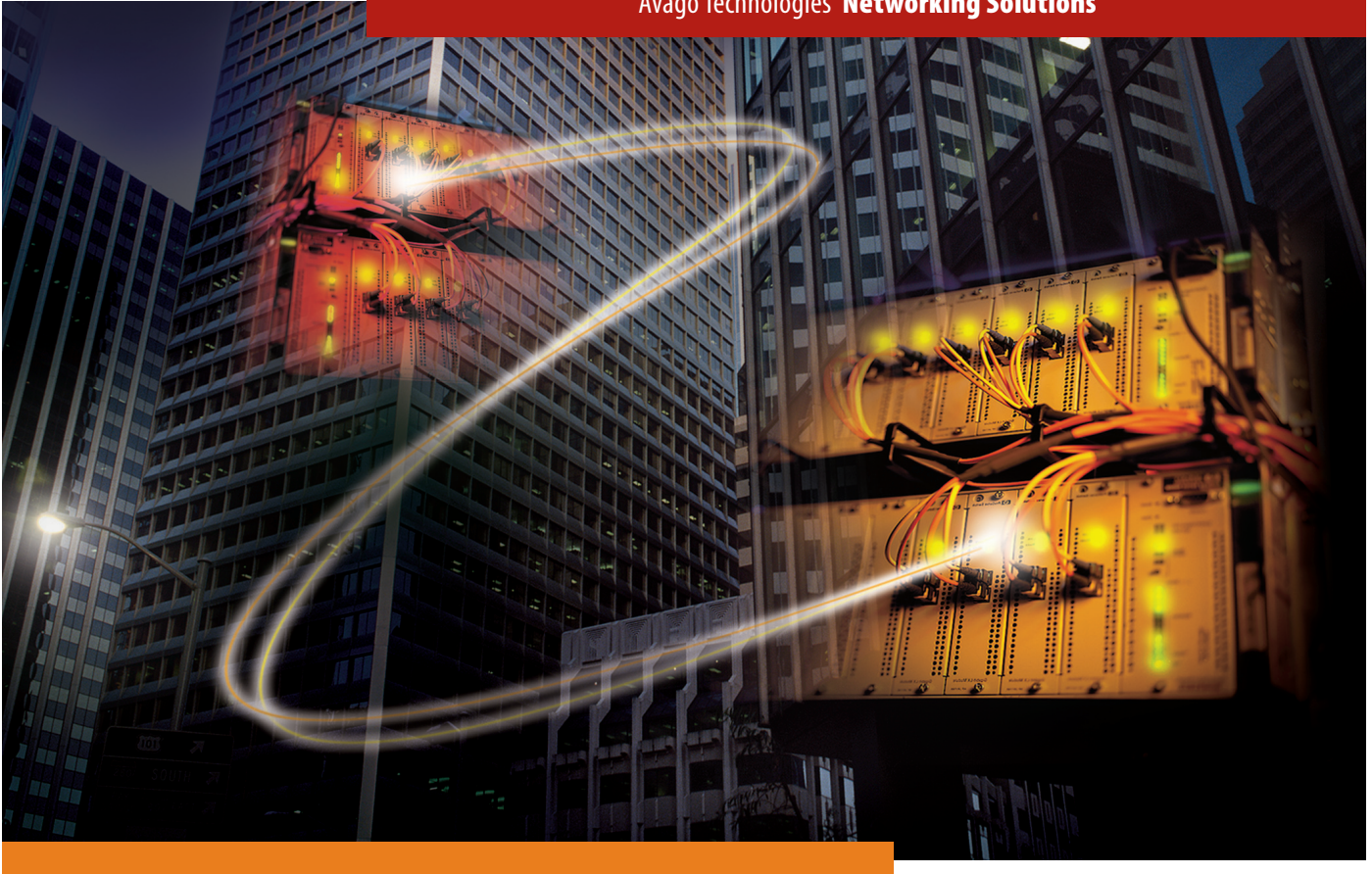




Parallel Optic Modules

Avago Advantages

- **Leading worldwide supplier of parallel optic products**
- **Unmatched 850-nm VCSEL reliability**
- **Cost-effective, robust design**
- **High-volume manufacturing capability**
- **Worldwide sales and applications**

