IVI VISA FAQ

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1- FAQ

1-1 What is instrument driver used for?

It is a tool, which eliminates labour of instrument-control programming when you write application software controlling test and measurement instruments through the GPIB/RS232/USB/LAN interfaces.

1-2 Is IVI driver different from application software?

Different. Instrument driver is an assistance tool which helps application development and a runtime library too. In terms of position of software layer, it is also called "middle-ware".

1-3 What sort of IVI instrument driver are there?

There are two types -- IVI-C and IVI-COM defined by the IVI spec. The IVI drivers that we provide are hybrid type containing both IVI-COM and IVI-C. Also we will provide new generation standard IVI.NET drivers in the future.

1-4 Tell me relationship between development tools and IVI instrument driver types.

IVI-C drivers are suitable for LabVIEW and LabWindows/CVI. IVI-COM drivers are suitable for Microsoft development tools (such as Microsoft Visual Studio, Office, etc...). As for LabVIEW, currently we don't develop new drivers specific to LabVIEW use, but you can use IVI-C drivers by importing and converting to LabVIEW LLBs. In .NET environment IVI.NET is suitable, however you can also use IVI-COM drivers through interop assemblies.

1-5 What is needed to use IVI instrument driver?

IVI drivers can be used as long as the latest VISA library is installed to your PC running Windows XP/Vista/7. When developing apps, a development language tools is also needed. When controlling instruments via GPIB, a GPIB controller card (or USB-GPIB converter card) that is supported by VISA library is also needed.

1-6 What is VISA library?

VISA is a library specification administrated by IVI Foundation, for use with common I/O connectivity for test and measurement instruments. It defines the architecture for automated instrumentations allowing a common approach to control regardless of instrument communication interfaces (GPIB, RS232, USB, LAN, VXIbus, etc...) The VISA library is an I/O library that conforms to this specification. Currently National Instruments, Agilent Technologies, Tektronix, and Kikusui provide the libraries. Kikusui is a member company of IVI Foundation.

1-7 Where can I obtain the VISA library from?

You can obtain VISA library from each vendor's WEB site free of charge. However, mind that the end-user license is different for each vendor. As for KI-VISA, you can obtain it at our download site.

1-8 Can I use IVI drivers with any vendor's VISA library?

Yes, you can use IVI drivers regardless of VISA library vendors. However, IVI drivers may not work with older versions of VISA library. However there may be compatibility issues with development tools. If you use National Instruments LabVIEW or LabWindows/CVI we recommend using NI-VISA. If you use Agilent VEE we recommend using Agilent IO Libraries Suite. IVI drivers themselves have no compatibility issues with VISA vendors.

1-9 Can new generation of interfaces such as USB/LAN coexist with legacy GPIB?

Yes, they can coexist. Installing USB and/or LAN based instruments does not negate legacy GPIB instruments. They can coexist in the same system.

1-10 What are the suitable languages using IVI instrument drivers?

A for choice of programming languages, it is hard to decide one because it depends on the size of app software, skill of developer, preferences, and corporate policies. However, our IVI-COM/C hybrid drivers can be used with LabVIEW, LabWindows/CVI, Visual Basic, Visual C++, Visual C#, C++Builder, Delphi, Office VBA, VEE, etc... Plus, we provide guidebooks for using each language.

1-11 Can I use IVI drivers under other than Windows OS?

No, unfortunately you can't use them with non-Windows systems. IVI instrument drivers are only provided as Windows (32bit/64bit editions) DLL format.

1-12 Are there any notes when I distribute finished apps?

When you run your finished application on the execution-only PC, you need install VISA library and necessary IVI drivers on the target PC as well as the PC that you used for development.

1-13 Can I redistribute IVI drivers and KI-VISA?

As for IVI drivers, you can redistribute them only if the completed application system uses the applicable instruments. As for KI-VISA, you can redistribute it only if the completed application system uses at least one Kikusui instrument to be controlled.