



## Smart

Our outdoor PoE systems can be easily and cost-effectively deployed, and they can be remotely managed through SNMP.



## Connected

Our outdoor PoE systems are powered through Ethernet cables and deliver data rates up to 1,000 Mbps.



## Secure

Our outdoor PoE systems are IEEE 802.3at compliant, and they are designed to withstand harsh environmental conditions and electrical surges.

## Sail Internet

### High-Speed Internet Enabled by Power Over Ethernet (PoE) Midspans and Switches

#### Market Dynamics

Business operations and individual consumers rely heavily on the Internet and expect uninterrupted service. Bandwidth expectations continue to increase to allow the use of advanced services and features.

Service providers are able to use a wider combination of technologies and protocols to deliver Internet service across wired and wireless networking media.

Internet service equipment is easier to install, activate and operate in areas with existing modern power delivery and communication infrastructure. Service will typically be deployed earlier to areas with a higher density of businesses and residences, to deliver a higher return on investment to service providers.

Continued expansion into more challenging areas with non-optimal infrastructure will follow as new technology delivers equipment that is easy to install and operate.



## The Challenge

Sail Internet had an opportunity to provide Internet services to residential and business customers in near-urban locations. The challenge was to deliver reliable, high-bandwidth services to these areas, which do not contain optimal supporting infrastructure.

The service provided to customers must be at parity with service offered in other areas to prevent business operations and consumer activities from experiencing interruptions or low bandwidth. Service must be modular and scalable to support the expected increase in the number of customers and related infrastructure bandwidth.

The supporting infrastructure lacked sufficient electrical wiring to support power delivery to rooftop antennas and Wireless Local Access Network (WLAN) access points that are used in common wired Internet solutions. Modification of the existing electrical wiring would be expensive, risky and time consuming.

Outdoor equipment should be designed to withstand environmental operating conditions. The equipment should be resistant to electrical power surges, dust intrusion and water intrusion. To reduce deployment time and minimize risk, equipment should be easy to install and initialize. To facilitate network monitoring and upgrades, Sail Internet wanted to use equipment that could be remotely managed through SNMP.



## The Solution

Sail Internet analyzed the challenges and decided to develop its service network with equipment powered by Power over Ethernet (PoE). PoE provides power to network devices effectively and efficiently over Ethernet cables, simplifying installation. Power delivery can be provided without depending on or modifying the existing electrical power infrastructure.

Sail Internet selected the PD-9601GO Single-Port Outdoor PoE Midspan and PDS-104GO Four-Port Outdoor PoE Switch from Microchip to power rooftop antennas and WLAN access points in strategic locations across buildings and homes to maximize wireless connectivity. Supporting power levels of 90W and 60W respectively, each device delivers a data rate up to 1,000 Mbps. The devices are compliant to IEEE® 802.3at for

PoE; GR-1089-CORE Issue 6 for electrical surges; and IEC 60529, Level IP66 and NEMA 250 for dust and water intrusion. The equipment is designed and manufactured in compact metal enclosures to withstand harsh conditions found in outdoor environments, such as extreme temperature, high humidity and dust.

The PD-9601GO and PDS-104GO do not need to be opened or configured during installation. They are powered through Ethernet cables, and the PDS-104GO switch can also be connected directly to fiber cables. They do not require separate surge protection components. This combination minimizes time and risk during installation, enabling rapid deployment and activation. Both devices can be remotely managed through SNMP, facilitating network maintenance and upgrades.

*Sail Internet has successfully deployed Internet services using over **1,000 PoE systems** from Microchip.*



## The Result

Sail Internet has successfully deployed Internet services using over 1,000 PoE systems from Microchip.

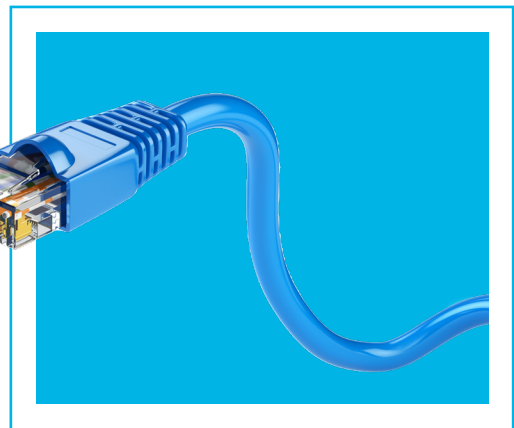
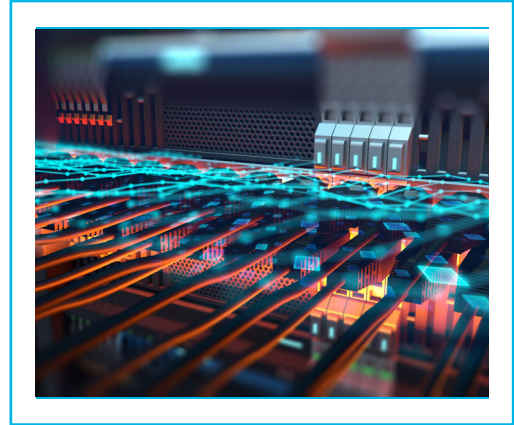
The service provided by Sail Internet meets the needs of its business and residential customers for bandwidth and reliability. The physical network remains rugged and is easy to maintain and update, ensuring high service quality for customers.

Networks were installed in areas with sub-optimal supporting infrastructures. These networks use PoE equipment to decrease risk and installation time compared to equipment powered through standard electrical lines.

Microchip PoE midspans and switches enabled Sail Internet to implement ubiquitous Wi-Fi® coverage for their customers without having to rebuild their existing infrastructure.

# About Sail Internet

Sail Internet delivers fiber-sourced, high-speed Internet access to homes and businesses. Fiber optic Internet technology has changed the infrastructure of the Internet but has also left many consumers behind. Miles of fiber optic cables are just out of reach of the average home or business. Sail Internet closes this gap by bridging service between industrial fiber and consumers using cutting-edge wired and wireless Internet technology. Fiber is at the core of service provided by Sail Internet, and the company believes everyone should have access to the fastest net-neutral Internet service available. Learn more about [Sail Internet](#).



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