

# Optical Network Architecture and Design Services

Leverage Tellabs experience and expertise to plan for optimal network performance and maximum ROI at all stages of your network lifecycle.

## Overview

The optical infrastructure represents a major part of the capital expense of a service provider network. Ensuring that the infrastructure plan is designed to be cost-effective, robust and flexible in meeting future needs is critical to achieving optimal return on investment.

The expert Tellabs architecture and design team will help you meet these objectives. Our approach uses proven tools and methodologies that are founded on extensive technical expertise and significant real-world deployment experience. By partnering with Tellabs, you are able to plan for optimal network performance at all stages of your network lifecycle from pre-deployment and new service introduction to ongoing expansion and operation.

## Tellabs Optical Architecture and Design Services Portfolio

### Network Architecture Service

- Network topology, traffic and capacity patterns
- Network implementation outline
- Outline of the business and operational implications
- Management reporting packages

### Network Design Service

- System commissioning data
- Detailed equipment lists and naming conventions
- System installation requirements
- System integration requirements

### Achieve Your Objectives

Leverage Tellabs experience to efficiently and effectively plan your optical solution. Our team of experts will help to ensure that your objectives are achieved:

- *Minimize cost of ownership* — Maximize returns with minimal investments
- *Accelerate time-to-market* — Bypass the learning curve and speed up your ability to generate revenue
- *Sustain competitive advantage* — Ensure a cost-effective foundation for daily operations that delivers superior performance and intelligent growth



Tellabs has significant, real-world experience in delivering DWDM lifecycle solutions from planning and deployment to ongoing operation.

## Network Architecture

DWDM technology is significantly different from traditional SONET networks and involves greater consideration of node and repeater location and traffic demands. Therefore, the network architecture phase of your deployment requires an experienced, holistic approach to the high-level design of your network. The design of optical/DWDM core network transport systems must be approached in a forward-thinking way to produce an architecture that will accommodate current demands and scale to support future growth.

The Tellabs network architecture team combines theoretical design knowledge with practical implementation experience to provide a high-level network design and physical implementation plan for your network. Leveraging our experience in optical transport network design, Tellabs works interactively with your team to create an effective network design and recommend industry best practices to support a secure, scalable, reliable and resilient network infrastructure.

Experienced senior consulting engineers perform an analysis and assessment of network status to identify system performance, security and application requirements, as well as Key Performance Indicators (KPI) and other elements necessary to build a solid foundation for the network implementation.

Tellabs Architecture Services approach includes:

- Design activities including bandwidth modeling, capacity planning, lambda analysis, scalability and redundancy assessments
- Clear and comprehensive picture of network topology and traffic and capacity patterns
- Review of network components and placement and configuration for optimal load distribution and traffic management
- Best practice checklist to integrate technical and business requirements into the high-level design
- Business and operational implications of the proposed design, such as visibility of circuit alarming, impact to existing KPIs, etc.
- Network implementation outline, including critical steps, anticipated impact to existing networks and integration recommendations
- Management reporting packages
- Network architecture plan development and presentation
- Network management and multi-vendor integration considerations

Tellabs Network Architecture Services are focused on directly impacting your bottom line:

- *Accelerate time-to-market* — With extensive knowledge of Tellabs and other vendor equipment, the Tellabs optical network architecture team has the experience and expertise necessary to quickly and effectively transform your vision into a reality
- *Maximize resource utilization* — Tellabs experts will develop an architecture that will help ensure optimal use and management of your network resources
- *Improve return on investment* — Optimized network architectures combined with expert engineering supports faster deployments that can help maximize profits from investments



Tellabs combines theoretical design knowledge with practical implementation experience to ensure a secure, scalable, reliable and resilient network.

## Network Design

The experienced Tellabs engineering staff, combined with world class tools and processes, offers end-to-end design expertise and helps to eliminate costly errors and redesigns. Utilizing the high-level design produced in the Network Architecture Service, Tellabs senior engineers develop a complete, implementation-ready engineering design package documenting the configuration parameters for Tellabs equipment at specific sites.

By partnering with Tellabs for your detailed network design, you are able to take advantage of our expert resources and produce a comprehensive design solution that achieves your objectives while utilizing knowledge from past implementations and industry best practices.

The Engineering Design Package includes:

- Detailed fiber maps
- Detailed ring diagrams
- Fiber characterization reports
- Optical power budgets
- Equipment elevations
- Naming conventions (site names, node names, circuit IDs)
- IP addressing for network management applications
- System installation requirements
- System integration requirements
- Transponder placement and configuration data
- Wavelength cross-connect and configuration data
- L2 or L3 traffic parameters
- Detailed Network Management System (NMS) information
- Progress reports and project documentation

As part of the Network Design service, Tellabs will provide support for any detailed design questions during the network deployment phase, as well as act as a subject matter expert resource for the Tellabs DWDM network elements.

Tellabs Network Design Services are focused on directly impacting your bottom line:

- *Improve Quality of Service (QoS)* — Help you meet Service Level Agreements (SLAs), achieve high performance levels with a well-configured network design and take full advantage of Tellabs equipment features
- *Reduce implementation costs* — Free up resources, reduce cost of maintaining in-house expertise and eliminate the need to hire expertise in multiple protocols and vendor equipment
- *Simplify ongoing operation* — Provide your operations team with the detailed documentation and tools they need to manage site-level configurations quickly and efficiently

## Ordering and Availability

Optical Network Architecture and Design Services can be customized to your specific requirements and are available to all carriers across the globe. For further information on these services, please consult your local Tellabs account manager or regional sales office.

## Making Your Vision a Reality

There is no doubt that DWDM technology will enable new and exciting services that bring significant opportunities for revenue generation. However, deployment of this next evolution requires major investments from service operators who are already under intense pressures to reduce operating expenses and improve service quality.

The Tellabs optical architecture and design team will help to ensure that your infrastructure plan is designed to be cost-effective, robust and flexible in meeting future needs — keeping you at the cutting edge of performance and reliability while minimizing costs. Our proven track record of building carrier-class networks and superior customer focus is the first step to ensuring that your vision becomes reality.

## Tellabs Global Services — The Right Partner, The Right Solutions

As you continue to strive to meet your customers' bandwidth demands and optimize your existing transport network, turn to Tellabs when you need a partner with proven experience and expertise. Our industry leading Tellabs® 7100 Optical Transport System coupled with our Optical Networking Services provide you with the latest transport networking technology and service experience necessary to create a next generation optical transport network that is scalable and resilient.

## About Tellabs

Tellabs helps customers succeed through innovation. That's why 41 of the top 50 global telecom service providers chose our mobile backhaul, optical networking and business services solutions. We help telecom service providers, independent operating companies, MSO/cable TV companies, enterprises and government agencies get ahead by adding revenue, reducing expenses and optimizing networks. With wireless and wireline networks in more than 90 countries, we enrich people's lives by innovating the way the world connects. Tellabs (Nasdaq: TLAB) is part of the NASDAQ Global Select Market, Ocean Tomo 300™ Patent Index, the S&P 500 and several corporate responsibility indexes, including FTSE4Good and eight KLD indexes.

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