

Optical Networks for Cable Operators

"In a competitive market, telecom operators like us must invest in next-generation, service-oriented, cost-effective network infrastructure to accommodate increasing bandwidth demand and deliver a high-quality user experience."

Paul Hendriks, CTO of Ziggo

We Bring the Latest Innovations to Your Network

DOCSIS 3.0 is creating opportunities for cable operators to deliver increased bandwidth with enhanced security – and to efficiently offer voice, data and video services via a common coaxial cable medium. By adopting DOCSIS 3.0, cable operators are able to deliver up to 200Mbit/s broadband throughput to a single cable modem. The possibilities are exciting. They enable cable service providers to offer premium high-speed services that address the demands of multiple market segments, including residential subscribers and commercial customers. With the introduction of DOCSIS 3.0, however, many cable operators have to consolidate their clustered networks toward streamlined operations. This will include a dramatic reduction in the number of content hubs hosting video servers, satellite broadcast receivers and Internet peering points.

Our Solution – a Flexible Ethernet Service-Delivery Engine

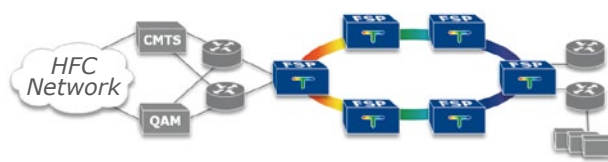
With continued bandwidth growth expected in coming years, network migration can only be supported by building new networks based on scalable optical transport technology that offers simplicity, scalability and disruptive cost-per-bit metrics. Our scalable optical transport solution, the FSP 3000, offers you a flexible, resilient optical layer with integrated sub-wavelength aggregation functionality for Ethernet client signals and other legacy protocols.

Efficient and reliable backhaul of broadband traffic from new CMTS locations is best supported by driving fiber deeper into the access network and by the adoption of Ethernet-centric optical technology. Our FSP 3000 enables you to deploy an efficient backhaul infrastructure for relocating CMTS sites closer to your customers. It is the ideal solution for increasing the available capacity throughout your network. The FSP 3000 provides a single platform for your access, metro and core network infrastructure, introducing common operational processes, spares and network management.

Our implementation of a flexible optical layer in combination with the latest multi-degree ROADM

technology maximizes the efficiency of your network and enables in-service network extension. Controlled by a multi-layer GMPLS control plane, the provisioning and management of end-to-end wavelength and sub-wavelength services becomes simpler and can be performed at the lowest possible operational costs.

An integrated Raman-amplification capability enables cost-efficient transport over single-span distances up to 200km and eliminates the need for mid-span amplification sites. It constitutes the basis for a new architectural approach to CMTS transport, resulting in the highest-quality services while reducing the cost and complexity of service delivery.



CMTS Backhaul Network

Key Benefits – a Cost-Effective Backhaul Architecture

Recognizing a continuously increasing demand for bandwidth, cable network operators are seeking scalable and energy-efficient ways to optimize their second-mile backhaul networks. Our FSP 3000 brings new levels of simplicity, flexibility, security and performance to the delivery of broadband services. It enables cable network operators to deploy scalable and transparent CMTS backhaul networks that meet the requirements of tomorrow. The combination of our FSP 3000 and the FSP Service Manager offers:

- **Seamless networking**
Single platform for access, metro and core networks that feature for common operational processes, spares and network management
- **Service and reach scalability**
Multi-haul capability supporting more than 80 wavelengths, with 100Gbit/s capacity per wavelength
- **Flexible capacity**
Service aggregation onto 4Gbit/s and 10Gbit/s add/drop wavelengths for scalability and optimal network resource utilization
- **Agile networking**
Colorless, directionless and contentionless multi-degree ROADMs functionality, with multi-layer GMPLS control plane for agile mesh networking
- **Energy and cost efficiency**
Low energy consumption and space-efficient integrated system design plus single- and dual-fiber working capability
- **Operational simplicity**
Service-based network operations for end-to-end service provisioning and service management across the entire network

FSP 3000

ADVA Optical Networking's scalable optical transport solution is a modular WDM system specifically designed to maximize the bandwidth and service flexibility of access, metro and core networks. The unique optical layer design supports WDM-PON, CWDM and DWDM technology, including 100Gbit/s line speeds with colorless, directionless and contentionless ROADMs. RAYcontrol™, our integrated, industry-leading multi-layer GMPLS control plane, guarantees operational simplicity, even in complex meshed-network topologies. Thanks to OTN, Ethernet and low-latency aggregation, the FSP 3000 represents a highly versatile and cost-effective solution for packet optical transport.



About ADVA Optical Networking

ADVA Optical Networking is a global provider of intelligent telecommunications infrastructure solutions. With software-automated Optical+Ethernet transmission technology, the Company builds the foundation for high-speed, next-generation networks. The Company's FSP product family adds scalability and intelligence to customers' networks while removing complexity and cost. Thanks to reliable performance for more than 15 years, the Company has become a trusted partner for more than 250 carriers and 10,000 enterprises across the globe.

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