Vimba API

VIMBA

A V T S O F T W A R E D E V E L O P M E N T K I T

Vimba API

Feature Manual

V1.2
2013-Jun-25

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Vision Technologies

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2   Introduction

2.1   Document history

Version	Date	Changes
1.0	2013-Feb-20	Initial version
1.1	2013-Mar-07	Different document generation, small changes
1.2	2013-Jun-13	Small corrections, layout changes

2.2   Conventions used in this manual

To give this manual an easily understood layout and to emphasize important information, the following typographical styles and symbols are used:

2.2.1   Styles

Style	Function	Example
Bold	Programs, inputs or highlighting important things	**bold**
Courier	Code listings etc.	`Input`
Upper case	Constants	CONSTANT
Italics	Modes, fields	*Mode*
Parentheses and/or blue	Links	(Link)

2.2.2   Symbols

Note

This symbol highlights important information.

Caution

This symbol highlights important instructions. You have to follow these instructions to avoid malfunctions.

www

This symbol highlights URLs for further information. The URL itself is shown in blue.
Example: http://www.alliedvisiontec.com

3   Vimba - Feature Overview

Vimba's feature interface provides functionality that is not covered directly by the functional interface. Features can only be accessed via modules inside of Vimba. The modules of Vimba are

- Vimba System
- Camera
- Data Stream: Features may be accessed via the camera.
- Interface
- AncillaryData

The **features** for these modules are described in the following places:

- Vimba System features (for the Vimba System module) in chapter Vimba System.
- Additional GigE features for IP configuration of the camera in chapter Vimba GigE IP Configuration.
- Additional GigE features for camera event handling in chapter Vimba Events.
- Camera features, Data Stream features and Interface features are primarily described in the Transport Layer documents for the AVT1394 Transport Layer and the AVTGigE Transport Layer

4   Vimba System

This chapter lists features that are potentially available in this module. Some features are only available under certain circumstances.

The following categories can be found below the Root category:

- Info

- Discovery

4.1   Info [AVT]

4.1.1   Elapsed [AVT]

Name	Elapsed
Interface	IFloat
Access	Read/Write
Visibility	Beginner
Values	0.0..

Elapsed time since the API was initialized.

4.1.2   GeVTLIsPresent [AVT]

Name	GeV TL is present
Interface	IBoolean
Access	Read/Write
Visibility	Beginner

The GigE Vision Transport Layer is present and working.

4.1.3   FiWTLIsPresent [AVT]

Name	FiW TL is present
Interface	IBoolean
Access	Read/Write
Visibility	Beginner

The FireWire Transport Layer is present and working.

4.1.4 UsbTLIsPresent [AVT]

Name	Usb TL is present
Interface	IBoolean
Access	Read/Write
Visibility	Beginner

The USB3 Transport Layer is present and working.

4.2 Discovery [AVT]

4.2.1 GeVDiscoveryAllOff [AVT]

Name	GeV Discovery All Off
Interface	ICommand
Access	Read/Write
Visibility	Beginner

Turns devices discovery OFF for all GigE interfaces.

4.2.2 GeVDiscoveryAllAuto [AVT]

Name	GeV Discovery All Auto
Interface	ICommand
Access	Read/Write
Visibility	Beginner

Turns devices discovery ON for all GigE interfaces.

4.2.3 GeVDiscoveryAllOnce [AVT]

Name	GeV Discovery All Once
Interface	ICommand
Access	Read/Write
Visibility	Beginner

Turns devices discovery temporary ON for all GigE interfaces.

4.2.4   DiscoveryCameraIdent [AVT]

Name	Discovery Camera Ident
Interface	IString
Access	Read/Write
Visibility	Beginner

Identifier of the camera that triggered the last discovery event.

4.2.5   DiscoveryCameraEvent [AVT]

Name	Discovery Camera Event
Interface	IEnumeration
Access	Read/Write
Visibility	Beginner
Values	Missing Detected Reachable Unreachable

Indicates the last camera discovery event.
Possible values:

- Missing: The camera is missing.

- Detected: The camera was detected.

- Reachable: The camera is reachable (can be talked to).

- Unreachable: The camera is unreachable (cannot be talked to).

4.2.6   DiscoveryInterfaceIdent [AVT]

Name	Discovery Interface Ident
Interface	IString
Access	Read/Write
Visibility	Beginner

Identifier of the interface that triggered the last discovery event.

4.2.7   DiscoveryInterfaceEvent [AVT]

Name	Discovery Interface Event
Interface	IEnumeration
Access	Read/Write
Visibility	Beginner
Values	Unavailable Available

Indicates the last interface discovery event.

5   Vimba GigE IP Configuration

This chapter lists features that are potentially available for GigEVision cameras. Some features are only available under certain circumstances.

The following categories can be found below the Root category:

- GigE

    – Current

    – Persistent

    – Configuration

5.1   GigE [AVT]

5.2   Current [AVT]

5.2.1   GevCurrentIPAddress [AVT]

Name	Current IP Address
Interface	IInteger
Access	Read/Write
Visibility	Beginner
Values	0..0xFFFFFFFF

Current IP address of the device.

5.2.2   GevCurrentSubnetMask [AVT]

Name	Current Subnet Mask
Interface	IInteger
Access	Read/Write
Visibility	Beginner
Values	0..0xFFFFFFFF

Current Subnet Mask of the device.

5.2.3 GevCurrentDefaultGateway [AVT]

Name	Current Default Gateway
Interface	IInteger
Access	Read/Write
Visibility	Beginner
Values	0..0xFFFFFFFF

Current Default Gateway of the device.

5.3 Persistent [AVT]

5.3.1 GevPersistentIPAddress [AVT]

Name	Persistent IP Address
Interface	IInteger
Access	Read/Write
Visibility	Beginner
Values	0..0xFFFFFFFF

Persistent IP address of the device.

5.3.2 GevPersistentSubnetMask [AVT]

Name	Persistent Subnet Mask
Interface	IInteger
Access	Read/Write
Visibility	Beginner
Values	0..0xFFFFFFFF

Persistent Subnet Mask of the device.

5.3.3 GevPersistentDefaultGateway [AVT]

Name	Persistent Default Gateway
Interface	IInteger
Access	Read/Write
Visibility	Beginner
Values	0..0xFFFFFFFF

Persistent Default Gateway of the device.

5.4   Configuration [AVT]

5.4.1   GevIPConfigurationMode [AVT]

Name	IP Configuration Mode
Interface	IEnumeration
Access	Read/Write
Visibility	Beginner
Values	LLA DHCP Persistent

Current IP configuration mode.

5.4.2   GevIPConfigurationApply [AVT]

Name	IP Configuration Apply
Interface	ICommand
Access	Read/Write
Visibility	Beginner

Apply the IP configuration.

6   Vimba Events

This chapter lists features that are potentially available for GigEVision cameras. Some features are only available under certain circumstances.

The following categories can be found below the Root category:

- EventData

6.1   EventData [AVT]

6.1.1   EventOverflowTimestamp [AVT]

Name	EventOverflowTimestamp
Interface	IInteger
Access	Read/Write
Visibility	Beginner

6.1.2   EventOverflowFrameID [AVT]

Name	EventOverflowFrameID
Interface	IInteger
Access	Read/Write
Visibility	Beginner

6.1.3   EventErrorTimestamp [AVT]

Name	EventErrorTimestamp
Interface	IInteger
Access	Read/Write
Visibility	Beginner

6.1.4   EventErrorFrameID [AVT]

Name	EventErrorFrameID
Interface	IInteger
Access	Read/Write
Visibility	Beginner