

The background is an abstract, futuristic illustration of a curved tunnel or corridor. The walls and floor are composed of glowing, curved lines in shades of blue, green, and yellow, creating a sense of depth and movement. The perspective is from the center of the tunnel, looking towards the horizon.

NIDays

WORLDWIDE GRAPHICAL SYSTEM DESIGN

CONFERENCE



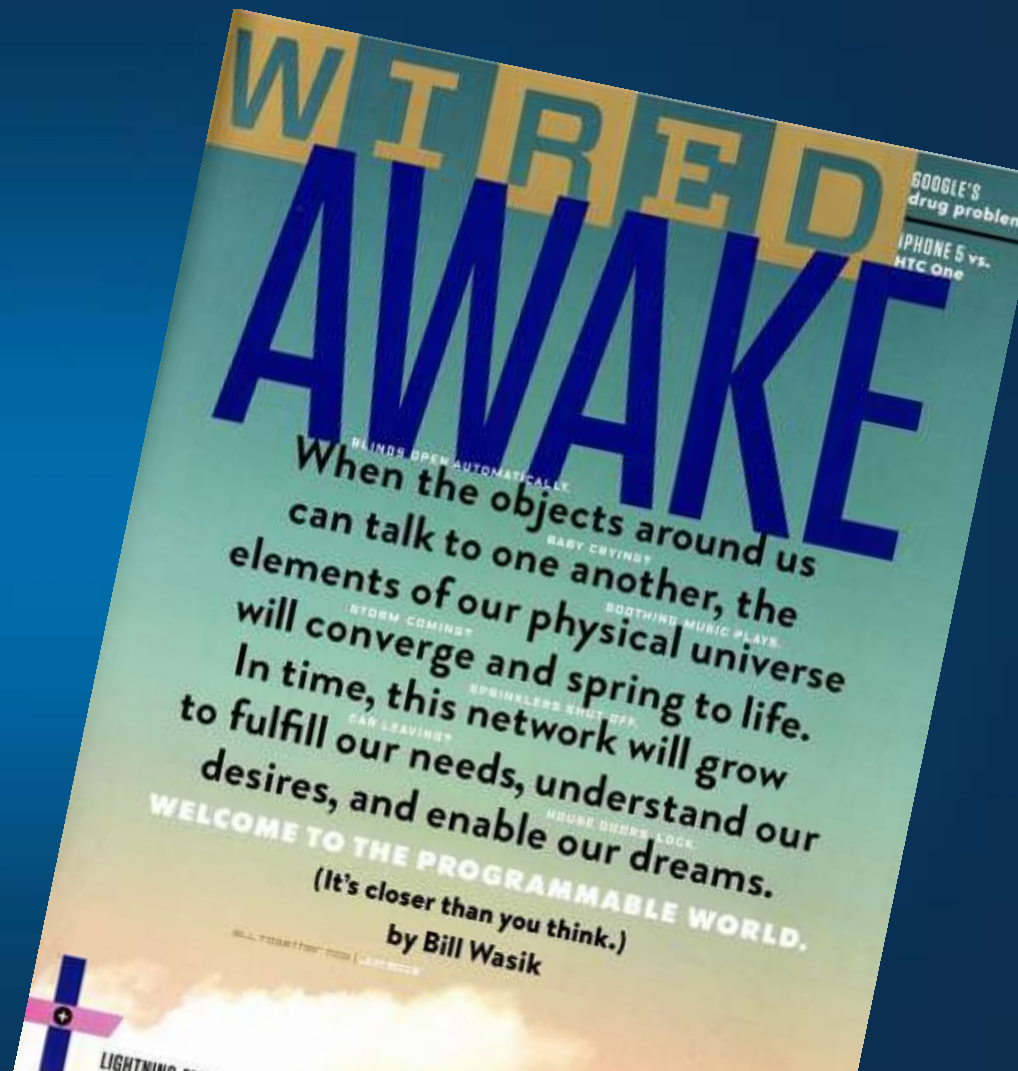
Georg Plasswilm
Northern Region Manager



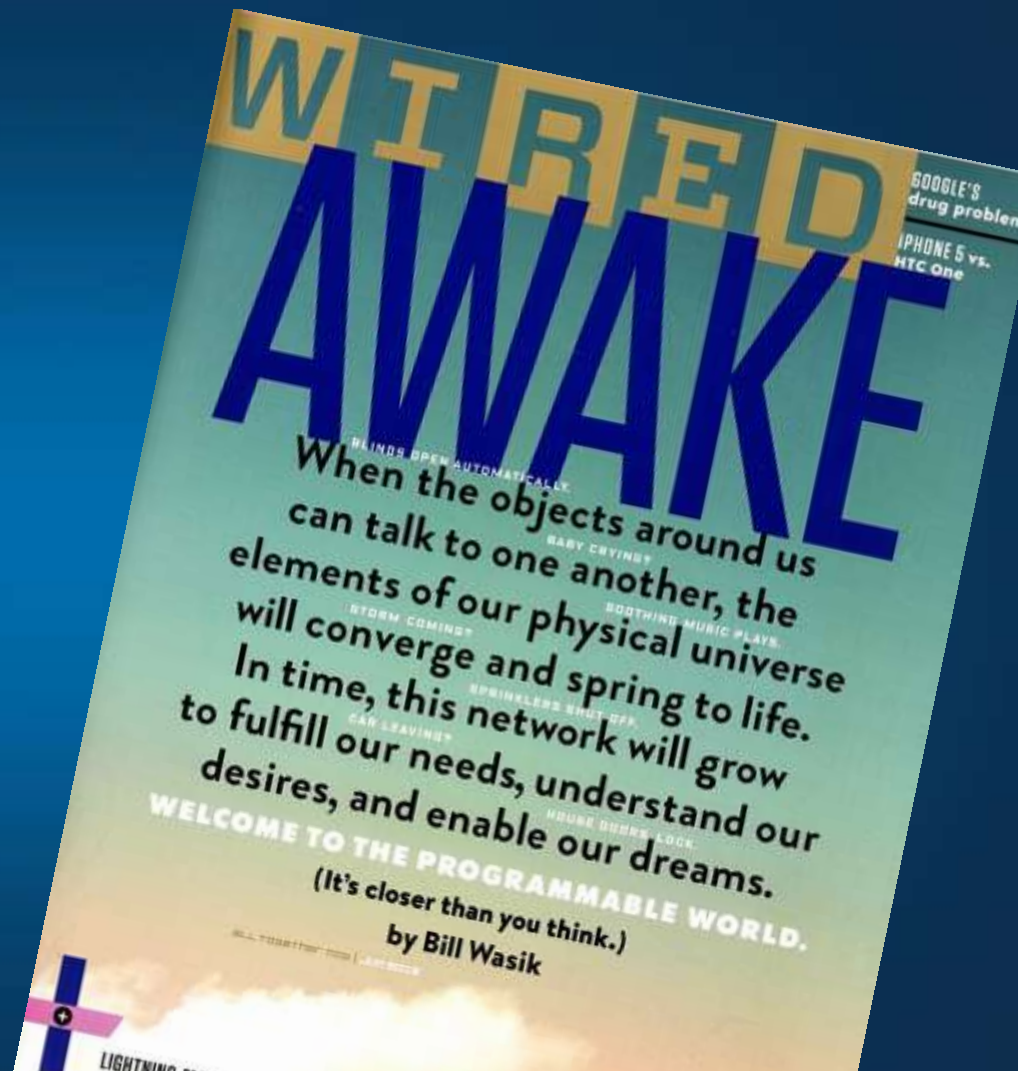
Luke Schreier
Senior Group Manager - Test Systems

