



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™) 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++, 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™ and HI*DEF™ 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™ (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™, an image file conversion utility software library and example program (source code included). File types supported with ImaFile include BMP, TIFF, and JPEG.

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_DeallocateAll
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

HPInout
HPout
eHD_RSET_Check
eHP_RSET_FRead
eHP_RSET_FWrite
eHP_RSET_Set
wHPIn
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
PixelFormat
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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