EXS

LIVE THE ACTION

viva pro

User Manual

Table of Contents

1. Introduction

Thank you for purchasing **EXS viva pro Wearable Sport Camera**. The following information will help you to use camera to its full capabilities.

Before you install and operate the product, please take a few minutes to read through this manual. It provides proper instructions for you to install and operate the product.

The camera may be affected by static electricity interference. Please wait for a few seconds when plug in power cable before starting the operation.

2. Preparation

Component & Accessories in the Box
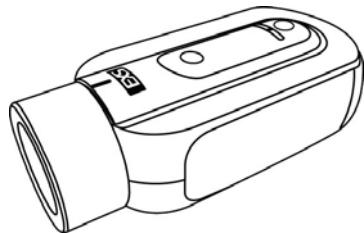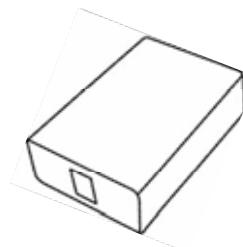
EXS viva pro Camera   Battery   User Manual
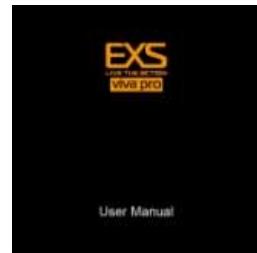
microSD Card
(Optional)   USB Cable   Safety Leash

Tripod Mount   Flat Board Mount

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Part Names

Rotatable Lens

Rear Cover

Wireless Light

Power / Record Button

Power / Record Light

Wireless Button

Charging Light
Battery Light
SD Card Light

micro SD Card Slot
Format Button
Mode Switch
mini USB Port
Battery Cover
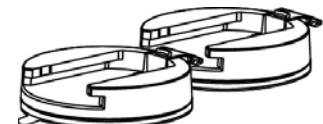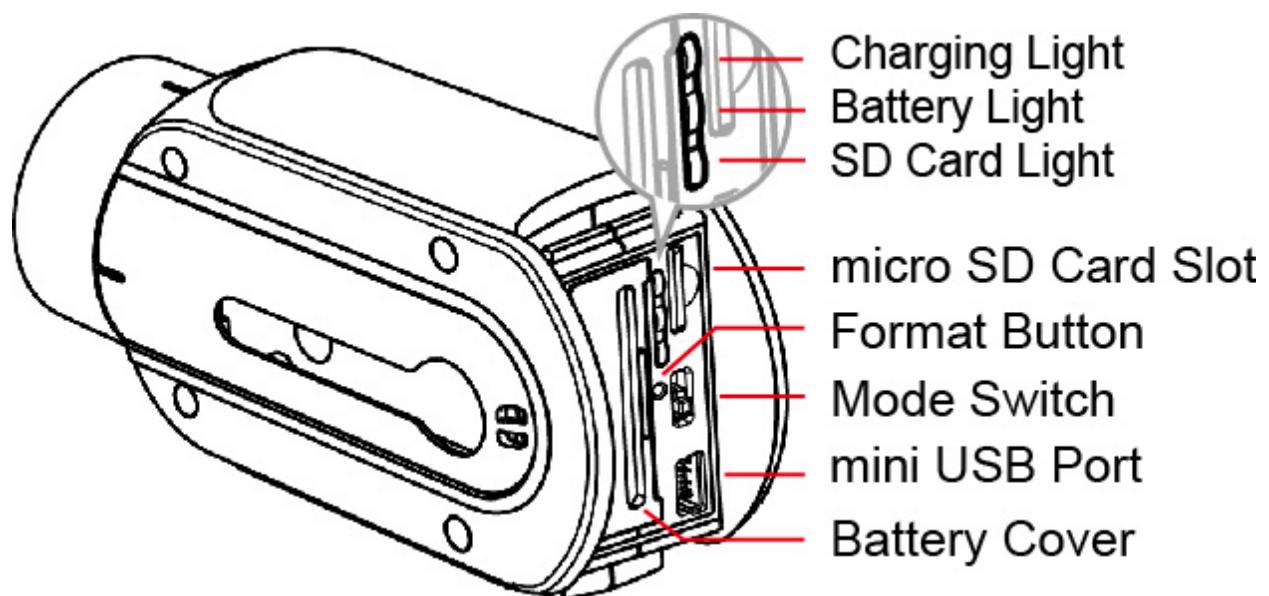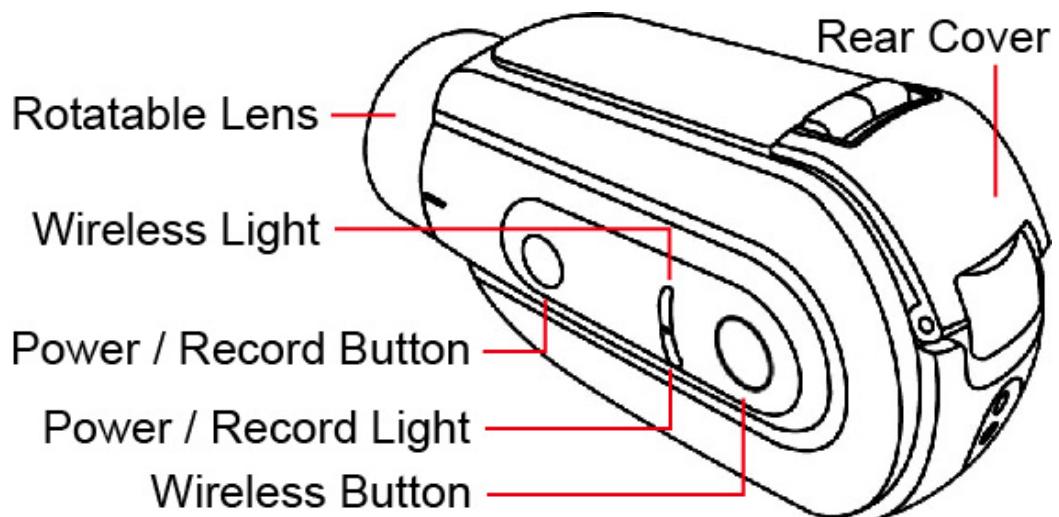
Operation Indication

