Chemi 410 and BioChemi 500 Camera

Installation and User Instructions

⑩UVP

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81-0269-01 Rev. E

Introduction

The high sensitivity, cooled CCD Chemi 410 and BioChemi 500 Cameras are designed for use with UVP's BioSpectrum® and EC3 Imaging Systems. The instruction manual covers assembly of the camera on the darkroom, installation of software and use of the camera.

Refer to the system (manual for additional system information and the VisionWorksLS Software Manual or Help Files for software information.

Components

Camera Kits

The cameras use an Interline Transfer CCD with the following specifications:

Specifications	BioChemi 500 Camera	Chemi 410 Camera
Type	Interline Transfer CCD, Monochrome	Interline Transfer CCD, Monochrome
Resolution	2048 x 2048	1600 x 1200
Megapixels	4.2	2.0
Bit Depth	16-bit	16-bit
Quantum Efficiency	55% at peak 50% at 425nm	56% at peak 50% at 425nm
Cooling	-28˚ C Absolute	-28˚ C Absolute
Binning	Yes	Yes
PC Interface	USB 2.0	USB 2.0

The camera/lens kit components and camera bracket are assembled at the UVP factory. Refer to the packing list.
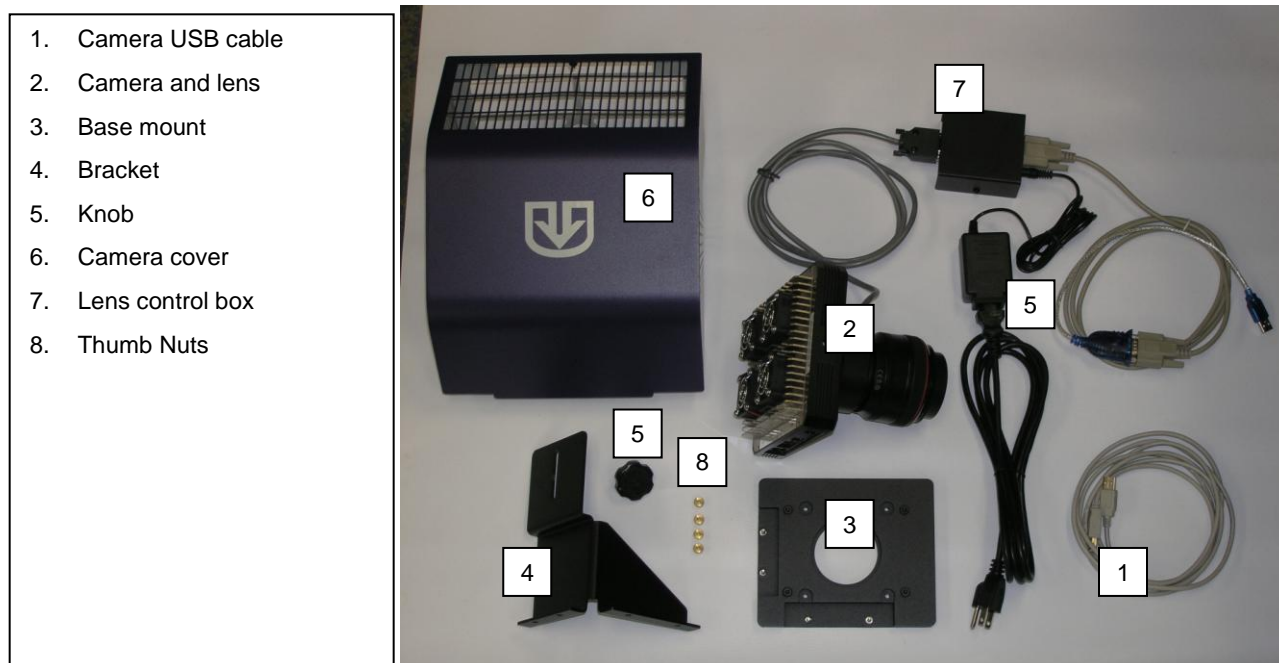
Installation

The camera is controlled by VisionWorksLS software. Refer to your darkroom manual for additional system information and the VisionWorksLS Software Manual (pdf file on the VisionWorksLS CD) or Help Files for software information.

