

# OLYMPUS<sup>®</sup>

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## Hardware Manual

# cellSens [Ver.1.7]

## IMAGING SOFTWARE

This hardware manual is for the Olympus imaging software cellSens and microscope digital camera. To ensure safety, obtain optimum performance and familiarize yourself fully with the installation of this software, we recommend that you study this manual thoroughly before operating the software.

For research and education

This system has been designed for research and educational purposes.

AX8249

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# Setting up cameras

## Install cellSens in advance prior to setting up the camera.

To operate a camera using cellSens, a device driver for each camera must be installed onto PC. If you have already used a camera, it is not necessary to install a device driver.

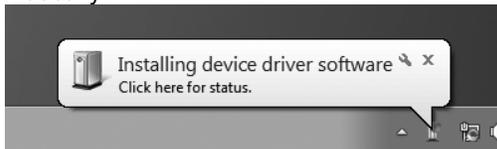
DP73, DP73WDR, DP72	P.1	DP25	P.5
DP71	P.2	DP21	P.8
DP70	P.3	DP20	P.9
DP26	P.4	Other cameras	P.10

## 1. DP73, DP73WDR, DP72

This section describes the installation procedures using Windows 7. If using Windows Vista or XP, the operating methods are more or less the same. Refer to the DP73, DP73WDR or DP72 manual for the installation of hardware.

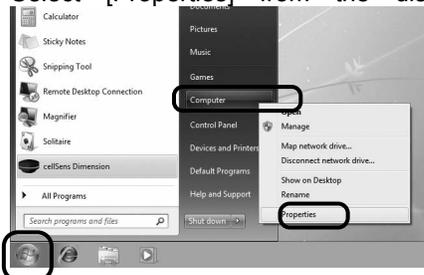
### Installation of DP73, DP73WDR, DP72 Driver

When you connect DP73, DP73WDR or DP72 to PC, following icons will be displayed in the lower right area of the PC screen and the device driver will be installed automatically.



In order to confirm that the device driver is installed properly, please follow the procedures below.

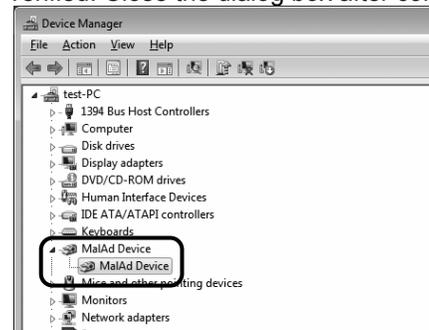
- 1) Open the [start] menu.
- 2) Right-click [Computer] in the start menu.
- 3) Select [Properties] from the displayed menu.



- 4) Click [Device Manager] located at the upper left side of the dialog box.



- 5) If a driver is installed, [MaAd Device] appears underneath the item of [MaAd Device]. Double-click on [MaAd Device] so that normal operation can be verified. Close the dialog box after confirmation.

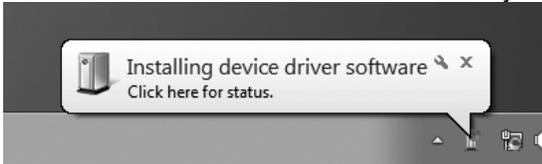


## 2. DP71

This section describes the installation procedures using Windows 7. If using Windows Vista or XP, the operating methods are more or less the same. Refer to the DP71 manual for the installation of hardware.

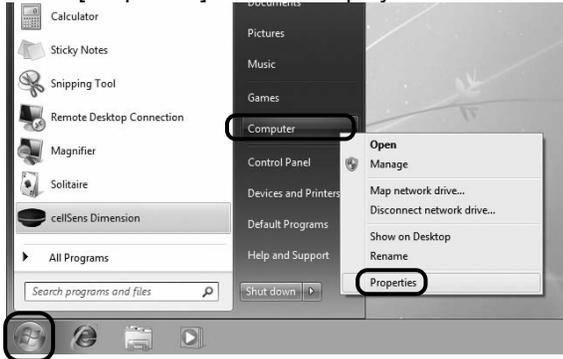
### Installation of DP71 Driver

When you connect the DP71 to PC, following icons will be displayed in the lower right area of the PC screen and the device driver will be installed automatically.



In order to confirm that the device driver is installed properly, please follow the procedures below.

- 1) Open the [start] menu.
- 2) Right-click [Computer] in the start menu.
- 3) Select [Properties] from the displayed menu.



- 4) Click [Device Manager] located at the upper left side of the dialog box.



