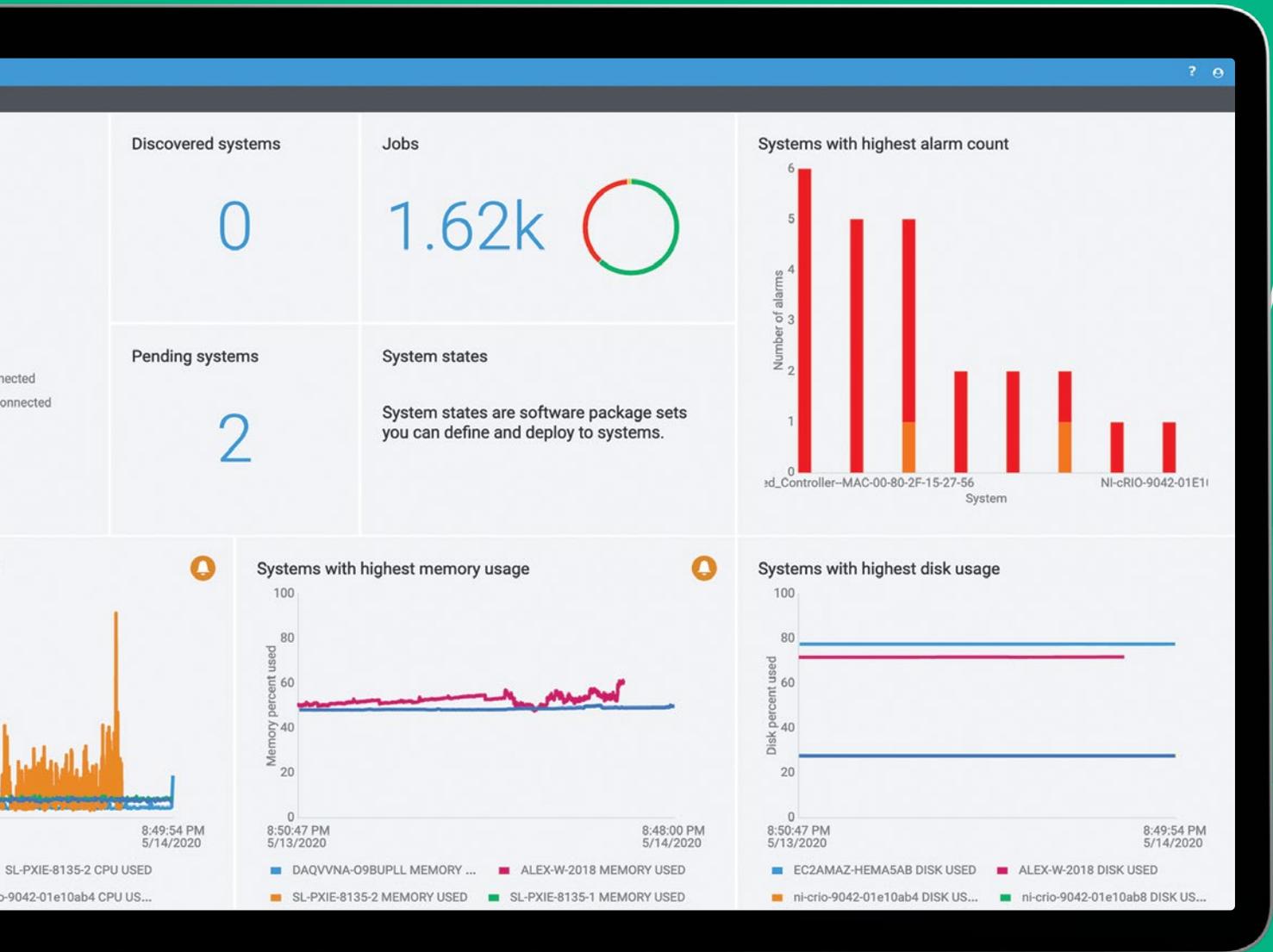


SystemLink™ Software



Designed for Engineering Use Cases

SystemLink software is an intelligent systems and data management software framework for validation, production, and monitoring test environments. Designed for engineering use cases, SystemLink software combines test-and-measurement-focused applications and data services with a software infrastructure that utilizes market-leading open-source technologies. This combination of IP and open technologies means that SystemLink software can provide a unique blend of domain value, extensibility, and flexibility.