| Operation	Light Behavior	Buzzer
Power On Press and hold [Power/ Record Button] for 2 seconds and release	[Power/ Record Light] Blink in Green	【3 Short Beeps】
Power Off Press and hold [Power/ Record Button] for 2 seconds and release	[Power/ Record Light] Off	【5 Short Beeps】
Start Recording Press [Power/ Record Button] and release	[Power/ Record Light] On in Green	【1 Short Beep】
Stop Recording Press [Power/ Record Button] and release	[Power/ Record Light] Blink in Green	【2 Short Beeps】
Wireless On Press and hold [Wireless Button] for 2 seconds and release	[Wireless Light] Blink in Blue	【3 Short Beeps】
Wireless Off Press and hold [Wireless Button] for 2 seconds and release	[Wireless Light] Off	【5 Short Beeps】

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Operation	Light Behavior	Buzzer
Charging	[Charging Light] On in Orange	-
Charging Completed	[Charging Light] Off	-
Battery Normal	[Battery Light] Off	-
Battery Low	[Battery Light] On in Red	-
Battery Empty	[Battery Light] Blink in Red	Auto Power Off
SD Card Normal	[SD Card Light] Off	-
SD Card Capacity Low	[SD Card Light] On in Red	-
SD Card Not Inserted	[SD Card Light] Blink in Red	【3 Long Beeps】 Auto Power Off
SD Card Error	[SD Card Light] Blink in Red	【3 Long Beeps】 Auto Power Off

3. Charging

1. Take out the rear cover of the camera.
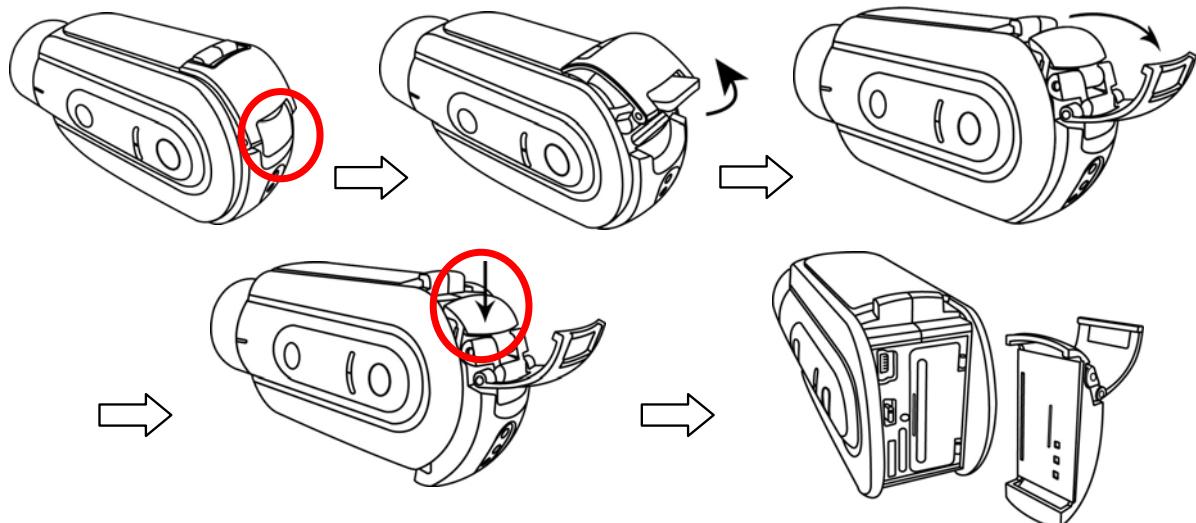

2. Open the battery cover and insert the supplied Li-ion rechargeable battery. Make sure the contact points of the battery are matching to the polarities indicated in the battery compartment.

