

How to configure IEEE1394 DCAM cameras with Cognex's Camera Integration Tool (CIT)

Cognex's CIT DCAM utility is a GUI primarily for creating and modifying Camera Configuration Files (CCFs) for IEEE1394 DCAM compliant cameras. CCFs are text files that contain parameter settings to control a camera in a particular mode. These CCFs are used by Cognex Vision Library (CVL) or by VisionPro to set up the acquisition for IEEE1394 DCAM cameras. In addition, to work with CCF files, the utility provides other useful information/tools when dealing with DCAM compliant cameras. For example, one can get topology information of all DCAM cameras connected to the system, as well as a dump of a specific camera registers that can be useful while debugging a problem.

The CIT DCAM utility comes with the installation of VisionPro Software. The several DCAM standard video formats are supported by the existing Generic Files. They are also located in the working directory like:

C:\Programme\Cognex\VisionPro\bin

For the custom video formats (Format 7) AVT provides specific CCFs, which may be modified to meet your needs.

System Setup

When using Windows 2000, Windows XP, or Windows Vista, please make sure that a Microsoft compliant IEEE1394 driver is installed for the related 1394 host controller and that the latest *Cognex IEEE1394 DCAM Driver* is installed for the plugged-in camera (see figure 1).

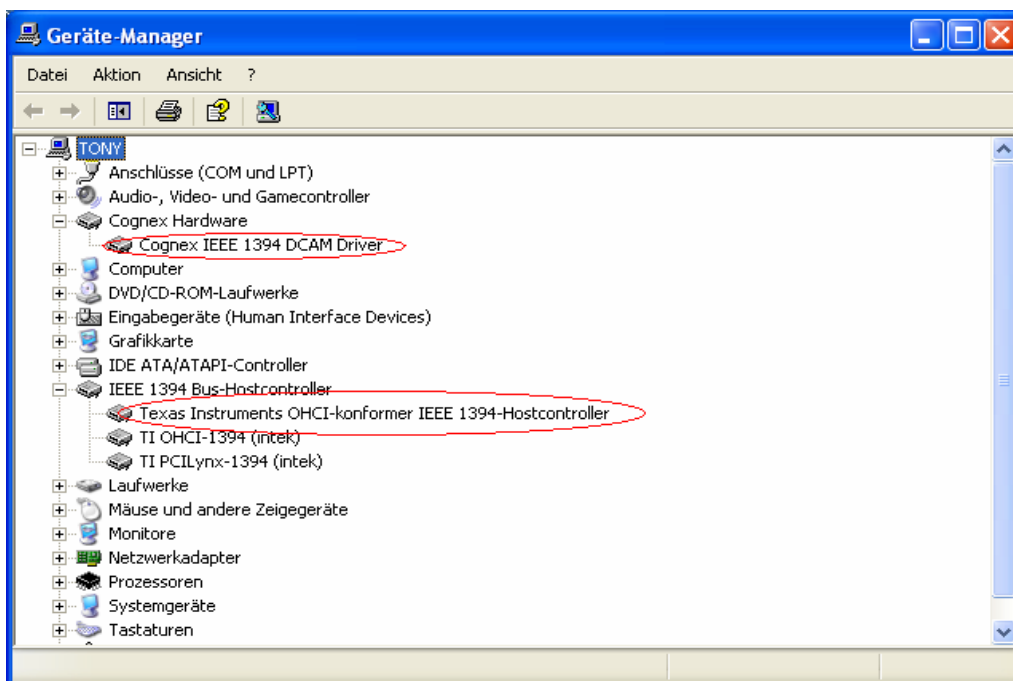


Figure 1: Driver Setup for the usage with CIT DCAM

FAQ – CIT DCAM Instruction

Creating CCF Files

Start the *CIT DCAM* utility:

C:\Programme\Cognex\VisionPro\citdcam\citfw2.exe

To create or modify a CCF it's recommended to use the **Online Mode**. Online Mode is a smart mode where GUI selections are displayed only in case that the underlying camera supports them. To run the *Online Mode*, click on the **Connect** button and select the currently plugged-in camera from a list (see figure 2).

