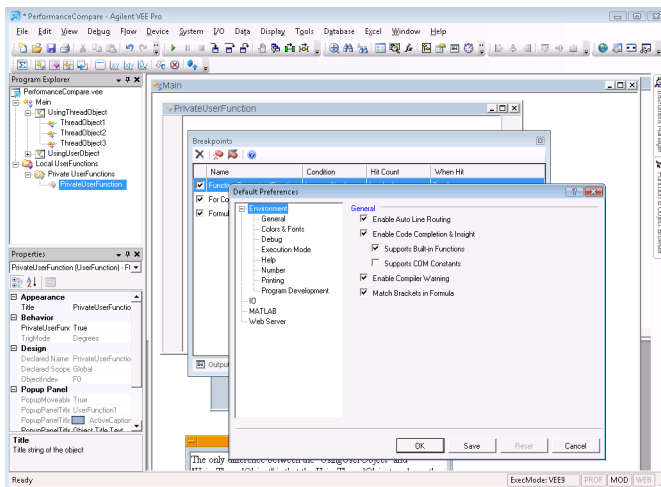


# Agilent VEE Pro 9.0 and Agilent VEE Express 9.0 Data Sheet

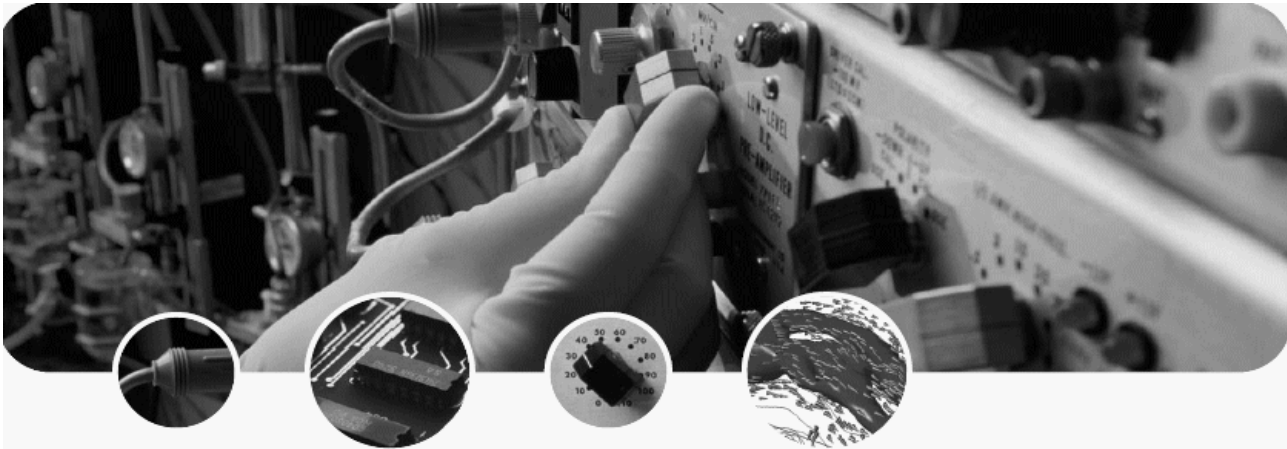


*Agilent's software products make you more productive, so you can focus on solving engineering problems, not on programming. Agilent VEE is a powerful intuitive graphical language environment that provides you the quick and easy path to measurement analysis.*

## *Agilent VEE 9.0 New Features*

- *Multithreading and Multicore Programming Support*
- *SCPI Completion*
- *Private UserFunction*
- *LXI Support*
- *Conditional Breakpoints and Breakpoints Window*
- *Error Call Stack*
- *Integrated Database Support*
- *Supporting Custom Menu in XML Format*
- *New Toolbars for VEE Objects*
- *Enhanced Default Preferences Dialog Box*
- *More Windows Standard Dialog Boxes*
- *NaN and Infinity Support*





