Powering Next-Generation Endpoints:
Making the Case for Power Over Ethernet Midspans
# Table of Contents

Understanding PoE ........................................... 3  
Answering the Question: Why Midspans? ................. 4  
Calculating the Revenue ................................. 5  
Getting to Know PoE Applications ...................... 5  
  Thin Clients  
  Wireless Access Points/WLAN Equipment  
  IP Cameras  
  IP Phones  
Applying Sales Tactics ................................. 7  
  Target Certain Markets  
Ask Qualifying Questions .............................. 8  
Choosing a Midspan Provider .......................... 8
Powering Next-Generation Endpoints: Making the Case for Power Over Ethernet Midspans

VARs, SIs, MSPs and IT-centric agents who sell thin clients, wireless access points, IP cameras and IP phones already reap the rewards of those deployments, namely in the form of traditional, upfront compensation and client loyalty. But partners could be earning even more money from those deals by also selling the boxes — midspans, in particular — that provide Power over Ethernet (PoE) to those existing and next-generation endpoints. This should pose an attractive proposition to IT partners who want to keep a steady stream of upfront pay in their practices even as they add recurring revenue. Indeed, the opportunity to boost sales value and reward by adding midspans is immense. IDC found in May 2013 that the overall enterprise network infrastructure market, which includes endpoints such as IP phones, will come close to $52 billion by 2017. Driven by cloud and mobility, the education, health care, enterprise and government verticals are among the leading adopters of thin clients, access points and IP cameras and phones. The upfront compensation opportunity grows more lucrative when the partner does not assume the client will take care of its power needs. Think of the opportunity to provide PoE hardware as a natural add-on that will net you, the partner, more margin without the headaches of undergoing certification or intensive training. With that in mind, examine the case for midspans as end users buy more devices that require PoE.

UNDERSTANDING POE

PoE is a standard that enables Ethernet network devices to receive power over CAT-5 or better Ethernet cable instead of through power outlets. The Institute of Electrical and Electronics Engineers (IEEE) approved the first PoE standard, 802.3af, which supports up to 15.4 watts of power, in 2003; the 802.3at standard, also called PoE Plus, came later and now supports up to 60 watts. Depending on the manufacturer, some PoE gear also delivers up to 95 watts. To get an idea of the range of devices, an IP phone can consume less than 15.4 watts, while some cameras and access points require more than 30 watts, making them candidates for 802.3at-based equipment.

PoE is deployed when USB is unsuitable because it can’t provide enough power; or where AC power is inconvenient because a wall jack sits too far away; or it’s too expensive because the cost of installing more wall jacks exceeds the cost of deploying PoE; or it’s unfeasible because there may be no wall jacks at all.
You must determine whether switches or midspans will work best to power an enterprise’s many Ethernet-reliant devices, from IP surveillance cameras to video conferencing phones.

**Ethernet switch.** A switch resides on Layer 2 or Layer 3, contains multiple ports, and processes and forwards data and packets. A switch also takes up several units of rack space. Not all switches are PoE-enabled.

**Midspan.** Also called a power injector, a midspan sits between an ordinary Ethernet switch and a PoE device, resides on Layer 1, generally takes up 1U of rack space, contains single or multiple ports and can support higher-wattage devices such as video phones.

**A Typical Midspan Deployment**

![A Typical Midspan Deployment Diagram](Source: Microsemi)

**ANSWERING THE QUESTION: WHY MIDSPANS?**

There are several reasons why midspans make solid alternatives to switches. Especially within cost-conscious organizations, the argument for midspans is a strong one.

If an organization already has an Ethernet switch, adding a PoE midspan saves the cost of buying a new switch. An Ethernet switch goes for thousands of dollars, whereas a midspan tends to cost several hundred dollars. An entire network refresh with switches could run tens or even hundreds of thousands of dollars.

Next, midspans also can prolong the life of an existing switch. High-wattage devices such as video conferencing phones generate large amounts of heat, decreasing the lifespan of a switch, midspan proponents say.
Also, partners do not have to undergo certification to sell midspans. There is some training involved, but it is less rigorous and time-consuming than getting the certification needed to sell some vendors’ switches.

Finally, PoE midspans make a good fit for VoIP and wireless projects for these reasons:

• It’s a single-cable solution for power and data.
• Anyone can perform the plug-and-play installation — there’s no need to hire an electrician.
• It’s safer than a wall jack, or AC power, and eliminates the need for AC outlet installation.
• It can be managed remotely to turn devices on and off at specific times to save energy.
• It can perform remote reboots to save manpower and time.

