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LambdaXtreme™ Transport for Service Providers

Description

The **LambdaXtreme™ Transport** is a next-generation 10Gbps/40Gbps core DWDM system that offers cost-effective long-haul, ultra long-haul, or ultra high-capacity transport on one common platform -- slashing equipment and operational costs.

The *LambdaXtreme* Transport system uses innovative Bell Labs technology to yield one of the industry's lowest cost-per-managed bit rates yet achieved by a DWDM system in its class.



Unlike dual-band transmission systems, the *LambdaXtreme* Transport system uses UltraBand (single wideband) transmission to enable footprint and power consumption efficiencies. It carries up to 2.56 Terabits per second at 40G wavelengths as far as 1,000km (625mi) — and 1.28Tbps at 10G wavelengths for 4,000km (2,500mi) — on a common platform without the cost of electrical regenerator sites. This can reduce your capital expenses and operation costs.

The ultra long-haul capabilities of the *LambdaXtreme* Transport product, combined with its high capacity, mesh-ready Reconfigurable Optical Add/Drop Multiplexing (ROADM) feature, can help reduce your transport costs. Remotely software-configurable high-capacity OADM's that are mesh-ready can be deployed at intermediate sites to flexibly add/drop wavelengths or remove otherwise needed transponders for through traffic. The *LambdaXtreme* Transport system is fully software controlled, allowing for single-step provisioning of a new wavelength in minutes, compared to upwards of several hundred separate steps for systems now in use.

For more information on our related products and solutions, please follow the links under Complementary Solutions.

Value description

The *LambdaXtreme* Transport is a next-generation optical core transport product that can help improve your bottom-line without trade-offs — it offers greater transmission performance at a dramatically lower cost-per-managed-bit.

With the *LambdaXtreme* Transport, you can:

- Move up to next-generation 40G technology at less than the cost of four of today's standard 10G wavelength systems
- Reduce your costs with a single transmission platform and common components for both 10Gbps and 40Gbps transport over legacy and new fiber
- Increase your transmission to long-haul and ultra long-haul network distances on a single system without expensive regenerators
- Offer new revenue-generating services with low-cost, flexible high-capacity add-drop capabilities in your network
- Remotely provision new capacity or upgrade transmission speeds easily — without additional truck-rolls
- Enhance revenues with expanded service offerings, point-and-click provisioning, automatic power balancing and gain control, and advanced fault detection and network management
- Reduce costs through compatible optics integration with the LambdaUnite® MultiService Switch (MSS) to support grooming and protection for client signals from DS-3 to 40Gbps, including GbE
- Support additional revenue opportunities for managed bandwidth services and optical mesh protection via seamless integration with the LambdaUnite MSS

Features

One Platform for All Core Transport Applications

- 128 x 10Gbps wavelengths (1.28Tbps) up to 4000km
- 64 x 40Gbps wavelengths (2.56Tbps) up to 1000km
- Multiplexing transponders with 4x2.5Gbps and 4x10Gbps client interfaces
- Industry standard Very Short Reach (VSR), Short Reach (SR) and Intermediate Reach (IR) interfaces
- Flexible high capacity, mesh-ready ROADM

Lucent Technologies
 Bell Labs Innovations


Tips

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Complementary solutions

[LambdaUnite® MultiService Switch \(MSS\) for Service Providers](#)
[Metropolis® DMX Access Multiplexer for Service Providers](#)
[Navis® Optical Element Management System \(EMS\) for Service Providers](#)
[Navis® Optical Network Management System \(NMS\) for Service Providers](#)
[WaveStar® OLS 1.6T for Service Providers](#)

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- Cost optimization through application-specific optical transponders (wavelength cards)

Low-Cost High-Speed Modular Growth

- Cost-effective in-service scalability from minimum (1) to maximum (128) channel count without additional truck-rolls
- Automatic power balancing and gain control
- Single-step provisioning of new wavelengths in minutes
- Ultra high-density footprint and low power consumption

Cost-Cutting, Advanced Technologies

- Raman amplification
- Dispersion managed soliton transmission
- Integrated chromatic dispersion compensation
- Ultra forward error correction (UFEC)
- 100-wavelength tunable transponders reduce sparing and simplify inventory management
- Compatible optics with the *LambdaUnite* MSS to eliminate transponders

Enabled Service Offerings

- Fully transparent 2.5Gbps, 10Gbps, 40Gbps wavelength services
- High-speed data applications, such as express IP overlay networks

Advanced Network Operations Capabilities

- Robust OAM&P capabilities, including fast boot time
- TL1 interface to EMS over TCP/IP
- High-capacity (OC-3) communication channel for system maintenance and performance monitoring
- Automatic fault detection, isolation, alarm and recovery
- Automatic provisioning of circuit packs, slots and new wavelengths
- Software-based control of transmission for dynamic control of channel power and gain
- Automatic power control eliminates additional line build-out attenuators for client signals
- Automatic power reduction to comply with laser safety standards

LambdaXtreme Transport, along with many Lucent optical products, is managed by the Lucent Navis® Optical Element Management System, Optical Management System, and Optical Network Management System.

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