
NATIONAL
INSTRUMENTS™

Beneficios de recolocar al “estudiante” en el centro de atención en ciencia e ingeniería

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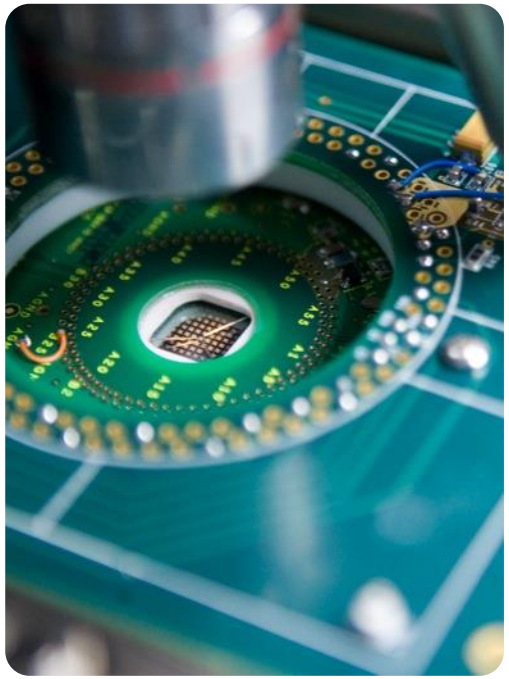
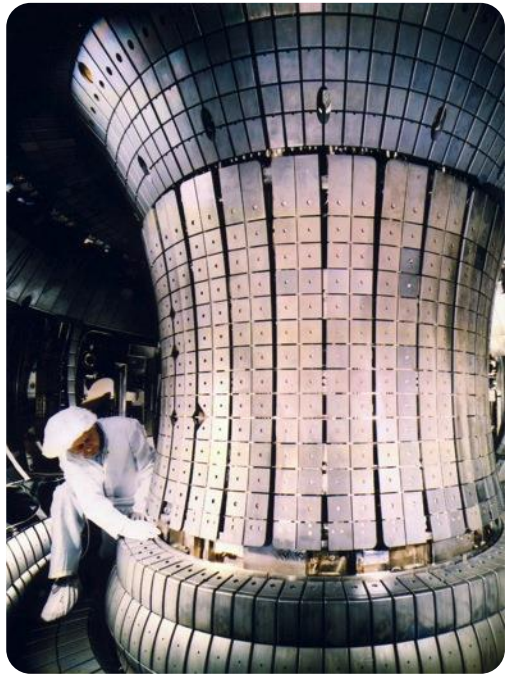
National Instruments - Misión

Equipamos a ingenieros y científicos con sistemas que aceleran la productividad, la innovación y el descubrimiento.





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Agenda

- ¿Dónde está el centro del mundo?
- Estudiante es el Alumno, el Profesor y el Investigador
- Recursos
  - para alumnos
  - para docentes
  - para investigadores

¿Dónde está el centro del mundo?

- Silicon Valley?
- Academia?
- Telecomunicaciones?
- Cirujanos?
- Ciberseguridad y criptografía cuántica?
- …

- Yo soy el centro del mundo!
- Y sigo siendo un “estudiante”

NATIONAL INSTRUMENTS™

“Estudiante” es el Alumno, el Profesor y el Investigador

… nunca paramos de estudiar

Project-Based Learning

Challenging
Problems & Projects

Ensure Project
Authenticity

Student Problem
Solving Skills

Student Centric
Process

Enable Student
Presentation

NATIONAL INSTRUMENTS

Analog Discovery 2

NI Edition

- Multi Instrumento low cost

- 2 canales 100MS/s osciloscopio 14 bits
- 2 generadores funciones arbitrarias
- 16 canales analizador lógico

