



UM06-CSZ064C

User's Guide



Version 1.0A

Content

1.	Product Introduction	2
1.1	Packing Contents	2
1.2	IR remote controller	2
1.3	Microscope introduction:	7
1.4	Microscope Focus	12
1.5	Microscope accessory.....	14
2.	Printed Notice.....	15
2.1	Maintenance.....	15
2.2	Product Specification.....	16
2.3	Safety Instructions	17

1. Product Introduction

1.1 Packing Contents

The box contains 1 microscope and 10 accessories. Each model comes with different accessories.




Item	Q'ty	Item	Q'ty
UM06 Camera	1	White Balance Card	1
HDMI Cable	1	Calibrator	1
USB 2.0 Cable	1	User's Guide	1
Power adaptor	1	Software CD	1
S110 Stand	1	CSZ064C Lens	1
Stand assemble guide	1	IR Remote Controller	1


1.2 IR remote controller


The Digi Microscope is controlled by the IR remote controller or application program and contains 3 different modes: Common Use, PC Cam and HDMI. When the far distance control mode is enabled, only the Power, PC Cam, and HDMI buttons can be accessed through the remote controller.

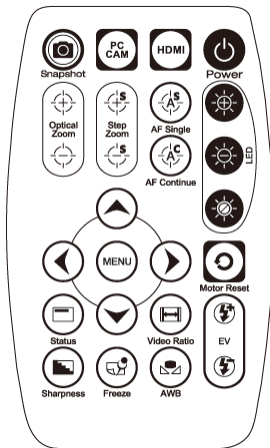
1.2.1 Buttons for Common Use

The following buttons are used for both PC Cam and HDMI mode.

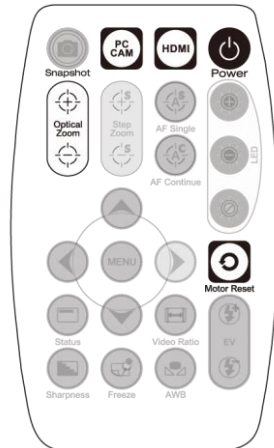
- (1) Power  : Turn on/off.
- (2) Motor Reset  (Recalibrates entire operation) : Returns to the lens position. If a loss of electricity occur during operation, please reset the operation.
- (3) Manual focus: Press Zoom out  till the end to set up the sensor motor at the top, so that all optical objectives lens reach the parfocal distance.

(3-1) Zoom in  : Zooms in; speed increases when held.

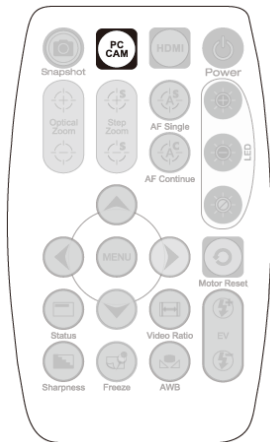
(3-2) Zoom out  : Zooms out; speed increases when held.



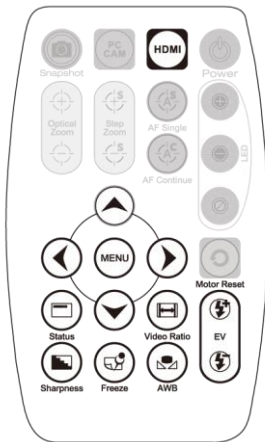
Microscope remote controller



Buttons for common use




Buttons for PC CAM mode



Buttons for HDMI mode



1.2.2 Buttons for PC CAM

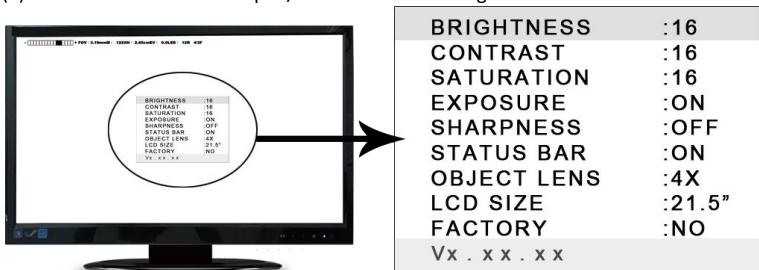
The following buttons are used only for PC Cam mode.

- (1) PC CAM  : When in PC CAM mode, the USB cable must connect to a PC and microscope. Please disable software before switching to HDMI mode or powering off.










1.2.3 Buttons for HDMI

The following buttons are used only for HDMI mode.

