Pathwave Lab Operations

For Connectivity

Improve the Workflow in Your Test Lab

In the automobile industry, innovation is accelerating in many areas: electric powertrains, energy storage, wireless connectivity, in-vehicle networking, autonomous driving, and more. Every day, difficult work is done within the R&D lab, spanning multiple programs, projects and teams. Some teams are staying productive, on schedule and on budget. Others may be struggling with challenges that range from big items—new technologies, standards and test methods—to the seemingly trivial—finding the right instrument, person or program to run a crucial test. The new reality amplifies the challenges they face in terms of team productivity, asset utilization, project-level visibility, standards compliance, and overall workflow efficiency. These issues also increase the likelihood of over-budget equipment buys, erroneous test results and, ultimately, problems with product quality. A new tool is required to manage the more complex workflow, a tool that allows simpler yet more in-depth insights into your test lab.
**Gain assurance with lab management software**

When managed manually, maintaining an efficient lab-wide workflow is a lot to keep track of—for you and your teams. The most effective alternative is lab management software that provides a comprehensive view of assets, activities, and more, across your lab.

The software includes creation and management of test plans, and it spans data collection, processing, storage and retrieval. It supports management of assets and resources, ensuring that you have a connected, process-driven workflow that helps you and your teams achieve maximum efficiency and utilization. You'll also be able to optimize equipment purchases, enhance test results, and ensure product quality. The net result is greater assurance that you are ready for production.

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**Our Solution**

Keysight’s PathWave Lab Operations is a modular software suite that provides a 360-degree view of your lab—assets, software, test plans, results, reports—at virtually any time and place along your R&D workflow. Whether individual teams test themselves or rely on a centralized group that provides test as a service (TaaS), PathWave Lab Operations lets you establish and manage a workflow that is connected, automated, and efficient.

The software suite enables you with a multi-department approach that is connected on a global scale. You get a fully functional lab management solution—off-the-shelf or customized—that addresses your needs in connectivity, automation, and visibility. Since the software is packaged together, we can offer the suite at a lower cost than you would pay for an individually developed software tools.

The software is broken down into specific modules that each have a unique feature set. They can be used together to create the ultimate lab management tool, or you can pick and choose and even add modules later, giving you complete flexibility.
You can see from Figure 1 above that each module can run independent or as part of a larger suite depending on your needs that cover the whole range of test related Enterprise Resource Management. The services can be hosted within your network infrastructure or with an appropriate cloud services provider.

Figure 2 highlights the “pick and choose” nature of this solution. At the initial purchase you can add the functionality specific to your requirement, but if in future these change, additional functionality can be added.
Key Features

With PathWave Lab Operations you get a full 360-degree view of your lab’s workflow and so much more.

**Component and asset tracking**
Before the tests even begin, which components do you want to test and where are they coming from? With Pathwave Lab Operations each individual component can be registered within the software to ensure the correct tests are run for the appropriate devices.

**Automated and intelligent tests**
Import your test scripts and tell Pathwave Lab Operations how these tests should be run, when they should run, and what happens in the event of a failure or anomaly detection.
Results management and analysis
Once the tests are run and the results are collected, how do you best share that information? In a non-managed workflow they are sent to someone in another area or department or stored on a local drive that only a few people know about. With Pathwave Lab Operations, results can be tracked, stored and analyzed by people whose time can be managed from within the software.

Data and database management
As there is a common workflow throughout the test structure, Pathwave Lab Operations allows a common data model throughout the test flow which enables your data to be stored in your preferred format on a database of your choosing, local or cloud based.
Customization

Keysight also offers you the opportunity to add a level of customization to the Pathwave Lab Operations software so that specific assets, people and devices can be entered, tracked, and effectively managed.

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**Bovem AG TestCoordinator**

<table>
<thead>
<tr>
<th>Resource Management</th>
<th>Test Sequences</th>
<th>Planning</th>
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<tbody>
<tr>
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**Setup 1**
### Module Details

<table>
<thead>
<tr>
<th>Solution Number</th>
<th>Option Name</th>
<th>Requirement</th>
<th>Option Description and Services</th>
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</thead>
</table>
| EP1101A         | Platform core | Required at time of purchase | Server side software installation and setup services  
Rolled services  
Frontend/ GUI installation  
Generic resource management  
License services  
Authentication / user managemen  
Instrument management connected to Keysight Care (calibration,  
maintenance, servicing) |
| EP1102A         | Test management, scheduling, execution | Required at time of purchase | Enables test routines to be run in development tool of your choice,  
currently support tools listed below*  
Option TAP + customization  
Option Matlab Test Platform / API + customization  
Option Matlab License  
Option TestExec SL  
*Not all development tools may be supported. Please consult Keysight Technologies for more information. |
| EP1103A         | Orders and tracking of tests | Can be added at purchase or at a later date | Enables the booking of DUTs into the schedule of the test lab  
Track tests that are completed, in progress, and still to be done.  
Track how many tests and hours are being consumed by individual departments and resources  
Allows measurements of time booked by each department |
| EP1104A         | Reporting and analysis | Can be added at purchase or at a later date | Backend services to allow for the creation and sending out of reports  
Interactively compare results and gathered data with trend analysis  
Gathered data is timestamped and aligned to the tests performed which allows for full traceability |
| EP1105A         | Resource and logistics management | Can be added at purchase or at a later date | Enables management and tracking of resources - assets, people and DUTs  
Provides analysis of what resources are required to run specific tests  
Tracking of which assets and materials are defective or need service  
Enables management of the warehouse, from people to parts |
| EP1106A         | System data test model | Can be added at purchase or at a later date | Keysight can assist or create the correct database format definitions  
Keysight can assist or pre-define the data model to allow a common data model across your workflow |
| EP1199A         | Customization services | Required at time of purchase | Customization is required so Keysight software engineers can work with you to create your ideal lab management suite |

Learn more at: [www.keysight.com](http://www.keysight.com)

For more information on Keysight Technologies’ products, applications or services, please contact your local Keysight office. The complete list is available at: [www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)