

# Ultra Low-Latency Optical Networks

"A 1-millisecond advantage in trading applications can be worth \$100 million a year to a major brokerage firm, ..."

Richard Martin, Information Week

#### Innovation for Run-Time Sensitive Applications

In today's high-frequency trading environment, fractions of a second make all the difference. As technology advances, faster networks drive revenues. Decreasing latency by reducing time in the transport network takes advantage of the significant differences that exist in optical networks today. It is no longer sufficient to employ smart people and fast computers running great software. The transport network with the fastest equipment and the shortest fiber distance also makes a significant impact. Successful time-sensitive applications require lowest-latency data transmission – something only achieved through dedicated fiber-optic networks with the fastest electronics. But not all fiber-based networks yield the same performance. It is a combination of the shortest route and the optimal transmission equipment that makes the difference.

### Our Solution – the Fastest System on the Market

Our scalable optical transport solution, the FSP 3000, is designed to achieve the lowest-latency transmission possible to respond to the demanding requirements driven by time-sensitive applications. Traditional data transport options use technologies that introduce additional latency, such as forward error correction and dispersion compensating fiber, to compensate for fiber irregularities.

In our FSP 3000, however, every component from transmitter to receiver is optimized for speed. Whether connecting to an information feed over Ethernet, interconnecting HPC clusters with InfiniBand or accessing storage networks using Fibre Channel, the ADVA FSP 3000 allows the transport of any protocol, over any distance, with best-in-class latency, coupled with the added confidence that only in-service fiber profiling brings.

Our FSP 3000 allows you to expand your network to up to 120 transmission channels. In addition, to give you the capability to react to traffic storms, we have a scalable network option that provides you with the ability to provision additional 1Gbit/s or 10Gbit/s channels faster than anyone in the market.

For managing your low-latency network, you have the option to run our FSP Service Manager, keeping you up-to-date on network status at all times. It is built on an intuitive graphical user interface that provides service provisioning and management across your entire network. With only a few clicks of the mouse, new services can be online, eliminating the need to drill down to configure individual elements. Whether commissioning, delivering, servicing or troubleshooting – our ADVA FSP Service Manager enables you to manage your services and not your network elements.



## Key Benefits – Lowest-Latency Optical Transmission

ADVA Optical Networking has a long history of helping the enterprise community achieve its business objectives. We are at the forefront of providing innovative transport solutions for dedicated high-performance networks, and we support you with best-in-breed technology and application know-how. Our FSP 3000 ultra low-latency solution provides you with the following advantages:

#### • Maximum performance

Lowest-possible-latency optical transmission, providing you with the fastest connectivity available on the market

#### • Highest service availability

Revolutionary approach to equipment, monitoring and support that provides our customers with the highest levels of reliability

#### • Ultra-fast scalability

Scalable network option, allowing reactions to traffic storms and the addition of new circuits faster than anyone on the market

#### • Simplified operations

Service-based network operations for end-to-end service provisioning and service management across the entire network

#### Continued innovation

Continuous functional enhancements to the latency characteristics of our equipment, allowing your systems to steadily improve

#### Trusted partnership

Our roots in enterprise connectivity, our dedication to the space and our dedicated laboratory allow us to be the perfect partner

## 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<sup>™</sup>, 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.



ADVA Optical Networking North America, Inc. 5755 Peachtree Industrial Blvd. Norcross, Georgia 30092 USA ADVA Optical Networking SE Campus Martinsried Fraunhoferstrasse 9a 82152 Martinsried/Munich Germany ADVA Optical Networking Singapore Pte. Ltd. 25 International Business Park #05-106 German Centre Singapore 609916



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