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FCC 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

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

1. Product Composition

Thank you for buying PC CAMERA of PROCHIPS TECHNOLOGY INC.

Prochips PC CAMERA is video communication USB CAMERA offering clear image and color.

This product supports video communication, video e-mail editing and image processing needed in multimedia function.

This product consists of as follows

)... 1-1

* This manual is equally used in PCA-2300, PCA-3100, PCA-3202, PCA-2302, PCA-3302

2. Before installing

1. System specification for installation

Pentium* MMX 200MHZ and above (Pentium II CPU is recommended)

USB port

Windows*98 and above

RAM 32MB and above

SUPER VGA and above

CD-ROM drive

Prochips PC CAMERA is able to use in WINDOWS98, WINDOWS98 SE, WINDOWS ME, WINDOWS2000 and execute using DIRECTX. It is recommended that you install DIRECTX 6.0 and above for picture quality and frame rate improvement.

** Reference Information

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. 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.

Pentium* is trademark of Intel.

Windows* is trademark of Microsoft.

3. Installing CAMERA

Please take following steps to install Prochips USB Camera.

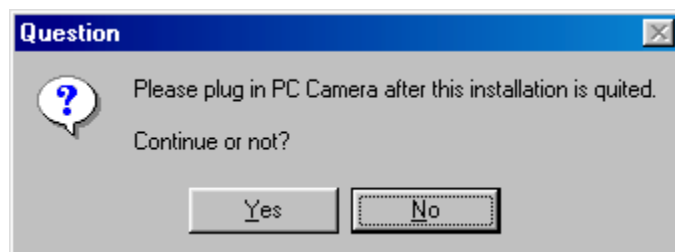
- Driver installation(including Viewer 4.0)
- Connection PC CAMERA to USB PORT
- Installation completion after detecting new hardware

1. Installation driver and Viewer 4.0

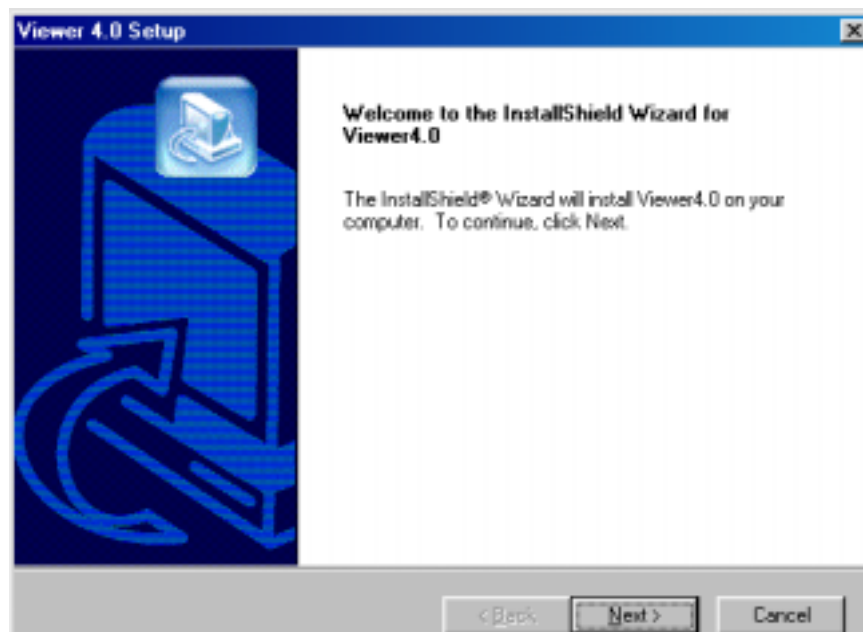
1-1. Please insert provided CD-ROM into CD-ROM drive. after that, installation starts.

