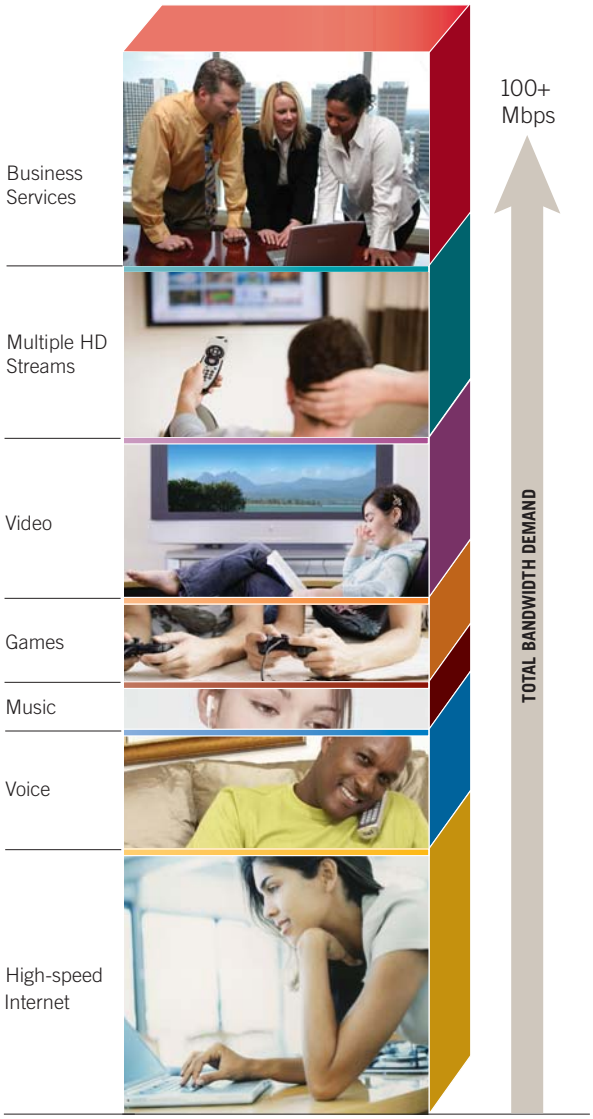
PRODUCT OVERVIEW

Tellabs® Converged Transport

Tellabs® 7100 Optical Transport System
Tellabs® 7100 Nano Optical Transport System

Is Your Transport Network Ready for High-bandwidth Video?

The explosion in popularity of triple-play services — particularly video — has spurred a rapid rise in demand for both more bandwidth and higher Quality of Service (QoS). With competitors from both within and outside the traditional service provider arena providing ever more sophisticated voice, video and data services, the battle for customers will likely shape the future of the telecommunications industry.



Challenges of Today's Transport Network

Today's transport networks may confront a number of hurdles when faced with this order of magnitude increase in capacity:

- Wavelength activation can be complex, expensive and too slow
- Performing unnecessary Optical-Electrical-Optical (OEO) conversions at each office in the network is uneconomical
- Service providers are paying for additional optics, common equipment, floor space and power when the job could be done — much more cost-effectively — with less
- The current trend of applying additional elements per service, creating overlay netowrks, increases capital costs, magnifies operational complexity and delays new service turn-up schedules

Converged Transport: A Solution That Reduces Costs & Maximizes Bandwidth

Scaling the transport network to cost-effectively support next-generation services drives the need to integrate typically stand-alone technologies such as Multiservice Provisioning Platform (MSPP), next-generation Add/Drop Multiplexers (ADM), Ethernet switching, Optical Cross-Connect (OXC) traffic grooming and Reconfigurable Optical ADM (ROADM) into a converged platform.

The use of ROADMs in the network eliminates the need for unnecessary electronics at all service add/drop sites throughout the network. The addition of multi-degree capability results in large capital and footprint cost savings at traditional hub offices where traffic is routed to all parts of the network. New services can be added with no transponders or truck rolls at the intermediate nodes, reducing incremental Capital Expenditure (CapEx) and Operating Expenditure (OpEx) while speeding service deployment time.

