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Introduction

**AVT FirePackage** is an SDK that provides support for the following application development tools: Visual Studio 6/2003/2005 as well as all programming languages capable of using .NET dlls or plain C dlls.

The additionally provided AVT SmartView viewer application allows customers to operate multiple cameras and save images in a number of formats. Also included are ready-for-use example programs provided as source code. With AVT FirePackage, your application immediately supports AVT’s 1394a and 1394b digital cameras.

### Advantages
- FireWire according IEEE 1394 a/b up to 800 Mbit/s supported
- Convenient and powerful viewer application (SmartView) is provided to explore every AVT FireWire camera and their SmartFeatures
- Direct Bus Access for high performance and high speed applications
- Supports the Pike, Guppy and Stingray feature **Firmware update via FireWire** by using the SmartView application

### Restrictions
- When using the AVT FireWire driver set other devices requiring a different FireWire driver will not work as usual
- The usage of the AVT FireWire driver set requires a license. This license is already included inside the AVT FireWire cameras. For other devices/cameras, a special license has to be acquired.
- The AVT FirePackage provides only C, C++ and .NET APIs.

### Document history

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2.0.0</td>
<td>20.03.2008</td>
<td>New Manual 32-bit version AVT FirePackage: RELEASE status</td>
</tr>
<tr>
<td>V3.0.0</td>
<td>02.08.2010</td>
<td>This FirePackage Manual is for 32-bit and 64-bit Windows operating systems: Windows XP, Windows Vista and greater</td>
</tr>
</tbody>
</table>

Table 1: Document history
The manual overview describes each chapter of this manual in short.

- Chapter **System requirements** on page 8 lists conditions for hardware, operating system and software.
  - Read the Chapter **Special advice when working with Windows Vista and greater on page 9**.

- Chapter **Package installation** on page 11 describes how to install **AVT FirePackage** incl. **intek** driver. You can install the **intek** driver automatically or manually.

- Chapter **Components overview** on page 24 describes the SDK components of **AVT FirePackage** and the example projects, which you may use immediately to test the AVT camera and acquire your first images.

- Chapter **Package architecture** on page 26 gives you an overview of the package architecture.

- Chapter **Working with examples** on page 27 describes how to work with examples.
  - Read the explanations to the User Account Control (UAC) very carefully before starting any project.

- Chapter **Licensing** on page 29 describes the licensing procedure for AVT cameras.
  - Read the license information before starting any AVT camera.
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:

**Styles**

<table>
<thead>
<tr>
<th>Style</th>
<th>Function</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bold</strong></td>
<td>Programs, inputs or highlighting important things</td>
<td><strong>bold</strong></td>
</tr>
<tr>
<td><strong>Courier</strong></td>
<td>Code listings etc.</td>
<td>Input</td>
</tr>
<tr>
<td><strong>Upper case</strong></td>
<td>Register</td>
<td>REGISTER</td>
</tr>
<tr>
<td><strong>Italics</strong></td>
<td>Modes, fields</td>
<td>Mode</td>
</tr>
<tr>
<td><strong>Parentheses and/or blue</strong></td>
<td>Links</td>
<td>(Link)</td>
</tr>
</tbody>
</table>

Table 2: Styles

**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](http://www.alliedvisiontec.com)
Before operation

We place the highest demands for quality on our software. The AVT FirePackage User Guide describes the installation of the AVT FirePackage and gives also some hints how to work with examples.

**Note** Please read through this manual carefully before operating AVT cameras with AVT FirePackage.
System requirements

This chapter describes the requirements for installing AVT FirePackage:

• Hardware requirements
• Operating system requirements
• Software requirements
• Special advice when working with Windows Vista and greater (UAC)

Hardware requirements

• PC or laptop with 1 GHz 32-bit (x86) or 64-bit (x64) processor or better
• Built-in IEEE 1394 interface or
  IEEE 1394 host adapter (OHCI) card (one or more) for PCI or PCI Express
  bus or PC card or ExpressCard with IEEE 1394 port(s)
• One or more AVT 1394a or 1394b cameras connected to the system

Note

AVT offers a wide range of IEEE 1394 host adapters, both 1394a or 1394b for different requirements.

FireWire hot-plug precautions

Note

Although FireWire devices can be hot-plugged without power-down equipment, we recommend turning the computer power off, before connecting a digital camera to the system via a FireWire cable.