BioChemi 500 and Chemi 410 Camera Kit with Motorized Fixed Lens

Installing on the BioSpectrum Imaging System

The photograph shows parts required for assembly of the camera kit with the automated/motorized fixed lens onto the BioSpectrum Imaging System.

NOTE: Some components are preassembled at the UVP factory.

1. Camera USB cable
2. Camera and lens
3. Base mount
4. Bracket
5. Knob
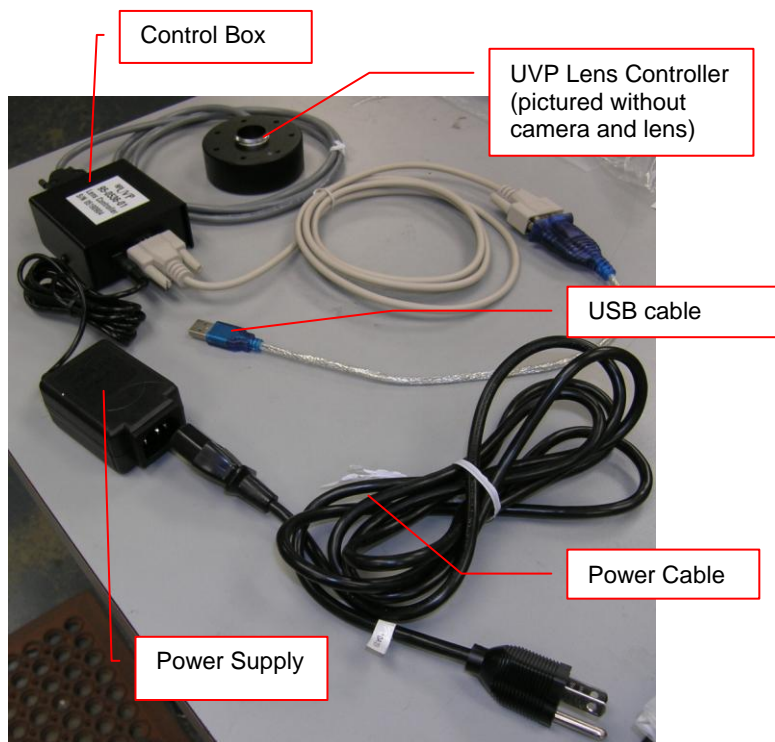6. Camera cover
7. Lens control box
8. Thumb Nuts

- Set up the darkroom and unplug all components from the power outlet. Refer to the **BioSpectrum Imaging System Manual** for more information.

- The base mount (3) is preassembled and attached to the BioSpectrum darkroom at the UVP factory. If not, secure the base mount to the darkroom with the long screws provided.

- Attach the camera bracket (4) to the base with the thumb nuts (8).

- The camera and lens (2) should be preassembled at the factory. Place the camera/lens assembly over the base mount and secure the camera to the bracket (4) with the knob (5).

Note: When positioning the BioChemi 500 camera, make sure that the cables are extending to the left of the camera when viewed from the front of the BioSpectrum darkroom. If this is not the case your image may display an incorrect orientation.

- Connect the camera power supply to the camera well at the top of the darkroom. If upgrading the system, plug the power supply into the wall outlet.

- Once the software is installed, connect the camera USB cable to the camera and then into an available port on the computer.

- Install the VisionWorksLS software to run the camera if not already installed. Refer to the PDF VisionWorksLS software manual on the Support CD or use the Help Files embedded in the software for more information.

