



Version: 2.0.0

Date: June 14, 2011
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Overview
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The AVT Adaptor for MATLAB® Image Acquisition can be used to access all features of AVT's high-performance IEEE 1394 FireWire and GigE Vision compliant digital cameras from within the MATLAB and Simulink environments. The AVT Adaptor for MATLAB® Image Acquisition is based on AVT's interface-independent UniAPI provided with the AVT Universal Package and can easily be installed via an installer executable. The adaptor can be used together with the Image Acquisition Toolbox and enables AVT camera users to access more camera features than available through open standards. Therewith, MATLAB and Simulink users can go further in leveraging AVT cameras to solve image processing tasks.

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Components and Version Reference
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The AVT Adaptor for MATLAB® Image Acquisition is available for several MATLAB® releases:

32-bit Windows operating systems
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R2008b and R2009a
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- AVT Adaptor DLL AVTMatlabAdaptor\_R2008b.dll v2.1.0
• MATLAB® help file AVTMatlabAdaptor\_R2008b.idmf

R2009b or later
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- AVT Adaptor DLL AVTMatlabAdaptor\_R2009b.dll v2.1.0
• MATLAB® help file AVTMatlabAdaptor\_R2009b.idmf

64-bit Windows operating systems
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R2009b or later
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- AVT Adaptor DLL AVTMatlabAdaptor64\_R2009b.dll v2.1.0
• MATLAB® help file AVTMatlabAdaptor64\_R2009b.idmf

Additionally, M-files are provided to register and unregister the adaptor:

- registerAVTMatlabAdaptor.m
• unregisterAVTMatlabAdaptor.m

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Hardware Requirements
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PC or laptop with 1 GHz 32-bit (x86) or 64-bit (x64) processor or better.

For further hardware requirements please refer to the AVT Universal Package release notes.

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Supported Operating Systems  
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The AVT Adaptor for MATLAB® Image Acquisition is designed for the 32- and 64-bit Windows operating systems:

Windows 7, Vista, and XP

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Software Requirements  
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Before installing the AVT Adaptor for MATLAB® Image Acquisition please make sure that the following software packages are installed:

- The MathWorks - MATLAB® version 7.7 (R2008b) or later
- AVT Universal Package version 2.0 or later  
The software can be downloaded free of charge under  
<http://www.alliedvisiontec.com/us/products/software/windows/avt-universal-package.html>

For further information about the AVT Universal Package and its requirements please refer to the corresponding release notes.

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Installation  
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The AVT Adaptor for MATLAB® Image Acquisition currently consists of two files:

- AVTMatlabAdaptor\_2\_0\_0.exe            Required for installing the adaptor
- ReleaseNotes.txt                    Text file version of this file

To install the AVT Adaptor for MATLAB® Image Acquisition simply start the AVTMatlabAdaptor.exe and follow the instructions shown on the screen.

Please refer to the AVT Adaptor for MATLAB® Image Acquisition - User Guide to learn more about the installation and usage of the software itself.

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Current Limitations  
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- The Image formats Raw16, Monol6, Rawl2, Monol2, YUV411, and YUV422 are not displayed properly in the Image Acquisition Toolbox, because the pixel data structure of these formats cannot be set in the Image Acquisition Toolbox.  
However using these image formats within M-files does not cause any problems.
- For decoding 16 bit image formats the user can use MATLAB's `swapbyte()` function to transform the image data into a format that can be displayed in MATLAB.
- The AVT Adaptor for MATLAB® Image Acquisition lists all image formats supported by the associated camera. Depending on the 1394 bus topology some fixed formats may not work. For example:  
Setting a camera to image format 800x600 RGB8 with 30 frames per second only works, when the camera is connected to the PC via an S800 interface.

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- Cameras with interlaced sensors (like GF-038 or GF-044) are not supported.
- When hardware trigger is enabled all trigger signals received within the first 100ms after starting the image acquisition will be ignored by the camera.
- Some device properties cannot be used in case preview is running. Please refer to the help file for details.

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AVT Technical Software Support  
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You can reach the AVT Technical Software Support via the corresponding contact form for your region:

Asia Pacific  
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<http://www.alliedvisiontec.com/apac/support/contact-support.html>

Europe, Middle East and Africa  
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<http://www.alliedvisiontec.com/emea/support/contact-support.html>

Germany  
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<http://www.alliedvisiontec.com/de/support/support-kontaktieren.html>

The Americas  
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<http://www.alliedvisiontec.com/us/support/contact-support.html>