### **Easy to Learn and Powerful Features for Increased Productivity**

Agilent VEE is a Visual Engineering Environment that allows you to program by creating intuitive “block diagrams.” You select and edit objects from pull-down menus or toolbars and connect them to each other by wires to specify the program’s flow, mimicking the order of tasks you want to perform. Agilent VEE illustrates objects and connections between them with color coding, so programs are easily understood by others. With the help of SCPI Completion, Code Completion and Code Insight, you can create programs easier and faster. You can quickly test and update code because programs can be debugged on the fly by using Conditional Breakpoints, Watch Window and Output Window. With multithreading technology and multicore programming, you can improve your system performance greatly. The Modern Integrated Development Environment with dockable tool windows gives users a more modern and streamlined programming experience. Plus, with Agilent VEE’s numerous sample programs, demos and context-sensitive help, beginners and veteran programmers alike can get started quickly and stay productive. There is also an active user’s forum that shares best practices and helps other users with common questions.

### **Designed for Test and Measurement**

Agilent VEE is designed for engineers and scientists who need to quickly create and automate measurements and tests. Agilent VEE Pro can talk to any device from any vendor using GPIB, LAN, USB, RS-232, VXI, LXI and other interfaces or buses, including PXI and SCXI data acquisition and modular instrumentation devices from National Instruments. Agilent VEE Pro can control any standard instruments and many vendor’s PC plug-in cards with an instrument driver, a vendor-supplied DLL or via Agilent VEE Pro’s easy and powerful Direct IO capability. With Agilent VEE Pro, instrument addresses and other parameters can be verified at runtime and changed on the fly, without reconfiguring programs. Agilent VEE automatically handles different data types, providing automatic conversion and giving you powerful data handling capabilities with minimal complex programming.

Agilent VEE’s compiler generates optimized code that can be further enhanced with its built-in Profiler. The Profiler allows you to quickly analyze critical sections of code to save development time when fine-tuning your programs.

Agilent VEE Pro comes standard with a RunTime execution engine that provides the ability to distribute run-only Agilent VEE Pro applications at no extra charge.

### **Open to the Software and Hardware You Choose**

Agilent VEE interfaces with popular software and hardware tools. It provides easy, menu-driven control of database and Microsoft Excel for database operations and exchanging data with spreadsheets and automating spreadsheet operations. Use Word for reports, Outlook for paging and e-mail. Agilent VEE integrates the .NET Framework and ActiveX, simplifying common tasks and making powerful system capabilities available to your programs. Now it is easy to complete tasks such as programmatically sending an email report or invoking a web page. With the included ActiveX Automation Server, other programs can call VEE Pro UserFunctions. Agilent VEE Pro supports all popular programming languages, including Visual Basic, C/C++, Visual C#, all .NET-compliant languages and National Instruments’ LabVIEW.

In addition to providing built-in support for instruments and data acquisition devices, Agilent VEE Pro works with surface-mount machines, robots and other manufacturing equipment via the .NET Framework or ActiveX libraries supplied by the manufacturer. And it can be used as a standalone solution or included in a custom in-house solution.

Agilent VEE Pro programs can also be monitored and diagnosed remotely via the web or network.

## Standards-Friendly to Preserve Your Investment

Agilent VEE supports industry-standard instrument drivers, including IVI-COM and VXI*plug&play* as well as a variety of legacy drivers. If an industry-standard driver is not available, use SCPI or the .dll library supplied with many instruments.

In addition to GPIB connectivity, Agilent VEE Pro allows you to connect directly to LAN and USB enabled instruments using industry-standard protocols. The user can dynamically change VISA Interface and Address among GPIB, USB, LXI, and LAN. VXI, PC and other backplanes can also be controlled with Agilent VEE Pro.

Agilent VEE Express only supports Agilent USB devices in LiveMode.

The open development environment of Agilent VEE allows you to easily use other applications and tools. With access to .NET classes and assemblies, Agilent VEE can programmatically perform everyday tasks and interact with other applications. The .NET Framework (Common Language Runtime and Framework Class Libraries) is installed with Agilent VEE Pro or Agilent VEE Express so it is instantly available. Support of ActiveX, DLLs, and other tools ensure access to the capabilities you need.

## Powerful

MATLAB Script and The MathWorks Signal Processing Toolbox are embedded in Agilent VEE Pro, included at no extra cost.

