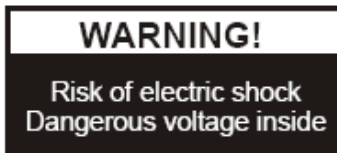


PRECAUTIONS



Please follow these precautions:

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To prevent electrical shock, do not open the cabinet. Refer to qualified personnel for service only.

Do not use the unit continuously for more than 24 hours with camera auto focus on. It may cause damage to the camera lens.

Be careful not to spill water or other liquids onto the unit, or allow combustible or metallic objects to get inside the cabinet.

Unplug the visualizer from the wall outlet when it is not being used for a long period of time.

Clean the cabinet with a soft cloth lightly moistened with a mild detergent solution.

Clean the lens carefully with an air spray or soft dry cloth to avoid scratching it.

When the lamps flash or become dark, they should be replaced with new ones.

Avoid switching arm lights and back light frequently.

Remove the camera lens cap before power the unit on.

CONTACTS:

QOMO Hitevision, LLC

Toll Free: 1-866-990QOMO

E-Mail: info@qomo.com

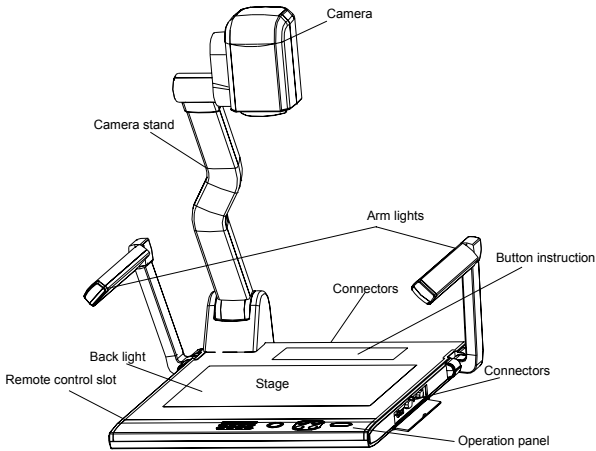
Web: www.qomo.com

CONTENTS:

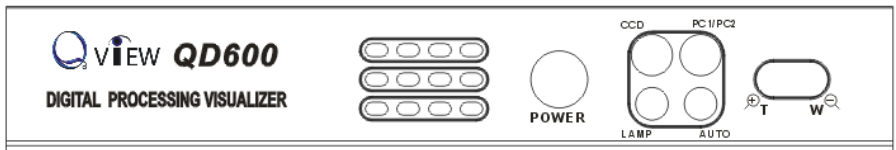
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PARTS IDENTIFICATION



CONTROL PANEL



POWER (Control the visualizer On/Off)

Mir (V-reverse the image)

Frz (Freeze the image)

Neg (Display film negatives)

Title (Freeze the top 1/8 of the screen)

D./S. (Switch between static mode and dynamic mode)

Far/Near (Focus far or near)

B+ / B- (Adjust the brightness)

Split (Image Split function)

↑/↓ (Increase and decrease the volume)

CCD (Select to output CCD signal)

PC1/PC2 (Select to output computer1/computer 2 signal)

LAMP (Control the arm lights and back light)

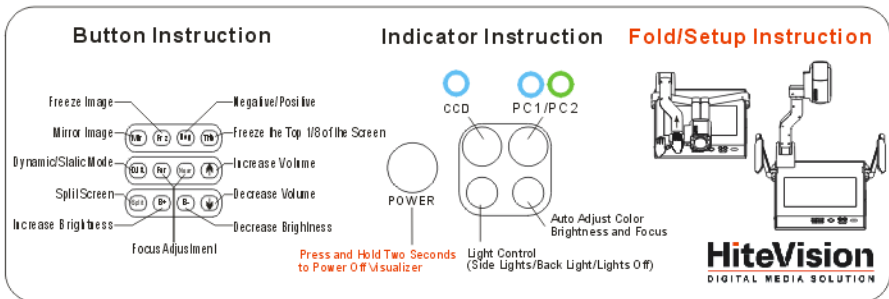
AUTO (To auto adjust white balance and auto focus)

⊕/⊖ (Increase and decrease the magnification)

Remarks: Frz, Title, D./S. and Split functions are only available on PROJECTOR OUT port.

