



## Release Information

V3.0

22 September 2010

## Contents

1	Overview .....	3
2	Package content.....	3
3	Package architecture.....	4
4	System requirements.....	5
5	Quick version overview .....	6
6	List of changes.....	6
6.1	AVT FirePackage v3.0.....	7
6.2	AVT FirePackage v2.11 .....	9
6.3	AVT FirePackage v2.10.....	10
6.4	AVT FirePackage v2.9.1 .....	13
6.5	AVT FirePackage v2.9.....	14
6.6	AVT FirePackage v2.8.1 .....	16
6.7	AVT FirePackage v2.8.....	17
6.8	AVT FirePackage v2.7.....	18
6.9	AVT FirePackage v2.6.1 .....	19
7	Known issues .....	22
8	Support.....	22

## 1 Overview

The AVT FirePackage is a software development kit (SDK) designed for the 32- and 64-bit Windows operating systems: Windows7, Vista, and XP. The SDK can be used with all AVT Firewire cameras and is free of charge.

This document provides an overview about the components and their versions provided with the AVT FirePackage. Additionally, the package architecture is shown (see figure 1) and the changes to previous releases are listed.

## 2 Package content

The current version (v3.0) of the AVT FirePackage contains the following components:

- **Firedrv.sys** – a high performance IEEE1394 bus driver
- **AVT 1394 Bus Driver Installer** – a flexible and easy-to-use driver installation tool that is utilizing the Svcinst.exe
- **Svcinst.exe** – driver install utility that enables a silent driver installation
- **AVT\_SmartView** – a comprehensive camera viewer optimized for the usage with AVT IEEE1394cameras to evaluate their SmartFeatures, or just to test and configure the camera itself. In addition, this tool can be used to update the firmware of Guppy, Pike and Stingray cameras.
- **FireGrab API** – a simple C++ camera API to deal with calls to the driver via a simplified camera interface, for which additionally a **C wrapper**, a **.NET wrapper** and an **example collections** is provided.
- **FireControl and FireStack API** – two C-type APIs that provide low-level bus access commands to get 100% control over the Firewire bus
- **FireClass API** – a C++ class model API built upon the FireStack API

In addition, with the AVT FirePackage a **User Guide** as well as for each API a corresponding **Command Reference Guide** are provided as a PDF file.

