DC Power Supplies

CATALOG

KEYSIGHT

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Keysight DC Power Supplies

One family. Four performance grades. 5 classes.

Benchtop DC Power Supplies

ESSENTIAL

NB1-class

- 90 W Maximum power
- 5 A Maximum current per output

ADVANCED

NB1, NB2-class

- 30 W to 400 W Maximum power
- 0.4 A to 20 A Maximum current per output

EXPERT

NB1, NB2-class

- 80 W to 800 W Maximum power
- 5 A to 80 A Maximum current per output

PRO

NB6-class

- 32 W Maximum power
- 3 A to 10.5 A Maximum current per output

ATE System Power Supplies

ADVANCED

NS1-class

- 750 W to 15 kW Maximum power
- 8 V to 1500 V Maximum voltage per output

EXPERT

NS1, NS4-class

- 1500 W to 12 kW Maximum power
- 20 V to 800 V Maximum voltage per output

PRO

NS1, NS4-class

- 1000 W to 30 kW Maximum power
- 9 V to 2000 V Maximum voltage per output

Introduction

Keysight DC Power Supplies — from basic to specialized power solutions

Keysight DC power supplies are now offered in three capability classes across four performance grades. Essential, our entry-level DC power supplies, includes the NB1-class, with maximum power up to 90 W. Advanced includes the NB1- and NB2-class, extending up to 400 W of maximum power. Expert includes the NB1- and NB2-class, supporting maximum power up to 800 W and extending maximum current per output to 80 A. Pro includes the NB6-class supporting maximum voltage per output up to 210 V and arbitrary waveform generation. A comprehensive library of DC power supply resources are available to help you find the performance grade and class best suited to your lab.

Precise control over voltage and current

DC power supplies deliver stable, adjustable power for testing circuits, components, and systems. They offer precise voltage and current control — crucial for accurate, repeatable measurements during prototyping, troubleshooting, and production testing. Keysight resources guide you from fundamental to complex applications to deepen your expertise.

Here are a few examples of the resources you will find to help you select the DC power supply that is right for you:

Benchtop DC Power Supplies

Keysight DC power supplies provide stable, precise power for designing, testing, and validating electronic devices across development and production. Choose the performance grade that fits your needs based on maximum power, voltage, current, and elevated measurement capabilities. Explore our broad portfolio of DC power supplies — from Essential to Pro models — to find the ideal DC power supply for your application.

	Essential **NB1-class**	Advanced **NB1, NB2-class**	Expert **NB1, NB2-class**	Pro **NB6-class**
Maximum power	**90 W**	**30 W to 400 W**	**80 W to 800 W**	**32 W**
Maximum current per output	**5 A**	**2 A to 20 A**	**5 A to 80 A**	**3 A to 10.5 A**
Maximum voltage per output	**30 V**	**6 V to 60 V**	**25 V to 60 V**	**210 V**
Number of outputs	**3**	**1 to 4**	**1 to 3**	**1 to 2**
4-wire remote sense	**No**	**Yes**	**Varies**	**Yes**
Up / down programming settling time	**80 ms**	**25 ms to 60 ms**	**11 ms to 15 ms**	**100 µs**
Arbitrary waveform generation	**No**	**No**	**Varies**	**Yes**
Brands included	**EDU36311A**	**E36100 Series** **E36200 Series** **E36441A**	**E36150 Series** **E36300 Series**	**B2960 Series**
	Explore	Explore	Explore	Explore

Essential Benchtop DC Power Supplies

Ideal power source for teaching labs

Keysight NB1-class Essential benchtop DC power supplies include the EDU36311A, which is a triple-output power supply with a compact design. You can control and view its three independent outputs simultaneously with its 7-inch color display, which is ideal for teaching labs. With Keysight power supply control and automation software, you can easily connect, control, and capture measurements remotely. Request a quote or order a Keysight Essential benchtop DC power supply today.

Learn more about our Essential benchtop DC power supply

Triple output channels

Three independent channels enable engineers to power several circuits simultaneously.

High accuracy and low noise

Delivers precise, stable power with line and load regulation under 0.01% for voltage and 0.2% for current.

Built-in protection features

Overvoltage, overcurrent, and over-temperature protection ensure safety and reliability in your test lab.

Intuitive and easy-to-use

A 7-inch color display with color-coded, user-friendly controls makes it easy for engineers to correlate on-screen readings with outputs.