- Windows, MAC y Linux
- WaveForms
- LabVIEW y otros lenguajes
- Multisim
- USB

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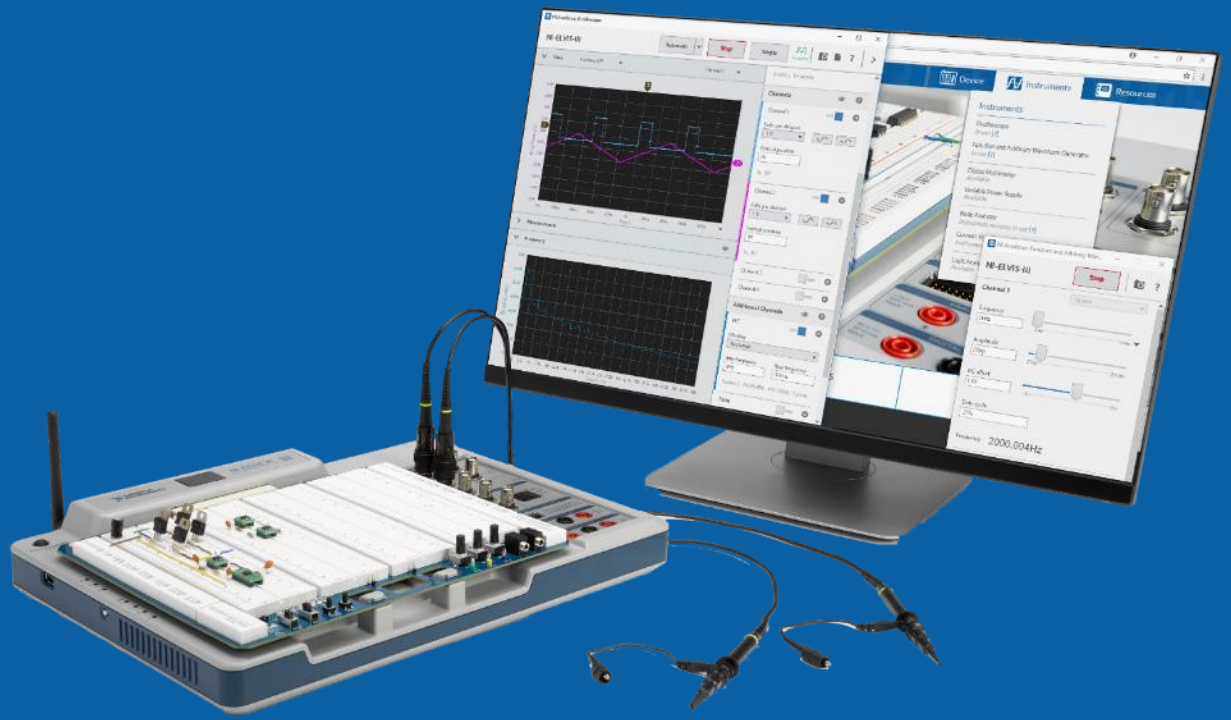
NI ELVIS III Engineering Laboratory Solution for Project Based Learning



- Measurements & Instrumentation
- Analog Circuits
- Digital Electronics
- Power Electronics
- Energy Systems
- Controls
- Mechatronics
- Communications

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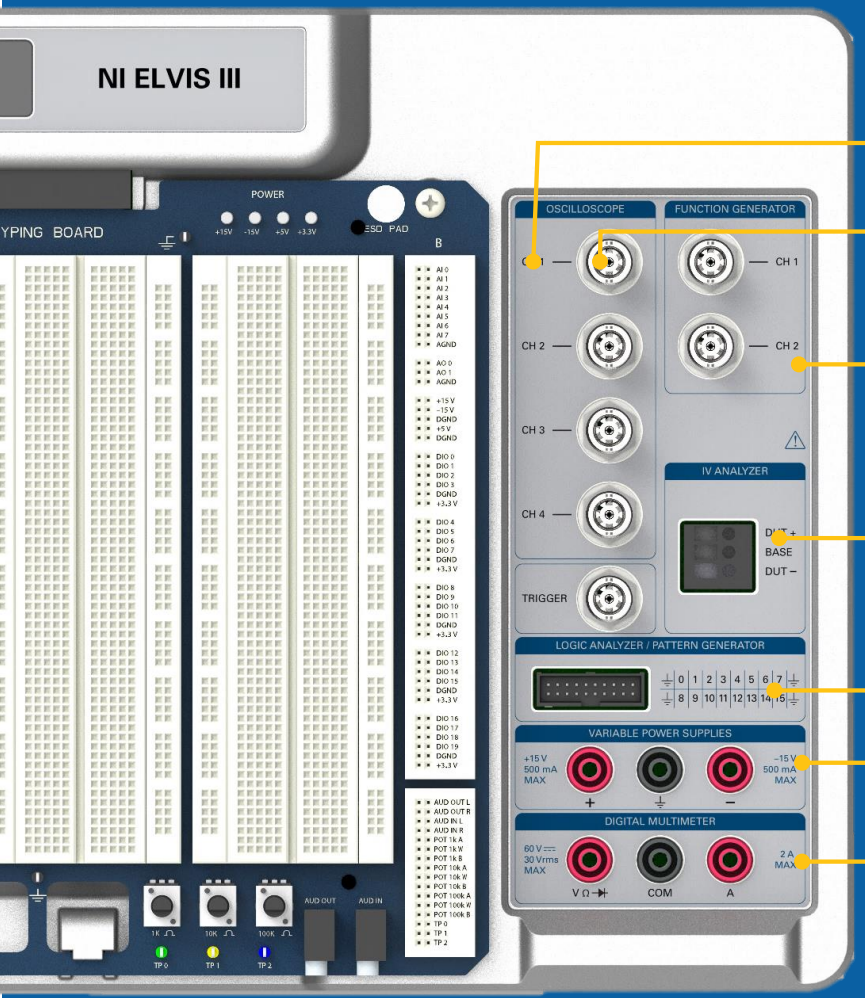
NI ELVIS III