If the phrase “doing more with less” resonates with you, you’re not alone. Many organizations are constantly faced with improving operational efficiency while also increasing productivity gains. Add the increasing pressure to bring new products to market, and it brings additional anxiety.

Let’s help you alleviate that pressure and reach your current and future potential with a digital transformation that reimagines test and measurement through a data-and-analysis-led approach.

With NI’s SystemLink product line, industrial companies of all sizes can take advantage of the potential of Industry 4.0 and set the stage for the next level of digital transformation journey.

“True digital transformation typically has profound implications for an organization—affecting strategy, talent, business models, and even the way the company is organized.”

FIGURE 01

SystemLink Framework

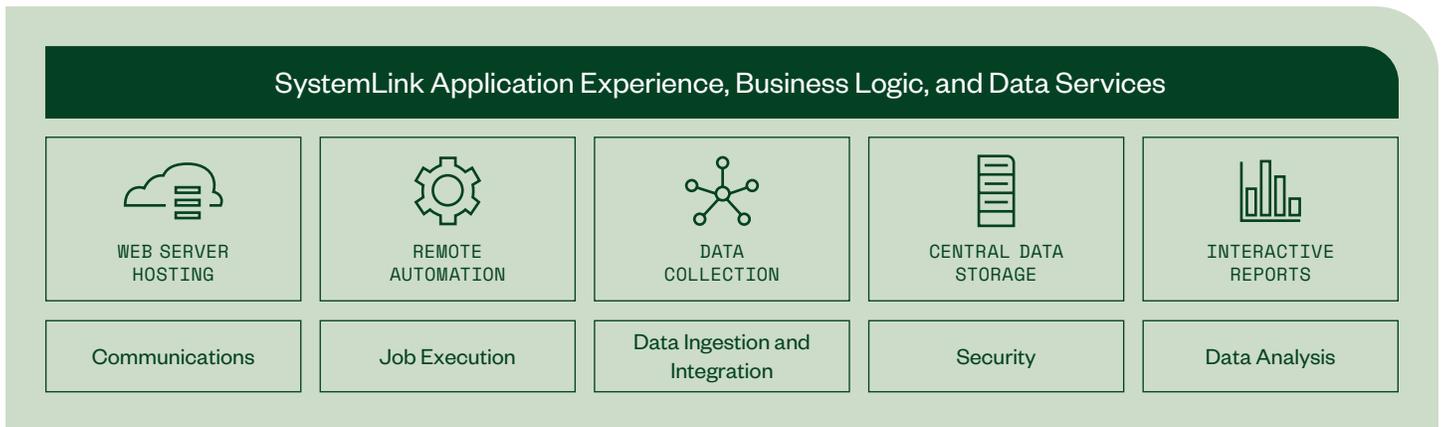


FIGURE 02

SystemLink Product Line

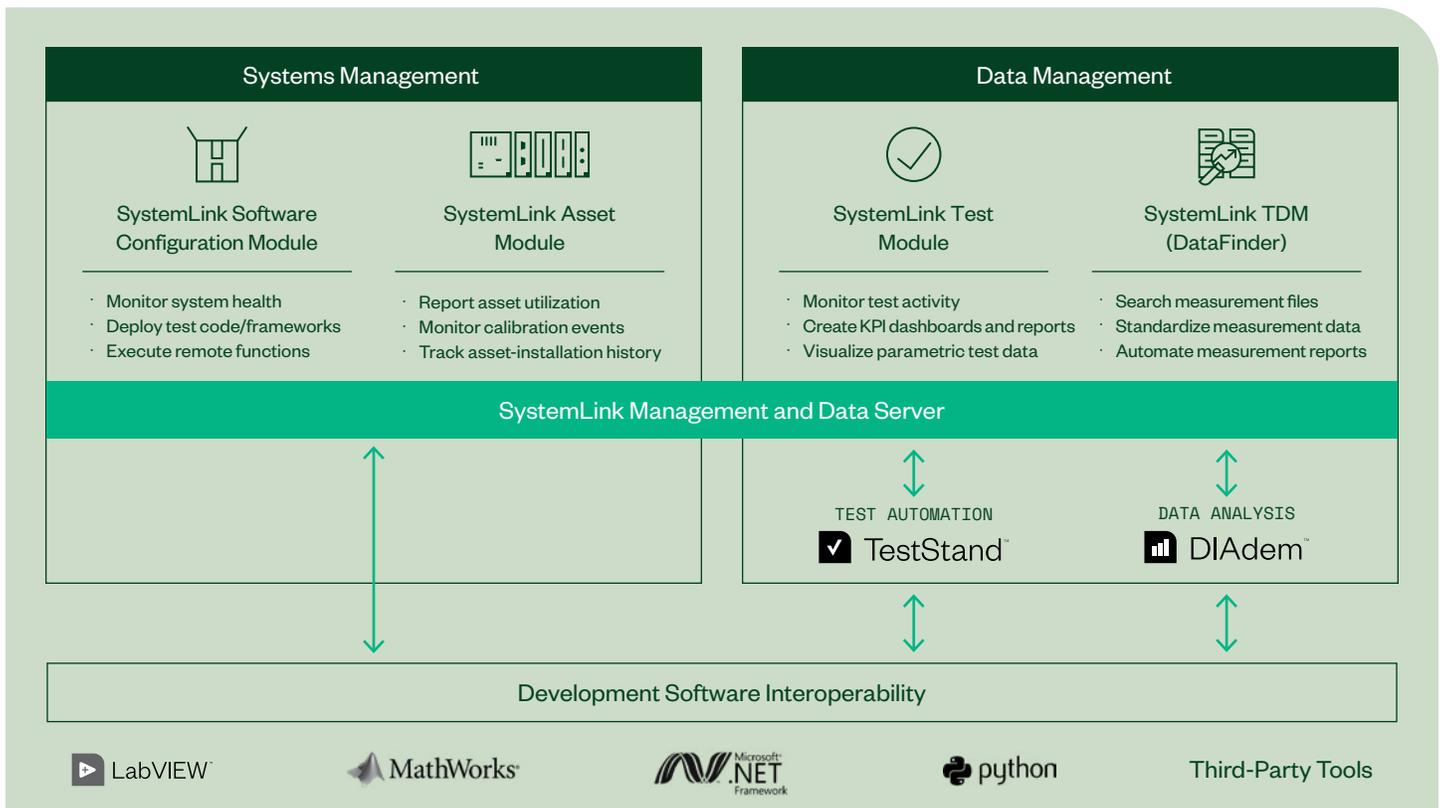
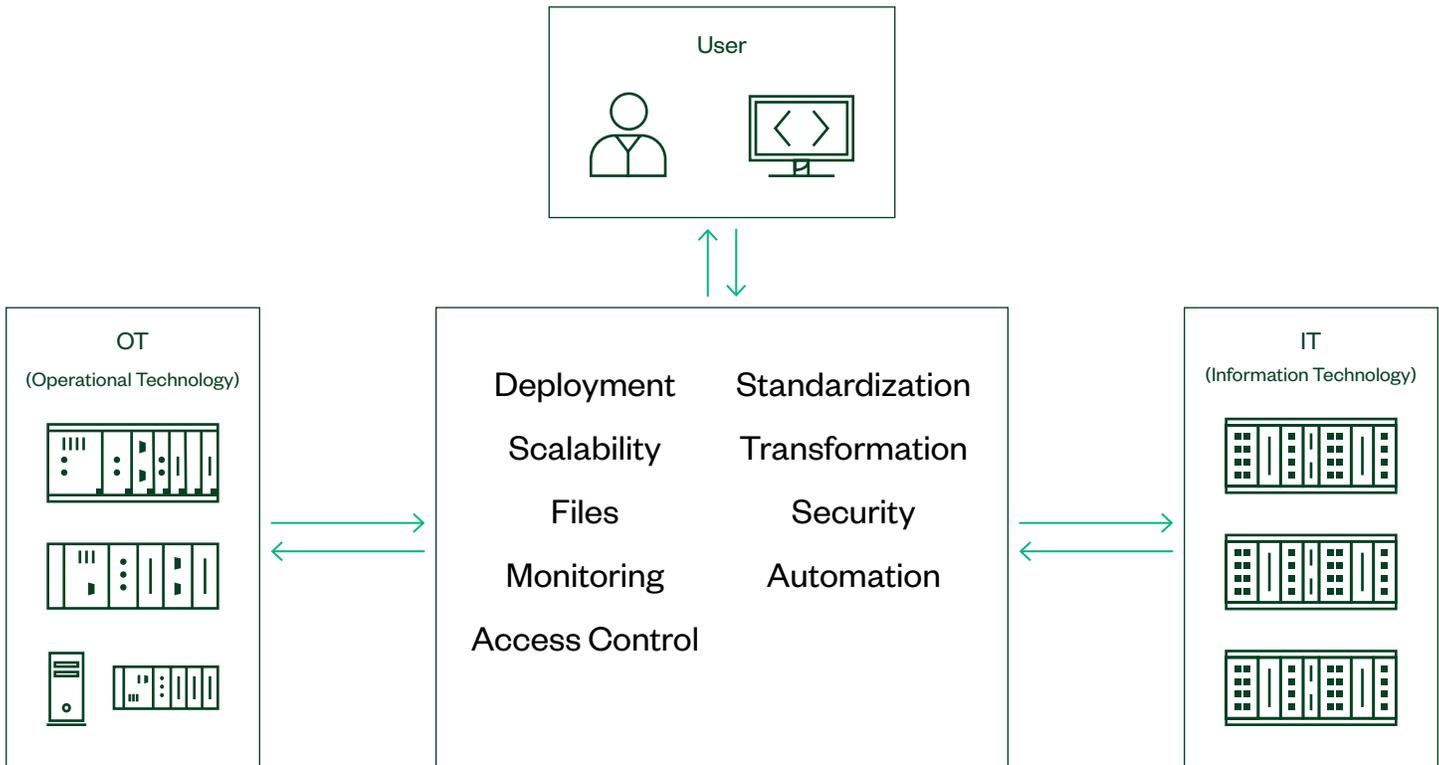


FIGURE 03

SystemLink Bridges the Divide Between IT and OT



SystemLink software is comprised of four modules—Software Configuration, Asset, Test, and TDM DataFinder. These modules provide application-specific capabilities that use the SystemLink Server for data communication, transmission, and movement, as well as software package, alarm and notification, and NI and non-NI instrument dashboard management. SystemLink provides TestStand and DIAdem native hooks for test automation and measurement data analysis, respectively.

With its open and extensible architecture, you can use SystemLink software with NI and non-NI automation software development tools such as LabVIEW, MathWorks, Microsoft .NET framework, and Python.

SystemLink software eliminates the manual tasks associated with keeping test systems current and healthy. From automating updates to monitoring system health, SystemLink software delivers key information that improves situational awareness and test readiness across the product life cycle. With SystemLink software, rest assured that your software configurations are accurate, and that test equipment complies with calibration and quality standards.

By employing an automation and connectivity framework, SystemLink software bridges the divide between your Operational Technology (OT) and Information Technology (IT) systems by aggregating test and measurement data from all test systems into a centralized

data repository. Easily transfer data from testers to data stores via tags or files, accessible securely through the SystemLink web application.

Engineers have ready access to asset utilization, calibration forecasts as well as test result history, trends, and production metrics to make proactive capital expense, maintenance event, and test or product modification decisions.

