Move the light, not the fiber

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Products

> S Series Optical Circuit Switch

> Edge|640™ Optical Circuit Switch

> OEM Subsystem Solutions

> LightConnect™ Fabric Manager

S Series Optical Circuit Switch

The explosion of data driven by video, AR/VR, and new high-bandwidth 5G-enabled services is accelerating the demand for flexible, scalable, high-bandwidth networks. As a direct consequence, Data Centers and Network Service Providers are under constant pressure to deliver more bandwidth and computing power at lower and lower cost per bit or compute cycle. Rapid service deployment has also become critically important for success.

CALIENT's S-Series optical circuit switches (OCS) play a unique and important role in addressing these challenges, by enabling the dynamic interconnection and sharing of high value compute, network, and test resources at the optical layer. The OCS is transparent to data speed and is protocol agnostic. Consequently, it offers very high bandwidth and configuration flexibility as networks grow in speed from 40 and 100 Gbps to 200 Gbps and beyond.

The S-Series switch family offers a range of port densities ranging from 80 to 320 ports. Small form factor, low power consumption, and fast switching speed make the switches highly suited to data center, cloud computing, service provider, and government applications. The S-Series switch family is the industry's most deployed and dependable optical switching solution, currently in service at scale in Tier 1 cloud data center and service provider networks.

S320

The S320 Optical Circuit Switch features 320 TX/RX ports (640 optical connections), in a compact 7 rack-unit form factor. Based on field proven 3D Optical MEMS technology that CALIENT has deployed in more than 750,000 optical connections globally, the S320 Optical Circuit Switch delivers a sweet-spot of high reliability, small form factor, low power consumption, low cost, and ease of use that allows the benefits of all-optical switching to be realized in real-world production networks.

S160

The S160 Optical Circuit Switch delivers the same powerful feature set as its larger cousin, the S320, but with a smaller 160-port count to support applications requiring lower capacities. Typical deployment applications include smaller data centers, mobile media production studios, and sharing of high value optical test equipment in development labs and manufacturing facilities.

Applications

The S Series Optical Circuit Switches provides the scalable and protocol independent software defined fiber interconnect and management infrastructure for a wide range of Data Center, Service Provider, and Government applications.

