

Documentation

Migration Guide for Open eVision™ 1.2



Migration Guide for Open eVision™



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Open eVision Migration Guide Documentation

Introduction

Open eVision 1.2 can be used with two APIs:

- The eVision 6.7.1 (or Open eVision 1.0) API (i.e. the legacy API)
- The more recent API, first introduced with Open eVision 1.1 (i.e. the regular API)

This ability is called the legacy API support and is supplied for C++ and ActiveX development.

Please note that no legacy API support is supplied for .NET development, since the .NET API has not changed much between eVision 6.7.1 (or Open eVision 1.0) and Open eVision 1.2.

The legacy API support is currently only intended for 32-bit development under the IDEs supported by Open eVision 1.2.

Although the legacy API support targets source code written against eVision 6.7.1, applications written against Open eVision 1.0 can easily be ported to run with it, since there are only a few API differences between eVision 6.7.1 and Open eVision 1.0 (see the Open eVision 1.0 release notes for details).

Installation and Usage Requirements

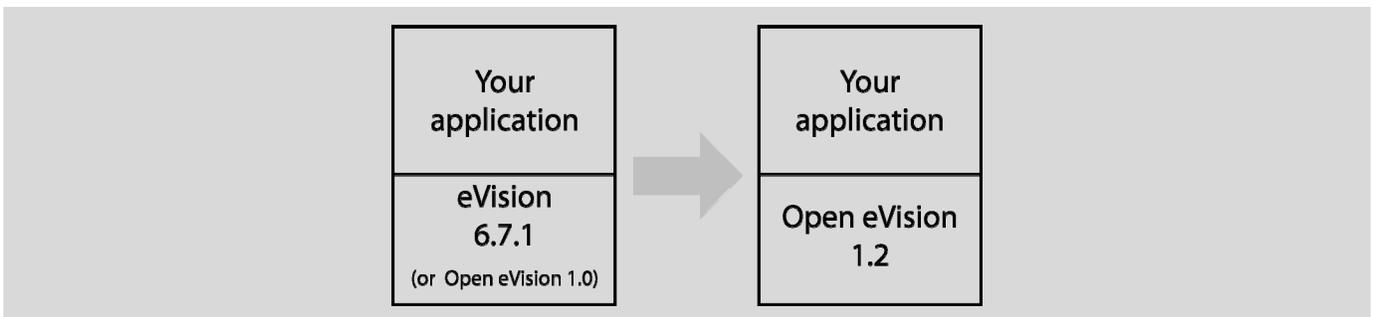
The following rules apply when installing and using eVision 6.7.1 (or Open eVision 1.0) alongside Open eVision 1.2:

- Provided that your operating system is supported by both products, you are allowed to install Open eVision 1.2 next to an existing eVision 6.7.1 (or Open eVision 1.0) installation.
- You are not allowed to use both the legacy API support and the eVision 6.7.1 (or Open eVision 1.0) components in the same program.

Usage

This legacy API support is designed to enable the following migration scenarios:

Please note that if you are using Open eVision 1.1, the migration to Open eVision 1.2 is straightforward since no API changes have been made. See the Open eVision 1.2 release notes for details.



Nearly every feature of eVision 6.7.1 (or Open eVision 1.0) is present in Open eVision 1.2. An exhaustive list of the differences is provided later in the document.

1. Configuring your Development Environment

1.1 C++ Development

Open eVision 1.2 comes with two sets of headers:

- the headers for the regular API.

the headers for the legacy API, compatible with eVision 6.7.1 (or Open eVision 1.0, with a few modifications).

Please note that you are allowed to use both APIs in the same program.

The steps to switch from eVision 6.7.1 (or Open eVision 1.0) to Open eVision 1.2 are straightforward:

Add the Open eVision 1.2 C++ include directory to the set of directories that your development traverses when searching for a header file. On some Visual Studio versions, this change is made automatically by the installer.

Switch to the compatibility headers by prefixing all eVision header file names with **Legacy_**. For instance, replace:

```
#include "EFind.h"
```

By

```
#include "Legacy_EFind.h"
```

Remove all library inclusion directives. No .lib file is needed when using Open eVision 1.2 in C++. The header files take care of referencing the needed binaries.

1.2 ActiveX Development

There are two ACL (ActiveX control libraries) supplied with Open eVision 1.2.

- The first one that uses the regular API (see the Open eVision 1.2 documentation);
- the legacy API support ACL which is source-level and binary-level compatible with the eVision 6.7.1 (or Open eVision 1.0) ACL.

Please note that you are allowed to use both APIs in the same program.

There is nothing to modify in your development environment settings once the legacy API support ACL is installed: everything will behave correctly.