- 5) If a driver is installed, [MalAd Device] appears underneath the item of [MalAd Device]. Double-click on [MalAd Device] so that normal operation can be verified. Close the dialog box after confirmation.

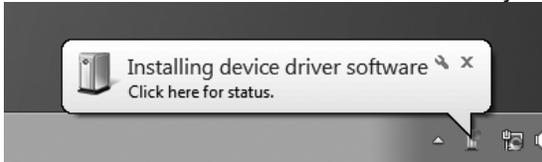


### 3. DP70

This section describes the installation procedures using Windows 7. If using Windows Vista, XP, the operating methods are more or less the same. Refer to the DP70 manual for the installation of hardware.

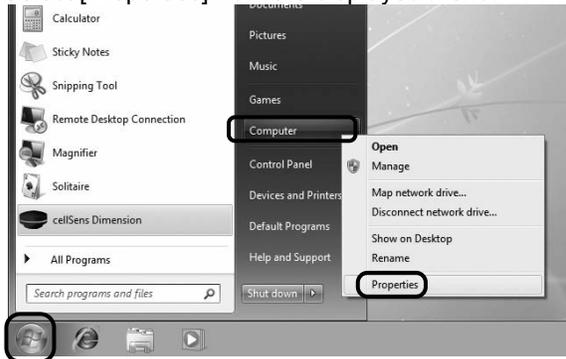
#### Installation of DP70 Driver

When you connect the DP70 to PC, following icons will be displayed in the lower right area of the PC screen and the device driver will be installed automatically.

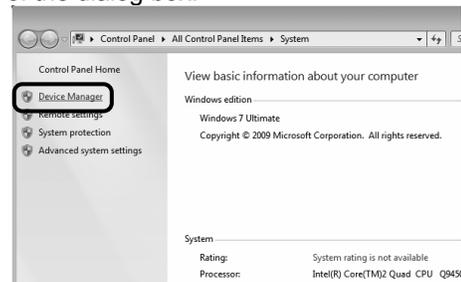


In order to confirm that the device driver is installed properly, please follow the procedures below.

- 1) Open the [start] menu.
- 2) Right-click [Computer] in the start menu.
- 3) Select [Properties] from the displayed menu.



- 4) Click [Device Manager] located at the upper left side of the dialog box.



- 5) If a driver is installed, [MaAd Device] appears underneath the item of [MaAd Device]. Double-click on [MaAd Device] so that normal operation can be verified. Close the dialog box after confirmation.



## 4. DP26

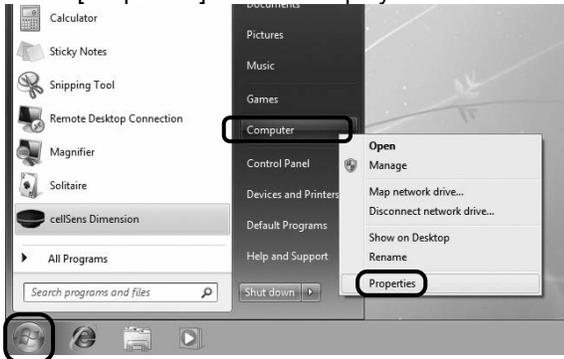
It is not necessary to setup DP26 as the device driver of the camera is installed at the same time as cellSens is installed. After cellSens is installed, please check whether or not the driver has been installed properly according to the following procedures.

**Caution** When cellSens is installed, and you use DP26, the 1394 driver is also replaced with the dedicated driver for the DP26. This makes it impossible to use other IEEE1394 devices. If you want to use an IEEE1394 device other than the DP26, see the installation manual (P. 3).

### Confirmation of normal installation of driver

In order to confirm that the device driver is installed properly, please follow the procedures below.

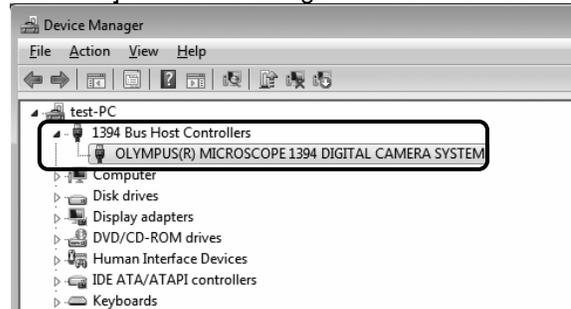
- 1) Open the [start] menu.
- 2) Right-click [Computer] in the start menu.
- 3) Select [Properties] from the displayed menu.



- 4) Click [Device Manager] located at the upper left side of the dialog box.