NI ELVIS III



Fully Accessible Instrumentation Panel

Bode Plotter Browser-based

Oscilloscope 4-CH 14-bit 100 MS/s 50MHz BW

Function Generator 2-CH 14-bit 100 MS/s

IV Analyzer Browser-based

Logic Analyzer / Pattern Generator 16 Independent I/O at 100MS/s

Variable Power Supply ±15V 500mA

Digital Multimeter 4.5 Digit 50V 2A with LC Measurement Capabilities

OS Support for Instrumentation

Windows

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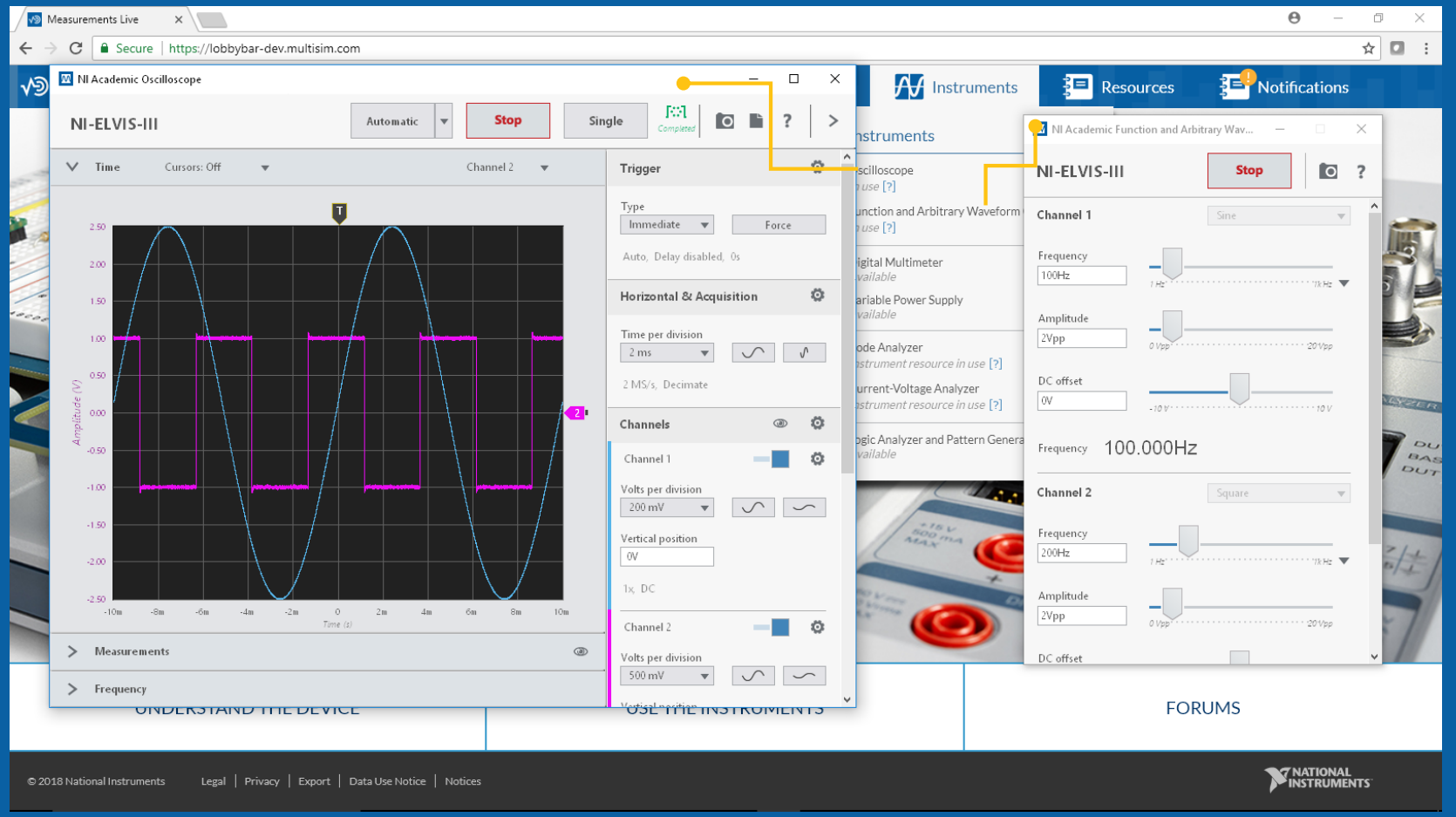
NI ELVIS III – Industrial-Grade Measurements