BUTTON INSTRUCTION

Button function instruction sheet



REMOTE CONTROL



POWER (Control the visualizer On/Off)

FREEZE (Freeze the image)

NEG (Display film negatives)

MIRROR (V-Reverse the image)

LAMP (Control the arm lights and back light)

D./S. (Switch between static mode and dynamic mode)

B&W (Switch between color mode and B&W mode)

SPLIT (Image split function)

TITLE (Freeze the top 1/8 of the screen)

XGA (Set output signal resolution as XGA (1024 x 768) mode)

SVGA (Set output signal resolution as SVGA (800 x 600) mode)

INIT (Restore to CCD default setting)

TEXT (Switch between image/text mode)

AUTO (To auto white balance and auto focus)

TELE/WIDE (Increase and decrease the magnification)

FAR/NEAR (Focus near or far)

CCD (Select to output CCD signal)

PC1 (Select to output computer 1 signal)

PC2 (Select to output computer 2 signal)

RED +/- (Increase/decrease the red hue)

BLUE +/- (Increase/decrease the blue hue)

BRIGHT +/- (Increase/decrease the brightness)

VOLUME +/- (Increase or decrease the volume)

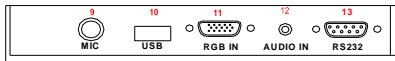
Remarks: FREEZE, TITLE, D./S. and SPLIT functions are only available on PROJECTOR OUT port.

