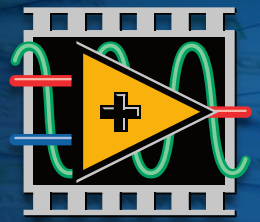

NIDays
WORLDWIDE GRAPHICAL SYSTEM DESIGN
CONFERENCE

Samuli Bergström

Marketing Engineer, NI

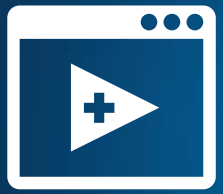
Certified LabVIEW Architect



NATIONAL INSTRUMENTS

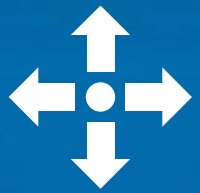
LabVIEW™ 2013

LabVIEW 2013 – New Features



Code Management

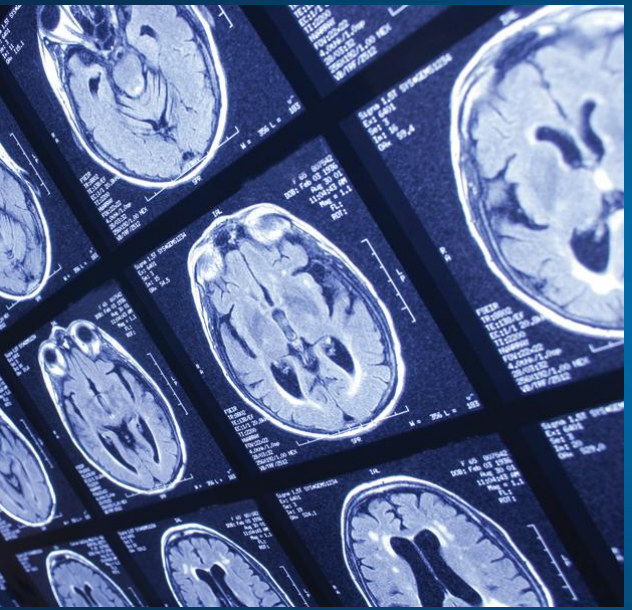
Software Engineering



Deployment Experience

Mobile and Web

Overhauled Resources



LabVIEW 2013 – New Features

Idea Exchange Features

- ✓ Bookmarks
- ✓ Attached Comments
- ✓ Mouse Wheel Support for Controls & Indicators
- ✓ High Priority User Events
- ✓ Installers Automatically Include Necessary Drivers & Runtimes
- ✓ Open Accessor VI for LVOOP
- ✓ Desktop Execution Trace Toolkit Updates (many)
- ✓ Unit Test Framework Updates (many)

LabVIEW 2013 – New Features

New Features Demonstrations


175+ Products
LabVIEW
TOOLS NETWORK
VI Package™ Manager


LEAP
MOTION
NATIONAL INSTRUMENTS
LabVIEW™ 2013
Parrot
AR.Drone

LabVIEW Add-Ons of the Year

INNOVATION

Deploy

wirebirdlabs
Expert Toolkits for LabVIEW™

DATA ACQUISITION

Chameleon

PVI SYSTEMS
ENGINEERED EXCELLENCE

EMBEDDED CONTROL AND MONITORING

Raima Database for LabVIEW

RAIMA

AUTOMATED TEST

Tool Qualification Kit

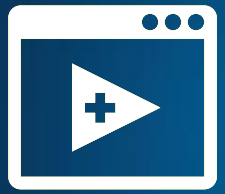
CertTech

COMMUNITY

TortoiseSVN Plugin

VIEWPOINT SYSTEMS

LabVIEW 2013 – New Features



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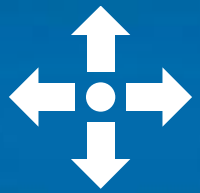
Software Engineering



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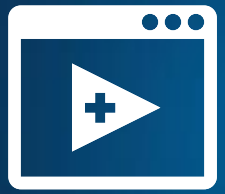

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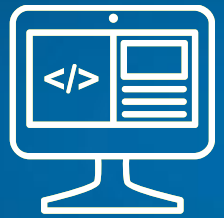
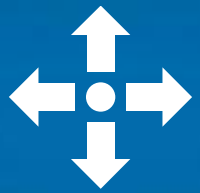