With MATLAB Script and The MathWorks Signal Processing Toolbox embedded in Agilent VEE Pro, you get 1800 MATLAB functions; 1000 plus of the most popular MATLAB analysis and visualization functions are preprogrammed as one-click objects in Agilent VEE Pro. Without leaving Agilent VEE Pro, you can instantly transform your measurement data into usable information. Built-in MATLAB functions include:

- Numeric computation
- Engineering & scientific graphics (2D, 3D, waterfall, bar, pie)
- Signal processing
- Arrays, matrix math..., and more

MATLAB Script and The MathWorks Signal Processing Toolbox are not available in Agilent VEE Express.

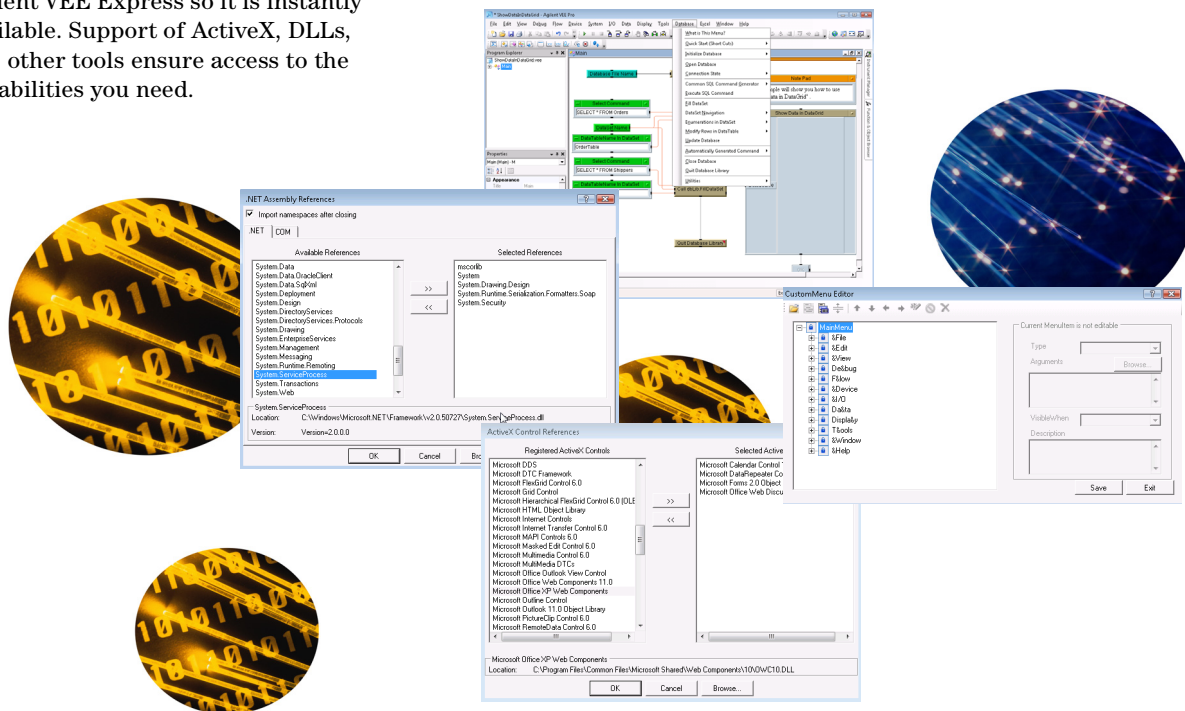
## Essential

With Agilent VEE Pro and Agilent VEE Express, you can do your job better and faster. It's an essential productivity tool for programmers worldwide, and it's the quickest, easiest way to get measurement analysis results. But don't take our word for it. Download your free, fully functional 30-day evaluation copy of Agilent VEE Pro or Agilent VEE Express at [www.agilent.com/find/vee](http://www.agilent.com/find/vee) and see it in action.