If you hot-plug a 1394 digital camera, it may be damaged.
Operating system requirements

- Windows 7 (32 bit and 64 bit)
- Windows Vista (32 bit and 64 bit)
- Windows XP (32 bit and 64 bit)

**Note** AVT FirePackage V3.0 and higher does no longer support Windows 2000 and Windows 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.

Software requirements

- AVT FirePackage installation file

**Note** The AVT FirePackage includes a special IEEE 1394 bus driver from intek suitable for all AVT cameras.

Special advice when working with Windows Vista and greater

This chapter gives you a short introduction to a new technology that Microsoft introduced with Vista operating systems: the so-called **User Account Control**.

**Basic information** **User Account Control (UAC)** is a technology and security infrastructure for Windows Vista and succeeding Microsoft operating systems. It aims at improving the security of the operating system by limiting application software to standard user privileges until an administrator authorizes an increase in privilege level. In this way, only applications that the user trusts receive higher privileges, and malware is kept from receiving the privileges necessary to compromise the operating system. So a user account may have administrator privileges assigned to it, but applications that the user runs do not have those privileges automatically unless the user explicitly authorizes them to have higher privileges.

**Effects** Windows **User Account Control (UAC)** prevents the compilation of example projects if those are opened directly from a location protected by UAC (i.e. C:\Program Files\...).
Therefore, to compile the AVT FirePackage example projects under Windows Vista and greater, copy the project to a user-writable location as described in Chapter Workaround for UAC problems on page 27.

**UAC warning** An example of an UAC warning when a program (e.g. AVT FirePackage installation program) wants to write in a system folder is the following:

![UAC Warning Example](image)

**Figure 1: UAC warning: example**

Perform the following steps:

1. In this case just click **Allow** because the shown program (AVTFirePackage.exe) is the installer of the FirePackage and needs to write certain files to the system folder for general use.
2. Go on working.

**Note** You may prevent this UAC warning by right-clicking the AVTFirePackage.exe and select **Run as administrator** before you install the software.
Package installation

Overview

We assume that you have already installed the IEEE 1394 interface card in your system. What happens when you do this is the following:

First of all Plug & Play will find the IEEE 1394 interface card and starts searching for appropriate drivers. Normally the standard Microsoft driver for OHCI cards will be installed.

After the IEEE 1394 interface card installation is completed, you have to replace the standard Microsoft OHCI driver with the so-called intek 1394 bus driver (AVT 1394 driver, firedrv.sys). In the following we call this driver intek driver for abbreviation purposes.

You can do this in two ways:

- Using the Driver Installation Utility or
- Installing the driver manually

In any of the two cases you start with installation of the AVT FirePackage. During this installation you can decide to install the driver automatically or install the driver later.

Note With AVT FirePackage V3.0 the UniAPI and related components are not provided any longer. This is due to the fact that since UniAPI V2.0 besides FireWire cameras also GigE cameras are supported.

UniAPI is part of the Universal Package. Please refer to the documentation of this package for more information.

Note If you have more than one FireWire card in your system and you want to use other FireWire devices:

- Only replace the standard Microsoft driver for those cards that shall be owned by the intek driver.
- The intek driver can live side by side with the Microsoft driver when multiple cards are present in your system.

Installing AVT FirePackage

To install AVT FirePackage, perform the following steps:

1. Save and exit out of all currently running applications.
2. Shut down your system.
3. Turn computer power off.
4. Connect your camera to the 1394 (FireWire) port.
5. Turn computer power on.
6. Restart your system.
7. Download the AVT FirePackage zip file from the AVT web site. Unpack it and start the corresponding *.exe.
   The Windows Installer box with a status bar will appear while setup prepares to start the installation process.
   Now you are ready to start installing AVT FirePackage.

Caution Although FireWire devices can be hot-plugged without powering down equipment, we recommend turning the computer power off, before connecting a 1394 digital camera to the system via a FireWire cable.
   If you hot-plug a 1394 digital camera, it may be damaged.

Note Before installation AVT FirePackage will remove (old) FirePackage V2.11 and will remove AVT Universal Package.
   These steps are necessary and will be done automatically by the installer.
   The Installer will also install the necessary .NET Framework.

The Welcome dialog box will appear:

Figure 2: AVT FirePackage setup: Welcome

8. Read the information in the Welcome dialog box.
– If any programs are running on your system, click **Cancel** to quit the setup program, then close any programs you have running.
– If you already closed all your programs, click **Next** to continue the installation.