“SystemLink is empowering teams with benefits beyond the traditional focus of test. It ensures systems and assets are healthy, it provides insight with web-based test monitoring, and it gives power to data with enterprise-level analysis and reporting.”

Darren Jones
Project Director, DMC, Inc.



Connecting People, Process, and Technology

SystemLink modules, SystemLink Server, DIAdem, and TestStand work together to provide superior situational awareness, test and measurement data analysis, and intelligent automation. With a modular and integrated architecture, choose the modules that address your organization's specific needs.



01

SystemLink Software Configuration Module

Helps test organizations achieve operational excellence with centralized test and measurement system coordination:

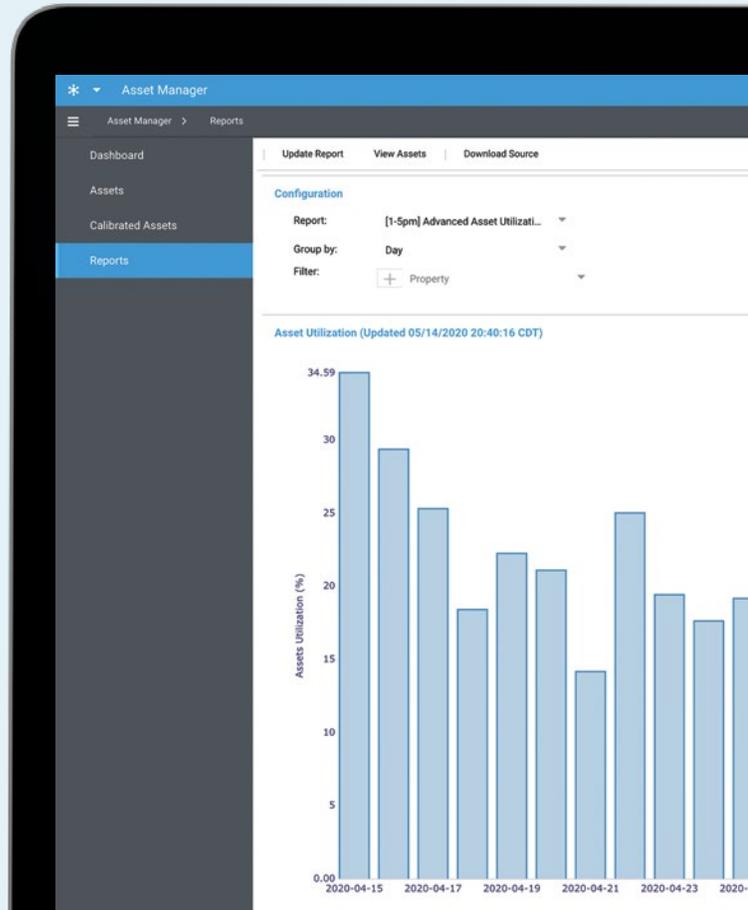
- Execute remote software installs, upgrades, and downgrades
- Deploy to multiple test systems simultaneously
- Define golden system "states" that represent collections of packages for deployment

02

SystemLink Asset Module

Improves business performance by empowering test teams to record, track, and control test assets from procurement to disposal in real time:

- Maximize test equipment uptime and utilization
- Optimize capital allocations and program planning
- View test asset connection history over various time scales (last month, quarter, year)
- View test asset installation history and export data to create reports
- View calibration history and forecasts as well as set alarms for upcoming calibration events