NI ELVIS III

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DIGILENT
A National Instruments Company

TEXAS INSTRUMENTS

QUANSER
INNOVATE·EDUCATE

QUANSER
INNOVATE·EDUCATE

QUANSER
INNOVATE·EDUCATE

EMONA

Solutions Developed with Leading Educators, Teaching Experts and Industrial Partners

VirtualBench

- Multi Instrumento desde 1980€

- 5 instrumentos en 1 interfaz integrada
- hasta 4 canales osciloscopio 1.5GS/s
- longitud registro hasta 1M muestras/ch
- 1 canal generador funciones 20MHz
- multímetro 5 ½ dígitos
- fuente DC 3 canales +/-25V
- 8 DIO
- USB, WiFi, Ethernet

- Desarrolla con LabVIEW
- Excelente experiencia de usuario

PXI Overview

- Multi-vendor standard governed by PXISA
- 1200+ modules, 70+ vendors
- CompactPCI + Requirements for instrumentation
  - Timing, Triggering
  - Environmental
  - Software

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Some Software-Designed Instruments

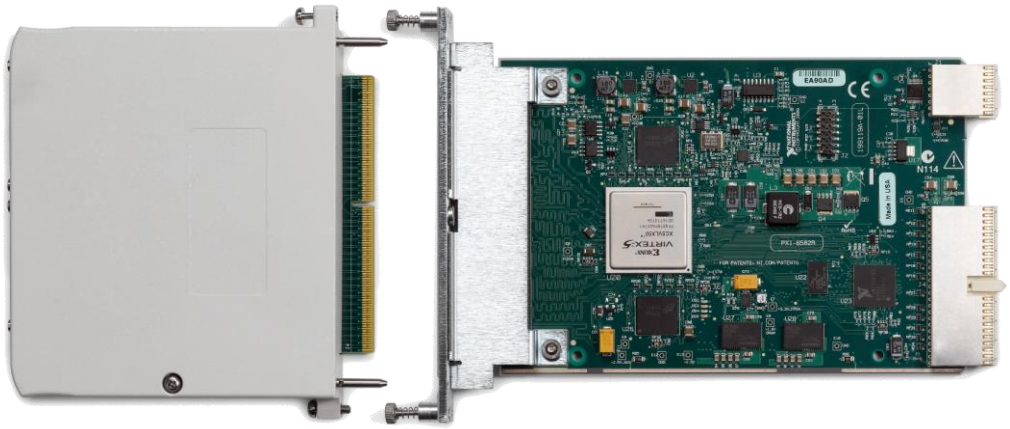
Oscilloscope
8-ch, 14-bit, 250 MS/s

High-Speed Serial Instrument
12.5 Gb/s, 8 Tx/Rx

IF Digitizer
2 GS/s, 2 GHz, 12-bit

Vector Signal Transceiver
6 GHz RF VSA/G, 200 MHz BW

RF Signal Analyzer
26.5 GHz, 765 MHz BW



National Instruments FlexRIO
LabVIEW FPGA-Enabled Instrumentation

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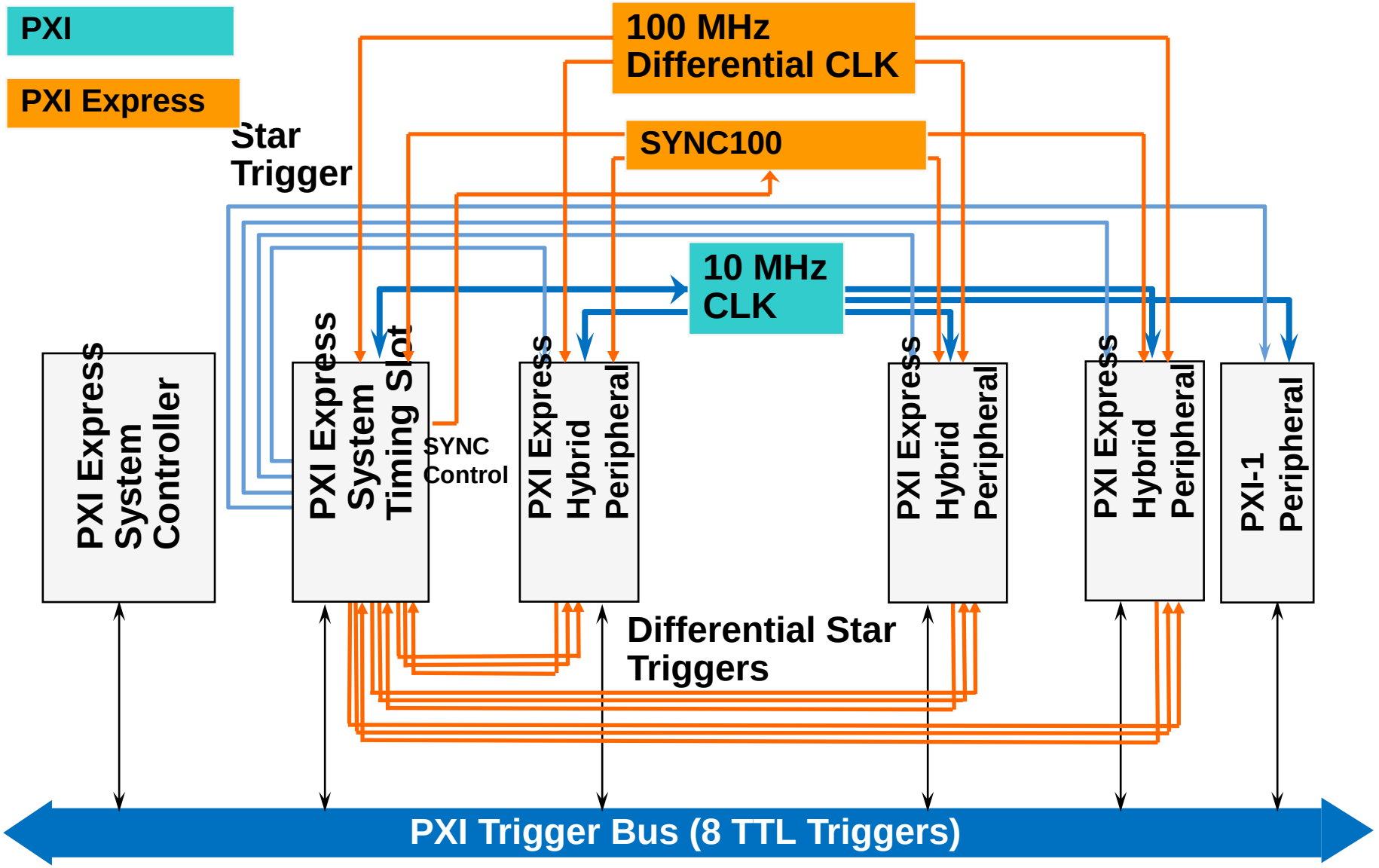

