

## **INTRODUCTION**

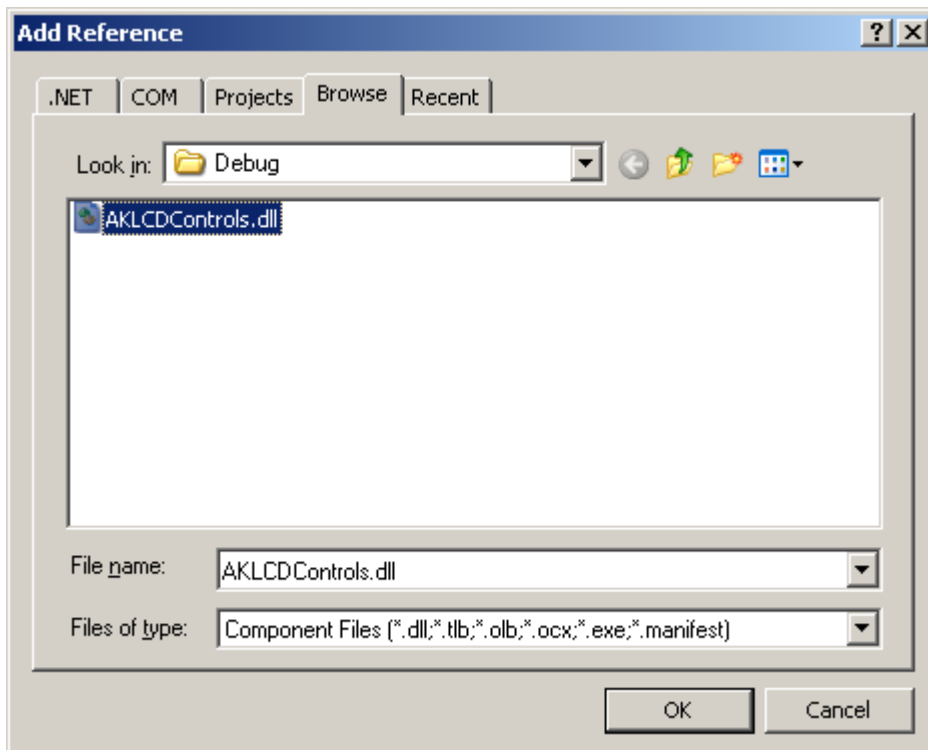
This .NET control library (DLL) will take the grunt work out of developing your own applications for the most popular displays from Crystalfontz. Use it to control the CFA-631, 632, 533/633, 634 and 635 displays. Functions are available to write to the display (row/col), clear the display, reboot, etc.

Just download and unzip the ZIP file to a folder on your hard drive, add a reference to the DLL in your development project and use it to control your Crystalfontz display. A program is also included to test each display. This control is compatible with Visual Studio .NET.

Sample code is shown below (using Visual Basic .NET).

## **USAGE**

Once you've downloaded and unzipped the file to your system, there will be a file called *AKLCDControls.DLL*. Your project will need to reference this DLL. Add a reference to your project (VB.NET example shown below) by browsing for the location of the DLL.



## USAGE (cont'd)

Next, add declarations in the code of your form to reference the displays' classes in the DLL. Use one or more declarations, depending on how many displays you have. Examples are shown below for each display class:

Public Class Form1

```
Dim mycfa631 as new AKLCDControls.cfa631
Dim mycfa632 as new AKLCDControls.cfa632
Dim mycfa533 as new AKLCDControls.cfa533
Dim mycfa633 as new AKLCDControls.cfa633
Dim mycfa634 as new AKLCDControls.cfa634
Dim mycfa635 as new AKLCDControls.cfa635
```

End Class

Then call the class to access a function. The code sample below will clear the display and write 'Hello world!' at row 0, column 0 on line 1 of a CFA-631 display connected to COM3 when clicking on a button called 'Button1':

```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
```

```
    mycfa631.Clear(3)
    mycfa631.Write(3, 0, 0, "Hello world!")
```

End Sub

See a complete listing of functions and samples for each display on the following pages.

