# Contents

## INFORMATION TO THE USER (Part 15, Section 15.105(b))

### INFORMATION TO THE USER

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 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.

### WARNING (Part 15, Section 15.21)

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

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## 1.   When beginning

Prochips USB PC Camera, with clear visual quality, strong colors and modern design, is a very small, multi functional color camera, which can support video communications and other applications. In addition, Prochips USB PC Camera can provide lap top computers with the best solutions for providing high quality motion pictures and video communications easily and fastly.

This manual consists of as follows:
- How to install camera
- How to set up software
- Motion picture capturing
- Still picture capturing

After installing this product, you can use Prochips USB PC Camera for various purposes like followings.

**Video e-mail**
Through Viewer 2.0 provided with Prochips USB PC Camera, you can send motion pictures or still pictures in your e-mail message.

**Video conference**
Prochips USB PC Camera basically supports all video conference softwares including Microsoft Netmeeting and Whilepine Cusee-Me, etc.

**Snapshot and video photo**
With editing software for various images, Prochips USB PC Camera plays a role as multimedia device including video display, image capturing, video capturing, and image editing & composition, which can support various features according to user's tastes. And it will allow users to perform the image related operation easily and conveniently.

## 2. Before installing

This manual explains the ways to install hardware and software, and to utilize Viewer program.

The Prochips USB PC Camera is consisted as follows:
- USB PC Camera
- PC camera driver and software CD
- User's manual

## 3. System specifications for installation

The PC specifications required for using Prochips USB PC Camera are as follows:

Pentium MMX 200MHz and above (Pentium II CPU is recommended.)
Windows98 and above (For Windows98SE, driver patch installation is required.)
RAM 16MB and above (32MB and above is recommended.)
Super VGA and above (16Bit and above color is recommended.)
PC with USB port
CD-ROM drive
Devices for video communications: Network card, or modem with above 33.6Kbps capacity
Prochips USB PC Camera Viewer 2.0 can run at Windows98 or Windows2000.

**References**
Before installing the Prochips USB PC Camera, you need to check if USB controller is properly installed by selecting My Computer -> Control Panel -> System -> Device Manager consequently on Windows98 background image. If USB controller is not properly installed, errors can occur when USB related devices are installed. For installing USB controller, please refer to main board manual.
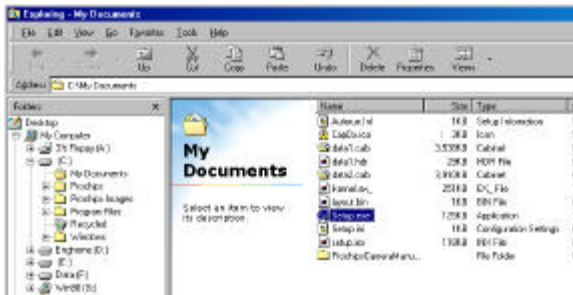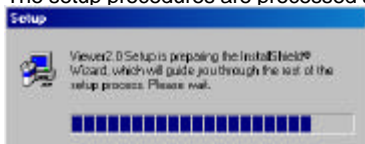
## 4.    Installing hardware & software

Please take following steps to install Prochips USB PC Camera.

### Step 1. Installing camera driver software

1) Please run the installing file in the driver CD provided.
   (For Windows98 SE users, it is necessary to access to
   http://www.prochips.com, then get the patch driver for Windows98 SE.)



2) The setup procedures are processed as follows.



3) After checking the following points, then click "Y" button and proceed
   the setup.
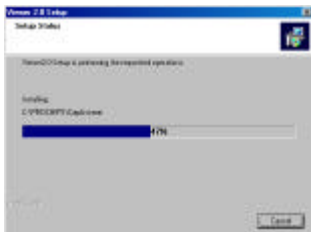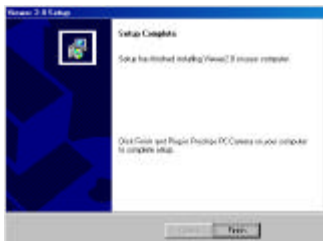
4) After completing other Windows programs, then click "N>" button. (You can convert to other programs by using "ALT + Tab" key.)



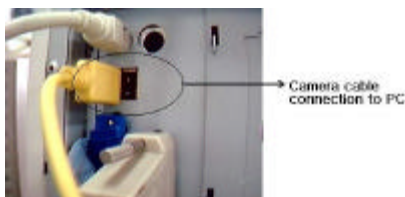5) Dialogue box for installation status appears as shown below picture and the files are copied.



6) After finishing file copy, if the dialogue box appears as shown below, then click "End" button.



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7)   After installing Viewer 2.0 program, please connect the USB terminal of camera to USB port in PC as shown the following picture. Then, PC will automatically recognize the status of connection with camera, and output messages for the following installment steps.



→ Camera cable connection to PC

**Picture 1. Connection part between camera and PC**
Installing steps will automatically proceed.

8)   On finishing installation of camera driver software, you can use Viewer 2.0 and video communication software.
**Notice** : Please check if " Prochips Dual Mode USB Camera" or " Prochips Dual Mode USB Camera Plus" is properly installed in " Control Panel > System > Device Manager > Image Device' .

### Step 2. Viewing camera motion pictures

After installing software, in Start > Program > Prochips > PC Camera, one executable file and one text file, and one uninstall program are created.

By clicking " Start" button, move to program folder, then run Prochips \PC Camera \Viewer 2.0 program. Through this program, you can use the capturing function for still picture and motion picture provided by PROCHIPS PC Camera.

## 5.    How to use Viewer 2.0

After the above camera installment process, Prochips program group is created in start program folder. Followings are explanations on Viewer 2.0

1) Major functions of the program
   - Recording motion pictures
   - Taking still pictures
   - Showing captured pictures on other windows
   - Setting up the display status of camera (source)
   - Setting up the display size of camera (format)
   - Setting up the timing of motion pictures
   - Setting up the voice assistance function in the case of motion picture capturing
   - Setting up the frame numbers in the case of picture capturing
   - Setting up the position for storing motion pictures and still pictures
   - Sending the stored motion picture and still picture files through e-mail
2) Program execution
   A. Execution screen



When the program starts, in the above part of the screen, camera image appears. In the below, camera control panel appears. On this control panel, there are many functional buttons for setting up and operating camera. When taking pictures or recording motion pictures, reduced still image clips appear automatically.

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# 5.    How to use Viewer 2.0

B    Explanation on each button



"Start Motion Picture Capturing" button: Click this button start the motion picture capturing.



"Stop Motion Picture Capturing" button: Click this button to stop the motion picture capturing.



"Taking a Picture" button: Click this button to take a picture.



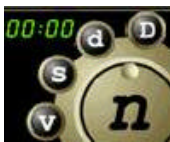"Set up Camera" button: Click this button, and then dialogue box displays for overall setup of camera.



"Continuously Taking a Picture" button: Click this button to continuously take pictures at regular interval. For stopping, click the "Stop Recording" button.
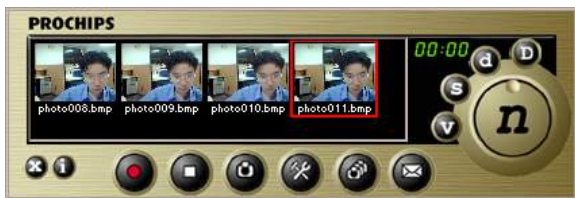
# 5. How to use Viewer 2.0



"Send Mail" button: This button is for sending motion pictures or still pictures via mail messenger. In order to send mails, it is required to set up the camera for sending Internet mails. In case of using Outlook as mail editor, set up the mail server with the help of tips on "Internet Mail". To attach motion pictures or still pictures to the mails, first select "File" in "Insertion" menu, then send the mails.



"File Management" button: This button is to manage the motion pictures and still picture files selected in "File Preview" window.
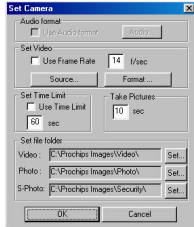- v : To view the selected files
- s : To save as another file name
- d : To delete the selected files
- D : To delete all files



For motion picture, double-click the "View" button or relevant picture in "File Preview" to make the media player program play the motion picture. And for picture, picture editing program will run, so that you can edit the picture on the program.

c. Dialogue box for camera setup
With this dialogue box, you can set up the operation of camera in detail.



-        Audio function

By using the built-in sound card, you can add the sound to motion picture.

-        Video setup

When producing motion pictures, you can adjust the number of frames to be captured per second according to user's system.

-        Source

You can set up the input parameters for camera including brightness of screen and others.

-        Format

You can set up the screen size, pixel depth, and resolution, etc.

-        Time limit

This enables to record motion pictures during the limited period.

-        Continuous picture-taking timer

This enables to automatically record motion pictures at certain interval for using the camera as security camera.

-        Storage position

You can set up the path through which files are to be stored.
Motion pictures: C:\Prochips Images\Video
Still pictures: C:\Prochips Images\Photo
Pictures in succession: C:\Prochips Images\Security

3) How to use programs

A. When capturing motion pictures
Please click "Start Recording" button, then "End Recording" button.

B. When taking still picture
Please click "Taking a Picture" button.

C. When capturing motion pictures for certain period
Please click "Camera Setup" button. Then mark on "Time-Limited Use" and input the desired time.
After that, please click "Start Recording" button.
After capturing is proceeded during the set period, the captured image will automatically appear on "File Preview" window.

