



Programming Considerations for Using VISA with Visual Basic 6

Application Note

This application notes covers some considerations for programming with VISA in Visual Basic. This information applies to Microsoft® Visual Basic version 6.0; for information on building a VISA application in newer versions of Visual Basic, see the VISA Online Help. For a complete Microsoft Visual Basic Version 6.0 sample program, see the VISA User's Guide.

Required module for a Visual Basic VISA program

Before you can use VISA specific functions, your application must add the `visa32.bas` VISA Visual Basic module found in `C:\Program Files\VISA\winnt\include\` (assuming default installation directories).

Adding the `visa32.bas` file to your project

To install `visa32.bas`:

1. Select **Project > Add Module** from the Visual Basic 6.0 menu.
2. Select the **Existing** tab.
3. Browse and select the `visa32.bas` file from the applicable directory (by default, `C:\Program Files\VISA\winnt\include\`).
4. Click the **Open** button.

VISA limitations in Visual Basic

VISA functions return a status code that indicates success or failure of the function. The only indication of an error is the value of a returned status code. The **VB Error** variable is not set by any VISA function. Thus, you cannot use the **ON ERROR** construct in VB or the value of the VB Error variable to catch VISA function errors. VISA cannot call back to a VB function. Thus, you can only use the `VI_QUEUE` mechanism in `viEnableEvent`. There is no way to install a VISA event handler in VB.

VISA functions that take a variable number of parameters (`viPrintf`, `viScanf`, `viQueryf`) are not callable from VB. Use the corresponding `viVPrintf`, `viVScanf` and `viVQueryf` functions instead. You cannot pass variables of type **Variant** to VISA functions. If you attempt this, the Visual Basic program will probably crash with a 'General Protection Fault' or an 'Access Violation.'

Format conversion commands

The functions `viVPrintf`, `viVScanf` and `viVQueryf` can be called from VB, but there are restrictions on the format conversions that can be used. Only one format conversion command can be specified in a format string (a format conversion command begins with the `%` character). For example, the following is invalid:

```
status = viVPrintf(vi, "%lf%d" + Chr$(10), ...)
```

Instead, you must make one call for each format conversion command, as shown in the following example:

```
status = viVPrintf(vi, "%lf" + Chr$(10),  
dbl_value)
```

```
status = viVPrintf(vi, "%d" + Chr$(10),  
int_value)
```

Numeric arrays

When reading from or writing to a numeric array, you must specify the first element of a numeric array as the *params* parameter. This passes the address of the first array element to the function. For example, the following code declares an array of 50 floating point numbers and then calls `viVPrintf` to write from the array.

```
Dim flt_array(50) As Double
```

```
status = viVPrintf(id, "%,50f", dbl_array(0))
```



Strings

When reading in a string value with `viVScanf` or `viVQueryf`, you must pass a fixed length string as the `params` parameter. To declare a fixed length string, instead of using the normal variable length declaration:

```
Dim strVal as String
```

use the following declaration, where 40 is the fixed length.

```
Dim strVal as String * 40
```

Note: This topic content was taken directly from the Agilent VISA User's Guide. You can find this and other help documentation on your computer by navigating to the Start button → All Programs → Agilent IO Libraries Suite → Documentation.

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