CONNECTIONS

Rear Panel



Side Panel



#1 AUDIO OUT

#2 VIDEO OUT

#3 S-VIDEO OUT

#4 PC AUDIO IN

#5 PROJECTOR Connector

#6 COMPUTER OUT

#7 COMPUTER IN

#8 POWER OUT/IN

#9 MIC IN

#10 USB Connector

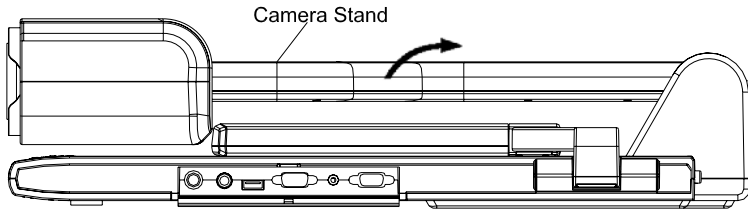
#11 RGB IN

#12 RGB AUDIO IN

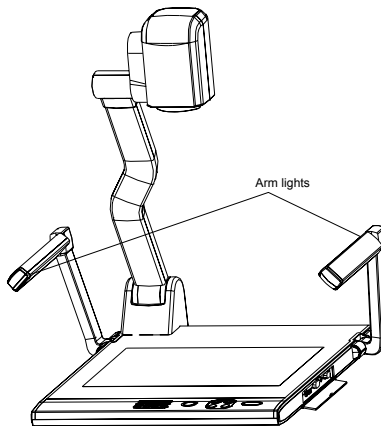
#13 COMPUTER RS-232 Connector

BASIC PREPARATIONS

1. Use one hand holds the base of the visualizer, use the other hand carefully lift up the camera stand of the unit.



2. Open the arm lights and rotate the camera head until they are in proper positions.



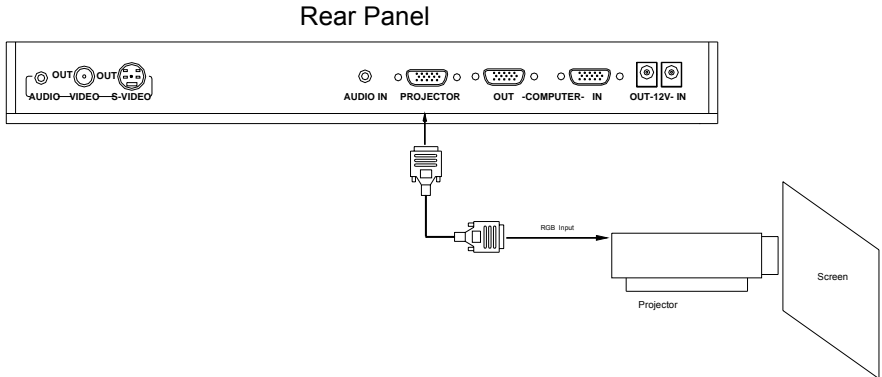
3. Making connections:

Before making any connection, turn off all the power, including power of the visualizer and the equipment to be connected.

Step 1: Connect power source.

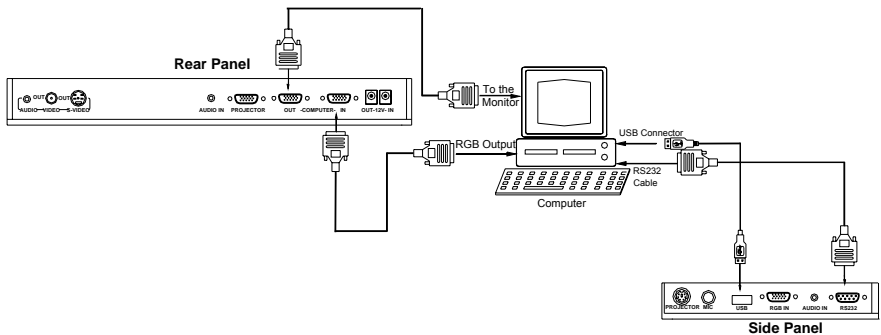
First connect the power cord to the **12V IN** connector.

Step 2: Connect to the projector.



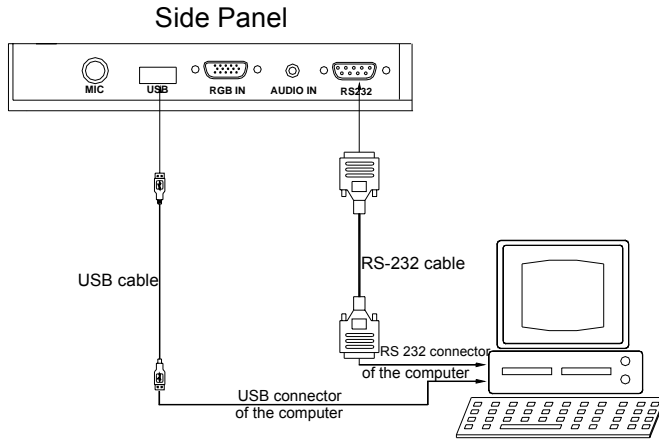
Connect visualizer's PROJECTOR port to the RGB IN port of the projector port with the RGB cable provided together the visualizer.

Step 3: Connect to a desktop computer.



Note: You can connect a laptop computer to the RGB IN port of side panel with a RGB cable.

Step 4: Connections for external control from the computer.



Use the computer RS232 cable (9-pin to 9-pin) to make the connections shown below to control the visualizer from an external computer.

USB connection enables capturing still images / video streams from the visualizer to the computer. Special software is required for this operation.

4. Turn on the power by pressing the “POWER” button.

OUTPUT MODE AND VERTICAL FREQUENCY (60Hz)

The RGB output can output a signal in the SVGA /XGA format. In order to achieve the best picture quality you must set the outputs of the visualizer to match the native resolution of your display unit.

PAL/NTSC VIDEO OUTPUTS

The S-Video and composite video outputs are set to PAL (NTSC) during manufacturing.