Residential triple play, business Ethernet and mobile broadband services will each demand an order of magnitude increase in bandwidth over the next several years. In order to respond to this demand transport networks need to be able to support Ethernet in its native format, without being burdened by additional overhead associated with legacy transport options. At the same time, the solution needs to protect a service provider's current network investment while transitioning to a pure Ethernet-based delivery method. By integrating these technologies into a single platform, service providers stand to benefit from a significant reduction in both CapEx and Opex as bandwidth scales to multiple 10 Gbps and 40 Gbps wavelengths.

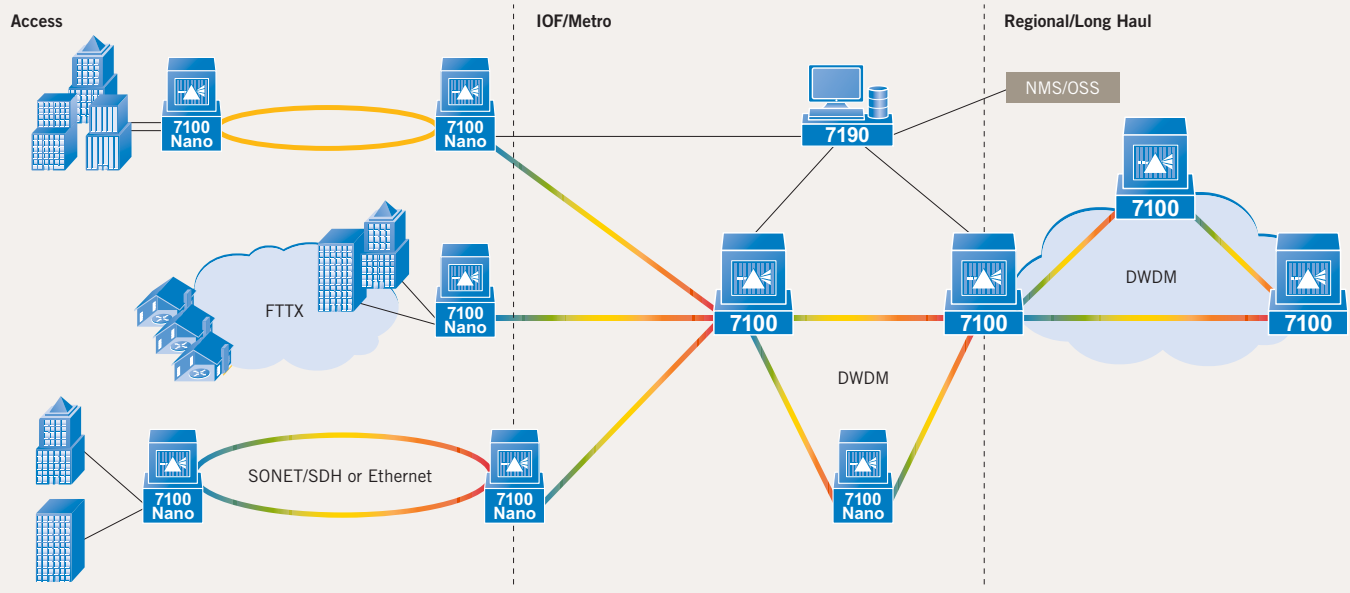
Tellabs Converged Transport

The Tellabs® 7100 Optical Transport System (OTS) incorporates the most advanced optical networking and services layer technologies available onto one seamless platform. The result is a transport product that appeals to service providers around the globe, supporting traditional SONET and SDH service delivery options while providing a seamless path to future Ethernet transport networks.

Offering unique system technologies that support true network convergence, the Tellabs 7100® OTS features an integrated dynamic optical core that supports 44 wavelengths at 10 Gbps data rates and is 40 Gbps-ready. Because Tellabs understands the needs of our customers, we are currently investing in the development of 100+ Gbps transmission for future network needs, as well as many other enhancements designed to address the traffic and operational needs of service provider networks.

The Tellabs 7100 OTS uses intelligent services modules that deliver MSPP capability, Ethernet switching and OXC capabilities. The Tellabs 7100 OTS enables service providers to meet today's bandwidth needs while supporting the ability to effortlessly deploy additional nodes for future expansion via a multi-degree ROADM. In addition, the control plane is based on Automatic Switched Optical Network/Generalized Multiprotocol Label Switching (ASON/GMPLS), providing accurate network resource inventory rather than information based on secondhand data stored externally from the network. This approach results in real time accuracy of network resources and speeds up the delivery of services across multiple network elements, increasing network reliability and the number of tolerated failures.