(Execute “setup.exe” file in CD-ROM if auto-execution is impossible by DIRECT CD of ADAPTEC* inc or other programs)

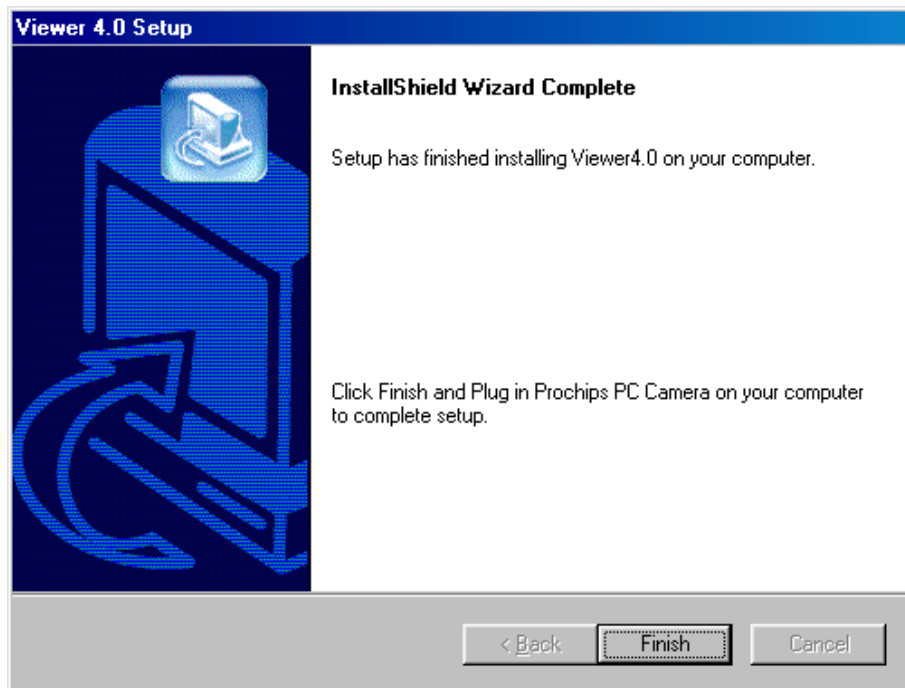
1-2. After checking the following message, then click “Yes” button



1-3. Proceed the installation by clicking “Next” button



1-3. After clicking “Finish” button, connect PC CAMERA to USB PORT.

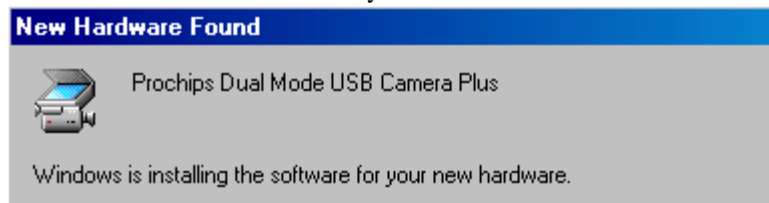


You can complete installation of PROCHIPS PC CAMERA driver and Viewer 4.0 using this process.

1-4. After installing driver, Please connect PC CAMERA to USB PORT.