Maximum power	**90 W**
Maximum current per output	**5 A**
Maximum voltage per output	**30 V**
Number of outputs	**3**
4-wire remote sense	**No**
Up / down programming settling time	**80 ms**
Arbitrary waveform generation	**No**

Buy / Get quote

Advanced Benchtop DC Power Supplies

Autoranging and remote sensing capabilities

Keysight Advanced benchtop DC power supplies come in two classes. The NB1-class includes the E36100 Series, and the NB2-class includes the E36200 Series and E36441A power supplies. Advanced DC power supplies deliver 30 W to 400 W of power to your device under test. The autoranging feature produces more current at all voltage levels. Auto-series and auto-parallel options internally combine the outputs when a single, higher power output source is needed, enabling flexible output utilization for a wide variety of applications. Choose one of our popular configurations or configure one specific to your application.

Learn more about our Advanced benchtop DC power supplies

Autoranging outputs

Automatically adjusts output voltage and current to deliver maximum current at each voltage setting, making it ideal for testing components with dynamic voltage and current requirements.

Wide voltage and current range

Improves bench space utilization by providing power over a wide range of voltages and currents, without requiring multiple specialized supplies.

Low ripple and noise

With ripple and noise less than 350 µVrms, the clean output minimizes interference and protects sensitive components during precision circuit testing.

Remote sensing

Compensate for voltage drops that occur in the power wires due to resistance — especially important over long cable lengths and high current.

Class	Included Brands	Range of Performance Specifications						
		Maximum Power	Maximum Current per Output	Maximum Voltage per Output	Number of Outputs	4-Wire Remote Sense	Up / Down Programming Settling Time	Arbitrary Waveform Generation
NB1	E36100 Series	30 W to 40 W	2 A to 5 A	6 V to 20 V	1	Yes	25 ms to 50 ms	No
NB2	E36200 Series, E36441A	200 W to 400 W	10 A to 20 A	30 V to 60 V	1 to 4	Yes	50 ms to 60 ms	No

View popular configurations

Expert Benchtop DC Power Supplies

High power range with specialized capabilities

Keysight Expert benchtop DC power supplies come in two classes. The NB1-class includes the E36150 Series, and the NB2-class includes the E36300 Series. They provide precise voltage and current control with a maximum output up to 800 W. Our highest power Expert model provides autoranging capabilities up to 800 W, ideal for testing motor drivers, power inverters, and DC to DC converters that require high voltage or current underload. Keysight Expert DC power supplies include all the capabilities in our Advanced models with additional features like enhanced programming speed, automotive ISO preset library, playback simulation, and e-logging features. Choose one of our popular configurations or configure one specific to your application.

Learn more about our Expert benchtop DC power supplies

Elevated data logging

Record and analyze power output over time, creating traceable reports for verification and compliance purposes.

LIST mode programming

Predefine a sequence of voltage and current settings to be automatically executed in a specific order, with precise timing.

Output sequencing

Simulate real-world conditions with power-up sequences for devices that require varying voltages or currents at different stages of operation.

Built-in voltmeter and ammeter

Measure voltage and current directly from the power supply for accurate readings and streamline testing, reducing the need for an external instrument.

Class	Included Brands	Range of Performance Specifications						
		Maximum Power	Maximum Current per Output	Maximum Voltage per Output	Number of Outputs	4-Wire Remote Sense	Up / Down Programming Settling Time	Arbitrary Waveform Generation
NB1	E36150 Series	800 W	40 A to 80 A	30 V to 60 V	1	Yes	15 ms	Varies
NB2	E36300 Series	80 W to 160 W	5 A to 10 A	25 V	3	Varies	11 ms to 12 ms	No

View popular configurations

Pro Benchtop DC Power Supplies

Ultra-low noise performance for precision power measurements

Keysight NB6-class Pro benchtop DC power supplies include the B2960 Series. They are our highest-performance benchtop DC power supply models, ideal for applications that require high precision, ultra-low noise, and stable power. Our Pro models offer 6.5-digit precision display for voltage and current readings, wide bipolar 4-quadrant output ranges, ultra-low noise, and a built-in arbitrary waveform generator (AWG). Choose one of our popular configurations or configure one specific to your application.