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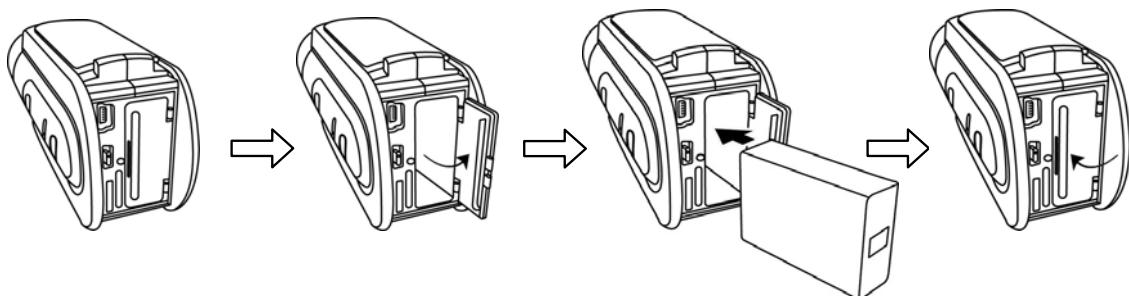
3. Plug the mini USB end of the supplied USB cable to the mini USB port of the camera and plug the other end of the USB cable to the USB port of PC / Mac, AC adaptor or car charger.
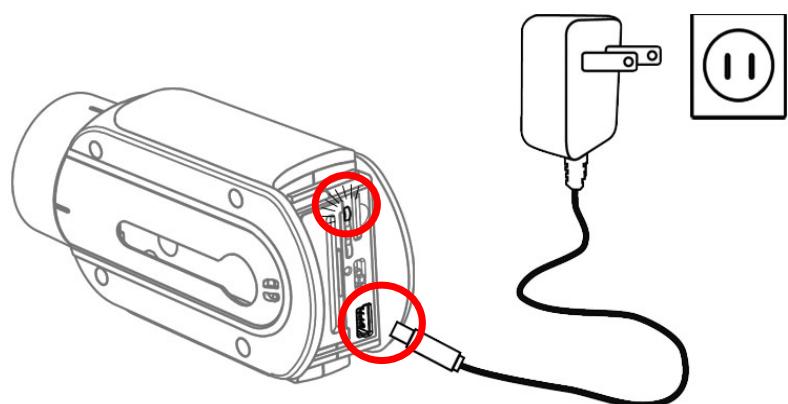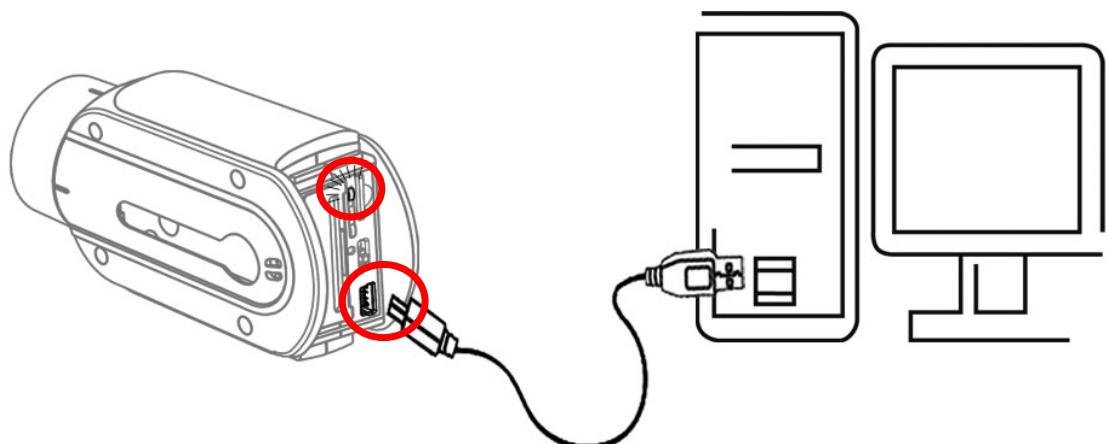
4. The [Charging Light] of the camera remains orange on when camera is charging.

5. The [Charging Light] will be off when the battery is fully charged.

Note 1: The [Battery Light] is on in red when the battery power is low.

Note 2: If the battery power is almost empty, the [Battery Light] blinks in red, and the camera emits【5 Short Beeps】then automatically power off.

Note 3: To shorten the charging time, turn off the camera before charging the camera battery.

4. Memory Card

Insert Memory Card

1. Turn off the camera.
2. Take out the rear cover of the camera.
3. Insert Class 10 or above speed microSD card with the correct direction into the microSD card slot of the camera.
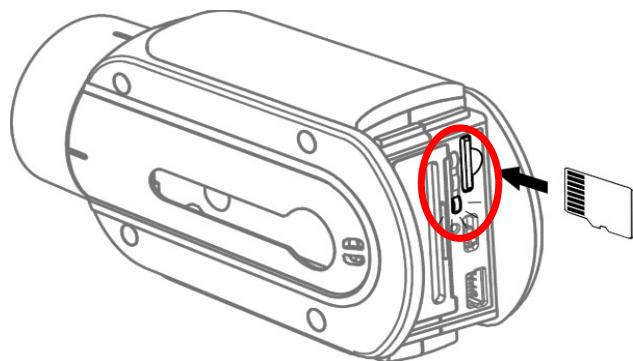
Note1: When power on with no microSD card inserted, the camera emits 【3 Long Beeps】 and the [SD Card Light] blinks in red, and the camera emits 【5 Short Beeps】 then automatically power off.

Note2: The [SD Card Light] blinks in red if the microSD card is detected error or not formatted. Please insert new microSD card or format the microSD card then try again.

