PLAYBACK OPERATION

The F1000 videoscope system supports various operation during video playback.

- Press **OK** to pause playback, press **OK** again to resume.
- Press to speed up playback, press to slow down.
- Press for fast forward, press for fast rewind.

MENU AND SETTINGS

GENERAL MENU OPERATION

- Press **OK** in live view mode enters main menu.
- Use to navigate between menu items.
- Press or **OK** enters submenu.
- Press **ESC** backs to upper tier.

ALBUM STYLE FILE DISPLAY

To enter album style file display:

<MAIN MENU> select <ALBUM>

SD CARD OPERATION

To watch the SD Card status:

<MAIN MENU> <SD CARD STATUS>

To format the SD card:

<MAIN MENU> <SD CARD STATUS>

- Select <Format SD Card>, use select <YES>

To delete all files on the SD card:

<MAIN MENU> <SD CARD STATUS>

- Select <Delete All Files>, use select <YES>

LANGUAGE SELECTION

To change UI language:

<MAIN MENU> <SETTINGS> <LANGUAGE>

- Use to select desired language, press **OK** to confirm.

ADJUST DATE AND TIME

To adjust system time:

<MAIN MENU> <SETTINGS> <DATE / TIME> <SYSTEM TIME>

- Use ⊖ ⊕ to navigate between fields.
- Use ⊕ ⊖ to adjust.
- Press **OK** to confirm.

To change time format:

<MAIN MENU> <SETTINGS> <DATE / TIME> <FORMAT >

- Use ⊖ ⊕ to navigate to <FORMAT> field
- Use ⊕ ⊖ to change time format.
- Press **OK** to confirm.

To change timestamp setting:

<MAIN MENU> <DATE / TIME>

- Use ⊕ ⊖ to navigate to <TIMESTAMP> field.
- Use ⊕ ⊖ to select <ON> or <OFF>
- Press **OK** to confirm.

ADJUST AUTO POWER OFF TIMER

To adjust the auto power off timer:

<MAIN MENU> <SETTINGS> <AUTO POWER OFF>

- Use ⊕ ⊖ to select between <5 MINUTES> <10 MINUTES> <15 MINUTES> <30 MINUTES> or <OFF>.
- Press **OK** to confirm.

SET REPEAT RECORDING

To set the repeat recording function:

<MAIN MENU> <REPEAT RECORDING>

- Use ⊕ ⊖ to select between <5 MINUTES> <10 MINUTES> <20 MINUTES> <30

MINUTES> or <OFF>.

- Press **OK** to confirm

USB FUNCTIONS AND AV OUTPUT

USB FUNCTIONS

The USB interface is the defact to standard of PC connection. The F1000 videoscope supports two USB modes: Reader Mode and Camera Mode.

USB Reader Mode

To use the USB reader function:

<MAIN MENU> <USB> <READER>

- Connect the system to a computer with the provided USB cable.
- Use ⊖ ⊕ to select <READER>, press **OK**
- The F1000 videoscope system appears as a mass storage device in **"My Computer".**
- You can escape the USB reader mode by press **ESC**.

USB Camera Mode

To use the USB camera function:

<MAIN MENU> <USB> <CAMERA>

- Connect the system to a computer with the provided USB cable.
- Use ⊖ ⊕ to select <CAMERA>, press **OK**
- Use the provided software to watch the live video on PC.
- You can escape the USB camera mode by press **ESC** .

AV Output

The F1000 videoscope supports AV output to leverage the big screen of TV. (SDTV only, HDTV not supported.)

To use the AV output:

- Connect the system to a SDTV with the provided AV cable.
- Use ⊖ ⊕ to select <NTSC> or <PAL> according to the TV, press **OK**.
- You can escape the AV output mode by press **ESC** .

MAINTENANCE

CHANGING PROBE AND CALIBRATION

In case of probe is malfunctioned and need to be replaced with a new one, follow below procedure to calibrate the probe to reach it's fully performance.

To change the probe:

- Turn off the system.
- Screw loose the sealing nut, remove the malfunctioned probe from system.
- Connect the new probe , insure the indication point on both connector is matched, screw tight the sealing nut.

UPGRADING FIRMWARE

To check the current firmware version:

- Turn off the system
- Press and hold both and **ESC** simultaneously to enter factory mode.
- Select <information>
- The firmware information will be displayed.

To update firmware:

- Turn off the system.
- Copy the firmware file to a SD card, then put inside the system.
- Press and hold both and **ESC** simultaneously to power on and the system will start updating procedure automatically.
- When firmware update is done, the F1000 videoscope system will power off automatically.