Learn more about our Pro benchtop DC power supplies

6.5-digit precision

Offers highly accurate readings with 100 nV resolution for voltage and 10 fA for current, ideal for testing high-precision devices like temperature sensors and integrated circuits.

Ultra-low noise

Supports an external noise filter for noise as low as 10 µVrms, preventing interference with precision circuits and low-noise amplifiers.

Pulsed source modes

Delivers pulsed output with precise timing, voltage, and current control, ideal for testing communications, automotive, and power electronics systems using real-world conditions.

Built-in AWG

Generates custom voltage and current waveforms with specific shapes, at frequencies from 1 mHz to 10 kHz, and with varying amplitudes.

Maximum power	**32 W**
Maximum current per output	**3 A to 10.5 A**
Maximum voltage per output	**210 V**
Number of outputs	**1 to 2**
4-wire remote sense	**Yes**
Up / down programming settling time	**100 µs**
Arbitrary waveform generation	**Yes**

View popular configurations

ATE System Power Supplies

Keysight ATE system power supplies accelerate automated test sequences with fast command processing and rapid settling times, reducing overall test duration. Their compact, high-power-density design saves valuable rack space. Ideal for fast, parallel testing, they are optimized for semiconductor, automotive, consumer electronics, and wireless communications applications in both production and development environments. Explore our wide range of ATE system power supplies from Advanced to Pro performance grades to find the one that is right for your application.

	Advanced **NS1-class**	Expert **NS1, NS4-class**	Pro **NS1, NS4-class**
Maximum power	**750 W to 15 kW**	**1500 W to 12 kW**	**1000 W to 30 kW**
Maximum voltage per output	**8 V to 1500 V**	**20 V to 800 V**	**9 V to 2000 V**
Maximum current per output	**1.3 A to 510 A**	**85 A to 240 A**	**16.7 A to 800 A**
Noise and ripple	**80 mVpp to 2400 mVpp**	**9 mVpp to 2400 mVpp**	**9 mVpp to 3000 mVpp**
Output response time	**0.1 ms to 250 ms**	**20 ms to 30 ms**	**0.075 ms to 1 ms**
Measurement accuracy	**16 mV to 1.5 V**	**9 mV to 480 mV**	**3.7 mV to 750 mV**
Regenerative power	**No**	**Varies**	**Varies**
Brands included	**N5700 Series** **N8700 Series** **N8900 Series**	**RP5900 Series** **DP5700 Series** **N6900 Series**	**RP7900 Series** **N7900 Series**
	Explore	Explore	Explore

Advanced ATE System Power Supplies

Precision power solutions for general-purpose testing

Keysight NS1-class Advanced ATE power supplies include the N5700 Series, N8700 Series, and N8900 Series. They deliver reliable, high-performance power tailored for automated test environments. Designed to support a wide range of voltage and current needs, these power supplies offer fast command response, high power density, and enhanced programmability. Whether you're testing power devices, solar inverters, battery packs, motor drivers, or industrial inverters, Keysight Advanced ATE power supplies provide the flexibility, precision, and scalability needed for both development and high-volume production environments. Our Advanced models provide up to 15 kW maximum power and offer an autoranging option, providing higher current at more voltage levels. Choose one of our popular configurations or configure one specific to your application.

Learn more about our Advanced ATE system power supplies

Built-in measurements

Integrated voltage, current, and power measurements simplify lab setup by eliminating the need for external meters.

Device protection

Overtemperature, overcurrent, and overvoltage protection shuts down the output when a fault condition occurs, preventing device damage.

Multiple I/O interface options

Supports GPIB, Ethernet / LAN, and USB interfaces for flexible system connectivity, enabling easy integration into test systems and workflows.

Remote access and control

Enables setup, monitoring, and operation through a standard web browser for simplified remote testing and control.

Class	Included Brands	Range of Performance Specifications						
		Maximum Power	Maximum Current per Output	Maximum Voltage per Output	Noise and Ripple	Regenerative Power	Measurement Accuracy	Output Response Time
NS1	N5700 Series, N8700 Series, N8900 Series	750 W to 15 kW	1.3 A to 510 A	8 V to 1500 V	80 mVpp to 2400 mVpp	No	16 mV to 1.5 V	0.1 ms to 250 ms

View popular configurations

Expert ATE System Power Supplies

High-power for complex, high-speed production test

Keysight Expert ATE power supplies come in two classes. The NS1-class includes the DP5700 and N6900 Series, and the NS4-class includes the RP5900 Series. They deliver the precision, speed, and enhanced programmability required to safely test complex systems. The Expert Series architecture delivers fast dynamic response, precise control, and efficient energy recovery, optimized for demanding ATE environments that require dynamic load testing. Choose one of our popular configurations or configure one specific to your application.

