



Products

- › S Series Optical Circuit Switch
- › [Edge|640™ Optical Circuit Switch](#)
- › OEM Subsystem Solutions
- › LightConnect™ Fabric Manager

Edge|640™ Optical Circuit Switch

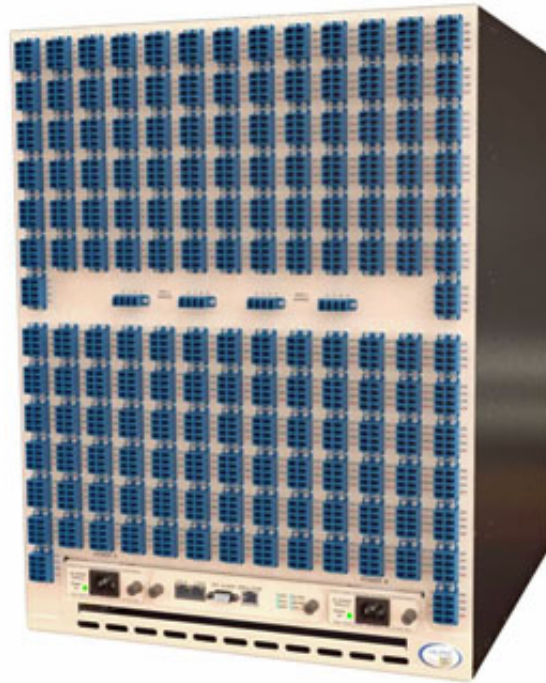
CALIENT's Edge|640™ Optical Circuit Switch is a variant of the S-Series product family that is purpose built for reconfiguring connectivity between network or device domains. Like the S-Series Optical Circuit Switch, the Edge|640™ is transparent to data speed and is protocol agnostic. Consequently, it offers very high bandwidth and configuration flexibility as networks grow in speed from 40 Gbps, and 100 Gbps to 200 Gbps and beyond.

The Edge|640 offers 640 full-duplex ports and consists of two 320×320 switch cores. One core is used to create a half-duplex connection from a device on one side to a device on the other side. The second switch core mirrors the first to create the other direction of a full-duplex connection. This results in a much larger switch fabric that is ideally suited to applications at the network or domain edge.

Based on field-proven 3D Optical MEMS technology that CALIENT has deployed in more than 750,000 optical connections globally, the new Edge|640™ Optical Circuit Switch delivers high reliability, small form factor, low power consumption, low cost, and ease of use that allows the benefits of optical switching to be realized in a range of datacenter and service provider applications.

Applications

The Edge|640™ is appropriate for applications where any-to-any connectivity is not required across the entire group of client devices. This condition exists in many edge applications where devices at the edge of one network need to be cross-connected to devices at the edge of another network, but there is no need for intra-network connections. One example of this edge condition occurs between the edge router network and the transport network: northbound edge router ports must be cross-connected to transport resources, but there is no need to connect northbound router port to northbound router port. Another example is in LTE and 5G wireless optical transport networks where a pool of radio devices must be cross-connected to a pool of baseband devices, but there is no need to connect radio to radio or baseband unit to baseband unit.



DOWNLOADS

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Datasheets

- ↓ [Edge|640™ Optical Circuit Switch Datasheet](#)
- ↓ [S-Series Optical Circuit Switch Datasheet](#)

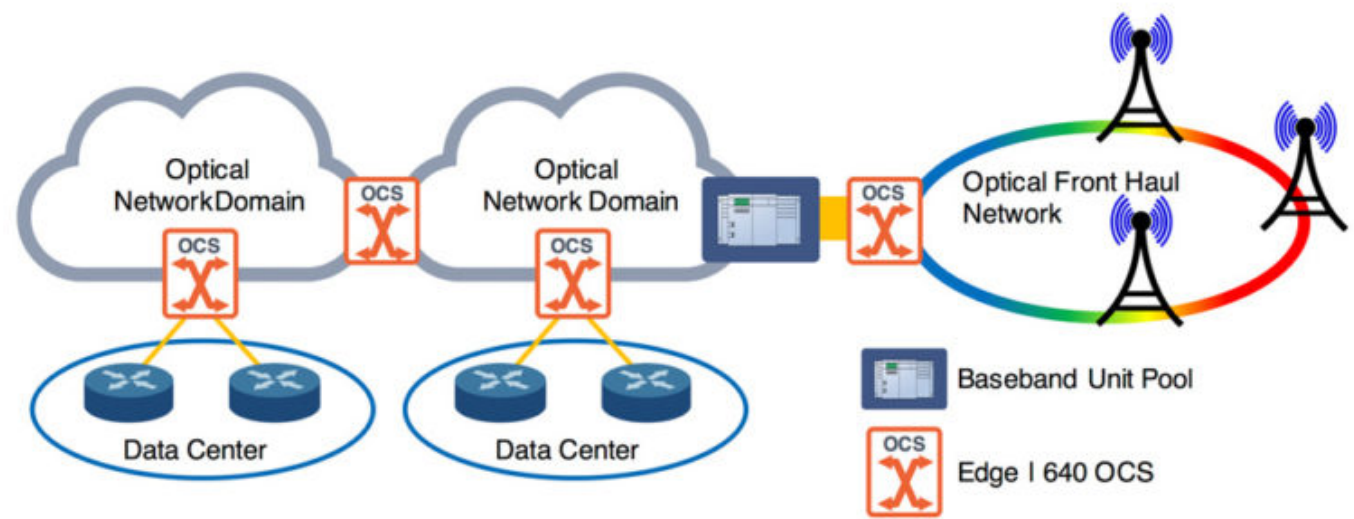
Application Notes

- ↓ [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 ROADMs Networks](#)

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Selected Edge640 Applications

Applications that can benefit from the all-optical switching provided by the Edge640™ include:

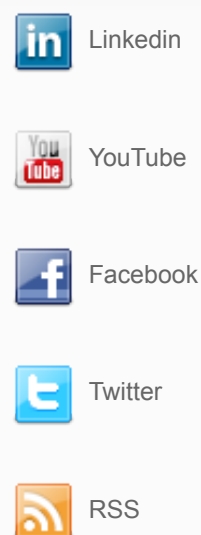
- **Network Edge to Network Edge:** e.g. edge router to transport network
- **Wireless Networks:** Capacity optimization in optical front-haul transport networks
- **Test Automation:** Supporting DevOps with on-demand sharing of high-value test, compute, and network resources
- **Cloud & Enterprise Data Centers:** Scalable on-demand compute resource optimization: Sharing racks between PODs/Clusters
- **Supercomputing:** Compute resource optimization: GPU, FPGA, Memory, Storage

Features & Benefits

- **High Port Density:** 640 ports (TX/RX pairs) in 14RU chassis (LC Connectors).
- **Ideal for Edge Applications:** Any 320 ports in one group can be cross-connected with any 320 ports in another group
- **Low Power Operation:** 90 W typical
- **Low Cost:** Supports deployment in data center, service provider and DevOps networks
- **Ultra-low Latency:** All-optical connectivity adds < 30 ns latency
- **Scalable:** Supports all data rates to 200 Gbps and beyond
- **Reliable:** Based on proven 3D MEMS design deployed in over 750,000 fiber terminations globally
- **Low loss:** 3.0 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, comprehensive set of northbound APIs



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