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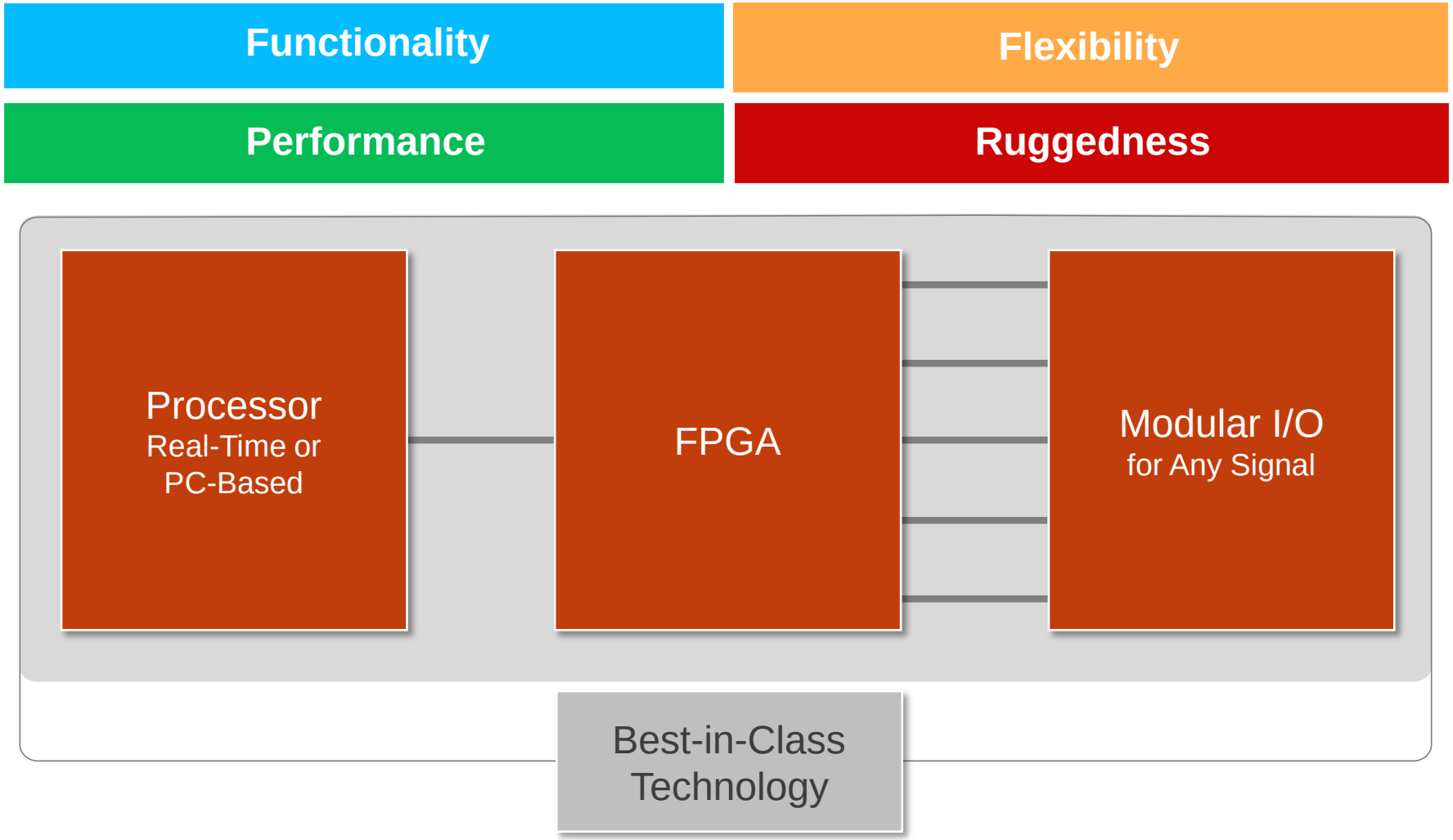
NI Reconfigurable I/O (RIO) Architecture



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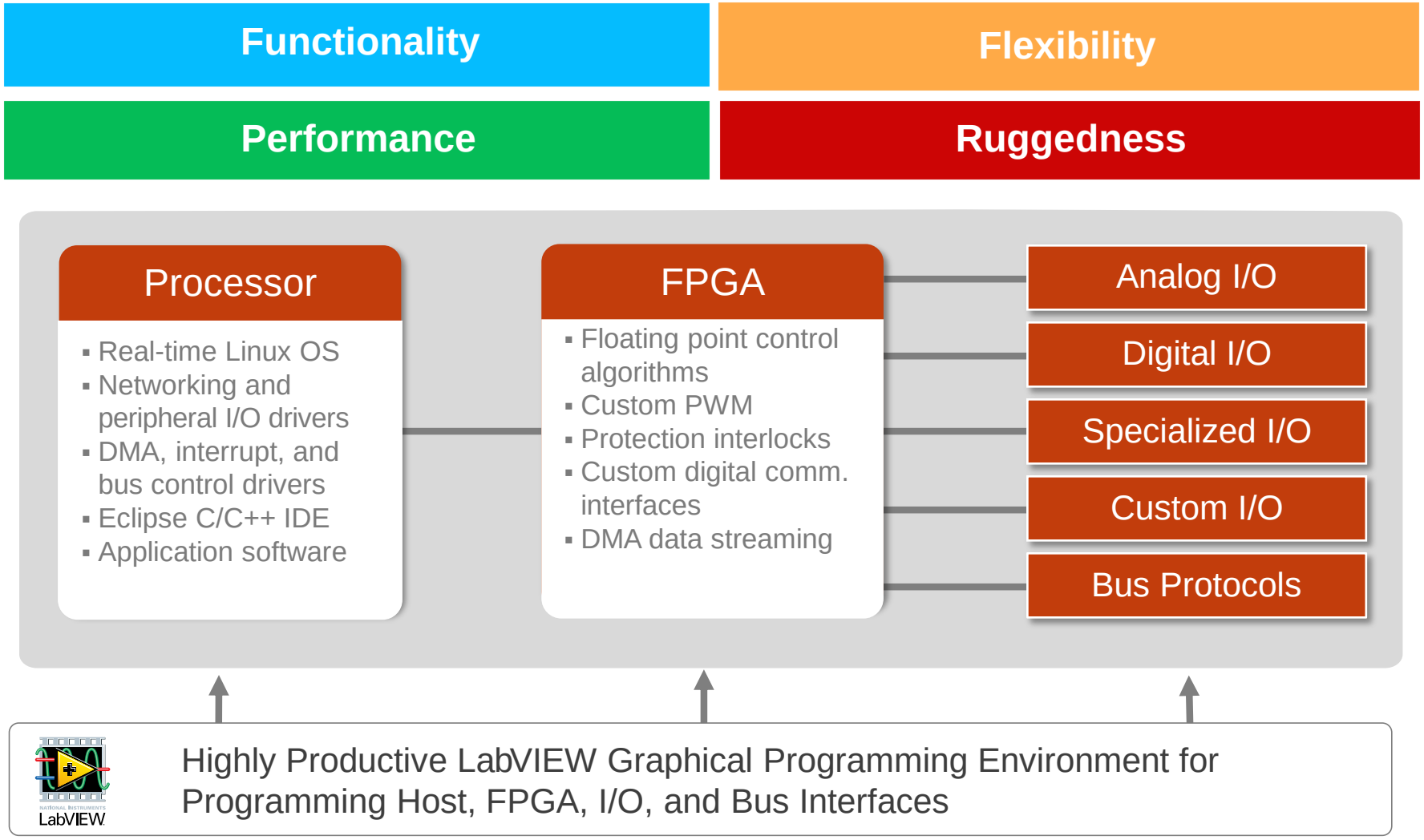