Note3: Don't eject the microSD card when power on or during recording.

Format Memory Card

Use a nib or needle to press the [Format Button] about 2 seconds then release after a beep when camera is on. The [SD Card Light] blinks in red during formatting and then off when completed.

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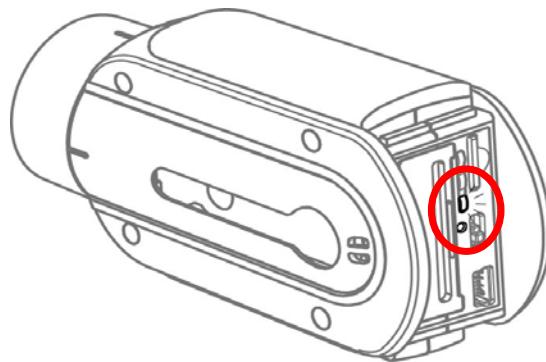
5. Quick Start

Power On

Press and hold the [Power/ Record Button] for 2 seconds then release. The camera emits 【3 Short Beeps】 and the [Power/ Record Light] blinks in green. The camera is now on and ready.
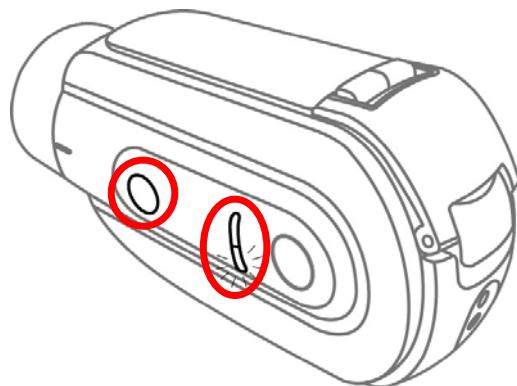
Start Recording

When camera is on and ready, press and release the [Power/ Record Button] to start recording. The camera emits 【1 Short Beep】 and the [Power/ Record Light] is on in green on while recording.

Stop Recording

During camera is recording, press and release the [Power/ Record Button] to stop recording, the camera emits 【2 Short Beeps】and the [Power/ Record Light] blinks in green. The camera is now ready for another recording.
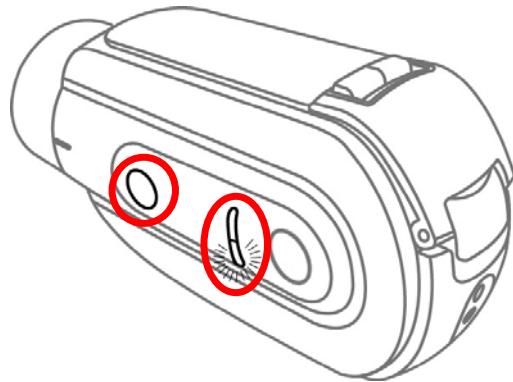
Power Off

When camera is on, press and hold the [Power/ Record Button] for 2 seconds then release, the camera emits 【5 Short Beeps】 and the [Power/ Record Light] is off. The camera is now power off.

6. Operation Mode

Video Mode

1. Set the Operation Mode to 1. Please refer to the appendix in this manual on how to set the modes and other settings.

2. To start recording, when camera is on and ready, press and release the [Power/ Record Button], the camera emits 【1 Short Beep】 and the [Power/ Record Light] is on in green while recording.

3. To stop recording, during camera is recording, press and release the [Power/ Record Button], the camera emits 【2 Short Beeps】 and the [Power/ Record Light] blinks in green.

4. When microSD card capacity is full or battery is almost empty during recording, the camera will emit 【2 Short Beeps】 and stop recording, save video file, and emit 【5 Short Beeps】 then automatically power off.

Note1: The video files recorded in Video Mode are located in folder "\DCIM\100EXSVP" on microSD card.

Note2: The video resolution can be changed via "VRES" setting.

Note3: The video timelapse feature in Video Mode can be achieved via "VTLP" setting.

Photo Mode

1. Set the Operation Mode to 2.

2. To take a photo, when camera is on and ready, press and release the [Power/ Record Button], the camera emits 【1 Short Beep】 and the [Power/ Record Light] is on in green while taking and saving photo file. After saving photo file is completed, the [Power/ Record Light] blinks in green.

3. To take another photo, please repeat step 2.

4. When microSD card capacity is full or battery is almost empty during photo taking, the camera will save photo file, and emit 【5 Short Beeps】 then automatically power off.

Note1: The photo files recorded in Photo Mode are located in folder "\DCIM\100EXSVP" on microSD card.

Photo Timelapse Mode

1. Set the Operation Mode to 3.

2. In Photo Timelapse Mode, the camera takes photos at predefined time intervals of 3, 10, or 60 seconds.

3. To take timelapse photos, when camera is ready and on, press and release the [Power/ Record Button] to start, the camera emits 【1 Short Beep】 when taking a timelapse photo at every defined time interval.

4. To stop taking timelapse photos, during camera is taking timelapse photo, press and release the [Power/ Record Button], the camera emits【2 Short Beeps】and the [Power/ Record Light] blinks in green.