As the leading worldwide supplier of parallel optic products, Avago Technologies' pluggable Parallel Fiber-Optic Modules allow for easy assembly and system field upgrades to add bandwidth. These cost-effective, high-capacity data "pipe" solutions are ideal for board to board, shelf to shelf and rack to rack interconnects up to 300 m apart.

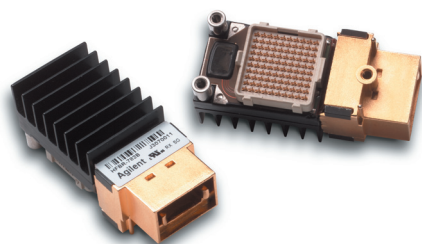
Designed to operate on multimode fiber systems at a nominal wavelength of 850 nm, the Parallel Fiber-Optic Modules feature high-performance, highly reliable, short wavelength optical devices, coupled with proven circuit technology to provide long life and consistent service. Operating up to 3.125 and 2.7-GBd per channel, they provide an aggregate bandwidth of up to 37 and 32-Gbps to remove system bottlenecks.

Avago's Parallel Fiber-Optic Modules feature two product versions: 12-channel, SNAP12 MSA-compliant transmitter (Tx) and receiver (Rx) pairs for 50 μ m and 62.5 μ m fiber options, and the 4-channel POP4 MSA-compliant transceiver for 50 μ m fiber. Both versions incorporate a Vertical Cavity Surface Emitting Laser (VCSEL) array together with custom, laser driver integrated circuitry. They also contain a PIN photodiode array coupled with a custom preamplifier/post amplifier integrated circuit.

Enabling a cost-effective, high-capacity data pipe

Applications

- Intra-system interconnects
 - Optical backplane extensions
 - High Performance Computing (HPC) interconnect
- Inter-system interconnects
 - OC-192 VSR
 - Cross connect switching
 - InfiniBand connections
 - Proprietary connections



The Avago 12-channel Tx and Rx pairs feature a low cost and high package density per Gbps.

Key Features

- Numerous high-speed, asynchronous, independent optical channels
- Pluggable package
- High package density per Gbps
- Single 3.3-V power supply for low-power consumption
- 850-nm VCSEL array source
- LVTTTL/LVCMOS-compatible control I/O
- CML-compatible, high-speed data I/O
- Standard 12-fiber MTP (MPO) optical connector interface
- 50/125 micron multimode fiber operation
 - Distance up to 300 m with 500-MHz. km fiber at 2.5 Gbps
 - Distance up to 600 m with 2000 MHz. km fiber at 2.5 Gbps
- IEC 60825/825 and CDRH Class 1M laser eye safety
- Manufactured in an ISO 9002 certified facility
- Current product offering supports 2.5 GBd and 3.125 GBd data rates per channel

MSA-compliant form factor

Supports interoperability and assurance of supply

Utilizes Avago VCSEL array

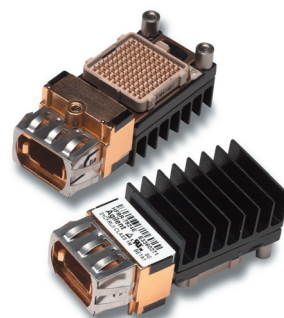
Enables high card-edge density for high backplane or switch density

Data rate agnostic

Lowers costs and simplifies supply chain

Ongoing channel technology

Ability to support 5- to 6-GBd data rates per development channel



The Avago 4-channel POP4 transceiver is compatible with SONET-scrambled and 8B10B-encoded data formats and features an integrated heat sink.

To find out more, please visit

www.avagotech.com/fiber