D. When you want to capture video and audio simultaneously, please click "Camera Setup" button. Then mark on "Using Audio". And then, motion picture capturing will be proceeded.

## 6. Viewer 2.0 function setup

1) Characteristics of camera
   Prochips USB PC Camera is very easy to use, and to set up without any additional explanations. All information on image processing can be treated in this camera characteristics page.
   This page is first applied to applications provided by Prochips, and is useful to all available programs because it is also operated in similar conditions. Prochips camera can variously adjust the screen brightness, colors, etc. according to the condition for use. The condition to be used for setting up is as follows.

2) Video source characteristics page
   A. How to set up : "Camera Setup" -> "Source"
      Through the simple explanation on control items widely and commonly used for ordinary camera viewer software, users can adjust video quality according to their tastes.

   B. Registration information : " Device Cotrol"
      **1. Brightness**:  This refers to brightness of a color, the difference in amounts of the bright reached to our eyes through color reflection or transmission. Basically, it is set automatically, but users can adjust it manually.

**2.    Contrast    :** It refers to the difference of brightness between the dark area and the bright area of an image. It is set to a certain value, but can be adjusted.

**3.    Saturation    :** It is the unit that represents the richness of a color in a certain area with a certain brightness. Here, the richness of a color means the human beings' sensation responding towards the amount of a color in a certain area.



**4.    Exposure    :** As a general camera obtains the proper exposure by adjusting an iris diaphragm and the speed of shutter according to the brightness of subject, it is possible to control the amount of the incoming lights electronically. The exposure is set automatically, but the user can also set it manually.

# 6.    Viewer 2.0 function setup

3)    Video format feature page
      In the format window, it is possible to change the frame rate of motion
      pictures, the color displayed on the screen, and the screen size.

# 7.    Questions and Answers (Q & A)

## 7.    Questions and Answers Q & A

- What is USB?
  - USB (Universal Serial Bus) is the data transmission method of a new standard. It is designed to resolve the problems such as insufficient ports and random interface development by unifying the interfaces among different devices into one. The connection among USB devices has a tree structure, and up to 127 devices can be connected theoretically. One USB cable consists of two data lines and two power lines. It is designed to generate the transmission speed of 12 Mbps and the serve channel speed of 1.5 Mbps. It supports the transmission of both synchronized and asynchronized data.
- What are required to use the USB Camera?
  - First, PC with the USB port installed is necessary. It means that it is necessary to install the USP port to PC. The USB port is basically installed in Pentium II PC, and MMX PC also supports USB.
  - The operating system supporting the USB is necessary. Windows 98 basically supports USB.
  - The start-up driver and the application software to start up USB PC camera are required. The driver of the USB PC camera is provided by the camera manufacturer. For the Prochips USB Camera Rookie, the start-up software that is easy to install and use is provided to the users. Any existing application software with the functions of capturing and picture communication can be used as the application software. The software with these functions from any camera manufacturer can be also used.
- What are the reasons that USB Camera is not recognized?
  - BIOS should be set up properly to allow PC to recognize the USB Camera. USB should be enabled in the CMOS setup. The USB function setup items can be different depending on BIOS. However, in general, those items may be classified into the I/O related items.
  - If the driver is not installed properly, it is possible that USB Camera cannot be recognized. The method and procedure of installing Prochips USB Camera Rookie is easily and simply provided in the "Installation and Software Installation" of the user's manual.
  - The manufacturer of the main board VIA chip using the VIA chip USB controller has distributed the modified driver. Download the relevant driver from the Prochips homepage and install it.

## 7.     Questions and Answers (Q & A)

- The displayed message says," It is impossible to search for the capturing device.". How should be done?
    - This problem is caused because more than one capturing device is registered and the USB Camera, one of them, is connected to another driver. In this case, it is possible to select the driver in the viewer. Though might be some differences in the expression for each viewer, in general, the camera can operate properly by selecting the proper driver in the driver selection item expressed either as "Option" or "Device". To check the video capturing device currently used by the system, view the device item of multimedia menu in the control panel.
- While the program is used (when the camera is working to display a motion picture), to plug the camera out of the port stops the picture. To reconnect the camera does not result in the proper operation. How should be done?
    - Because the program using a capturing driver cannot know if the camera is plugged out, the user should not plug the camera out while it operates. If the user plugs it out during its operation, end the program and restart it. It is needless to mention that the camera should be connected.
- To run Viewer 2.0 for the first time changes the screen color.
    - The screen color can be changed because the camera automatically sets the environment up when Viewer 2.0 runs for the first time. There should not be any problem with the capturing operation.
- To play the captured pictures results in fragmental pictures.
    - It depends on the system. Most of time, the problem occurs because the cluster is not arranged after the much working of deleting and creating files, or the memory is not managed properly.
- Where are the captured motion pictures and files saved?
    - C:\Prochips Images\ Video, C:\Prochips Images\ Photo, and C:\Prochips Images\ Security is set up by default for the motion pictures, still pictures, and pictures in succession, respectively. The user can designate the place where files are saved.