INSTALLING VISUALIZER SOFTWARE

This function is to snap and display images with the USB interface, which includes displaying static and dynamic pictures, snapping dynamic images and playback the dynamic images with the Windows

Media Player or its own player.

- A. Insert the CD-ROM that comes with your visualizer into the CD-ROM drive.
- B. Click the **Code-Writing** folder to install Code-Writing Program.
- C. Click the **DirectX9.0** folder to install Microsoft DirectX 9.0.
- D. Click the **Capture Program** folder to install the program that captures images in the AVI or JPG format.
- E. Shut down your computer when prompted so the changes will take effect.
- F. Use the USB cable to connect your computer to the visualizer before your computer is restarted.
- G. Turn on the visualizer.

Remarks: DirectX9.0 is not necessary to install, it is mainly for computer print screen function.

Please pay attention to the following:

- 1. Computer hardware requirement: CPU: Pentium 4, RAM: 256M or above, USB 2.0 port, Hard disk 40G or more
- 2. Operating system: Windows 2000 or above. If the operating system is Windows 2000, should install SP4. If the operating system is Windows XP, should install SP1.
- 3. Must use the high-speed USB cable provided together with the visualizer.
- 4. When connect the visualizer to a desktop computer with the high-speed USB cable provided together with visualizer, we recommend using the USB port on the rear of the mainframe as the USB port on the front of the computer might have interference.
- 5. You need to install the USB driver again when you change a computer's USB port. If this port has installed USB2.0 driver, then no need to install USB driver again.
- 6. When you open capture program, but can not capture the image, please set the signal input source: click "Option"→"Video Crossbar", and then set INPUT as Video Composite In.

USB CAPTURE FOR MAC COMPUTER

Copy the folder “Mac Driver” into Mac hard disk, open the folder and double-click Empia 1.0.0b2.zip, the “setup” file appears. Follow dialog-box messages, click “next” and finish installation.

Note:

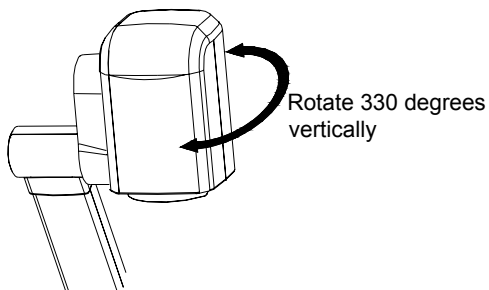
1. Please connect Mac computer and visualizer when installing
2. Please use USB2.0 from visualizer accessories.

WORKING ON THE STAGE

1. Place your material on the working surface.
2. Select the enlargement required with the “ \oplus T” and “W \ominus ” keys.
3. Adjust the focus with the “Near” and “Far” keys or “AUTO” key.

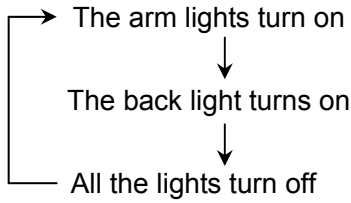
WORKING OUTSIDE THE STAGE

For showing 3-dimensional objects with the visualizer, just place them on the working surface and adjust the “ \oplus T” or “W \ominus ” and “AUTO” keys. If the object is too big for the stage or you want to show it from the side, just place it behind or in front of the unit and tilt the camera by hand (please take off the close-up lens first).



LIGHT

The arm lights are on when the power is on. Each time you press the “LAMP” buttons, the lighting changes as below.



ADJUSTING IMAGE SIZE

In order to reduce or enlarge the image size displayed on the screen, press the “⊕T” or “W⊖” button.



WIDE



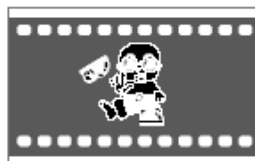
TELE

WORKING WITH NEGATIVES

The visualizer is automatically set to display normal materials on the screen when the power is on. To display negatives, turn on the backlight by pressing the “LAMP” key, and then press the “Neg” button to display the film negatives. Press the “Neg” button again to display normal materials in the color mode.



