

OptiChemi 600 Camera

Installation and User Instructions



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Introduction

The highly sensitive, cooled CCD OptiChemi™ 600 Camera is designed for use with UVP's BioSpectrum® Imaging System and ChemiDoc-It® Imager. This instruction manual covers assembly of the camera to the BioSpectrum and ChemiDoc-It darkrooms, installation of software and use of the camera with the BioSpectrum and ChemiDoc-It.

Refer to the BioSpectrum and ChemiDoc-It manuals for additional system information and the VisionWorks®LS Software PDF manual on the Support CD or Help Files embedded in the software for more information.

The OptiChemi 600 Camera is designed for the following applications:

- Luminescence detection,
- Chemiluminescent samples including Westerns, Northern, Southern and in vivo/in vitro samples,
- Autoradiograph films, and
- Fluorescent and colorimetric gels, colony and microtitre plates, dot blots and membrane arrays.

Components

Camera Kit

The camera kit includes a motorized lens or which may or may not include zoom capabilities. Refer to the packing slip or installation components list for a complete inventory of included parts.

- OptiChemi 600 Camera
- Cables
- Camera power supply
- 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 600
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	50mm Aperture: f/1.2

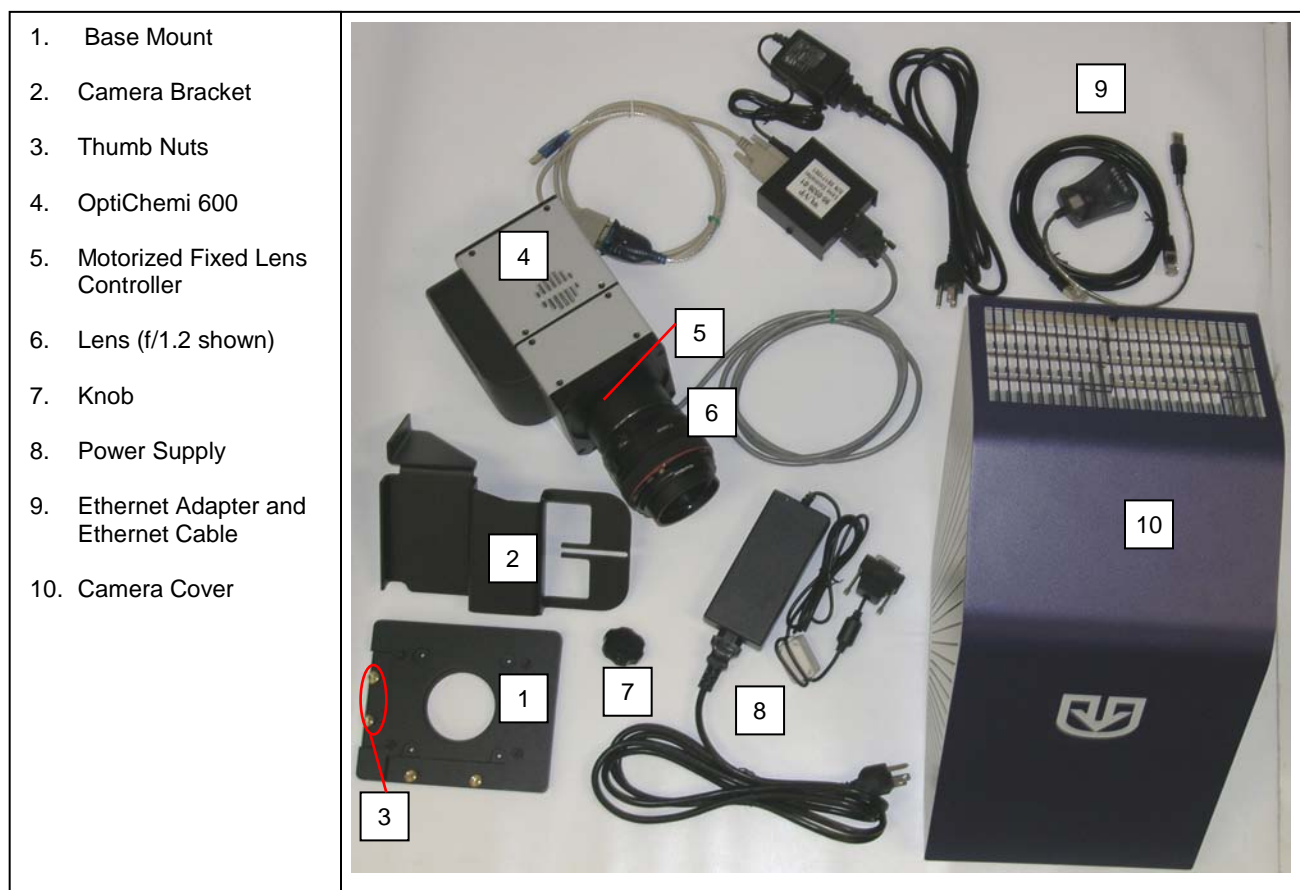
Installation

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

OptiChemi 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 and ChemiDoc-It Imager.

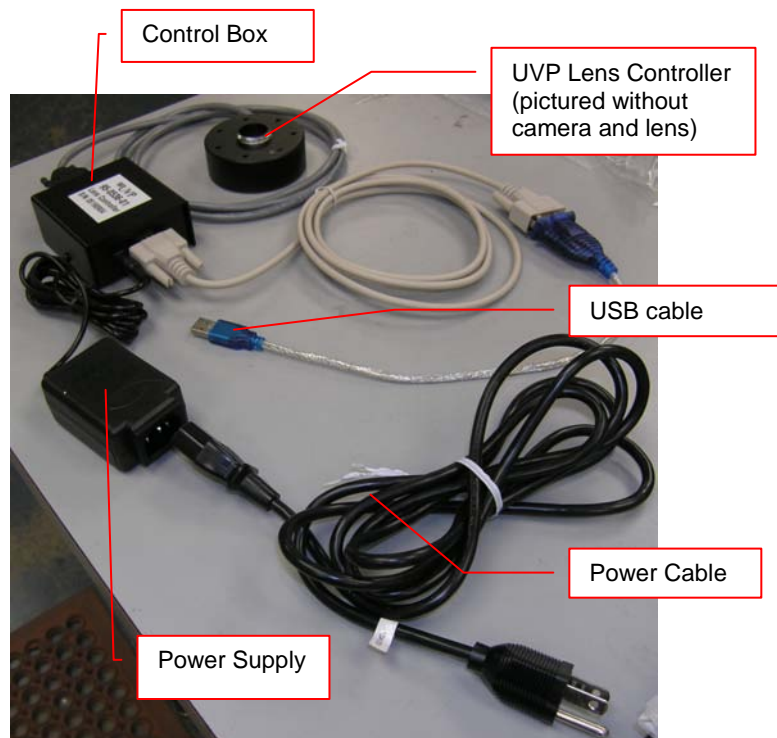


- Set up the darkroom and unplug all components from the power outlet. Refer to the **BioSpectrum Imaging System Manual** and **ChemiDoc-It Imager Manual** for more information.
- The Base Mount (1) is preassembled and attached to the BioSpectrum and ChemiDoc-It at the UVP factory. If not, secure the 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 OptiChemi 600 (4) should be attached to the Motorized Fixed Lens Controller (5) and Lens (6). Place the camera/lens assembly over the base mount at the top of the darkroom and secure the camera to the Camera 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, only connect the pinned power connector coming from the darkroom to the camera. If upgrading the BioSpectrum or

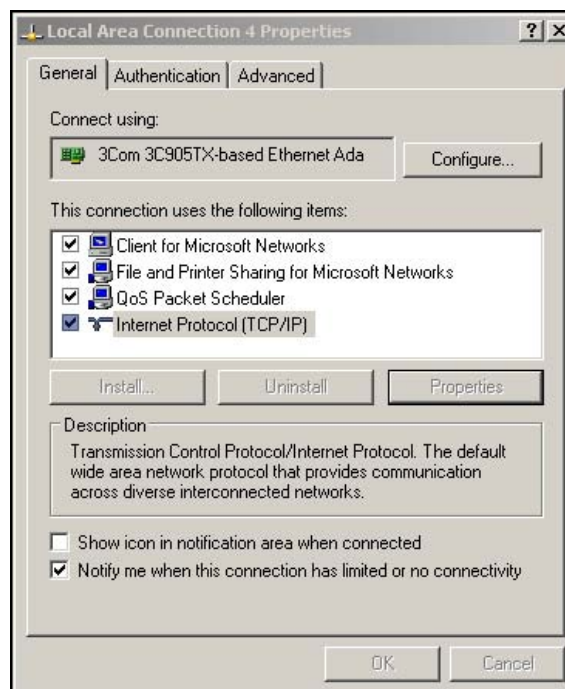
ChemiDoc-It from another camera type to the OptiChemi 600 camera, all power supply parts will be visible. In this case, the power supply cord must be plugged into a wall outlet.

- Insert Ethernet Cable (9) into the camera and 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.

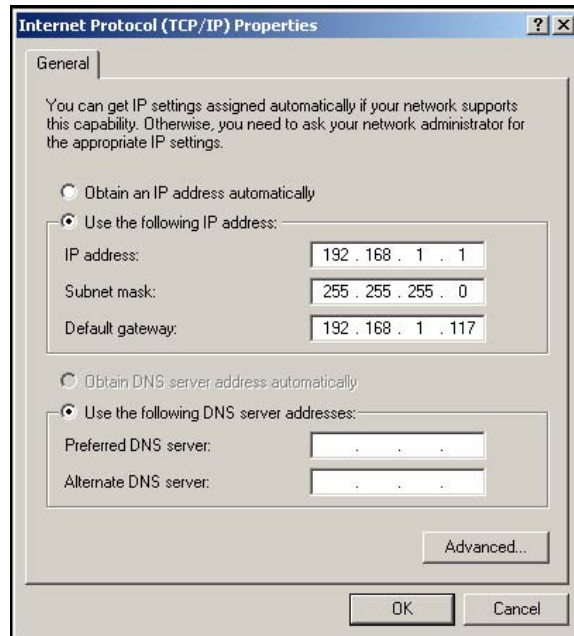


Configure the Settings

- 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.
- If the computer controlling the camera is also connected to the Internet or to a local network, the camera should be connected to the computer's built-in network port. The supplied Ethernet-to-USB adapter can then be used for the Internet/local-network connection (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 its products. If you have any questions about the product's use, operation or repair, please contact UVP's 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