



PASSIVE OPTICAL NETWORKS

Increasing demand for rapid, low-latency and high-volume communication to homes and businesses has made information distribution and delivery increasingly important. Millions of users expecting economical high-speed connectivity represent an opportunity for the operators with “last mile” challenges. Passive optical networks (PONs) can offer a solution to these challenges.

BUSINESS CHALLENGE

One of the most critical decisions for any business involves the purchase of capital equipment. Of the various factors that influence this decision, equipment cost and the resulting revenue potential are two of the most important. Service providers confront this decision when upgrading existing access networks or expanding into new areas. They want to minimize the cost of deploying access equipment while maximizing revenue from the service offerings. As anticipated revenue involves considerable speculation, the bandwidth capabilities and scalability of access technology are often embraced as a proxy for revenue potential. Thus, the key challenge for a service provider is how to strike a balance between minimizing the equipment cost and maximizing the bandwidth.

Another challenge that enterprises encounter is having a tailored network and advancing with it in parallel to new technological developments.

SOLUTION

Lower Capital Expenditure

PONs operate on a point-to-multipoint (P2MP) architecture that supports 32 users per fiber compared with one user via point-to-point (P2P) communication. This reduces floor, rack and closet space by up to 90%.

The use of only passive equipment in the PON distribution network eliminates the electronic components from the field, minimizing end-to-end infrastructure requirements.

Lower Operational Expenditure

Having fewer active parts in the network reduces power consumption, simplifies troubleshooting and eliminates the need to monitor power supplies in the field.

Superior Reliability

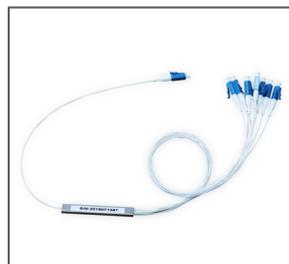
The field components of an active fiber network are susceptible to environmental challenges, whereas PONs do not have any electronic components outside the central office. This enables delivery of superior reliability.

Easier Scalability

Both active and passive optical networks require electronic upgrades in the optical line termination (OLT) and customer premises, but unlike active Ethernet, no upgrades are needed outside the plant for a PON. This positions it as an easily scalable solution.



Attenuator



Splitter



Fiber Optic Splice Enclosure



Modular Splitter Box



THE MOLEX ADVANTAGE

Molex designs PON products on a universal platform that supports both traditional and passive networks and offers design flexibility by allowing customers to update the network architecture without changing platforms.

Molex offers a complete PON solution, including attenuators, splitters, modular splitter boxes, multi-function fiber enclosures, wall-mount fiber boxes, fiber optic splice enclosures and cables with custom options, plus a 25 year comprehensive warranty.

To learn more www.molex.com

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