Using Photometrics Cameras with Meta Image Series Versions 3.5 and Above

Document ID
T10160

Product
MetaMorph
MetaFluor
MetaGFP

Created
18-Nov-1998

Abstract

These instructions explain how to get Meta Imaging Series (consisting of MetaMorph, MetaFluor and/or MetaGFP) to work with Photometrics cameras. These instructions only apply to versions 3.5 and above of Meta Imaging Series. If you have an older version of MetaMorph (such as 3.0 or 2.76) do not follow these instructions!

Instructions

Identifying the Hardware

Photometrics currently offers 3 interface cards - an ISA card, the original PCI card (called the Snapper), and a new PCI card (called the Model 2). The ISA card will not work with Meta Imaging Series 3.5 and above. The ISA card used to work with earlier versions (MetaMorph 2.76 and before) but will not work with 3.0 and above. If you have an ISA card you should call your Universal Imaging representatitve for suggestions on how to upgrade your camera hardware to operate with MetaMorph.

Meta Imaging Series 3.5 and above will work with both the Snapper and the Model 2 cards. The Snapper card is a "double-decker" PCI card. Photometrics' part number for this is SNP-DIG16-PHM. The Model 2 card is a thin, half-size PCI card. Photometrics' part number for this is 01-376-001. Photometrics has a number of different models of cameras in the field. These include the Sensys, PXL, and Quantix, as well as earlier cameras such as the AT-200. The PCI cards are only compatible with the Sensys, PXL, and Quantix. Those of you with AT-200's must get an upgrade from Photometrics that converts the AT-200 into something that "looks" like a PXL to MetaMorph.

Installing the Photometrics Snapper or Model 2 Card

The very first time you install a Snapper or Model 2 PCI card in your computer, Windows 95 will detect the card and ask you for an installation file. If you have the Meta Imaging Series 3.6 CD-ROM, point Windows to the "Photometrics Snapper PCI Drivers" directory on the CD-ROM if you have a Snapper card, or to the "Photometrics Model 2 PCI Drivers" directory on the CD-ROM if you have a Model 2 card. Windows 95 will read the driver information file from the directory and correctly setup the PCI card.

Note: If you had previously installed a Photometrics PCI card in the computer, then Windows will not ask you for the driver installation file, because that file will already be in Windows' database.

Confirm that the Photometrics Card is Recognized by Windows 95

After you have installed the PCI card and Windows 95 has found the drivers for it, you should open the Windows 95 Control Panels and launch the System control panel. Select the Device Manager tab. If you have a Snapper PCI card installed, you should see an entry called "Video Capture". If you click on the "+"

Keywords: photometrics hardware roper
Issue Type: Hardware

symbol to the left of "Video Capture", it will reveal "Snapper Video Acquisition & Processing Hardware". If you have a Model 2 PCI card installed, you should see an entry called "CameraAdapter". If you click on the "+" symbol to the left of "CameraAdapter", it will reveal "Photometrics PCI Camera Adapter".

Installing the Photometrics Drivers

Prior to installing any drivers, you should uninstall any old / previous Photometrics drivers that are in your system. This step is only necessary if you had previously installed Photometrics drivers. To uninstall these files, you should bring up the Windows 95 Control Panel and start up "Add/Remove Programs". From there, locate the Photometrics item in the list of installed software, highlight it and press the Remove button. After Removing it, you should reboot your computer. This will insure that the old Photometrics driver files are not in memory. The first part of the installation process is to install the driver files supplied by Photometrics. The driver files are determined based on what card you have, not on what camera you have. If you have a Snapper card you install one set of files, and if you have a Model 2 card you install a different set.

If you have a Snapper card, you need to install PCI HCK 32 for Windows 95 (Rev A0). If you have a Meta Imaging Series CD-ROM from Version 3.6 or above handy, these files can be found on the CD-ROM in a directory called "Photometrics Snapper PCI Drivers". If you do not have this CD-ROM, then you can go to Photometrics' web site at http://www.photomet.com/CS/pfiles.htm and download the file. If you have a Model 2 card, you need to install PCI HCK for Windows 95 (Rev B0). If you have a Meta Imaging Series CD-ROM from Version 3.6 or above handy, these files can be found on the CD-ROM in a directory called "Photometrics Model 2 PCI Drivers". If you do not have this CD-ROM, then you can go to Photometrics' web site at http://www.photomet.com/CS/pfiles.htm and download the file. Please be certain that you are downloading the correct revision (e.g. Rev A0 for Snapper or Rev B0 for Model 2).

