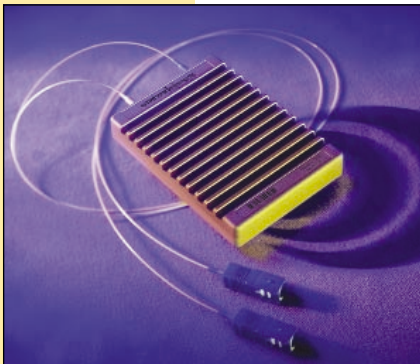




Optical Networking Modules

10Gb/s Optical Cross-connect PHY Module *For applications requiring increased optical link margin*

The ONM10PHYOXC is a highly integrated 10Gb/s physical layer module designed for applications such as optical switches where large optical attenuation is expected. The ONM10PHYOXC offer a minimum of 12dB of optical margin and a reach of 600m using SMF. Utilizing Fabry-Perot serial optics, the ONM10PHYOXC provides network equipment manufacturers a cost effective integrated solution for reduced time to market and significantly lower system costs. The module performs all of the necessary optical-to-electrical and electrical-to-optical conversion, clock and data recover, transmit clock multiplication, and serialization and deserialization functions for a complete physical layer solution.



An optional transmit jitter filter simplifies system design by eliminating the need for a SONET quality reference clock in order to insure SONET compliant timing and jitter performance.

On the system side, the module provides an OIF 16-bit parallel LVDS interface through an MSA compatible 300-pin connector. An integrated microprocessor and EEPROM provides enhanced management of the optical performance and monitoring of user-defined module parameters. A comprehensive set of Application

Innovative optical networking modules provide maximum integration, speed and functionality while reducing time-to-market for networking equipment vendors.

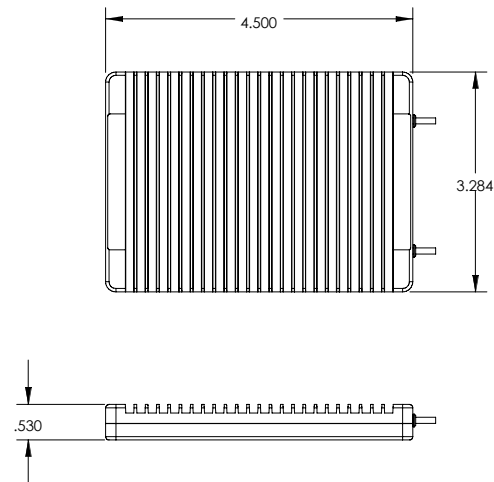
FEATURES

- 9.9-10.7Gb/s serial optical data rate
 - SONET/SDH including FEC
 - POS, 10GbE
- 1310nm serial optics supporting 600m reach using SMF
 - 12dB worst case optical link margin with 10^{-12} BER
- ITU-G.691 eye mask compliant
- 16-bit parallel LVDS OIF-SFI-4 system interface
- 300-pin Berg connector with MSA compatible pin-out
- Tx reference selectable between source or line timing
- Optional reference clock jitter filter for SONET OC-192 data rate
- Control, monitoring, and alarm functions through I²C serial bus control interface
 - Laser on/off control
 - Serial and version numbers, date of manufacture, etc.
 - Monitor loss of signal, laser temperature, laser bias, receiver power, loss of lock, etc.
 - Set user-defined parameter alarm limits

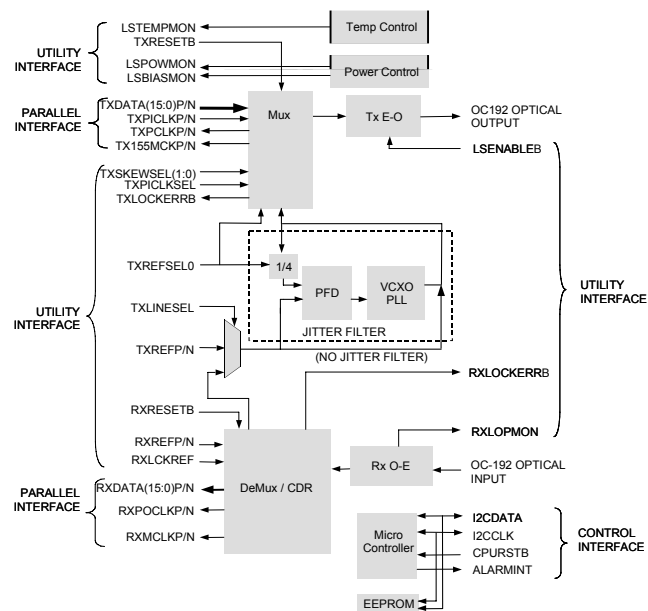


Program Interface (API) routines is provided to greatly simplify the system software design effort.

The ONM10PHYOXC module provides a compact, low-cost, high-bandwidth interface for use in high-performance switch routers, edge equipment, campus backbone switches, servers, and aggregators.



Mechanical Diagram



Functional Diagram

Class 1 Laser Product

For More Information

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About Network Elements

Network Elements, leading the drive to 10Gb/s and 40Gb/s modular products, is developing plug and play modules integrating innovations in high-speed optics and electronics with wirespeed multiprotocol ASICs. These products dramatically enhance cost-performance and time-to-market for our customers. The ONM10 product family is part of Network Elements' Optical Networking Module product offerings of cost-effective physical, link, and network layer interface modules. The ONM40 product line addresses 40Gb/s modular products. Products address a broad spectrum of New Generation Internet infrastructure applications and markets.