## **FUNCTIONS**

### **CFA-631 (20x2 display)**

#### **.Register (key)**

This function will allow you to register your control through your software. This is useful if you wish to distribute your application and don't want the end-user to have to re-register the control. This function only needs to be called once per machine. *key*=string value of your registration key (if purchased)

#### **.Clear (comport)**

Clears the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa631.Clear (3)**

Clears display connected to COM3

#### **.Write (comport,row,col,text)**

Writes *text* to the *row* and *col* on display connected to *comport*.

*row* can be either 0 or 1 (line 1 or line 2) and *col* can be between 0 and 19 (20 character width).

Example: **mycfa631.Write (3,0,0,"Hello world!")**

Writes 'Hello world!' to row 0, col 0 on display connected to COM3

#### **.Brightness (comport,value)**

Sets the brightness according to *value* on display connected to *comport*. This value is usually between 0 and 100.

Example: **mycfa631.Brightness (3,100)**

Sets brightness to 100 on display connected to COM3

#### **.Contrast (comport,value)**

Sets the contrast according to *value* on display connected to *comport*. This value is usually between 0 and 255.

Example: **mycfa631.Contrast (3,95)**

Sets contrast to 95 on display connected to COM3

#### **.Reboot (comport)**

Reboots the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa631.Reboot (3)**

Reboots display connected to COM3

## **FUNCTIONS (cont'd)**

### **CFA-632 (16x2 display)**

#### **.Register (key)**

This function will allow you to register your control through your software. This is useful if you wish to distribute your application and don't want the end-user to have to re-register the control. This function only needs to be called once per machine. *key*=string value of your registration key (if purchased)

#### **.Clear (comport)**

Clears the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa632.Clear (3)**  
Clears display connected to COM3

#### **.Write (comport,row,col,text)**

Writes *text* to the *row* and *column* on display connected to *comport*. *row* can be either 0 or 1 (line 1 or line 2) and *col* can be between 0 and 15 (16 character width).

Example: **mycfa632.Write (3,0,0,"Hello world!")**  
Writes 'Hello world!' to row 0, col 0 on display connected to COM3

#### **.Brightness (comport,value)**

Sets the brightness according to *value* on display connected to *comport*. This value is usually between 0 and 100.

Example: **mycfa632.Brightness (3,100)**  
Sets brightness to 100 on display connected to COM3

#### **.Contrast (comport,value)**

Sets the contrast according to *value* on display connected to *comport*. This value is usually between 0 and 255.

Example: **mycfa632.Contrast (3,95)**  
Sets contrast to 95 on display connected to COM3

#### **.Cursor (comport,cursortype)**

Sets the cursor type on the display connected to *comport*. Accepted values for *cursortype* are *hide*, *block*, *underline*, or *invertblock*.

Example: **mycfa632.Cursor (3,"block")**  
Sets cursor type to block for display connected to COM3

#### **.Reboot (comport)**

Reboots the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa631.Reboot (3)**  
Reboots display connected to COM3

## **FUNCTIONS (cont'd)**

### **CFA-533/633 (16x2 display)**

#### **.Register (key)**

This function will allow you to register your control through your software. This is useful if you wish to distribute your application and don't want the end-user to have to re-register the control. This function only needs to be called once per machine. *key*=string value of your registration key (if purchased)

#### **.Clear (comport)**

Clears the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa533.Clear (3)**

Clears display connected to COM3

#### **.Write (comport,row,col,text)**

Writes *text* to the *row* and *col* on display connected to *comport*.

*row* can be either 0 or 1 (line 1 or line 2) and *col* can be between 0 and 15 (16 character width).

Example: **mycfa633.Write (3,0,0,"Hello world!")**

Writes 'Hello world!' to row 0, col 0 on display connected to COM3

#### **.Brightness (comport,value)**

Sets the brightness according to *value* on display connected to *comport*. This value is usually between 0 and 100.