Learn more about our Expert ATE system power supplies

Fast command processing

Precise voltage and current control delivered with high-speed command processing, ideal for quickly testing high-speed electronic devices with fast-switching circuitry.

Dynamic power allocation

Adjusts outputs dynamically based on the DUT's requirements, ensuring optimal power delivery while preventing overloads.

Digital I/O integration

Built-in digital I/O ports allow for direct integration with automated test controllers for synchronization with other lab instruments like oscilloscopes and function generators.

Parallel and series operation

Scales to 192 kW by combining multiple units, enabling testing of larger, high-power systems.

Class	Included Brands	Range of Performance Specifications						
		Maximum Power	Maximum Current per Output	Maximum Voltage per Output	Noise and Ripple	Regenerative Power	Measurement Accuracy	Output Response Time
NS1	DP5700 Series, N6900 Series	1500 W to 3400 W	25 A to 170 A	20 V to 80 V	9 mVpp to 75 mVpp	No	9 mV to 36 mV	3 to 30 ms
NS4	RP5900 Series	2000 W to 12 kW	8 A to 240 A	80 V to 800 V	200 mVpp to 2400 mVpp	Yes	48 mV to 480 mV	15 ms to 30 ms

View popular configurations

Pro ATE System Power Supplies

Complete capability power supplies with regenerative options

Keysight Pro ATE power supplies come in two classes. The NS1-class includes the N7900 Series, and the NS4-class includes the RP7900 Series. They are high-performance, autoranging DC power supplies engineered for automated test environments that demand speed, accuracy, and flexibility. Offering up to 30 kW in a compact 5U form factor, our Pro models deliver fast output response times, wide voltage and current ranges, and precise control to support a broad range of dynamic test applications. Our Pro ATE supplies are ideal for testing automotive components, aerospace systems, and industrial electronics. Choose one of our popular configurations or configure one specific to your application.

Learn more about our Pro ATE power supplies

Ultra-high power

Test high-power systems up to 30 kW — such as renewable energy systems, electric vehicle powertrains, data centers, and industrial motor drives — using a single, integrated unit.

Real-time control

Hardware-based control enables immediate adjustments of voltage and current based on external sensors or triggers, supporting a closed-loop testing environment.

High-speed digitization

Provides up to 1.6 MSa/s sampling for voltage and current, enabling scope-grade waveform capture and analysis directly from the power supply.

Built-in AWG

Simulate dynamic real-world power conditions by directly outputting complex, time-varying voltage and current profiles from the power supply.

Class	Included Brands	Range of Performance Specifications						
		Maximum Power	Maximum Current per Output	Maximum Voltage per Output	Noise and Ripple	Regenerative Power	Measurement Accuracy	Output Response Time
NS1	N7900 Series	1000 W to 2 kW	16.7 A to 200 A	9 V to 160 V	9 mVpp to 30 mVpp	No	3.7 mV to 47 mV	0.5 ms
NS4	RP7900 Series	5000 W to 30 kW	20 A to 800 A	20 V to 2000 V	30 mVpp to 3000 mVpp	Yes	6 mV to 750 mV	0.075 ms to 1 ms

View popular configurations

Specialty Power Solutions

Keysight specialty power solutions, including battery emulators, photovoltaic array simulators, HEV / EV power converters, and mobile communication DC sources, provide precise power simulation for testing energy-intensive systems. These solutions enable you to validate critical components in electric vehicles, renewable energy systems, and telecommunications with accurate, real-world conditions. Important for industries like automotive, renewable energy, and consumer electronics, they ensure reliable performance and compliance for next-generation technologies. Explore our wide range of specialty power solutions to find the one that is right for your application.

Battery emulators

Assess battery life of your devices by emulating any battery charge state.

Explore

Photovoltaic array simulators

Simulates real-world solar conditions for accurate photovoltaic system test.

Explore

HEV / EV power converters

Delivers precise, high-power testing for HEV / EV powertrain components.

Explore

Mobile communication DC sources

Reliable DC power for testing mobile communication devices and systems.

