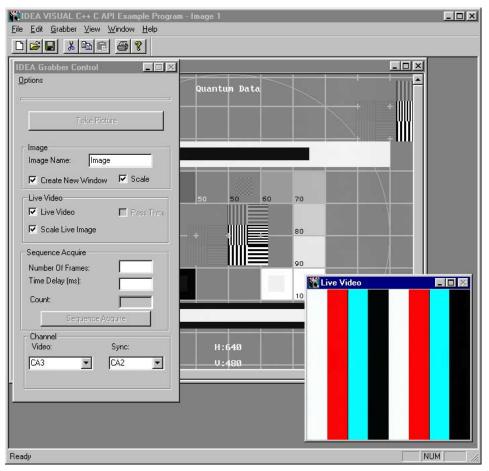
# **IDEA Software**





# **Key Features:**

- I-Series and HI\*DEF product families support
- Hardware independent
- C functions
- ActiveX controls
- Auto-SYNC Tools library
- Example programs with source code
- Royalty-free run-times

### **Software Support**

- Visual C/C++
- Visual Basic
- DELPHI
- Windows 95/98
- Windows NT
- Windows 2000

Imaging Development Environment for Applications (IDEA<sup>™</sup>) is a comprehensive set of hardware independent function calls, ActiveX controls, and software tools for board configuration, video control, image capture, video streaming, memory management, and more. IDEA consists of a Software Development Kit (SDK), a Tools library, and example programs with source code. The IDEA SDK provides both C functions and ActiveX controls so that programmers have their choice of utilizing Microsoft Visual C/C<sup>™</sup>, Visual Basic, DELPHI, or other languages that support ActiveX controls.

IDEA is a hardware independent library providing systems developers and OEMs with the confidence of a single interface to all supported boards, currently the I-Series<sup>™</sup> and HI\*DEF<sup>™</sup> product families. Users can write their applications once and support their products and applications using any of the I-Series or HI\*DEF frame grabbers. As new hardware is added to these product families, users can support them by adding the appropriate board driver and using any new function calls for new or unique features of that hardware. With IDEA, there is no need to re-program the developed application.

The SDK includes a series of C functions for frame grabber control and management as well as ActiveX controls for frame grabber information, frame grabber access and control, and video display in a window. The Tools library is a series of function calls that allows programmers to incorporate Auto-SYNC<sup>™</sup> (Foresight Imaging's automatic video analysis and board configuration software) functionality into their application programs. Several example programs, with source code, are included for image capture and display, image saving, triggered capture, video streaming, and more.

Included with IDEA is ImaFile<sup>™</sup>, an image file conversion utility software library and example program (source code included). File types supported with ImaFile include BMP, TIFF, and JPEG.

## **IDEA Software Functions and Controls**

#### **Board Information**

nHP GetBoardInfo

#### **Image Data Access**

ihHD\_Allocate eHP\_FBFastRead eHP\_FBFastWrite eHP\_FBHisto

#### **Image Handle**

eHD\_ABOCancel
eHD\_ABOGetStatus
eHD\_ABORelease
eHD\_ABOWait
eHD\_Command
bHD\_CommandDone
eHD\_Deallocate
eHD\_Deallocate
eHD\_FBFastReadPixel
eHD\_FBHistoPixel
eHD\_RSET\_Get
eHD\_RSET\_Set
eHD\_SetChannel

### Millisecond Timer

fine\_abswait fine\_add fine\_ascii\_local fine\_delta fine\_later fine\_now fine\_subtract fine\_wait

### **Preparing Board Access**

bhHP\_Claim nHP\_ClaimAll eHP\_Close \_HP\_Error eHP\_Open HP\_UnClaim

#### **Register Functions**

HPIout
HPout
eHD\_RSET\_Check
eHP\_RSET\_FRead
eHP\_RSET\_FWrite
eHP\_RSET\_Set
wHPIin
wHPin

#### **Tools**

eHD\_ASInitiate eHD\_ASTerminate bHP\_CSyncDetect nHP\_Report eHD\_SyncSurvey HD\_VideoAlign HD\_VideoMeasure

#### Video Control

eHP\_Command
bHP\_CommandDone
eHP\_CommandDone
bHP\_CommandReady
eHP\_CommandReady
eHD\_LiveVideo
eHD\_NumberFields
eHP\_SetBlackLevel
eHP\_SetChannel
eHP\_SetGain
eHD\_SetSyncSource
eHD\_TrackSync

### **ActiveX Controls**

### 1) ImaBoardInfo Control

This is an overview control that provides the application with information about how many and what kinds of boards are present in the system.

#### **Properties**

BoardCount BoardHandle BoardType

#### 2) CImaFG Control

This is the primary interface for accessing the board. Through this interface, an application is able to access the hardware to initialize the board, perform video-tuning operations and access the video data.

#### **Properties**

BitsPerPixel BoardHandle BoardLocation BoardType **Brightness** Contrast **FireSnapEvent** FrameGrabDelay HardwareProfile PixelType SequenceCount SerialNumber SnapMode SyncChannel VideoChannel XScaleFactor YScaleFactor

#### Methods

Close GetDeviceInfo GetImageData GetImageDIB GetImagePicture GetLine **InitRGB IsVideoDetected** Open SaveImageToFile **SetDisplayWindow** Snap SnapRGB SnapSequence StreamCapture TriggeredSnap

#### **Events**

SnapImage ExternalTrigger SequenceComplete

### 3) CImaDisplay Control

This is the interface that an application uses to create a live or pseudo live video window. This interface controls passing data from the frame grabber into a DirectDraw overlay surface where it is displayed.

#### **Properties**

BackColor BorderStyle ColorKey DisplayMode ScaleImageDisplay

### Methods

Disable
Enable
GetDC
RegisterVideoWindow
ReleaseDC
SetImageHandle
UnregisterVideoWindow

For a description of each function, please see the IDEA Software data sheet online at www.foresightimaging.com



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