The **Readme Information** dialog box will appear:

![Readme Information dialog box](image)

Figure 3: AVT FirePackage setup: Readme Information

9. Read the **IMPORTANT INFORMATION**.
10. Click **Next** to proceed.

The following dialog will appear:

![Installation options dialog box](image)

Figure 4: AVT FirePackage setup: Installation options
The default location of AVT FirePackage files is 

C:\Program Files\Allied Vision Technologies\FirePackage

11. If you want to change the location, click Browse, enter drive and path for the desired folder and click OK.

12. Furthermore you set a few general Installation Options:

<table>
<thead>
<tr>
<th>Check box / option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create shortcuts ... on the desktop.</td>
<td>When chosen: for AVT SmartView and AVT 1394 Bus Driver Installer, shortcuts for desktop are created.</td>
</tr>
</tbody>
</table>
| Install startmenu items and shortcuts for... | Choose an option to install the items/shortcuts for  
• All users  
• Current user |

Table 3: AVT Universal Package setup: Installation options (shortcuts)

13. Click Next to proceed.

The following dialog will appear:

Figure 5: AVT FirePackage setup: Ready to Install the Application

14. Click Next.
The following dialog will appear:

![AVT FirePackage setup: Updating System](image)

**AVT FirePackage** will be installed.

Once the installation is finished, the following dialog box will appear:

![AVT FirePackage setup: Successfully installed](image)

Figure 6: AVT FirePackage setup: Updating System

Figure 7: AVT FirePackage setup: Successfully installed

15. Activate **Run Driver Installer** to call setup of **AVT 1394 Bus Driver Installer** automatically after the installation is finished.

Activate **Show Release Notes**, if you want to read the release notes with the last informations and **Launch AVT SmartView** to start SmartView immediately after the installation is finished.
16. Click **Finish** to exit the installer.

**Note**  
Depending on your operating system you might need to reboot your system at this point. You will be prompted if a reboot is required; if a message appears, follow the on-screen instructions.

**Driver management**

Generally: If you want to change a driver that is bound to a device (e.g. changing from Microsoft 1394 driver to **intek** driver), you have the following two choices to do this:

- **Using AVT 1394 Bus Driver Installer** (see Chapter Using the AVT 1394 Bus Driver Installer on page 16) or
- **Installing driver manually** (see Chapter Installing driver manually on page 19)

**Note**  
Description and screenshots in this chapter were done under **Windows 7**.  
The procedure under Windows XP / Vista is similar.

**Using the AVT 1394 Bus Driver Installer**

Perform the following steps:

1. Start **AVT 1394 Bus Driver Installer**: AVT1394BusDriverInstaller.exe  
   If you have chosen **Run Driver installer**, the setup of **AVT 1394 Bus Driver Installer** starts automatically, then go on with Figure 8: AVT 1394 Bus Driver Installer: Initial screen on page 17. Otherwise:
   
   You have two choices to open the **AVT 1394 Bus Driver Installer**:  
   - **First choice**: Double-click icon on desktop:

   ![AVT 1394 Bus Driver Installer Icon]

   **Note**  
   This is only possible if you activated **Create shortcuts ... on the desktop** check box during the installation process.
- **Second choice:**
  Start → All Programs → Allied Vision Technologies → FirePackage → AVT 1394 Bus Driver Installer.

  In both cases the following window will appear:

  ![AVT 1394 Bus Driver Installer: Initial screen](image)

  **Figure 8: AVT 1394 Bus Driver Installer: Initial screen**

  In the list you find one entry per 1394 host controller.

  2. Choose the 1394 host controller on which the driver should be changed.

    **Driver Provider** column shows the driver which is currently in action: Microsoft or intek or AVT. A tooltip lists the software packages for which the driver is suitable.
3. In the **Switch To** column, click in the appropriate cell. A combo box will appear.
   - Having the **inteK** driver active, you can switch to the Microsoft driver (**Microsoft 1394 Bus Driver**).
   - Having the Microsoft driver active, you can switch to the **inteK** driver (**inteK 1394 Bus Driver**).

4. If necessary, click on **ReInstall**: This can be useful to:
   - Uninstall currently used driver.
   - Install the driver again.
   - Do a driver reset.

5. Click **Apply**.

**Note**

The drivers shown in the combo box depend on what packages you have installed on your system.

*If AVT 1394 Bus Driver Package* is installed on your system, the combo box lists also the **AVT 1394 Bus Driver**.

For more information see *AVT 1394 Bus Driver User Guide*.

