

OptiChemi 600 Camera

Installation and User Instructions



UVP, LLC
2066 W. 11th Street
Upland, CA 91786
Phone: (800) 452-6788
Fax: (909) 946-3597

Ultra-Violet Products Ltd
Unit 1, Trinity Hall Farm Estate,
Nuffield Road, Cambridge CB4 1TG UK
Phone: +44(0)1223-420022
Fax: +44(0)1223-420561

Web Site: www.uvp.com

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Introduction

The high sensitivity, cooled CCD OptiChemi HR Camera is designed for use with UVP's BioSpectrum® imaging system. This instruction manual covers assembly of the camera to the BioSpectrum darkroom, installation of software and use of the camera with the BioSpectrum.

Refer to the BioSpectrum Manual for additional system information and the VisionWorksLS Software PDF Manual on the Support CD or Help Files embedded in the software for more information.

Applications the OptiChemi 600 Camera is designed for:

- Luminescence detection
- Chemiluminescent samples including westerns, northern, southern and in vivo/in vitro samples
- Autoradiograph films
- Fluorescent and colorimetric gels, colony and microtitre plates, dot blots, membrane arrays

Components

Camera Kit

The camera kit includes a motorized lens or may include a motorized zoom lens. Refer to the packing slip or installation components list for a complete list of parts.

- OptiChemi 600 Camera
- Cables
- Power supply for the camera
- Motorized Lens
- Brackets/screws for each lens
- Back Focus Rings (Note: Back focus rings may not be required for your camera. If no rings are needed there will not be any rings shipped with your order.)
- Additional components as described under the **Installation** section

The OptiChemi 600 Camera specifications include:

Specifications	OptiChemi HR
Type	14.85mm x 10.26mm full frame CCD
Resolution	2184 x 1472
Pixel Size	6.8µm x 6.8µm
Full Well Capacity	55,000 electrons
Bit Depth	16-bit
Readout Noise	12 electrons (typical)
Quantum Efficiency	(94% @ peak) 400nm 60%; 500nm 67%; 600nm 86%
Cooling	-60° C from ambient
Binning	Yes
PC Interface	Ethernet (CAT-5)
Lens Mount	C-Mount
Lens	12.5 to 75mm Aperture: f 1.2

Installation

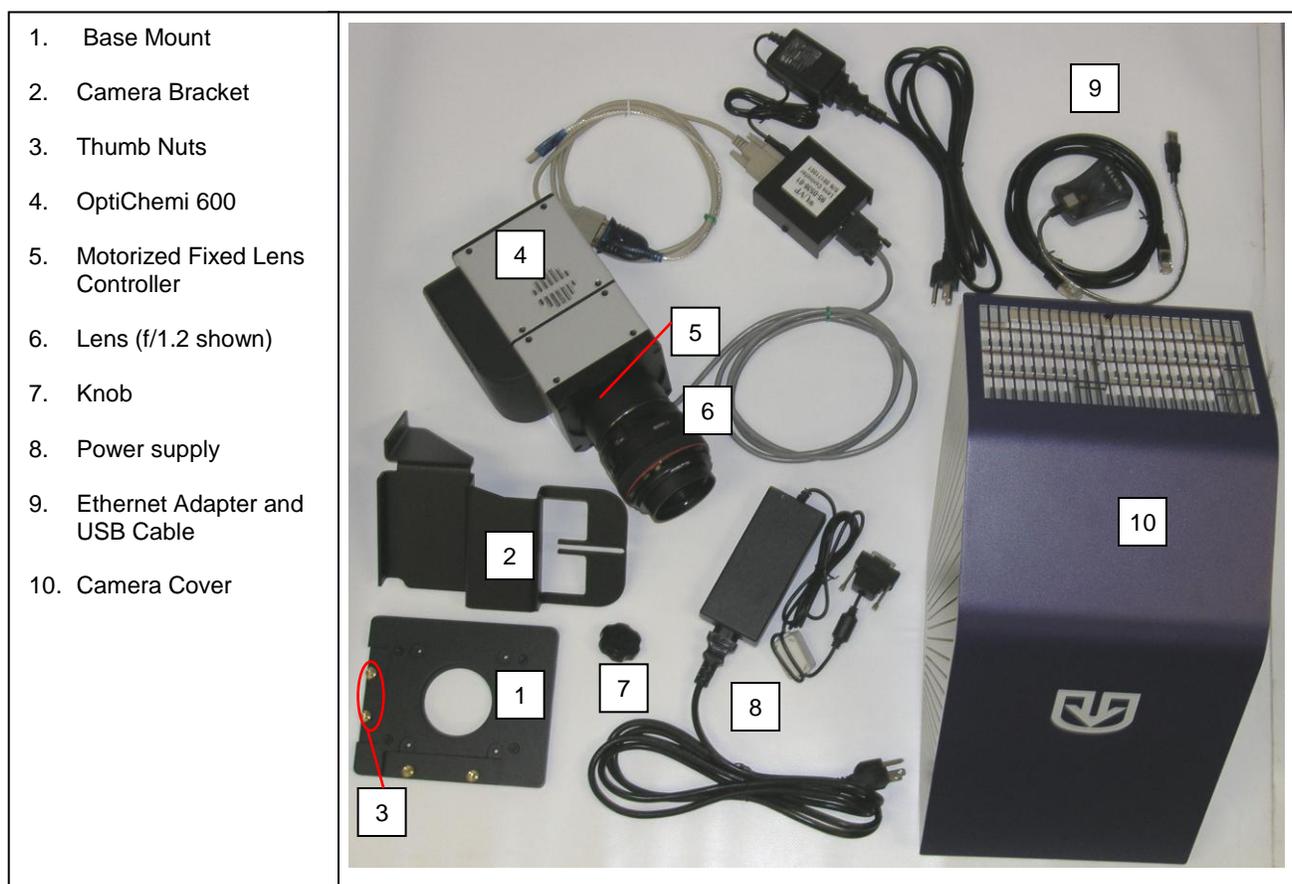
The camera kit assemblies attach the OptiChemi 600 to the BioSpectrum Imaging System. The camera is controlled by VisionWorksLS software. Refer to the BioSpectrum manual for additional system information and the VisionWorksLS Software Manual or Help Files for software information.

