DeltaCam Update Manual

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Introduction

The DeltaCam allows several files to be updated:

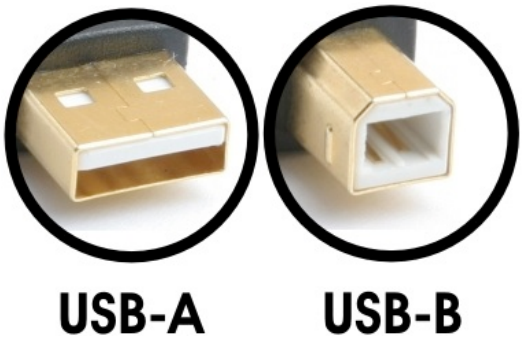
- ➔ Firmware (*.bin)
- ➔ CAID list (*.cid)
- ➔ modbox (*.mbx)
- ➔ Emu keys (*.key)

This manual explains the steps to take to flash those files to the DeltaCam.

Flashing files with the USB Programmer

Required Equipment

A … PCMCIA power board
B … USB serial programmer board
C … USB cable(s) (type A - B connectors)

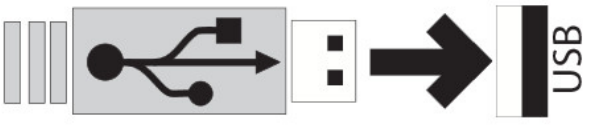


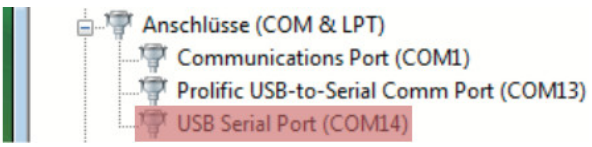
Prerequisites

Windows

Download the latest DeltaFlashLoader for Windows.

Windows will automatically install the required (FTDI) virtual COM port (VCP) driver via Windows Update as soon as the USB programmer is connected to the PC. A free COM port number is assigned. It can be verified via Windows Device Manager whether installation has been successful:





In case Windows Update cannot install an appropriate driver (lack of internet connection), the USB programmer is detected as “FT232R USB UART” and will show with an exclamation mark. In this case, the latest VCP driver can be downloaded from the FTDI homepage. FTDI drivers typically feature an installer. So installation should be quite straightforward.

Step-by-step instructions on how to manually install the VCP (INF) driver via the Windows Device Manager can be found here. Thanks to the installer, this should not be required though.

The following Windows versions are supported:

- ➔ Windows XP
- ➔ Windows Vista
- ➔ Windows 7
- ➔ Windows 8 / 8.1
- ➔ ***Windows 10***

Mac OS X

Download the latest DeltaFlashLoader for Mac OS X.

For Mac OS X, it might be necessary to install an up-to-date virtual COM port driver. Latest driver package can be downloaded from the FTDI homepage.

The following Mac OS X versions are supported:

- ➔ 10.4 “Tiger”
- ➔ 10.5 “Leopard”
- ➔ 10.6 “Snow Leopard”
- ➔ 10.7 “Lion”
- ➔ 10.8 “Mountain Lion”
- ➔ 10.9 “Mavericks”
- ➔ 10.10 “Yosemite”
- ➔ 10.11 “El Capitan”

Linux

Either download the GUI or the CLI version of the latest DeltaFlashLoader, depending on your personal preferences.
(As some ULCs/DBs do not support uploading common Linux tar archives, we generally switched to ZIP now.)

In order for the DeltaFlashLoader to run, the 32-bit library version of GTK+ is required. Use the package management software of the Linux distribution of your choice (e.g. apt, yum/dnf) to install such dependencies.

Popular Linux distributions are typically equipped with the required (FTDI) virtual COM port driver to run the USB programmer.

To check whether the USB programmer is detected properly after connecting, you might want to execute the following command:

```
$ lsusb | grep -i ft232
Bus 007 Device 002: ID 0403:6001 Future Technology Devices
International, Ltd FT232 USB-Serial (UART) IC
```

To find out the serial device that Linux chose to attach the USB programmer to, execute the

following command:

```
$ dmesg | grep -i ftdi
usb 7-1: FTDI USB Serial Device converter now attached to ttyUSB0
```

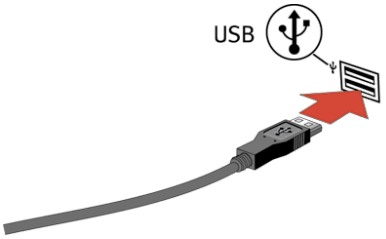
Under Linux, the DeltaFlashLoader has to be run with root privileges (sudo).

