

Using the Logitech Gaming LCD SDK with C#

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Contents

Overview3	
Making the LCD SDK work in your C# program3	
Steps	

Overview

The Logitech Gaming LCD SDK enables applications such as games to control the LCDs on supported Logitech gaming mice and keyboards.

It's built as a C++ DLL, but it can be easily integrated in a C# assembly, using P/Invoke and function marshaling.

Please refer to the Logitech SDK's Doc\LogitechGamingLCDSDK.pdf for details on the SDK's functionality.

Making the LCD SDK work in your C# program

The following steps show how to make the Logitech SDK work with a C# program. Please adapt the steps to your game for things to work.

Steps

1. Create a SDK C# wrapper class as follows:

LogitechGSDK.cs

```
using System.Collections;
using System.Runtime.InteropServices;
using System.Collections.Specialized;
using System;
public class LogitechGSDK {
       //LCD SDK
       public const int LOGI LCD COLOR BUTTON LEFT = (0x00000100);
       public const int LOGI LCD COLOR BUTTON RIGHT = (0x00000200);
       public const int LOGI LCD COLOR BUTTON OK = (0x00000400);
       public const int LOGI LCD COLOR BUTTON CANCEL = (0x00000800);
       public const int LOGI_LCD_COLOR_BUTTON_UP = (0x000010
public const int LOGI_LCD_COLOR_BUTTON_DOWN = (0x00002000);
                                                            = (0 \times 00001000);
       public const int LOGI_LCD_COLOR_BUTTON_MENU = (0x00004000);
       public const int LOGI LCD MONO BUTTON 0 = (0x00000001);
       public const int LOGI LCD MONO BUTTON 1 = (0x000000002);
       public const int LOGI_LCD_MONO_BUTTON 2 = (0x000000004);
       public const int LOGI_LCD_MONO_BUTTON_3 = (0x000000008);
       public const int LOGI LCD MONO WIDTH = 160;
       public const int LOGI LCD MONO HEIGHT = 43;
       public const int LOGI LCD COLOR WIDTH = 320;
       public const int LOGI_LCD_COLOR_HEIGHT = 240;
       public const int LOGI_LCD_TYPE_MONO = (0x00000001);
       public const int LOGI_LCD_TYPE_COLOR = (0x000000002);
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
```

```
public static extern bool LogiLcdInit(String friendlyName, int lcdType);
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern bool LogiLcdIsConnected(int lcdType);
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)
       public static extern bool LogiLcdIsButtonPressed(int button);
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern void LogiLcdUpdate();
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern void LogiLcdShutdown();
       // Monochrome LCD functions
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern bool LogiLcdMonoSetBackground(byte [] monoBitmap);
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern bool LogiLcdMonoSetText(int lineNumber, String text);
       // Color LCD functions
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern bool LogiLcdColorSetBackground(byte [] colorBitmap);
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
       public static extern bool LogiLcdColorSetTitle(String text, int red , int green ,
int blue );
       [DllImport("LogitechLcd", CharSet = CharSet.Unicode, CallingConvention =
CallingConvention.Cdecl)]
      public static extern bool LogiLcdColorSetText(int lineNumber, String text, int red,
int green, int blue);
```

2. Call the functions from the wrapper from your C# code as follows:

```
LogitechGSDK.LogiLcdInit("TEST", LOGI_LCD_TYPE_MONO | LOGI_LCD_TYPE_COLOR);
LogitechGSDK.LogiLcdColorSetTitle("Testing", 255,0,0);
LogitechGSDK.LogiLcdMonoSetText(0,"testing");
LogitechGSDK.LogiLcdShutdown();
pixelMatrix = new byte[LOGI_LCD_COLOR_WIDTH * LOGI_LCD_COLOR_HEIGHT * 4];
//fill this array with your image
LogitechGSDK.LogiLcdColorSetBackground(pixelMatrix);
```

Using the LCD SDK with C#

- 3. Copy Logitech SDK's Lib\x86\ LogitechLcd.dll to your c# 32bit executable path
- 4. Copy Logitech SDK's Lib $\x64\$ LogitechLcd.dll to your c# 64bit executable path
- 5. Compile and run your program

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