

# NEW Galil .NET API Aids Development of Windows-based .NET Applications

Galil now offers their newly created .NET Application Program Interface (API) designed to provide a set of classes that aid in the development of Windows®-based .NET software applications. Additionally, this API helps programmers by providing the interface they need to communicate to Galil controllers from a .NET environment. .NET API benefits include:

- **.NET compliant.** Data types/structures implemented take advantage of .NET programming environment. All of the core functions needed for communicating with Galil controllers have been ported to the .NET development platform
- **Ease of programming.** Online help (F1) is available for quick access to the help files and “Intellisense” auto-completion of functions.

- **Improved error handling.** Exception-based error handling that simplifies error checking.

The Galil namespace contains classes that define values and reference types used to communicate with Galil motion controllers from a .NET project. Programmers who are familiar with the Galil 'C' API (DMC32.dll) should also find this .NET API to be familiar. The list of classes in the Galil namespace is shown in *Table 1*.

With the .NET API, software developers now have the building blocks necessary to write programs in a common .NET programming environment. A sample VB.NET program to communicate to the controller is shown in *Table 2*. Contact Galil for other VB.NET and C# examples.

Table 1: .NET Classes

DMCAPI	The DMCAPI class is the core of the Galil namespace and supports all communication with Galil controllers.
DMCArray	The DMCArray class allows the programmer to more easily utilize arrays on the motion controller.
DMCDR	The Data Record class represents the data record that most Galil Motion Controllers can produce. The data record is received from the controller in binary form and used to fill in the members of this class for easy access to the information.
DMCException	An exception class derived from System.Exception that adds Galil specific information.
DMCGalilRegistry	The DMCGalilRegistry class supports the use of the Galil Registry. The Galil Registry is a series of keys within the Windows registry that is used to store a controller's communication configuration. When a communication handle is opened to a controller using the DMCAPI class, the information stored in the Galil Registry is used to configure the communication handle.

Table 2: Sample VB NET Program

```
Imports Galil                                     'use Galil namespace

Public Class Form1
    Inherits System.Windows.Forms.Form
    Dim Controller As DMCAPI                       'declare controller object

    Private Sub Form1_Load()
        Controller = New DMCAPI                   'allocate memory for controller object
        Controller.apiOpen(1, System.IntPtr.Zero) 'open communications

        Controller.sCommand("SHX;PRX=10000;BGX")  'Send Position Relative move command
        Controller.apiWaitForMotionComplete("X", True) 'Wait for motion to complete
        TextBox1.Text = Controller.sCmdTrim("TPX")  'Display X axis Position in TextBox1
    End Sub

    Private Sub Form1_Closed()
        Controller.apiClose()                     'close communication
    End Sub
```