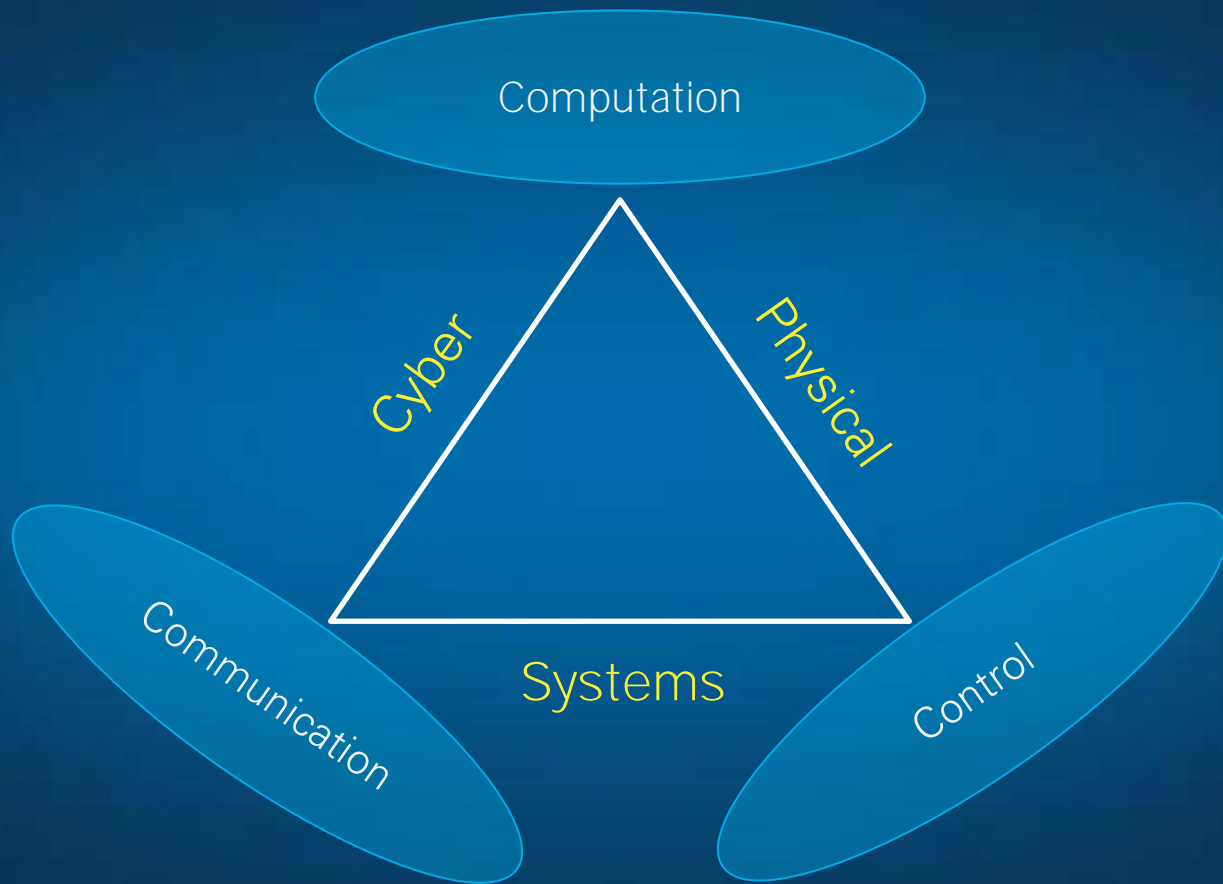
Innovating in a Platform-Based World

The Programmable World



Industrie 4.0
Internet of Things
Big Analog Data™ Solutions
Intelligent Systems
Smart Factory
M2M
Industrial Internet





Computation

“Cyber-physical systems (CPSs) will transform entire industrial sectors, including transportation, healthcare, energy, manufacturing, and agriculture. There is an urgent need to develop design methodologies that will provide real-time, guaranteed performance.”

–Vijay Kumar, Assistant Director for Robotics and Cyber-Physical Systems,
Office of Science and Technology Policy at the White House



Extra equipment needed.



Are You Wearing a Watch?