Software Engineering



Deployment Experience

Mobile and Web

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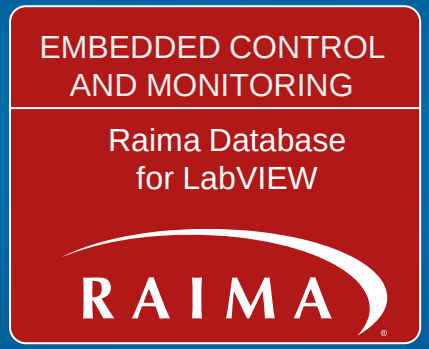
TortoiseSVN Plugin

RAIMA



Steinar Sande
Chief Executive Officer, RAIMA

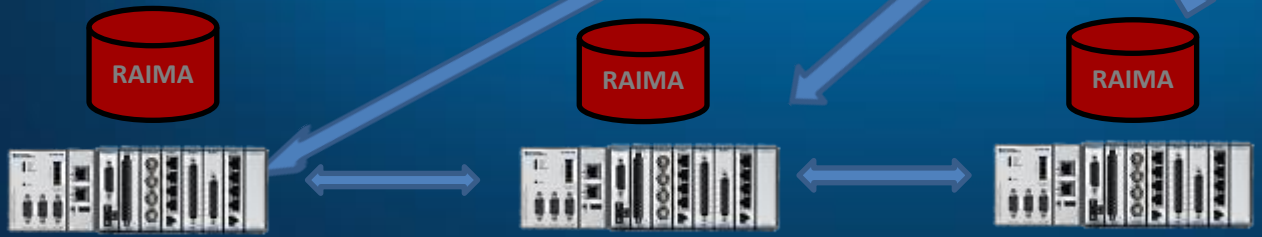
RAIMA Database API for LabVIEW

What does Raima provide to LabVIEW users?

- Program data management functionality into applications deployed on VxWorks & NI Linux Real-Time based cRIO or sbRIO devices
- **Set of intuitive & easy-to-use database APIs callable from LabVIEW's familiar interface**
  - Reduced learning curve & time-to-market
  - Certified Compatible with LabVIEW
- Database with small footprint, low CPU & memory usage, multi-core optimized & live response
- **Store tables on disk or in memory**
  - Built-in recovery for power loss or crashes
- **Conduct a single query across multiple targets**
- **RIO devices can share data between each other**
  - Enables distributed applications to push intelligence closer to the edge – faster response/more efficient
- **Integrated circular table implementation**
  - Control amount of storage space used
  - Retain Time Series data for a specific period

RAIMA Database API for LabVIEW

- **Local data** for history & analysis
  - Perform data reduction & simplification on RIO device before sending data over network
  - Local storage incase network outage
  - Local processing at edge – reduce time from collection, to visualization, to decision
- **Peer-to-Peer** operation/distribution
- **Connectivity** from Windows/Linux
  - SCADA
  - Replication
- **Tablet** application access



VxWorks or NI Linux RT

Award Winning Partner

"Raima won the award because of the products broad reach. Many people can benefit from a database, unlike solutions tailored to more niche needs. It builds on the LabVIEW value add with the API."

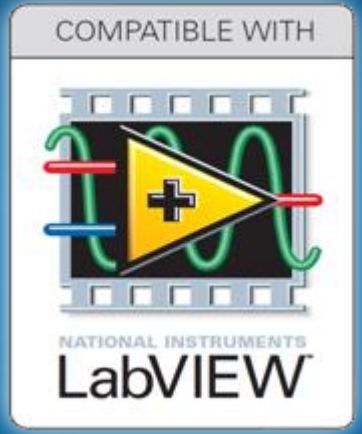
Sanjay Challa
LabVIEW Embedded Product Marketing Manager
National Instruments

RAIMA

EMBEDDED CONTROL
AND MONITORING

Raima Database
for LabVIEW

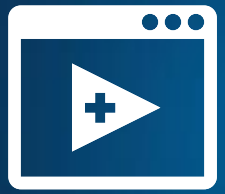
RAIMA



LabVIEW
TOOLS NETWORK

Download Raima Database API for LabVIEW:
http://www.ni.com/labviewtools/raima

LabVIEW 2013 – New Features



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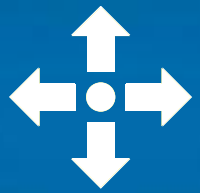
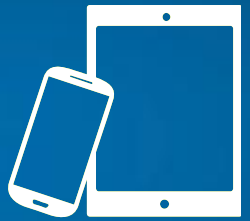