- 5) If a driver is installed, [ OLYMPUS ( R ) MICROSCOPE 1394 DIGITAL CAMERA SYSTEM ] appears underneath the item of [1394 Bus Host Controllers]. Close the dialog box after confirmation.



## 5. DP25

This chapter describes the procedures to setup DP25. IEEE1394a connector (6pin) is required to connect DP25 to PC. If you are using PC which is not equipped with IEEE1394a connector, you will need to mount an IEEE1394a PC Card (Laptop PC) or an IEEE1394a Card (Desktop PC).

**Caution** Please install the cellSens or TWAIN driver software (TWAIN Interface) before connecting the camera to the FireWire interface.

### Installation of DP25 device

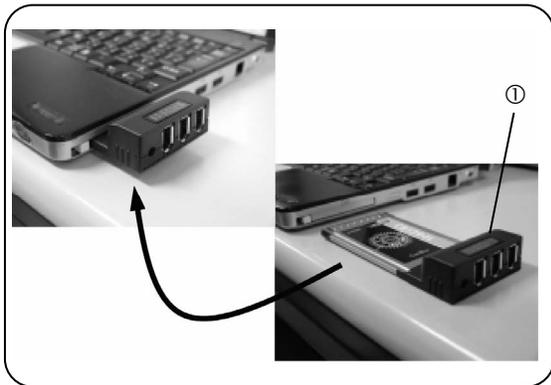


Fig. 1

#### ①-a Mounting of IEEE1394a PC Card (Only Laptop PC) (Fig.1)

Please read the following only if you are using a Laptop PC. If you are using a Desktop PC, please see [(①-b Mounting of IEEE1394a Card (Only Desktop PC))] described on the same page.

- 1) Restart your PC.
- 2) Log on with a user account who belongs to the manager (Administrator) group of the computer.
- 3) Insert the FireWire PC card ① into the PC card slot of the laptop PC.
- 4) Plug the AC adaptor into the FireWire PC card. DP25 needs the bus power.

#### ①-b Mounting of IEEE1394a Card (Only Desktop PC) (Fig.2)

Please read the following only if you are using a Desktop PC. If you are using a Laptop PC, please see [①-a Mounting of IEEE1394a PC Card (Only Laptop PC)] described on the same page.

The following is not needed if your PC has a 6pin FireWire port.

- 1) Turn off your PC, and disconnect the power supply.
- 2) Remove the cover from the PC.
- 3) Insert the FireWire card ② into the PCI slot.
- 4) Replace the cover of PC.
- 5) Restart your PC.
- 6) Log on with a user who belongs to the manager (Administrator) group of the computer.

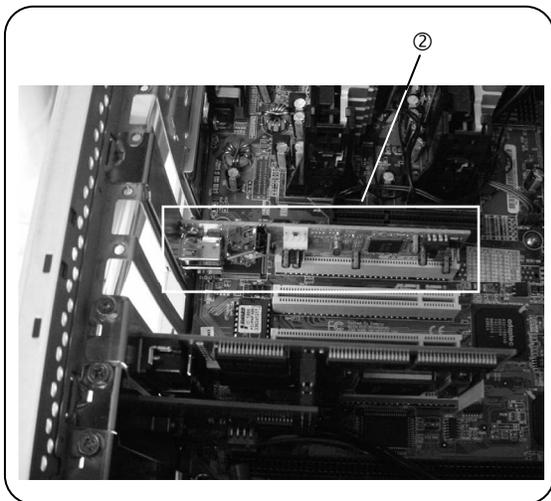


Fig. 2

**Caution** If a slim desktop PC with only a Low-Profile PCI slot is used, it is necessary to replace the existing bracket with the Low-Profile bracket.

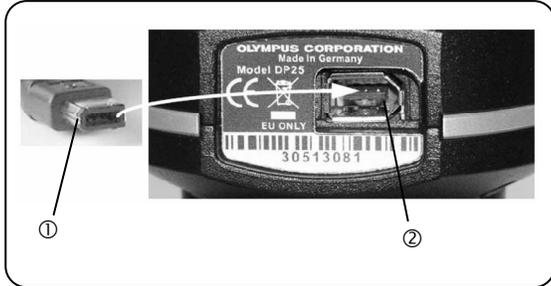


Fig. 3

#### ② Installation of camera (Fig.3)

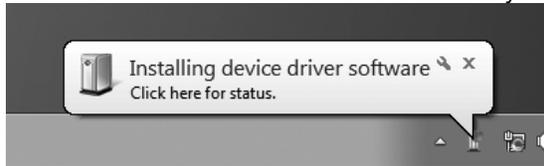
- 1) Remove the protection cap attached on the C mount from the DP25.
- 2) Screw the camera adapter securely to the DP25 camera. This should be done with the CCD chip side of the camera facing down to minimize the chance of dust landing on its surface.
- 3) Install the camera and the camera adapter onto the microscope's camera port. You may need to align the orientation of the camera with that of the microscope stage, and also match the focus of the camera image with that of the eyepiece image. This alignment can be made later when you are able to obtain an image on the screen.
- 4) Plug either end of the FireWire cable① into the camera connector②