Positive



Negative

FOCUSING

When the Visualizer is turned on the focus automatically adjusts to the

stage, it is not necessary to readjust the focus if you are only working with flat materials (text, photos, etc.). Only 3D objects require a focus adjustment.

Press the “AUTO” button to auto focus.

Press the “FAR” or “NEAR” button once to focus manually.

FREEZING IMAGE

Press the “Frz” button to freeze the image. When the output signal is RGB, in order to show a still image on the screen, press the “Frz” button. The frozen image can’t be adjusted (Zoom in/out, color adjustment, etc.).

Note: This function is not available on S-Video and Video output.

BRIGHTNESS ADJUSTMENT

If the image effect is not satisfactory, you can adjust the brightness to get a better image effect. Use the “BRIGHT +” or “BRIGHT -” button to adjust the brightness. To increase the brightness, press the “BRIGHT +” button. To decrease it, press the “BRIGHT -” button. To go back to the initial brightness press the “AUTO” button.

WHITE BALANCE ADJUSTMENT

Each time the lighting condition changes, the user should adjust the white balance of the CCD.

Press the “AUTO” button to adjust the white balance automatically.

AUTO ADJUSTMENT

One of the QD600’s special functions is auto adjustment. Press the “AUTO” button to auto adjust the white balance and the focus. The whole process takes about 10 seconds.

TEXT/IMAGE MODE

Press the “TEXT” button to switch between image/text modes. To display a text file, switch to the text mode to get a clearer text effect.

(On the remote control)

COLOR AND B&W MODE SWITCH

Press “B&W” once to enter the Black & White mode; Press again to return to the Color mode.

SWITCHABLE INPUTS

Use the “CCD” button to output CCD signal, use the “PC1/PC2” button to output computer 1 or computer 2 signal.

Each time the “PC1/PC2” button is pressed, it provides seamless transitions among different sources such as computer 1 and computer 2.

Notes: RGB OUT always outputs RGB IN signals.

VISUALIZER ON/STANDBY

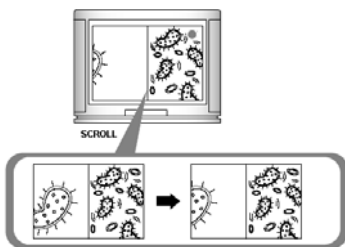
Press the “POWER” button to turn on the visualizer’s power. To turn the visualizer standby after use, press the “POWER” button more than 2 seconds.

IMAGE REVERSION

Press the “Mir” button once to V-reverse the image and the vertically mirrored image will be displayed. Press the “Mir” button again to exit. (On the remote control, please press the “MIRROR” button)

IMAGE SPLIT

Press “SPLIT”, the image will be split into two images. One is the current captured image the other is a frozen image of the last image, Press the “SPLIT” button again to exit.



Note: This function is not available on S-Video and Video output.

DYNAMIC/STATIC MODE SWITCH

To display dynamic images, Press the “D./S.” button to switch to the Dynamic mode, the image will be clear and has no choppy strobe effect. To display still images, press the “D. / S.” button switch to the Static mode.

Note: This function is not available on S-Video and Video output.

TITLE FUNCTION

Press the “Title” button once, the image split into two parts, the upper 1/8 part of the image will freeze and stay on top 1/8 of the screen. Press “Title” button again to exit the Title mode.

Note: This function is not available on S-Video and Video output.

INFRARED REMOTE CONTROL

The QD600's remote control can control the camera from different angles. Please note that an infrared remote control can only be used up to a certain distance to the unit. Objects situated between the visualizer and the infrared remote control and a weak battery may interfere with the reception.

On the left side of the visualizer stage, there is a built-in remote control storage compartment where you can store the remote control when you not use it.

VOLUME ADJUSTMENT

Press the “↑” button to increase the volume; Press the “↓” button to decrease the volume.