5. When microSD card capacity is full or battery is almost empty during photo timelapse taking, the camera will emit 【2 Short Beeps】 and stop photo timelapse taking, save photo file, and emit 【5 Short Beeps】 then automatically power off.

Note1: The photo files recorded in Photo Timelapse Mode are located in folder "\DCIM\100EXSVP" on microSD card.

Note2: The time interval can be changed via "PTLP" setting.

## Mode Switch

1. The camera can be quickly switched to two pre-defined operation modes via the Mode Switch located at the back of the camera body.

2. By default, [Mode Switch 1] is set to Video Mode at 1080P30 and [Mode Switch 2] to Video Mode at 1080P60.

3. The pre-defined operation modes can be modified. Please refer to the appendix in this manual on how to set the modes and other settings.
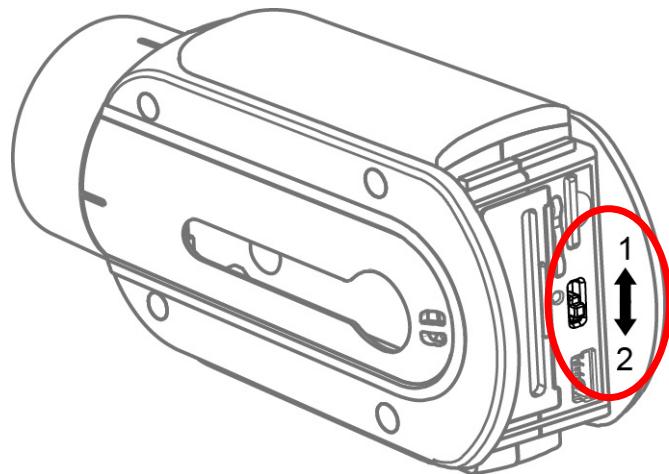
7. File Transfer

File Transfer via USB Cable

1. Turn off the camera and take out the rear cover.

2. Plug the mini USB end of the supplied USB cable to the mini USB port of the camera.

3. Plug the other end of the USB cable to PC / Mac.
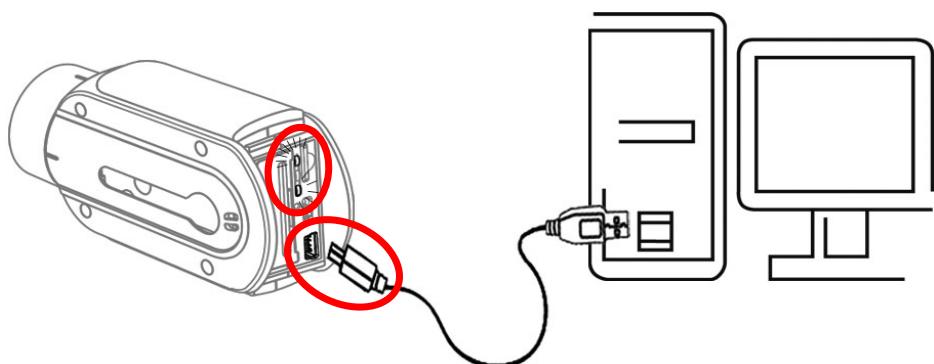
4. Turn on the camera. On the PC / Mac, the camera will be mounted to the computer as an external storage device.

5. The files can be copied to your PC / Mac from the folder "\DCIM\100EXSVP".

Note 1: Always eject camera in PC / Mac before unplugging camera.

File Transfer via Card Reader

1. Turn off the camera and take out the rear cover.

2. Take out the microSD card.
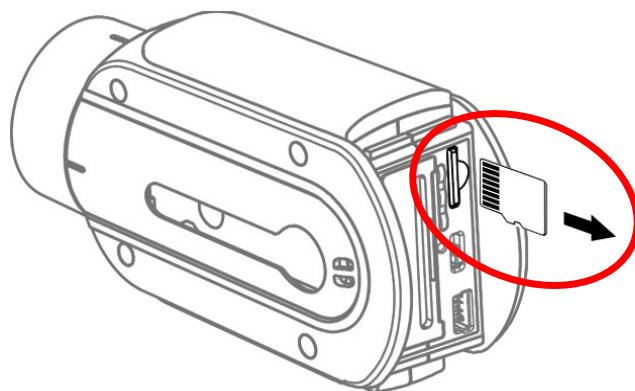
3. Insert the microSD card to a compatible card reader and connect the card reader to PC / Mac.

4. On the PC / Mac, the microSD card will be mounted as an external storage device.

5. The files can be copied to your PC / Mac from the folder "\DCIM\100EXSVP".

Note 1: Always eject card reader in PC / Mac before unplugging microSDcard.

8. Playback

Video file playback from PC / Mac

The video file can be played by QuickTime or Windows Media Player with PC / Mac.

Windows Vista / 7 / 8: The videos can be viewed by the built-in Windows Media Player or downloaded QuickTime.

Windows XP: The videos can be viewed by the Windows Media Player Version 11 or downloaded QuickTime.

Mac: The video file can be viewed by the Built-in QuickTime.

9. Wireless Function

Wireless function enables user to remotely control the camera via EXS App from iOS and Android smartphones and tablets.