*If a Windows Security* window appears, click **Install** to continue.
Installing driver manually

In most cases we recommend an installation via the driver install tool. But there may be scenarios where it’s advisable to install the driver manually, e.g.:

- If the software package installation via the **Driver Installation Utility** fails, you may try to install the driver manually.
- If an unknown FireWire card cannot be identified by the driver install tool, you have to install the driver manually.

To install the driver manually, perform the following steps under Windows Vista and greater. (Under Windows XP, a similar procedure is necessary.)

1. Call the device manager: click on **Start**, right-click **Computer**, click **Properties** and then click **Device Manager**.

---

**Note**

If you installed a driver manually, click ![refresh](image). This refreshes the list of host controllers.
The **Device Manager** window will appear:

![Device Manager window](image)

**Figure 10: AVT FirePackage: manual driver installation (Device Manager)**

2. Open the **IEEE 1394 Bus host controllers** tree, right-click the desired FireWire card and choose **Update Driver Software...**
The following dialog will appear:

![Driver Software Search Dialog](image1.png)

Figure 11: AVT FirePackage: manual driver installation (locate driver manually)

3. Choose **Browse my computer for driver software**.
   
   The following dialog will appear:

![Browse for Driver Software](image2.png)

Figure 12: AVT FirePackage: manual driver installation (pick from a list)

4. Choose **Let me pick from a list of device drivers on my computer**.
The following dialog will appear:

![Dialog for selecting device driver](image1)

Figure 13: AVT FirePackage: manual driver installation (Select device driver)

5. Click on **Have Disk...**.

The following dialog will appear:

![Copy manufacturer's files dialog](image2)

Figure 14: AVT FirePackage: manual driver installation (Copy manufacturer’s files)

6. Enter the path to where the **firedrv.inf** has been copied to and click **OK**.

The default path is:

C:\Program Files\Allied Vision Technologies\FirePackage\Driver\WDM
The following dialog will appear:

![Driver Installation Dialog](image)

**Figure 15: AVT FirePackage: manual driver installation (Choose intek driver)**

7. Select the shown hardware with the name **Generic OHCILynx_1394 (intek)** and click **Next**.
8. Ignore all signature warnings and continue until you reach the following dialog:

![Driver Installation Confirmation](image)

**Figure 16: AVT FirePackage: manual driver installation (finished installing driver)**

9. Click on **Close**.

The manual driver installation process is completed.
Components overview

This chapter describes the package content and the package architecture of AVT FirePackage.

Package content

The AVT FirePackage consists of the following SDK components:

<table>
<thead>
<tr>
<th>SDK component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firedrv.sys</td>
<td>High performance IEEE 1394 bus driver (including Svcinst.exe)</td>
</tr>
<tr>
<td>AVT 1394 Bus Driver Installer</td>
<td>Easy-to-use driver installation tool</td>
</tr>
<tr>
<td>FireControl and FireStack API</td>
<td>Two C-type APIs that provide low-level bus access commands to get 100% control over the FireWire bus</td>
</tr>
<tr>
<td>FireClass API</td>
<td>C++ class model API built upon the FireStack API</td>
</tr>
<tr>
<td>FireGrab API</td>
<td>Simple C++ camera API to deal with calls to the driver in a quite simple way via a simplified camera interface Additionaly, there is also a C wrapper and a .NET wrapper for FireGrab.</td>
</tr>
</tbody>
</table>
| AVT SmartView                  | Comprehensive camera viewer optimized for usage with AVT IEEE 1394 cameras:  
  • Evaluate SmartFeatures  
  • Test AVT cameras  
  • Configure AVT cameras |
| FireView                       | Simple viewer for IIDC-compliant cameras, only supporting standard features. Feature support is discontinued. Does not need any dll, just the installed driver. |

Table 4: AVT FirePackage SDK components

Note

With AVT FirePackage V3.0 the UniAPI and related components are not provided any longer. This is due to the fact that since UniAPI V2.0 besides FireWire cameras also GigE cameras are supported.

