

NI ELVIS Education Platform

NI ELVIS

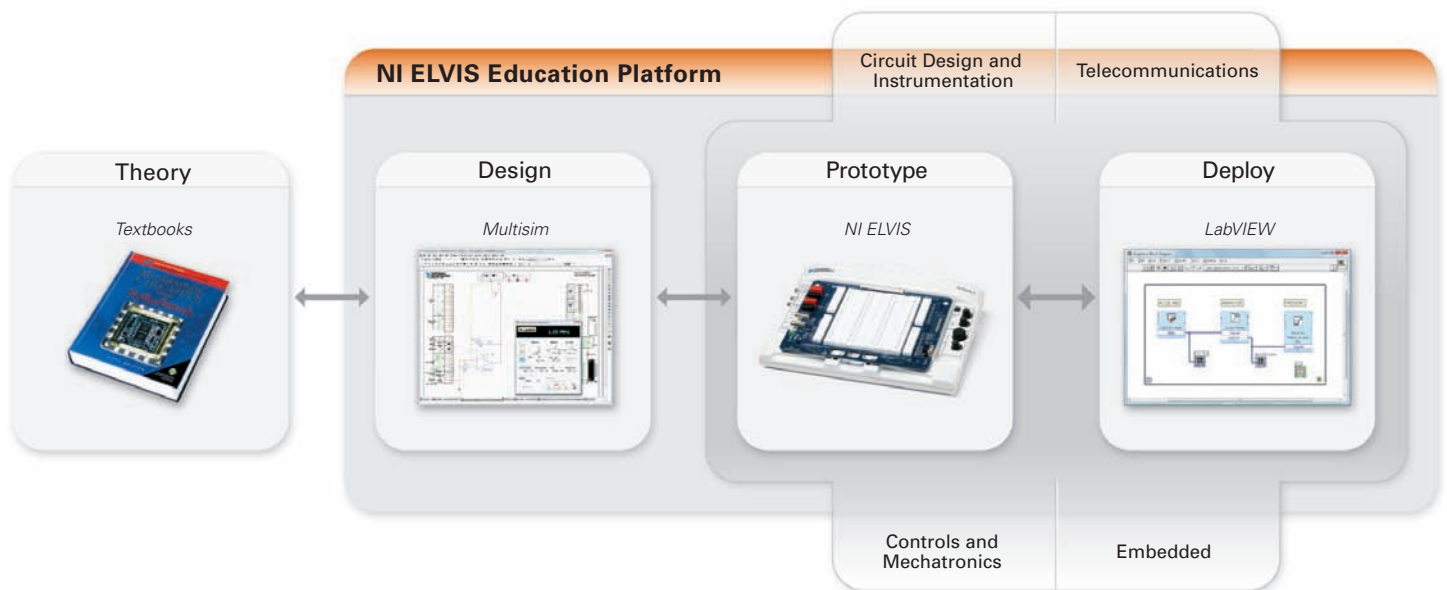
NI LabVIEW

NI Multisim



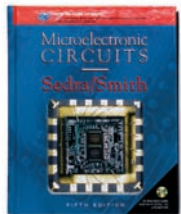
Connect Theory to the Real World

With National Instruments software and hardware, engineering educators worldwide help students connect theory to real-world design through hands-on, experiential learning. Using NI ELVIS, educators can take advantage of a complete, low-cost design and prototyping platform for teaching circuits, measurements, controls, telecommunications, microcontrollers, and embedded design in engineering laboratories. Designed with the educational lab in mind, NI ELVIS features a suite of 12 accurate instruments based on NI LabVIEW graphical system design software, USB plug-and-play connectivity, backward compatibility with previous versions of NI ELVIS, and a comprehensive set of curriculum resources for helping educators make the most of their courses.