## A Complete Solution

There's no need to buy expensive add-ons to get the full set of Agilent VEE functionality. Agilent VEE includes all the capabilities and support you need to be successful including:

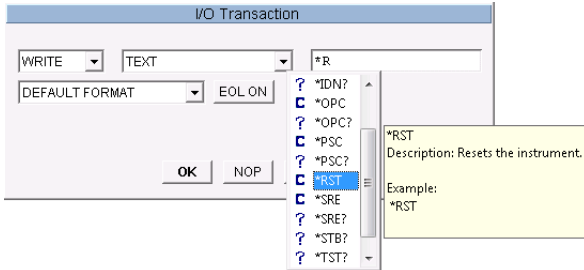
- Built-in MATLAB Script and Signal Processing Toolbox (Available in Agilent VEE Pro only)
- Menu-driven control of Excel
- Menu-driven control of database
- Support for Microsoft .NET Framework
- Unlimited RunTime distribution of your Agilent VEE Pro applications
- Localized documentation



## Minimum System Requirements for Agilent VEE Pro 9.0 and Agilent VEE Express 9.0

### Software Requirements

- Microsoft Windows Vista SP1 or higher (Business, Ultimate, Enterprise), Windows XP SP3 or higher, or Windows 2000 SP4 or higher. Please note that only 32-bit versions of OS are supported by Agilent VEE.



- Microsoft Internet Explorer 6.0 or higher.
- Microsoft Office 2000 or higher (if using Office products with Agilent VEE Pro or Agilent VEE Express).
- Agilent IO Libraries Suite 15.0 SP1 or higher (If communicating with instruments using Agilent VEE.)
- Microsoft .NET Framework 3.5 for Windows XP/ Vista, or Microsoft .NET Framework 2.0 SP1 for Windows 2000.

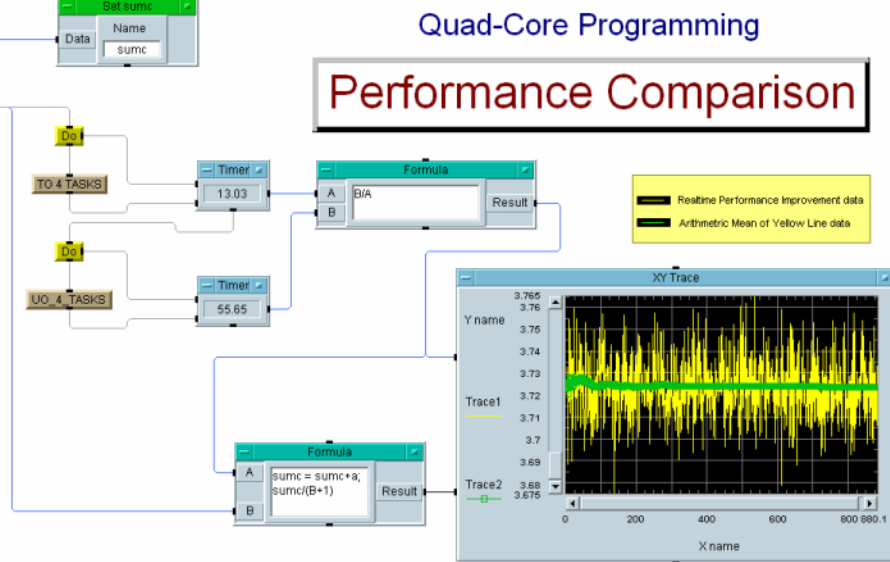
### PC Hardware Requirements

- 450 MHz Pentium® II or higher processor for Windows 2000/XP, or 1 GHz Pentium III or higher for Windows Vista.
- 128MB RAM or higher for Windows 2000/XP, or 1GB RAM or higher for Windows Vista.
- 470 MB Hard disk free space for Agilent VEE Pro, or 125 MB for Agilent Express.
- CD-ROM drive (if installing from CD).
- Super VGA (800x600) display or higher resolution monitor with 256 colors or more.

