

# POLATIS® all-optical switches for intelligence and cybersecurity systems

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# Challenges for network monitoring and cybersurveillance

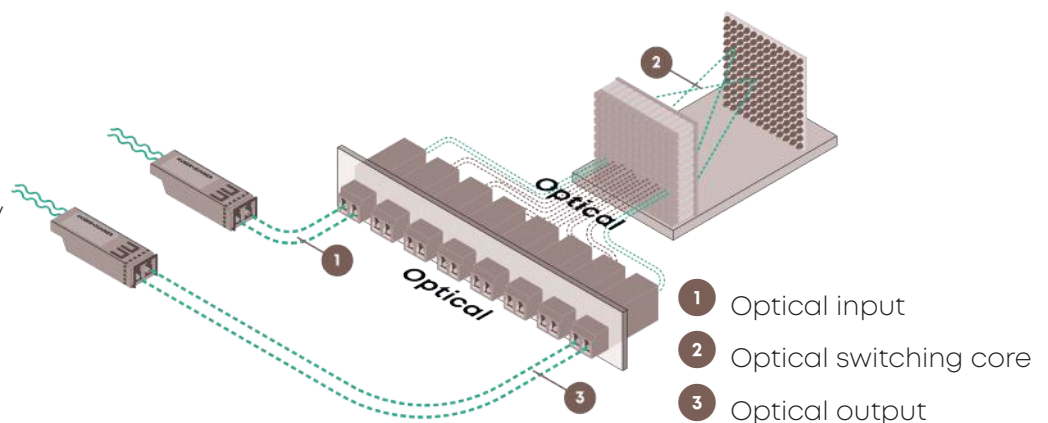
- The ever-increasing size of networks
- The wide range of wavelengths, signal formats and data rates on networks
- The need to cost effectively filter and down select massive data streams to feed expensive analysis tools
- Connecting very low power and intermittent signals
- The need to control signal powers to prevent damage to sensitive receivers
- Signal mirroring to support multiple analysis systems simultaneously
- Reliability to support mission-critical applications
- Remote unmanned deployments
- Customized configurations of hardware required for unique deployments

## Solutions with HUBER+SUHNER POLATIS all-optical switches

The POLATIS DirectLight® all-optical switching technology steers light from an input fiber port directly to an output fiber port without intermediate conversion to an electrical signal. All data traffic on the fiber is switched so it functions as a circuit switch, not a routing switch. The switch is software controlled with interfaces ranging from low-level protocols such as TLI or SCPI, to Software Defined Network interfaces such as RESTCONF and NETCONF.

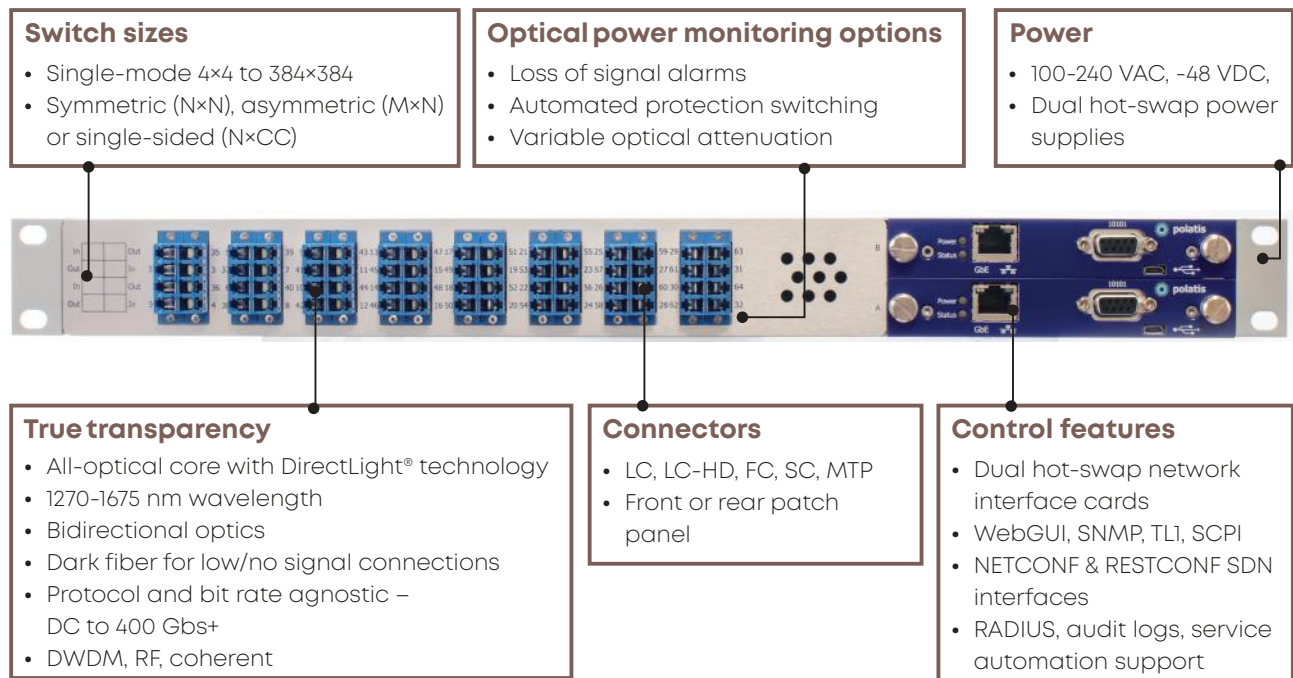
Clear advantages include:

- High-density switch matrices occupy very little rack space.
- Superior optical performance – very low insertion loss, very low latency through the switch, very fast switching speeds, bi-directional operation
- Future proof – operates independent of bit rate and protocol to meet evolving standards
- Ability to set and hold dark fiber connections—pre-provision pathways for future use, compatible with ultra-low and intermittent signal levels.
- High reliability leading to high availability - dual-redundant, hot-swappable network interface cards and power supplies, robust design



HUBER+SUHNER also offers compact POLATIS optical switch modules which can be integrated into host systems that provide power and communications interfaces.

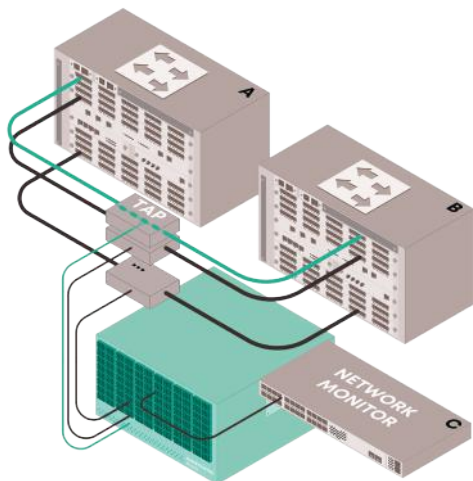
# Anatomy of a POLATIS all-optical switch



## Network monitoring and mass cybersurveillance

Allows for the automation of network monitoring systems by connecting thousands of network fiber taps to a smaller suite of expensive analytical equipment and cybersecurity software for cost-effective, large-scale network monitoring.

- Monitor and identify the types of traffic being carried on the network
- Detect traffic that should not be present on networks to identify and shut down cyber threats.
- Dynamically and cost-effectively connect signal sources to signal analysers for dynamic target-tasking in network monitoring systems, whether in mobile units, data centers or situation rooms



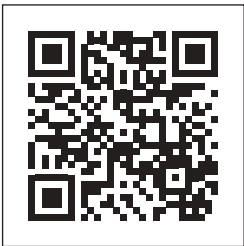
### Other applications include:

- Network simulation and cyber lab automation
- Routing RF signals over fiber for RF test labs and satellite ground stations
- Switching and/or monitoring of traffic in undersea cable landing stations
- Automating the physical-layer connections within and between data centers
- Optical test and measurement automation

# HUBER+SUHNER POLATIS at a glance

- 2000** POLATIS is founded in Cambridge, UK, to commercialise all-optical switching technology
- 2005** Expanded technology and product portfolio through the merger with Continuum of Boston, USA, to serve a wider range of applications
- 2016** Acquired by HUBER+SUHNER AG based in Switzerland with 150 years of excellence in connectivity solutions.
- 2020** Celebrating 20 years of serving the defense and security markets

For more information and to contact the HUBER+SUHNER sales and support teams around the globe, visit [www.hubersuhner.com](http://www.hubersuhner.com)



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