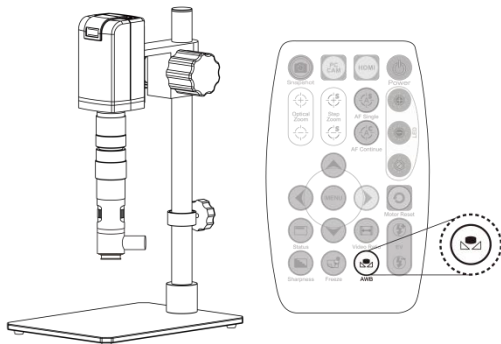
- (1) HDMI : When in HDMI mode, the HDMI cable must connect with the screen and microscope.
- (2) Menu on Screen : Open/close menu for setting.





- (2-1) BRIGHTNESS : Adjusts the brightness of the entire image. [1~31]
- (2-2) CONTRAST : Emphasizes the difference between bright and dark. [1~31]
- (2-3) SATURATION : Adjusts the color level. [1~31]
- (2-4) EXPOSURE VALUE :
 - [ON] Auto mode, use with the exposure value +/- . This mode will automatically adjust the image brightness. For the best result, turn on all LED lighting. For more on adjustment, please refer to Section 1.2.3-(7).
 - [OFF] Manual mode, use with the LED brightness +/- and the exposure value +/- . This mode allows you to manually adjust the LED brightness and exposure value. For more on adjustment, please refer to Section 1.2.1-(2) and Section 1.2.3-(7).

- (2-5) SHARPNESS :
- [ON] Sharpens the image.
 - [OFF] Smooth the image.
- (2-6) STATUS BAR : Suggest to OFF the Status Bar in CSZ064 model.
- [ON] Displays the status bar on the top of screen. For more on the status bar, please refer to Section 1.2.3-(9).
 - [OFF] Hides the status bar.
- (2-7) OBJECT LENS : No Function in CSZ064 model.
- (2-8) LCD SIZE : No Function in CSZ064 model.
- (2-9) FACTORY :
- [NO] Stays on the current setting.
 - [YES] Returns all settings to factory settings.
- (2-10) Vx.xx.xx : Firmware version.
- (3) Up  : Choose the previous item
- (4) Down  : Choose the next item
- (5) Left  : Choose the next value
- (6) Right  : Choose the last value
- (7) Exposure Value: 13 levels of exposure value are selectable, from +0.2~ -2.0.
- (7-1) Increase  : Use to increase exposure when the image is too dark.
- (7-2) Decrease  : Use to decrease exposure when the image is too bright.
- (8) Video Ratio  : Press Video Ratio button to change 3 different image sizes.
- (9) Status Bar : The default setting is "OFF", if status bar shows on screen, please turn to OFF manually.
- (10) Auto White Balance Calibration : To calibrate the white balance, place the white balance card (included in box) under the lens, focus until clear, and choose On. Because the white balance is sometimes influenced by external

light sources, it is recommended to calibrate the white balance if the color seems off or incorrect.



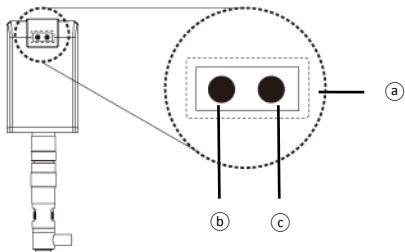
- (11) Image Freeze : On/Off image freeze. Freezes the image; press the button again to return to preview.
- (12) Sharpness : On/Off sharpness mode. Please refer to Section 1.2.3-(2).

1.3 Microscope introduction:

1.3.1 IR Remote Area/Indicator

When both the HDMI and USB indicator lights are on, the microscope is in standby mode.

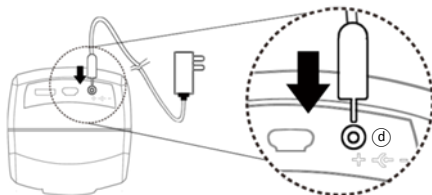
Caution: Please remove the transparent protection sheet on the IR receiver area.



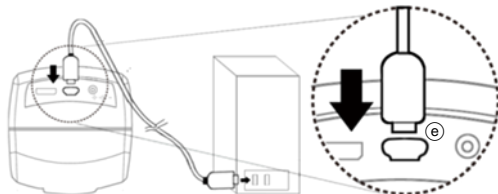
- (1) IR remote control aiming areaⒶ: The indicator will blink whenever buttons are pressed. The indicator will blink, if the indicator did not blink means the signal was not delivered and please repress again.
- (2) HDMI indicatorⒷ: When lit up, the device is in HDMI mode.
- (3) USB indicatorⒸ: When lit up, the device is in USB mode. The light will flicker if the microscope is not connected to a PC.

1.3.2 Power/USB/HDMI port

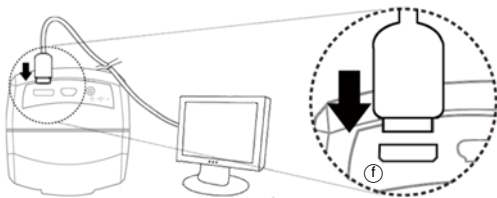
- (1) PowerⓄ: Power supply is only compatible with the cord in the box.



