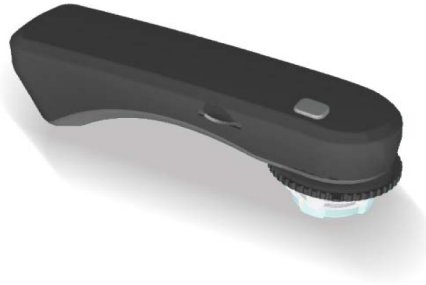


User's Guide

Model: UM-02



USB Digital Camera Microscope

Contents

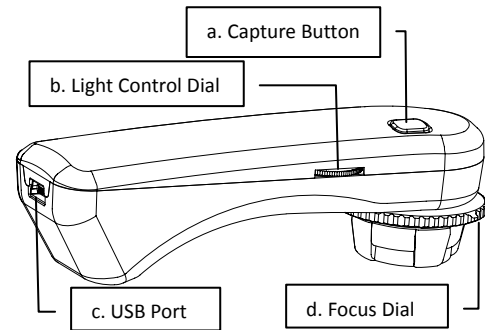
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1. Product Introduction

1.1 Packaging Contents

Object	Quantity	Object	Quantity
USB Digital Microscope	1	User's Guide	1
Mini USB2.0 Cable	1	Installation CD	1

1.2 USB Digital Microscope Function






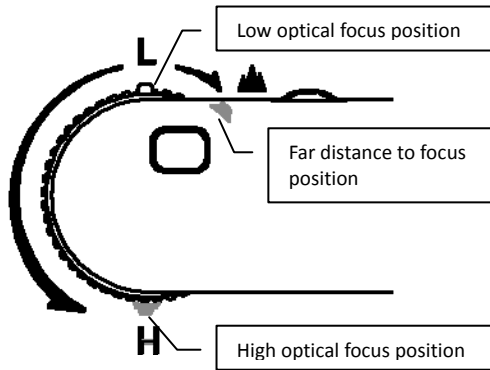
- a. Capture Button: Press the capture button to record the image. The image is displayed on the application program.
- b. Light Control Dial: Light control dial is used to control LED brightness.

c. Focus Dial: Adjust focus, magnification, and zoom when it is in the video mode.

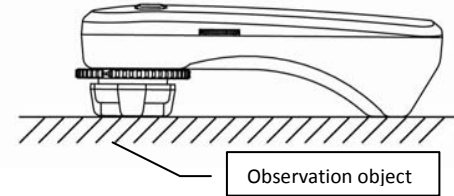
d. USB 2.0 Port: Use the mini USB 2.0 cable to connect this device to the PC.

1.3 USB Digital Microscope Operation

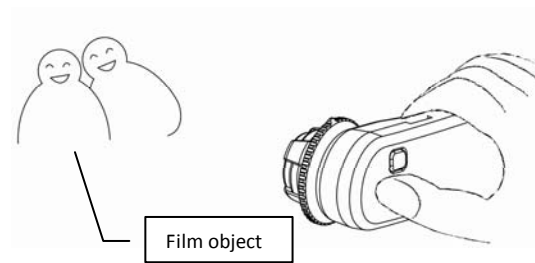
a. Focus mode: 3 Focus points as LP H &  L, H, and  are focus positions. L is low magnification, H is high magnification &  is for far distance snapshot.



b. Flat Mode: Adjust flat mode button to L or H to observer.



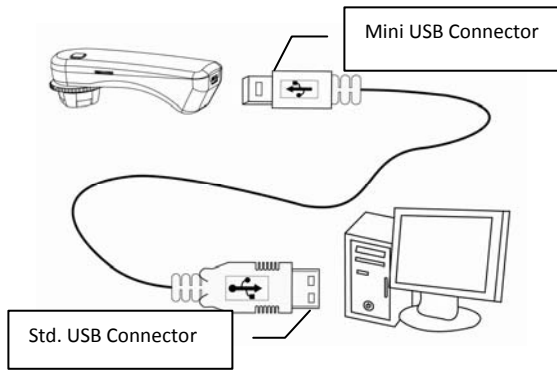
c. Distance mode: Distance mode is just like a regular video camera to shoot.



1.4 USB Cable

Standard USB connector is connected to PC (Normal), and the mini USB connector is connected to the device.

C Attention: Please use the included USB 2.0 cable in the package. Other cables may not work properly with this device.

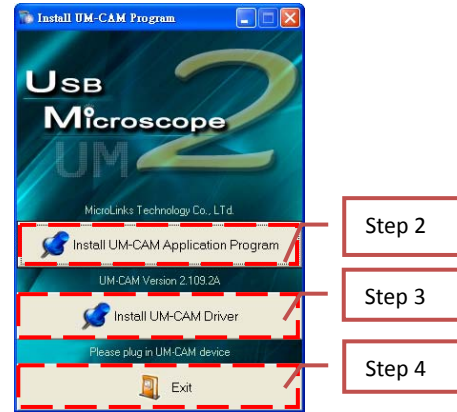


2. Installation

For detailed program installation, please refer to the [User's Manual](#) located in the [Installation CD](#). Programs shall be installed according to the following 4 steps:

2.1 Insert Installation CD (Step 1)

Insert Installation CD provided together with the product into CD-ROM Drive. The CD will be read by computer automatically, and the installation window will be displayed:



If the computer does not display installation window, please open the Installation CD and select 'Autorun.exe' as illustrated in the following image:



If the Installation CD provided together with the product is lost or damaged, please visit <http://www.ihara-us.com> to download installation files.