USB PORT

The USB port can be used to transfer still images from the visualizer to a computer. No additional computer hardware is required. In this way, the

visualizer can be used as a 3-D scanner for your computer.

Connect the Visualizer to your computer with the supplied USB cable.

The Visualizer Software is available on the supplied CD-ROM.

VIDEO DISPLAY AND CAPTURE

A. Static Images Snap

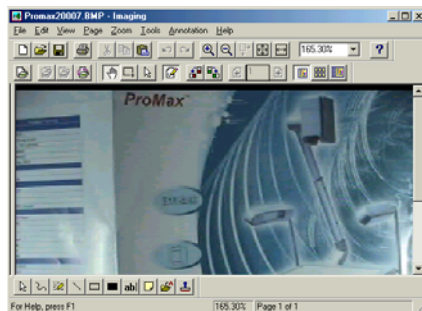
Select [Start] -> [All Programs] -> [VideoCap] -> "VideoCap" to open the VideoCap.exe. Click [File] -> [Set Capture File] to locate the image file into your desired folder. Then click [Set Frame File Name] to input the name of the file. Click [Capture] -> [Capture Frame] to save the static image.

B. Snap Video Stream

Click [File] -> [Set Capture File] to select the location of the file to be saved. Then input the name of the file. Click [Capture] -> [Start Capture] to start capture, and click [Capture] -> [Stop Capture] to stop. If you want to set the time limit for the capture, select [Capture] -> [set time limit] to set the time limit. (If you have set the time limit, it will stop automatically when the time is up.)

C. Display and Edit the Static Image

You can use the "Imaging" or "Paint" tool to display and edit the static image. To run a tool, click [Start] -> [All Program] -> [Accessories] -> "Imaging" or "Paint" to open a picture. A sample is shown as follows:



D. Play Video Stream

Click [Start] -> [All Programs] -> [Accessories] -> [Entertainment] ->

“Windows Media Player” or “ActiveMovie control”. You can also click [File] -> [Display Captured Video Stream] to play video stream in the VideoCap program.

E. Set the Frame Rate

Click [Capture] -> [Set Frame Rate], and click open “Choose Frame Rate” to set the frame rate.

F. Set Time Limit

Click [Capture] -> [Set Time Limit] to set the time limit while capturing video.

G. Control the CCD

Click [Option] -> [Video Capture Filter] -> [Video Proc Amp], open the dialog to adjust “Brightness”, “Contrast”, etc. Use “Default” to set each parameter to the default.

H. Note:

Don't connect / disconnect the USB cable when the application is running, it will cause the program to be interrupted.

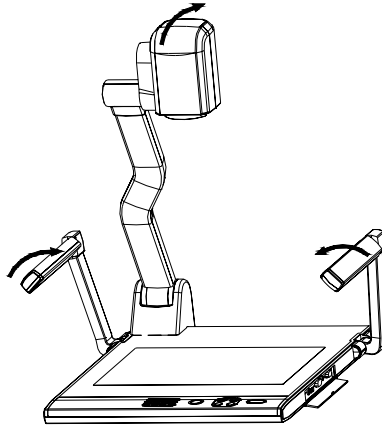
CONTROLLING THE VISUALIZER FROM A COMPUTER

You can control the Visualizer from a computer connected with a RS232 connector.

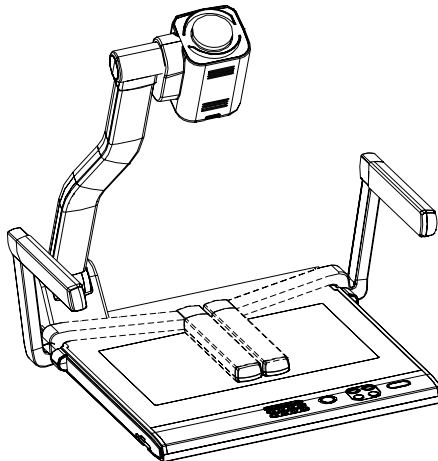
- A. Connect the computer and the visualizer with the computer RS-232 cable (9-pin to 9-pin).
- B. Select [Start] -> [Program] -> [VideoCAP] -> “VideoCAP” to open the VideoCap.exe.
- C. Click “Visualizer Control” under “Capture”.
- D. Select the COM port COM1 or COM2, and you can control the visualizer by clicking the buttons on the menu.