CALCULATING THE REVENUE

Partners who sell VoIP and wireless hardware in general are well-suited to include midspans in their line cards because the sale is a natural extension of the deployments they’re overseeing. Say you’re a VAR selling 1,000 IP phones to a university. Be sure to include, as part of the deal, the injectors that will power those devices. Not only does this save the IT department the headache of procuring PoE equipment, it increases the financial value of the sale for the partner.

Take the above fictitious university as an example. Along with the sale and installation of the 1,000 IP phones, the partner proposes to deploy 42 24-port midspans. In this scenario, the partner boasts a high credit score and is able to mark up a midspan by 35 percent for a retail price of $900. Gross, that’s $37,800 the reseller would otherwise have overlooked. About $13,000 of that total is pure profit. In other words, prioritize PoE as part of a sale.

GETTING TO KNOW POE APPLICATIONS

Four types of IP devices — thin clients, wireless access points, IP cameras and IP phones — are experiencing high adoption rates. And with insight into the market demand for each of these areas, the ability to earn money from the associated midspan sales seems endless.

Thin Clients

Research firm IDC predicts that in 2014, 5.31 million thin clients will ship worldwide, with the number reaching 8.01 million units by 2017. “[C]ost reduction, as well as the easier endpoint management that desktop virtualization provides, will continue to drive thin client growth, with virtual desktop infrastructure replacing old PCs,” said Jennifer Song, research analyst, worldwide trackers for IDC.

Thin Client Worldwide Shipments

Source: IDC, December 2013
**Wireless Access Points/WLAN Equipment**

IDC said the enterprise WLAN market ranks as one of the fastest growing networking opportunities. “Across all verticals and geographies, the explosion of mobility with bring-your-own-device continues to drive new investments in WLAN infrastructure,” Rohit Mehra, vice president of network infrastructure for IDC, said in December 2013. TechNavio, in a January 2013 report, reported similar findings. The firm predicted the global WLAN equipment market, driven by smartphones and tablets, will grow at a compound annual growth rate of 17.81 percent in the 2012-2016 period.

**Global WLAN Equipment Market Growth**

![Graph showing growth of global WLAN equipment market](image)

Source: TechNavio, January 2013

**IP Cameras**

Video surveillance is moving from analog to IP at a rapid pace. In fact, MarketsandMarkets predicts that IP surveillance will have surpassed analog by 2018, with the overall video surveillance market size hitting $36.3 billion. The firm forecast in 2011 that IP video surveillance alone will reach $15.89 billion in 2016, up from $5.15 billion in 2011.

**IP Video Surveillance Market Share**

![Graph showing IP video surveillance market share](image)

Source: MarketsandMarkets, January 2011
IP Phones

TechNavio in November 2012 predicted that the global fixed-VoIP service market will experience a compound annual growth rate of 6.46 percent from 2012-2016. The provisioning of this service inherently means that organizations will deploy the requisite phones.

**Fixed VoIP Service Market Share**

![Fixed VoIP Service Market Share](image-url)

Source: TechNavio, November 2012

All of those statistics hit home when a partner calculates not only the revenue from sales of those thin clients, access points, and IP phones and cameras, but also the money that would stem from selling the midspans to power those devices. Armed with that incentive, then, here are some tips to maximize midspan sales efforts.

**APPLYING SALES TACTICS**

**Target Certain Markets**

Four vertical markets, especially, are ripe targets for midspans because they are among the sectors most deploying VoIP and wireless equipment:

- **Higher Education.** At colleges and universities nationwide, students and professors alike are bringing laptops, smartphones and tablets to the network. To handle the traffic load, schools are deploying PoE-enabled wireless access points across campus, often in hard-to-reach locations. This is a prime example of when a midspan’s remote reboot capabilities come in handy, as well as its ability to eliminate the need for AC outlet installation. And some midspans providers give extra discounts to education customers.

- **Health Care.** Many medical facilities are turning to thin clients as alternatives to PCs, which eat more power and cost more money than virtualized systems. More health care practitioners also are deploying tablets for use with patients. As a result, they need access points to blanket campuses with wireless coverage and the ability to power those devices.

- **Enterprises.** Similar to the higher education and health care verticals, enterprises are turning to more VoIP and wireless gear that runs on PoE. Like their counterparts, they are seen as top adopters of thin clients, for the associated financial and energy savings; wireless access points, for Wi-Fi availability that lets employees work from mobile devices; IP cameras, for security surveillance; and IP phones, for savings on traditional telecom costs and access to more features such as auto-attendant, call forwarding and more. Again, midspans will power all of that hardware.