3G



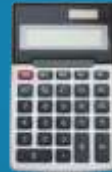
8:30

Tuesday, 6 August

Instruments



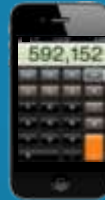
Physical Embedded Systems



Virtual Instruments



Platform-Based Embedded Systems



PC Platform



Web Platform



Mobile Platform



Graphical System Design



Measurement



Test



Monitoring



Embedded



Control



Desktops and
Laptops



NI CompactDAQ



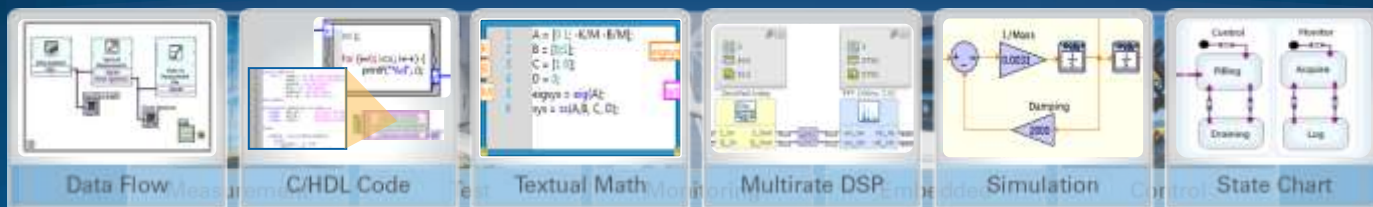
PXI and Modular
Instruments



NI CompactRIO



Graphical System Design



Desktops and Laptops



NI CompactDAQ



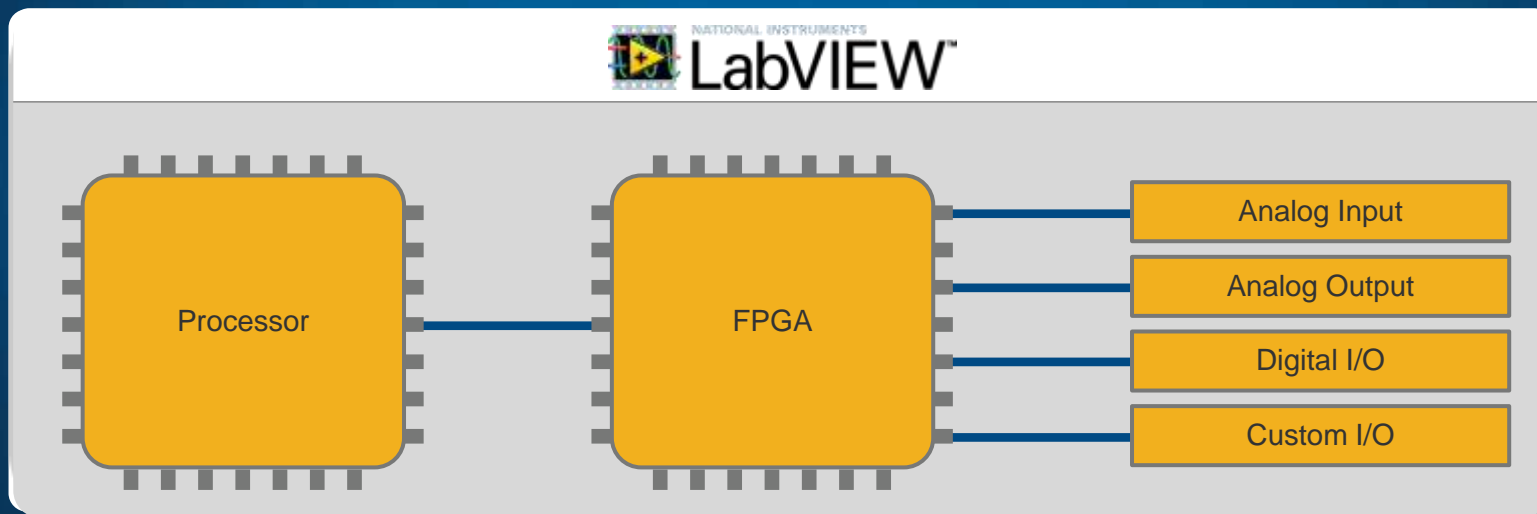
PXI and Modular Instruments



NI CompactRIO



LabVIEW RIO Architecture



Graphical System Design



Measurement



Test



Monitoring



Embedded



Control



Desktops and
Laptops



NI CompactDAQ



PXI and Modular
Instruments



NI CompactRIO





“In the past year I have been struck again and again by how important measurement is to improving the human condition.”

–Bill Gates

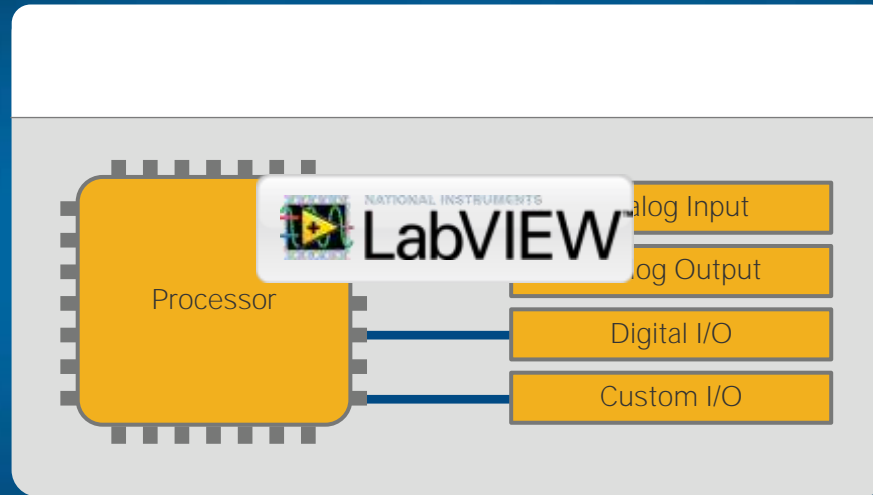
PCI Express

USB

PXI Express

Ethernet

WiFi



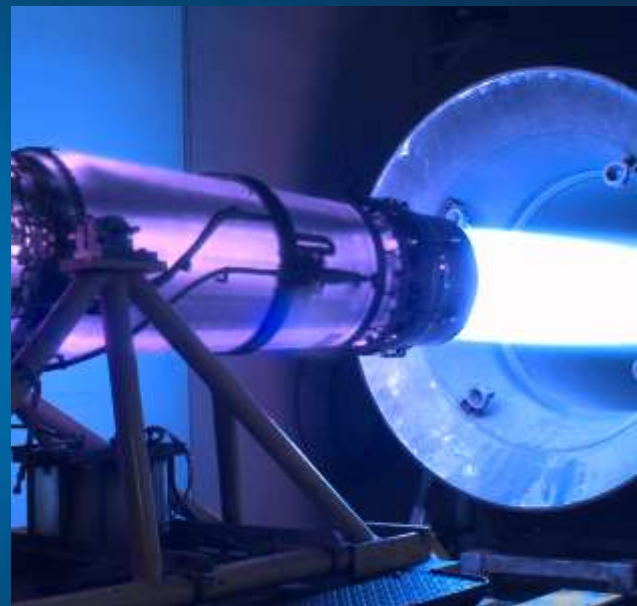
Voltage

Temperature

Strain

Acceleration

Motion



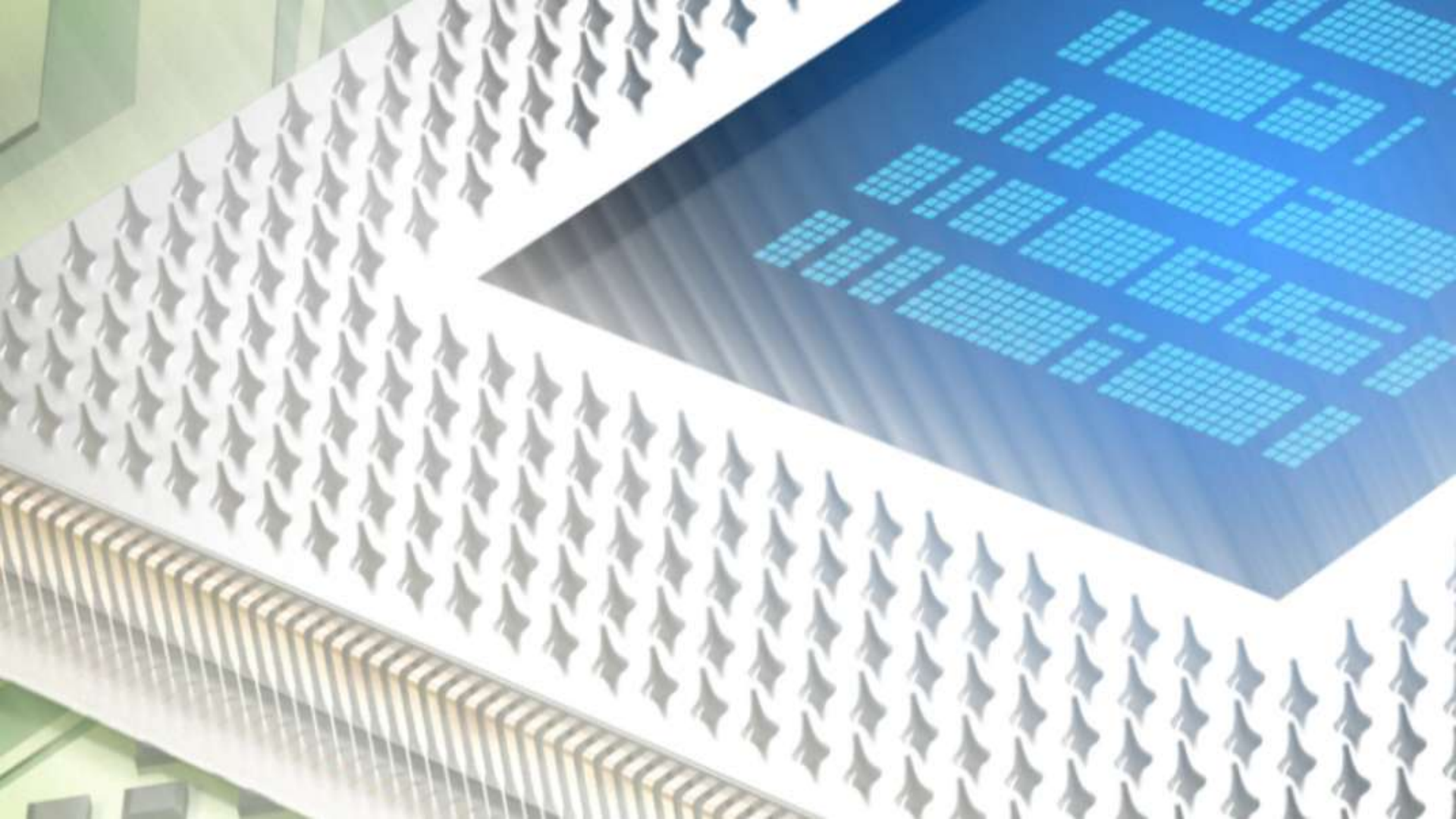
NI CompactDAQ



Rugged Ethernet Chassis

NI cDAQ-9188XT







***ISA
BUS***

Data Bus



Processors



FPGAs

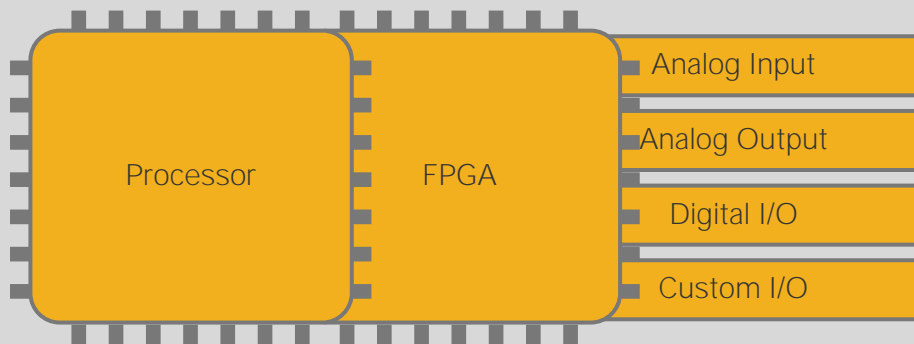


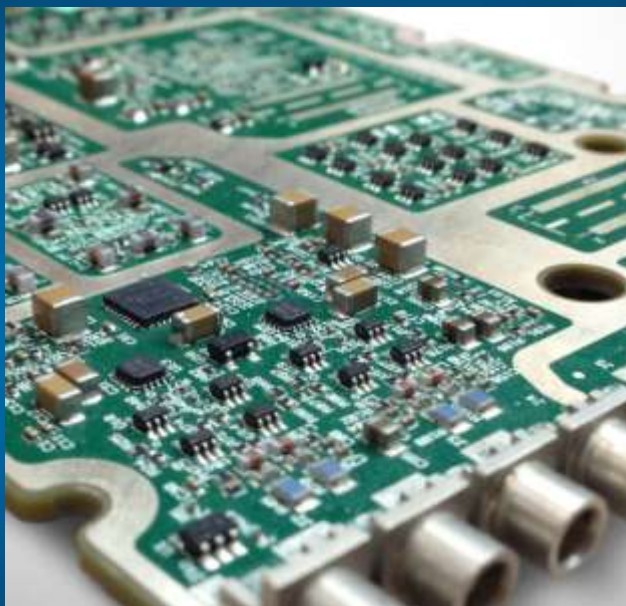
Converters



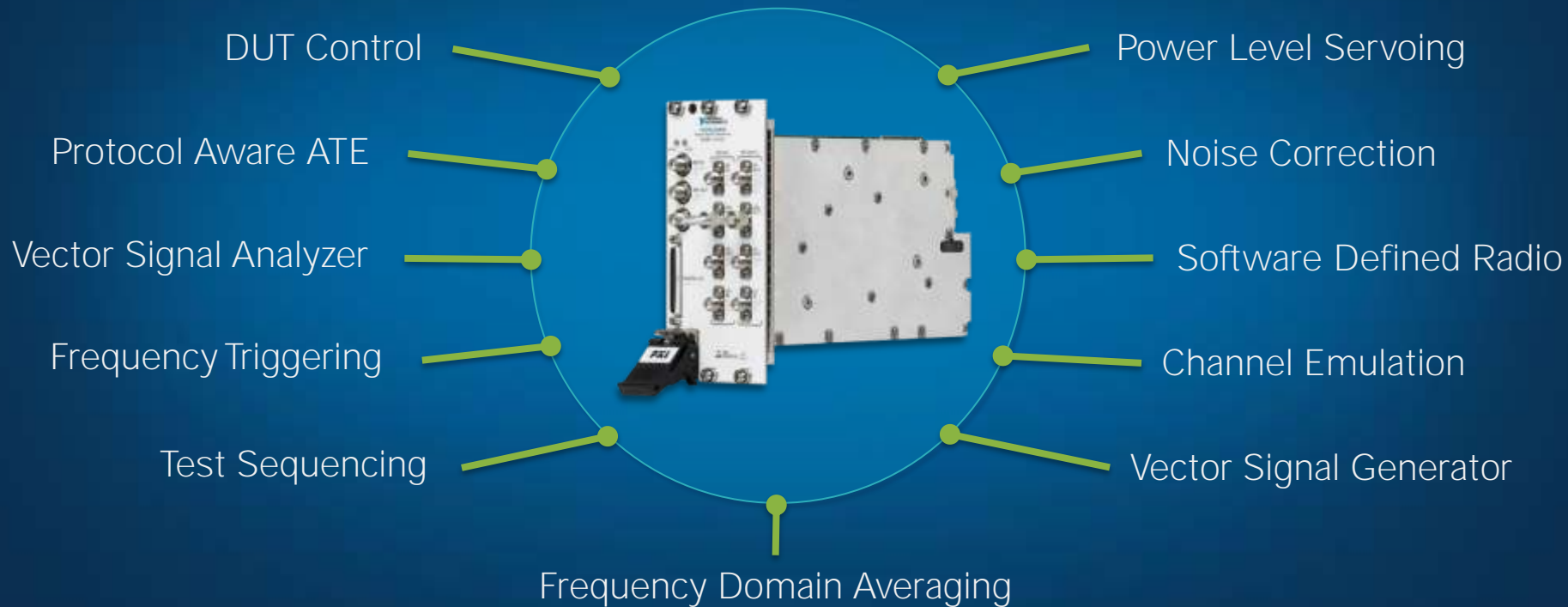
NATIONAL INSTRUMENTS

LabVIEW™





Vector Signal Transceiver



Two Programming Options for NI VSTs

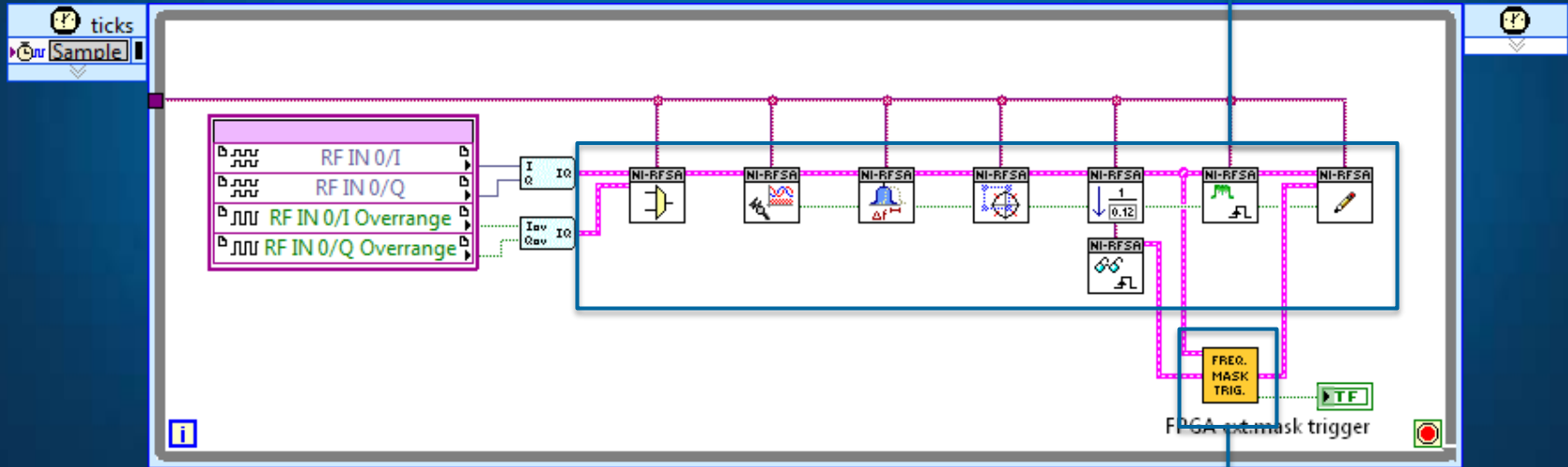
The *compatibility* of industry-standard instrument drivers



The *flexibility* of the LabVIEW RIO architecture

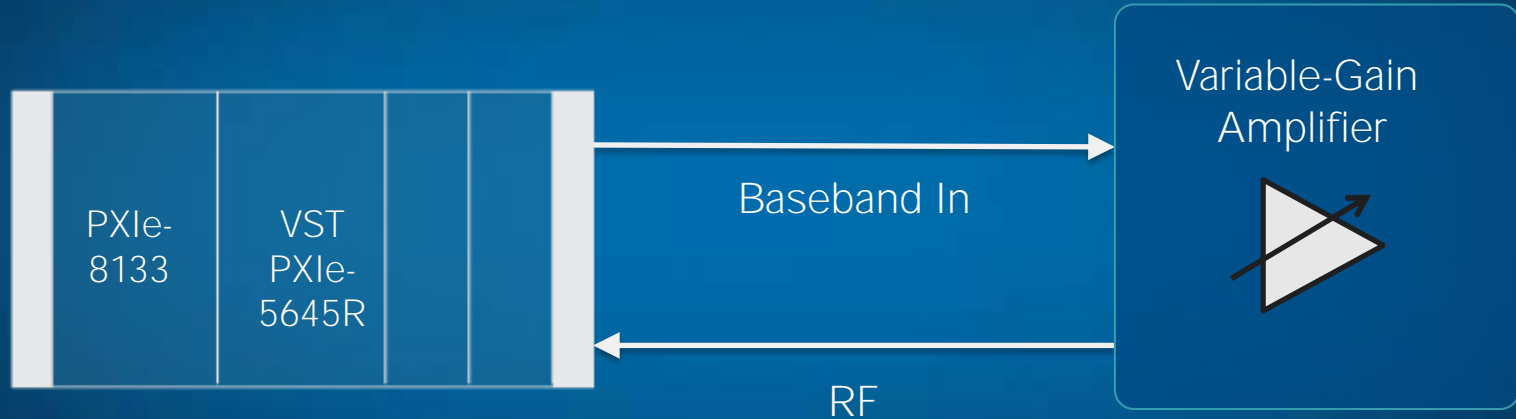
Instrument Driver FPGA Extensions

NI Instrument Driver FPGA VIs



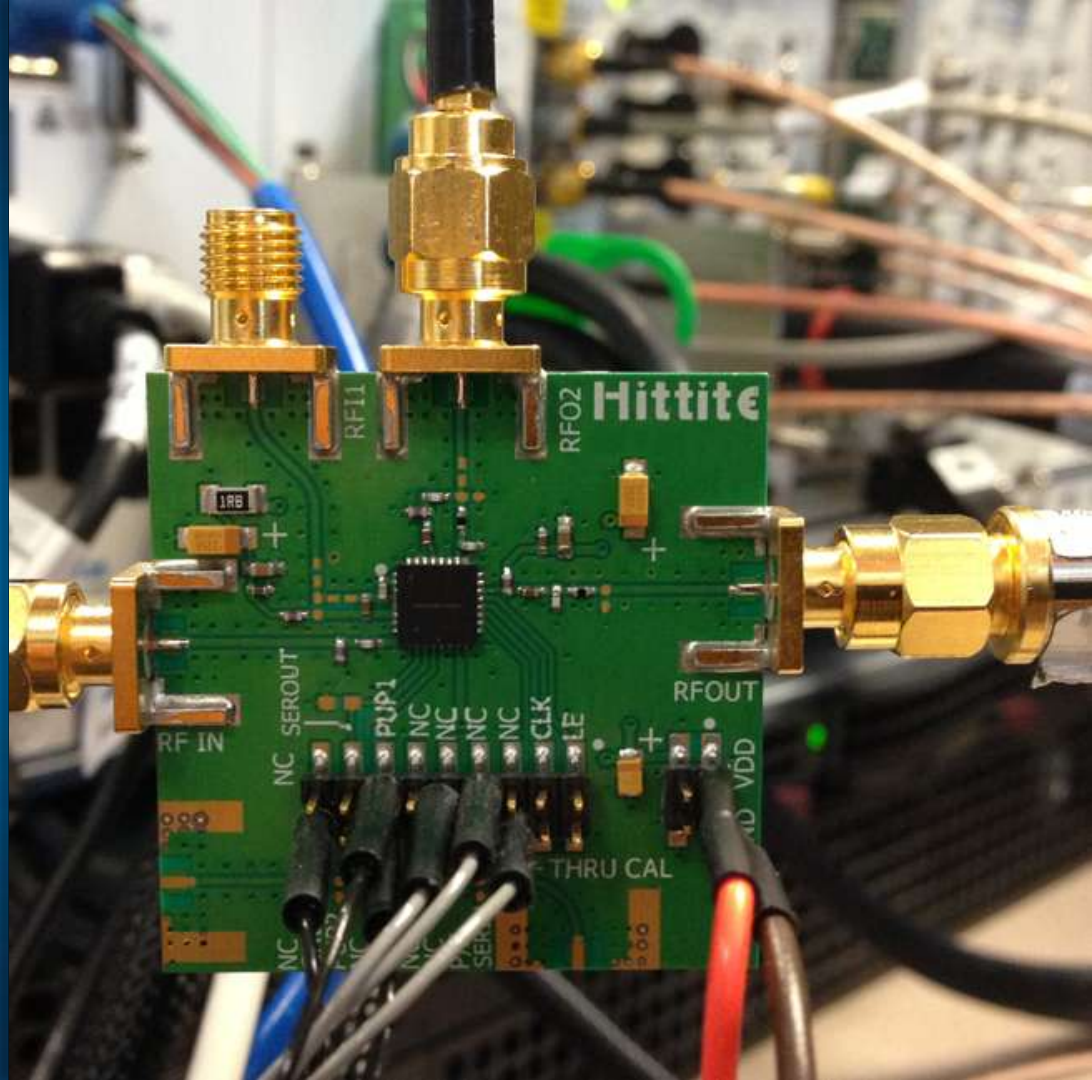
Application or User FPGA VI

Testing Modern RF Transmitter Front Ends

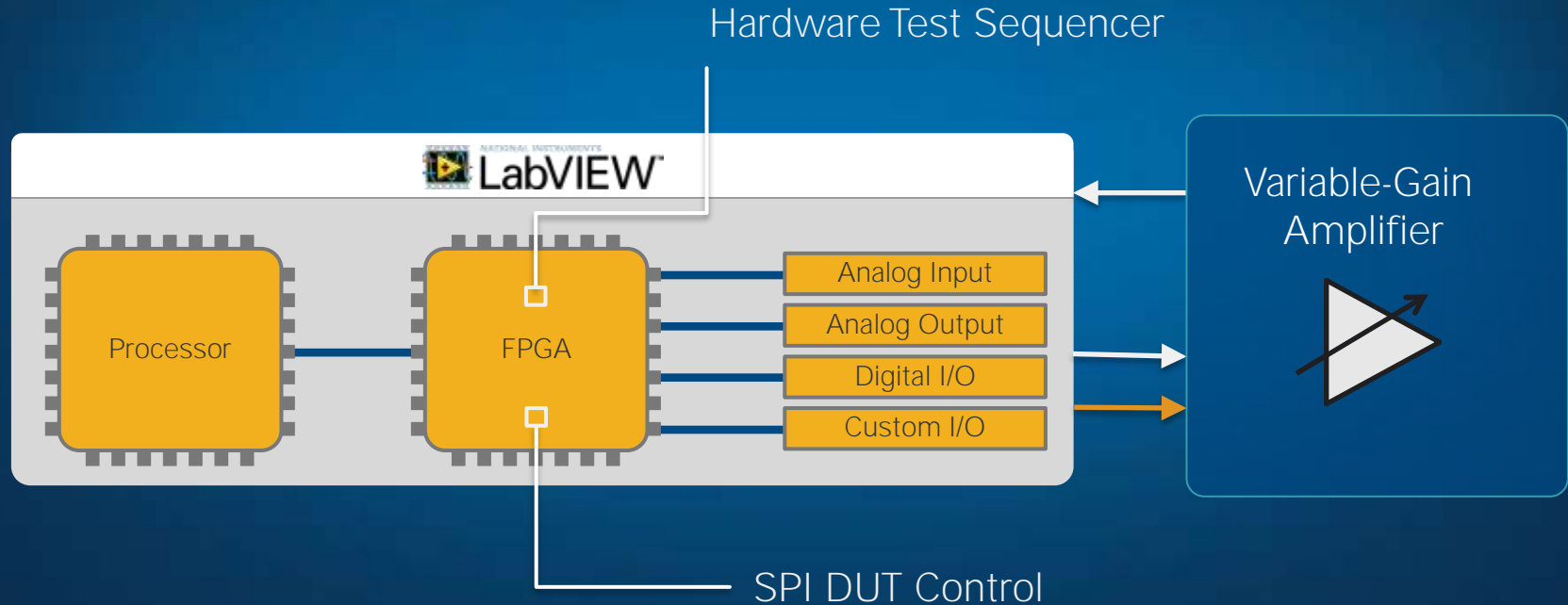


RFIC Production Test Application

- Using instrument driver FPGA extensions
- 30X lower test times
- Increased test coverage