Explore

Battery Emulators

A complete battery profiling and emulation solution for IoT optimization

Keysight BE3-class battery emulators include the E36731A Series, which accelerates battery-powered device development by enabling precise, repeatable, and safe battery emulation and analysis. This high-accuracy power supply and software suite let you emulate real battery behavior under dynamic load conditions without the unpredictability and safety risks of physical batteries. It supports in-depth power consumption analysis and validation, making it a critical tool for R&D teams developing devices like smartphones, wearables, and other battery-dependent electronics. Request a quote or order a Keysight battery emulator today.

Learn more about our battery emulators

Battery emulation

Simulate battery behavior with high precision to test devices under controlled, repeatable conditions, without the need for actual batteries.

Integrated battery profiler

Create a digital twin of a real battery, and then test under active device load conditions to get an accurate analysis of device battery usage.

Simulate battery aging effects

The cycling function automates the analysis of repeated charge and discharges on your system's battery.

Built-in electronic load

Combines a power supply and electronic load in a single device, so you can test both power delivery electronics and the device they power in a single instrument.

Maximum power	**200 W**
Maximum voltage per output	**30 V**
Maximum current per output	**20 A**
Number of outputs	**1**

Buy / Get quote

Photovoltaic Array Simulators

Photovoltaic array simulators to maximize the performance of your inverter

Keysight NU2-class benchtop photovoltaic (PV) array simulators include the PV8900 Series. They deliver up to 30 kW of power, or 600 kW with multiple units in parallel, in a 3U rack-mounted form factor to emulate the electrical characteristics of photovoltaic arrays, critical for testing and optimization of solar inverters. The autoranging output accommodates a wide range of voltage and current combinations at full power to simulate various PV array conditions without the need for multiple power supplies. Our PV array simulators also function as a DC power supply, offering features like built-in output lists, data logging, and arbitrary waveform generation. Choose one of our popular configurations or configure one specific to your application.

Learn more about our photovoltaic array simulators

High-power and scalable

Test up to 2000 V and 30 kW in a single unit, or scale with multiple units to 600 kW for high-capacity string inverter testing in large commercial PV systems.

Autoranging output

Automatically adjusts the output to match load requirements to deliver full power over voltage and current combinations up to 2000 V or 60 A.

DC power supply mode

Delivers up to 30 kW of autoranging DC power with precise voltage / current control and features like output sequencing, data logging, and waveform generation.

Automated testing

Designed to streamline the process of verifying compliance with industry standards, like EN50530, IEC 61853, and IEC 61215.

Maximum power	**20 kW to 30 kW**
Maximum voltage per output	**1500 V to 2000 V**
Maximum current per output	**30 A to 60 A**
Number of outputs	**1**

View popular configurations

HEV / EV Power Converters

Power converter and DC charging test solution for HEV / EV

Keysight NU1-class HEV / EV power converters include the EV1003A, SL1041B, and SL1800A Series and are purpose-built to support the fast-paced development and validation of electric and hybrid electric vehicle (EV / HEV) power trains. These systems combine high-voltage operation, bidirectional power flow, and regenerative energy capabilities to accurately emulate real-world vehicle charging and operations scenarios. Designed for applications including onboard charger testing, DC fast charger testing, and inverter and motor controller validation, they offer fast transient response, scalable power, and integration with hardware-in-the-loop (HIL) systems. Choose one of our popular configurations or configure one specific to your application.

Learn more about our HEV / EV power converters

Regenerative energy recovery

Recover and return excess energy to the grid instead of wasting it as heat — ideal for power sink tests like regenerative braking or battery discharge.

Scalable architecture

Generate up to 1.5 MW of power using parallel connections to expand test capacity as your requirements grow.

Automated test sequencing

Create, execute, and manage complex test routines for fast, scalable validation in high-throughput environments.

Safety and fault simulation

Simulate a wide range of fault scenarios in a controlled and repeatable environment, ensuring that systems meet both performance and safety standards.

Class	Included Brands	Range of Performance Specifications		
		Maximum Power	Maximum Voltage	Maximum Current
NU1	EV1003A, SL1041B, SL1800A Series	20 kW to 300 kW	950 V to 1500 V	100 A to 900 A

View popular configurations

Mobile Communication DC Sources

Specialized DC power sources for testing digital wireless appliances

Keysight NU4-class mobile communication DC power sources include the 66300 Series power sources. They provide precise voltage and current control, low ripple, built-in measurement capabilities, and a highly programmable design optimized for testing digital wireless communications products under a variety of real-world conditions. Choose one of our popular configurations or configure one specific to your application.