Step-by-Step Instructions

1. Insert the DeltaCam into the slot of the *PCMCIA power board* (A) and verify that the switch is turned off resp. at position 'O', see following image.

2. Insert the *USB serial programmer board* (B) into the SmartCard slot of the DeltaCam.

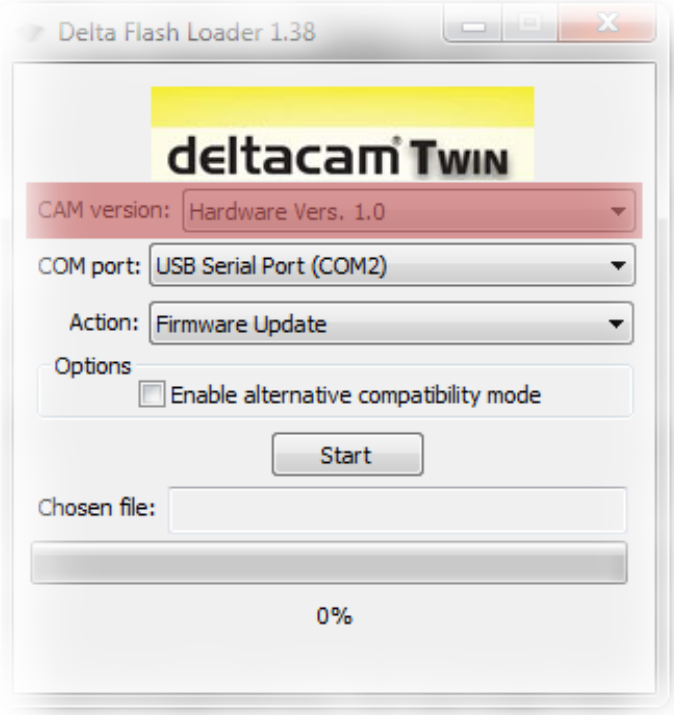
3. Connect the type A side of the *USB cable*(s) (C) to USB port(s) of the PC.



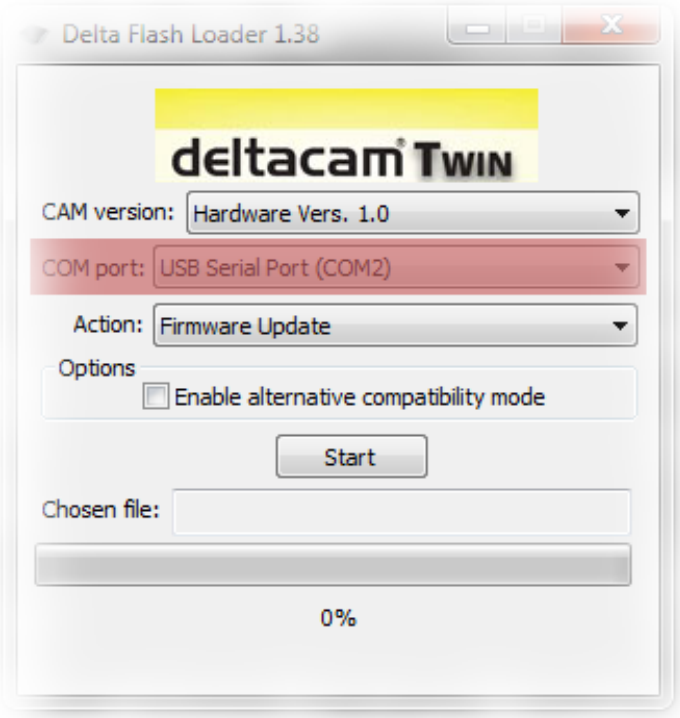
4. Connect the type B side of the *USB cable*(s) (C) to the connectors of the *PCMCIA power* and *USB serial programmer boards*.