- PC keyboard and 2-button mouse
- Required connectivity options for instrumentation:
  - Agilent 82350B PCI-GPIB interface
  - Agilent E5810A LAN/GPIB gateway
  - Agilent E5805A USB/4-port RS-232 interface
  - Agilent E5813A networked 4-port USB hub
  - USB connectivity to instruments supporting the TMC protocol
  - Standard RS-232
  - LAN connectivity to instruments supporting the VXI-11 protocol
  - National Instruments (NI) I/O hardware using NI 488 version 1.5 or higher
  - NI I/O hardware using NI VISA version 3.0 or higher
- National Instruments DAQ devices and modular instruments are supported via the following APIs:

- NI-DAQ 7.3 or higher
- NI-DMM 2.3.1 or higher
- NI-SCOPE 2.7 or higher
- NI-FGEN 2.2.1 or higher
- NI-SWITCH 2.3 or higher
- NI-DAQmx 8.1 or higher

See Agilent web site for more details.



**Agilent VEE Comparison Table (Click [here](#) for more information on Agilent website)**

	Agilent VEE 9.0			Agilent VEE 8.5			Agilent VEE 8.0		Agilent VEE 7.5
	Pro	Express	Student	Pro	Express	Student	Pro	Express	Pro
<b>Development Tools</b>									
MultiThreading	Δ	Δ	Δ						
Multicore Programming	Δ	Δ	Δ						
SCPI Completion	Δ	Δ	Δ						
Private UserFunction	Δ	Δ	Δ						
Toolbars for VEE Objects	Δ	Δ	Δ						
Enhanced Default Preferences dialog box	Δ	Δ	Δ						
Color Coding	Δ	Δ	Δ	Δ	Δ	Δ			
Modern Integrated Development Environment [IDE]	Δ	Δ	Δ	Δ	Δ	Δ			
Microsoft Windows Vista Support	Δ	Δ	Δ	Δ	Δ	Δ			
Microsoft Office 2007 Support	Δ	Δ	Δ	Δ	Δ	Δ			
Programmatic Properties for VEE Objects	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
Code Completion and Code Insight	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
Minimap	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
Project Explorer Window	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
.NET ActiveX and IVI-COM Support	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Support for Microsoft .NET Controls	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
The Callable Server Feature	Δ			Δ			Δ		Δ
The Remote Function Feature	Δ			Δ			Δ		Δ
Creating RunTime Version of Agilent VEE Programs and Secured Version of Agilent VEE Objects	Δ			Δ			Δ		Δ
<b>Debugging Tools</b>									
Conditional Breakpoints	Δ	Δ	Δ						
Error Call Stack	Δ	Δ	Δ						
Output Window	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
Watch Window and Edit and Continue	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
Breakpoints	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Automatic Error Handling	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Show Data Flow Show Execution Flow	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Line Probe and Object Probe	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Step-into, Step-out and Step-over	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
<b>Connectivity Tools</b>									
LXI Support	Δ		Δ						
Industry-standard Connectivity	*1	*2	*1	*1	*2	*1	*1	*2	*3
Dynamically Change VISA Interface and Address	Δ	Δ	Δ	Δ	Δ	Δ			
Using Agilent IO Monitor to Monitor Instant Communications	Δ	Δ	Δ	Δ	Δ	Δ			
Instrument Manager Auto-detect and Configure of Instruments	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
VEE I/O Configuration File Saved with Program	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
<b>Other Tools</b>									
Integrated Database library	Δ	Δ	Δ						
Custom Menu in XML format	Δ	Δ	Δ						
MATLAB 2007a Support	Δ	Δ	Δ	Δ	Δ	Δ			
Built-in MATLAB Engine	Δ	Δ		Δ	Δ		Δ	Δ	Δ
MatlabScript Objects	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Integrated Excel Library	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ

\*1 - GPIB, RS-232, GPIO, USB, LAN, VXI, NI-DAQ, NI-DAQmx

\*2 - Agilent USB only

\*3 - GPIB, RS-232, GPIO, USB, LAN, VXI, NI-DAQ

**Agilent VEE Education 9.0 has all the features of Agilent VEE Pro 9.0 and comes packaged with 10 standalone licenses.**

## To Order Agilent VEE Pro and Agilent VEE Express

Note: All of the products listed below are structured as options under the W4000A product number.