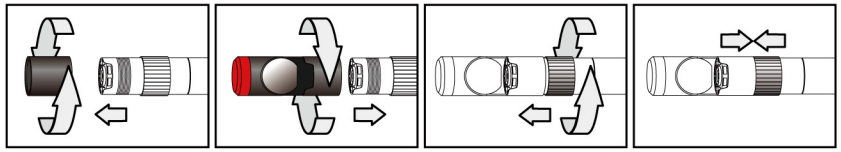
ACCESSORIES(Optional)

Working with Side View Mirror Adaptor

When there is no enough space for the probe neck to bend, the side view mirror comes into play

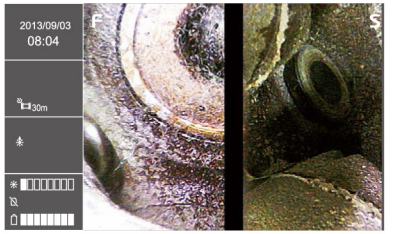
To attach the side view mirror adaptor:

- Remove the protective ring from scope tip
- Screw tight the side view mirror adaptor
- Toggle the led illumination direction by press for best visual performance.

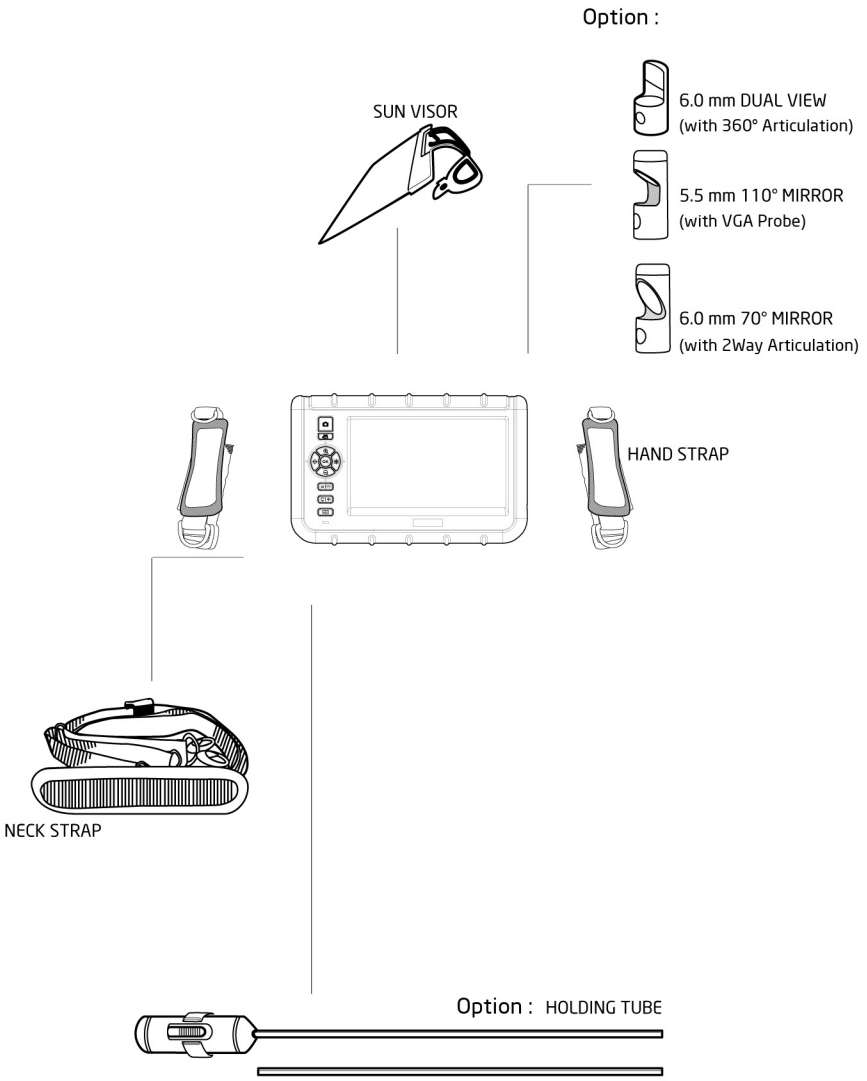


Working with Dual View Mirror Adaptor (for option)

- Remove the protective ring from scope tip.
- Screw tight the dual view mirror adaptor.



SYSTEM UNIT ASSCESSORIES



SPECIFICATIONS

SYSTEM UNIT

Features	Description
LCD	7" LCD (800 x 480)
Snapshot	640 * 480, JPEG
Recording	640 * 480 , MPEG4 (with audio)
Dimension	240 * 154 * 47mm
Weight	1.18 kg (2.6 lb)
Dust & Water proof	IP57 standard
Drop test	1.0m
Battery	Li-polymer (Non-Interchangeable) 6 hours capacity / 3 hours charge to full
Working temperature	-10 ~ 60°C
Storage temperature	-20 ~ 80°C
USB	Mass storage mode Webcam mode
Storage	SD card, up to 32G
AV output	NTSC/PAL
Audio input	Built-in microphone
UI Languages	28
Brightness Adjust	8 levels

NOTE