

title: **Application Note: pco.dimax (Standard, HD/HD+) Firmware Update Procedure**

type: Application Note

file name: APL_DX_FIRMWARE_UPDATE_0101.doc

version: 01.01

release date: 2017-02-23

reference to:

author: LWa

available to: Public

content / history:

2012-10-30:	First release with new layout / new document name.
2017-02-23:	Clarified that before and during update all other programs controlling the camera (e.g. Camware) must be closed.

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Application Note: pco.dimax (Standard, HD/HD+) Firmware Update Procedure

1 Content of the Document

This document describes the process of firmware update and the firmware programmer for the pco.dimax and the pco.dimax HD/HD+.

Please read the document completely before updating the camera. Follow the instructions accurately in order to avoid that the camera will get into an error condition and cannot be used any longer.

2 Preparations

The PC used for the update must have the latest pco drivers installed for USB or GigE, depending on the interface which is intended to be used for updating the camera. It is recommended to test, if the pco.dimax can correspond with the PC by using Camware. The pco.dimax must be detected by camware.

Note: The firmware programmer expects only the camera to be updated at the selected interface, no other pco.dimax camera and also no other PCO camera. Therefore connect only the camera to the port you intend to use for firmware update. However, you may have connected other cameras at the GigE ports, when you are updating a camera using the USB port, or vice versa.

Also close all other applications controlling PCO cameras (e.g. Camware) before starting the firmware programmer!

Usually there is a zip file with the programmer and the firmware file. The programmer is named

DIMAX_PROG.EXE

There is another file containing the firmware for one or several programmable devices of the pco.dimax:

FW_<version info>.dmf (dmf = dimax firmware file)

Unzip the files into a directory.

3 Description of the Firmware Programmer

Dialog structure of the pco.dimax firmware programmer:

The screenshot shows the 'Firmware programmer for pco.dimax Rev 16, built Dec 15 2010 11:23:47' window. It features a table of device components, a progress bar, control buttons, and a status bar. Callout boxes provide the following explanations:

- Current firmware version of the camera. Is available when camera is connected:** Points to the 'Current FW' column in the table.
- Firmware versions which are included in the firmware update file (extension *.dmf):** Points to the 'Loaded FW' column in the table.
- Progress bars show programming progress and indicate success / failure by color:** Points to the 'Programming Progress' bar.
- Control buttons. Explanation see below:** Points to the 'Connect', 'Load File', 'Program', 'Verify', 'Support', and 'Quit' buttons.
- Status bar provides information about current action:** Points to the 'Current Status' bar.
- Devices to be updated can be selected individually. Do not change preset selection until you are advised to do by qualified service personnel.** Points to the 'Device' column with checkboxes.

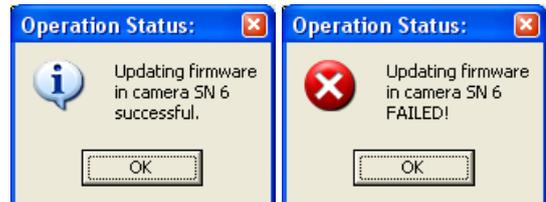
Device	Current FW	Loaded FW	Programming Progress
<input type="checkbox"/> Boot uP	001 V05.70		
<input type="checkbox"/> Boot FPGA	001 V01.17		
<input type="checkbox"/> Main FPGA	003 V16.31	003 V16.31	
<input type="checkbox"/> Mem FPGA 1	001 V16.20	001 V16.20	
<input type="checkbox"/> Mem FPGA 2	001 V16.20	001 V16.20	
<input checked="" type="checkbox"/> Main uP	003 V16.32	003 V16.32	
<input type="checkbox"/> Power uP	001 V03.40		
<input type="checkbox"/> HDSDI FPGA	000 V00.00		