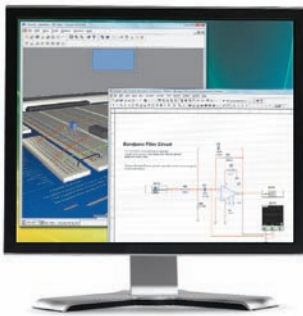
Teach Design from Chalkboard to Breadboard

With NI Multisim, LabVIEW software, and the NI ELVIS design and prototyping platform, educators can bring theory to life with real-world data in circuits and electronics classes. The NI electronics education platform fosters learning, reinforces theory, and provides students with a hands-on approach to learning the industrial process of taking theory and designing, prototyping, and deploying actual systems.



Theory

Students learn fundamental circuit design concepts by attending lectures, reading textbooks, and solving homework problems. Educators can download circuit sets from top textbooks at ni.com/academic/circuits and build a curriculum that lays the foundation for understanding circuit behavior.



NI Multisim



NI ELVIS

Design

With Multisim SPICE simulation and schematic capture software, students can interactively design and simulate the circuits from their textbooks. With Multisim, they can also test the performance of their designs using built-in NI ELVIS virtual instruments and probes. Students can also practice wiring their circuits in the innovative 3D NI ELVIS environment, which optimizes their time in the laboratory.

Prototype

After verifying that their circuits simulate correctly, students can prototype the actual circuits using LabVIEW and NI ELVIS, which offers 12 built-in instruments, such as an oscilloscope, digital multimeter, function generator, and variable power supply, to compare simulation results with real-world data.



NI LabVIEW

Deploy

After prototyping and verifying their circuits, students can extend their applications to senior design projects by leveraging the advanced processing and deployment options that LabVIEW provides, such as an FPGA-based NI CompactRIO system. This helps them gain an understanding of the complete industrial process of designing, prototyping, and deploying a system.

NI ELVIS Partner Boards for Multiple Disciplines

Educators can use the NI ELVIS prototyping platform to teach a variety of classes – from circuit design and instrumentation using NI ELVIS, LabVIEW, and Multisim; to control design using Quanser QNET plug-in boards; to telecommunications using the Emona DATEx board for NI ELVIS; to embedded/microprocessor design with the Freescale MCU Student Learning Kit. Educators also can download free curriculum resources, example programs, and other resources for these disciplines from ni.com/nielvis.



Multisim 10.1 Integration, Powered by LabVIEW

Offers tight integration with LabVIEW graphical programming and Multisim SPICE simulation software

Modular Teaching Platform

Works with plug-in boards from Emona, Freescale, and Quanser to expand NI ELVIS across multiple disciplines