DOWNLOADS

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Datasheets

Edge|640™ Optical Circuit Switch Datasheet

S-Series Optical Circuit Switch Datasheet

Application Notes

5G Dynamic Optical Layer Resource Allocation

vCluster: Disaggregation of Data Center Resources

Optical Layer Virtualization for DevOps Test Automation Labs

SD-DCI: Virtualized DCI and Optical Transport Networks

vPod: Optical Layer Data Center Virtualization

CALIENT Plexxi Hybrid Datacenter Architecture Solution Brief

White Papers

5G Dynamic Optical Layer Resource Allocation

vCluster: Disaggregation of Data Center Resources

SD-DCI: Virtualized DCI and Optical Transport Networks

vPod: Optical Layer Data Center Virtualization

Software-Defined Metro Networks: Virtualizing The Network & Services Edge

CALIENT's 3D MEMS Technology Enables Exploding Bandwidth Demands

The Need for Next-Generation ROADM Networks

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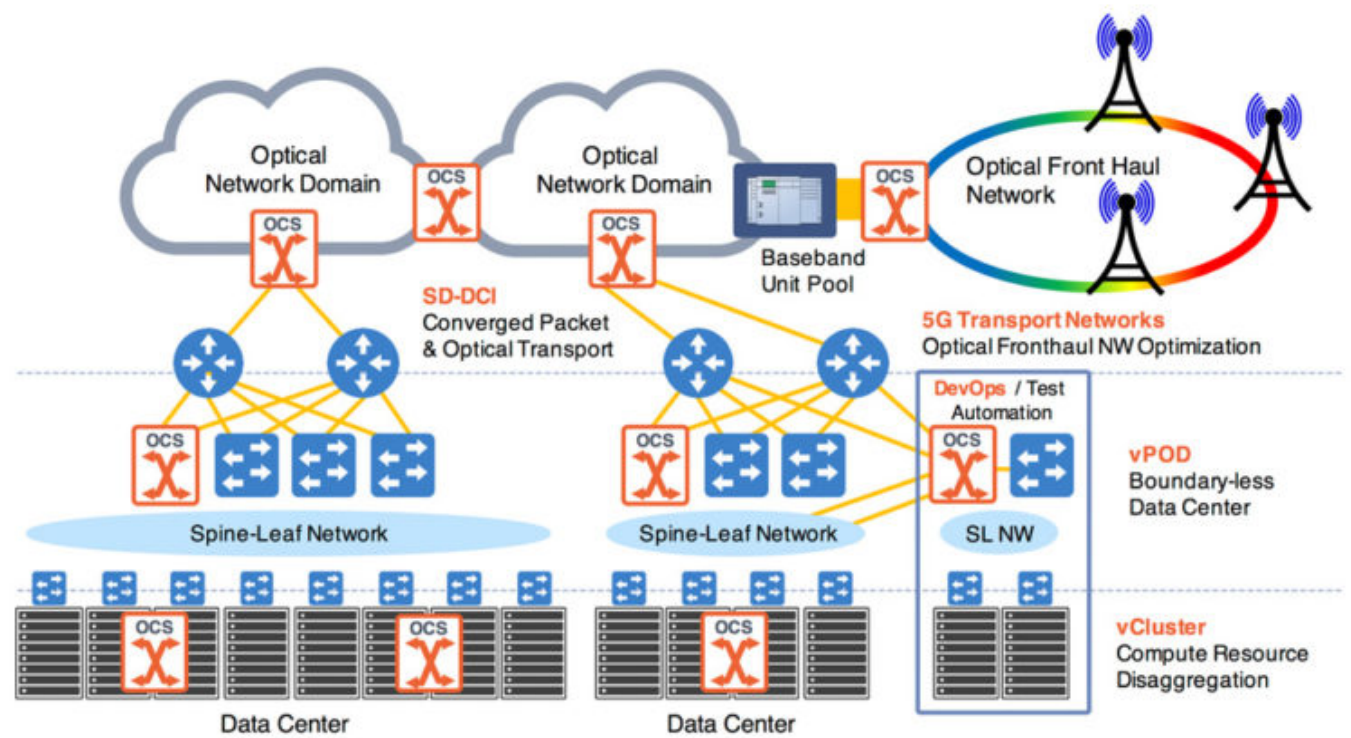
Selected S-Series OCS Applications

Key applications include:

- **DevOps/Test Automation:** Dynamic sharing of test, compute, and network resources
- **Wireless Networks:** Capacity optimization in optical backhaul and front-haul networks
- **Cloud & Enterprise Data Centers:** Scalable on-demand compute resource optimization
- **Colocation Data Center Facilities:** Software defined optical topology management
- **Disaster Recovery:** Rapid recovery from multiple network failure scenarios
- **Subsea Cable Networks:** Remote network configuration and restoration
- **Fiber to The Home (FTTH/FTTP) Networks:** Automated service activation & testing
- **Cybersecurity:** Protection of critical network infrastructure from cyber attacks

Features & Benefits

- **Small Size:** 80-160, 160 or 320 Ports (Tx/Rx pairs) in 7RU Chassis (LC Connectors)
- **Low Power Operation:** Less than 45 Watts typical
- **Low Cost:** Supports deployment in data center, service provider, and government networks
- **Ultra-low Latency:** All-optical connectivity adds less than 30 ns latency.
- **Scalable:** Supports all data rates to 200 Gbps and beyond
- **Reliable:** Based on proven 3D MEMS design with over 750,000 ports deployed globally
- **Low loss:** 3 dB maximum insertion loss
- **Built-in power monitoring:** Every in/out fiber is monitored providing powerful network diagnostic capabilities.
- **Simple to install, integrate and use:** GUI- driven, EMS-ready, supports TL1, SNMP, CORBA, OpenFlow, and REST APIs

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