Wireless On

Press and hold the [Wireless Button] for 2 seconds then release. The camera emits 【3 Short Beeps】 and the [Wireless Light] blinks in blue. The wireless function is now on and ready.
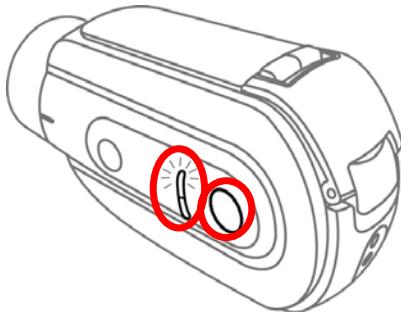
Wireless Off

Press and hold the [Wireless Button] for 2 seconds then release. The camera emits 【5 Short Beeps】 and the [Wireless Light] is off. The wireless function is now off.

Note1: Before using EXS App to control camera, make sure to connect your camera via WLAN setting in your smartphone or tablet.
Note2: Default camera's WLAN name is "EXS_xxxxxxxx", and password is "12345678".
Note3: Wireless function can be automatically turned off via "WAPO" setting.

10. Advanced Mode

Allow user to manipulate the camera with its full functionalities via a camera configuration file located on microSD card which is automatically generated by camera.

Modify camera setting

1. Turn off the camera and take out the rear cover.

2. Take out the microSD card and insert the microSD card to a compatible card reader and connect the card reader to PC / Mac.

3. Open the camera configuration file "msg.txt" located on the root path of microSD card via a text editor.

4. Refer to the appendix in this manual for detailed descriptions, and change settings according to desired purpose.

5. Modify the UPDATE setting from N to Y before saving the camera configuration file. (The camera will not apply any changed settings if the N has not ben changed to Y).

6. Turn on the camera with the microSD card inserted.

7. The camera will read the camera configuration file and restart itself with the changed settings applied.

Note 1: The "msg.txt" file is automatically created by camera during power on process when new microSD card inserted.

Adjust Date and Time

1. Turn off the camera and take out the rear cover.

2. Take out the microSD card and insert the microSD card to a compatible card reader and connect the card reader to PC / Mac.

3. Open the camera configuration file "msg.txt" located on the root path of microSD card via a text editor.

4. Find the DT setting in the camera configuration file.

5. Follow the exact format to adjust the date and time.

6. Modify the UPDATE setting from N to Y before saving the cmaera configuration file. (The camera will not apply any changed settings if the N has not been changed to Y).

7. Turn on the camera with the microSD card inserted.

8. The camera will read the configuration file and restart itself with the changed date and time applied.

Note 1: The date and time of the camera will be correctly maintained by camera itself even when camera is off thanks to a separate clock battery equipped inside camera.

11. Firmware Update

Firmware Update Steps

1. Turn off the camera and take out the rear cover.

2. Take out the microSD card and insert the microSD card to a compatible card reader and connect the card reader to PC / Mac.

3. Copy the firmware file "xxxxxxfw.bin" to the root path of the microSD card.

4. Turn on the camera with the microSD card inserted.

5. The [SD Card Light] of the camera blink in read about few seconds, then the camera power off automatically when firmware update is completed.

6. Now, take out the microSD card again and insert the microSD card to a PC / Mac via card reader.

7. Delete the firmware file "xxxxxxfw.bin". Please note that the firmware file should be deleted from the microSD card, otherwise camera will keep updating the firmware file every time it turns on.

Note 1: Make sure battery is fully charged before firmware update.

Note 2: Avoid taking out the microSD card or battery when the firmware is updating which may cause the camera not working correctly later.

Verify Firmware Version

1. Turn off the camera and take out the rear cover.

2. Take out the microSD card and insert the microSD card to a compatible card reader and connect the card reader to PC / Mac.

3. Firstly delete the "msg.txt" camera configuration file.

4. Insert the microSD card to camera.

5. Turn on the camera. The "msg.txt" camera configuration file will be automatically generated by the camera on the microSD card.

6. Turn off the camera.

7. Take out the microSD card again and insert the microSD card to a compatible card reader and connect the card reader to PC / Mac.