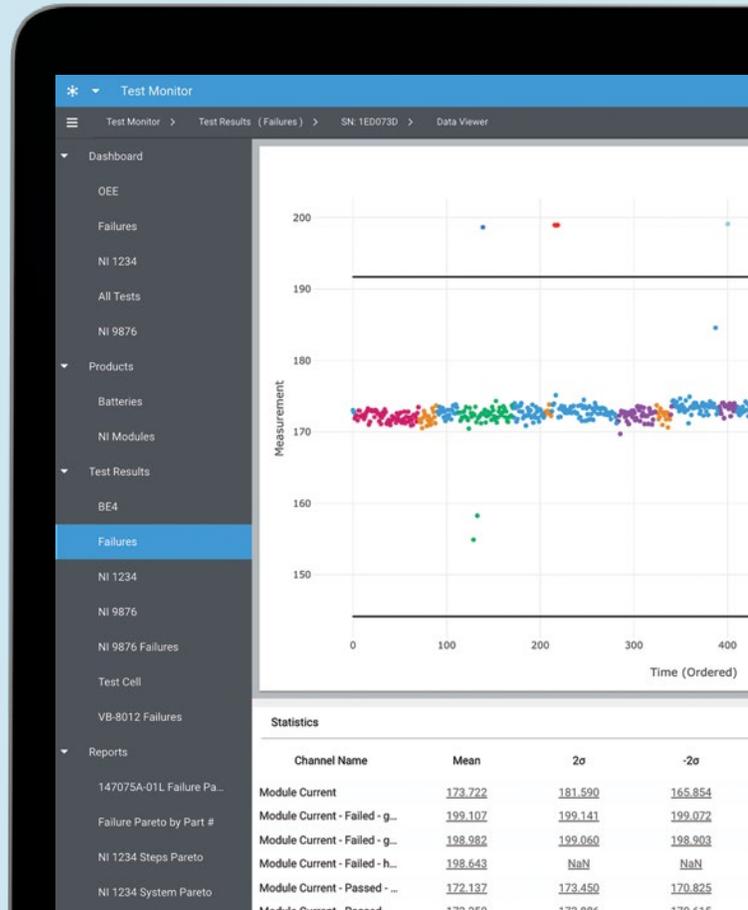


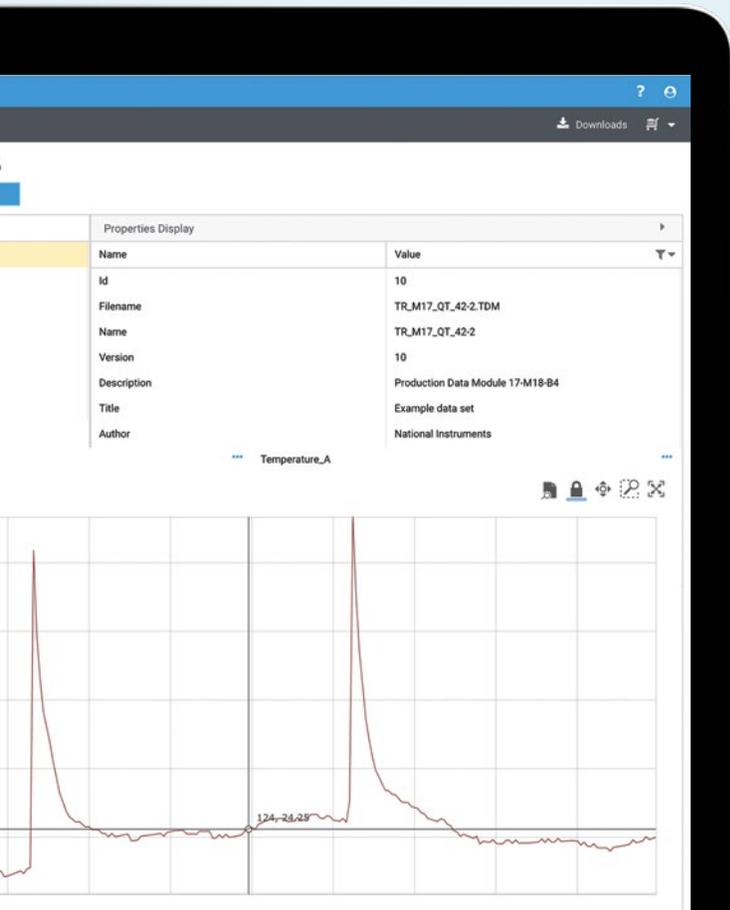
03

SystemLink Test Module

Helps manufacturers optimize their test processes to produce the highest-quality products for the lowest possible cost of test:

- View KPI metrics in a dashboard and drill down to underlying test results data
- Explore individual test results, with sequence, steps, attachments, and data trends. View SPC statistics with test results such as Process Capability: Cp and CpK
- View trends in measurement values or elapsed test time for a given test type, and compare trends to limits to isolate outliers
- View test sequence runs by test type, product/DUT, pass/fail status, and test run date
- Customize dashboards and reports to reflect customer-centric business logic



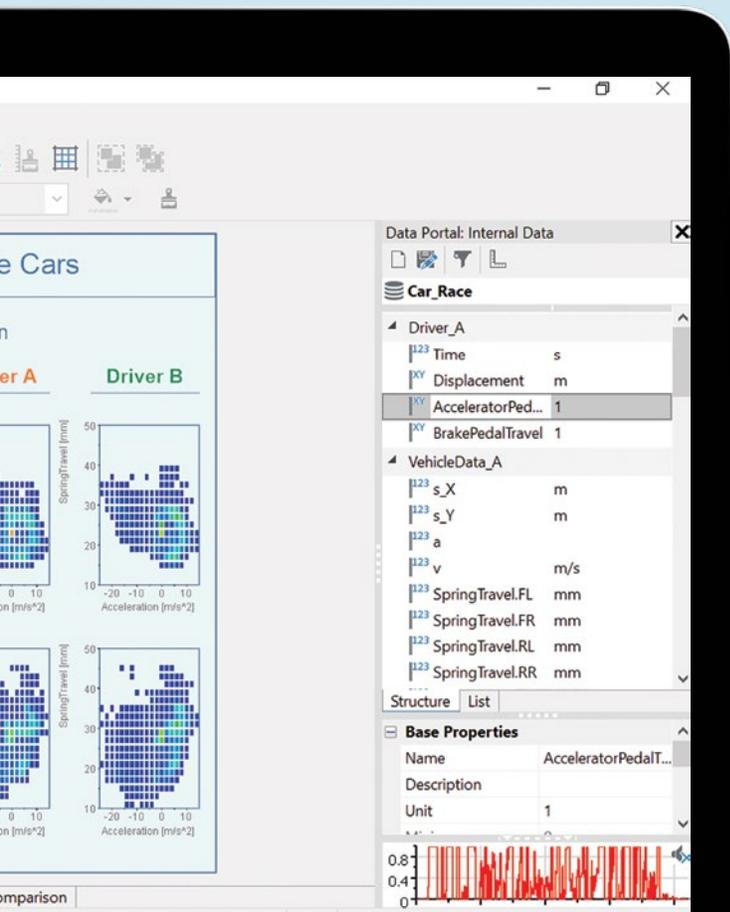


04

SystemLink TDM DataFinder Module

Helps test organizations and product validation teams efficiently manage, search, access, visualize, and analyze all measurement data:

- Automatically standardize data-file format and metadata with a preprocessor routine
- Interactively search with complex queries and view waveform data in the SystemLink web application
- Run analysis and report-generation scripts written in Python or VBScript interactively within the SystemLink web application, on a schedule, or triggered when new data is available
- Automate test and measurement data file ingestion with the SystemLink File Ingestion Service and index those files using DataFinder for easy search and access



05

DIAdem

Helps engineers and scientists be more efficient when postprocessing high-volume measurement data sets:

- Locate and load data indexed by the SystemLink server
- Interactively visualize data with custom layouts and synchronized views
- Analyze data with hundreds of built-in engineering functions and add your own reusable formulas
- Quickly create multipage reports with a What-You-See-Is-What-You-Get editor
- Automate tasks with Visual Basic scripts, created from scratch or through the macro recording mode

“With SystemLink, we made the impossible possible by enabling the remote management of 200+ assets within multiple high-power distribution systems worldwide. Today, our customer has a plug-and-play solution that saves them time and money while increasing data quality and employee safety.”