2. API changes between eVision 6.7.1 (Open eVision 1.0) and Open eVision 1.2

Note: as mentioned above, the Open eVision 1.0 API introduces some slight API differences that are detailed in the Open eVision 1.0 release notes. Except for these, it is similar to the eVision 6.7.1 API

2.1 Differences in the C++ API

Basic types and miscellaneous

- The **CheckOEMKey** and **SetOEMKey** methods (**Euresys::eVision::Licenses** namespace) are not available in Open eVision 1.2.
- The **EJpegHandler** class is not available in Open eVision 1.2.
- The **EImageSequence** class and associated methods are not available in Open eVision 1.2.
- In Open eVision 1.2, when saving an image or an ROI to a TIFF file, the Author, Comment, Date and Title text properties are not saved to the corresponding TIFF tags.
- In Open eVision 1.2, the **EGenericROI::Load(...)** method does not return a value. However, the loading mechanism is more flexible (see next remark).
- In Open eVision 1.2, the image and ROI **Load** methods are able to import several different pixel formats in a given image. For instance, loading a color image in an **EBW8Image** does not cause an error, but triggers an automatic conversion. This is more powerful but different from the eVision 6.7.1 (or Open eVision 1.0) behavior. See the Open eVision 1.2 documentation for more details.
- The **GetResolution** and **SetResolution** methods in the **EImage...** and **EROI...** classes are not available in Open eVision 1.2.
- In Open eVision 1.2, it is possible for an ROI to extend outside the parent image limits (its position is not clipped automatically). You can call the new **CropToImage** method of the **EGenericROI** class after having moved or attached an ROI to emulate the eVision 6.7.1 (or Open eVision 1.0) behavior.
- The return value from a property (such as **MatrixCode::NumErrors**) must be cast to its correct type before being used in a **printf(...)** function call. This is because **printf** is a C function that does not comply with the C++ conversion rules (i.e. not type-safe)
- The **GetNextObjectType** method of the **ESerializer** class, as well as the related **ObjectType** enumeration (also member of the **ESerializer** class) have been removed.

EasyFind

- The **CoarseStage** and **FineStage** methods of the **PatternFinder** object have been removed. They are superseded by the **ReductionMode** and **ReductionStrength** properties of the same object, that offer a more intuitive way of selected the speed vs. robustness tradeoff of the pattern searching process. See the Open eVision 1.2 documentation for details.

EasyBGA

- This library has been removed from Open eVision 1.2

EasyMultiCam

- In Open eVision 1.2, the EasyMultiCam library has been removed and has been transferred to MultiCam, version 6.0 or higher. See the documentation of the C++ object-oriented MultiCam API for details.

License Mediator

- This library has been removed from Open eVision 1.2

2.2 Differences in the ActiveX API

Basic Types

The **ElmageSequence** control is not available in Open eVision 1.2.

The following image and ROI controls properties are not available in Open eVision 1.2: **PixelUnit**, **PixelWidth**, **PixelHeight**, **HorizontalPixelsPerUnit** and **VerticalPixelsPerUnit**.

When saving an image or and ROI. to a TIFF file, the Author, Comment, Date and Title text properties are not saved to the corresponding TIFF tags.

In Open eVision 1.2, the **Load** method of the image and ROI controls return an unspecified value. However, the loading mechanism is more flexible (see next remark).

In Open eVision 1.2, the image and **ROI** Load methods are able to import several different pixel formats in a given image. For instance, loading a color image in an **EBW8Image** does not cause an error, but triggers an automatic conversion. This is more powerful but different from the eVision 6.7.1 (or Open eVision 1.0) behavior. See the Open eVision 1.2 documentation for more details.

License Mediator

This library has been removed from Open eVision 1.2

Conversion functions

If you are developing in C++ and using both the Open eVision 1.2 API and the legacy API support at the same time, you may sometimes need to convert back and forth between objects of these APIs.

In order to help you doing this, the **EApiConversion.h** file contains inline functions that convert objects between APIs.

All the functions have a similar prototype:

TargetType* CreateNewCopy(const SourceType*);

The supported types are:

- Images: **EImageBW1, EImageBW8, EImageBW16, EImageBW32, EImageC15, EImageC16, EImageC24, EImageC24A;**
- ROIs: **EROIBW8, EROIBW1, EROIBW16, EROIBW32, EROIC15, EROIC16, EROIC24, EROIC24A;**
- Vectors: **EBW16Vector, EBW16PathVector, EBW32Vector, EBW8PathVector, EBW8Vector, EBWHistogramVector, EC24PathVector, EC24Vector, EPathVector, EColorVector, EPeakVector.**

Important notes

These functions create new standalone objects independent from the original ones.

Please note that it is up to you to delete the objects that are created by these functions.

Example

```
#include "EApiConversion.h"
...
EImageBW8 oldStyleImage;
oldStyleImage.Load("test.bmp");
...
Euresys::Open_eVision_1_2::EImageBW8* newStyleImage = NULL;
newStyleImage = CreateNewCopy(&oldStyleImage);
// Now, newStyleImage contains another copy of the "test.bmp" contents.
...
delete newStyleImage;
```

Documentation

The Open eVision 1.2 API documentation is provided as CHM and PDF files embedded in the installer.

The legacy API documentation (C++ and ActiveX) can be found in the eVision 6.7.1 (or Open eVision 1.0) help files.

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