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.

OptiCam 600 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.



- 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 (1) is preassembled and attached to the BioSpectrum at the UVP factory. If not, secure the base mount to the darkroom with the long screws (not shown).
- Attach the camera bracket (2) to the base with the thumb nuts (3).
- The camera (4) should be attached to the motorized lens controller (5) and lens (6). Place the camera/lens assembly over the base mount at the top of the BioSpectrum and secure the camera to the bracket (2) with the knob (7).

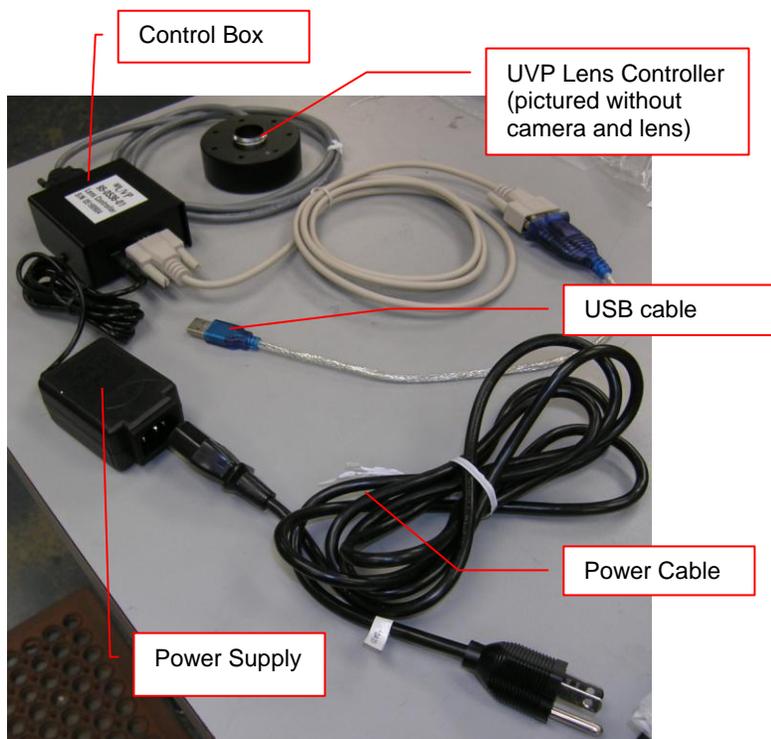
- Connect the 15-pin camera power supply cord (8) to the camera well at the top of the darkroom.

Note: Although the picture shows a rectangular power supply, a power cord, and a pinned power connector, just connect the pinned power connector coming from the darkroom to the camera. If upgrading the BioSpectrum from one camera type to the OptiChemi 600 camera, all power supply parts will be visible. In this case, the power supply cord must be plugged into a wall outlet.

