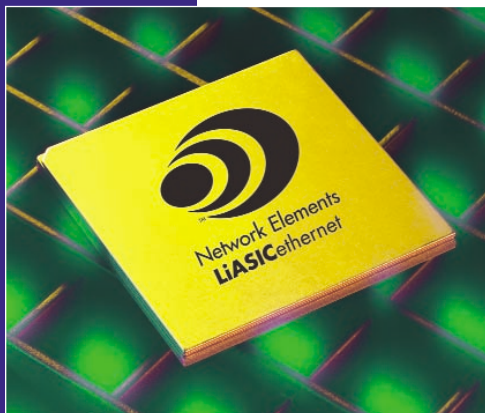




10 Gigabit Ethernet (10GbE) Processor

LiASICethernet Processor



Network Elements' LiASIC, the industry's first 10Gb/s multi-protocol processor, previously available only in the award-winning LiMPM module, is now available as an ASIC product in protocol-specific versions. The LiASICethernet is designed to support 10 Gigabit Ethernet (10GbE) optical networking applications in the LAN, MAN, and WAN.

Network Elements' LiASICethernet provides a full range of 10 Gigabit Ethernet processing, low power dissipation (typically <7 watts), and admission control filtering. The LiASICethernet incorporates an OIF SPI-4 phase 2 interface for transferring system-side packets, an 802.3 XSBI interface for connecting to PHY modules, an 802.3 XGMII interface for connecting to PCS/PMD modules, and a 16-bit control interface.

The LiASICethernet performs MAC, PCS, and WIS processing, RMON statistics monitoring, and programmable packet filtering. Fine-grained control over protocol processing options enables the LiASICethernet to be used as a stand-alone monitoring MAC, a 10GBASE-R MAC/PHY, or a 10GBASE-W MAC/PHY.

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

FEATURES

- Supports 10GbE LAN, 10GbE WAN
- MAC/PCS/WIS processing
- Frame size to 10KB
- Internal loopback on both line and system sides
- Packet counters for Ethernet RMON
- Software API
- 16-bit OIF SPI-4 phase 2 system interface
- 16-bit 802.3 XSBI stream interface
- 32-bit 802.3 XGMII PCS interface
- Glueless controller interface
- Full complement of evaluation boards (see LiMPM Toolkit)

Egress Side

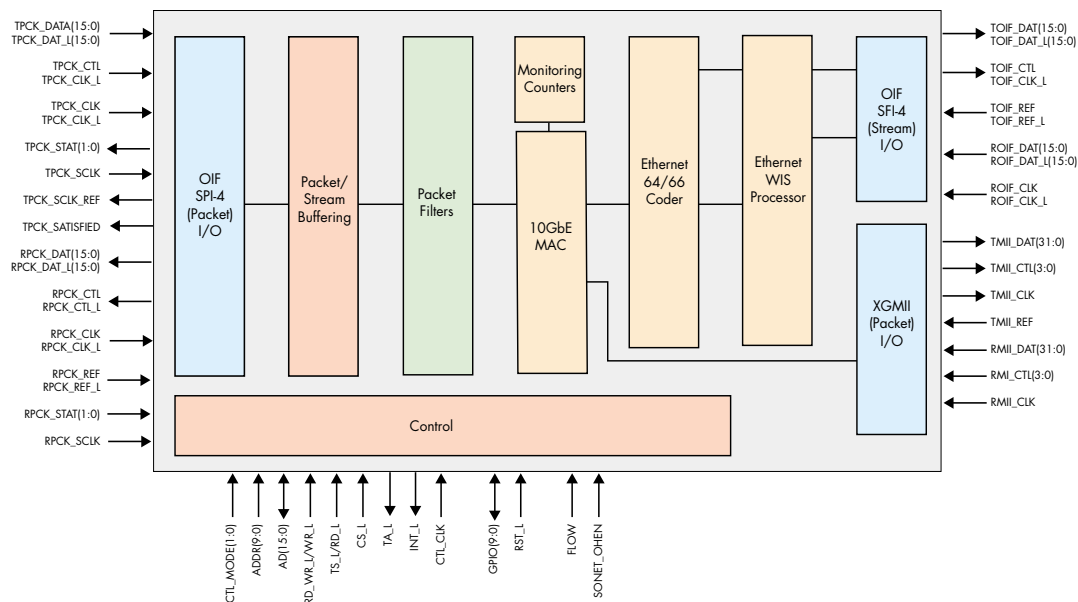
- Ethernet FCS computation
- Programmable packet size enforcement
- 64/66 PCS coding
- Optional WIS framing and overhead insertion

Ingress Side

- Optional WIS framing and monitoring
- 64/66 PCS decoding
- FCS, RMON monitoring
- Programmable packet size enforcement
- Admission control packet filtering



To speed the time-to-market, Network Elements offers the industry's most comprehensive Application Programming Interface (API) for use with the LiASICethernet. The API, written in ANSI C for maximum portability, provides a high-level interface to the ASIC's functionality, eliminating the need for designers to learn the complexities of bit-level assignments.



Network Elements' 10Gb/s LiASICethernet Block Diagram

For More Information

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About Network Elements

Network Elements is leading the drive to 10Gb/s optical networks through innovations in modular integration, high-speed optics, high-speed electronics, and wirespeed protocol processing ASICs. These products address the core, metropolitan area, edge and server markets, providing the highest levels of performance and integration. Network Elements' products enable new classes of optical networking equipment based on flexible, scalable and configurable architectures. For more information visit www.nei.com.