5. Execute the DeltaFlashLoader utility on the PC.

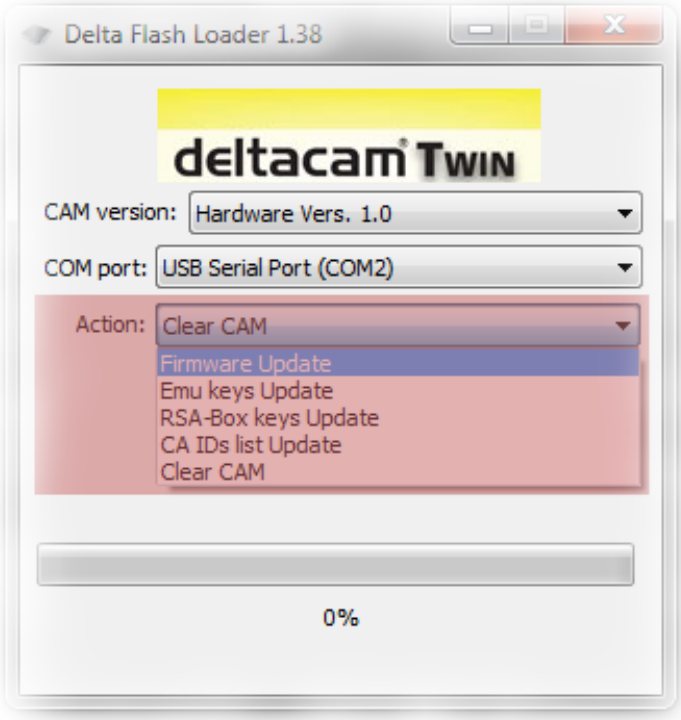
6. Select the proper DeltaCam hardware revision which is typically printed on the backside of the module with the label “hardware/level”.



7. Select the (virtual) serial (COM) port that has previously been installed for the USB serial programmer board.



8. Select the action that you want to perform, i.e. the file that you want to flash. The files are described in more detail in the manual.



Firmware Update:

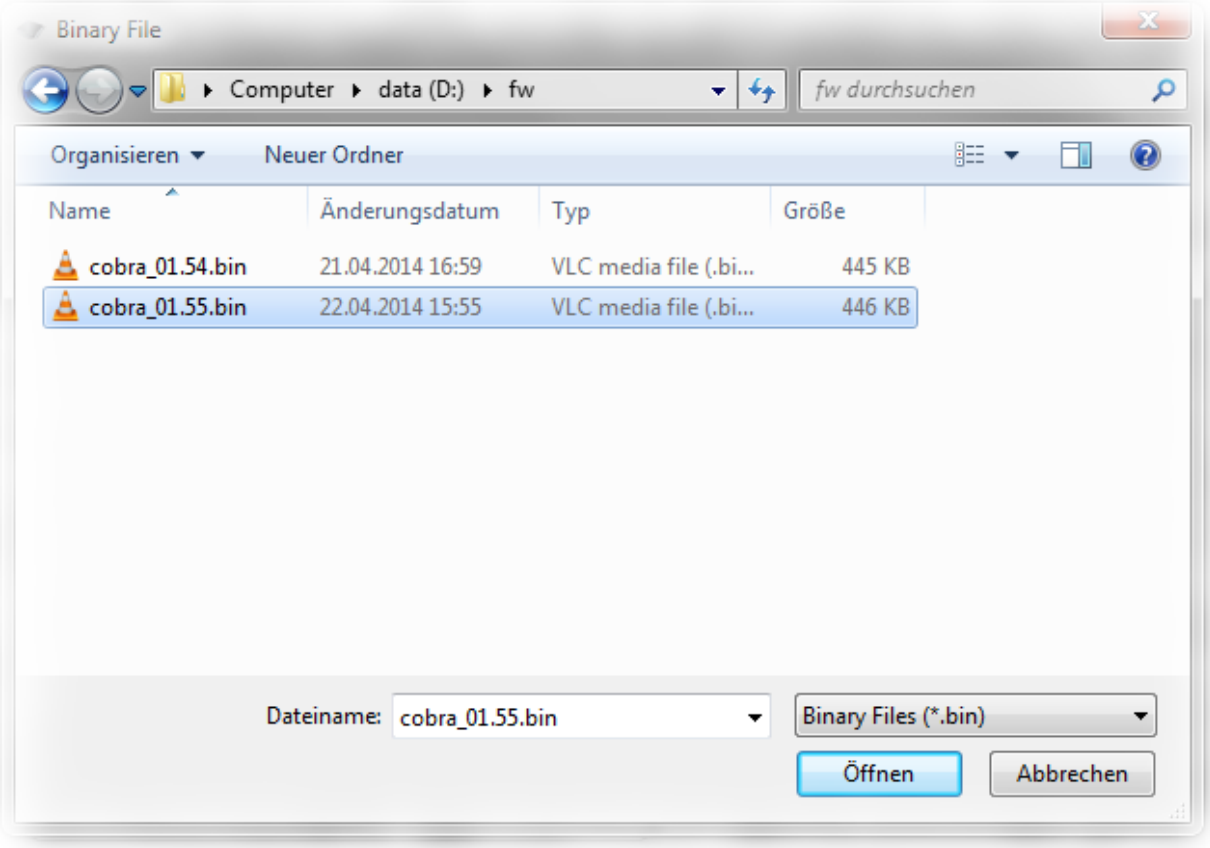
In case the DeltaCam does not initialize inside the TV/STB after the firmware has been flashed (and only in this case), the firmware might be flashed again with the “alternative compatibility mode” being enabled.