- Insert Ethernet Cable (9) into the camera and then the other end into the Ethernet Adapter.
- Once the software is installed, connect the USB cable extending from the Ethernet Adapter into an available port on the computer.

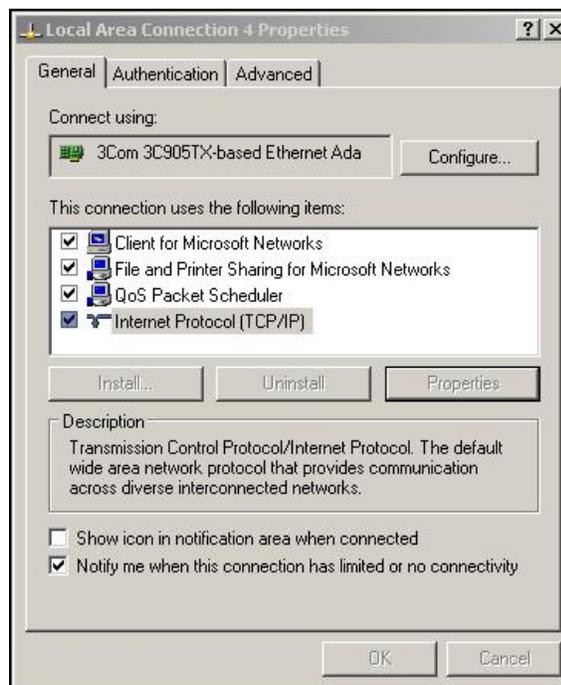
- Install the VisionWorksLS software to run the camera if not already installed. Refer to the PDF VisionWorksLS software manual on the Support CD or use the Help Files embedded in the software for more information.

- To 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.

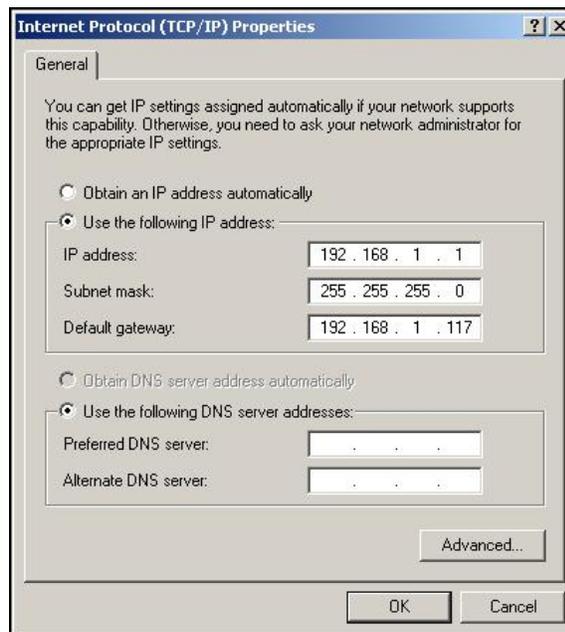


Configure the Settings

- Connect the camera to a dedicated Ethernet port on the computer via the Ethernet adapter cable.
- Plug in the camera power supply (extending from the darkroom) into the 15-pin connector on camera. If upgrading the system, plug the power supply into the wall outlet.
- Go to the Windows **Control Panel > Network Connections**
- Select the connection used for the camera, right click and select **Properties**



- Under the general tab select "Internet Protocol (TCP/IP)" and left click the "Properties" button. Enter the following information:
 - IP address: 192.168.1.1
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 192.168.1.117
 - Leave the DNS entries blank



**** **NOTE:** Write down the old settings before you change your TCP/IP properties if you will need to restore these settings at a later date ****

- Select "Ok" twice to return to the desktop. Some computers may require a restart before the new TCP/IP settings will take effect
- To access your local area network and/or the internet while running the OptiChemi 600 camera you may use the provided USB to Ethernet adaptor (UVP part number 89-0380-01).

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) 1223-420022 , and ask for Customer Service during regular business days between 9:00 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
Fax Technical Support at (909) 946-3597	Fax Customer Service at +44(0) 1223-420561
Write to: UVP, LLC. 2066 W. 11 th Street, Upland, CA 91786 USA	Write to: Ultra-Violet Products Ltd. Unit 1, Trinity Hall Farm Estate, Nuffield Road, Cambridge CB4 1TG UK