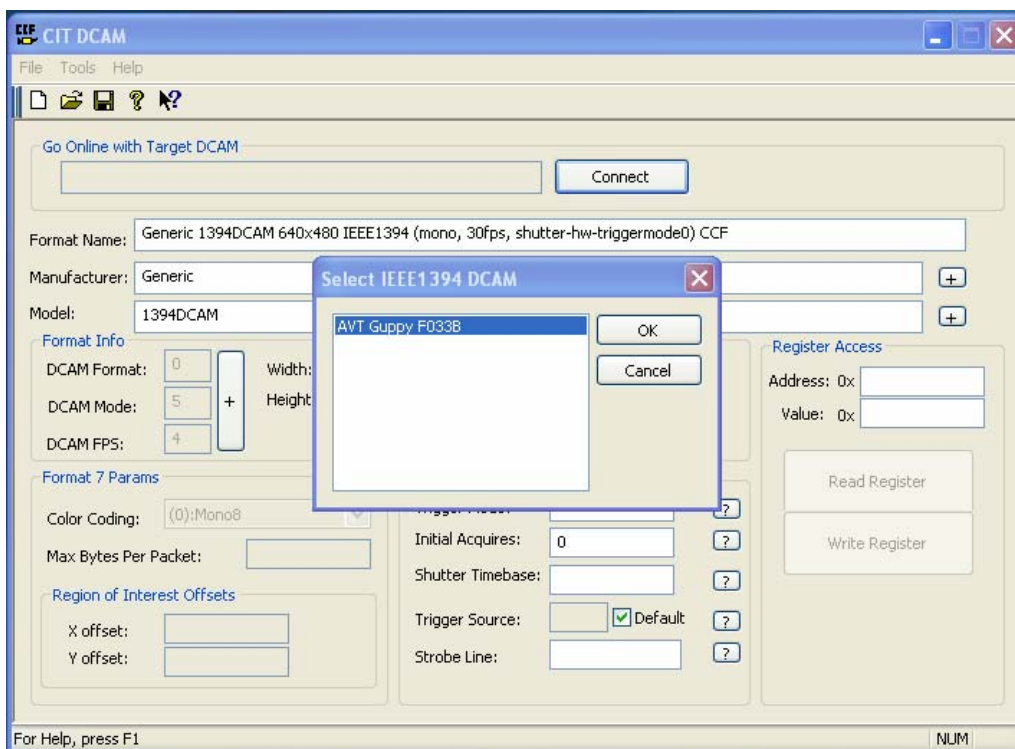


Figure 2: Camera selection when using CIT DCAM

In the next step the camera configuration file is set up (see figure 3):

Set the **Format Name**. This is the string that is used to represent the video format to setup the acquisition in CVL or VisionPro.

To set the **Manufacturer** and **Model Name** you can press the '+' button on the side to get the string automatically filled in from the camera.