- **Government.** Local, state and federal agencies alike all are using IP video cameras, as one example, to track criminal and potentially criminal acts. Government buyers
also rank among the most cost-conscious as the impact of the recent recession maintains a ripple effect (remember the 2013 sequestration and shutdown?). This means partners pitching midspans as sources of PoE have an advantage, not only because this hardware costs less than switches but because some midspan manufacturers provide additional discounts for sales to government customers.

ASK QUALIFYING QUESTIONS

Engage the customer via these best practices:
1. Ask, “How will you power that?” This simple question opens the door for VARs, MSPs and other channel partners to increase the value of a deal.

2. Find out the customer’s growth plans for the next two to five years. This will help determine how many devices will be connected to the midspan. Most midspans come in the following configurations: one port, four ports, six ports, 12 ports or 24 ports. Keeping some ports available will accommodate a customer’s growth.

3. Help the client create a road map for equipment upgrades. Get a bead on whether an organization plans to deploy higher-wattage devices such as video conferencing IP phones and 802.11ac wireless access points. That way, the partner can decide whether an 802.3af midspan will suffice, or whether an 802.3at midspan is required to support endpoints that consume more power.

CHOOSING A MIDSSPAN PROVIDER

Choosing a midspan vendor is an important decision. Consider, then, Microsemi®, which owns the PowerDsine® brand. PowerDsine was a leading contributor to the invention of PoE and Microsemi, which bought PowerDsine about seven years ago, and currently has members on the IEEE board driving new power specifications and upcoming standards. Turning to the company that created PoE and that continues to ship millions of ports makes sense. As proof of its expertise, PowerDsine debuted its first midspan in 1999 and has since shipped more than 130 million ports. And now, with the influence of longtime channel insiders on the Microsemi team, Microsemi and PowerDsine together offer the Empower Partner Program, which targets the converging indirect channel.

Empower features the following tiers and benefits:

**Platinum**
- $100,000 in annual revenue
- Annual training for channel team
- Microsemi published and listed on website, line card and marketing materials

**Gold**
- $25,000 in annual revenue
- Annual training for channel team
- Microsemi published and listed on website and line card

**Bronze**
- $10,000 in annual revenue (This level is well-suited for telecom agents who want to beef up their IT practices and own their customers. In fact, a deal forged in June 2013 between Intelisys and ScanSource lets Intelisys partners sell Microsemi products via ScanSource.)
### Empower Rewards by Partner Tier

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<thead>
<tr>
<th>REWARD</th>
<th>BRONZE</th>
<th>GOLD</th>
<th>PLATINUM</th>
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<tbody>
<tr>
<td>Standard discount</td>
<td>3%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Additional discounts on registered products</td>
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<td>✔️</td>
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<tr>
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<td>✔️</td>
<td>✔️</td>
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<tr>
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<tr>
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<tr>
<td>Access to marketing programs and promotions</td>
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<tr>
<td>Welcome kit with marketing tools</td>
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Source: Microsemi

One of the program’s greatest differentiators is that Microsemi prides itself on employing channel managers who are not laser-focused on quotes oversight. Instead, they work with partners from pre- to post-sale. That means, first of all, that they educate and train partners on PoE and midspans. Selling midspans through Microsemi does not come with a certification requirement. “It’s the awareness aspect that’s critical,” said Brock Aldred, director of U.S. channel sales at Microsemi.

Another differentiator comes in the form of Microsemi’s government and education discount. The company provides an additional 10 percent off to all government and education customers, even if the partner bringing in the deal participates at the lowest tier (Bronze). That extra value drives buying behavior, Aldred said.

On the whole, Microsemi’s channel personnel are almost like partners for partners. They work with the VAR, SI, MSP or other indirect salesperson as closely as that partner would like. “Our channel managers are really engaged on the field level,” said Aldred.

Because of that, and because of PoE’s inherent add-on value to the sale, channel partners have a clear opportunity for making more money. Partners selling VoIP and wireless equipment just need to shift their thinking to include PoE, Aldred said. Picture tires on a car, he said by way of an analogy. “If we were one degree off on our Michelin tires, we’d get 25,000 miles instead of 50,000,” he said. Missing out on those other 25,000 miles is as unnecessary as missing out on the PoE opportunity. As Aldred put it, “PoE is the easiest win you’ve got in your bag.”

For more information, visit [www.microsemi.com/powerdsine](http://www.microsemi.com/powerdsine).