Tellabs® Converged Transport
One Platform — Multiple Applications



A Brilliant Discovery:

Tellabs® 7100 Nano Optical Transport System

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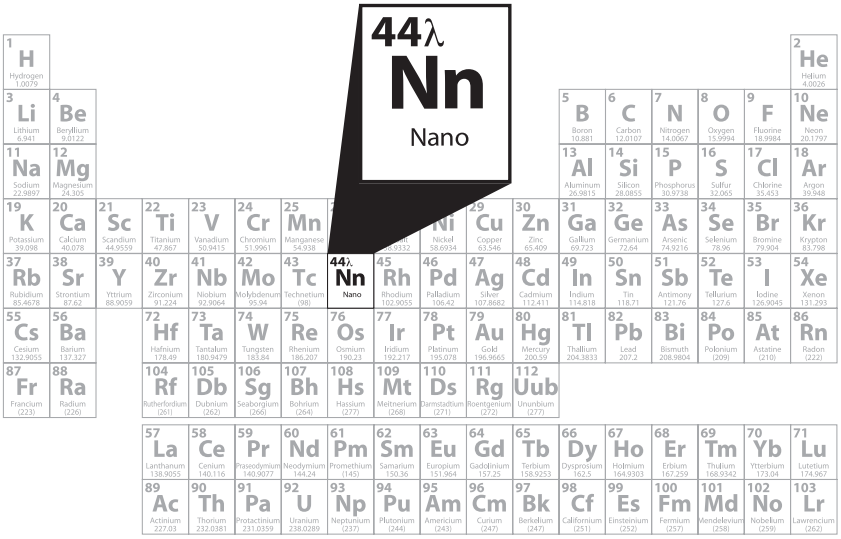
Tellabs® 7100
Nano OTS



Tellabs has developed an innovative new version of the flagship Tellabs 7100 OTS that offers even more flexibility, efficiency and cost-effectiveness. The Tellabs® 7100 Nano Optical Transport System (OTS) provides critical ROADM features available with the Tellabs 7100 OTS — with the size, density, low power requirements and capabilities that make it an ideal solution at the network edge.

Like the Tellabs 7100 OTS, the Tellabs® 7100 Nano OTS supports 44 wavelengths. The Tellabs 7100 Nano OTS can add or drop up to eight wavelengths, with expansion capabilities to support additional wavelengths in the future. Using the same service delivery modules as the Tellabs 7100 OTS, wavelengths added or dropped from the Tellabs 7100 Nano OTS can be of any color, meaning that each drop and add port is not permanently dedicated and can be re-allocated quickly via software provisioning.

The Tellabs 7100 Nano OTS is a self-sufficient, standalone system designed for quick and easy installation. Like the Tellabs 7100 OTS, it supports 10 Gbps and is 40 Gbps-ready, enabling a four-fold bandwidth increase in capacity with minimal capital and operational investment.

Decrease Your Total Cost of Ownership (TCO) for Greater Profit Margins

By deploying the Tellabs Converged Transport products, service providers can deliver competitive next-generation services quickly and cost-effectively in a way that makes the most sense for their customers, their network and their bottom line. With ROADM network elements, transponders that tune across 44 different wavelengths, native Ethernet switching and an intelligent transport control plane, the Tellabs Converged Transport product family offers a service provider significantly lower network ownership costs while protecting TDM investment as they migrate to a pure packet network.

CapEx/OpEx Savings

- Integrated SONET/SDH and Ethernet switching and grooming eliminates the need for multiple limited functionality network elements platforms
- Pluggable optics, software programmable service ports and multi-degree Wavelength Selective Switch (WSS)-based ROADM modules stop unnecessary truck rolls
- "Pay as you grow" architecture — by adding network intelligence in a modular fashion
- Addresses the network inventory challenge and supports over 35 different client interface types, ranging from 16 Mbps–40 Gbps, in just four widely tunable service modules

Increased Network Flexibility and Service Delivery

- Multi-degree ROADM architecture gives service providers the ability to provision lightpaths where needed to deliver services and easily respond to unexpected demand in the network
- New services can be added with a simple "point and click" through the Tellabs® 7194 Network Management System (NMS)
- Topology agnostic architecture simultaneously supports linear, ring or mesh networks across the Tellabs Converged Transport product family
- Network design and future additions of new services are easily planned and implemented using the Tellabs® 7196 Optical Subnet Planner tool

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