8. Open "msg.txt" camera configuration file via a text editor and check the firmware version number.

## 12. Mount Install

Tripod Mount

1. Follow the designated direction to slide Tripod Mount into the camera mounting slot.

2. Push the Tripod Mount to the end of the camera mounting slot and make sure it is tightly locked.

3. Now, screw in a monopod or tripod in the screw hole of the Tripod Mount.
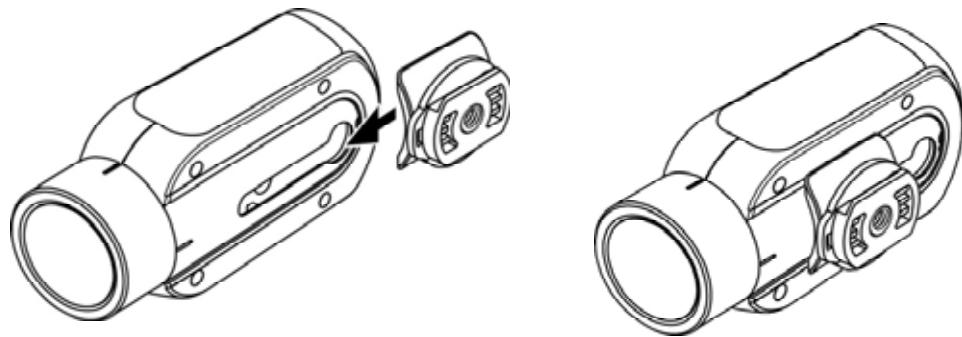
4. Once mounted with camera, rotate the camera lens barrel to the proper position for recording.
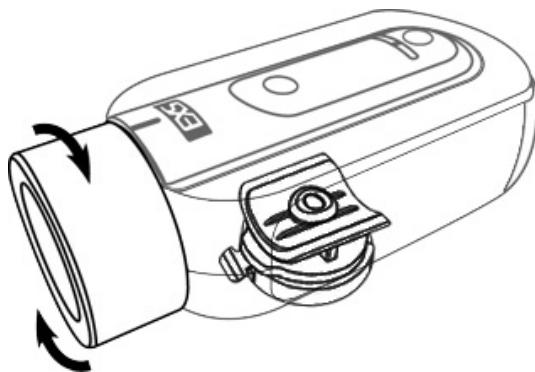
Flat Board Mount

1. Follow the designated direction to slide Tripod Mount into the camera mounting slot.

2. Push the Tripod Mount to the end of the camera mounting slot and make sure it is tightly locked.
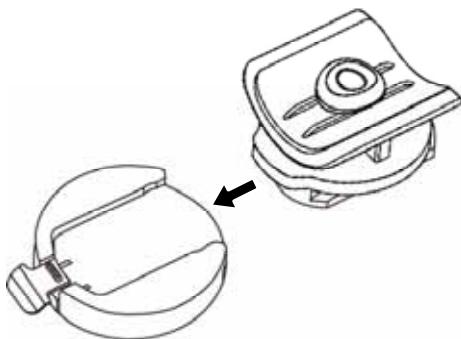
3. Push the Tripod Mount to the end of the Flat Board Mount. Push in the latch of the Flat Board Mount and make sure it is tightly locked.
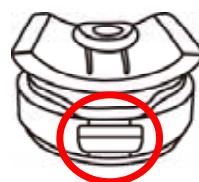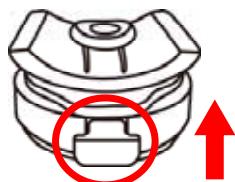
4. Clean the flat board where you want to mount. Remove the protected membrane of adhesive on the Flat Board Mount.

5. Put and compress the Flat Board Mount on the flat board and keep it for at least 24 hours to make sure the adhesive has firmly stuck on the flat board.

6. Once mounted with camera, rotate the camera lens barrel to the proper position for recording.
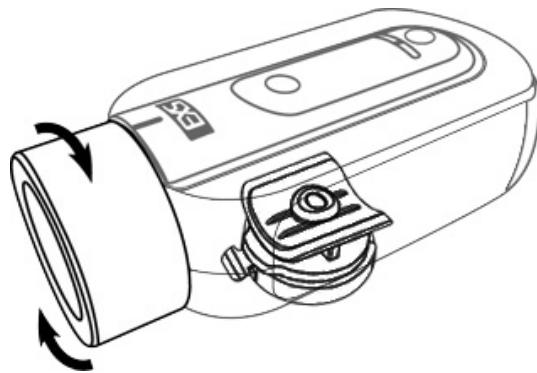
7. Later on, to separate the Flat Board Mount, push out the latch of the Flat Board Mount.

8. Push the Tripod Mount out of the Flat Board Mount.
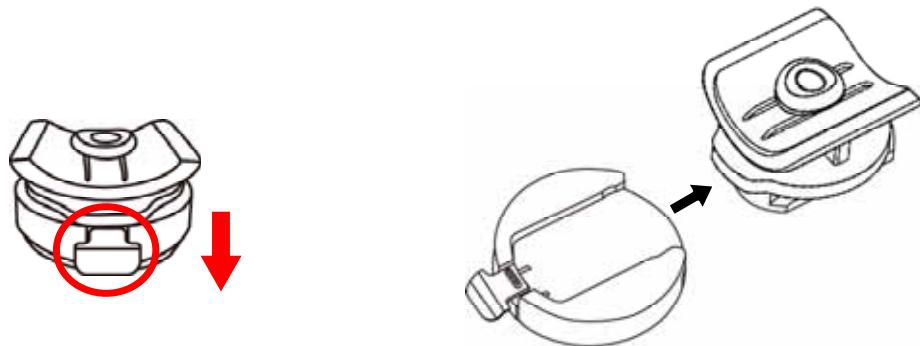
13. Appendix

Specification

Item	Specification
Image Sensor	Sony 16.7M (4768x3516) CMOS
Image DSP	Ambarella A7L
Lens	8G+IR, F2.3, f2.93 mm
Video Format	1080p: 1920x1080@ 25 / 30 / 50 / 60 fps
	720p: 1280x720@ 25 / 30 / 50 / 60 / 100 / 120 fps
	480p: 848x480@ 25 / 30 / 50 / 60 / 100 / 120 / 200 / 240 fps
Photo Format	4608x2592 @ 16:9
Video Encoder	H.264, MP4
Audio Encoder	AAC and AC3, 48KHz
Battery	3.7V / 2400mAH Li-Ion Rechargeable Battery
Storage	microSD
Connector	USB 2.0, mini USB
Dimension	113.0 (L) x 55.5 (W) x 37.5 (H) mm

Note 1: Specifications are subject to change without prior notice.