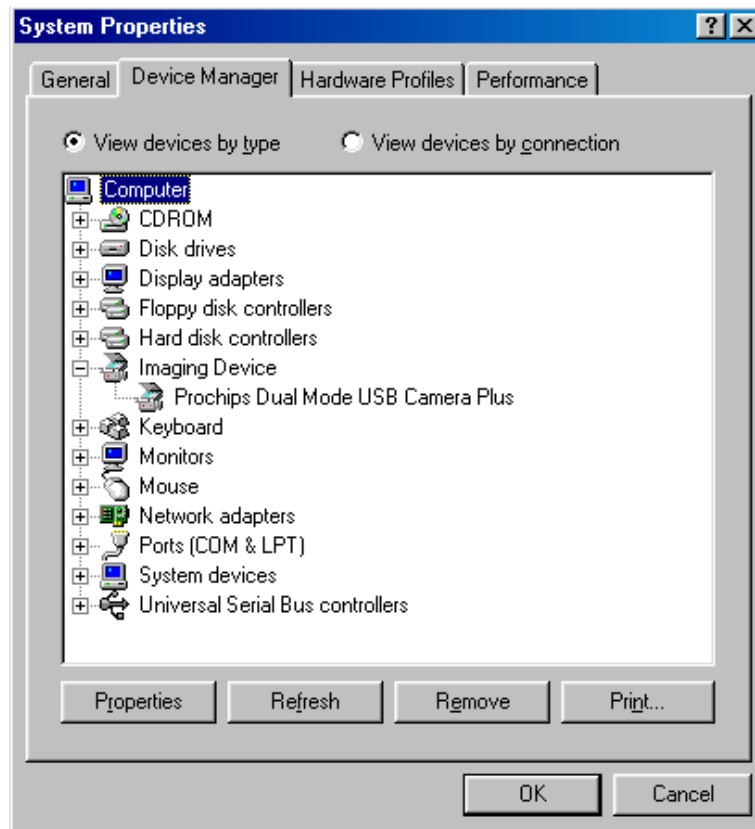
)... 3-4

1-5. It detects device automatically after connection



* It completes detection in a few seconds, but it is different from system performance and specification. Don't turn off computer until complete detection.

1-7. Please check if “Prochips Dual Mode USB Camera” or “Prochips Dual Mode USB Camera Plus” is properly installed in “Control Panel - System - Device Manager - Imaging Device”.



2. MGI Video Wave III SE installation

MGI Video Wave III SE, Strong Graphic Tool offered by Prochips, provides moving picture and still image editing function. Strong and Easy user interface and help word provided by voice assist user to use comfortably



- 2-1. To install MGI Video Wave III SE, execute "setup.exe" in VideoWave folder of CD.
 - 2-2. Please proceed continuously to the next steps by clicking "Next" button.
 - 2.3. Video Wave III SE program is made by MGI Software Corp. You must register e-mail address to get a newest information of MGI. If you need, Please register
 - 2.4. Finally, you can see the installation completion window. If you choose "seeing guide tour ", you can hear from animation and voice. It helps you to use MGI Video Wave III SE.
- * Windows ME user must install "WinMEPatch.exe"

4. Function and usage of Viewer 4.0

Please execute Start - Program - Prochips - PC CAMERA - Viewer 4.0 to run Viewer 4.0.



Function of each buttons in Viewer 4.0 is as follows.

Record



Stop



SnapShot



Set Camera



Sequence Image



E-Mail



View

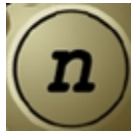


Rename



Delete

Delete All



NetMeeting

Function usage

1. Still image capturing function

In case of clicking still image capturing button which looks like camera, Still image appears in the below box like image clip.



Captured file can edit using Windows Paint program automatically linked by double clicking image clip. And, in case of clicking mouse button and Shift or Ctrl key together, you can choose many images. In case of clicking button, you can see the slide show.





button can delete chosen files,



button delete all images.



button store chosen image to other name.

2. Continuously Capturing function

Continuously capturing function can use to observe movement of object.

It is initially set that every ten seconds capture image file after clicking continuously capturing button.

If you want to adjust capturing interval, after clicking button you must change newly continuously



capturing item.

3. Moving picture capture

If you use recording button, you can make moving picture file, *.AVI.

Viewer 4.0 supports two recording completion method as follow.

A. Method to complete recording by recording time setting

(initial setting : 10 seconds)



After clicking button, you check time limit usage in time limit option. Next, Please input capturing time in seconds.

B. Method to complete by clicking stop button



While recording progress, in case of clicking button, anytime you can stop recording.

4. Sending e-mail

When you attach still image or moving picture file to e-mail, you need not execute mail program like outlook express. You can choose many still images and moving pictures. If you click Shift or Ctrl key and button together, they are automatically attached to the e-mail.

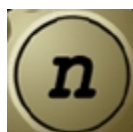


* When sending e-mail is not executed

- You must set "Default Mail Handler" option in mail program like outlook express.
- You must set MAPI client option in outlook express 4.0.
- Other mail programs must set "Default Mail Handler" and MAPI client option too.

5. NetMeeting function

In case of clicking button, Viewer 4.0 is automatically minimized, execute NetMeeting.