**Caution** The FireWire cable plug is not symmetrical. You must make sure that the cable plug is facing the same way as the camera socket when you plug the cable into the camera jack. The camera chip may be ruined otherwise.

- 5) Plug the other end into one of the free connector sockets on your PC's FireWire PCI board. There are two or more sockets depending on the FireWire board. You can use any of them.

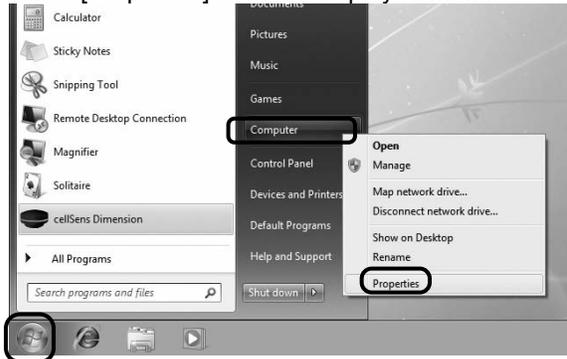
## Installation of DP25 Driver

When you connect the DP25 to PC, following icons will be displayed in the lower right area of the PC screen and the device driver will be installed automatically.



In order to confirm that the device driver is installed properly, please follow the procedures below.

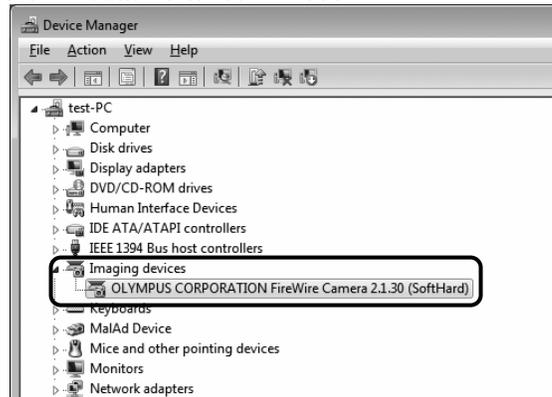
- 1) Open the [start] menu.
- 2) Right-click [Computer] in the start menu.
- 3) Select [Properties] from the displayed menu.



- 4) Click [Device Manager] located at the upper left side of the dialog box.



- 5) If the driver has been normally installed, the [Imaging Device] will be displayed underneath OLYMPUS CORPORATION FireWire Camera x.x.xx (SoftHard). It can be confirmed to operate normally by double-clicking OLYMPUS CORPORATION FireWire Camera x.x.xx (SoftHard). Please close the dialog box by clicking the "X" button after confirmation.



## 6. DP21

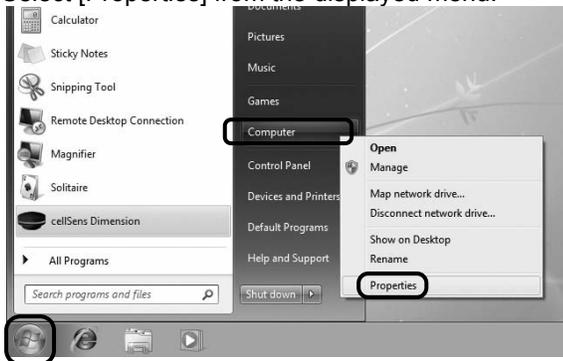
It is not necessary to setup DP21 as the device driver of the camera is installed at the same time as cellSens is installed. After cellSens is installed, please check whether or not the driver has been installed properly according to the following procedures.

**Caution** When cellSens is installed, and you use DP21, the 1394 driver is also replaced with the dedicated driver for the DP21. This makes it impossible to use other IEEE1394 devices. If you want to use an IEEE1394 device other than the DP21, see the installation manual (P. 3).

### Confirmation of normal installation of driver

In order to confirm that the device driver is installed properly, please follow the procedures below.

