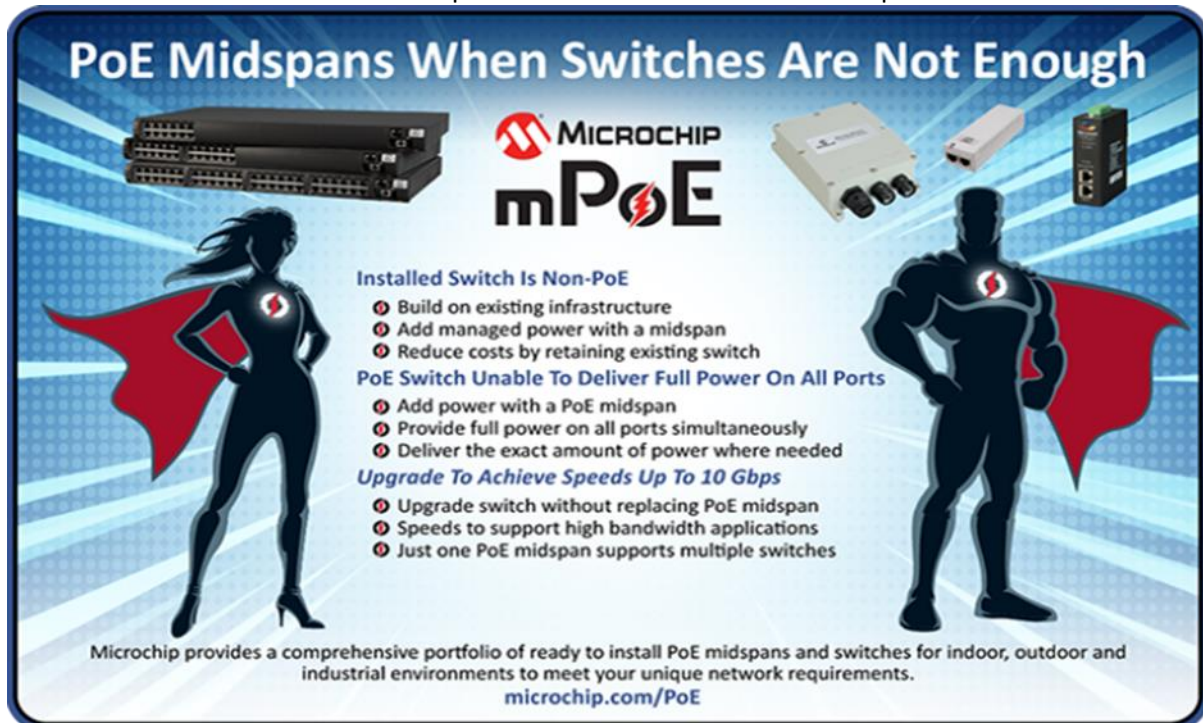


## PoE Midspans when Switches are Not Enough

Power over Ethernet (PoE) has been powering many devices since its invention in 1997. Initially, most Ethernet switches could not provide power. This was when the PoE midspan was introduced. Inserted after the switch, the midspan would inject power onto an Ethernet line to provide a device both data and power.

Over time, switches began to offer both power and data. PoE switches have become more prevalent in the marketplace at price points that are very attractive. Thus, many today believe they must make a choice between choosing a PoE switch, or a PoE midspan. This is simply not the case. It is not a matter of either a PoE switch or midspan. The decision should be based upon the situation.



**PoE Midspans When Switches Are Not Enough**

**MICROCHIP**  
**mPoE**

**Installed Switch Is Non-PoE**

- Build on existing infrastructure
- Add managed power with a midspan
- Reduce costs by retaining existing switch

**PoE Switch Unable To Deliver Full Power On All Ports**

- Add power with a PoE midspan
- Provide full power on all ports simultaneously
- Deliver the exact amount of power where needed

**Upgrade To Achieve Speeds Up To 10 Gbps**

- Upgrade switch without replacing PoE midspan
- Speeds to support high bandwidth applications
- Just one PoE midspan supports multiple switches

Microchip provides a comprehensive portfolio of ready to install PoE midspans and switches for indoor, outdoor and industrial environments to meet your unique network requirements.  
[microchip.com/PoE](http://microchip.com/PoE)

### When to use a PoE midspan?

If there is already a switch installed that does not provide power, there is no need to replace the entire switch. The introduction of a midspan into the environment provides devices the power required at an incremental cost with minimal interruption. You can build on the existing infrastructure and add features such as Power Management for minimal investments.

However, even if there is a PoE switch installed, or a new PoE switch is being installed, the switch may not be able to provide the required power on all ports. Every switch comes with a Power Budget. The Power Budget is the maximum amount of power the switch can provide. Few PoE switches can provide full power on all ports. If the power demand of the connected devices requires more power than the switch can provide, the easiest and least expensive way of supplementing power is by adding a PoE midspan to inject power on the ports that do not have any.

There are also many benefits that can be derived by isolating an Ethernet switch from the PoE midspan. If a switch does fail, PoE midspans will still provide power to the connected devices. Additionally, midspans originally supported data rates up to 1 Gbps but are now capable of supporting up to 10 Gbps. When such a midspan is installed, to increase anticipated network speeds, only the switch must be replaced. This enables network managers to upgrade the network without replacing their entire infrastructure.

Finally, midspans offer extreme flexibility. Not every port on a switch may require power. Midspans are cable of supporting multiple switches to provide power to only the ports that have power requirements.

Providing power where and when needed at the proper voltage plus enabling upgrades to increase speeds all while providing reducing failure rates makes the midspan a perfect solution even when PoE switches are deployed.

You can download our infographic, [here](#). To learn more about PoE midspans visit <https://www.microchip.com/en-us/products/power-over-ethernet/poe-systems>