



Impact ActiveX C++ Getting Started

Publication # 843-0150 Rev 11.8

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Telephone: 952-996-9500
Facsimile: 952-996-9501
Web site: <http://www.datalogic.com>
E-Mail: mvsupport@datalogic.com

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Technical Support

If you have technical questions about the operation of any Datalogic product, contact your distributor or Datalogic Automation, Inc. Please have the following information available before you call:

- The model and serial number located on the Datalogic unit. The version number of the Impact software you are running, found in the title bar of the software.
- The type and version number of the operating system software you are running on the client computer.

Chapter 1: Using C++ with Impact ActiveX

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Using C++ with Impact ActiveX

This manual documents the C++ sample programs provided by Datalogic that uses the Impact ActiveX interface. The interface allows ActiveX/COM programmers to access data and events on Datalogic (including network-connected Emulator) devices.

Using ActiveX, a C++ programmer can monitor and operate a Datalogic device, including the ability to read and write tool and task inputs and outputs, to load and unload programs, to trigger the device to snap an image, and to respond to device events. The C++ program can concurrently interact with other subsystems such as a Quality Control monitoring implementation as the programmer desires.

For a more general overview of Impact ActiveX installation, configuration, and use, refer to the Impact ActiveX Reference Guide (Publication # 843-0119).

NOTE: This manual does not provide detailed operation about Datalogic Cameras. It assumes you have some knowledge of how vision programs and Impact tools and tasks are structured, how to access tool and task data, and that you understand Impact terminology.

The terms Datalogic vision device and Datalogic camera are used interchangeably in this document to refer to the M-Series and MX-U Series processors.

NOTE: Impact ActiveX cannot be used on the Datalogic model A30, T4x-Series, or P-Series Smart Cameras.

To initially configure the Datalogic device and create Impact vision programs and control panels, you need to install Impact software, including Vision Program Manager (VPM) and Control Panel Manager (CPM) on a host computer. If you do not intend to create or modify vision programs, you do not need to install the Impact software (VPM and CPM) on the host computer.

For more details about using Datalogic devices and the Impact Vision Program Manager (VPM) refer to the Hardware Guides and the Impact Software Reference Guide.

Overview

The sample provided includes C++ source code based on standard Microsoft Visual Studio 2008 C++ Dialog Application templates, Microsoft Visual Studio 2008 build files, a built executable for Windows XP+, the sample's Impact vision program and the Impact ActiveX type library.

To easily view, modify, and build the sample, you typically need to install Microsoft Visual Studio 2008+.

For the sample running on the host to interact via ActiveX with a device, you must install Impact Software (including Impact ActiveX) Release 10.1.0 or greater on the host PC and the Datalogic vision device. The Major.Minor software release version (10.1) is also the interface version and the two must agree for host and device to successfully communicate. The ActiveX interface is implemented as a DLL, Impact.dll, which is installed and registered during the Impact ActiveX software installation.

You may copy, modify, and use this sample program code, subject to the terms of Datalogic's Software End User License Agreement.

Files

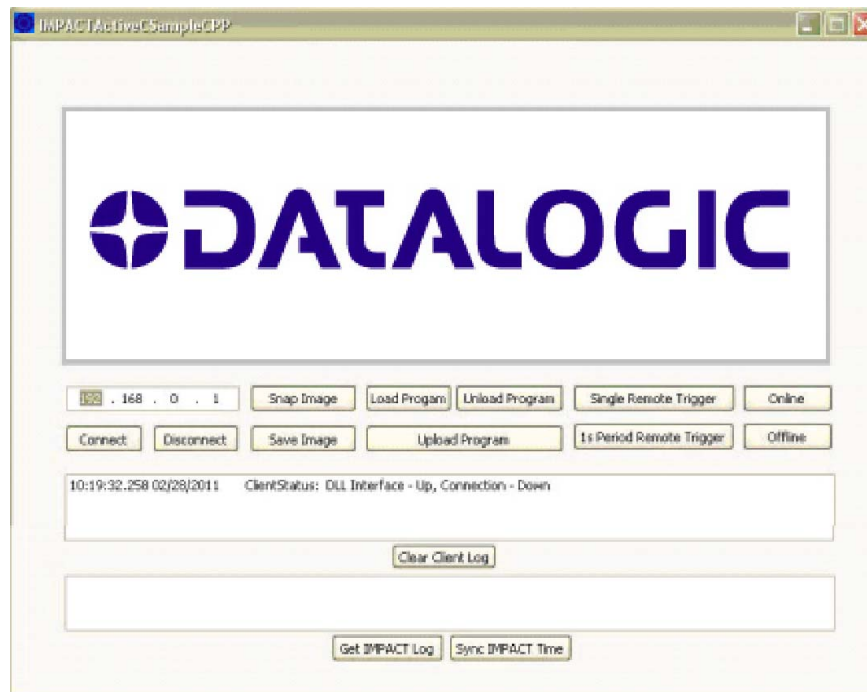
Look in the "install folder" for the sample files:

C:\install folder\IMPACT\Vision Device APIs\ActiveX\Sample Applications\CPPActiveX\

app\	IMPACTActiveXSampleCPP.*	Microsoft VS 2008 project
	*.cpp, *.h, *.rc, *.txt, *.bmp	UI C++ source code
	Impact.dll, Impact.idl	IMPACT ActiveX type library
app\Debug	IMPACTActiveXSampleCPP.exe	Windows XP+ prebuilt executable
	IMPACTActiveXSampleCPP.vp	Sample device program
	CImpact.PPT.bmp	logo for sample.exe
app\res	*.rc, *.ico	VS2008 resource and icon files
common\	*.cpp, *.h -	Most reusable windows control and ActiveX inter-
	face source classes	

User Interface

When you start the sample program the following User Interface is displayed:



This simple UI may be viewed as four vertical sections: Image Display, Device Control, Client Log and Device Log.

Image Display

640x480 fixed-size display window which will show a resized image collected from a connected Datalogic device when either a user manually snaps an image or an image arrives asynchronously when a trigger occurs.

Device Control

IP Address/Connect/Disconnect - To perform any control operations on a Datalogic device the application must be in a connected state. A known IP Address must be entered and the connect button operation must succeed as indicated by the client log. Only one device may be connected to at a time with the sample UI so disconnect must be exercised before connecting to another device.

Snap Image/Save Image - Manually snap a single image from the connected device and display it in the Image Display. The last image snapped (or displayed asynchronously via trigger) will be saved to the default file ImpactActiveXSampleCPP.png on button press.

Load Program/Unload Program/Upload Program - Upload a .vp program, ImpactActiveXSampleCPP.vp, from the host file system to the device file system, load that program into memory for execution and unload that program from memory if desired. This is a simple sample program that must be loaded for online triggering to successfully fetch images.

Single Remote Trigger/1s Period Remote Trigger/Online/Offline - Generate a single trigger from the host (client) or generate triggers every one second from the host (client). Pressing the 1s Period Remote Trigger button a second time will toggle its state. A Datalogic device needs to be online to accept triggers so one would need to bring the device online to begin receiving images and again offline to stop receiving images.

Client Log

Provides a time stamped log, useful for time-sequenced debugging, on the host side showing each pertinent client operation. The log may be cleared with the 'Clear Client Log' button.

Host Log

Fetches a time stamped log, useful for time-sequenced debugging and correlating with client operations, on the device side showing each pertinent operation when 'Get Impact Log' is pressed. Host and device timestamp synchronization may be achieved by using the 'Sync Impact Time' button.

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