

Velocity 3900 Series Switches

Accelerate Testing and Improve Efficiency with Automation Switches for Managing Lab Connectivity and Topology

Today's test lab teams face a myriad of challenges, ranging from keeping OpEx costs such as energy and labor in check to improving lab tool utilization and actively shortening test cycles. Keysight delivers a portfolio of flexible test lab automation and management products, including a comprehensive series of Velocity Automation Switches to virtualize, automate, and securely manage your physical layer fabric.

Keysight's Velocity 3900 Series switches for test lab automation serve as the focal point for managing lab connectivity and topology. The 3900 optimizes test lab operations by combining Layer 1 matrix switching into a scalable architecture. It offers flexible pay-as-you-grow configurations, with one, three, and 12 slot chassis options and a variety of interoperable optical-electrical-optical (OEO) blades.

Whether managing dedicated high-performance test labs or consolidated globally accessible lab resources, the 3900 Series supports a wide range of port speeds and media types for managing network topologies within today's complex test labs.

Benefits and Capabilities

Keysight has helped thousands of organizations increase utilization of lab equipment, automate lab management, and drive CapEx and OpEx savings by:

- Increasing test lab and resource sharing and efficiency
- Reducing time required to set up and test
- Providing insight into lab and equipment use
- Improving lab performance by reducing manual errors

Key Switch Features

- Software-adjustable any-rate blades
- Hybrid electrical and all-optical switching fabrics
- 1-, 3-, and 12-slot chassis options
- Scalable from 16 to 1,152 ports per system
- Distributed and redundant architecture
- Controlled by Velocity or third-party software

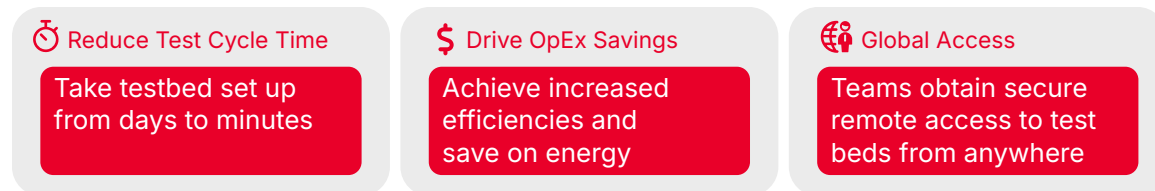


Figure 1. Chart displaying three key benefits for Velocity 3900 Series switches

Highlights

- Patented, non-blocking architecture
- Scalable to 1,152 OEO ports per chassis
- Low latency for time-sensitive applications
- Redundant, modular systems designed for high availability
- Multiple blade options available to meet individual test lab needs
- Integrates seamlessly within the Velocity Automation Portfolio for complete lab automation
- Controlled by Velocity Core or third-party automation systems

Table 1. Velocity 3900 Switch Ethernet Configuration Options



3901 Switch



3903 Switch



3912 Switch

	3901 Switch	3903 Switch	3912 Switch
Max 1 GbE Port Capacity	72	216	864
Max 10 GbE Port Capacity	96	288	1,152
Max 40 GbE Port Capacity	24	72	288
Chassis Slots	1	3	12
Rack Units	1	3	16

Velocity 3900 Switch Series Chassis Options

The 3900 Switch family offers three different chassis options to fit multiple test lab scenarios. The switches provide users with secure, remote access to test lab equipment in order to set up, perform, and tear down test scenarios from any location 24/7, eliminating the need to physically access the lab. The switches are controlled by Keysight Velocity Core for ease of management and maximum flexibility.

Velocity 3901 Switch Chassis

The 3901 switch is a single-blade system option that delivers up to 96 ports of 10G or 24 ports of 40G in a 1-slot chassis. The 3901 provides blade support for both the S-Blade 64 and S-Blade Pro.

Velocity 3903 Switch Chassis

For customers requiring more ports, the 3903 offers up to 288 ports of 10 G or 72 ports of 40 G in a 3-slot standalone 19"-rack mount chassis option. The 3903 supports both the S-Blade 64 and S-Blade Pro and provides fully redundant power and control.

Velocity 3912 Switch Chassis

If even higher port density is required, the 3912 offers the flexibility of one to 12 blades and supports up to 1,152 ports of 10 G or 288 ports of 40 G in a 16U 12-slot chassis. The 3912 supports any combination of Keysight blades and delivers fully redundant power and control. The 3912 uses pluggable Switch Fabric Modules (SFMs) to expand backplane capacity and supply four dedicated QSFP+ back ports for connecting switches using cross switch links (xSLs).

Velocity 3900 Series Blade Options

All 3900 Series switch chassis support Keysight's blade family, offering the following port configurations:

Table 2. Velocity 3900 Series Blade Options

	SFP Ports	QSFP Ports	Protocols
Velocity 3900 S-Blade Pro	0	24	Ethernet, CPRI, SAS, OC, FC, OTN, SONET
Velocity 3900 S-Blade 64	32	8	Ethernet, CPRI, SAS, OC, FC, OTN, SONET

Velocity 3900 S-Blade Pro

Offering multiple configuration options, the Velocity S-Blade Pro delivers high-density connectivity with 24 QSFP+ ports per blade and offers advanced features including network impairments and utilization metrics.

Velocity 3900 S-Blade 64

Offering multiple configuration options, the Velocity 3900 S-Blade 64 delivers up to 64 high-density ports of connectivity (1/10/40 G) per blade, either natively or via breakout cables or couplers. The blade comes standard with 32 SFP+ ports and eight QSFP+ ports and provides ultra-low latency Layer 1 connectivity (<5 ns).

Additional Velocity Automation Switches

Test labs are challenged with the ever-changing landscape of ethernet speeds, test tools, and interface types. Velocity provides a variety of automation switches to support your test lab requirements and environments.

Velocity HS Series Switches

The Velocity HS series can maximize efficiency in diverse environments by supporting Ethernet speeds up to 400 G and enabling the use of lower speed test tools for higher speed testing through rate conversion and aggregation. Isolated port mapping allows you to easily configure test scenarios that would otherwise require additional spending for new tool ports. The HS Series delivers flexible, multi-speed support in three different chassis options with QSFP-28 or QSFP-DD interfaces.

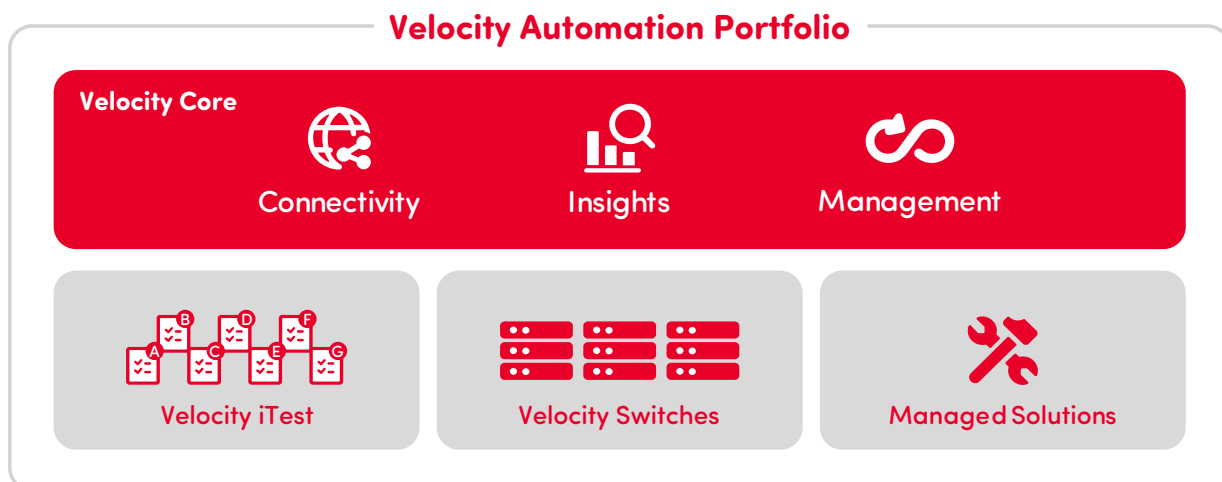


Figure 2. Chart displaying Velocity Automation Portfolio offerings

The Velocity Automation Portfolio supports the complete automation of customer lab and testing environments for large enterprise, NEM, and service provider organizations. It is the only fully integrated solution to provide automation and management of lab resources, facilitate automated test suite creation, oversee lab connectivity and topology, and provide professional services for automation initiative success.

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.