After you have found or downloaded the Photometrics software, run the SETUP program that is in the collection of files that you downloaded or found on the CD-ROM. The SETUP program will install the Photometrics drivers on your computer. If the Photometrics setup program asks you if you want to "launch the application", answer No. You will have to reboot your computer after the installation is finished.

Configuring the Photometrics Drivers

The Installation program will create a Program Group on your desktop. When your computer finishes rebooting, you should find a new Program Group on your desktop. If you have a Snapper card, run PCISetup to configure the camera. If you have a Model 2 card, run PCISetup95 to configure the camera. When you run either the PCISetup or PCISetup95 program, type in the name of your camera. This can be any name you choose, but we suggest you enter SENSYS, QUANTIX, or PXL to match the model of camera that you have.

If you are using a Snapper Card, you enter the camera name in the name field, such as SENSYS. There is also a field called "Type". You must type in the word PCI_32 in the Type field. For both the Snapper and Model 2 cards, once you have entered in this required information the PCISetup or PCISetup95 screen will indicate "OK" to indicate that the camera is now installed. Now you can exit the program.

Testing to Make Sure the Photometrics Driver is Correctly Installed

Photometrics supplies two utility programs, called CamTest and CamTest32. If you have installed a Model 2 card, then icons for these utility programs can be found in the same Program Group as the PCISetup / PCISetup95 programs. If you installed a Snapper card, then you will have to use Windows Explorer and navigate to the directory where the Photometrics software was installed (typically

c:\Program Files\Photometrcs) where you will find the CamTst32.exe application. You should run CamTest32 to verify that the camera is functioning. Please note that CamTest32 will not display a correct image if your Windows Desktop is configured for 24-bit VGA. Reconfigure Windows for 256 colors before running CamTest32.

Confirming that things are OK up to this point

At this point you should have your Sensys, PXL, or Quantix camera connected to a Snapper or Model 2 PCI card, the proper Photometrics driver files should be installed, and the camera should be taking pictures with CamTest32. Once you have verified this, exit CamTest32 and reconfigure Windows back to 24-bit color. Meta Imaging Series 3.5 and above work best when Windows is configured for 24-bit color.

Install MetaMorph if it is not already installed

If you have not installed MetaMorph yet, you should install it now. If you are installing version 3.5 or 3.6 of MetaMorph, then after the installation completes, you must apply the patch containing the latest driver (see next paragraph) because the driver on the 3.5 and 3.6 CD is not going to work.

Verifying that you have the Latest Meta Imaging Series Driver

Log on to our support site at http://support.universal-imaging.com and do a Search for "Photometrics". Read the articles on the site and make sure you have found and downloaded the most up-to-date Photometrics driver, and have followed the instructions to install it into your Meta Imaging Series system. This step is critical if you have version 3.5 or 3.6 of Meta Imaging Series on your computer.

Installing the Photometrics Driver from Video Manager

Run Video Manager. See if the "Photometrics Camera" appears under the Installed Drivers list. If it does not, highlight the "Photometrics Camera" under the Available Drivers list and press the ADD-> button to copy it to the Installed Drivers list. Then highlight the "Photometrics Camera" in the Installed Drivers list and press the CONFIGURE button. The first thing you need to do is select your card, either Snapper or Model 2. As soon as you select the card, press OK, then press OK to exit Video Manager. Now restart Video Manager. Highlight the "Photometrics Camera" in the Installed Drivers list and press the CONFIGURE button.

Select the sensor mode (such as Normal or FT for a frame transfer camera) and the Camera name. The camera name should be whatever name you entered when you installed the Photometrics Driver software. If this field is blank then there is a driver version mismatch. Do not proceed if that is the case. Make sure to specify the operating Temperature for the camera. This defaults to 0, but you may want a lower temperature for your camera. Press the "External Shutter Support" tab. If you have a Model 2 card, you should clear the checkbox called "Emulate Transition" because emulation is not necessary. You can then OK the dialog and exit Video Manager.

If you have a Snapper card you may want to check on "Emulate Transition" if you intend to use an external illumination shutter to prevent photo-bleaching of your samples. Some Snapper cards may not properly detect the transition state between "exposing" and "transferring" of an image - thus the external shutter is closed after the transfer is finished instead of after the exposure is finished. The "Emulate Transition" checkbox corrects for this problem. Read the instructions on the Video Manager screen to see how to configure the emulation. You can then OK the dialog and exit Video Manager.

Using the Photometrics Camera from Meta Imaging Series

You should now be able to start up MetaMorph, MetaView, MetaFluor, or MetaGFP and use your Photometrics camera to acquire images.

