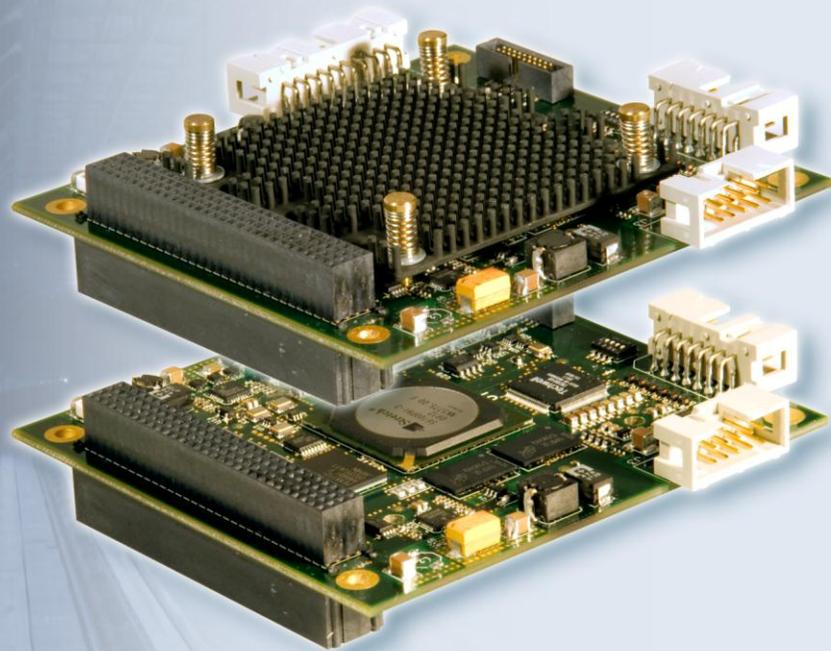


PICOLO U4 H.264 PCI-104™

Release Notes DirectShow® Driver 2.1.0.111

January 4, 2011



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Requirements

CPU Architectures

The DirectShow® Drivers support the following CPU architectures:

- Intel and AMD 32-bit x86
- Intel and AMD 64-bit x86-64

Operating Systems

The DirectShow® Drivers operate under the following operating systems:

OS Version	Additional Information	
Microsoft Windows 7	x86 (32-bit) Edition	-
	x86-64 (64-bit) Edition	
Microsoft Windows Vista	x86 (32-bit) Edition	SP2
	x86-64 (64-bit) Edition	SP2
Microsoft Windows XP	x86 (32-bit) Edition	SP3
	x86-64 (64-bit) Edition	SP2
Microsoft Windows Server 2008	x86 (32-bit) Edition	SP2
	x86-64 (64-bit) Edition	SP2
Microsoft Windows Server 2008 R2	x86-64 (64-bit) Edition	-

Note: The DirectShow Drivers allow the activation of the PAE feature of x86 and x86-64 processors used in 32-bit systems.

Development tools

The DirectShow® Drivers are supplied as:

- **DirectShow® filters** designed to be used with 32-bit (x86) Microsoft Visual C++ compilers for the development of 32-bit (x86) applications.
- **DirectShow® filters** designed to be used with 64-bit (x86-64) Microsoft Visual C++ compilers for the development of 64-bit (x86-64) applications.

The DirectShow® Drivers should be usable with any development tool that supports at least one of these interfaces. Please note that these programming interfaces also cover most of the available development tools used with other languages.

Fixes and Improvements

Additional Visual Source filters

Since version 2.1 of the driver, additional Visual Source filters are exposed. These filters are identical to the existing filter except that the index of the video input is already configured when the filter is instantiated depending on the index of the filter. For example, instantiating "U4 H.264 PCI-104 Visual Source 03" performs the same operation in the driver than instantiating the Visual Source filter and setting the input (camera) to 3.