- Connect the **motorized lens** (showing the motorized fixed lens in the photograph):

  - Connect the Power Cable to the Power Supply

  - Connect the Power Cable to an electrical outlet

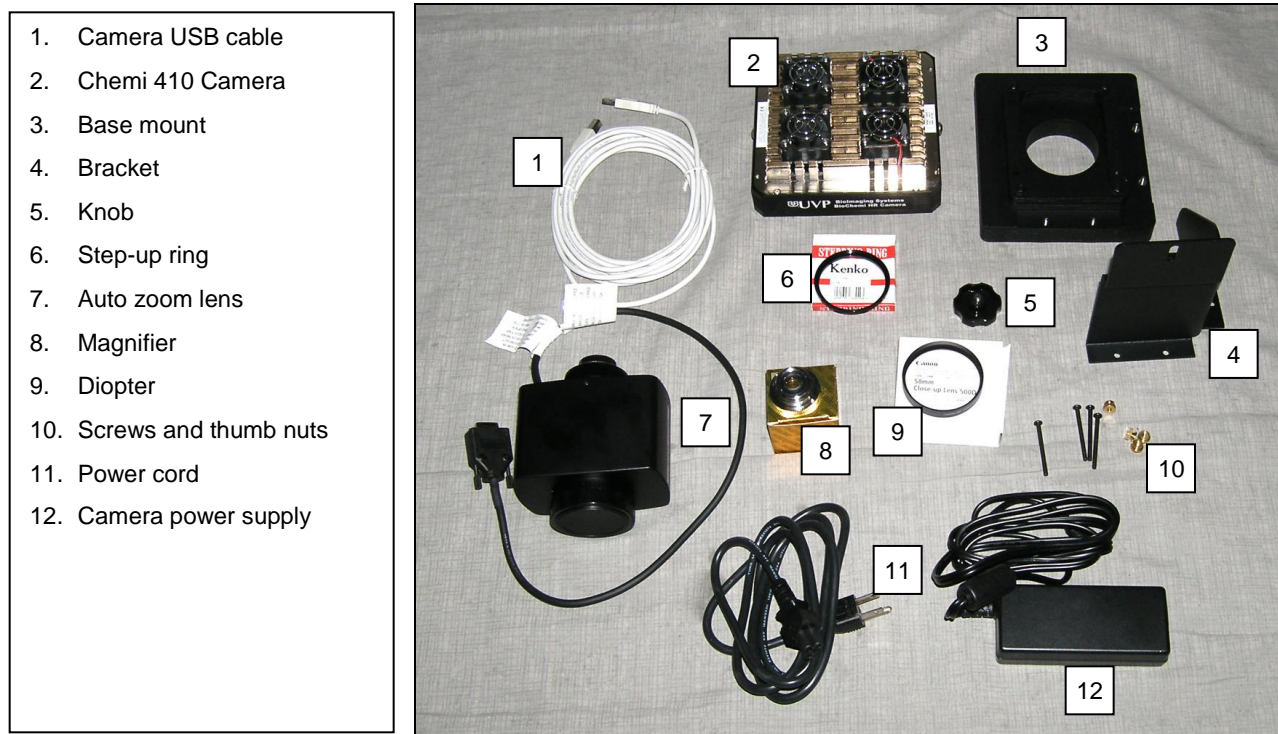 - Connect the USB cable to an available port on the computer.

Control Box

UVP Lens Controller (pictured without camera and lens)

USB cable

Power Cable

Power Supply

Chemi 410 Camera Kit with Motorized Zoom Lens

Installing on the BioSpectrum Imaging System

The photograph shows parts required for assembly of the camera kit with the automated/motorized zoom lens onto the BioSpectrum Imaging System.

NOTE: Some components are preassembled at the UVP factory.

1. Camera USB cable

2. Chemi 410 Camera

3. Base mount

4. Bracket

5. Knob

6. Step-up ring

7. Auto zoom lens

8. Magnifier

9. Diopter

10. Screws and thumb nuts
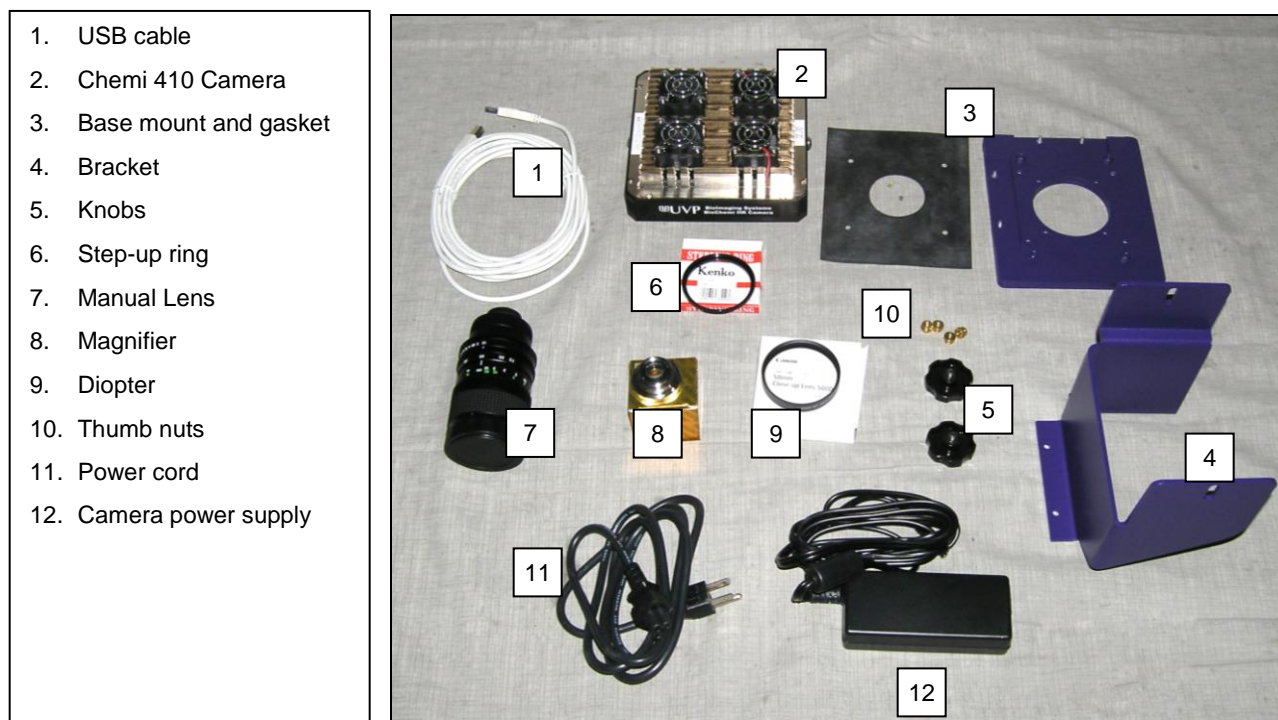
11. Power cord

12. Camera power supply

- Set up the darkroom and unplug all components from the power outlet. Refer to the **BioSpectrum Imaging System Manual** for more information.

- The base mount (3) is preassembled on top of the BioSpectrum at the UVP factory. If not, secure the base mount to the darkroom with the long screws (10).

- Attach the camera bracket (4) to the base with the thumb nuts (10).

- The camera (2) should be preassembled with the motorized zoom lens (7), step-up ring (6) and the diopter (9) and magnifier (8). Place the camera/lens assembly over the base mount and secure the camera to the bracket (4) with the knob (5).

- Connect the camera power supply from the BioSpectrum's camera well to the camera. Locate the cable extending from the top of BioSpectrum darkroom. If upgrading the system, plug the power supply into the wall outlet.