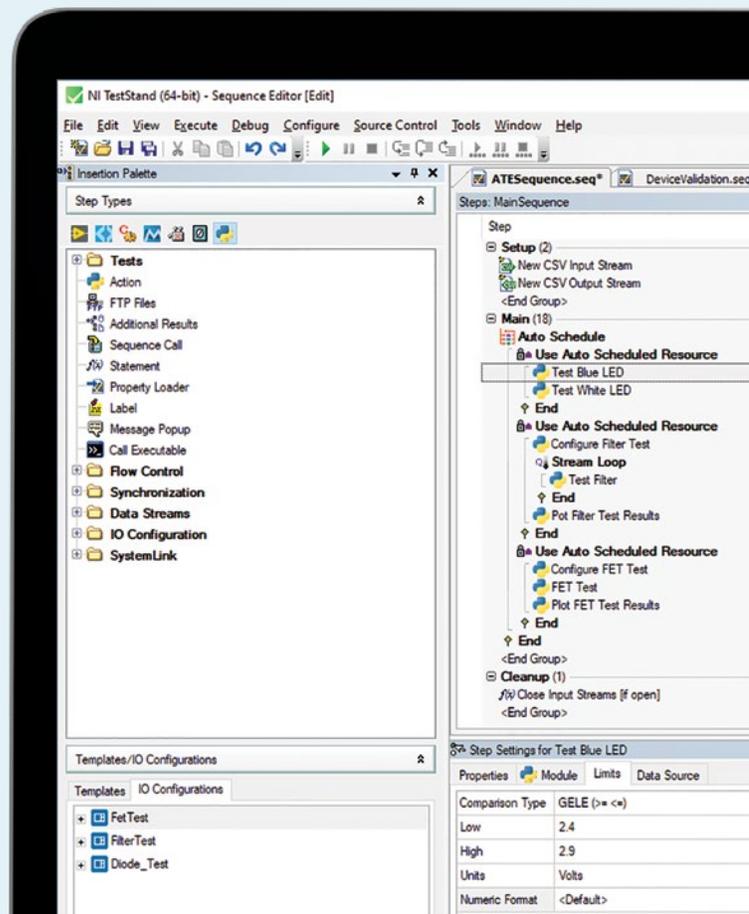
Regis Sayer
Director, Sales Engineering
Averna

06

TestStand

Test and validation engineers quickly can build and deploy automated test systems:

- Create, execute, and debug test sequences
- Reuse code developed in any programming language
- Increase throughput with parallel testing
- Generate reports and integrate with databases
- Check a checkbox to automatically send test data and attachments to the SystemLink software
- Develop or connect to professional operator interfaces





“SystemLink answers the hard questions of “what” is happening and “why” it is happening. We empower our customers to Engineer Ambitiously™ with purpose-built software and data management services that deliver visibility into, and across, their operations. By connecting people, processes, and technology, we enable new ways of thinking to overcome the challenges of today and tomorrow.”

Penny Merian
Chief Product Marketer
National Instruments

Engineer Ambitiously.

At NI, we Engineer Ambitiously. We celebrate creative problem solving. We take our customer relationships to heart. We are dedicated to helping engineers, enterprises, and forward thinkers thrive today, tomorrow, and for the next hundred years.

Over the past four decades, NI has set the standard in software-connected automated test and automated measurement systems and served as a trusted partner to customers around the world.

We continue to push the limits of innovation as we help you take on your most complex engineering challenges and build better businesses.



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NI Services and Support

NI offers success services to ensure you get the results you are looking for. We complement your team with expertise in implementation, integration, and data management practices.

Consultation and Integration

From start-up assistance to full solution implementation, leverage specialized expertise in configuration, integration data ingestion, visualization, and analytics from NI engineers and SystemLink Specialty Partners to ensure project success.

Training

From online training modules to custom on-site training, ensure your team has the skills needed to be successful with SystemLink software.

Technical Support

Troubleshoot any issue by contacting NI applications engineers who are ready to help via phone and email.

ni.com
ni.com/systemlink

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