### 3 Package architecture

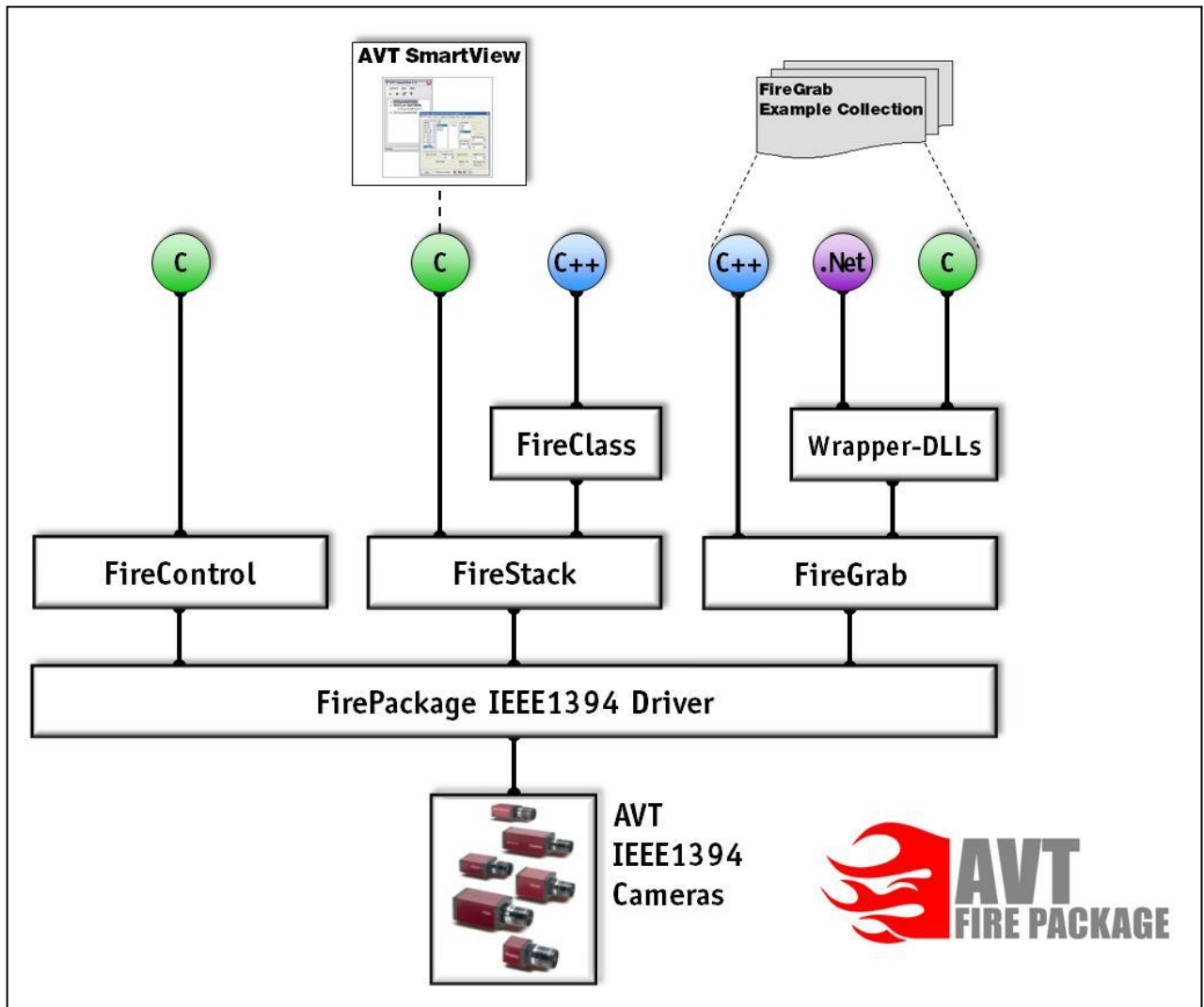


Figure 1: Architecture of the AVT FirePackage v3.0

## 4 System requirements

### Software

The AVT FirePackage is a software development kit (SDK) designed for the 32- and 64-bit Windows operating systems:

- Windows 7
- Vista (SP1)
- XP (SP2/SP3)

#### Note

This SDK should also work on older service pack releases. However, testing has been performed on the service pack versions listed above.



#### Note

AVT FirePackage v3.0 and higher does no longer support Windows 2000 and NT officially. However, the components of this SDK may be useable also on these operating systems, but no corresponding tests have been performed in our labs.



Optional for .NET compatibility the installation of .NET FrameWork 2.0 or higher is required.

### Hardware

Testing has been performed on host controllers that are based on OHCI chip sets from Texas Instruments. The driver should run on host controllers that are based on OHCI chip sets from other vendors, too. However, if there are any problems please feel free to contact our Technical Software Support (see below).

To install the AVT FirePackage properly, at least one 1394 card or port has to be available in your system.

#### Note

AVT FirePackage by default only supports AVT 1394 cameras. Third-party IIDC 1394-based digital camera can not be used with this SDK without a corresponding license.



## 5 Quick version overview

The components provided with current AVT FirePackage v3.0 have the following version numbers:

	32-bit	64-bit
<b>Driver Components</b>		
• 1394 Bus Driver (FireDrv.Sys)	<b>2.8.0.1</b>	<b>2.8.0.1</b>
• AVT 1394 Bus Driver Installer	<b>2.0.2.0</b>	<b>2.0.2.0</b>
• Driver Installation Utility (SvcInst.exe)	1.3.0.0	1.2.0.0
<b>Application Programming Interfaces</b>		
• FireGrab C++ API	<b>2.8.0.1</b>	<b>2.8.64.0</b>
• FGWrap C wrapper for FireGrab (FGCamera.dll)	1.0.0.1	1.0.64.1
• FireWrap.Net .NET wrapper for FireGrab (FGCamera.dll)	<b>1.2.34</b>	<b>1.2.34</b>
• FireStack C API	<b>2.8.0.0</b>	<b>2.8.64.0</b>
• FireClass C++ API	N/A	N/A
• FireCtrl C API	<b>2.8.0.0</b>	<b>2.8.64.0</b>
<b>Viewer Applications</b>		
• AVT SmartView (32-bit)	<b>1.11</b>	<b>1.11</b>
• FireView (32-bit)	2.20	2.20

*Remark:*

*Components with a **bold** version number have been changed compared to the previous AVT FirePackage v2.11. Changes towards previous versions of AVT FirePackage64 are not considered in this list.*

## 6 List of changes

The following tables provide an overview about the revision history of the AVT FirePackage since release v2.6.1.

Thereby, only the changed components are listed for each release. Furthermore, a **bold version number** indicates a component version number that was published in an official release of the AVT FirePackage. Version numbers in parentheses indicate a component version number that was never published in an official release of the AVT FirePackage.