FAQ – CIT DCAM Instruction

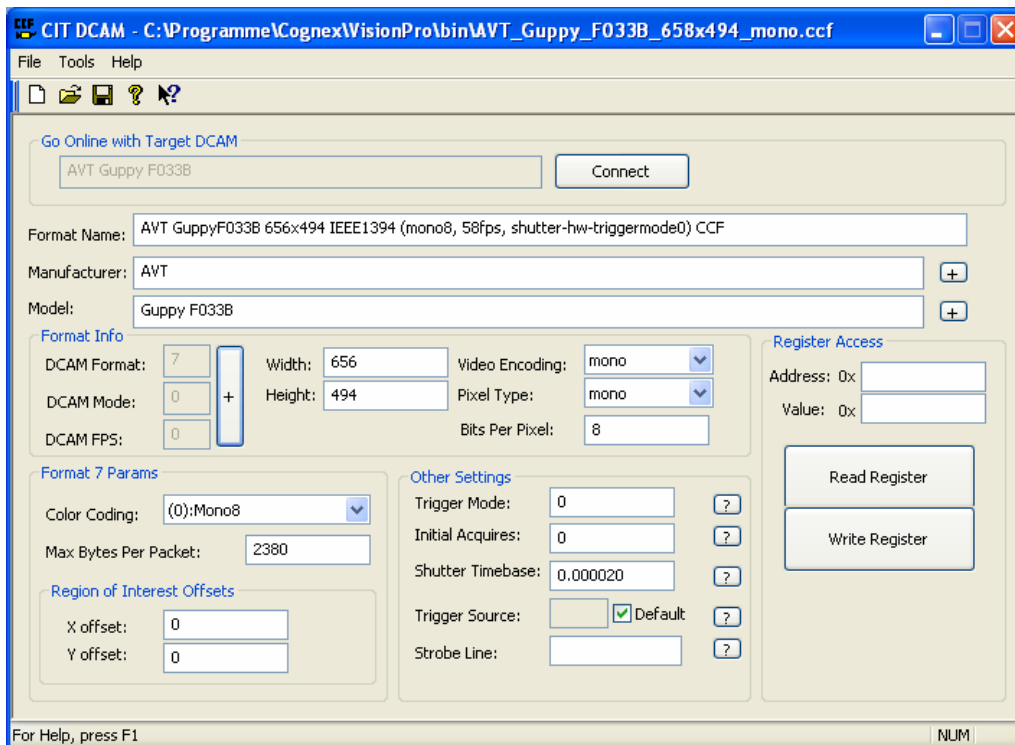


Figure 3: Setup the CCF file

To set the video format click the '+' button in the **Format Info** box, the **DCAM Format Select** window is opened (see figure 4). Select **Format**, **Mode**, and the frames per second (**FPS**), as well as the **Format 7 Color Coding** from the list of all currently available formats.

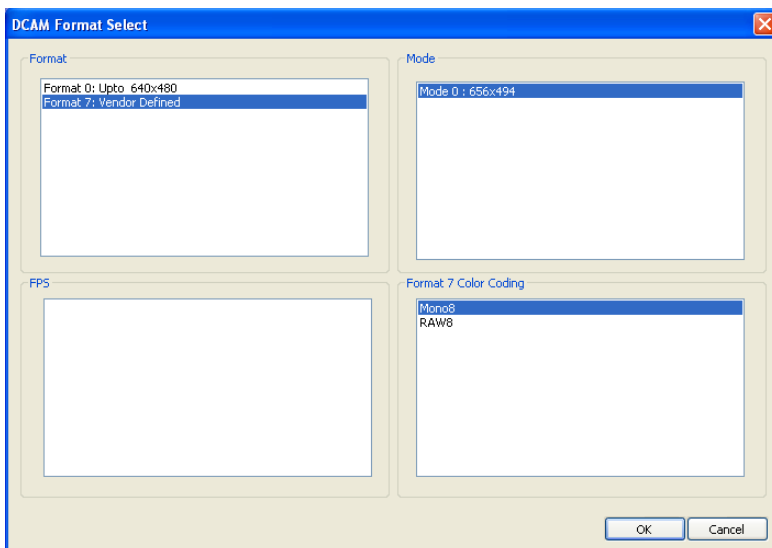


Figure 4: Video format selection in Online Mode

similar to the **Format Name** string.

For further information, please refer to the help topics of CIT DCAM.

Please note that:

- the *CIT DCAM* utility supports DCAM 1.3 but does not save register values for direct access.
- for AVT cameras, the **Shutter Timebase**, which is part of the **Other Settings** box, has to be set to 20 μ s (0.000020), at least as long as the camera is set to this default value.

Finally, please use the standard dialogs of the **File** menu in the menu bar to open and save your CCFs with a significant file name