## 7.    Questions and Answers (Q & A)

- A file error occurs when the capturing is performed in succession.
  - When the capturing of motion pictures is started and ended, the first frame of the captured pictures shows up in a different window. If it is desired to capture motion pictures in succession, press the start button after the previous motion picture appears in a different window.

- To capture suddenly ends the program.
  - To select the compression function for a certain format (12bit :1420)of the camera and perform the capturing often ends the program improperly. Select the source and compression in the camera configuration before making a change.

- The sound quality is degenerated noticeably when pictures and sounds are captured simultaneously.
  - For sound shooting, the sound quality can be different depending on the microphone performance. In this case, the microphone of good quality is required.

- The camera suddenly stops operating.
  - If the camera is turned on for a long time, it can stop operating due to the automatic power off function. In this case, the function does not affect the camera. Either lengthen the period for the automatic power off function or disable the function.

## 7. Questions and Answers (Q & A)

- The mail is not sent properly.
  - Check if the messenger for the Internet mail is set up properly. If the Microsoft Outlook is used as the mail editor, set up the mail server by using the "Internet mail" as the help keyword. Use the "File" of "Insert" in menu to attach a file. Refer to the Outlook helps for the method of the use in details.

- Where can one obtain the detailed information on the camera?
  - Refer to the homepage for the details related to the camera hardware.
    http://www.prochips.com

# Specifications

| | PCA-2300 | PCA-3100 | PCA-3202 | PCA-3302 |
|---|---|---|---|---|
| Imaging Device | 1/4" CMOS | 1/4" CMOS | 1/3" CMOS | 1/3" CMOS |
| Pixel | 100,000 pixel | 100,000 pixel | 307,200 pixel | 316,224 pixel |
| S/N/ Ratio | >48 dB | >48 dB | >48 dB | >48 dB |
| Lens | F2.0 1:5.6 60º | F2.0 1:5.6 60º | F2.0 1:5.6 60º | F2.0 1:5.6 60º |
| Minimum Illumination | 3 Lux | 3 Lux | 2.5 Lux | 4 Lux |
| Exposure | 500:1 (Auto) | 500:1 (Auto) | 500:1 (Auto) | Auto |
| Frame Speed | 60 lps and more (CIF) | 60 lps and more (CIF) | 525 Ume 30 lps | 45 lps |
| White Balance | Auto | Auto | Auto | Auto |
| Contrast | Manual | Manual | Manual | Manual |
| Connection Device | USB | USB | USB | USB |
| Power/Voltage | DC 5 V/ | DC 5 V/ | DC 5 V/ | DC 5 V/ |
| Dimensions | 55x75x55 mm | 75x90x57 mm | 58x78x60 mm | 60x80x80 mm |

# Warranty

## Customer card

Product Name
Model Name
Sale Date:      Year:      Month:      Day:
Customer Name      Phone:
Customer Address

1. Be sure to fill the blanks when selling the product and hand in the filled form to the customer.
2. Keep the customer card at the agency for the customer management.

## Product Warranty

Product Name
Model Name
Sale Date:      Year:      Month:      Day:
Customer Name      Phone:
Customer Address

### Contents

1. Any damage caused by the innate defects of the product under a normal operation will be repaired for free during the period specified in the contract.
2. If the damage is caused by the following reasons, the product will be repaired only with proper payments even during the warranty period:
   - A wrong use of the product
   - An improper repair and modification of the product
   - Fault from neglect of what are specified in the user's manual.

### The standards of the compensation for the damage to the customer

1. The compensation for this product follows the regulations about the compensation regulation for the damage to the customer notified by the Ministry of Finance and Economy.
2. Prochips Technology Inc. takes out the liability insurance for business compensation to protect the customer's rights.

### Customer Center and A/S

The compensation for the damage to the customer caused by this product follows the regulations about the compensation for the damage to the customer notified by the Ministry of Finance and Economy.
Customer Center: (080) 300-0911