## 6.1 AVT FirePackage v3.0

Release date: 22<sup>th</sup> of September 2010

### Driver Components

Component	Version		Description of changes
	32-bit	64-bit	
Driver [FireDrv]	2.8.0.1	2.8.0.1	Date limited license bug removed (unintentionally introduced in v2.7.0.3).
	(2.8.0.0)	(2.8.0.0)	Maximal twenty (was ten) 1394 host controller cards allowed per system. Enabled user buffer allocation for 64-bit systems <sup>(1)</sup> .
	(2.7.0.4)	(2.7.0.4)	Support functional extensions for FGCamera.dll Security check for SystemBuffer == NULL. Low cost 1394 card with 0 IsoDmas now has DMAs. Pointer check for pFireDev==NULL (to avoid blue screen in case card initialization failed).
	(2.7.0.3)	(2.7.0.3)	Bugfix FCTLWriteBlk: Writebuffer can be smaller than 36 Bytes now. On SurpriseRemoval driver does not hang anymore (shuts down though hardware is not present). When XIO2200 is used transmit FIFO threshold is set to 2K (to avoid broken large packets).
AVT 1394 Bus Driver Installer	2.0.2.0	2.0.2.0	This tool, which is utilizing the previous driver installer (SvcInst.exe), enables a more flexible driver installation. It is provided the first time with this SDK.

(1) When using FireGrab's AssignUserBuffers function with 64-bit operating systems, the following issues have to be considered:

- If you have only a small amount of memory, you should not assign too many buffers to avoid slow system responses.
- Although 64-bit systems allow huge amounts of data, Firedrv.sys can only use 2 GB of memory in this version.

### Viewer Applications (32-bit only)

Component	Version	Description of changes
AVT SmartView	1.11.0	Feature release; see AVT_SmartView_Release_notes.pdf for details.

## Standard APIs

Component	Version		Description of changes
	32-bit	64-bit	
FireGrab [FGCamera]	2.8.0.1	2.8.64.0	FGP_CARDRESET works when thunking DLL is used (required to run 32-bit application under 64-bit Windows).
			FGP_FRAMEBUFCOUNT returns valid value when UserBuffers are active <sup>(1)</sup> .
	(2.8.0.0)	(2.8.64.0)	MAXCARDS==20.
			FGCamera:: Allocated ISO channel is kept until IsoDma is closed AND camera device is stopped.
	(2.7.0.4)	(2.7.64.4)	Functional Extensions: - When FGGetNodeList is called with MaxCnt set to (Cnt+0x80000000), firewire cards in system are listed - DMA flags DMAF_CONTEXTISEVT and DMAF_CONTEXTISCB introduced - FGP_CARDRESET on unconnected camera performs card reset on card specified with value Bug Fix: CFGIsoDma AssignUserBuffers works.
FireWrap.Net	1.2.34	1.2.34	New version to be compatible to FireGrab 2.8.0.1, 2.8.64.1 respectively
FireStack [FCTLMain]	2.8.0.0	2.8.64.0	Version update only (for driver compatibility)
FireCtrl	2.8.0.0	2.8.64.0	MAXCARDS==20.

(1) When using FireGrab's AssignUserBuffers function with 64-bit operating systems, the following issues have to be considered:

- If you have only a small amount of memory, you should not assign too many buffers to avoid slow system responses.
- Although 64-bit systems allow huge amounts of data, Firedrv.sys can only use 2 GB of memory in this version.

## General

1. In dependency of the operating system used the installer now installs either the 32-bit or 64-bit version of the AVT FirePackage. Therewith, the **AVT FirePackage64** no longer exists.
2. The **AVT UniAPI** is no longer part of the AVT FirePackage, as since version 2.x.x this API also supports AVT GigE Vision cameras. The UniAPI now is part of the camera interface independent **AVT Universal Package** SDK.

## 6.2 AVT FirePackage v2.11

Release date: 14<sup>th</sup> of September 2009

### Driver Components

Component	Version	Description of changes
Driver [FireDrv]	2.7.0.3	Bugfix FCTLWriteBlk: Writebuffer can be smaller than 36 Bytes now. The driver does no longer hang (shuts down though absent hardware) when removing ExpressCards for notebooks suddenly. For IEEE 1394 Host Controllers featuring TI XI02200 chipset the transmit FIFO threshold is set to 2k, to avoid broken large packets. Selecting too many buffers for the ISO transfer may no longer cause a bluescreen during ISO setup phase.
	(2.7.0.2)	The TXDMA start routine can no longer be interrupted by a high priority kernel task.