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Case Studies

Replicating Urban Vehicular Network Performance in Lab Settings

Institute of Telecommunications, TU Wien

Read More: http://sine.ni.com/cs/app/doc/p/id/cs-17662

NorthROV: Pioneering Research of the Underside of Icebergs

Aarhus University

Read More: https://bit.ly/2FLhEoY

The Materialise Control Platform: Using CompactRIO to Revolutionize 3D Printing

Materialise

Read More: http://sine.ni.com/cs/app/doc/p/id/cs-17674#

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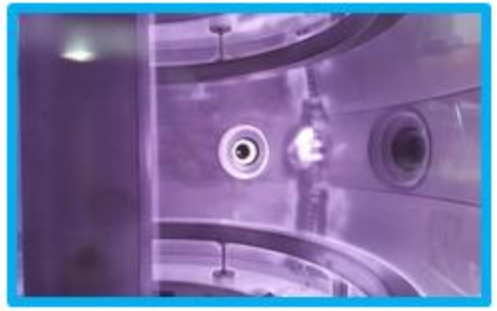
Case Studies (cont’)

ETHEC: Ground-Breaking Two-Wheel Driven Electric Motorcycle

ETH Zurich

Read More: https://bit.ly/2KhQGr8



Unlocking Fusion Energy – Our Path to a Sustainable Future

Tokamak Energy

Read More: http://sine.ni.com/cs/app/doc/p/id/cs-17496#

Using LabVIEW To Automate Aerospace Actuator Testing

TBG Solutions