- (2) USBⓄ: The USB cable is used to connect the microscope to a PC to access the application program. When the device is in PC Cam mode, connect the microscope to a PC through the USB cable from the box. Make sure to connect the USB cable first and then switch to PC Cam mode.

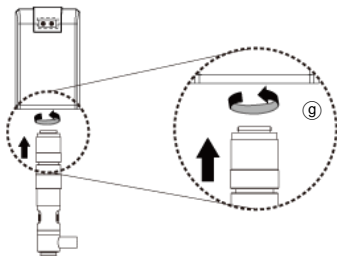


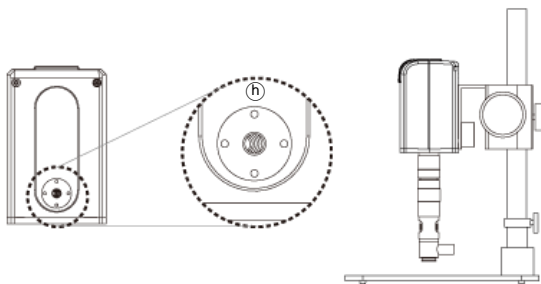
- (3) HDMI① : The HDMI port is used to connect the microscope to a screen. When the device is in HDMI mode, connect the microscope to the screen using the HDMI cable from the box. * For TV screen connections, make sure to choose the homologous image ratio and format.



1.3.3 CSZ064C Lens Assembling

Each CSZ064C lens has reach its parfocal distance when goods ship out; simply screw ⑨ the CSZ064C lens under the UM06 camera and tighten up with stand ⑩.

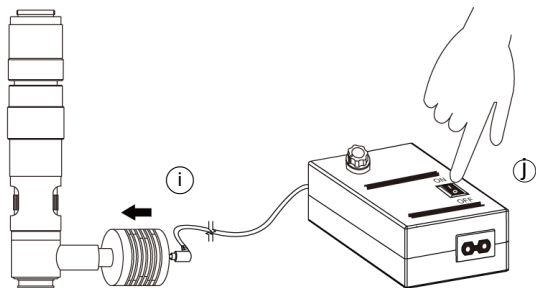





1.3.4 Illuminance


CSZ064C Lens has its own Coaxial illumination, please insert the coaxial light


① to lens, then switch power ON ②.



1.4 Microscope Focus

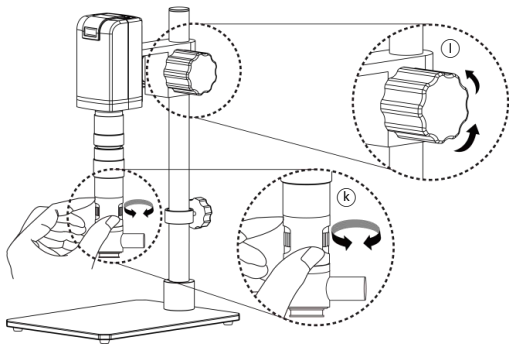
Move the CSZ064C upward, leave 82mm to the object; press Zoom out  button to move the sensor to end position. Rotate the optical zoom from 0.6x-4x see if all image is clear. If the lens does not reach parfocal distance, try turning the gearbox to find clear image. If focus lost, please refer to the instruction to tuning parfocal distance.

(2-1) In HDMI mode, press Zoom Out  till the end.

(2-2) In PC CAM mode, press the Zoom Out  till the end. (The sensor position at around 18XX, each device has a little difference due to the assembling tolerance.



When the image sensor position is fixed, as in (2-1) and (2-2), focus the image by using knob ① to adjust the height and knob ② to fine tune.



1.4.1 Magnification chart

The below chart measured base on UM06-CSZ064C model on 24" screen with working distance 82mm, and optical focusing from 0.6x-4x. The chart is only a reference data, might not be accurate enough.

To use the measurement function in software, all the build in scales are not correct. User's must create and calibrate a new scale. Refer to the AP User's Guide in CD for more detailed information on create a new scale file.

CSZ064C Zoom lens working distance: 82mm (3.228")

CSZ064C Lens magnification on 24" HDMI monitor. (Ref. Data)					
Optical Adaptor(0.5x)	0.6x	1x	3x	3x	4x
1x Focusing lens Working Distance(mm)	82	82	82	82	82
Mode 1, 2 FOV(mm)	11.7	7	3.5	2.35	1.8
Mode 3 FOV (mm)	8.7	5.2	2.65	1.8	1.35
Mode 1 Mag. (X)	34	56	110	164	215
Mode 2 Mag. (X)	44	74	147	220	288
Mode 3 Mag. (X)	59	99	197	290	380

1.5 Microscope accessory

1.5.1 Calibrator

Mainly used to calibrate the scale on the application program (please refer to the AP manual for more information). The calibrator is transparent and can be applied onto the object directly.