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.10.2	Bugfix release with minor feature improvements; see AVT_SmartView_Release_notes.pdf

### Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.7.0.2	New parameter FGP_CARDRESET Fix: Thunking mechanism for AllocateIsoResource did not return IsoChannel correctly. Internal changes.
FireWrap.Net	1.2.1	New version to be compatible to FireGrab 2.7.0.2. Assembly has strong names now.
FireCtrl	2.7.0.0	Thunking part was not initialized correctly. Therefore, 32bit applications under Win64 could not work properly

### General

This version has been tested as 'Windows7 ready'.

### 6.3 AVT FirePackage v2.10

Release date: 16<sup>th</sup> of December 2008

#### Driver Components

Component	Version	Description of changes
Driver [FireDrv]	<b>2.7.0.1</b>	Blue Screen removed when FireGrab closes node with outstanding asynchronous operations
	(2.7.0.0)	Additional system wide trigger introduced Bug fixing in OhciExit()
	(2.6.0.8)	Unexpected Blue Screen on multi-core systems removed (synchronous hardware register access)
	(2.6.0.7)	Driver restores some PHY registers on exit (CANOPUS problem). When system shuts down for reset, driver leaves 1394-chip in PowerDeviceD0 state (Supermicro BIOS problem).
	(2.6.0.6)	Internal, minor changes
	(2.6.0.5)	Bug-fixing: Added missing events in FireStack in case of very high frame rates
	(2.6.0.4)	Bug-fixing: For frame buffer posting with missing user memory.
DriverInstaller [SrcvInst]	<b>1.3.0.0</b>	Improved behavior when restoring MS driver

#### Viewer Applications

Component	Version	Description of changes
AVT SmartView	<b>1.9</b>	Feature release; see AVT_SmartView_Release_notes.pdf

#### UniAPI Components

Component	Version	Description of changes
[UniControl]	<b>1.4</b>	New functionality: UCC_GetCameraInfo() and UCC_GetCameraInfoString() return extended version info ----- New functionality: Methods to save/load settings now uses the camera type or camera GUID ----- New feature: E_FEAT_DO_MULTIBUSTRIGGER to set trigger on multiple busses ----- Bug-fixing: Frame start notifications will no longer block if callback is in same thread context ----- Bug-fixing: Saving/loading settings from or to an empty file ----- Bug-fixing: The pointer is no longer deleted twice when opening of the camera fails ----- Bug-fixing: Removed double disconnect of the camera ----- Bug-fixing: Corrected wrong reporting in feature handling (states, min/max values and presence) ----- Added: Samples Grab2ConNative and MicroView::ShadingCtrl

<b>Component</b>	<b>Version</b>	<b>Description of changes</b>
<b>[UniTransform]</b>	<b>1.6.</b>	Added: E_UNI_SIMPLE_IMAGE_FORMAT enum for use with the UIT_XXXImageTransform functions Added: UIT_RGB8ImageTransform Added: UIT_YUV422ImageTransform Added: UIT_YUV411ImageTransform Added: UIT_Y8ImageTransform Added: UIT_Y12ImageTransform Added: UIT_Y16ImageTransform Added: UIT_Raw8ImageTransform Added: UIT_Raw12ImageTransform Added: UIT_Raw16ImageTransform Added: UIT_Raw8ImageTransform_3x3 Added: UIT_Raw8ImageTransform_IntYUV422 Added: UIT_Raw8ImageTransform_IntLCAA Added: UIT_Raw8ImageTransform_IntLCAAV Added: UIT_IRaw8CYGMImageTransform_Bin Added: UIT_IRaw8CYGMImageTransform Added: UIT_IRaw8CYGMImageTransform_3x3
<b>[UniControl.Net]</b>	<b>1.3</b>	New functionality: OpenEx with serial number and speed New functionality: Global and camera specific frame start notification New feature: MultiBusTrigger (E_FEAT_DO_MULTIBUSTRIGGER) Added GrabRGBPlanesImage Added GrabRGBYPlanesImage Added GetRGBPlanesImage Added GetRGBYPlanesImage
<b>[UniTransform.Net]</b>	<b>1.4</b>	Added: enUniSimpleImageFormat enum for use with the UniTransform::XXXPixelFormat functions Added: RGB8ImageTransform Added: YUV422ImageTransform Added: YUV411ImageTransform Added: Y8ImageTransform Added: Y16ImageTransform Added: Raw8ImageTransform Added: Raw16ImageTransform Added: Raw8ImageTransform_3x3 Added: Raw8ImageTransform_IntYUV422 Added: Raw8ImageTransform_IntLCAA Added: Raw8ImageTransform_IntLCAAV Added: IRaw8CYGMImageTransform_Bin Added: IRaw8CYGMImageTransform Added: IRaw8CYGMImageTransform_3x3 Added: Raw12ImageTransform

## Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.7.0.0	New parameter FGP_DO_MULTIBUSTRIGGER
	(2.6.0.5)	Headerfile <i>FGCamera.h</i> changed to be compatible with FirePackage versions prior to 2v25. Due to extensions in the class CFGCamera several offsets of class members were changed. This lead to incompatibilities.
		Internal CCamera object has some more functions for variable query. Internal variables are private now.
FireWrap.Net	1.2	New version to be compatible to FireGrab 2.7.0.0.
FireStack [FCTLMain]	2.7.0.0	Only version number updated (for driver compatibility)
FireClass		Color Format includes new 1394b formats

## 6.4 AVT FirePackage v2.9.1

Release date: 4<sup>th</sup> of July 2008

### Driver Components

Component	Version	Description of changes
Driver [FireDrv]	2.6.0.3	OHCIExit does a software reset on the chip IRP_MN_SET_POWER calls card close on shutdown events Killing process in Win64-BlueScreen removed

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.8.1	Bugfix release; see AVT_SmartView_1_8_1_Release_notes.pdf

### UniAPI Components

Component	Version	Description of changes
[UniControl]	1.3.2	Recompiled to be compatible with FireGrab 2.6.0.5+
	(1.3.1)	Added extended secure build checks Increased UCC_Shading_Upload speed Fixed: UCC_GetSupportedFixedFormats returns now more than Format0 information Fixed: UCC_GetCameras called with NULL array now returns the number of found cameras Fixed: UCC_PrepareFixedGrab_setup of receiver reworked Added missing UCC_GetErrorInfo strings
[UniTransform]	1.5.1	Added: UIT_Y8ToBGR
[UniControl.Net]	1.2.2	Recompiled to be compatible with FireGrab 2.6.0.5+
	(1.2.1)	UniCamera::Trigger will not throw an exception if all went ok

### Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.6.0.5	Fixed the structure of the internal class CFGCamera to regain backward compatibility to versions older than 2.5.0.6 (part of FP 2.8.1)
	(2.6.0.4)	Headerfile FGCamera.h changed to be compatible with FirePackage Versions prior to 2v25. Due to extensions in the class CFGCamera several offsets of class members were changed. This lead to incompatibilities.
FGWrap	1.0.0.1	Bug in FGPutCameraHandle removed Additional function FGSetInitialPhySpeed introduced Console Sample added
FireWrap.Net	1.1.1	Update to current version of FireGrab (2.6.0.5)
FireCtrl	2.6.0.2	Minor changes

## 6.5 AVT FirePackage v2.9

Release date: 3<sup>rd</sup> of April 2008

### Driver Components

Component	Version	Description of changes
Driver [FireDrv]	(2.6.0.2)	Multiple connected PCs handled correctly with FireGrab AppCnt also decreased when application crashes
	(2.6.0.1)	New notification for bus reset and card specific iso errors Multiple application connection for camera objects Zero MAC addresses ignored for license check Maximum user buffers increased to 8192 Internal BlockRead buffer corrected (was 2048) Lock mechanism for extremely read/write changed for fast access CSR register handling improved Callback ranges can return RCode Better handling for mapped memory ranges (PC as target)

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.8	Feature release; see AVT_SmartView_1_8_Release_notes.pdf

### UniAPI Components

Component	Version	Description of changes
[UniControl]	1.3	Added UCC_GetLicenseType / UCC_GetLicenseType_Global Added UCC_ReadBlock / UCC_WriteBlock Added UCC_SerialIO_ReceiveInfo Added UCC_GetFreeBandwidth Added UCC_LoadLutFromCSV Added open from card support Added missing UCC_GetErrorInfo strings UCC_GetCameraInfoString now also supports CustomerKey/OrderID If FrameDropped Notification is sent, the Frame Ready Notification is also sent ( Notifications shouldn't stop then) Extended documentation Freed allocated Iso resources during UCC_GrabStop GetCurrentImageFormat: BitDepth not correct for some cameras SerialIO_GetConfig: Parameter pMode not written if pBuffer is NULL
[UniTransform]	1.5	Improvements for UIT_GetSIS Changed returned error for UIT_GetBitsPerPixel if color code out of bounds UIT_GetErrorInfo missing error codes added

Component	Version	Description of changes
[UniControl.Net]	1.2	Added MultiShot start/ stop Added Read/write Block of registers from/to camera Added property StreamSpeed - Iso Speed Added serial- IO control from UniControl Added FrameDropped handler Added global and camera dependent License type information BusReset Handler notifies the user whenever a FireWire bus reset occurs Property <i>CardNumber</i> controls the card connect to the camera
[UniTransform.Net]	1.3	GetSIS takes enUniSISType which was non-public type before Extended documentation Changes and bug fixes regarding the behavior of the underlying UniTransform modul also apply to the .Net components

