

USB 3 uEye CP Rev. 2: Internal image memory

This application note describes the changes in the usage of the internal image memory for USB 3 uEye CP Rev. 2 cameras.

Driver 4.81 or higher

From IDS Software Suite 4.81 on, the camera is operated with active image memory by default. Deactivation of the image memory is not possible any more.

With the new "image memory compatibility mode" you can regain the camera behavior up to and including IDS Software Suite 4.80.2. Thereby you can disable the internal image memory again.

For configuring the compatibility mode, you use the "Compatibility mode" option in IDS CameraManager or use the `is_Configuration` function with the new parameters `IS_CONFIG_CMD_GET_IMAGE_MEMORY_COMPATIBILIY_MODE`, `IS_CONFIG_CMD_SET_IMAGE_MEMORY_COMPATIBILIY_MODE`, and `IS_CONFIG_CMD_GET_IMAGE_MEMORY_COMPATIBILIY_MODE_DEFAULT`.

The status of the camera temperature is signaled and can be queried with `is_DeviceFeature`.

For more information about the new behavior of the internal image memory, refer to the uEye manual at <http://en.ids-imaging.com/manuals-ueye.html>.

Older driver versions

Driver ≥ 4.70

The internal image memory of the USB 3 uEye CP Rev. 2 was introduced with driver version **4.70**.

The internal image memory was enabled or disabled while camera operation. In the "Advanced features" tab in uEye Cockpit, there was a check box for enabling the internal image memory. If the camera was operated with activated image memory and if the camera got very hot, the internal image memory was automatically disabled.

The status of the camera temperature is signaled and can be queried with `is_DeviceFeature`.

There were no changes in the driver versions 4.71 and 4.72.

Driver ≥ 4.80

From driver version **4.80** on, the behavior of the internal image memory has changed.

The internal image memory can only be enabled or disabled if the camera is closed and no longer while camera operation. In return, the internal image memory must only be configured once and the settings are stored in the non-volatile camera memory.

The internal image memory is now configured in the IDS Camera Manager in the "Additional functions" tab and no longer in uEye Cockpit.

There is no longer an automatic deactivation of the internal image memory but the status of the camera temperature is still signaled and can be queried with `is_DeviceFeature`.

Effects of the changes in driver 4.80 to earlier versions

Because of the changes described above, the `is_DeviceFeature` function for enabling or disabling the internal image memory also has changed. Now you have to use the device ID instead of the camera ID when activating the internal image memory:

Order of function calls from 4.80 on

Enable the internal image memory:

```
is_DeviceFeature(DeviceID,
IS_MEMORY_MODE_ON)
```

Initialize the camera:

```
is_InitCamera(CameraID)
```

Save/Load parameter file created with 4.80:

```
is_ParameterSet()
```

Order of function calls before 4.80

Initialize the camera:

```
is_InitCamera(CameraID)
```

Enable the internal image memory:

```
is_DeviceFeature(CameraID,
IS_MEMORY_MODE_ON)
```

Save/Load parameter file with memory mode:

```
is_ParameterSet()
```

Note that parameter files (ini) that have been created with a driver version lower than 4.80 must be replaced. If the file uses settings for the internal image memory in the [Memory] section, the `is_ParameterSet` function will now return `IS_INCOMPATIBLE_SETTING`. We recommend saving a new parameter file with driver version 4.80.

While configuring the internal image memory the camera has to be reconnected. For this reason the camera will briefly not be visible in the camera list of the IDS Camera Manager.

The configuration of the internal image memory now has to be done in IDS Camera Manager and no longer in uEye Cockpit:

