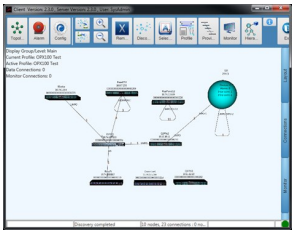
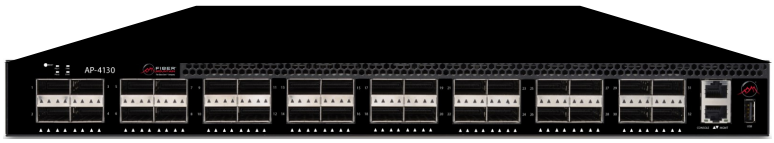
AllPath® AP-4100 OPX®

Datasheet DS-00107

Product Description

The AP-4100 OPX family features layer 1 SDN Optical Path Exchanges which are an integrated part of Fiber Mountain's Glass Core solution for layer 1 networking. These software-controlled layer 1 switches provide low latency Programmable Light Path (PLP) connections for dynamic reconfiguration of paths in the Glass Core architecture with single mode and multimode managed optical connectivity for Ethernet networks. Forwarding latency is reduced by forwarding all packets received at a port to the defined destination port, with minimal packet inspection.





(AP-4130 shown with AllPath Director)

Point to Multipoint Functionality

In conjunction with Fiber Mountain's AllPath Director (APD) SDN orchestration software, AP-4100 OPX models also provide Point to Multipoint Connection functionality. Ideal for network tapping, this feature enables applications that require a flow received at a port to be replicated one or more times and sent to multiple unique output ports. APD provides advanced monitoring features to assist with complex tapping configurations in networked environments

Orchestration—Layer 1 SDN

All of the AP-4100 OPX product family are embedded with a Fiber Mountain Open–vSwitch agent, enabling orchestration via the APD SDN controller as well as network-wide discovery and visibility. Applications are designed to take advantage of the total network view, so tasks such as provisioning end-to-end connectivity are easily performed via point & click workflows. APD also provides documentation management with port labeling, reservation, asset management and more. Security is improved with audit trails providing historical records of provisioning and monitoring changes. A graphical rendering of the layer 1 topology provides a network-wide view of the physical layer, with enhanced features such as Path Finder, which draws out the connection path from a selected port to the destination.

Use Cases

- High Density Tap and Monitoring with application software support
- Dynamic physical layer remote managed moves, adds and changes for lights-out environments
- Co-location data center market enablement
- Media conversion, cross-connect between lambdas, between single and multimode, between fiber and copper
- For lab automation, supporting application software can schedule reconfigurations
- Optical repeater

Feature Highlights

- Low cost SDN-managed networked Layer 1 switch, fully non-blocking fabric
- Embedded Open-vSwitch agent providing cut-through connections for reduced latency
- Interoperable with multiple Open Source Openflow controllers.
- SDN Orchestration Software provides network-wide provisioning, tapping/monitoring, documentation and asset management support
- All data ports on front faceplate, fans and power supplies mounted on rear faceplate
- Point & click provisioning from breakout hardware for 10GbE and 40GbE connectivity
- Hot-swappable, load sharing, redundant power supplies
- Hot swappable fan modules. Front to Back or Back to Front for hot /cold aisle configurations

181-00007.01.01 DRAFT

For more information, visit **www.fibermountain.com**

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FIBER MOUNTAIN™
The Glass Core™ Company

	AP-4105 OPX	AP-4115 OPX
		
Layer 1 Switch Ports	48 x SFP+ for 48 x 10GbE ports 4 x QSFP+ for 4 x dedicated 40GbE ports	40 x SFP+ for 40 x 10GbE ports 8 x QSFP+ for 8 x 40GbE ports (or 32 x 10GbE ports)
Management Ports	1 x RJ-45 serial console 1 x RJ-45 100/1000Base-T management	1 x RJ-45 serial console 1 x RJ-45 100/1000Base-T management
Power	2 Redundant. load-sharing, hot swappable AC Power Supplies Input Voltage: 100-240 VAC at 50-60 Hz Power Draw: 230W	2 Redundant. load-sharing, hot swappable AC Power Supplies Input Voltage: 100-240 VAC at 50-60 Hz Power Draw: 460W
Silicon	Switch Silicon: Broadcom Trident+ 1.28 Tbps. CPU Module: P2020	Switch Silicon: Broadcom Trident2, 1.44 Tbps. CPU Module: P2020
Dimensions	438.15 x 476.25 x 44.45 mm (17.25 x 18.75 x 1.75 inches)	439.4 x 406.4 x 43.94 mm (17.3 x 16.00 x 1.73 inches)
Weight	7.68kg (16.94 pounds)	8kg (17.63 pounds)
Operating Temperature	10°C, to 50°C, (50°F to 122°F)	0°C, to 45°C, (32°F to 116°F)
Operating Humidity	80% maximum relative humidity	95% maximum relative humidity
Regulatory and Certifications	Emissions: FCC, CE, VCCI-a, CCC, KCC, BSMI Safety: UL, CE RoHS: Yes	Emissions: FCC, CE, VCCI, CCC, KCC, BSMI Safety: UL, CE RoHS: Yes

	AP-4120 OPX	AP-4130 OPX
		
Layer 1 Switch Ports	24 x QSFP+ for 96 x dedicated 10 GbE ports 8 x QSFP+ for 8 x dedicated 40 GbE ports	32 x QSFP+ for 32 x dedicated 40GbE ports
Management Ports	1 x RJ-45 serial console 1 x RJ-45 100/1000Base-T management	1 x RJ-45 serial console 1 x RJ-45 100/1000Base-T management
Power	2 Redundant, load-sharing, hot swappable AC Power Supplies Input Voltage: 100-240 VAC at 50-60 Hz Power Draw: 460W	2 Redundant, load-sharing, hot swappable AC Power Supplies Input Voltage: 100-240 VAC at 50-60 Hz Power Draw: 460W
Silicon	Switch Silicon: Broadcom Trident2, 2.56 Tbps. CPU Module: P2020	Switch Silicon: Broadcom Trident2, 2.56 Tbps. CPU Module: P2020
Dimensions	439.4 x 406.4 x 43.94 mm (17.3 x 16.00 x 1.73 inches)	439.4 x 406.4 x 43.94 mm (17.3 x 16.00 x 1.73 inches)
Weight	8kg (17.63 pounds)	8kg (17.63 pounds)
Operating Temperature	0°C, to 45°C, (32°F to 116°F)	0°C, to 45°C, (32°F to 116°F)
Operating Humidity	95% maximum relative humidity	95% maximum relative humidity
Regulatory and Certifications	Emissions: FCC, CE, VCCI, CCC, KCC, BSMI Safety: UL, CE RoHS: Yes	Emissions: FCC, CE, VCCI, CCC, KCC, BSMI Safety: UL, CE RoHS: Yes

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Breakouts and Accessories

Fiber Mountain also supplies:

- Fiber Port Aggregation and Breakout panels with Intelligent Connection Identification (ICID) and per-port LEDs.
- Ultra high quality fiber optic cabling, available in single mode and multimode; plenum, riser, LSZH
- Optical transceivers to meet the requirements of any application

About Fiber Mountain:

Glass Core represents a new way of thinking about data center infrastructure. With integrated software and hardware innovations, Glass Core infrastructure enables intelligent Layer 1 SDN switching with high-density optical connectivity for a software-controlled physical layer and unprecedented network speed and agility.

Services: Fiber Mountain provides a variety of value added services from hands-on training, to 24x7 technical support. Contact Fiber Mountain for a schedule of available services.

Warranty: Return to factory hardware repair or replacement for one year.
Fiber Mountain embedded software warranty: 90 days.