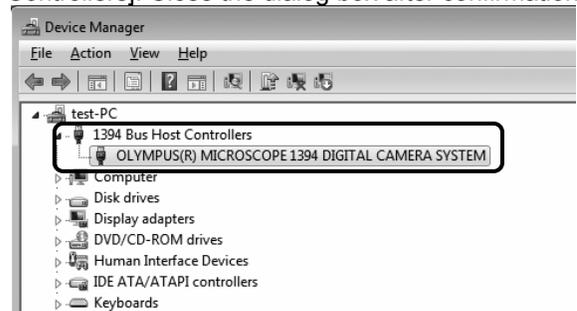
- 1) Open the [start] menu.
- 2) Right-click [Computer] in the start menu.
- 3) Select [Properties] from the displayed menu.



- 4) Click [Device Manager] located at the upper left side of the dialog box.



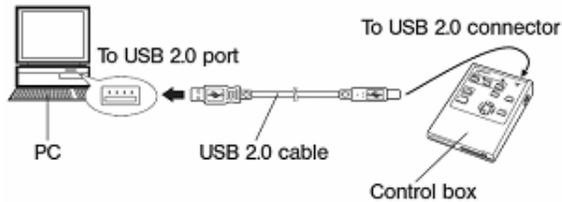
- 5) If a driver is installed, [ OLYMPUS ( R ) MICROSCOPE 1394 DIGITAL CAMERA SYSTEM ] appears underneath the item of [1394 Bus Host Controllers]. Close the dialog box after confirmation.



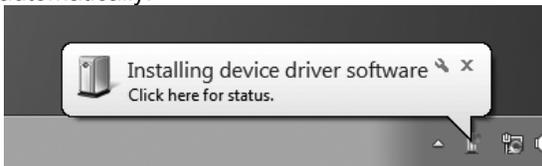
## 7. DP20

### Installation of DP20 Driver

- 1) Connect the control box to your PC using the provided USB 2.0 cable.

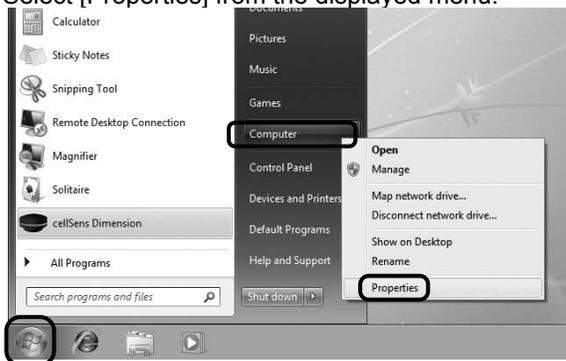


- 2) Please turn the main switch of the control box (ON).
- 3) When you connect the DP20 to PC, following icons will be displayed in the lower right area of the PC screen and the device driver will be installed automatically.



In order to confirm that the device driver is installed properly, please follow the procedures below.

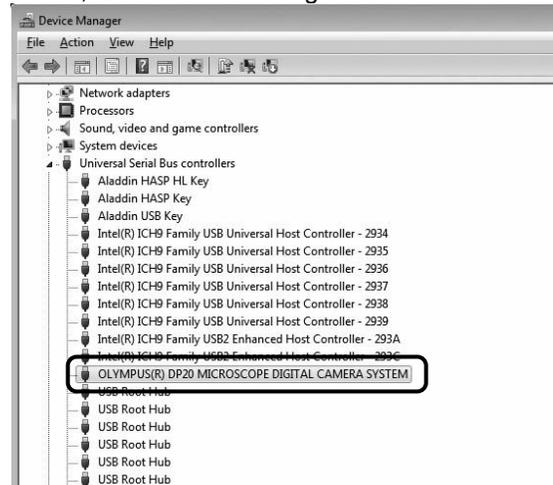
- 4) Open the [start] menu.
- 5) Right-click [Computer] in the start menu.
- 6) Select [Properties] from the displayed menu.



- 7) Click [Device Manager] located at the upper left side of the dialog box.



- 8) If the driver is installed, under the USB controller's item OLYMPUS(R) DP20MICROSCOPE DIGITAL CAMERA SYSTEM is displayed. It can be confirmed to operate normally by double-clicking OLYMPUS(R) DP20MICROSCOPE DIGITAL CAMERA SYSTEM. After confirmation, click the [x] button, and close the dialog box.



## 8. Other cameras

This software can be combined with other cameras in addition to Olympus Digital Camera DP Series for microscope. The cameras combinable to this software differ depending on the grade of cellSens. For details, contact Olympus sales office where you have purchased this product. For the operating procedures of cameras or the installation procedures of device drivers, refer to the Instruction Manual of the relevant camera.



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