UniAPI is part of the Universal Package. Please refer to the documentation of this package for more information.
Together with the **AVT FirePackage** the following examples are provided:

<table>
<thead>
<tr>
<th>Example</th>
<th>... for following SDK component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FireDemo Project</td>
<td>FireStack</td>
<td>Viewer based on FireStack</td>
</tr>
<tr>
<td>FireGrab Console Project</td>
<td>FireGrab</td>
<td>Minimal console example based on FireGrab (only console output, no GUI)</td>
</tr>
<tr>
<td>GrabDemo Project</td>
<td>FireGrab</td>
<td>Viewer based on FireGrab</td>
</tr>
<tr>
<td>WrapSample Project</td>
<td>FireWrap (FireGrab)</td>
<td>Minimal console example for FireWrap. (FireWrap is a C wrapper for (C++)-FireGrab)</td>
</tr>
</tbody>
</table>

Table 5: AVT FirePackage example collection
Package architecture

The following diagram describes the package architecture of **AVT FirePackage**:

![Diagram of AVT FirePackage architecture]

Figure 17: Architecture of **AVT FirePackage**
Working with examples

As already mentioned in Table 5: AVT FirePackage example collection on page 25, AVT FirePackage comes with example projects for FireStack and FireGrab. You can open these projects and adjust them to your needs.

Note: If User Account Control (UAC) is activated, the example projects cannot be compiled directly (i.e. from the C:\Program Files directory).

In this case you get one or more error messages:
- e.g. Could not create output directory

The reason for these messages are missing write permissions due to User Account Control (UAC).

Read Chapter Workaround for UAC problems on page 27.

For basic information on User Account Control (UAC) read Chapter User Account Control (UAC) on page 28.

Workaround for UAC problems

To solve the compiling problems under UAC, perform the following steps:

1. Locate the installation directory:
   e.g. C:\Program files\Allied Vision Technologies\FirePackage

2. Copy FirePackage directory to your desktop (or one of your user directories).

3. On desktop open Samples directory and search for *.sln.

   Visual Studio opens this file.

5. You can work with this files as usual (e.g. compile) without getting the error messages listed above.
User Account Control (UAC)

Compiling projects To compile the example projects under Windows Vista and greater, copy the project to a user-writable location as described in Chapter Workaround for UAC problems on page 27.

Note For more information on Microsoft Vista User Account Control (UAC) read Chapter Special advice when working with Windows Vista and greater on page 9.

UAC warning An example of an UAC warning when a program wants to write in a system folder is the following:

In this case just click Allow and go on working.
Licensing

In order to run a camera with AVT FirePackage, your system (PC or laptop) or your camera needs a license. All AVT 1394 cameras have an embedded license. This license will be read out with the help of a license file on the PC. Primary the system examines the license file specified by the subkey LicenseFile in [HKEY_LOCAL_MACHINE\SOFTWARE\intek\FirePackage] This registry key is not overwritten during a subsequent AVT FirePackage installation.

Note The AVT FirePackage installer uses by default (32-bit and 64-bit systems) the following file:

```
  avtfplic.txt
```

in the following directory:

- XP: $ALLUSERPROFILE$\ApplicationData\AlliedVisionTechnologies\Firepackage
- Win7: $PROGRAMDATA$\AlliedVisionTechnologies\Firepackage

If no registry key is found, the file name LICENSE.TXT is assumed, which has to be in the same directory as the used DLL (FCTLMAIN.DLL, FGCamera.DLL or FireCtrl.DLL).

Note

- By default AVT FirePackage will look for the DLLs in the current directory.
- Normally the DLLs are used from the Windows System32 directory:

```
  %SYSTEMROOT%\system32 or
  %SYSTEMROOT%\SysWOW64 for 32-bit applications at 64-bit OS.
```

A typical license file for AVT cameras looks like this:

```
* FireControl License File
1EEAF9B450220075 Devicecontained Offset=F1000008 (AVT)
...
```

After the top line starting with *, each line contains one license. The line after the top line is exactly as shown above.

The license file will be read from top to bottom until a valid license is found.
Redistribution of AVT FirePackage components

Distribution of AVT FirePackage-based software also requires the redistribution of AVT FirePackage components. The actual set of necessary components depends on the utilized API. This section describes the redistribution of components on a file basis. When this approach is chosen, it lies in the responsibility of the packager that all required components are installed on the target system. Alternatively, the whole installer package provided by AVT may be integrated in third-party installers.

Note: To assure compatibility with installers provided by AVT, pre-determined component GUIDs should be used for all redistributed components. Component GUIDs are listed at the end of this chapter.

Mandatory requirements

The following requirements are mandatory for the installation of any other AVT FirePackage component to be installed on a target system.

