

Top 10 Reasons You Should Consider Active Ethernet

There are several options available when it comes to deploying a fiber network. While PON is perhaps the most widely known, point-to-point Active Ethernet has significant advantages which should be considered. Active Ethernet has been deployed in FTTH applications for almost 10 years and the percentage of communities and service providers that choose Active Ethernet over PON is growing dramatically.

1. Active Ethernet offers subscribers **dedicated bandwidth** of up to 1000Mbps based on their individual requirements and offers differential services for residential and business customers in the same area. In a PON network, the available bandwidth per subscriber terminal is shared with all other subscribers in that area without being able to give different service levels.
2. Active Ethernet supports a **pay-as-you-grow** philosophy since new subscribers can be easily added within the 100km geographic area at minimal cost. PON networks require one splitter for every 32 ONUs within the 20km service area and are cost-effective only when at least 26 ONUs are connected.
3. Active Ethernet is **standards-based**. Ethernet components that are 802.3 compliant offer full interoperability with other standards-based solutions from a broad base of vendors.
4. Since Ethernet is standards-based and is used universally, the **cost** of Ethernet-based products and components is decreasing rapidly.
5. **Triple-Play Ready** – Many Active Ethernet solutions support integrated VoIP protocols - H.323, SIP, and MGCP as well as various standards-based mechanisms - which ensure the voice, video (both IPTV or with RF overlay), and data quality using IEEE802.1p, voice priority, and TOS marking.
6. Digital voice (VoIP) and video (IP video) services can be delivered using a **single strand of fiber** or over CWDM using up to 16 unique wavelengths over fiber pairs. This ability to provide dedicated bandwidth over a single fiber or fiber pair to multiple subscribers maximizes fiber capacity and keeps costs low.
7. Active Ethernet is **easy to configure and design**. PON requires detailed pre-planning to place splitters in the ideal location from the OLT to ensure that the ONU reaching the maximum number of subscribers. Active Ethernet has virtually unlimited distance, so planning is easier and more flexible.
8. Active Ethernet is **easy to support**. Because traffic is pure IP, no transition between protocols is required. Network management of all network elements is simple using off-the-shelf products and standards. Each element in an Active Ethernet network can send information to the NOC using SNMP, EFM OAM, and others that support not only remote troubleshooting but also mass provisioning and network maintenance. Passive splitters cannot transmit data so troubleshooting a problem requires dispatching a technician to the site – or multiple sites.
9. **Reliability and Availability** – Carrier Ethernet aggregation switches support multiple topologies (mesh or ring) and, using standard-based RSTP and MSTP based solution, ensure less than 50mSec convergence time. Phone calls and video services will continue even case of a failure.
10. **Field-proven, highly reliable** Active Ethernet products from Telco Systems give you cost-effective choices to help you find your FTTH direction!

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FOR YOUR FTTH DEPLOYMENT.



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