



TECHNICAL
OVERVIEW

BenchVue Software

Control. Automate. Simplify.



品勛科技股份有限公司
www.pinsyun.com.tw



Simplified Measurement Viewing, Control and Capture

Keysight BenchVue software for the PC eliminates many of the issues around bench testing. By making it simple to connect, control instruments, and automate test sequences you can quickly move past the test development phase and access results faster than ever before. Dedicated instrument apps allow you to quickly configure the most commonly used measurements and setups for each instrument family. Additionally, Test Flow enabled apps help you drastically shorten your development of automated programs and further streamline your workflow.

Use BenchVue Apps to:

- Configure the most commonly used controls and measurements from instruments
- Visualize multiple measurements simultaneously
- Easily log and export data and images in a few clicks for faster analysis
- Quickly create automated test sequences with minimal instrument knowledge
- Access deeper instrument controls and solutions

Save time by:

- Analyzing results within BenchVue or with built-in data exports
- Learning software quickly with common look and feel apps
- Utilizing multiple instrument apps in one easy to use software platform



See your measurements across instruments in one place to quickly correlate measurement activities and obtain actionable insight. Depending on your measurement task, BenchVue provides extensive data, trace and measurement logging capabilities all from within one piece of software.

Plug and Play Instrument Control

Connecting and controlling an instrument to BenchVue is as simple as plugging it in and launching the BenchVue instrument application. No programming or separate instrument drivers required. BenchVue will automatically detect GPIB, USB and LAN instrument connections.



BenchVue Apps

Keysight's BenchVue software platform provides access to a wide array of instrument control, automation and analysis apps with different capabilities to enhance your productivity. These capabilities vary based on the functionality of the types of instruments, apps, and models that are connected to your PC running BenchVue software.

All instrument control apps such as BenchVue Digital Multimeter or BenchVue Oscilloscope apps allow you to easily control and build custom automated sequences using BenchVue Test Flow (for more details see page 5).

Technology-specific apps such as Solar Array Simulation software are dedicated apps for a specialized type of application or industry.

Lab management apps provide centralized lab instrument configuration, ability to track assets, and more lab administration features.



Current BenchVue apps and collections

- Complete Control Collection (BV9001B)
- Digital Multimeter (BV0001B)
- Function Generator (BV0002B)
- Power Supply (BV0003B)
- Oscilloscope (BV0004B)
- Data Acquisition (BV0006B)
- Power Meter (BV0007B)
- FieldFox Analyzer (BV0010B)
- Universal Counter (BV0011B)
- Electronic Load (BV0012B)
- Current Analyzer (BV0013B)
- LCR Meter (BV0014B)
- USB Modular Digital Multimeter App (BV0021B)
- USB Modular Function Generator App (BV0022B)
- USB Modular SMU App (BV0023B)
- USB Modular Oscilloscope App (BV0024B)
- USB Modular DAQ App (BV0025B)
- USB Modular Chassis (N/A) ¹
- USB Modular Switch Matrix (N/A) ¹
- Lab Manager (BV0110B)
- Lab Client (BV0111B)
- Spectrum Analyzer (Available in BV9001B)
- Network Analyzer (Available in BV9001B)
- Signal Generator (Available in BV9001B)
- Power Analyzer (N/A) ¹
- Education Control Collection (BV9111B)
- Solar Array Simulation (DG8901A) ¹

1. The no-cost version of these apps do not require a paid license.

For the latest applications with free 30-day trials, check out the BenchVue Apps tab within BenchVue or visit: www.keysight.com/find/benchvue_apps

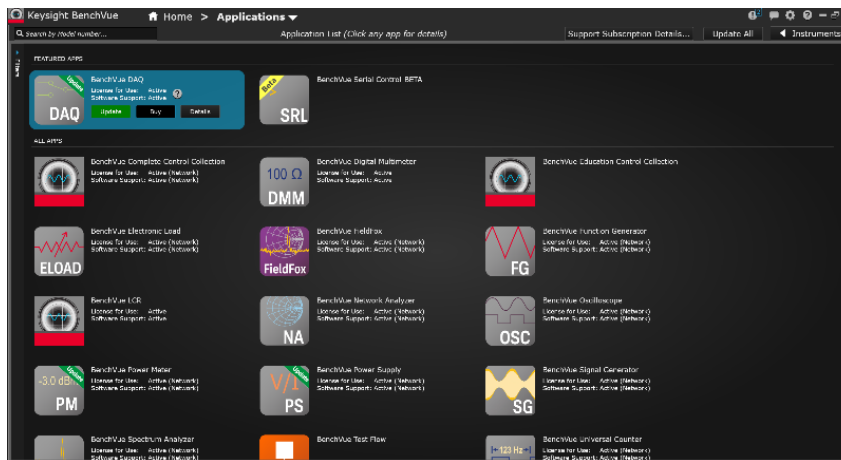
Many instruments now include a BenchVue app license with a new purchase. Visit www.keysight.com/find/IncludedBenchVue for more information

Faster test automation development

Instrument programming can be time consuming and laborious. With Test Flow enabled apps, you can build automated test sequences without needing in-depth instrument knowledge or programming. Also access advanced instrument controls for specialized testing with integrated Command Expert command sequences.

BenchVue Software Platform Features

Application View



Example of BenchVue's applications view.

Additional applications (apps) can be easily viewed, downloaded and installed via the Application view within BenchVue. Filters can also be used to help you easily find Apps of interest. You can get a description of your app, start a free trial, install/remove Apps, and even license your app all within the Apps tab. Keysight recommends checking the Apps tab on a regular basis as existing Apps are updated constantly and new Apps are added all the time.

The Bench view

As BenchVue's main interface, you will do most of your instrument work in this tab. The instrument Apps launch into this tab, allowing you to control, data log or automate sequences with the BenchVue Test Flow app. Apps from this tab can also be expanded for better viewing. With the Bench Tab, you can view and control up to 4 instruments in BenchVue. Even more instruments can be controlled by expanding them into their own windows. To try out some of the BenchVue apps for instruments you don't currently have on your bench, use BenchVue's Demo mode.



Instrument tool bar

Located on the right side of BenchVue's interface, the Instrument Tool bar shows all instruments connected to your PC. Simply double click on any of your instruments to start interacting with that instrument in BenchVue. Toggle BenchVue's Demo mode on and off, and access other helpful configurations with the Instruments tool bar. Click on the Add button to open up Keysight's IO libraries to manually add more instrument connections.



Small icons, big impact

Tucked away in the corners of the BenchVue interface and each of the apps, are unobtrusive icons that can be very useful in enhancing your BenchVue experience.

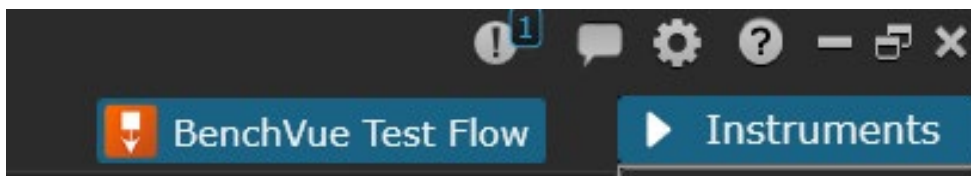
Comment Icon – Use this menu to send feedback, report an issue or contact support.

Gear Icon – Use this menu to access additional settings and other configurations for the BenchVue platform, enable mobile access¹, or license your BenchVue app.

Question Icon – Press this icon to load the Help file. Note that each app has its own help icon, which provides “help” information specifically for that app.

Instruments Button – Toggle the visibility of connected instruments. Collapse the tool bar to gain more space to use your instrument in BenchVue

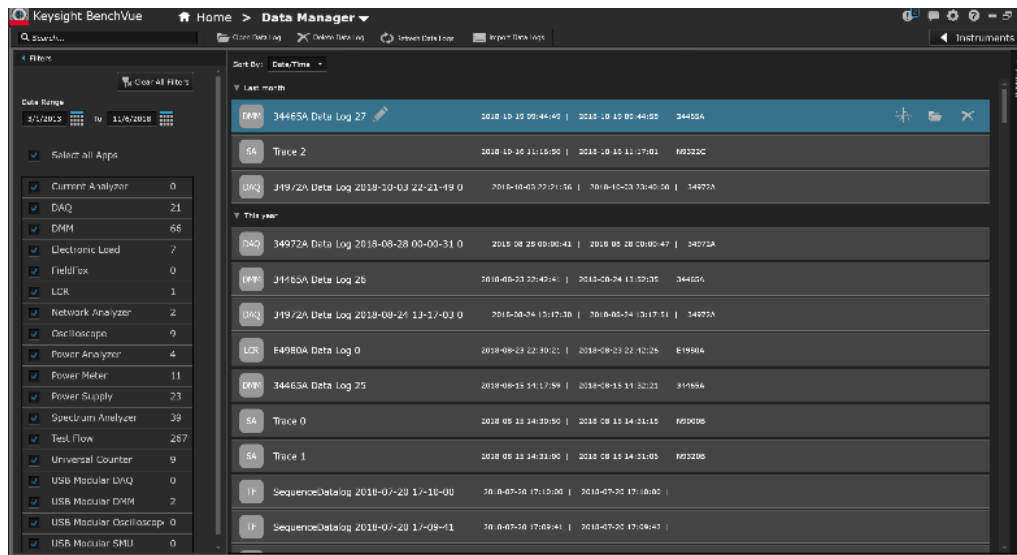
BenchVue Test Flow Button – Open and close the BenchVue Test Flow workspace.



1. Mobile support available with select BenchVue apps.

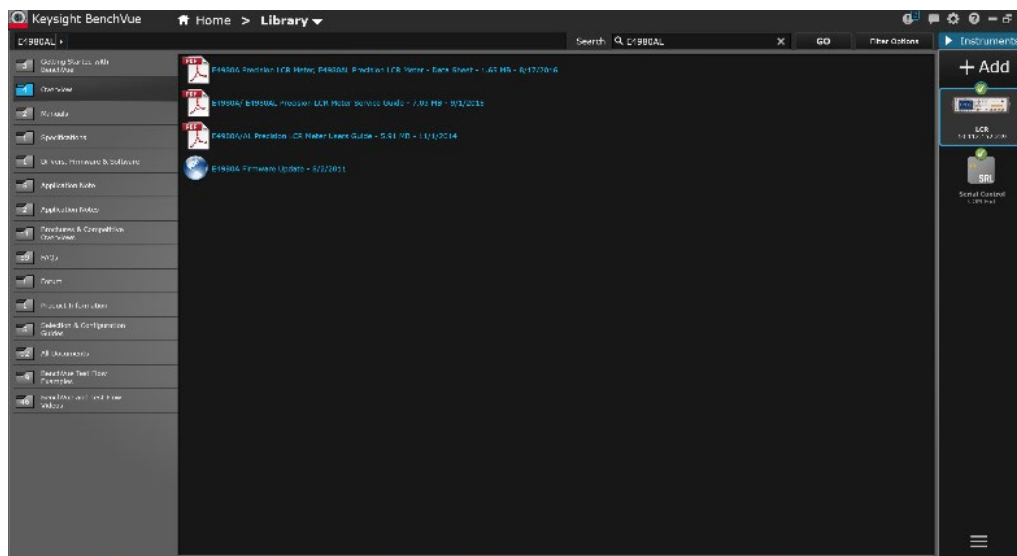
Data manager view

The Data Manager view is used to find past data logs. BenchVue automatically stores the data logs that you take; an especially useful feature if you've neglected to save critical data. This data repository allows you to filter based on either date range or app.



Library view

You can find all the documentation for your Keysight instrument in the Library view. App notes, datasheets, user guides, and even videos are grouped together on the Library view for easier access than ever before. Simply click on your instrument on the Instrument Tool bar and additional documentation relating to that instrument is automatically loaded. Example Test Flow sequences and BenchVue videos are also available in the Library.



BenchVue Test Flow App

Rapidly build automated tests in BenchVue

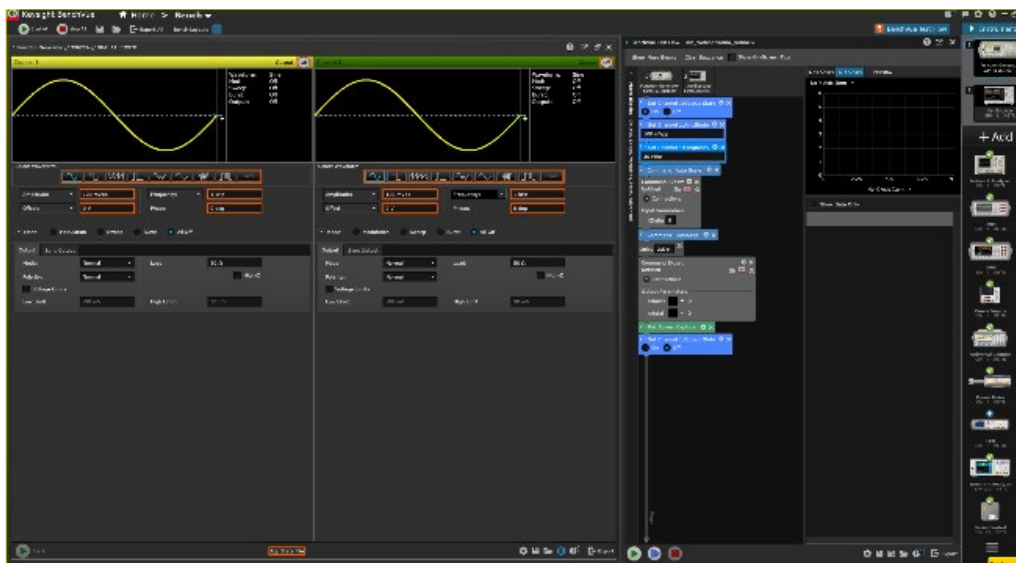
Build custom test sequences within BenchVue software using Test Flow. The intuitive drag-and-drop interface enables you to accomplish in minutes what can require days using traditional programming languages. Test Flow controls are integrated into most BenchVue apps. BenchVue Test Flow is enabled with most BenchVue control apps.

With BenchVue Test Flow you can:

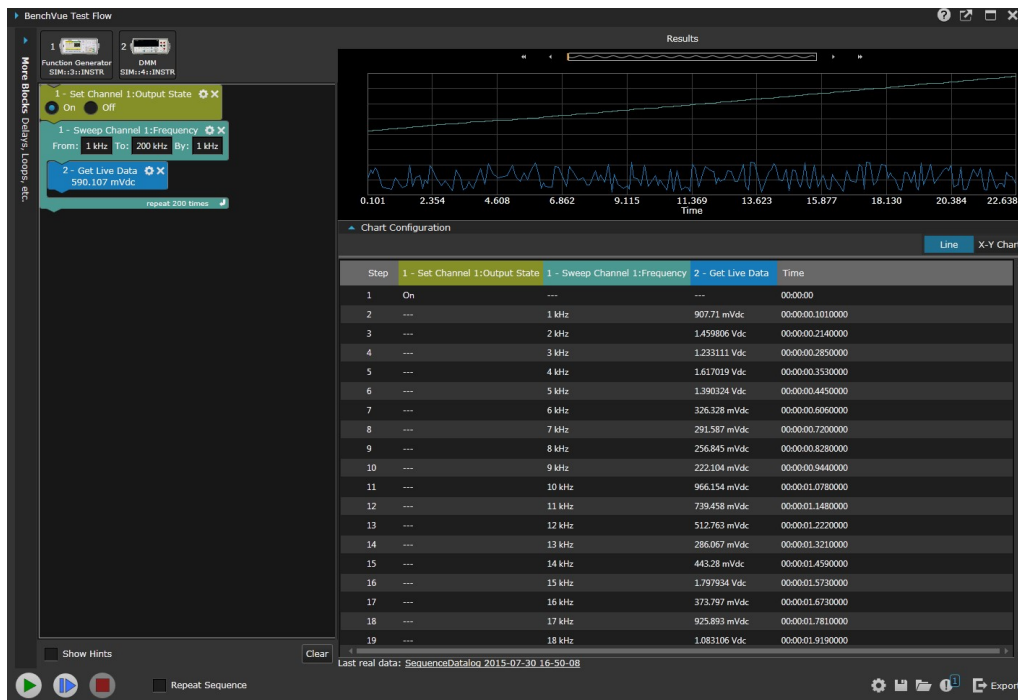
- Create custom test sequences fast and intuitively
- Combine multiple instruments into a sequence for better
- DUT characterization
- Drag-and-drop controls for rapid test prototyping
- View data logs in tabular or graphical form

Interpret results more quickly by:

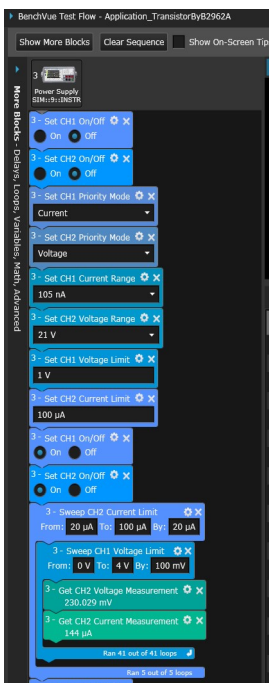
- Customizing your X-axis and Y-axis on graphs to view measurements
- Exporting data to popular tools such as MATLAB or Microsoft Excel and Word for documentation or further analysis



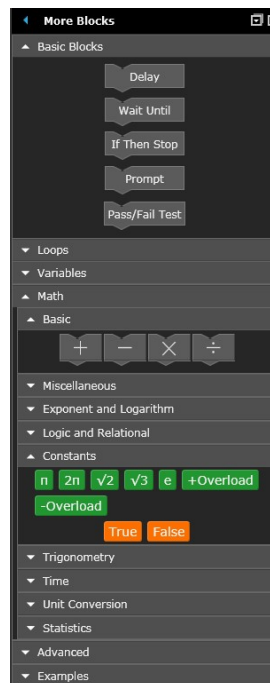
BenchVue Test Flow is integrated into the BenchVue framework and occupies the right-hand panel of the user interface.



Create your test procedures in BenchVue Test Flow by dragging and dropping blocks into a test sequence. This intuitive method of test design allows you to understand the order of operations within your test sequence. Simply use the instrument controls and measurements that are available from integrated instrument controls in the BenchVue apps. For added flexibility, several utility blocks are available in BenchVue Test Flow including step controls, loops, and the ability to run SCPI commands, integrated Command Expert sequence blocks, or external programs.



Arrange the BenchVue Test Flow blocks in sequence in the order you want to run them. Top to bottom.



Built-in blocks add flexibility for your test sequences.

BenchVue Complete Control Collection



Access a complete collection of all BenchVue instrument control, automation and analysis apps. Including exclusive access to the Network Analyzer, Spectrum Analyzer and Signal Generator apps.
Model: BV9001B

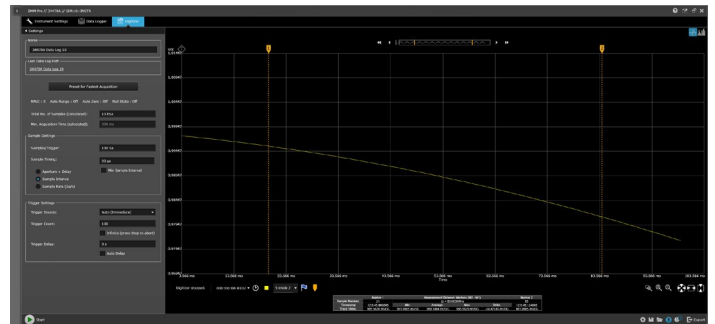
Digital Multimeter App
Function Generator App
Power Supply App
Oscilloscopes App
Data Acquisition App
Power Meters/Sensors App
FieldFox App
Universal Counter App
Electronic Load App
Current Analyzer App

LCR Meter App
USB Digital Multimeter App
USB Function Generator App
USB Modular SMU App
USB Modular Oscilloscopes App
USB Modular Data Acquisition App
Lab Client App
Spectrum Analyzer App
Signal Generator App
Network Analyzer App

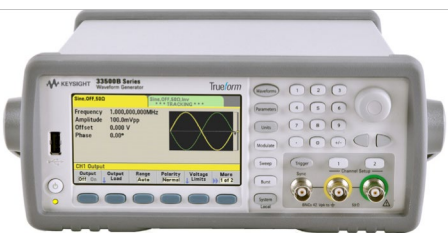
BenchVue Digital Multimeter Control & Automation App



Easily control your DMM to quickly build automated tests, log measurements, and save valuable time.
Model: BV0001B



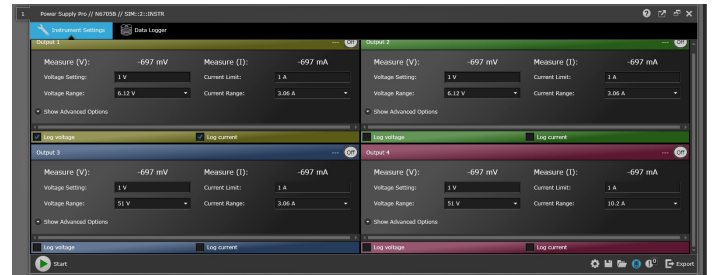
BenchVue Function Generator Control & Automation App



Intuitively control your function generators, build automated tests, and design custom waveforms.
Model: BV0002B



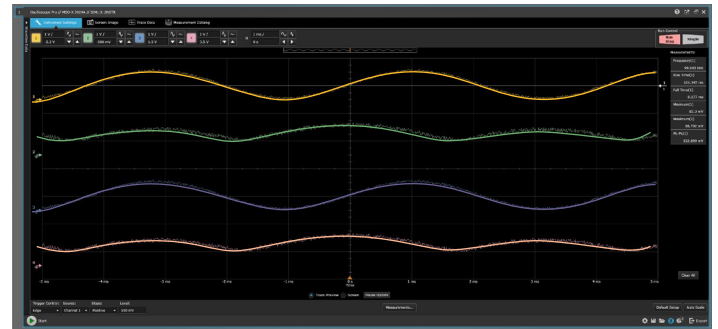
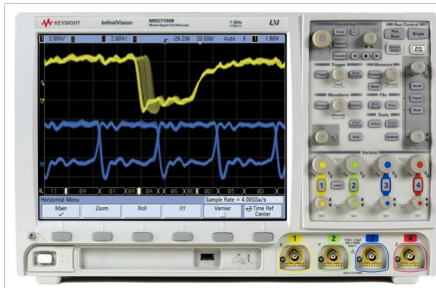
BenchVue Power Supply Control & Automation App



Easily control your power supplies to set parameters and quickly build automated tests.

Model: BV0003B

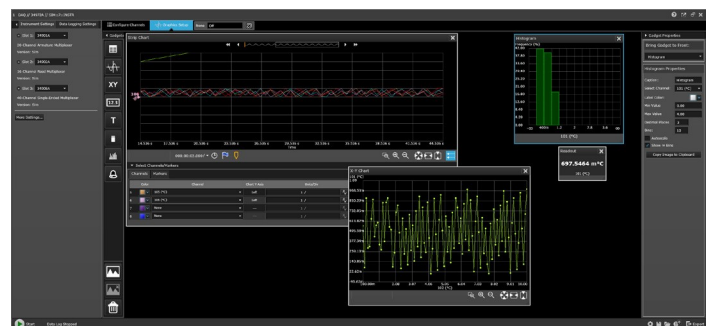
BenchVue Oscilloscope Control & Automation App



Conveniently control your oscilloscopes to quickly build automated tests and log data for analysis.

Model: BV0004B

BenchVue Data Acquisition Control & Analysis App



Conveniently control your data acquisition units, easily visualize measurements and log data.

Model: BV0006B

BenchVue Power Meter/Power Sensor Control & Analysis App



Conveniently control your power meters and power sensors, analyze RF power measurements, and quickly log data.

Model: BV0007B

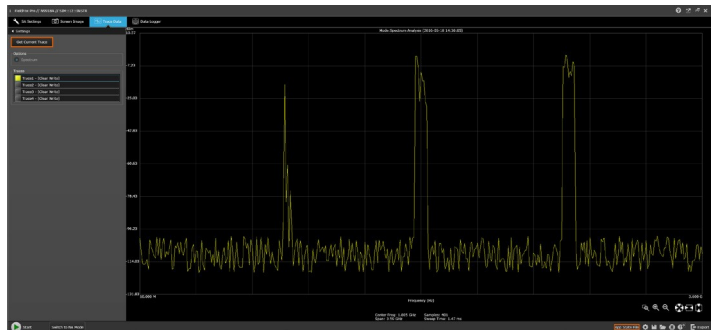


BenchVue FieldFox Control & Automation App



Use your FieldFox in spectrum analyzer or network analyzer modes to quickly control parameters, capture measurements over time and build automated tests.

Model: BV0010B

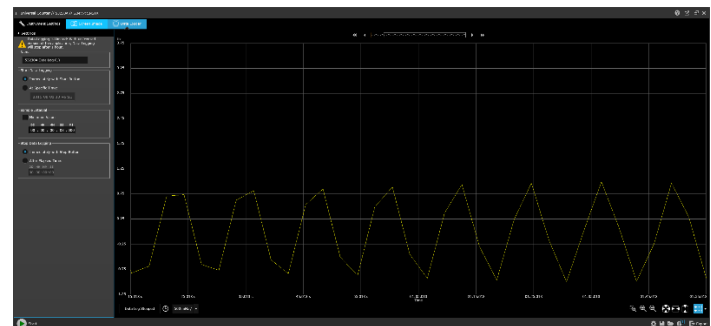


Universal Counter Control & Automation App

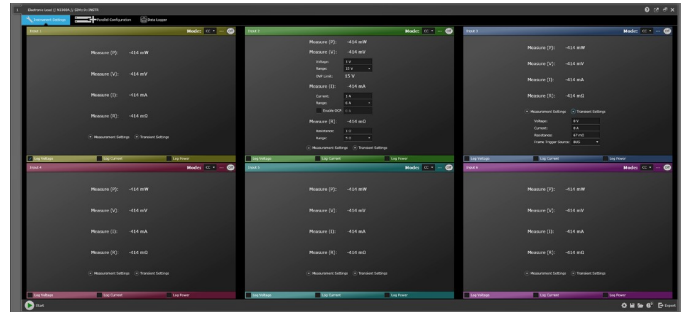


Easily control your counters to quickly build automated tests and log data for faster analysis.

Model: BV0011B



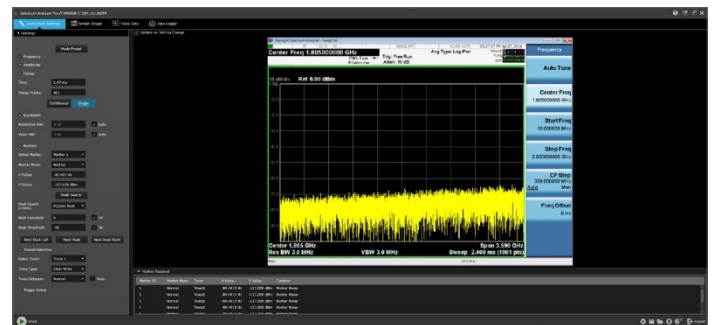
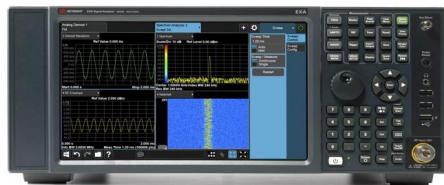
BenchVue Electronic Load Control & Automation App



Easily control your electronic loads, build automated tests, and visualize measurements over time.

Model: BV0012B

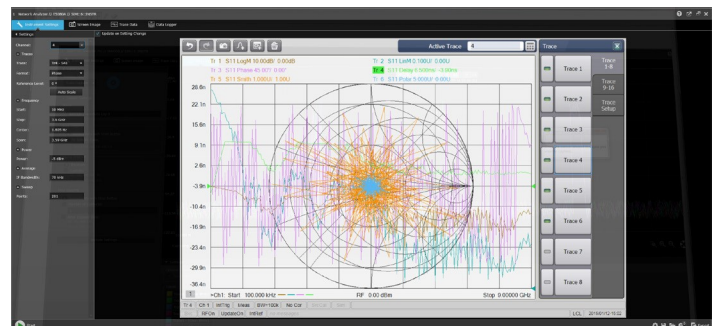
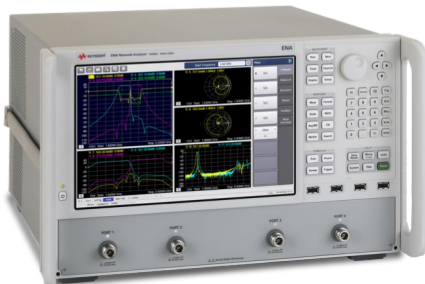
BenchVue Spectrum Analyzer Control & Automation App



Intuitively control your spectrum or signal analyzers, build automated tests, and log trace data.

Model: BV9001B (Exclusively available in the BenchVue Complete Control Collection)

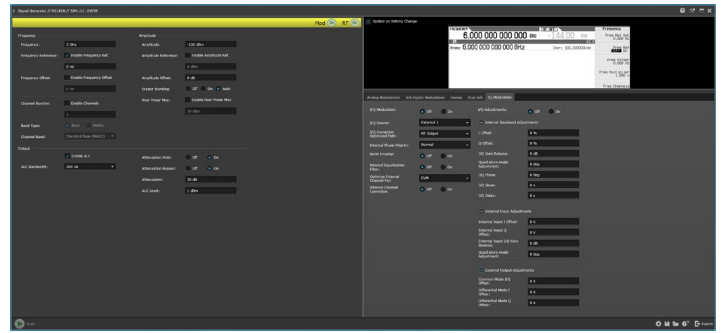
BenchVue Network Analyzer Control & Automation App



Intuitively control your network analyzers, quickly build automated tests, and acquire trace data.

Model: BV9001B (Exclusively available in the BenchVue Complete Control Collection)

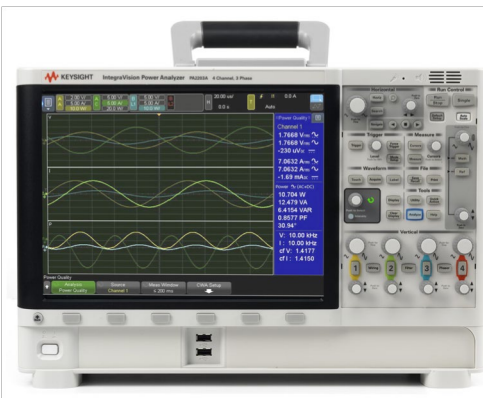
BenchVue Signal Generator Control & Automation App



Easily control signal generators to build automated tests, set parameters for faster analysis and load customer arbitrary waveforms from files.

Model: BV9001B (Exclusively available in the BenchVue Complete Control Collection)

BenchVue Power Analyzer Control & Automation App



Conveniently control your power analyzers, quickly visualize measurements, and easily log data.

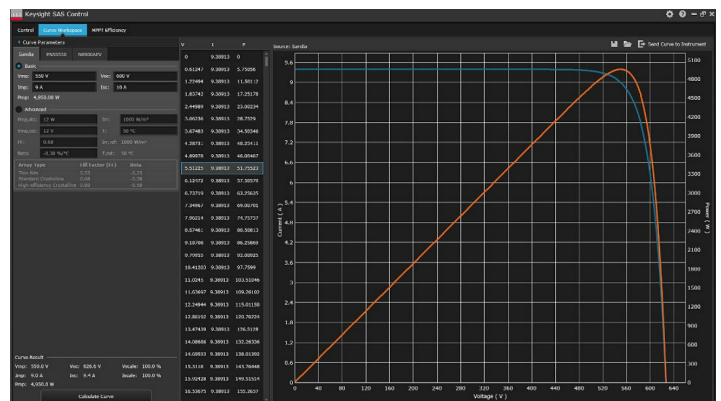
Model: No cost download.

Solar Array Simulator Control

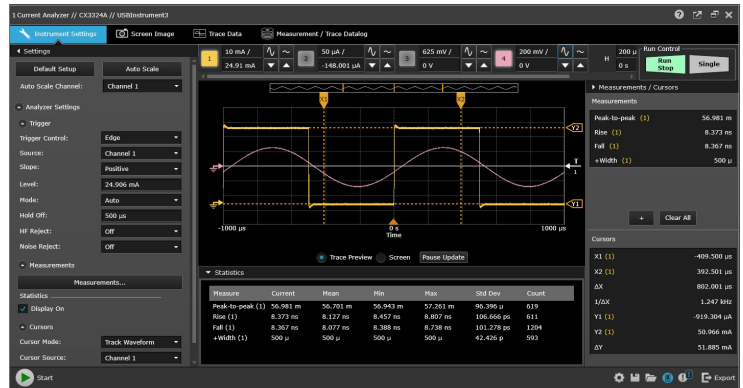


Easily create, manipulate, view, and execute photovoltaic I-V curves for testing PV inverters.

Model: DG8901A



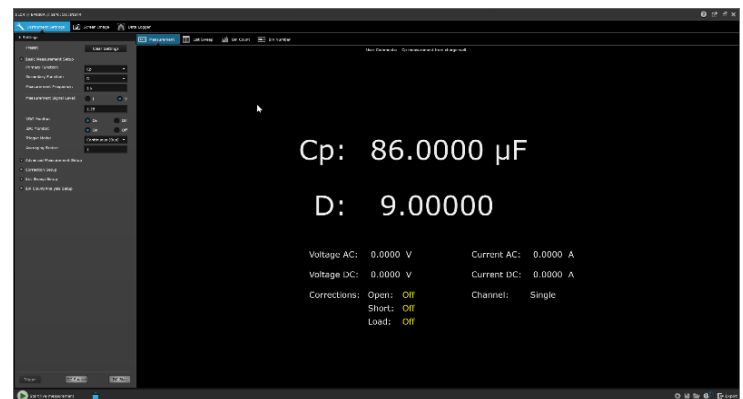
BenchVue Current Analyzer Control and Analysis App



Conveniently connect and control your current analyzers to quickly view measurements, build automated tests, and log data for analysis.

Model: BV0013B

BenchVue LCR Control and Automation App



Connect and control your LCR meters to quickly view measurements, configure sweeps, build automated tests, and log data for analysis.

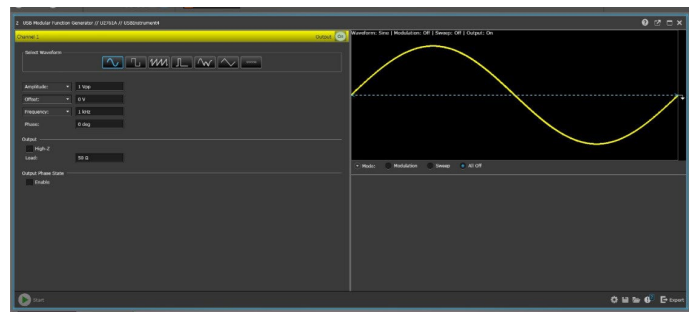
Model: BV0014B

USB Modular Digital Multimeter App



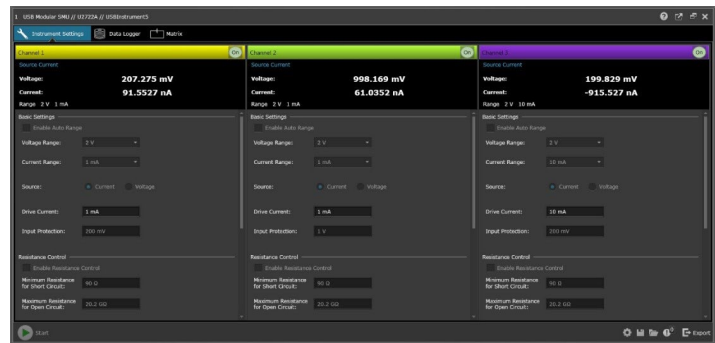
Connect and control your USB Modular DMM to view \ measurements and plot or log data.
Model: BV0021B

USB Modular Function Generator App



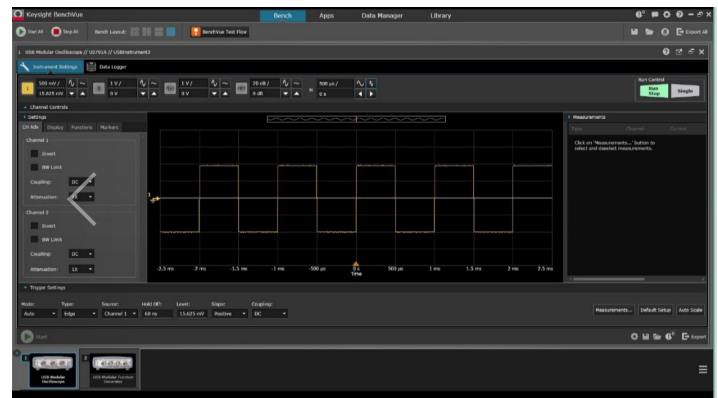
Connect and configure your USB Modular function generator to create waveforms.
Model: BV0022B

USB Modular Source Measure Unit (SMU) App



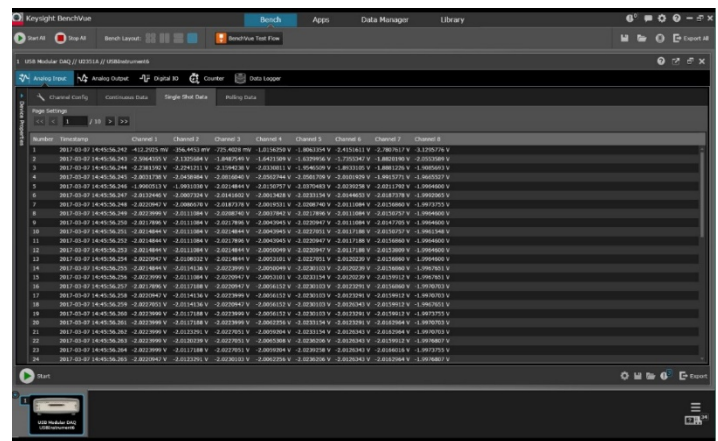
Configure voltage and current source, range, and limits for USB Modular SMU channels and log data.
Model: BV0023B

USB Modular Oscilloscope App



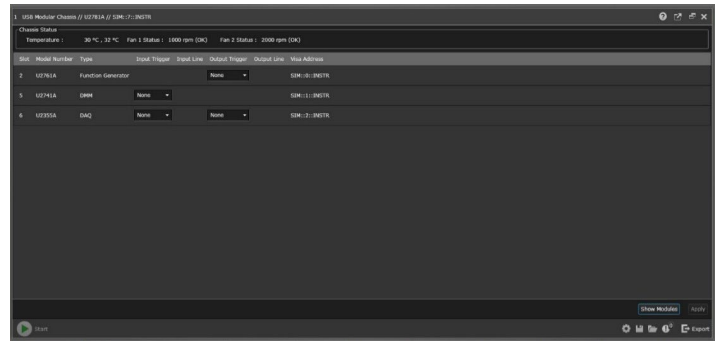
Configure and control your USB Modular oscilloscope to capture screen images, record trace data and log measurements.
Model: BV0024B

USB Modular Data Acquisition Control App



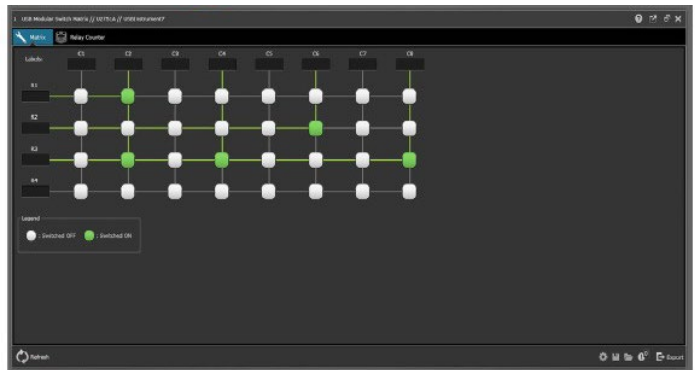
Connect and configure your USB Modular DAQ channels to make measurements and log data.
Model: BV0025B

USB Modular Source Measure Unit (SMU) App



Configure triggers, monitor temperature and see connected USB modular units connected to your chassis.

USB Modular Switch Matrix App

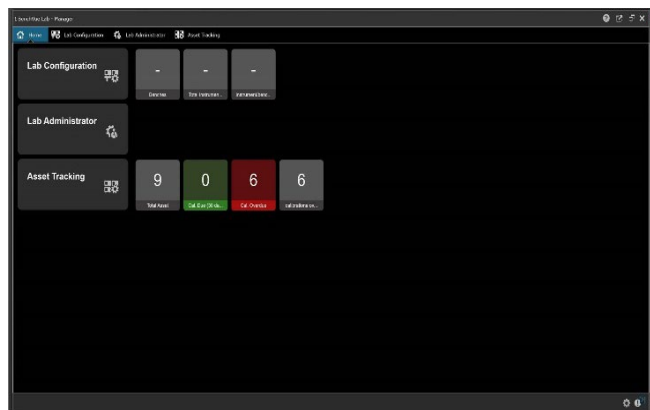


Easily open and close relays channels on your USB Modular switch matrix

BenchVue Lab - Manager



Centralized control and bench management of instruments in a lab environment.
Model BV0110B



BenchVue Lab - Client



Used with Lab Manager to control instruments and bench setups from a central PC.
Model: BV9111B

BenchVue Education Lab and Control Collection



Exclusively for schools and universities.
free student access, designed to fit into an education budget. Multiple networked licenses,
Model: BV9111B

Serial Control App



Intuitively send receive commands from your serial devices to your PC. Control and automate serial devices within BenchVue along with your instruments.

Application Comparisons

BenchVue software supports many Keysight instrument types and hundreds of models all from one platform. Choose from a variety of powerful apps below to accelerate your workflow.

Control, Automation and Analysis apps	App Type	Features	Test Flow Automation Capabilities	Mobile Support
BenchVue Complete Control Collection (BV9001B)	Control, automation, analysis	- Access to all BenchVue control, automation, or analysis apps - Exclusive access to Spectrum Analyzer, Network Analyzer, Signal Generator apps	- Controls integrated in app - Using Command Expert instrument controls	Depends on app used
Digital Multimeter App (BV0001B)	Control & automation	- Instrument control and measurements - Data logging with graphing - Digitizer functions - Limit testing and alerts	- Controls integrated in app - Using Command Expert instrument controls	Yes
Function Generator App (BV0002B)	Control & automation	- Instrument control and measurements - Waveform editing capabilities	- Controls integrated in app - Using Command Expert instrument controls	Yes
Power Supply App (BV0003B)	Control & automation	- Instrument control and measurements - Log output V&I data with graphing - Status alerts	- Controls integrated in app - Using Command Expert instrument controls	Yes
Oscilloscope App (BV0004B)	Control & automation	- Instrument control and measurements - Get screen images and trace data - Log measurements with graphing - Limit testing and alerts	- Controls integrated in app - Using Command Expert instrument controls	Yes
Data Acquisition App (BV0006B)	Control & analysis	- Instrument control and measurements - Data graphing tools - In depth analysis - Log measurements	Using Command Expert instrument controls	No
Power Meter App (BV0007B)	Control & analysis	- Instrument control and measurements - Data visualization tools - Multi-unit control	Using Command Expert instrument controls	No
FieldFox App (BV0010B)	Control & automation	- Instrument control and measurements - Support for SA and NA personalities - Log trace data and screen images	- Controls integrated in app - Using Command Expert instrument controls	No
Universal Counter App (BV0011B)	Control & automation	- Instrument control and measurements - Log frequency or time interval data	- Controls integrated in app - Using Command Expert instrument controls	No
Electronic Load App (BV0012B)	Control & automation	- Instrument control and measurements - Log power, V, I - Parallel channel config	- Controls integrated in app - Using Command Expert instrument controls	No
Current Analyzer App (BV0013B)	Control and Automation	- Instrument control and measurements - Get screen images and trace data - Log measurements with graphing	- Controls integrated in app - Using Command Expert instrument controls	No
LCR Meter App (BV0014B)	Control and Automation	- Instrument control and measurements - Get screen images and trace data - Log measurements with graphing	- Controls integrated in app - Using Command Expert instrument controls	No
Spectrum Analyzer App (BV9001B)	Control & automation	- Instrument control and measurements - Log screen Images - Log trace data	- Controls integrated in app - Using Command Expert instrument controls	Yes

Control, Automation and Analysis apps	App Type	Features	Test Flow Automation Capabilities	Mobile Support
Network Analyzer App (BV9001B)	Control & automation	- Instrument control and measurements - Log screen Images - Log trace data	- Controls integrated in app - Using Command Expert instrument controls	No
Signal Generator App (BV9001B)	Control & automation	- Instrument control and measurements - Arbitrary waveform setting	- Controls integrated in app - Using Command Expert instrument controls	No
Power Analyzer App (N/A)	Control & analysis	- Instrument control and measurements - Log measurements - Screen captures	NA	No
Solar Array Simulator Control App (DG8901A)	Technology specific	- Simple solar array simulator controls - View I-V, power curves - Create PV curves (in licensed version only)	NA	No
Serial Control App	Control and automation	Interface control with read write capabilities	- Controls integrated in app - Using Command Expert instrument Controls"	
USB Modular Digital Multimeter (BV0021B)	Control and analysis	- Instrument control and measurements - Data logging with graphing - Limit testing and alerts	NA	No
USB Modular Function Generator (BV0022B)	Control	Instrument control and measurements	NA	No
USB Modular Source Measure Unit (BV0023B)	Control and analysis	- Instrument control and measurements - Data logging with graphing - Parallel/Serial channel configurations	NA	No
USB Modular Oscilloscope (BV0024B)	Control and analysis	- Instrument control and measurements - Get screen images and trace data - Limit testing and alerts	NA	No
USB Modular Data Acquisition Control (BV0025B)	Control and analysis	- Instrument control and measurements - In depth analysis - Log measurements	NA	No
USB Modular Chassis	Control	Chassis control and measurements	NA	No
USB Modular Switch Matrix	Control	Instrument control	NA	No
Lab Manager (BV0110B)	Lab Management	- Configure lab bench setup - Asset tracking - Monitor bench status	NA	No
Lab Client (BV0111B)	Lab Management	- Works with Lab Manager - Configure local bench setup	NA	No
Education Lab and Control Collection (BV9111A)	Lab Management and Control	- Configure lab bench setups - Asset tracking - Monitor bench status - Instrument control and measurements	NA	No

BenchVue Software Supported Instruments

Each of the BenchVue apps support certain Keysight instrument models. These apps are updated regularly with additional models as shown below. For the most current supported instrument list, visit:

www.keysight.com/find/BenchVueInstruments

Data acquisition units (4)	Power meters/sensors (33)	Function generators (19)	Power supplies/SMUs (168)	Spectrum/signal analyzers (30)	Oscilloscopes (218)
34970A 34972A DAQ970A 34980A Digital multimeters (10) 34401A, 34405A, 34410A, 34411A, 34420A ¹ , 34450A ¹ , 34460A ¹ , 34461A ¹ , 34465A ¹ , 34470A ¹ Network analyzers (45) ENA E50xxA/B/C (5) PNA N522xA/B (10) PNA-L N523A/B/C (11) PNA-X N524xA/B (12) PXI VNAs M937xA (6) PXIe multiport VNA M9485A	U2021XA ¹ U2022XA ¹ U2041XA ¹ U2042XA ¹ U2043XA ¹ U2044XA ¹ U2049XA LAN ¹ U2000 Series ¹ (9) U2053/63 Series ¹ L2050/60 Series ¹ (6) U848x Series ¹ (4) N191xA ¹ (4) N8262A ¹ Current Analyzers (2) CX3322A CX3324A	332x0A (3) 33500 Series¹ (10) 33600 Series¹ (4) 81150A 81160A Power analyzers (2) PA2201A PA2203A Signal generators (14) E4428C E4438C E8257D E8267D E8663D EXG X-Series N517xB (3) MXG X-Series N518xB (3) N518xA (3)	B2900 Series ¹ (4) B2961A/62A ¹ E3600 Series (14) E36100 Series ¹ (10) E36300 Series ¹ (4) N5700 Series ¹ (24) N6700A/B/C ¹ N6701A/C ¹ N6702A/C ¹ N6705A/B/C ¹ N6785A ¹ N6786A ¹ N6900 Series ¹ (12) N7900 Series ¹ (12) N8700 Series ¹ (21) N8900 Series ¹ (36) RP7900 Series (17)	X-Series N9040B UXA N9030A/B PXA N9020A/B MXA N9010A/B EXA N9000A/B CXA M9290A CXA HSA N934xC (3) ESA E440xB (4) PSA E444x (6) BSA N932xB/C (2) Electronic loads (4) N3300A ¹ N3301A ¹ 6060B 6063B FieldFox analyzers (22) N9912A-N9918A (6) N9923A-N9928A (4) N9935A-N9938A (4) N9950A-N9952A (3) N9960A-N9962A (3)	1000-X Series ¹ (4) 2000-X Series ¹ (12) 3000-X Series ¹ (18) 3000T Series ¹ (20) 4000-X Series ¹ (16) 5000 (5) 6000A Series (16) 6000L Series (3) 6000-X Series ¹ (4) 7000 Series (28) 9000 Series (8) 90000 (6) 90000 Q-Series (5) 90000 X-Series (12) 90000 DSA Series (16) P924xA Series (3) S Series (14) V Series (18) Z Series (10) Counters (3) 53210A ¹ 53220A ¹ 53230A ¹
USB modular devices (21) U2300 Series ¹ U2500 Series ¹ U2600 Series ¹ U2700 Series ¹	LCR Meters (2) E4980A E4980AL				

¹ New Instrument purchases include a Node locked perpetual BenchVue app license

BenchVue mobile

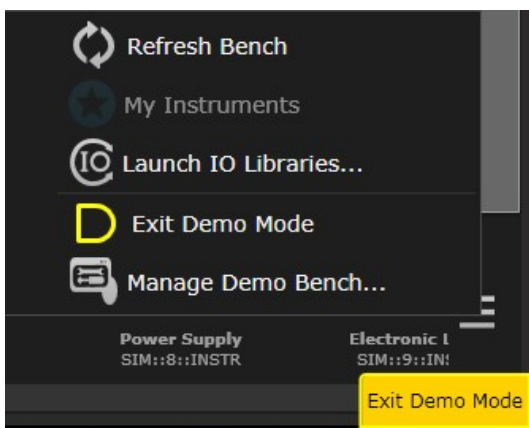
Mobile apps lets you monitor and respond to long running tests from anywhere for our most popular instrument families. Multimeters, oscilloscopes, function generators, spectrum analyzers and power supplies are all supported from one app.



BenchVue mobile is a mobile app that you can install on an Android or Apple iOS device to control BenchVue bench applications running on your Windows computer. BenchVue mobile connects to your computer as a client, and requires that your mobile device and computer be connected to the same local network or intranet (behind the same corporate firewall). This network connection can be made via a WiFi connection inside your work location or externally through a VPN connection.