Deployment Experience



Mobile and Web

Overhauled Resources

Data Dashboard for LabVIEW 2.2

Data Dashboard for LabVIEW 2.2

Alternate Servers

Multi-Plot

Android Tablets

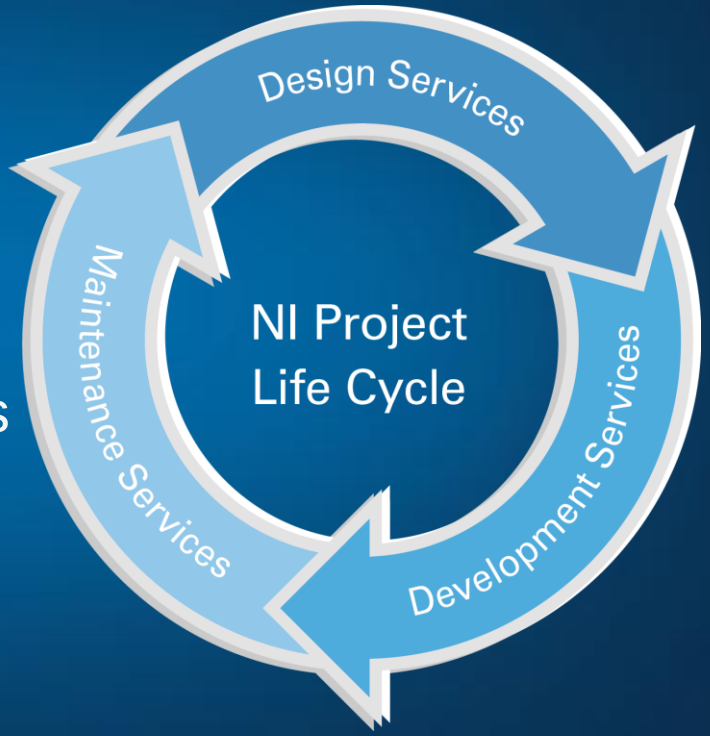
Transparency

Joeri Wingelinckx

Services Manager, NI

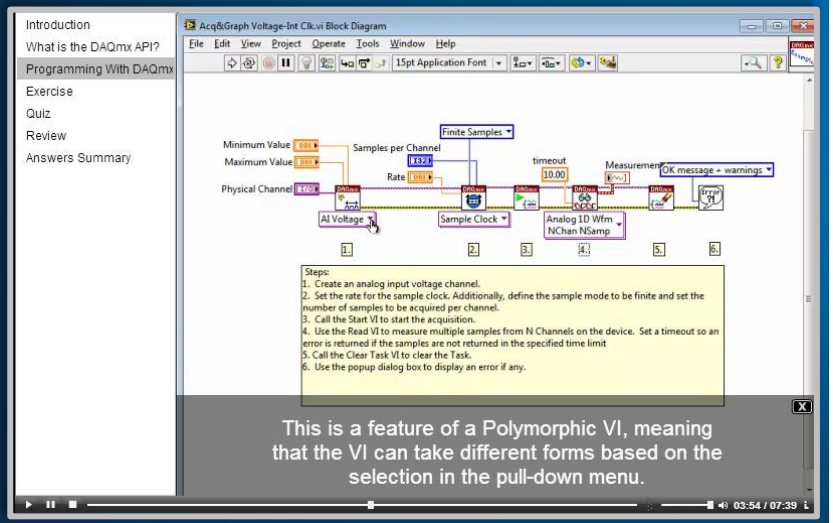
Services and Support Throughout Life Cycle

1. Innovate with Confidence
2. Reduce Development Time
3. Reduce Long-Term Maintenance Costs



Expanded LabVIEW Online Training

Core LabVIEW skills included with your software purchase



LabVIEW Online Training

- LabVIEW Core 1
- LabVIEW Core 2
- LabVIEW Core 3
- Advanced Architectures in LabVIEW
- Object Oriented Design and Programming in LabVIEW
- LabVIEW FPGA
- LabVIEW Real-Time 1 & 2

The Bath University Rugby Scrum machine represented our team's first real use of LabVIEW integrated with NI hardware, so we opted to attend formal training courses provided by National instruments (LabVIEW Core 1, Core 2, Real-Time and FPGA), and achieved the subsequent certifications. These practical, instructor-led courses played a key role in ensuring the success of the project, by dramatically accelerating our proficiency with NI tools.

Dario Cazzola

University of Bath, Department for Health, Applied Biomechanics Suite

LabVIEW Proficiency

Certified LabVIEW Developers in Norway

Kim Espen Nyhus, Prevas
Håkon Hjort Francke, Flow Design Bureau AS
Øyvind Østensen, Marin-Innovasjon AS
Jarl Ringard, Kongsberg Devotek
Bjørn Halvor Straume, Marin-Innovasjon AS

LabVIEW Proficiency

CLA’s in Norway

You could be the first one ;)

CLA Summit 2014 @CERN

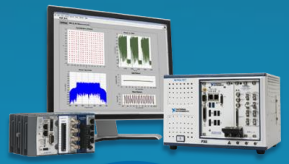
18-20 March 2014

David Baker

Academic Program Manager, NI

Create Shared Value for Sustainable Success

To Equip
Engineers and Scientists



To Inspire
Future Innovators

NATIONAL INSTRUMENTS

To Solve
Grand Challenges

Proficient in G programming!

…minimum certification of CLD required…

“Engineers explain what it takes to get a job at Elon Musk’s SpaceX.

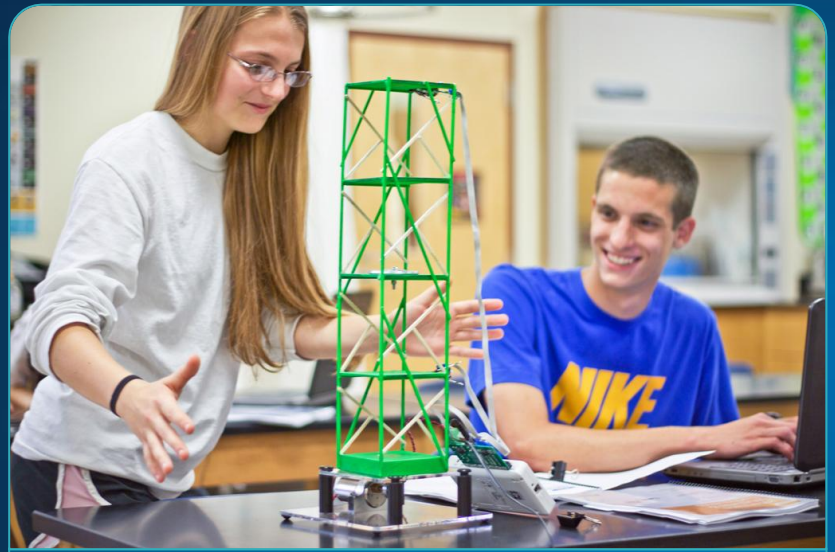
…LabVIEW developers needed.

for Launch Engineering … awesome LabVIEW + LabVIEW FPGA programming experience + great algorithm and data structure knowledge.”

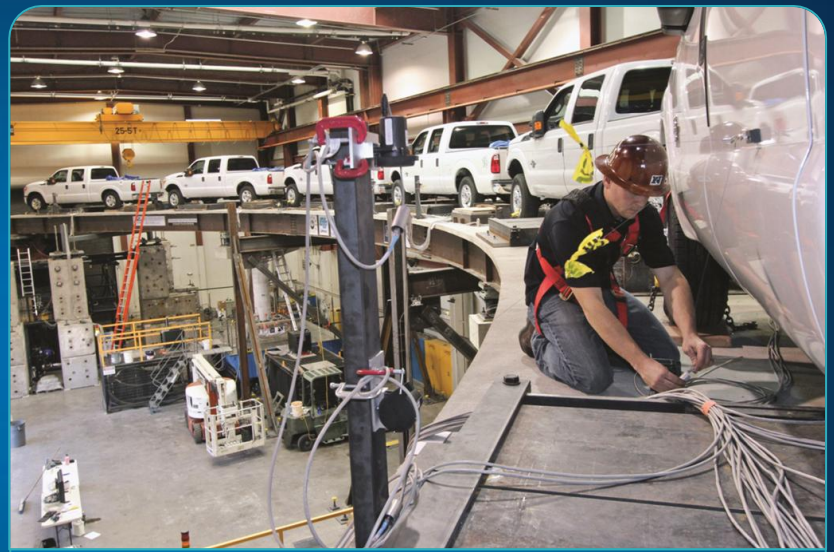
–Business Insider

…test engineer with LabVIEW experience.

…must know LabVIEW!