**Standard APIs**

Component	Version	Description of changes
FireGrab [FGCamera]	2.6.0.3	FGP_USEIRMFORBW was not working correctly in the last revision (fixed here)
	(2.6.0.2)	When multiple connect second application does not stop camera on connect/disconnect Error removed in allocation of isochronous resources for Dma/Camera
	(2.6.0.1)	New notification messages in call back function for: Busreset (WPARAM_BUSRESET) Card specific errors (WPARAM_ERRORFLAGSCARDx) New parameter FGP_CARD (specify card for connection) FGP_LICENSEINFO (retrieve license information) FGP_PACKETCOUNT (query packet count) New log utility tries to load a dll called LogUtil.dll and logs all calls into FGCamera.dll StartDevice always clears IsoEnable when not in continuous mode More consequent error handling for ReadQuad/WriteQuad/ReqdBlk/WriteBlk New 1394b registers for speed and iso channel handled correctly New pure DMA object CFGIsoDma Vendor specific colour formats are enumerated correctly New functions for host and camera license request information Bugfix: Repeated calls to AssignUserBuffers led to BSOD Different algorithm for MAC address detection
FireWrap.Net	1.1	Added FGGetLicenseInfo, globally and per camera Added FGBroadcast class Extended feature string mapping Added enum-supported DCam formats Changed return codes to ::enFireWrapResult Extended FGEventArgs to FGErrorEventArgs and FGErrorFollowUpEventArgs Extended events BusReset and ErrorFollowUp Camera implements equals based on GUID Extended documentation
FireStack [FCTLMain]	2.6.0.1	New MAC-Address-Detection
	(2.6.0.0)	Minor changes and improvements License information returned in SysHdr.Arg[0] during FCTLLicenseRequest call Different algorithm for MAC address detection
FireCtrl	2.6.0.1	New MAC-Address-Detection

## 6.6 AVT FirePackage v2.8.1

Release date: 23<sup>rd</sup> of November 2007

### Driver Components

Component	Version	Description of changes
Driver [FireDrv]	2.5.0.7	In 2.5.0.6 introduced bug removed: Disappearing cameras when FireStack was used in between
	(2.5.0.6)	Handling optimized when device reports BUSY_X in startup phase FireGrab allows packet size of 8192 under 800 Mbit

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.7.2	Feature release; see AVT_SmartView_1_7_2_Release_notes.pdf

### UniAPI Components

Component	Version	Description of changes
[UniControl]	1.2	Added new function GetSupportedFixedFormats
		Support for isochronous packet sizes beyond 1394 specification
		Extended support for triggered acquisition - New Features: E_FEAT_BURSTCOUNT, E_FEAT_BUSTRIGGER, E_FEAT_STARTIMMEDIATELY
		New Functions for isochronous transfer speed control: UCC_GetStreamSpeedMax, UCC_GetStreamSpeed, UCC_SetStreamSpeed
		UCC_GetCameras and UCC_GetCamerasEx now optionally filter temporary unavailable cameras. Filter behaviour can be controlled by E_FEAT_LIST_ALL_CAMERAS.
		Function UCC_CheckAvailable has been improved.
		Feature E_FEAT_IRMFFREEBW fixed
[UniTransform]	1.4	Bugfixes related to transfer mode and format setup
		Multishot acquisition aborted one frame early (fixed)
		Fixed access violations in IO-related functions
[UniControl.Net]	1.1	Added function UIT_RGB8ToY8 method for color-to-grayscale conversion; for details please refer to the corresponding CHM file
[UniControl.Net]	1.1	Minor changes due to UniControl updates Added functions for IO utilization: UniCamera::SetTriggerMode(), UniCamera::SetInputOutput()
[UniTransform.Net]	1.1	Minor changes due to UniTransform updates

### Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.5.0.6	Trigger source/mode inquiry bug removed (wrong mask used)
FGWrap	1.0.0.1	Bug in FGPutCameraHandle removed
		Additional function FGSetInitialPhySpeed introduced Console Sample added

## 6.7 AVT FirePackage v2.8

Release date: 22<sup>nd</sup> of August 2007

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.7	Feature release; see AVT_SmartView_1_7_Release_notes.pdf