Additional Visual Source Encoder filters

Since version 2.1 of the driver, additional Visual Source Encoder filters are exposed. These filters are identical to the existing filter except that they do not expose formatter pin and related interfaces. In addition, the index of the video input and the index of the encoder are already configured when the filter is instantiated. For example, instantiating "U4 H.264 PCI-104 Visual Source 05 Encoder 0" performs the same operation in the driver than instantiating the Visual Source filter, setting the camera to 5 and using the encoded pin.

Additional Audio Encoder filters

Since version 2.1 of the driver, additional Audio Encoder filters are exposed. These filters are identical to the existing filters except that the index of the audio input is already configured when the filter is instantiated depending on the index of the filter. For example, instantiating "U4 H.264 PCI-104 Audio Encoder 06" performs the same operation in the driver than instantiating the Audio Encoder filter and setting the input to 6.

Video standard persistence

Since version 2.1 of the driver, the video standard is "persistent". Once set, the video standard is saved in the registry. Further instantiation of a filter will use this saved value as default value. This operation is performed independently on each input of each board in the system.

Known Issues

Installation

Network connection icon appears after installation process (Microsoft Windows XP)

After the PicoU4 H.264 PCI-104 installation on a Microsoft Windows XP-based computer, a Local Area Connection 2 icon may be created in the View Network Connections section in My Network Places. The information that is displayed below this icon describes the connection as Microsoft TV/Video Connection.

As a workaround, restart the computer. After restarting, the Local Area Connection 2 icon does not appear.

Accessing the driver with a 32-bit application running on a 64-bit OS is not supported

Accessing the driver with a 32-bit application running on a 64-bit OS is not supported, even if the filters are visible. The reason is that the user mode 32-bit .ax files are not registered on 64-bit OS.

As a workaround, use 64-bit application on 64-bit OS to access the driver.

GraphEdit***Setting PAL standard in GraphEdit***

When setting PAL format in GraphEdit, it is required to press the [Apply] button on the pin to get the graph running.

Visual Source Filter***Setting Decimation Parameter (Microsoft Windows 7)***

When setting decimation to a value greater than 3, video is not yet refreshed.

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Fixes and Improvements

I420 color format

The number of planes and the number of bits per pixel is not correctly defined in the I420 color format. This issue has been solved.

IYUV color format

The IYUV color format appears in the listed formats but is not supported. It has been removed from the listed formats.

Long shutdown delay

Computer shutdown is abnormally long when the driver is installed. This issue has been solved.

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Fixes and Improvements

Corrupted image using a VMR renderer

When the formatted pin is directly connected to a VMR render, the image can appear corrupted. This issue has been solved.

Event is dispatched to all inputs

When registering for a Video Detection event on a dedicated video input, the event is generated when it occurs on any video input. This issue has been solved.

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Fixes and Improvements

Microsoft Redistributable

The PicoU4 H.264 PCI-104 driver does not need the Microsoft Redistributable to be present. Redistributable has been removed from installer.

Thermal protection

The absolute limit of the on-board thermal protection has been increased from 95°C to 100°C.

Rendering latency

A latency ranging from 500 to 800 ms was present when rendering video. This has been solved.

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When setting decimation to a value greater than 3, video is not yet refreshed.

Black Screen on Formatted Pin (Microsoft Windows XP)

If Scale parameter is equal to 4CIF or 2CIF and Color Format is YUV, the video rendered can remain black.

As a workaround, instantiate the AVI Decompressor, connect it directly to the Picolo U4 H.264 PCI-104 Formatted pin, then render the output pin of the AVI Decompressor.

Corrupted image using a VMR renderer

When the formatted pin is directly connected to a VMR render, the image can appear corrupted. This problem may occur depending on the graphic card.

As a workaround, insert the Color Space Converter Filter between the Picolo Visual Source and the VMR renderer Filter.

Event is dispatched to all inputs

When registering for a Video Detection event on a dedicated video input, the event is generated when it occurs on any video input. The same problem occurs on I/O lines.

As a workaround, use a polling mechanism to monitor the status of the inputs.

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Fixes and Improvements

General

Release 1.4.0.91 is the first official release.

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