Technical Support
Knowledge Center Open

IVI Instrument Drivers Overview

KEYSIGHT TECHNOLOGIES

Generated on : Apr 12, 2021

Notices

© Keysight Technologies Incorporated, 2002-2020

1400 Fountaingrove Pkwy., Santa Rosa, CA 95403-1738, United States All rights reserved.

No part of this documentation may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Keysight Technologies, Inc. as governed by United States and international copyright laws.

Restricted Rights Legend

If software is for use in the performance of a U.S. Government prime contract or subcontract, Software is delivered and licensed as "Commercial computer software" as defined in DFAR 252.227-7014 (June 1995), or as a "commercial item" as defined in FAR 2.101(a) or as "Restricted computer software" as defined in FAR 52.227-19 (June 1987) or any equivalent agency regulation or contract clause.

Use, duplication or disclosure of Software is subject to Keysight Technologies' standard commercial license terms, and non-DOD Departments and Agencies of the U.S. Government will receive no greater than Restricted Rights as defined in FAR 52.227-19(c)(1-2) (June 1987). U.S. Government users will receive no greater than Limited Rights as defined in FAR 52.227-14 (June 1987) or DFAR 252.227-7015 (b)(2) (November 1995), as applicable in any technical data.

Portions of this software are licensed by third parties including open source terms and conditions.

For detail information on third party licenses, see Notice**.**

Contents

Keysight Support for IVI Instrument Driver Standards 4

Keysight Support for IVI Instrument Driver Standards

The IVI (Interchangeable Virtual Instruments) Foundation, a consortium of T&M instrument manufacturers, system integrators and customers, approved the first IVI specifications in October 2002. The IVI standards specify an instrument driver architecture that addresses concerns with previous driver technology by providing:

1. Compatibility with popular application development environments (ADE)
2. Common command syntax across instrument families and members
3. Supporting PC industry standards such as COM (Component Object Model)

The IVI standards provide a key step in giving programmers the ability to use powerful computer-standard hardware and software environments to more economically, rapidly and easily develop T&M applications.

- Download Keysight IVI-COM and IVI-C Drivers
- Get more information on the IVI specifications at the IVI Foundation Web Site.

Key Features and Specifications
The IVI standards define an open driver architecture, a set of instrument classes and the requirements for instrument interchangeability. The standards include:

IVI Open Architecture - IVI-COM and IVI-C instrument driver specifications

- IVI-COM is the IVI driver architecture standard that is based on Microsoft´s ubiquitous COM standard. IVI-COM drivers work in industry standard software development environments, like Microsoft Visual Studio .NET, Visual Basic and Visual C++, and proprietary test and measurement software development environments, like National Instruments LabVIEW, that support COM. The current version of Keysight VEE can call IVI-COM drivers that support the IDispatch interface. (All Keysight IVI-COM drivers support the IDispatch interface.)
- IVI-C is the IVI driver architecture standard that is based on the VXI*plug&play* instrument driver specifications. IVI-C drivers work directly with VXI*plug&play*-enabled development environments, e.g. Keysight VEE, National Instrument´s LabWindows/CVI and LabVIEW. Note that you must include proprietary software from National Instruments along with the instrument specific drivers to achieve instrument interchangeability with IVI-C drivers.

IVI Classes
Interfaces for oscilloscope, digital multimeter, function generator, DC power supply, switch, power meter, spectrum analyzer and RF signal generator instrument families. The IVI Foundation provides a venue for development of class specifications for additional families as well.

Microsoft is a U.S. registered trademark of Microsoft Corporation.
Visual Studio is a registered trademark of Microsoft Corporation in the United States and/or other countries.

This information is subject to change without notice.

www.keysight.com