Example: **mycfa533.Brightness (3,100)**

Sets brightness to 100 on display connected to COM3

#### **.Contrast (comport,value)**

Sets the contrast according to *value* on display connected to *comport*. This value is usually between 0 and 255.

Example: **mycfa633.Contrast (3,95)**

Sets contrast to 95 on display connected to COM3

#### **.Reboot (comport)**

Reboots the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa633.Reboot (3)**

Reboots display connected to COM3

## **FUNCTIONS (cont'd)**

### **CFA-634 (20x4 display)**

#### **.Register (key)**

This function will allow you to register your control through your software. This is useful if you wish to distribute your application and don't want the end-user to have to re-register the control. This function only needs to be called once per machine. *key*=string value of your registration key (if purchased)

#### **.Clear (comport)**

Clears the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa634.Clear (3)**  
Clears display connected to COM3

#### **.Write (comport,row,col,text)**

Writes *text* to the *row* and *column* on display connected to *comport*. *row* can be either 0, 1, 2 or 3 (lines 1-4) and *col* can be between 0 and 19 (20 character width).

Example: **mycfa634.Write (3,0,0,"Hello world!")**  
Writes 'Hello world!' to row 0, col 0 on display connected to COM3

#### **.Brightness (comport,value)**

Sets the brightness according to *value* on display connected to *comport*. This value is usually between 0 and 100.

Example: **mycfa634.Brightness (3,100)**  
Sets brightness to 100 on display connected to COM3

#### **.Contrast (comport,value)**

Sets the contrast according to *value* on display connected to *comport*. This value is usually between 0 and 255.

Example: **mycfa634.Contrast (3,95)**  
Sets contrast to 95 on display connected to COM3

#### **.Cursor (comport,cursortype)**

Sets the cursor type on the display connected to *comport*. Accepted values for *cursortype* are *hide*, *block*, *underline*, or *invertblock*.

Example: **mycfa634.Cursor (3,"block")**  
Sets cursor type to block for display connected to COM3

#### **.Reboot (comport)**

Reboots the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa634.Reboot (3)**  
Reboots display connected to COM3

## **FUNCTIONS (cont'd)**

### **CFA-635 (20x4 display)**

#### **.Register (key)**

This function will allow you to register your control through your software. This is useful if you wish to distribute your application and don't want the end-user to have to re-register the control. This function only needs to be called once per machine. *key*=string value of your registration key (if purchased)

#### **.Clear (comport)**

Clears the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa635.Clear (3)**

Clears display connected to COM3

#### **.Write (comport,row,col,text)**

Writes *text* to the *row* and *col* on display connected to *comport*.

*row* can be either 0, 1, 2 or 3 (lines 1-4) and *col* can be between 0 and 19 (20 character width).

Example: **mycfa635.Write (3,0,0,"Hello world!")**

Writes 'Hello world!' to row 0, col 0 on display connected to COM3

#### **.Brightness (comport,value)**

Sets the brightness according to *value* on display connected to *comport*. This value is usually between 0 and 100.

Example: **mycfa635.Brightness (3,100)**

Sets brightness to 100 on display connected to COM3

#### **.Contrast (comport,value)**

Sets the contrast according to *value* on display connected to *comport*. This value is usually between 0 and 255.

Example: **mycfa635.Contrast (3,95)**

Sets contrast to 95 on display connected to COM3

#### **.Reboot (comport)**

Reboots the display connected to USB/serial port specified by integer *comport*.

Example: **mycfa635.Reboot (3)**

Reboots display connected to COM3

## **TEST PROGRAM**

A test utility is included with the DLL called *AKLCDControlsTest.Exe*. With this, you can verify that the .NET control is working properly with your display. Simply choose your display and port from the dropdowns, enter text in the textboxes and click 'Write' to send the text to the display. Other options include clearing the display, rebooting the display and brightness and contrast controls. See screenshot below:

