



Introducing Keysight's Smart Bench Essentials Series

1. What is Keysight Announcing?

Keysight is introducing a complete portfolio of Smart Bench Essentials (SBE) lab bench products including the triple-output power supply, an arbitrary function generator, a digital multimeter, and an oscilloscope.

The Smart Bench Essentials series harnesses the power of four unique instruments through one powerful graphical interface with integrated data management and analysis, providing the following key benefits:

- Elegantly integrated, enabling customers to focus on innovation
- Configure, control, and monitor multiple instruments from a single screen
- Test, analyze, and share lab instruments and data remotely with peers
- Automate common tasks from test set up to report generation
- Centrally manage an entire lab of instruments and configuration

Keysight's [PathWave BenchVue application software](#) complements the Smart Bench Essentials series to configure instruments quickly, while operating on the same PC screen to test device under test. It stores data on a PC and exports it in standard readable formats for post-analysis work and report generation.

The Smart Bench Essentials series includes the optional [PathWave Remote Access Lab software](#) and the [PathWave Lab Manager software](#) to enhance the lab experience and productivity. Keysight's PathWave Remote Access Lab software enables university teaching labs to transition to online learning seamlessly. It allows students to remotely access the lab setup and perform lab work through the web browser. Keysight's PathWave Lab Manager software works seamlessly with the Smart Bench Essential series instruments to manage lab assets effectively and productively.

2. What are the applications for this product?

The Smart Bench Essentials series instruments are ideal for modern university teaching labs that require an enhanced environment conducive to sharing and maximizing learning. Remote learning technology is becoming the new norm accelerated by the recent Covid-19 pandemic. Most universities struggle to adapt to this new environment, seeking a blended learning experience with the right technologies.

Keysight's SBE series, when coupled with the PathWave Remote Access Lab software, enables students to schedule and book access to the lab instruments. Once remotely accessing the lab instruments, they can switch between different training kits or measurement points during a lab session. Access is through the PathWave cloud application, which also provides collaborative chat tools and cloud storage.

Keysight's SBE series instruments, when coupled with the PathWave Lab Manager software, enables educators or lab administrators to simplify centralized lab configuration and asset management, as well

as mass firmware updates for instruments. They can manage and configure lab instruments for multi-bench setup.

Keysight's SBE series instruments are general-purpose instruments that are used for the design and test of products in manufacturing and R&D. The new SBE series provide basic, reliable, and capable bench instruments that are affordable for small manufacturing businesses. Workspace in many labs is valuable, requiring instruments that are compact and stackable.

3. What are the key customer benefits of Keysight's Smart Bench Essential Series?

University teaching labs and general test labs need test instruments that are smart and connected to each other, connected to the lab, connected to the cloud and connected to innovation. These differentiated connections enable customers to accelerate connected insights, whether in learning, teaching or troubleshooting.

- **Connected to innovation:**

- Large displays with a consistent graphical user interface for all test instruments

- All Keysight SBE series instruments include a signature large 7" LCD display enabling customers to view information clearly, even from a distance. The input/output channels on the LCD display, light buttons, and input/output connectors are color-coded for an intuitive setup configuration. The graphical user interface, buttons and dial knobs are also designed to be consistent across the platform for ease of use.

- Consistent software user interface for easy setup connection

- Keysight SBE series instruments include USB and LAN interfaces that can be remotely detected by the dedicated Keysight PathWave BenchVue application software which offers a graphical user interface that are easy and intuitive to use, as well as consistent across the SBE series instruments.

- **Connected to the lab:**

- Manage lab assets and setup configuration effortlessly

- Keysight PathWave Lab Manager software provides customers with a simplified, centralized lab configuration and asset management capabilities. Lab managers and teaching lab educators can manage and configure lab instruments for multi-bench setup with ease. Customers can seamlessly connect to, manage, monitor, and troubleshoot the instruments within a lab.

- Intuitive lab tools track long lists of assets and keep instruments up to date

- Keysight PathWave Lab Manager software easily keeps track of a long list of assets in the lab, including - but not limited - to instruments, equipment and accessories. It also tracks calibration due dates for instruments and enables customers to perform a mass firmware update on connected Smart Bench Essential series instruments in the lab.

- **Connected to the cloud:**

- Access lab equipment securely through cloud-based remote lab scheduling and session booking

- Keysight's industry-ready remote access lab solution delivers a convenient way to make the switch to online access of lab instruments. This end-to-end solution offers a complete remote setup of a basic instrument lab. It covers web-based lab management and

scheduling administration to instrument control, as well as remote access for measurement and analysis. Customers can continue working with industry-grade test and measurement instruments and software, gain similar practical skills and application knowledge as industry engineers conducting work in the lab today.

Test, analyze and share results collaboratively, across the room or across the world

- Keysight's unique connected solution allows up to 50 students, lecturers and lab admins to remotely access lab instruments simultaneously, anytime and anywhere. They can perform collaborative lab work through a web browser – to execute measurements, analyze data, and share results across the room or across the world. This cloud solution also provides central storage of test data for uploading and downloading to local computers.

- **Connected to each other:**

Little or no learning required to set up and control the test hardware

- Keysight's SBE series is a combination of hardware and software. The industrial-grade quality hardware is complemented with Keysight PathWave BenchVue software which eliminates bench testing issues. Simple to connect and control instruments, customers can quickly execute test measurements and access results with just a few clicks. Dedicated instrument apps for the digital multimeter, power supply, oscilloscope and function generator, enable customers to quickly configure the most common measurements and setup for each instrument.

Store test results and export data for post analysis work and report generation

- When measuring device under test, customers can store test results in the instrument hardware or PC using Keysight's PathWave software. The test results can then be exported into different output formats for post-analysis work and report generation. Customers can capture the abnormal signals from faulty circuits, perform daily test monitoring processes, and quickly visualize measurements. Customers can quickly generate reports and collaborate with peers. This report generation also helps students or new engineers to highlight lab work without the hassle of software programming work.

4. What problems does Keysight's SBE series solve?

Keysight's SBE series is a combination of hardware and software that accelerates and educators' teaching experience, students' learning experience, electronic design and manufacturing engineers' better-connected insights to analyze and troubleshoot products, with the following key features:

- Test, analyze, and share results collaboratively, across the room or the world through cloud application.
- End to end efficiency and productivity through connected PathWave software application, from setup, configure, measure, storage, and post analysis to report generation.
- Elimination of repetitive instrument setup configurations to simplify tedious asset tracking.
- Includes Keysight Care, which provides 24-7 access to technical and troubleshooting support.



Keysight's four unique Smart Bench Essentials Series instruments with PathWave BenchVue software.



Keysight Smart Bench Essentials instruments with intuitive color display.



Keysight Smart Bench Essential instruments.



Keysight Smart Bench Essentials instruments with intuitive color display and button layouts.