Default Setting of Camera Configuration File

Type: EXS viva pro
Version: Vxxx.xxx
SN:

UPDATE: N
    FORMAT
P1: 1
P1_AE: 0
P1_AWB: 0
P1_EV: 6
P1_SHRP: 3
P1_CTST: 64
P1_PQAL: 0
P1_VRES: 1
P1_VQAL: 0
P1_VTLP: 0
P1_APO: 0
P1_WAPO: 0
P1_VOS: 0
P1_FOV: 0
P1_UPDN: 0
P1_AREC: 0
P1_PTLP: 10
P1_MICM: 0
P1_MICG: 8

P2: 1
P2_AE: 0
P2_AWB: 0
P2_EV: 6
P2_SHRP: 3
P2_CTST: 64
P2_PQAL: 0
P2_VRES: 0
P2_VQAL: 0
P2_VTLP: 0
P2_APO: 0
P2_WAPO: 0
P2_VOS: 0
P2_FOV: 0
P2_UPDN: 0
P2_AREC: 0
P2_PTLP: 10
P2_MICM: 0
P2_MICG: 8
DT: 2013/01/01 00:45:28

P1/P2 (Operation Mode) : 1 ~ 3
    (1)Video (2)Photo (3)Photo Timelapse
AE (AE meter) : 0 ~ 2
    (0)Center (1)Average (2)Spot
AWB (AWB Mode) : 0 ~ 6
    (0)Auto (1)Incandescent (2)Indoor (3)Daylight (4)Sunny (5)Cloudy
    (6)Flash
EV (EV Bias) : 0 ~ 12
    (0)-2EV (3)-1EV (6)0EV (9)+1EV (12)+2EV
SHRP (Sharpness) : 1 ~ 5
    (1)Soft (3)Standard (5)Hard
CTST (Contrast) : 32 ~ 88
    (32)Soft (64)Standard (88)Hard
PQAL (Photo Quality) : 0 ~ 2
    (0)Super Fine (1)Fine (2)Normal
VRES (Video Resolution) : 0 ~ 7
    NTSC (0)1080P60 (1)1080P30 (2)720P60 (3)720P30 (4)720P120
    (5)480P60 (6)480P30 (7)480P120 (8)480P240
    PAL   (0)1080P50 (1)1080P25 (2)720P50 (3)720P25 (4)720P100
    (5)480P50 (6)480P25 (7)480P100 (8)480P200
VQAL (Video Quality) : 0 ~ 2
    (0)Super Fine (1)Fine (2)Normal
VTLP (Video Timelapse) : 0 ~ 30
    (0)Off (1)1s (5)5s (30)30s
APO (Auto Power Off when idle) : 0 & 60~ 300 (When wireless
    function is on, APO will not be activated)

(0)Off (60)1Mins (180)3Mins (300)5Mins

WAPO (Wireless Auto Power Off when idle) : 0 & 60~ 300 (When
connected with EXS App, WAPO will not be activated)
(0)Off (60)1Mins (180)3Mins (300)5Mins

VOS (Video Output System) : 0 ~ 1
(0)NTSC (1)PAL

FOV (Field Of View) : 0 ~ 2
(0)Wide (1)Medium (2)Narrow

UPDN : 0 ~ 1 (Upside Down. When UPDN is Yes, FOV will be
automatically fixed at Wide)
(0)No (1)Yes

AREC (Auto Recording) : 0 ~ 1
(0)No (1)Yes

PTLP (Photo Timelapse) : 3 ~ 60
(3)3s (10)10s (60)60s

MICM (Microphone Mute) : 0 ~ 1
(0)No (1)Yes

MICG (Microphone AGC Max) : 0 ~ 16
(0)00db   (8)24db   (16)47db

DT (Date Time) : YYYY/MM/DD hh:mm:ss
YYYY: 2013 ~ 2038
MM: 01 ~ 12
DD: 01 ~ 31

Federal Communications Commission (FCC) Statement

15.21
You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)
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.

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 of the device.

RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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┌─────────────────────────────────────────────┐
│                   CAUTION                     │
│  RISK OF EXPLOSION IF BATTEY IS REPLACED      │
│           BY AN INCORRECT TYPE                │
│  DISPOSE OF USED BATTERIES ACCORDING          │
│           TO THE INSTRUCTIONS                 │
└─────────────────────────────────────────────┘
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Trademark Information

QuickTime^{TM}, Mac^{TM}, and iOS^{TM} are trademarks of Apple Inc. or its related companies.

Android^{TM} is trademark of Google Inc. or its related companies.

Windows®, Windows XP®, Windows Vista®, Windows 7®, Windows 8®, Windows Media Player® are trademarks of Microsoft® Corporation or its related companies.

This symbol on the product or in the instructions means that your electrical and electronic equipment should be disposed at the end of its life separately from your household waste.
There are separate collection systems for recycling.
For more information, please contact the local authority or your retailer where you purchased the product.

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