1.5.2 White balance card

The white side is used to calibrate the white balance. If the object is tiny, place it onto the white balance card and move the card instead of the object.

2. Printed Notice

Please read the following information before operating.

2.1 Maintenance

Please abide by the following rules while storing or using this product:

- 2.1.1 Keep dry: do not place the product in a humid environment. Dry surroundings help extend the life of the product.
- 2.1.2 Avoid temperature shock: temperature shock (for example, taking the product into a warm room from a cold environment) will cause internal condensation inside the machine. Please put the device inside the protection bag or handbag to prevent temperature shock, and avoid using the device in an environment with extreme temperatures.
- 2.1.3 Avoid dropping: the device may malfunction if it encounters strong collision, vibration, or distortion.
- 2.1.4 Turn the microscope off before cutting off the power supply : do not forced cut off the power supply.
- 2.1.5 Do not face the lens against strong light or sunshine for extended periods of time: Strong light rays may degrade sensitive elements and generate white stains on images.
- 2.1.6 Handle the device carefully: do not disassemble cables forcefully and avoid contact with the lens since they are subjected to damage.
- 2.1.7 Make sure to switch the power supply off and unplug the power cable if the device is not in operation for an extended period of time. Store the device in a dry environment with excellent ventilation. Do not expose the machine in an environment lower than -5°C or higher than 50°C.
- 2.1.8 While carrying, put the device inside the box to prevent it from being damaged.

2.2 Product Specification

CMOS Sensor	5 million pixels CMOS sensor
Lens	CSZ064C Coaxial Zoom Lens
Magnification	Optical Zoom from 0.6x-4x.
Auxiliary source	Coaxial Light
DC port	Adaptor DC input
HDMI port	Output 1080P(1920*1080 Pixel) image
USB port	USB 2.0,3.0 compatible, connect with PC.
Focus control	IR remote controller/PC(application program) control
Power supplier	adaptor (input : DC 5.0V/2.0A input : AC 100-240V 50/60Hz)
Power Consumption (A/C)	0.225A (Max.)
Size	115x66x68mm
Weight	Host weight around 710-grams
Operation environment	Temperature -5°C ~ 50°C; Humidity-lower than 85% (No Condensation)
For any changes, please visit http://www.vitiny.com	

2.3 Safety Instructions

- As an electronic product, please do not use the device in any place in which electronic products are prohibited.
- Keep the device away from water sources to avoid electric shock as it is not waterproof.
- Keep the device away from chemicals or substances with explosive or fire hazards. Switch the device off near gas stations.
- In the case that there are foreign substances or water inside the device, or the device is dropped or damaged, please switch off and remove the power supply to avoid fire and electric shock.
- Do not look steadily into Light sources after switching on the host as it is harmful to your eyes.
- Please use only the product accessories provided in the box for connections. Do not use any outside products without approval of original factory.
- Please remove the power supply from the microscope when not in use.
- Do not disassemble the machine for inspection. For any problems occurring in the machine itself, please power off the device and contact us through e-mail: mltc@vitiny.com

Please ask the distributor to fill in the name of the shop, address, purchase date, and other contents to protect your rights and validate your one-year warranty since upon the purchase date.

Contents of Warranty: The warranty is provided free of charge for faults caused by manufacturing within one year from the purchase date.

Non-warranty:

1. Product appearance parts, such as the outer casing, knobs and LED cover, etc (charged spare parts are limited to one year after completing the product manufacturing).
2. Consumption goods of the host itself, such as LED lights and lens.
3. Product accessories and fittings, such as the power supplier, USB cable, HDMI cable, calibrator, white balance card, remote controller...etc.

Services caused by any of the following situations in the period of the warranty shall not be provided free of charge:

1. Improper use or disassembly, repair or refitting.
2. Any damages to the device caused by external or environmental factors.
3. Discrepancy of product serial number, unfilled or unidentified warranty. Any inspection or repair service after the period of warranty will be charged as follows:
 - (1) Service fees (including transportation fees) of product inspection.
 - (2) Repair fees.
 - (3) Fees of replaced parts

ViTINY Service Center Tel: 07-657-9551 Fax: 07-657-9561

Address: 10 F., No.1, Section 1, Syuecheng Road, Dashu District, Kaohsiung City 840, Taiwan (R.O.C.)

Website: <http://www.vitiny.com>

ViTiny UM06 Warranty

Product	
Model no	
S/L nos.	
Purchase d a t e	DD/MM/YYYY
Purchaser	
Tel no:	
Address	
Email	

Distributor Seal for Confirmation

(Stamp is necessary for validation of the Warranty)

※Distributor's seal shall include name of the shop, telephone and address※



[HTTP://WWW.VITINY.COM](http://www.vitiny.com)

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