2.2 Install Application Program (Step 2)

Select Install UM-CAM Application Program to install UM-CAM Application Program.

2.3 Install Driver (Step 3)

Please make sure the UM-CAM USB Microscope Camera is connected to the PC. Next, select Install UM-CAM Driver to install UM-CAM driver.

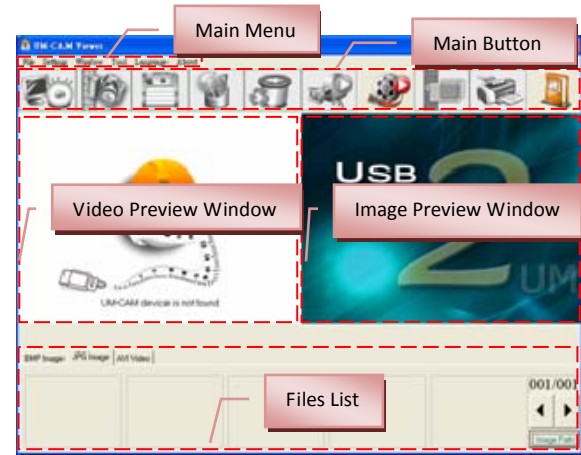
C Attention: Driver will not install properly if the UM-CAM is not connected during installation.

2.4 Exit Installation Program (Step 4)

After installing Application Program and Driver, please select Exit to quit the installation program.

3. Application Program

There are primarily 6 operation functions in the application program. For a detailed explanation, please refer to the Operation Instruction set in the Installation CD (User's Manual).



3.1 Video Preview Window

After connecting the USB microscope camera, this window will show video information, images, videos, played files, as well as information on special function modules.

3.2 Image Preview Window

This window displays captured images, edit and process images.




3.3 Main Menu




The Main Menu of the Application Program contains the following selections:

- a. File includes files open and storage, as well as printing images.
- b. Setting includes input device, image quality, video information formats, sources and compression, as well as automatic storage, etc.
- c. Window you can adjust sizes of video information windows and switch to the single window mode.
- d. Tool open different files folders, such as BMP, JPG and AVI. Languages and path of files storage can be reproduced to preset values of the system.
- e. Language five languages including Chinese in complex and simple forms, English, Japanese and Germany are available for selection.
- f. About to show the version, copyright and other relevant information about the Application Program.






3.4 Main Button

Main Button contains more general functions as follows:



- a. Connect  / Disconnect  button of connecting and disconnecting to microscope camera. Video image will be displayed in Video Preview Window after connection.
- b. Snapshot  press the button to capture image from Video Preview Window. The captured image will be displayed in Images Preview Window.

- c. Save Image  store images in Images Preview Window
- d. Editor Image  / Exit Editor  to enter or quit Edit Image function. After entering, image editing tools are listed below Images Preview Window as follows:





- e. Delete Image  Pressing delete icon will delete image.
- f. Video Record  / Stop Record  to record or stop recording video. Recorded video will be displayed in Video Preview Window. You can set compressed coding way by clicking and selecting "Setting->Video Compression" in the Main Menu. The user is recommended to install DivX encoder to achieve better compression results and quality.
- g. Play Video  / Stop Play  to play or stop playing video. Video of played files will be displayed in Video Preview Window. Playing tools are listed below the preview window as follows:



- h. Image Process  / Exit Image Process  image processing include reversed video, grey scale, black and white, edge detection and other basic functions. After entering Image Processing model, tools will be displayed below Images Preview Window as follows:



i. Print Image  print images displayed in Images Preview Window.

j. Exit  close the Application Program.

3.5 Files List


Files List is primarily applied to list all current files contained in folders. You can select among BMP images, JPG images and AVI videos.

3.6 Special Function Modules


Special Function Modules are four primary functions. They are:

- Comparison mode;
- Aiming mode;
- Video control mode;
- Measurement mode;




a. Comparison mode  observe similarity of compared images through overlapping and half-half comparison. Before using the model, please load the image for application of other functions. For tools of comparison model, please refer to the following image:




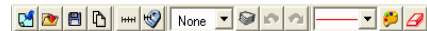
b. Aiming mode  the model provides 4 different center concentrations including cross, scope, rectangle and circular to aim at shot objects as an auxiliary function. Please refer to the following image for tools of the model.



c. Video control mode  you can take the machine by your left or right hand, adjust image direction of yourself or object, as well as adjusting contrast, brightness and exposure rate of the image. Please refer to the following image for tools of Image Control Model.



d. Measurement mode  the model can be used as rulers and compasses. Further, this model can measure in the dynamic (real-time image) or static (loaded images or frozen image) images, as well as providing various measuring tools. Please refer to the following image for tools of Measurement Model.



* * *