AVT Software Package Quick Selector for Windows OS

Introduction

This document is designed to help programmers to decide which AVT software package they should select to develop their application based on AVT IEEE1394 cameras. Taken into account the type of the used Windows operating system (OS), the FireWire bus type and general application requirements.

AVT SDK - Windows OS - IEEE1394 Interface Type Reference Table

The following table shows the compatibility of the available AVT Windows SDKs and their specific drivers with popular Windows operating systems, whereby it is also distinguished between different IEEE1394 interfaces.

Remark:
1394a and 1394b refer to the type of OHCI compliant host adapter card. It is possible to use 1394a/1394b cameras on either type of card, but please note that 1394b cameras will not be able to run faster than S400 on a 1394a bus.

Operating System	FirePackage Firedrv.sys		Active FirePackage 1394DCAM.sys		Direct FirePackage AVT1394.sys	
	1394a	1394b	1394a	1394b	1394a	1394b
Windows 2000	✓	✓	✓	✓	✓	N/A
Windows XP (32 bit)	✓	✓	✓	restricted (1)	✓	N/A
Windows XP (64 bit)	*Q1/2008*	*Q1/2008*	*Q2/2008*	N/A (2)	N/A	N/A (2)
Windows Vista (32 bit)	✓	✓	✓	N/A (2)	*Q2/2008*	N/A (2)
Windows Vista (64 bit)	*Q1/2008*	*Q1/2008*	*Q2/2008*	N/A (2)	N/A	N/A (2)

N/A - not applicable

(1) With Windows XP SP2, 1394b devices are only supported with **S100** speed. To enable **S400** with 1394b, there is an official Microsoft hotfix KB885222 available. **S800** support can only be achieved by a 'rollback' to 1394 OHCI drivers that come with Windows XP SP1.

(2) Currently no S800 support provided by Microsoft for this operating system.

General Application Requirements

The following table is designed to help programmers to determine which AVT software package is best suited for their own application development.

Application Description	FirePackage	Active FirePackage	Direct (3) FirePackage
Multi-camera applications (AVT cameras only)	✓	restricted (4)	restricted (5)
High performance application with high deterministical demands (100% bus control)	✓	restricted (6)	N/A
Full AVT SmartFeature Usage	✓	restricted (7)	restricted (5)
Video Streaming based on DirectShow	N/A	restricted (8)	✓
Usage of ActiveX Controls	N/A	✓	no longer recommended
Multi-vendor applications using the Microsoft IEEE1394 Driver Set	N/A	✓	✓
1394a cameras used on a 1394b bus	✓	✓	✓
Applications with 1394b cameras	✓	restricted (1)	N/A
1394b cameras used on a 1394a bus	✓	✓	N/A

N/A - not applicable

(3) Currently the following AVT camera families are supported: Dolphin, Oscar, Marlin, and Guppy with restrictions

(4) No broadcast for camera setup and one-shot

(5) Restrictions caused by DirectShow itself due to fixed bandwidth allocation per camera

(6) There are some known stability issues that may cause problems in industrial and professional applications with high reliability demands.

(7) AVT SmartFeature only accessible via direct register access

(8) The Active FirePackage is based on a mini-port driver and not a stream class driver like the Direct FirePackage.
This means, the driver is not running all the time in the system, and therefore it cannot detect how many cameras (if any) are connected/disconnected in order to list/delist them. Therefore, the DirectShow application only detects a single 'AVT 1394 camera' type independent of the number of cameras connected to the system.
Nevertheless, the selection of the AVT camera type is possible via the PropertyPage of the output pin.