Learn more about our mobile communication DC power sources

Fast transient response

Quick response to rapid changes in load and current to keep pace with dynamic power demands when testing devices like smartphones and tablets.

Low output noise

Provides stable, clean power with minimal ripple for precise RF testing of mobile devices which are sensitive to power supply noise.

Built-in measurements

Monitor key parameters like voltage, current, and power in real-time, ensuring accurate insights when testing technologies like 5G.

Programmability

Supports remote control and programming via USB, LAN, and GPIB, for convenience and integration into automated test systems.

Maximum current per output	**3 A to 20 A**
Number of outputs	**1 to 2**
Maximum power	**45 W to 100 W**
Maximum voltage per output	**15 V to 20 V**
Digital voltmeter	**Varies**
Battery emulation	**Varies**

View popular configurations

Modular DC Power Solutions

Configurable system-level DC power supplies in a compact form factor

Keysight modular DC power solutions enable you to optimize performance and power to match test needs in specific applications. Choose your mainframe and select from over 35 modules, including basic, high-performance, precision, source / measure units (SMU), and electronic loads, to create the custom power supply solution you need. With several mainframes and modules to choose from, select the modular DC power solution that is right for your application.

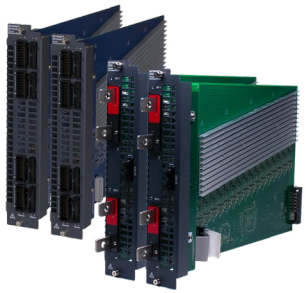
See catalog

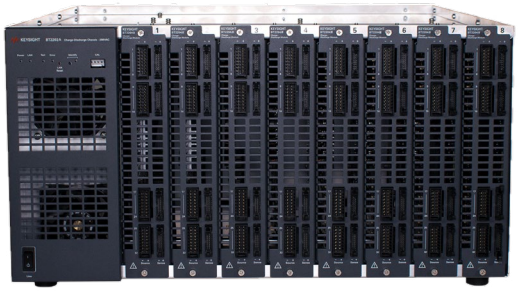
General-purpose testing

Maximum output power:
400 W to 1200 W

Photovoltaic testing

Maximum output power:
1200 W to 10 kW





Battery cell testing

Maximum output power:
875 W

Software and Accessories

Find compatible software and accessories for your DC power supplies

Unlock the full potential of your Keysight DC power supplies with a suite of software and accessories designed for precision testing and automation. integrate leading-edge programming and control capabilities for remote operation, data logging, and sequencing. Accelerate your testing with application-specific software for battery drain analysis, power device characterization, and power envelope tracking. Stay in control with LAN, USB, GPIB, and LXI connectivity options, while enhancing your test setup with high-quality accessories — from probes and cables to rack-mount kits.

Extend your DC power supplies with a wide range of specialty software:

- battery charging test
- photovoltaic inverter test
- IV curve measurement
- battery emulation and test
- lab management and control
- remote instrument control
- automated instrument control

Explore software

Get more functionality out of your DC power supplies by pairing them with the right accessories, including:

- Kelvin probes
- ultra-low noise filters
- GPIB interface modules and cables
- filler panel kits
- ultra-low noise filters
- instrument stacking kits
- rack-mount kits

Explore accessories

Keysight Support Services

Explore the services that are right for you

Keysight Support Services can reduce your learning curve, enhance your uptime, guarantee the accuracy of your testing equipment, and provide the expertise you require, precisely when and where you need it.

Maximize your instrument uptime, quickly optimize your test measurements, and get the answers you need at our fastest available times. KeysightCare curated support plans bundle critical services with prioritized response and turnaround times. **High-performance instruments include one year of KeysightCare Assured.**

Explore support services

Calibration

Ensure your test system performs to specification and meets local and global standards.

Repair

Restore equipment to original functionality and specifications with trained technicians.

KeysightCare

Innovate at speed with curated support plans and prioritized response and turnaround times.

Education

Make measurements quickly with eLearning and in-house, instructor-led training.

Keysight Support

Get 24x7 access to service requests, case management help, and technical articles.

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.