Students learn about the effects of earthquakes



Researchers measure the effects of earthquakes

The Tools to “Do Engineering”

2004

NI ELVIS:
Lab Instrumentation

2010

NI myDAQ:
Student Instrumentation

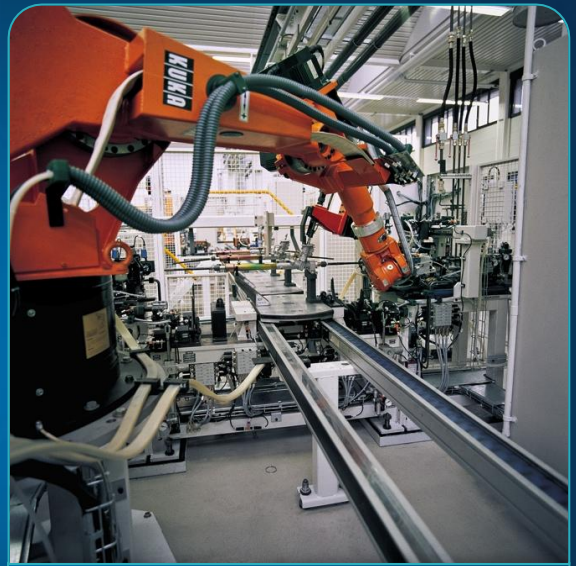
2011

NI USRP™:
RF/SDR

Design Real Systems, Fast

Student Design

Embedded Systems



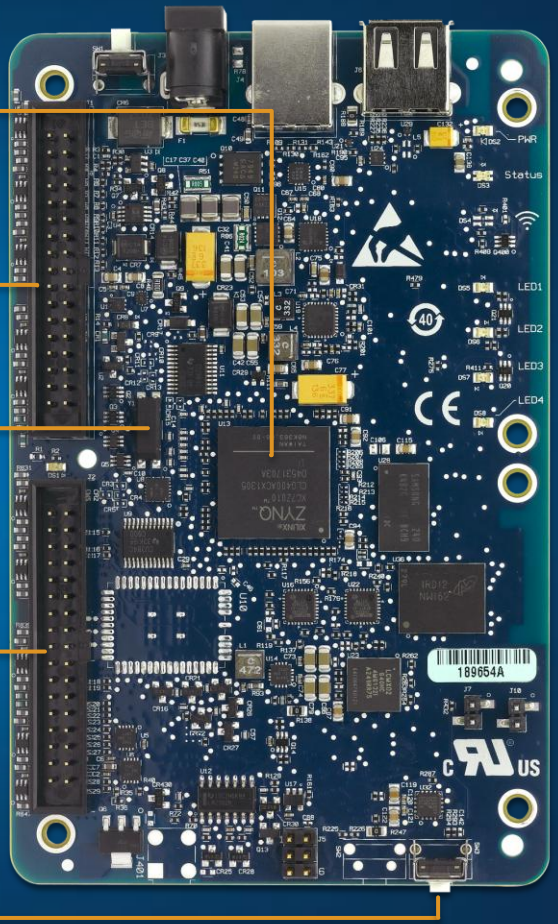
Control, Robotics, and Mechatronics

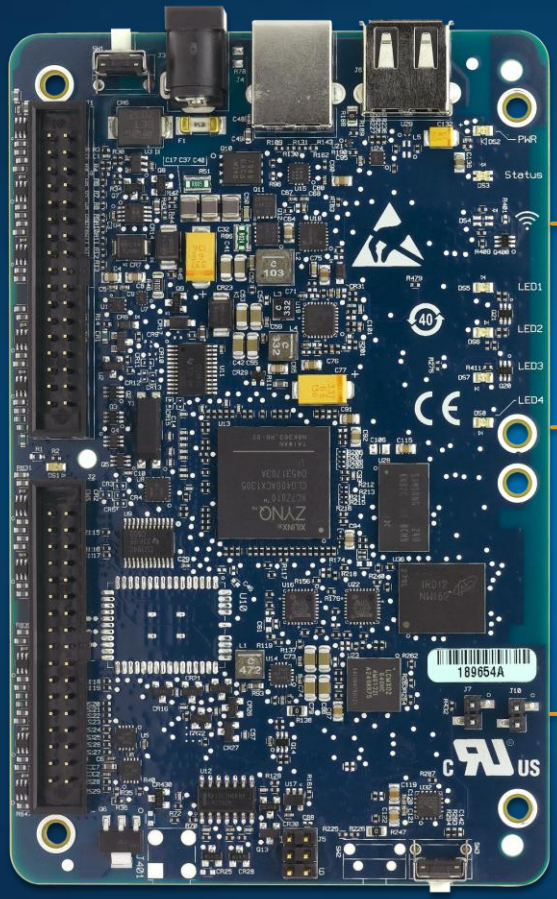
Xilinx Zynq SoC (Artix-7 FPGA and dual-core ARM Cortex-A9)

