The Cisco® Lumin Optical Transmission Platform represents the world’s first deployment of a 1310nm dense form factor optical transmitter that incorporates hybrid optical-RF linearization technology, changing the price/performance curve for 1310nm optics. With the Lumin dense-platform optical system, you can deliver the latest broadband services to consumers across a powerful, highly scalable and reliable platform that delivers high performance at low costs.

The Cisco Lumin Optical Transmission Platform gives you 1310nm optical linearization technology similar to technology used in a 1550nm transport, in a robust, low-priced 1310nm platform.

The Lumin platform’s DLTx optically conditioned 1310nm laser transmitters enable:

- **Ultra-wide band optical distortion correction** not limited by the effective bandwidth of RF predistortion.
- **Use of digital DFB lasers for analog transmission** – Reduces the industry’s critical dependence on pricey, sorted, high-performance analog DFB diodes.
- **CSO control over life of the product via active feedback** – Stabilizes composite second order (CSO) over life, not subject to the aging drift of predistorter-to-laser matching which exists in current RF predistortion technology.

### Lumin Platform Benefits

- **Great density**
  - 3 RU, 15 module capacity
  - Stackable with no need for an air flow spacer between chassis
  - 5.0 modules per rack unit

- **1310 transmission and reverse transmission**

- **Powering options**
  - Dual DC power supply modules
  - AC powering with a 1 RU AC power supply subsystem

- **Monitoring**
  - Simple Network Management Protocol (SNMP) Ethernet interface
  - Integrated front panel LCD displaying all functions with custom settings enabled through front-panel control keypad
  - User friendly GUI-based Lumin utility for local setup and control

- **Low price with no compromise in performance**

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### At-A-Glance

![Cisco Lumin™ Optical Transmission Platform](image)

- **Experience 1550nm optical predistortion technology in a 1310nm platform**

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![Cisco Lumin™ Optical Transmission Platform](image)
Cisco Lumin™ Optical Transmission Platform
Experience 1550nm optical predistortion technology in a 1310nm platform

Cisco Lumin Optical Transmission Platform
Cisco Lumin platform products include the Lumin DLC Dense Optical Distribution Chassis, Lumin DLT 1310 nm Optical Transmitter Module, and Lumin DDR Dual Return-Path Optical Receiver.

Lumin DLC Optical Distribution Chassis
The Lumin DLC Dense Optical Distribution Chassis is a highly compact and cost-efficient, rack-mounted Optical Distribution Chassis and Communications Subsystem designed for HFC high-density platform deployments where headend or hub space is limited.

The 3 RU chassis accommodates a combination of up to 15 hot-swappable transmitter and/or receiver modules, resulting in one of the highest density chassis on the market.

Primary Features
• Standard 19” 3 RU, rack-mountable
• High-density, low-cost design
• High-volume, high-efficiency, fan-cooled system tray
• Microprocessor controlled subsystem service monitoring
• F-connector output
• RJ45 and RS232 compatible
• External alarm interface
• Ethernet port for remote status monitoring
• Communication module built into fan tray
• Integrated LCD panel and control function keypad
• Blind mate (push on), DC and communications connectors
• Internal power supply has power factor correction and harmonic attenuation
• Over temperature auto-shutdown and restart circuitry
• Internal surge and short-term power dropout protection
density with up to 15 modules per chassis

Lumin DLT 1310nm Optical Transmitter Module
The Lumin DLT 1310nm Optical Transmitter Module is an exceptionally cost-effective high-performance 1 GHz 1310nm optical transmitter. The Lumin DLT is designed for HFC forward-path high-density platform deployments where cost considerations are critical. This module enables economically fully segmented optical nodes (1:1 transmitter-to-node ratio), providing increased targeted services bandwidth per subscriber.

Primary Features
• High density with up to 15 modules per chassis
• Low power consumption for lowering end user operational expense cost
• Excellent stability over time and temperature
• Increased CSO suppression at high frequency improves digital performance to 1 GHz
• 1310nm DFB laser diode
• Active performance monitoring
• Separate RF input for narrowcasting
• Hot-swappable design
• Front panel status indicator
• Software control addressable
• Advanced on-board microprocessor control
• Manual or automatic gain controlled (MGC/AGC) modes

Lumin DDR Dual-Path Optical Receiver
The Lumin DDR Dual Return-Path Optical Receiver is designed to meet CATV deployments that require high return path receiver density. The DDR module is specifically designed to accommodate both analog and digital formats. The receiver module has manual gain control and is designed for deployment with DLT transmitter modules in the Lumin DLC multi-module chassis accommodating up to 15 modules.

Primary Features
• High density with up to 15 modules per chassis
• Two return-path receivers in a single module
• Low electronic noise and low distortion
• 1290-1620nm wavelength operation
• Hot-swappable design
• Software control addressable
• Advanced on-board microprocessor control
• Low power consumption
• 200 MHz capable
• High Gain

Why Cisco
The Cisco Lumin Optical Transmission Platform is based on more than three decades of technology excellence and commitment to the cable industry. Our mission is to help you succeed today and in the future by growing the number of services your system can offer. Deploying solutions that provide greater density, scalability, and overall flexibility helps you to combat competitive pressures and address new market opportunities for the delivery of broadband services to your consumers.