FOLDING THE UNIT

1. Fold the right arm light down first onto the base, then the left arm down. Rotate the camera head clockwise until the camera head is parallel to the camera stand.



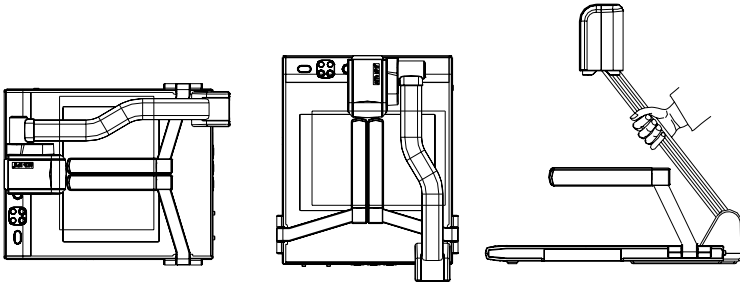
2. Carefully Fold the camera stand down to the front panel.



Cautions:

- a. Don't lay the unit down flat.
- b. Don't try to stand it on its rear or sides.

c. Don't try to pick up this unit by pulling the camera stand.



NOT THIS WAY

SPECIFICATIONS

Color system	NTSC or PAL system
Pickup device	1/4" professional CCD
Resolution	XGA (1024 x 768), SVGA(800 x 600)
Total Pixels	470,000
RGB Output Pixels	780,000
Lens	16 x optical zoom, 8 x digital zoom F=1.6~3.7mm / f=3.9~85.8 mm
Focus/Iris	Auto/manual selectable
White balance	Auto
Image split	Yes
Negative/positive conversion	Yes
Black/white and color selection	Yes
Image Freeze	Yes
Mirror	Yes
Lights	Arm light: 1.5 W LED lamps x 2 Back light: 4 W LED lamps

Input connectors	MIC: Mini jack 1
	PC Audio: Mini jack 2
	RGB: DB15FLC 2
Output connectors	RGB DB15FLC 2
	C-Video: RCA jack 1
	S-Video: 4 pin mini Din 1
	Audio: Mini jack 1
Operating system	Windows 2000/XP
USB connector	30 frames/sec
RS-232 connector	9-pin, D-Sub, male/6-pin PS/2
USB port	USB 2.0
Power requirements	12V/4A external AC adapter
Dimension (W x D x H)	Folded: 20.0" x 16.1" x 4.7"
	Setup: 20.0" x 20.9" x 22.4"
	Packing: 25.6" x 21.3" x 9.1"
Weight	N.W: 5.5Kg (12.1lbs) G.W: 9.5Kg (20.9 lbs)
Accessory	AC power cord RGB cable Audio/Video cable S-Video cable Computer RS232 cable (9-pin to 9-pin) USB cable Audio convert cable AC adapter User's manual Quick Start-up guide Software CD Infrared remote control Warranty card

* Design and specifications are subject to change without notice.

TECHNICAL SUPPORT

How to Reach QOMO:

By Phone

Call us at 1-866-990QOMO. Our expert personnel provide technical assistance from 9:00AM through 5:00PM Eastern Standard Time, Monday through Friday. Please gather the following information before calling:

- Product model name(s) and numbers
- Product serial number(s)
- Detailed and specific questions

Online

Technical support is also available online at QOMO's web site at www.qomo.com, you can enter your questions and concerns through our online form. Or you can email us at info@qomo.com. Copyrights © 2004 QOMO Hitelevision, LLC. All Rights Reserved.