### UniAPI Components

Component	Version	Description of changes
[UniControl]	1.1	Added multi-shot methods: UCC_MultiShotStart and UCC_MultiShotStop Added standard feature support for E_FEAT_TRIGGERDELAY, E_FEAT_SIS, E_FEAT_PARAMUPDATETIMING, E_FEAT_LOWSMEAR Added RAW12 and MONO12 formats as output formats for UCC_GetNativeImage and UCC_GrabNativeImage Added methods for encapsulated parameter transfer, UCC_ParamUpdate_Begin and UCC_ParamUpdate_Apply (all parameters changes between the two commands are applied simultaneously, but the camera is stopped during this period) Added methods for parameter list transfer, UCC_SetFeatureList, UCC_SetRegisterList and UCC_GetRegisterListInfo Bugfixing: In version 1.0, UCC_PrepareFixedGrab returned a boolean value; now, S_OK is returned in case of success
[UniTransform]	1.3	Renamed UIT_InterlacedToProgressive to UIT_InterlacedToProgressive Removed dynamic dependencies to runtime libraries of VS 8.0 Added methods UIT_Flip and UIT_FlipVertical Corrected methods UIT_YUV422ToRGBYPlanes and UIT_ResampleScanlines
[UniControl.Net]	1.0	First official release
[UniTransform.Net]	1.0	First official release

### Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.5.0.5	SetPacketSize bug removed Wrong PhySpeeds detected on CFGCamera::Connect

## 6.8 AVT FirePackage v2.7

Release date: 22<sup>nd</sup> of June 2007

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.6.2	Bug-fix release; see AVT_SmartView_1_6_2_Release_notes.pdf

### UniAPI Components

Component	Version	Description of changes
[UniControl]	1.0	First official release
[UniTransform]	1.2	Renamed UIT_InterlacedToProgressive to UIT_InterlacedToProgressive
		Removed dynamic dependencies to runtime libraries of VS 8.0
		Added methods UIT_Flip and UIT_FlipVertical
		Corrected methods UIT_YUV422ToRGBYPlanes and UIT_ResampleScanlines

### Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.5.0.4	Resolved an error in WriteBlock command when FireGrab was used in a console application
FireWrap.Net	1.0.0.0	First official release

## 6.9 AVT FirePackage v2.6.1

Release date: 15<sup>th</sup> of May 2007

In the following the remaining revision history of the AVT FirePackage is listed. Thereby, version numbers in parenthesis could also have been part of a previous release of the AVT FirePackage, but this is no longer separated explicitly.

### Driver Components

Component	Version	Description of changes
Driver [FireDrv]	2.5.0.5	Signed for Windows Vista (32 and 64) "Force Root" packet sent before every bus reset if needed (VIA problem)
	(2.5.0.3)	Removed a bus reset loop that occurred when plugging cameras in case that certain combinations of multiple devices were used.
	(2.5.0.2)	BlockRead bug when AppRelease==2 removed
		Continuous BusReset problem removed (GapCount is overwritten)
		Speed limit for FireGrab set to maximal possible speed, not to device speed
	(2.5.0.1)	Under Windows Vista-32, no administrator rights required for all interfaces (UAC can be enabled)
		Timestamp fix for BlockRead response packets
	(2.5.0.0)	Adapted to Windows Vista
		Sleep handled in any situation
		Frame limit of 1024 removed
	(2.4.0.0)	Gap-count optimization for 800 Mbit/s and optical repeater works now
		Asynchronous functions can be called with sync-object FCTLMapAddress: AppResponse was not always handled correctly
	(2.3.0.14)	Bugfix for ISO channel numbers>7: they could be used only once Internal changes for external tool support
	(2.3.0.12)	Bugfix for Dual-Processor System on Windows2003 R2. Internal call to NodeManager contained wrong IRP handling!
	(2.3.0.11)	Bugfix for user frames
	(2.3.0.10)	Due to change of development environment missing volatile declaration led to hanging driver when PCILynx card was used
	(2.3.0.9)	OHCI module: Residual count new set on isochronous descriptors for O2Micro chipset
Surprise card removal could lead to system hangup due to hardware-dependent loops for phy register access		
Unexpected cross-influence removed when deactivating and activating several devices		
Workaround for O2Micro Cardbus 1394 chipset errata integrated Reboot request during driver installation removed		
(2.3.0.7)	Prepared for Windows64	
	Initial ReadGuid has longer timeouts	
	New error flag HALERF_ISORXACK for distinguishing external (cycle, length) ISO errors from external errors	
	DMA flags sometimes could be handled wrong	
	Freeze bug with high frame rates removed	
(2.3.0.5)	FCTLSPEC_ISOHDRCHECK removed and moved to individual DMA flags Device-contained licensing extended	