CI devices that are known to require this mode:

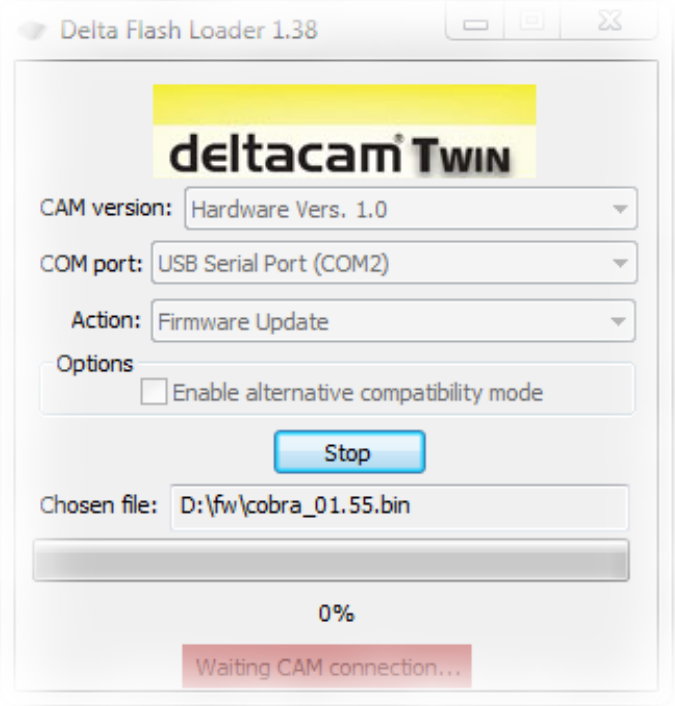
- ➔ Philips PFL series
- ➔ LG W series

➔ Kathrein UFO headends

9. Press the ‘Start’ button and browse to the file that is supposed to be flashed.

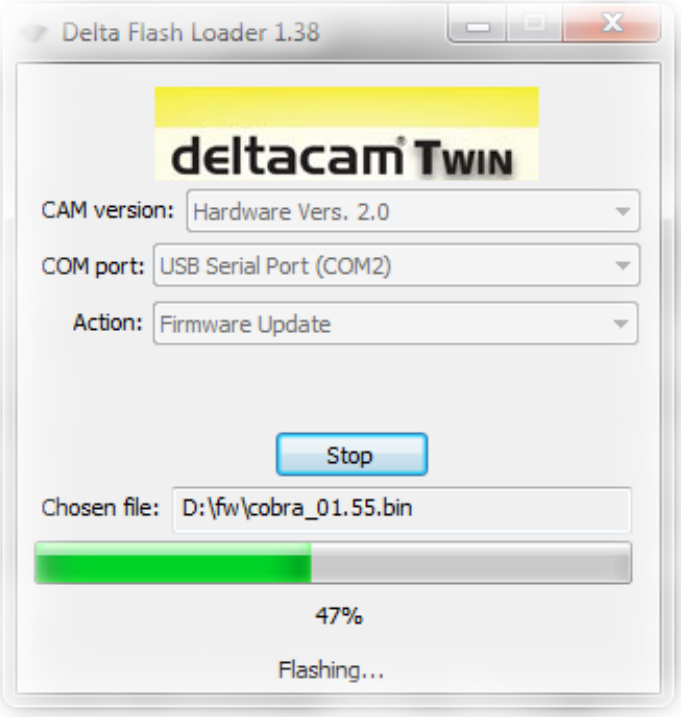


10. The message "Waiting CAM connection…" will appear.

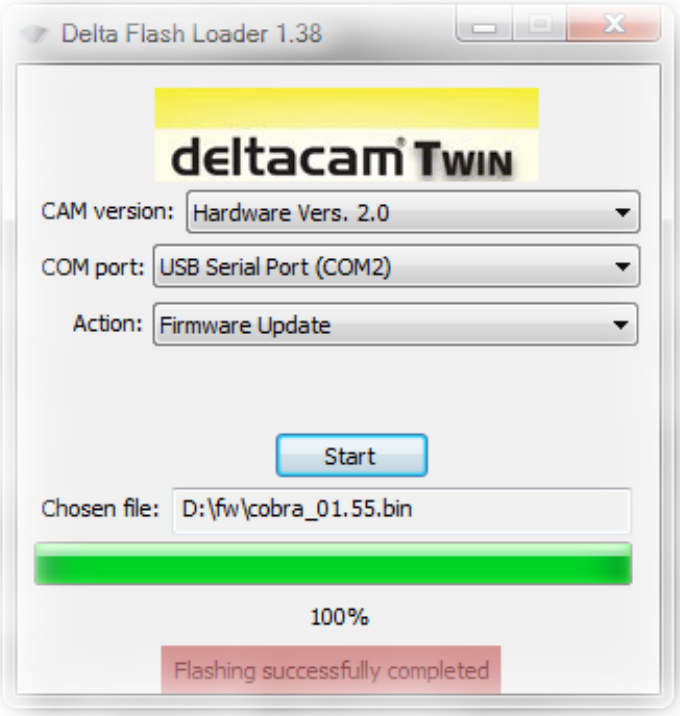


11. Turn on power by pressing the switch on the *PCMCIA power board* (A), i.e. setting it to position ‘I’.

12. The DeltaFlashLoader will automatically start to flash the DeltaCam.



13. Once the flashing process has completed, the message “Flashing successfully completed” will appear.



14. It is now safe to remove the *PCMCIA power* and *USB serial programmer boards* from the DeltaCam.

DeltaFlashLoader Command-Line Tool (Linux CLI)

First establish all cable connections as described in the Step-by-Step Instructions chapter (steps 1-4).

Then execute the DeltaFlashLoader with the serial interface, file type and file path as arguments:

```
# deltaflashloader /dev/ttyUSB0 -firmware cobra_1.41.bin
Waiting cam connection...
```

As indicated, the DeltaFlashLoader has to be run with root privileges.
When the display reads 'Waiting cam connection...', give power to the PCMCIA power board by changing the switch position to 'I'. The DeltaFlashLoader will automatically start to flash the specified file.

```
Flashing...
100%
[============================================================]
Flashing successfully completed
```

Flashing files with the unicam Basic/Combo Programmer

To leverage the full DeltaCam functionality, it is advised to update the firmware of the unicam Basic/Combo programmer to *'uniprog 1.21'*. Find out more about this firmware and how to update in the announcement.

As the unicam Basic/Combo programmer appears like an USB pen drive within the respective operating system, **no** additional tool is required for programming.

To flash files to the DeltaCam with either the unicam Basic or Combo programmer, proceed with the respective manual:

➔ unicam Basic Programmer

➔ unicam Combo Programmer

Flashing files with the RS-232 Serial Programmer

USB has pretty much replaced the RS-232 interface on modern computers. The RS-232 serial programmer therefore is not produced any longer. The manual on how to flash files with it has been outsourced to a separate manual.

Please consider that most RS-232 controllers on Mainboards do not support the non-standard compliant baudrate of the DeltaCam V2 anymore. So either use one of the USB based programmers or a Serial-to-USB adapter.