BenchVue Demonstration Mode

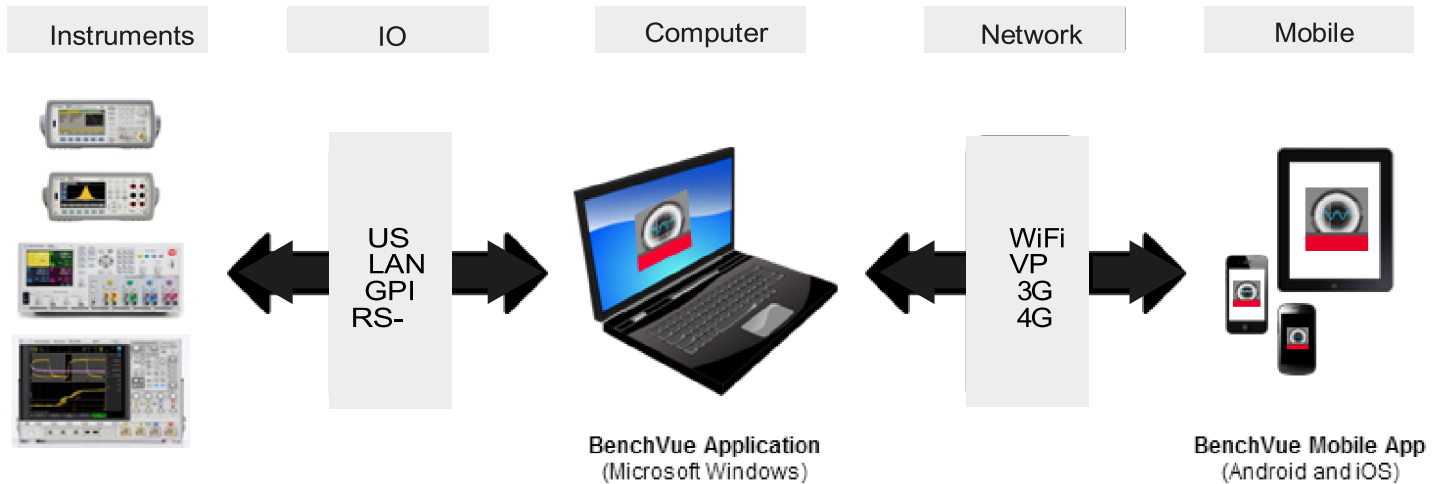
BenchVue includes a demonstration mode that does not require instruments to be connected, making product evaluation quick and easy. Simply download and click “enable demo mode” under the global setting menu to begin exploring BenchVue functionality.



To assist in the evaluation of BenchVue with physical instruments, BenchVue includes an integrated help file and getting started guide to make setup quick and easy.

Supported Apps for BenchVue Mobile

- Digital Multimeter app
- Function Generator app
- Power Supply app
- Spectrum Analyzer app
- Oscilloscope app



License Terms, License Types, and Support Subscriptions

You can now choose your license type (node-locked (fixed), transportable, floating (single site), or USB portable), license term (perpetual or time-based license), and then choose the support subscription period that best meets your needs. See more details below.

License terms

License Term	Description
Perpetual	Perpetual licenses can be used indefinitely.
Time-Based	Time-based licenses can be used through the term of the license (6, 12, 24 month options available).

License types

License Type	Description
Node-locked ¹	License can be used on one specified instrument/computer.
Transportable	License can be used on one instrument/computer at a time but may be transferred to another using Keysight Software Manager (internet connection required).
USB Portable	License can be used on one instrument/computer at a time but may be transferred to another using a USB dongle. Available for additional purchase, Keysight part number E8900-D10.
Floating (single site)	Networked instruments/computers can access a license from a server one at a time. Multiple licenses can be purchased for concurrent usage.

¹ See additional licensing considerations below for licenses included with instrument purchases

Support subscriptions

License Term	Support Subscription
Perpetual	Perpetual licenses are sold with a 12 (default), 24, 36, or 60-month software support subscription. Support subscriptions may be renewed for a fee after that.
Time-Based	Time-based licenses include a software support subscription through the term of the license.

Ordering New BenchVue Software Apps and Collections

Step 1. Choose your software product.

Step 2. Choose your license term: perpetual or time based.

Step 3. Choose your license type: node-locked, transportable, USB portable, or floating.

Step 4. Depending on the license term, choose your support subscription duration.

Product	License Type	License Term		
		Perpetual		Time-based
		License	Support Subscription	License & Support Subscription
Example: 0004B	Node-locked (fixed)	✓	+ 12, 24, 36, or 60 months	6, 12, or 24 months
	Transportable	✓	+ 12, 24, 36, or 60 months	6, 12, or 24 months
	USB Portable ¹	✓	+ 12, 24, 36, or 60 months	6, 12, or 24 months
	Floating (single site)	✓	+ 12, 24, 36, or 60 months	6, 12, or 24 months

¹ USB portable license requires a certified USB dongle (available for additional purchase, Keysight part number E8900-D10)

Additional Licensing Considerations

- An Entitlement Certificate is delivered with each purchased software order. Follow the directions on the certificate to redeem your order for your license. License redemption requires an internet connection.
- Many Keysight instruments include a Node-Locked Perpetual license with a new instrument purchase. These licenses are locked to your instrument and must be activated by connecting your instrument to BenchVue 2019 (or above) to activate. Visit www.keysight.com/find/IncludedBenchVue and www.keysight.com/find/benchvelicensehelp for more information
- BenchVue Node-locked licenses purchased separately i.e., not included with an instrument, are node-locked to a PC and not to an instrument.

Floating License Server Requirements

Network Floating licenses require loading a vendor daemon on a license server. This server may be the same PC running BenchVue software or a separate server. Full installation instructions (5951-5739) and support are provided for compatible server operating systems:

Keysight license server software (lmgrd.exe and agilesofd.exe) is supported on: Microsoft Windows 7 Enterprise SP1(32-bit and 64-bit) Microsoft Windows 10 Creators Update (32-bit and 64-bit), 64-bit Red Hat Linux v7.0

Keysight License Manager 6 is supported on: 64-bit Microsoft Windows 7 Enterprise SP1, Microsoft Windows 10 Creators Update 64-bit

The license server software is supported on 32-bit and 64-bit Windows and 64-bit Linux systems, but the Keysight License Manager 6 utility is supported on 64-bit Windows systems only. To setup licensing on 32-bit Windows and on Linux systems, use the processes described in the Manual License Setup section of <https://literature.cdn.keysight.com/litweb/pdf/5951-5739.pdf>

System and Installation Requirements

Computer operating system

Windows 10, 8, 7	– Windows 10 32-bit and 64-bit (Professional, Enterprise, Education, Home versions) – Windows 8, 8.1 32-bit and 64-bit (Professional, Enterprise, Core) – Windows 7 SP1 and later 32-bit and 64-bit (Professional, Enterprise, Ultimate, Home Basic, Home Premium)
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Computer hardware	Windows 10, 8, 8.1 and 7 – Processor: 1 GHz or faster (2 GHz or greater recommended) – RAM: 1 GB (32-bit) or 2 GB (64-bit) (3 GB or greater recommended)
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Interfaces	USB, GPIB, LAN, RS-232
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Display resolution	1280x1024 minimum recommended for single instrument view (higher resolution recommended for multiple instrument view)
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Additional requirements

BenchVue requires a VISA library (Keysight or National Instruments) when used to connect to physical instruments. Keysight IO Libraries Suite, which contains the necessary VISA, will be downloaded and installed automatically when BenchVue is installed if needed. IO Libraries Suite 2019 or newer is recommended. IO Libraries Suite information is available at: www.keysight.com/find/iosuite

Mobile devices

Apple iPhone, iPad, iPod Touch all models; iOS 9.0 and later. Android phone and tablets; Android 4.0.3 and later.

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Keysight also offers a variety of optional start-up assistance and project consulting services to help you maximize your test development productivity. Contact your Keysight sales specialist

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