Read More: https://bit.ly/2IGCJod

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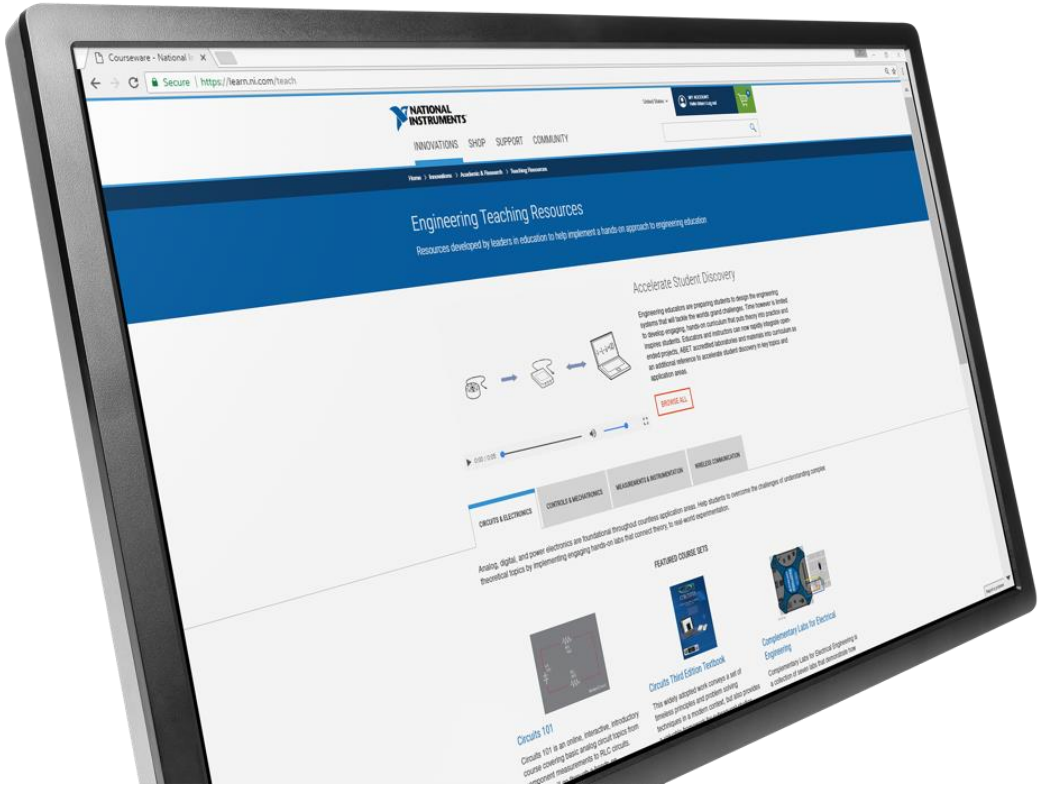
Teaching Resource Portal

- Find both single modules and full sets of labs, projects, and references
- Evaluate resources based on learning objectives, requirements, etc.
- Access protected answer keys

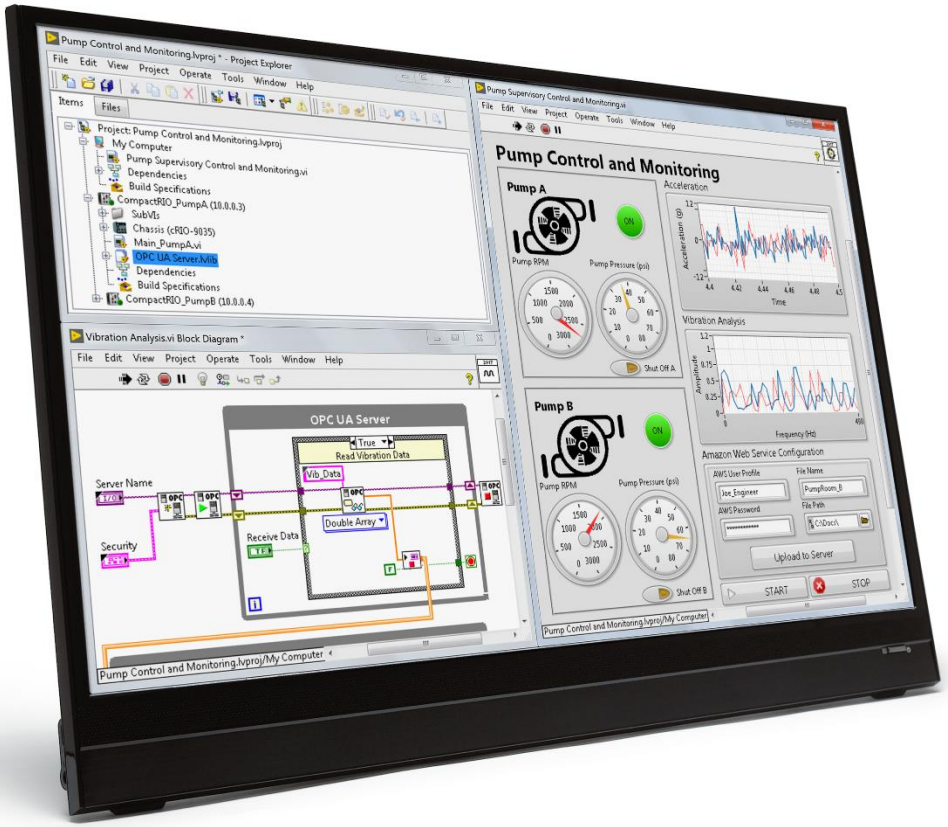


ni.com/teach

New Benefits of the NI Academic Site License

Every Student. Every Lab. Every Researcher.

ni.com/asl



- Give students access to over 18.000€ worth of NI software on their personal computers through student licenses with an active SSP membership.
- Get free premium accounts on Multisim Live through Multisim (for desktop) licenses with active SSP membership.

Expand with ASL+

- LabVIEW + Circuits + Training

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GRACIAS!

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