

Documentation LabVIEW Camera Control for Canon EOS 3.2

This document describes the usage and installation of the “LabVIEW Camera Control for Canon EOS “ version 3.2.

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1 General Information

The „ Canon EOS LabVIEW Control “ allows the control of Canon EOS cameras via USB. The library offers capturing images, recording movies as well as setting camera properties.

2 System Requirements

2.1 Operating System

The library can be used with Windows 7, 8 and 10 as 32 and 64 bit.

2.2 LabVIEW

The library can be used with LabVIEW 2010 to 2017 in 32 bit and 64 bit.

Most examples are using the NI IMAQ controls and functions. For these the NI Vision Software needs to be installed. The used functions and controls do not need a licensed version of the NI Vision Software.

2.3 Supported Cameras

The following cameras are supported:

EOS-1D Mark III
EOS 40D
EOS-1Ds Mark III
EOS DIGITAL REBEL Xsi/450D/ Kiss X2
EOS DIGITAL REBEL XS/ 1000D/ KISS F
EOS 50D
EOS 5D Mark II
EOS Kiss X3/EOS REBEL T1i /EOS 500D
EOS 7D
EOS-1D Mark IV
EOS Kiss X4/EOS REBEL T2i /EOS 550D
EOS 60D
EOS Kiss X5/EOS REBEL T3i /EOS 600D
EOS Kiss X50/EOS REBEL T3 /EOS 1100D
EOS 5D Mark III

EOS Kiss X6i/EOS 650D/EOS REBEL T4i
EOS 6D
EOS-1D C
EOS Kiss X7i/EOS 700D /EOS REBEL T5i
EOS Kiss X7/EOS 100D/EOS REBEL SL1
EOS 70D
EOS Kiss X70 / EOS 1200D /EOS REBEL T5
EOS 7D Mark II
EOS 5DS / EOS 5DS R
EOS REBEL T6s / EOS 760D / EOS 8000D
EOS REBEL T6i / EOS 750D / EOS Kiss X8i
EOS-1D X Mark II
EOS 80D
EOS Rebel T6 / EOS 1300D / EOS Kiss X80
EOS 5D Mark IV
EOS Kiss X9i / EOS Rebel T7i / EOS 800D
EOS 9000D
EOS 77D

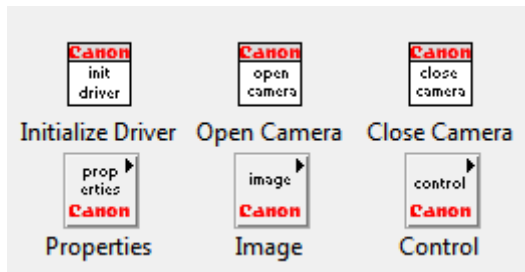
3 Installation

3.1 LabVIEW Library

The installer installs files directly to the LabVIEW directory (..\program files\National Instruments\LabVIEW xx\..)

The library is installed into the intr.lib folder in the subfolder "_Ackermann Automation\Canon EOS Control".

The functions palette is installed under Instrument Drivers.



A shortcut to examples and documents is installed in the Start Menu in Programs -> Ackermann Automation -> Canon EOS Control LabVIEW

3.2 LabVIEW Examples

The examples are installed in the LabVIEW examples folder
“..\Program Files\National Instruments\LabVIEW xx\examples\Ackermann Automation\ Canon EOS Control “.

3.3 Tools And Documents

All further tools and documents can be found in:

“..\Program Files\Ackermann Automation\ Canon EOS Control “

4 Programming

This chapter describes the principals of programming with the library. The detailed VI information can be found in the help file.

4.1 Init Driver

The function “Init Driver” has to be called before all other function calls.

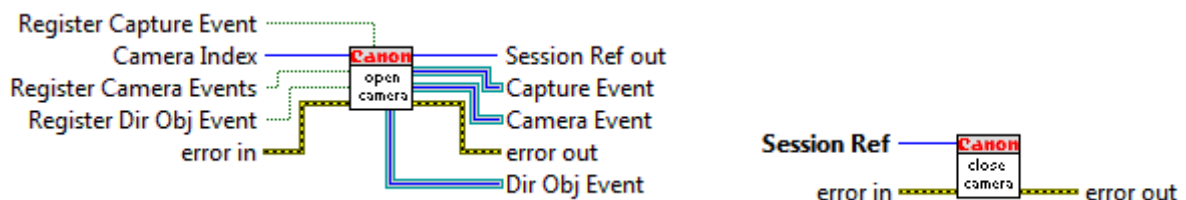
This function initializes the driver and does a license check.

If no valid license number is entered, the library works in demo mode for 10 minutes. Also no executables can be created with a missing license.



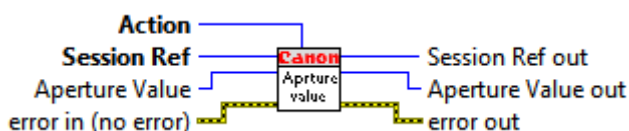
4.2 Camera Session

For each camera a session has to be opened. This returns a session reference and a LabVIEW User Events for different actions from the camera as capturing, status information and directory object creation.



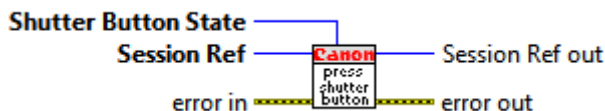
4.3 Camera Properties

The camera properties can be accessed with set and get functions. The available properties are camera dependent.



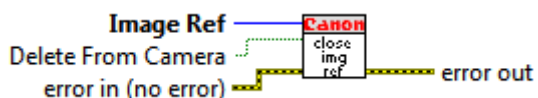
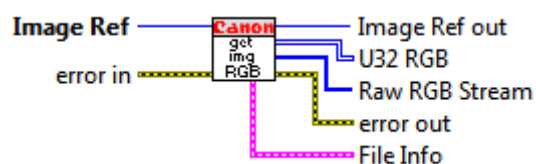
4.4 Camera Control

Different actions like pressing the shutter button can be triggered in the cameras. The available functions are camera dependent.



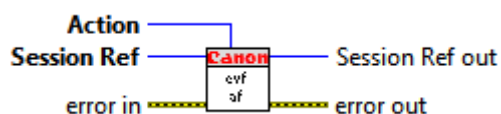
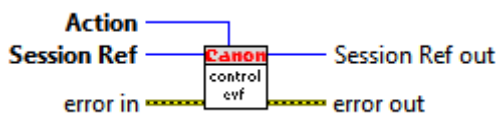
4.5 Image Capturing

An image is captured by executing the capture image function or using the press shutter button function. As soon as the image is available in the camera, a LabVIEW Event is generated. By using the image reference, the image data can be obtained.



4.6 View Finder

The camera View Finder can be controlled and displayed in LabVIEW by using the EVF functions. There are control functions and properties especially for the VIEW Finder image.



4.7 Error Codes

The following error codes are used in the library.

5005: Init Driver not called

5010: Demo time exceeded

5012: Session ref not valid

5 Creating Executables

Since version 2.4 the Canon driver files are not installed to the windows directory for global access. The dlls to control the camera are installed locally with the LabVIEW library.

Because there are multiple dlls used, not all needed dlls are copied automatically to the LabVIEW executable folder during the build of an executable. One has to make sure, that the needed dlls are put in the data subfolder of the executable. The necessary dlls can be found in the folder:

C:\Program Files\Ackermann Automation\Canon EOS Control\Distribution\Dlls

6 Support

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