Isolated DMM

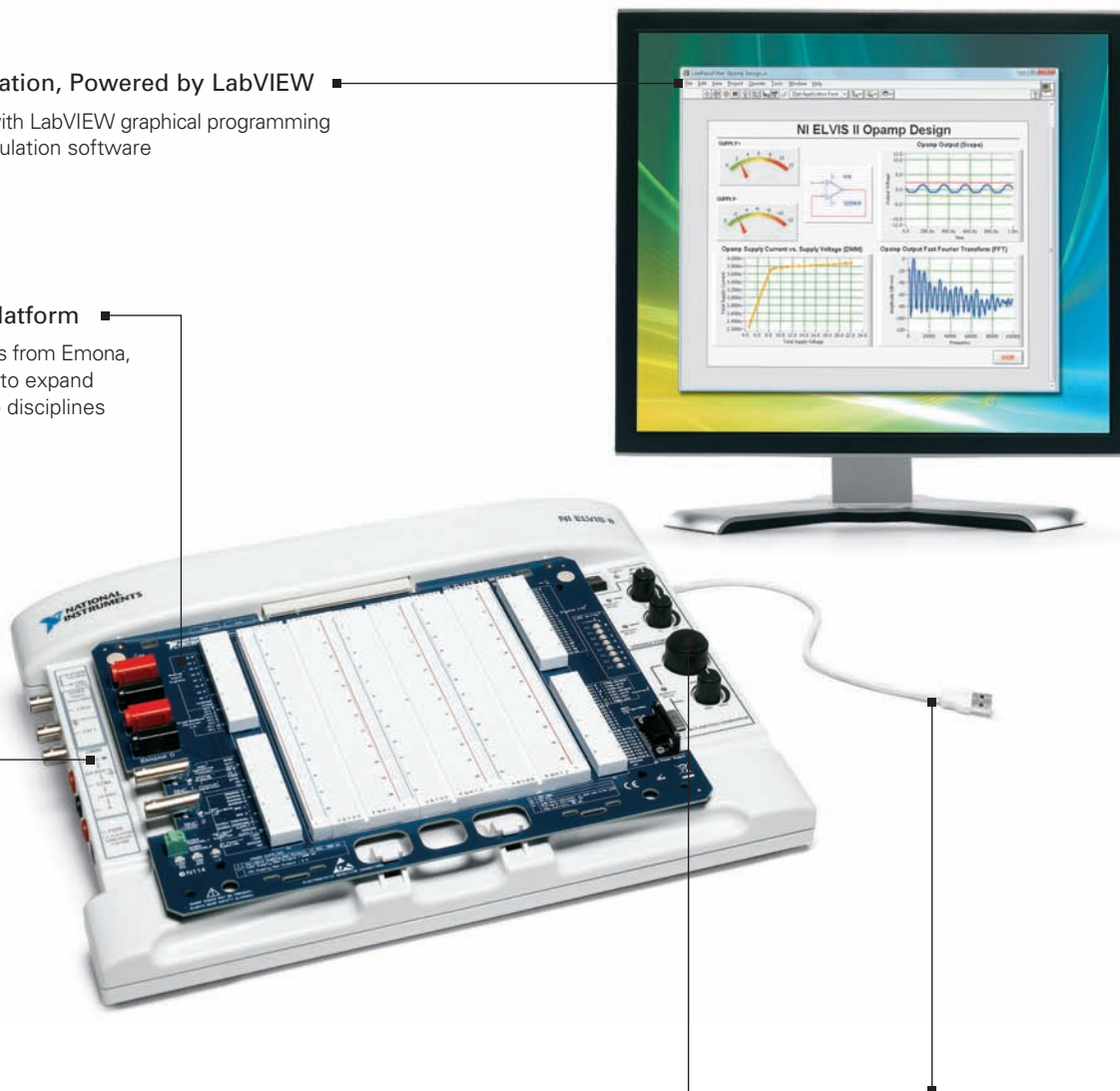
Features an isolated digital multimeter (DMM) for DC measurements up to 60 V, 2 A and AC measurements up to 20 V_{rms}, 2 A_{rms}

12 Integrated Instruments

Includes oscilloscope, DMM, function generator, variable power supply, and more in a cost-effective, compact size

USB Plug-and-Play Interface

Offers easy setup, maintenance, and portability in labs



NI ELVIS Instruments

- | | | |
|----------------------------|--------------------------------|-----------------------------------|
| ▪ Digital Multimeter (DMM) | ▪ Bode Analyzer | ▪ Digital Writer |
| ▪ Oscilloscope | ▪ Dynamic Signal Analyzer | ▪ Impedance Analyzer |
| ▪ Function Generator | ▪ Arbitrary Waveform Generator | ▪ 2-Wire Current-Voltage Analyzer |
| ▪ Variable Power Supply | ▪ Digital Reader | ▪ 3-Wire Current-Voltage Analyzer |

Services and Support

Commitment to Your Success

National Instruments offers technical support, software and hardware services, training, and professional services to meet your needs. Learn more about these services at ni.com/services.

Curriculum Resources

National Instruments offers high-quality course materials and lab exercises for a variety of disciplines, such as circuit design, measurements, control and simulation, signal and image processing, RF and wireless communications, and embedded systems. Explore these resources at ni.com/academic and freely use them to supplement your courses.

Student Software

Students can use Multisim and LabVIEW student editions to complete coursework. With free courseware, example circuits, and extensive Web resources, students have the tools they need to effectively translate theory into practice at home as well as in the lab. For a free evaluation of Multisim and additional resources, visit ni.com/academic/multisimse. To evaluate LabVIEW for free, visit ni.com/labview/whatis.



U.S. Corporate Headquarters 866 463 5417

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