Button	Description
Connect	Establishes connection to the camera to be updated. The interface can be selected using the radio buttons below the %Connect+ button. If successfully connected, you will see the message %Connected to pco.dimax SN xx+ in the status line. Please check, if this is the camera you want to update. If not successful, the message %ERROR: Connecting to camera failed!+ will be displayed in the status line.
Load File	Loads the firmware files to be programmed to the camera. If there is only one firmware file in the directory where the programmer is started from, it is loaded automatically at the program start.
Program	Starts programming the firmware.
Verify	Starts a verify of the programmed firmware. Optional function.
Support	In case of problems: Shows the location of the generated log and backup files and displays an email address for support requests.
Quit	Leave the update program

4 Update procedure:

When updating the pco.dimax camera, please proceed as described below:

- Switch on the camera and connect it using USB or GigE interface. Be sure, that the communication works, e.g. by testing, if the pco.dimax can be controlled using Camware.
- Note: Please connect only the camera to be updated. This applies for all types of pco cameras, i.e. you should not have any other pco camera connected to the selected update port.
- **Important: Close all other applications controlling PCO cameras (e.g. Camware) before starting the firmware programmer!**
- Press the %Connect+button. If successfully connected, you will see the message %Connected to pco.dimax SN xx+in the status line. Please check, if this is the camera you want to update.
- If there is only one firmware file (.dmf) in the directory where the programmer is started from, it is loaded automatically at program start. If there are no version numbers listed below %Loaded FW+ or you want to program another firmware, press %Load File+ and select the desired firmware file.
- Unless you are not advised otherwise, do not change the preset selection of devices to be updated.
- Press the %Program+ button and wait until all devices are updated. A small message box (like shown right) will pop up, when the update is done.
- After programming was successful, restart the camera.



5 Important Notes:

Please pay attention to the following advice:

- **Close all other applications controlling PCO cameras (e.g. Camware) before starting the firmware programmer!**
- **Never switch off the camera during update!**
- **Never disconnect the camera during update!**
- **Never terminate the firmware programmer during update!**
- **If you think the firmware programmer got stuck during the update, please wait at least 10 minutes. If there is no visible activity within 10 minutes and the programmer does not respond to user action, like a pressed button, you may Ë terminate the firmware programmer.**

6 Log and Backup files:

The programmer will generate log files and backup files, which will be useful in case of problems occurring during the update process. Press the %Support+ button to get information about the location of the log and backup files.

The name of the log file is:

DIMAX_PROG.log

Before updating the camera firmware, the firmware programmer will read the current firmware from the camera and save it to a backup file. The backup file may be used to restore the old firmware. However, it is strongly recommended to send an support request in case of problems before restoring the original firmware.

Note that you may update your camera several times, existing backup files are not lost. Furthermore the firmware programmer creates a new backup file with a number appended.

The name of the first backup file containing the really original firmware is:

pco_dimax_SN<S/N of the camera>_backup.dmf

Following files are named

pco_dimax_SN<S/N of the camera>_backup_01.dmf

pco_dimax_SN<S/N of the camera>_backup_02.dmf

etc.

where 02 is newer than 01.

Note:

You may delete the generated log and backup files after some time, if you are sure, that the update process was successful and the camera operation with the new firmware is clean and without failure.

7 Known Bugs / Problems:

Currently none.

8 Trouble Shooting

Problem	Solution
Cannot connect to camera	Check, if: <ul style="list-style-type: none"> • the used interface is selected in the dialog radion buttons below the %Connect+ button • pco drivers for GigE/USB are installed • the connection is working properly, this can also be checked by invoking the camware program from pco.
Camera does not start after update	Process in that order: <ul style="list-style-type: none"> • Switch off and on power supply of the camera. • Retry programming firmware • If no success, contact support, see below
All other problems	Contact support, see below

9 Support Request

In case of any problems which cannot be solved by the solutions described in the trouble shooting chapter, please contact the support department of pco. Please press the %Support+ button of the programmer and the programmer will provide the email address of the support department. It is recommended to enclose the generated log file to any support request.