- Install the VisionWorksLS software to run the camera if not already installed. Refer to the PDF VisionWorksLS software manual on the Support CD or use the Help Files embedded in the software for more information.

- Once the software is installed, connect the camera's USB cable to the camera and then into an available port on the computer.

- Connect the cable from the motorized zoom lens to the back of the BioSpectrum darkroom.

Refer to the BioSpectrum Imaging System manual for additional system assembly and user instructions.

Chemi 410 Camera Kit with Manual Lens

Installing on the EC3 Imaging System

The photograph shows parts required for assembly of the camera kit with the manual zoom lens onto the EC3 Imaging System.

1. USB cable
2. Chemi 410 Camera
3. Base mount and gasket
4. Bracket
5. Knobs
6. Step-up ring
7. Manual Lens
8. Magnifier
9. Diopter
10. Thumb nuts
11. Power cord
12. Camera power supply

- Set up the Darkroom and unplug all components from the power outlet. Refer to the **EC3 Imaging System Manual** for more information.

- Screw the base mount and gasket (3) to the darkroom with the thumb nuts (10). **Note:** This step may be completed by the manufacturer. (If the base mount is already attached proceed to step 3.) Place the gasket between the base mount and darkroom. Ensure that the gasket prevents light leaks into the dark room around the lens.

- Attach the camera bracket (4) to the base mount with the brass thumb nuts (10).

- The camera (2) is preassembled with the manual lens (7), step-up ring (6) diopter (9) and magnifier (8). Place the camera/lens assembly over the base mount and secure the camera to the bracket (4) with the knob (5).

- Attach the magnifier (8) to the back of the lens and then attach the camera (2) to the magnifier.

- Place the camera/lens assembly in the hole in the base mount and then use the knobs (5) to secure the camera in place attaching it through the hole at the top of the bracket (4).

- Connect the camera power supply from the EC3's camera well to the camera. Locate the cable extending from the top of EC3 darkroom. If upgrading the system, plug the power supply into the wall outlet.

- Install the VisionWorksLS software to run the camera if not already installed. Refer to the PDF VisionWorksLS software manual on the Support CD or use the Help Files embedded in the software for more information.

- Once the software is installed, connect the camera's USB cable to the camera and then into an available port on the computer.

- Connect the power supply and cable (11) to the camera and power source.

Install the Camera drivers

- Open VisionWorks software.

- Connect the camera to a USB port on the computer with the USB cable provided and power connect the power supply to the camera and an appropriate power outlet.

- When the camera is first connected to the computer the "Found New Hardware" wizard will open. Select "Install from a list or specified location (Advanced)" and click the "Next" button.

- Select "Don't Search. I will choose the driver to install." The click the "Next" button.

- Click the "Have Disk…" button and browse to the "C:\Windows\system32\drivers" folder. Select the "AltaUSB.inf" file and select "Open" and then "OK" to install the camera.

- Select "Finish".

Note: the installation may cause a warning message saying that the drivers are "not verified by Microsoft". Select "Continue Anyway" and the drivers will be installed correctly.

Accessories and Replacement Parts

To order accessories or replacement parts, contact UVP's offices listed under Technical Support.

Technical Support

UVP offers expert technical support on all of our products. If you have any questions about the product's use, operation or repair, please contact our offices at the locations below.

Note: A **Returned Goods Authorization (RGA) number** must be obtained from UVP's Customer Service prior to returning any product.

If you are in North America, South America, East Asia or Australia:	If you are in Europe, Africa, the Middle East or Western Asia:
Call (800) 452-6788 or (909) 946-3197, and ask for **Technical Support** during regular business days, between 7:00 am and 5:00 pm, PST.	**Call +44(0) 1223-42002**, and ask for **Customer Service** during regular business days between 8:30 am and 5:30 pm.
E-mail your message to: info@uvp.com or techsupport@uvp.com	**E-mail** your message to: uvp@uvp.co.uk
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