If you complete net meeting, it automatically restore to Viewer 4.0.

6. Option function

When click button, next window appears.



- Audio function decide whether you record moving picture and voice together or not.
- Video setting function tunes frame rate of moving picture during recording. While recording, if recording does not process, please tune frame rate using this function.
- Time limit function limits recording time in seconds.
- Continuously capturing timer function tunes time interval of continuously capturing.
- Source button tunes color texture of video.
- Slide function help us see continuously many images with time interval set. when slide show completes, it returns to Preview automatically.

5. Question and Answer (Q & A)

? Case of not detecting USB CAMERA after installation

- Enable USB item in CMOS setup using main board manual
- You must uninstall previous pc camera driver before installing Viewer 4.0.
- It may happen in main board using VIA chipset. You must download and install patch driver concerned with VIA chipset from production company homepage “www.prochips.com”.

? I am using old version of Viewer. how to delete this driver and install new driver.

- At first, uninstall old driver and detach camera from usb port ,and then reboot. When Windows restart, install Viewer 4.0 and connect pc camera to usb port.

? How should I do to change video size and color number.

- After execute Viewer 4.0, click option button. After click format button, you can change video size and color value.

? How do I see clearly in dark place.

- After executing Viewer 4.0, click option button. After clicking Source button, Brightness and Exposure items must be checked in new window, and then adjust to adequate brightness.

? Can I use in pc with TV Card

- In case of using TV card and USB pc camera together, pc camera viewer may not operate well.

? Sound quality is not good when play sound after recording sound. What is the solution about it?

- After clicking option button, click audio button. In sound choice window, click side of no title button. Among radio quality/ phone quality/ cd quality, choose the item you want. As audio quality is good, captured moving picture size increases more.

? Video stops while using viewer

- Please check if the pc camera is connect to the usb port

? What should I do to decrease the captured file size

- To decrease size of still image, click option button, then click format button. Choose I420 in bit number per pixel and compression. Of them, I420 display viewer with least color but it does not affect very much.

? When execute viewer, viewer may have slow frame rate and video may happen to stop a little. What should I do?

- Frame rate is in proportional to video size and color number. To optimize display circumstance, after clicking option, change video size to 320x240 and color to I420.

? Where should I consult about MGI VideoWave III SE

- If you visit www.videowave.com, you will find more information.

* You will find more information at production company website, www.prochips.com.

6. Specification

	PCA-2300	PCA-3100	PCA-3202
Imaging Device	1/4" CMOS	1/4" CMOS	1/3" CMOS
Pixel	100,000 pixel	100,000 pixel	307,200 pixel
S/N/ Ratio	>48 dB	>48 dB	>48 dB
Lens	F2.2 f:4.0 56°	F2.2 f:4.0 56°	F2.0 f:5.8 60°
Minimum Illumination	3 Lux	3 Lux	2.5 Lux
Exposure	500:1 (Auto)	500:1 (Auto)	500:1 (Auto)
Frame Speed	30 fps and more (CIF)	30 fps and more (CIF)	15 fps(VGA)
White Balance	Auto	Auto	Auto
Contrast	Manual	Manual	Manual
Connection Device	USB	USB	USB
Power/Voltage	DC 5 V/	DC 5 V/	DC 5 V/
Dimensions	55x75x55 mm	75x90x57 mm	58x78x60 mm

	PCA-2302	PCA-3302
Imaging Device	1/3" CMOS	1/3" CMOS
Pixel	307,200 pixel	307,200 pixel
S/N/ Ratio	>48 dB	>48 dB
Lens	F2.0 f:5.8 60°	F2.1 f:4.0 56°
Minimum Illumination	2.5 Lux	2.5 Lux
Exposure	500:1 (Auto)	500:1 (Auto)
Frame Speed	15 fps(VGA)	15 fps(VGA)
White Balance	Auto	Auto
Contrast	Manual	Manual
Connection Device	USB	USB
Power/Voltage	DC 5 V/	DC 5 V/
Dimensions	55x75x55 mm	70x80x70 mm