Intek license requirements

A valid intek license file needs to be present in the same directory as the utilized DLL (usually at %SYSTEMROOT%\system32\LICENSE.TXT) or in any path pointed to by the registry entry [HKEY_LOCAL_MACHINE\SOFTWARE\intek\FirePackage]

Intek driver requirements

The intek host controller driver needs to be installed for each 1394 host controller to be used with AVT FirePackage components.

The driver files can be found at the following location:

<table>
<thead>
<tr>
<th>Windows 7, Windows Vista, Windows XP (32 bit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVT FirePackage installation folder under Driver/WDM</td>
</tr>
</tbody>
</table>

Table 6: Locations for driver files 32-bit Windows versions
Redistribution of AVT FirePackage components

.NET Framework requirements

.NET components of the AVT FirePackage require the .NET Framework version 2.0 to be installed on the target computer. Furthermore, redistributed .NET components need to be installed either side by side with the application or into the target system’s Global Assembly Cache.

For detailed information see http://msdn2.microsoft.com/en-us/library/yx7xezcf(VS.80).aspx

Requirements matrix for API files

In dependency of the application programming interface (API) used for the development of an application, different files need to be installed on the target system. The following table provides an overview about the files that belong to a certain API.

<table>
<thead>
<tr>
<th>API</th>
<th>C++</th>
<th>.NET</th>
</tr>
</thead>
<tbody>
<tr>
<td>FireStack</td>
<td></td>
<td>FCTLMAIN.dll (1)</td>
</tr>
<tr>
<td>FireControl</td>
<td>FireCtrl.dll (1)</td>
<td></td>
</tr>
<tr>
<td>FireGrab</td>
<td>FGCamera.dll (1)</td>
<td>FGCamera.dll (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FGCamera.dll (1)</td>
</tr>
</tbody>
</table>

Table 8: File requirement reference matrix for AVT FirePackage APIs

(1) These files have to be stored in the application folder or in a folder referenced in the PATH variable (usually %SYSTEMROOT%\system32 or %SYSTEMROOT%\SysWOW64 for 32-bit applications at 64-bit OS).

(2) These files have to be referenced in the target application project directly, and are found by the application via .Net assembly cache.
Requirements for the usage of AVT SmartView

In case the AVT SmartView application should be used, the following files need to be installed on the target system:

- FCTLMAIN.dll (1)
- SmartView.exe has to be installed
- GdiPlus and MSXML3 components provided by Microsoft need to be installed on the target system. GdiPlus is normally included on XP, Vista systems and greater, but not on Windows 2000 systems

(1) This file has to be stored in the application folder or in a folder referenced in the PATH variable (usually `%SYSTEMROOT%\system32`)

Component GUIDs

The MSI installer engine allows a single file to be installed by more than one installer package at a time. However, special care needs to be taken to prevent conflicts between installation packages redistributing AVT components and a possibly installed AVT FirePackage.

When installed to the mentioned location, the files below should be installed as single-file MSI Components and the following Component GUIDs should be used:

<table>
<thead>
<tr>
<th>File</th>
<th>Component GUID 32 bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>%SYSTEMROOT%\system32\FCTLMAIN.DLL</td>
<td>{9C351B2D-E8CE-64C5-D88F-4EF089D72EB6}</td>
</tr>
<tr>
<td>%SYSTEMROOT%\system32\FireCtrl.DLL</td>
<td>{D427FE2B-AFF1-07F3-1C85-0DA9FB1ED9F0}</td>
</tr>
<tr>
<td>%SYSTEMROOT%\system32\FGCamera.dll</td>
<td>{B597DEDC-ECDD-914F-53F8-F16EC045B761}</td>
</tr>
</tbody>
</table>

Table 9: MSI components and component GUIDs (32 bit)

<table>
<thead>
<tr>
<th>File</th>
<th>Component GUID 64 bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>%SYSTEMROOT%\system32\FCTLMAIN.DLL</td>
<td>{251CFD36-ECOC-445C-B95B-2639A6A0ED5}</td>
</tr>
<tr>
<td>%SYSTEMROOT%\system32\FireCtrl.DLL</td>
<td>{DDD7516A-F1EA-4A27-AB47-B6F49E4CE9B}</td>
</tr>
<tr>
<td>%SYSTEMROOT%\system32\FGCamera.dll</td>
<td>{A11D7ABD-7D08-4C70-800D-A952ED613682}</td>
</tr>
</tbody>
</table>

Table 10: MSI components and component GUIDs (64 bit)

If these files are installed to locations other than `%SYSTEMROOT%\system32`, self-generated GUIDs should be used instead.
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