Onboard 3-axis accelerometer

Two 34-pin headers

User-defined button

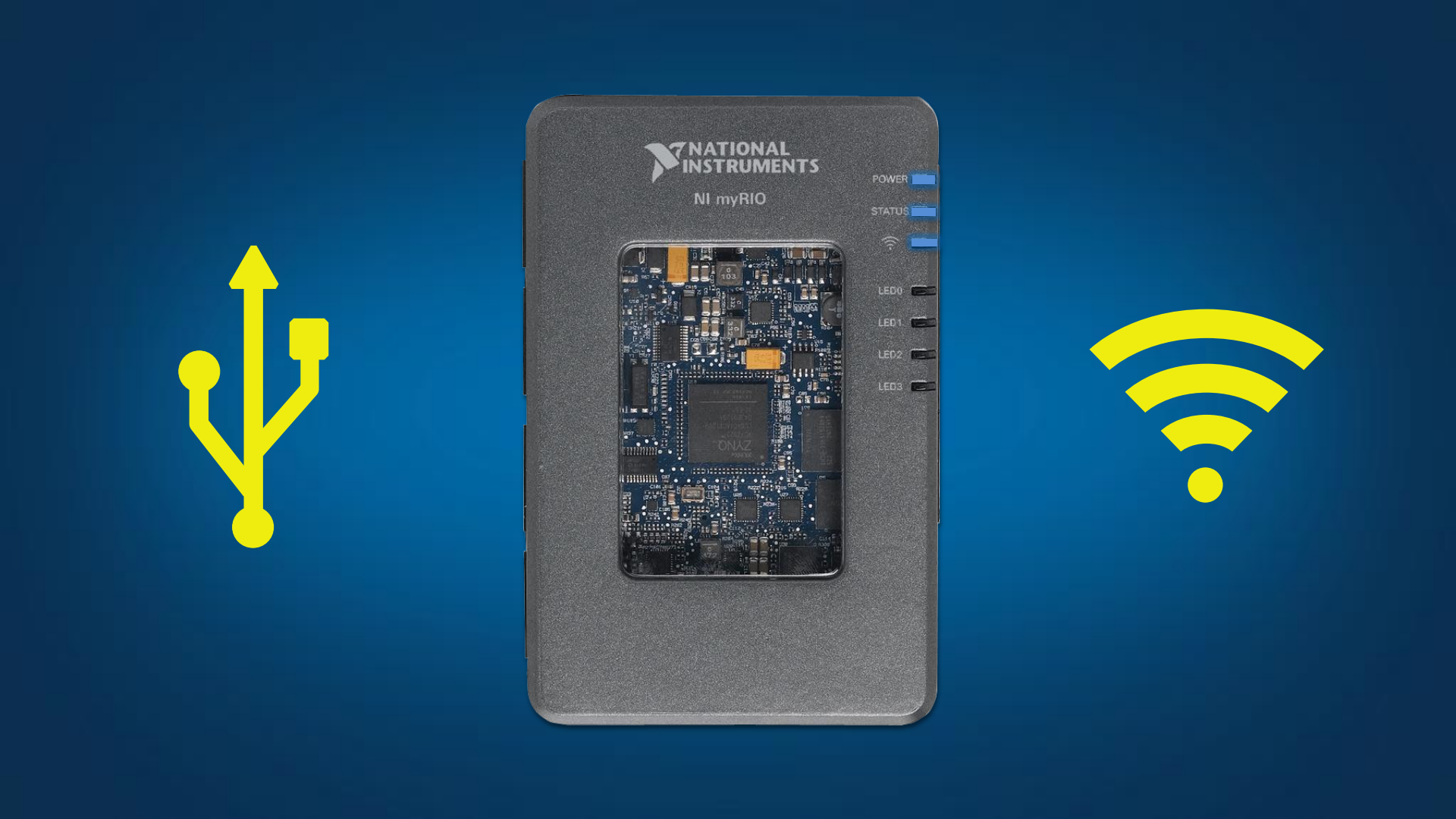




Integrated WiFi

40 lines of digital I/O
(SPI, I²C, UART,
PWM, encoder)

Stereo audio I/O


NATIONAL INSTRUMENTS
NI myRIO
POWER
STATUS
LED0
LED1
LED2
LED3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