Test System With Instrument Driver FPGA Extensions

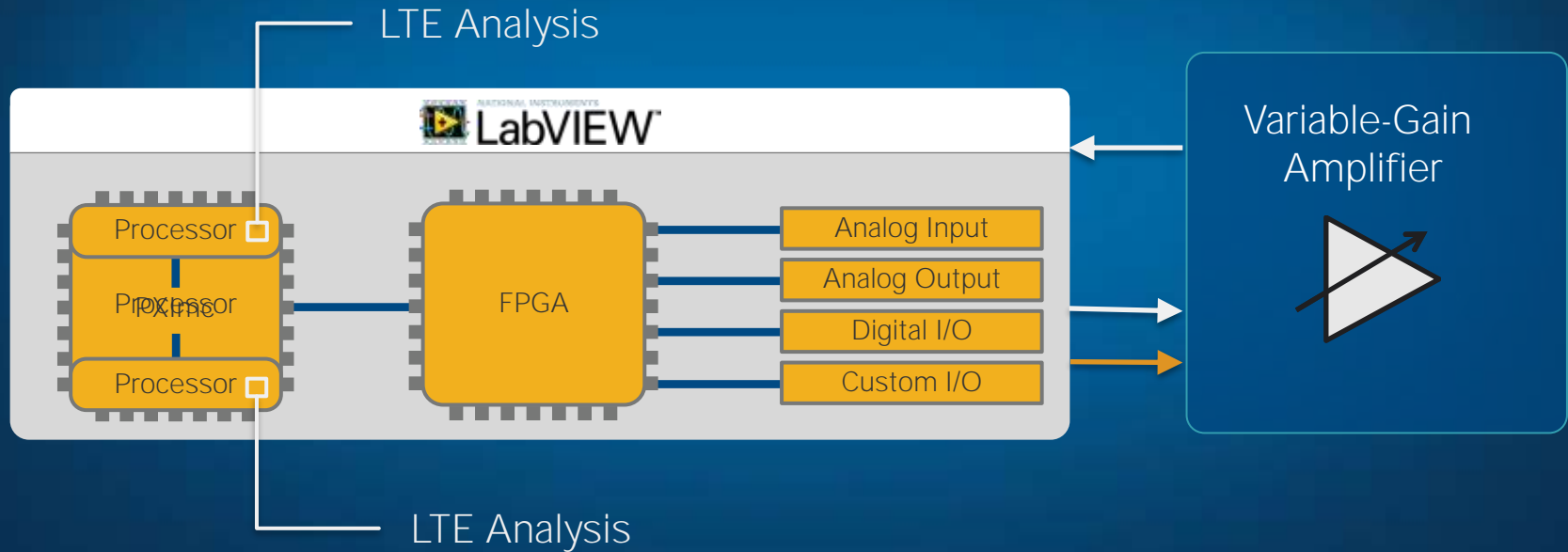


Industry's First PXImc Adapter Module

NI PXIe-8383mc



Test System With PXI MultiComputing





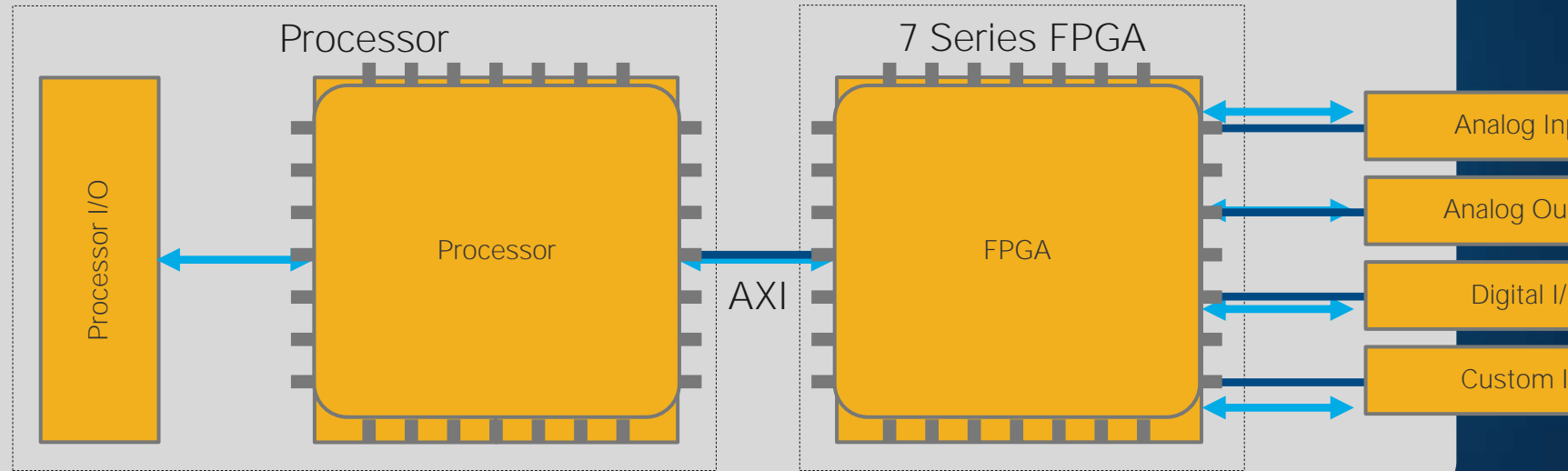


“Abbott buys laser cataract specialist OptiMedica for \$400M.”

—optics.org



Zynq All Programmable SoC



Software-Designed Controller

NI cRIO-9068



Software-Designed Controller

NI cRIO-9068



NI Real-Time OS History



1999

Phar Lap
ETS



2004

RTX



2006

VxWorks



2007

NI ETS on
Multicore



2009

NI Hypervisor



2013

NI Linux
Real-Time

Linux Community



Database

Raima
MySQL
SQLite
MongoDB
CouchDB



Security

OpenVPN
IPTables
System Logging
fail2ban
denyhost



Code Reuse

C/C++
Shell Scripting
Python
Ruby
Perl



Connectivity

Isshd
IPv6
SNMP
NTP
netstat



eclipse



C/C++

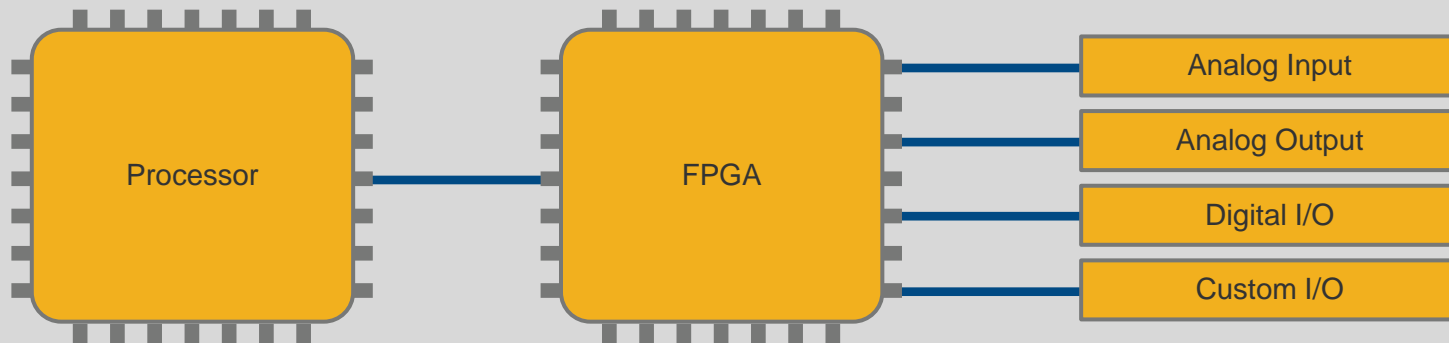


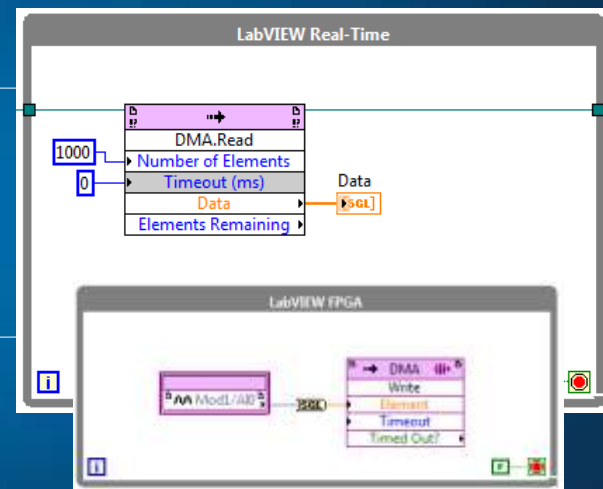
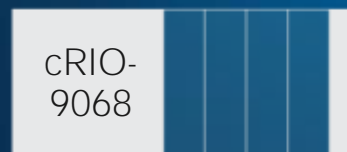
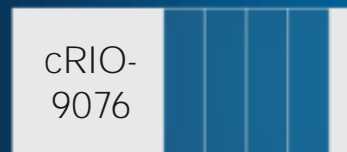
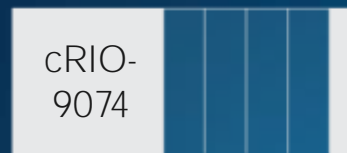
NI cRIO-9068



NATIONAL INSTRUMENTS

LabVIEW™







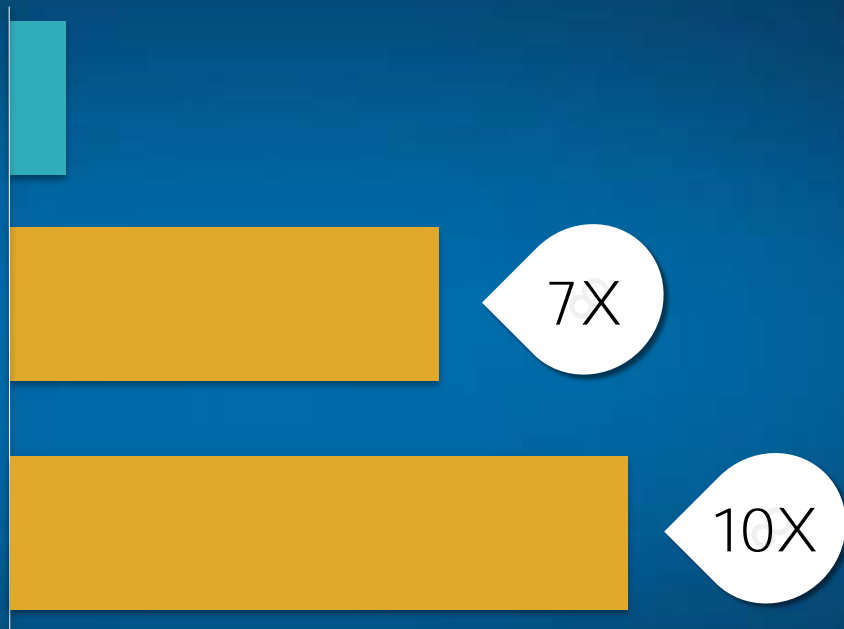
Competitor

cRIO-9074

cRIO-9068

7X

10X



Graphical System Design



Measurement



Test



Monitoring



Embedded



Control



Desktops and
Laptops



NI CompactDAQ



PXI and Modular
Instruments



NI CompactRIO



NI Supports Your Success

Through extensive services and Alliance Partner networks

Your Solution

Your Team

Engineering, Services, and More

Alliance Partners

Integration and Consulting

NI Services

Training, Calibration, Maintenance, and More

NI Products

Ecosystem and Community

Users, IP, Add-Ons, and More

A world map with a dark blue background and light blue landmasses. Numerous red circular pins are scattered across the map, indicating locations. There is a high concentration of pins in North America, particularly in the United States and Canada. Another significant cluster is in Europe, with many pins across Western and Central Europe. Smaller, more sparse groups of pins are visible in South America, Africa, Asia, and Australia. A semi-transparent dark blue horizontal band runs across the middle of the map, serving as a background for the text.

700+ Alliance Partners
1,000+ Locations, 60+ Countries

NI Alliance Partners



Consulting



Integration



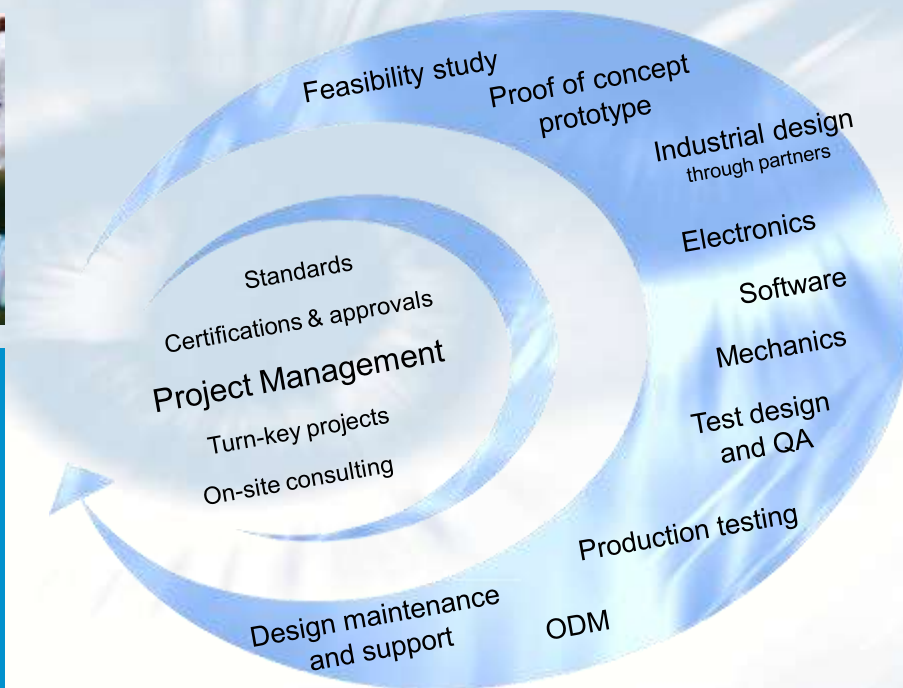
Product Ecosystem

AWR
JJJ Automaatio
Optofidelity

Services - From Ideas to Products



Industrial applications
Automation & control
Measurement systems
Medical devices
Telecom
Building automation
Wireless solutions





- Suomalainen teknologiakonserni
- Yli 200 ammattilaista 9:llä paikkakunnalla ympäri Suomen
- Mittaus ja informaatiojärjestelmät
- Teollisuusautomaatio
- Sähköistys ja instrumentointi
- ICT ratkaisut ja ohjelmistot
- 24 LabVIEW osaajaa
- NI Certified Alliance Partner vuodesta 1998
- Tuotannon ja tuotekehityksen testausjärjestelmät
- Koelaitteistojen prosessiautomaatio
- Värähtelymittaukset, kunnonvalvonta





ProtorhinO

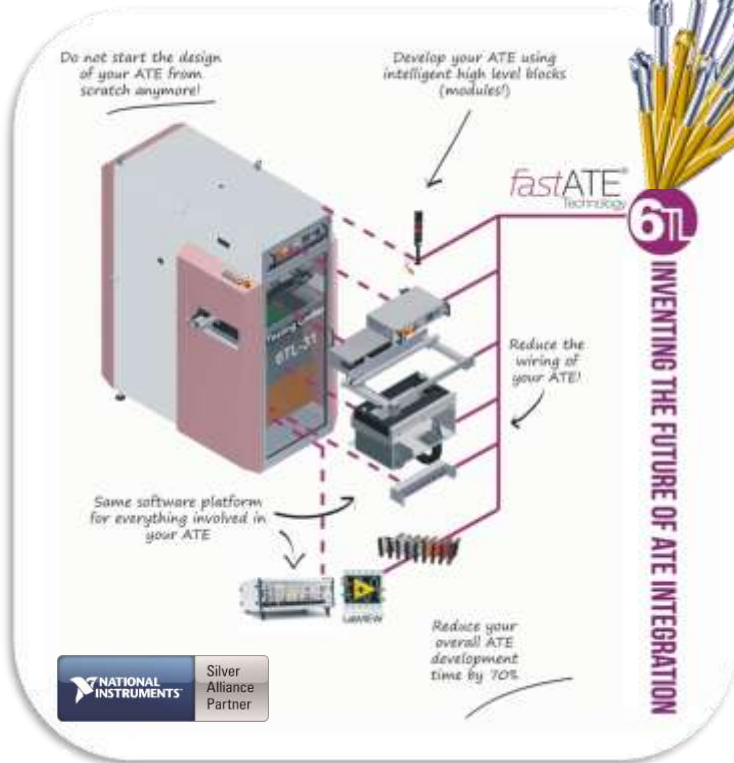
Measurement systems shaped to your need



- >> Complex **FPGA** systems
- >> Turn-key solution
- >> User friendly

Turnkey Test Systems

fastATE



COLUMBIA



NI – PARTNER PRESENTATION 14H45-15H30 – TRACK C

THE 10 MOST FREQUENTLY MADE MISTAKES, WHEN DESIGNING AND BUILDING A TURN-KEY PRODUCTION TEST PLATFORM FOR PCB'S

COLUMBIA





Test and Quality Data Management
In the cloud

**FREE
TRIAL**

Plug in with NI TestStand or LabView – Collect, store and
analyze test data in the cloud

**Support others with
Test Data**





Thank you!



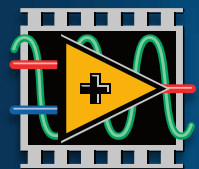
A National
Instruments
Company™



COLUMBIA



ESPOTEL
Advanced Embedded Solutions



NATIONAL INSTRUMENTS

LabVIEW™ 2013



The background of the image is a complex, abstract composition. On the left side, there is a curved, tunnel-like structure with a metallic, reflective surface. This structure is illuminated with a vibrant rainbow gradient, transitioning from yellow and orange at the top to green and blue at the bottom. The right side of the image is a solid, deep blue gradient. Overlaid on this blue background is a faint, technical drawing or schematic of a system, featuring various lines, boxes, and arrows, suggesting a graphical system design theme.

NIDays

WORLDWIDE GRAPHICAL SYSTEM DESIGN

CONFERENCE