

# Deliver Multi-gigabit Speed to the Enterprise Today, and to the Networked Home of Tomorrow

Tellabs® Optical LAN cuts costs, space and energy use to enhance profitability.

Increasing consumer demand for ever-faster internet access to countless wired and wireless devices in the home — coupled with growing business globalization and tele-working trends — is exponentially increasing network bandwidth requirements. For MSOs this means that, in many cases, an optical connection will serve the networked home of the future. This is the same technology many MSOs are deploying to their enterprise and government customers today.

The Tellabs® Optical LAN application leverages your existing network infrastructure to maximize revenue and minimize capital upgrade costs. The feature-rich Tellabs application is a Layer-2 transport medium built with PON technology. It converges video, data and voice services at multi-gigabit speeds to end-users over a single strand of fiber. By converging the traffic from business and residential home-office customers on the same network, the Tellabs application maximizes your ability to cost-effectively deliver broadband services.

Focused on deep fiber service delivery, Tellabs Optical LAN features an IP/Ethernet architecture that supports:

- Multi-gigabit speed Internet access
- Digital video services, including HDTV, 3D-TV, IPTV, VOD and RF video
- Digital phone via SIP-based Voice-over-IP
- Broad support for business data services (transparent LAN services)
- Low-latency for real-time services (e-trading) and cloud-based applications
- High-bandwidth managed services like video conferencing

Tellabs Optical LAN offers a range of deployment options that promote a multi-tiered service rollout based on market conditions, geography, budget cycles and the pace of localized residential/commercial development. With the capability to deploy virtually any service, you can respond quickly to new customer requests and create a competitive differentiation.

Diving deeper into the system architecture, the Optical Line Terminal (OLT) is centrally located within a large building for business customers or Multi-dwelling Units (MDUs) — or at a network hub location to serve business and residential customers. The OLT aggregates traffic to and from small workgroup Optical Network Terminals (ONTs) located in the end-user environment.



Tellabs Optical LAN delivers 2.5 Gbps to the business or home office.

## Tellabs Optical LAN for business customers and home office locations

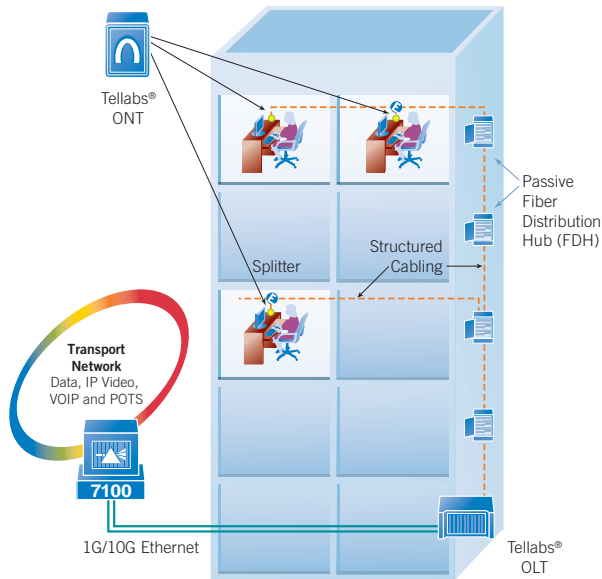
Tellabs offers an enterprise platform to specifically address business customer requirements. The platform provides investment protection through convergence of services and an all-fiber infrastructure that does not change as technology evolves. It integrates the delivery of high-speed data, analog voice, Voice-over-IP (VoIP) and both RF and IP video services — over a single fiber infrastructure — directly to the desktop or communication closet.

MSO service delivery is ensured by an advanced Quality of Service (QoS) architecture. Distributed Ethernet bridging enables local switching without traversing the core/edge data network. Powerful VLAN methodologies enable the provisioning of VLAN groups to provide trunking, termination and translation capabilities. Service segregation and service-aware QoS support granular SLAs with guaranteed delivery of multiple services on each end-user interface.

With a robust redundancy and resiliency architecture, including rapid spanning tree protocol, Tellabs Optical LAN offers a true carrier-class enterprise LAN solution.

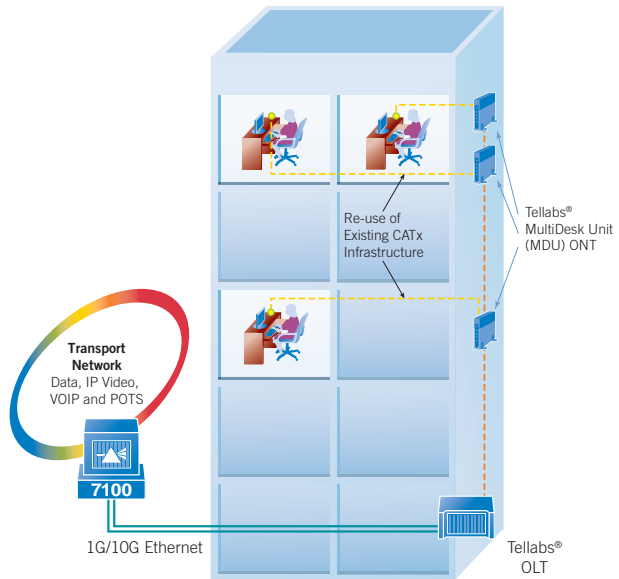
## Cost savings with Tellabs Optical LAN

So how does an optical LAN solution compare with the active-Ethernet LAN architecture? Cost is one differential. In one Fiber-to-the-Desktop (FTTD) LAN serving 2K users, the capital expenditure (CapEx) of building an active-Ethernet solution is in excess of \$1 million. By contrast, an optical LAN would save more than 70%.



### Fiber to the Desktop

- Fiber directly to the desktop
- Future-proof structured cabling
- Technology migration without impact to structured cabling
- 2.5 Gbps to office environment



### Fiber to the Communication Closet

- Fiber directly to communication closet
- Re-use of existing CATx infrastructure
- Technology migration without impact to structured cabling
- 2.5 Gbps to the communication closet

In terms of power usage, the optical LAN is up to 80% “greener.” In the 2K user example, active-Ethernet consumes over 10 watts per user, while an optical LAN consumes less than 2 watts. Based on DOE estimated 2009 rates, Tellabs Optical LAN would save this commercial customer \$72K annually.

Space-wise, a typical active-Ethernet LAN serving 2K users requires 90 rack units. Contrast that with a scenario in which a Tellabs Optical LAN serves up to 2K ONTs and 7,700 end-users, but requires only 9 rack units, a 90% savings of space.

Cable’s business customers not only save physical space, but also cut expense by eliminating unnecessary communications closets. And with up to 30kms of reach, Tellabs Optical LAN enables operators to reduce or eliminate repeaters and switches.

### The government and military as business customers

You can also increase revenues from your government and military customers with Tellabs Optical LAN. Like their civilian counterparts, government customers must stay up-to-date in terms of network speed, capacity and security. At the same time, they must achieve these objectives while trimming energy consumption 30% by 2015 (Executive Order 13423). Tellabs Optical LAN is the only JITC\*-certified optical LAN solution for the U.S. Federal Government.

For further information on Tellabs’ solutions for MSOs, please contact your regional Tellabs sales representative.

\*Joint Interoperability Test Command.

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