Component	Version	Description of changes	
Driver (continued) [FireDrv]	(2.3.0.4)	Dell Blue Screen after Wakeup from Standby removed FrameStart event bug fixed Completely new ISO header for maximum safety OHCI CopyData<RtesCount> read bug removed (could lead to BSOD on some systems) "SpecialFlags" for bus configuration can be taken from registry	
	(2.3.0.3)	Fixed a bug concerning the maximum number of licenses	
	(2.3.0.2)	Asynchronous communication functions from NodeMgr are blocked against reentrance <FCTLisoClear> also clears IsoEvent Time stamping for frames Maximum number of licenses extended to 128 FGF_DMAHALTED also set in notification routine	
		(2.2.0.0)	<DiscardFrames> also cancels <GetFrame> Iso routines return handles instead of pointers (Address check on Iso post) Improved shutdown cancels all outstanding IRPs in a controlled manner IsoBuf.Append flags extended (IBF_PRELAST)
		(2.1.0.0)	CancelWaitEvent for NodeManager implemented NmIsoResize implemented
	(2.0.0.4)	System crash removed when iso active and bus reset	
	(2.0.0.3)	NodeMgr: If device signals ACK_BUSY after bus reset then communication is delayed up to 1s	
	DriverInstaller [SrvcInst]	1.2.0.0	Vista compatible

### Viewer Applications

Component	Version	Description of changes
AVT SmartView	1.6.1	Feature release; see AVT_SmartView_1_6_2_Release_notes.pdf

### UniAPI Components

Component	Version	Description of changes
[UniTransform]	1.0	First official release

### Standard APIs

Component	Version	Description of changes
FireGrab [FGCamera]	2.5.0.3	ExitModule blocks until Workerthread has stopped CCamera object can be disconnected even when FGExitModule has been called Blockfunction bug fixed
	(2.5.0.0)	New ReadBlock/WriteBlock New FGP_COMMANDTIMEOUT New broadcast object

Component	Version	Description of changes
FireGrab (continued) [FGCamera]	(2.4.0.0)	When GetFrame was called repeatedly with timeout, frames could be lost (fixed)
	(2.3.0.5)	Internal changes for external tool support
	(2.3.0.4)	Raw mode works correctly now
		GetFrame with time-out 0 works correctly now
		System time and cycle time associated with an isochronous frame
	(2.3.0.2)	External trigger may be switched even if On-Off-Capabilities are off
		New function: AssignUserBuffers
	(2.3.0.0)	New version counting to be consistent with FireDrv
		Asynchronous communication functions from CFGCamera can be called from multiple threads now
		New parameter <FGP_CYCLETIME> returns current bus time
		Recommended packet size used in format 7
		System time returned in frames
		Frame receive status can be polled
Camera can be reset (FGP_DORESET)		
New color modes according to IIDC 1.31		
DMA-halted comes as flag in frame status		
(1.0.0.5)	DCAM tables also support unspecified modes (where packet size is zero)	
	All variables of CFGCamera and Ccamera classes are now private due to address offset problems between different versions	
(1.0.0.4)	Worker thread of NodeManager (used for notification) terminates correctly now on FGExitModule	
	Resize now supported (FGP_RESIZE)	
	Iso channel can also be set freely now (FGP_USEIRMFORCHN)	
	New parameter FGP_SETISOCHANNEL	
	Wait time after iso parameter shortened to 3 ms and changeable via FGP_CAMACCEPTDELAY	
(1.0.0.3)	Parameter read back from camera also reads color mode in format 7	
(1.0.0.2)	Callback from FGINIT now declared as __stdcall	
	Directory read in ConfigROM uses Tags instead of Offsets	
	Recommended packet size in format 7 ignored if camera says 0	
FGWrap	1.0.0.0	C-Wrapper for CFGCamera now as DLL First official release
FireStack [FCTLMain]	2.5.0.0	New events HALEVT_SHUTDOWN/HALEVT_WAKEUP New FCTLSet/GetParameter
	(2.4.0.0)	Asynchronous functions can be called with sync-object
	(2.3.0.1)	Prepared for Windows64
FireClass		Prepared for Windows64
		Wrong VidSet counting if no mode 0 present in format 7 removed
		Feature handling for absolute value corrected
		Directory read in ConfigROM uses Tags instead of Offsets
		Recommended packet size in format 7 ignored if camera says 0
FireCtrl	2.5.0.0	Vista compatible
	(2.3.0.1)	Prepared for Windows64

## 7 Known issues

### AVT FirePackage v2.9

The UniAPI and FireGrab API and all corresponding wrapper DLLs provided with this release of the AVT FirePackage are incompatible to all other releases. Therefore, we recommend not using these API versions.

## 8 Support

Please do not hesitate to inform us about any problem, error, or bug you may discover. You can reach the **AVT Technical Software Support** via the corresponding contact form for your region:

### Asia Pacific

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

### Europe, Middle East and Africa

<http://www.alliedvisiontec.com/emea/support/contact-support.html>

### Germany

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

### The Americas

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