Core product	Notes
Agilent VEE Pro 9.0 Software (W4000A-PRO)	Includes the full feature of Agilent VEE Pro 9.0 CD and Quick Start Guide (6 languages)
Agilent VEE Express 9.0 Software (W4000A-EXP)	Includes the basic feature of Agilent VEE Pro 9.0 CD and Quick Start Guide (6 languages)
Agilent VEE Pro 9.0 Student Software (W4000A-STU) (for students only)	Includes the full feature of Agilent VEE Student 9.0 CD and Quick Start Guide (6 languages)
Agilent VEE Pro Education 9.0 (W4000A-ED1) (for education customers only)	Includes 10 licenses of Agilent VEE Pro 9.0 and Quick Start Guide (6 languages)

Upgrade licenses	Notes
Upgrade from Agilent VEE Pro 8.5 to Agilent VEE Pro 9.0 (W4000A-UP85)	Includes CD and Quick Start Guide (6 languages)
Upgrade from Agilent VEE Pro 8.0 to Agilent VEE Pro 9.0 (W4000A-UP80)	Includes CD and Quick Start Guide (6 languages)
Upgrade from Agilent VEE Pro 7.5 & below to Agilent VEE Pro 9.0 (W4000A-UP75)	Includes CD and Quick Start Guide (6 languages)
Upgrade from Agilent VEE Express 9.0 to Agilent VEE Pro 9.0 (W4000A-UPEXP)	Includes CD and Quick Start Guide (6 languages)
Upgrade from Agilent VEE Express 8.5 to Agilent VEE Express 9.0 (W4000A-UPEXP85)	Includes CD and Quick Start Guide (6 languages)
Upgrade from Agilent VEE Express 8.5 to Agilent VEE Pro 9.0 (W4000A-EXPUP85)	Includes CD and Quick Start Guide (6 languages)

Additional options	Notes
Agilent VEE Education 9.0 10 license option (W4000A-UPED)	Includes Software Entitlement Certificate to add on 10 licenses to VEE Education 9.0 (W4000A-ED1)
*No Documentation / Education Package (W4000A-0B0)	Includes Software Entitlement Certificate only / basic Education package only (default for W4000A-STU and W4000A-UPED only)

For additional ordering information, technical policy, part numbers, and pricing assistance please refer to: [www.agilent.com/find/vee](http://www.agilent.com/find/vee).

## Ordering Information

[www.agilent.com/find/vee](http://www.agilent.com/find/vee)

All Agilent VEE Pro products ship with embedded MATLAB Script, The MathWorks' Signal Processing Toolbox, .NET Framework and ActiveX programmatic access at no extra charge. Agilent VEE Express products only ship with .NET Framework and ActiveX programmatic access at no extra charge. In addition, Agilent VEE Pro products ship with unlimited RunTime distribution rights. The full MATLAB product can be purchased from The MathWorks at [www.mathworks.com](http://www.mathworks.com) or 508 647-7000. Updated or new instrument drivers can be downloaded free of charge from the Agilent VEE web site [www.agilent.com/find/vee](http://www.agilent.com/find/vee).

The Agilent VEE web site also provides example programs, technical notes, and a variety of other resources.

## Worldwide Service and Support

With Agilent Technologies' service and support, you have access to worldwide resources for start-up assistance, training classes, and update services.

Additional consulting services are available from Agilent. There are currently over 30 companies available in North America, Europe, Middle East and Asia to help you develop your Agilent VEE Pro and Agilent VEE Express solution.

Join Agilent VEE electronic users group. Sign up through Agilent VEE web site or go to [www.agilent.com/find/vrf](http://www.agilent.com/find/vrf) and get assistance on using Agilent VEE Pro and Agilent VEE Express from experts around the world.



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Agilent Open simplifies the process of connecting and programming test systems to help engineers design, validate and manufacture electronic products. Agilent offers open connectivity for a broad range of system-ready instruments, open industry software, PC-standard I/O and global support, which are combined to more easily integrate test system development.

## Remove all doubt

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For more information on repair and calibration services, go to

[www.agilent.com/find/removealldoubt](http://www.agilent.com/find/removealldoubt)

## www.agilent.com

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#### Europe:

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#### Japan:

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(fax) (81) 426 56 7840

#### Korea:

(tel) (080) 769 0800

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