THE X-LUMIN TeraLink™ SYSTEM

The X-lumin TeraLink™ Optical Laser Communication Systems deliver 100Gbps to 4Tbps throughput for ultra-high bandwidth networks in urban, rural and enterprise environments with carrier-grade availability. The technology is ideal for mobile backhaul (4G/5G/6G), last mile access and ad-hoc mobile networks requiring low latency.

The X-lumin TeraLink™ Systems incorporate the latest optical and photonic technology, connects seamlessly to existing fiber networks and addresses both commercial and DoD needs in a cost-effective

The TeraLink™ Systems have a unique design which separates the optics from the network interface. The optics are mounted on a tower, building or other stationary location. The network interface module fits into a 19" rack mount stand-alone cabinet or may be incorporated into an existing cabinet with other network equipment. The TeraLink™ Systems are managed and controlled by the X-lumin Operating System (XOS).

FIELD UPGRADEABLE TO OVER 4 TBPS

Through the implementation of DWDM the TeraLink™ Systems are field upgradeable by adding additional channels to the network interface module. Each channel provides an additional 200Gbps of throughput which can be easily implemented as demand increases.

CARRIER CLASS CONSTRUCTION AND QUALITY OF SERVICE

High throughput and low latency combine to deliver fiber comparable performance. The TeraLink™ Systems are the first optical wireless system in the market to use artificial intelligence (AI) to improve quality of service (QoS). This includes mitigation of optical turbulence, increased link stability, the ability to predict future performance based on weather conditions and managing potential hardware failures in advance.
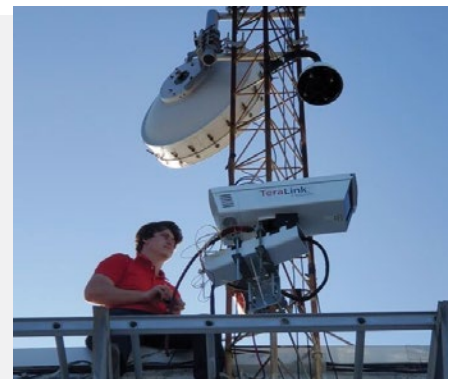
MULTI-GIGABIT PERFORMANCE OVER LONGER DISTANCES

Available in three standard models and the XLR custom version to address distances greater than 5.0Km. Multi-channel support available an an upgrade on all models.

TeraLink™ Models		
SR105	100Gbps, full duplex, single channel	Up to 5.0Km
SR205	200Gbps, full duplex, single channel	Up to 5.0Km
SR405	400Gbps, full duplex, single channel	Up to 5.0Km
XLR-Custom	800Gbps to 4Tbps, multi-channel	Distances >5.0Km

EASY TO DEPLOY AND MANAGE

TeraLink™ Systems can be deployed on a tower, a rooftop or indoors behind a window. The systems are generally installed in one day, without the need to acquire expensive spectrum and without requiring right-of- way or government permits to install. The systems are managed through the easy-to-use X-lumin Operating System (XOS) with a web interface that supports Windows, Linux, Mac, Android and IOS. XOS can be used in standalone mode or can be integrated with existing network management software using a standard SNMP interface. XOS also provides the ability to access system functionality via a web socket for integration with custom HTML5 interfaces.

EXCEPTIONAL VALUE

TeraLink™ Systems are scalable from 100Gpbs full duplex (200Gbps) to multi-Terabit allowing you to deploy what you need, when you need it. The TeraLink™ Systems are extremely rugged and designed to last for many years in the harshest environments anywhere in the world. The systems are optimized at price points that yield a quick Return-On-Investment (ROI) and minimizes the Total Cost of Ownership (TCO). The systems deliver an unbeatable price per Gigabit with a solid path to upgradeability. The small form factor allows for flexible installations at a lower cost with increased reliability and reduced site visits.

ABOUT X-LUMIN

X-lumin is on a quest to build an effective and efficient bridge between existing communications technology and the need for a high-speed data highway to meet exploding IoT demands. X-lumin brings over 25 years of experience in the design, development and integration of optical technology, laser systems, tracking and surveillance, atmospheric propagation, and video and image processing to our innovative and state-of-the-art solutions. While the early foundations of our products and solutions focused on universities and government agencies, our solutions today allow us to bring these cutting-edge solutions to the commercial marketplace creating new standards and solutions that have broader impact.

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OWC Specifications

Models

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Features

Datarate/Throughput	100 to 4Tbps Gbps full duplex (200+ Gbps aggregate)
200Gbps DWDM channel	Supports multiple 200Gbps DWDM channels up to 4Tbps
Channel Bandwidth	100GHz DWDM Optical channels
Ingress Protection	Optics Head: IP66/NEMA-4X
Free-space Wavelength	ITU C-band DWDM (1550nm)
Network Interface	Standard copper or fiber interface
Frequency	Unlicensed (Optical not RF), No RF interference (RFI)
Laser Output Power	Eye-safe at 1550nm
Thermal Regulation	Optics Head-Active Cooling and Heating

Mechanical/Electrical

Input Voltage	120-240V, AC 15amp circuit
Power Consumption	100 watts max (w/heater)
Temp Range	-40F to +140F
Dimensions	Optics Head Enclosure: 27in x 7in x 8in
Weight	< 20kg

Management & Control

X-lumin Operating System (XOS)	Full Management & Control System, Web-based user interface for Windows, Linux, Mac, Android and IOS.
Quality of Service (QoS)	Uses Artificial Intelligence (AI) to mitigate optical turbulence, increase link stability and performance, predict future performance based on weather conditions, and potential hardware failures affecting system performance.
System Security	Protected by advanced security measures that prevent malicious attacks and protect user data

Options

Field Bandwidth Upgrade Kit	200Gbps full duplex kits (400Gbps aggregate) up to 4Tbps
Mounting Interfaces	Pole, Building, Tower or Mobile Unit
Distances > 5.0Km	Custom TeraLink Systems available to support distances beyond 5.0Km