



## Leading VoIP Technology Consultant, Capgemini, Expands Own IP Telephony Network Using Microsemi's PowerDsine Power-over-Ethernet Midspans

### BACKGROUND

Capgemini is well aware of the challenges and opportunities associated with VoIP deployment, having been an early advocate of the technology. As far back as 2004, when less than 20 percent of phones in the U.S. were being shipped with VoIP capability, the company had already been profiled in the media for its early VoIP expertise. Capgemini asserts that, over the next five years, the ability of U.S. telecommunications companies to embrace IP-based services such as VoIP will largely determine their futures. Within its Telecom, Media and Entertainment (TME) practice, the company offers significant VoIP deployment expertise and also an innovative "WiFi in a box," end-to-end approach to launching WLAN services.

### BUSINESS CHALLENGES

Capgemini recently turned its attention to further expansion of its own IP telephony infrastructure. Capgemini believes that VoIP should enable anyone to sit anywhere they want,

type in their login, and have the phone become theirs for the day, as though it were their own phone.

To realize this vision, Capgemini chose a Cisco Catalyst 3560 switch and Cisco IP phones in an implementation spanning more than 2,000 ports at its new facility in Toulouse. The Cisco infrastructure was designed to provide powerful VoIP capabilities, but Capgemini still faced the challenge of bringing power to all of the VoIP handsets. Indeed, one of the key challenges related to replacing traditional telephony with VoIP is the absence of power previously carried over the copper wiring. With PoE, this problem is solved because power is available wherever there is a LAN connection. By deploying centralized UPS, PoE Midspans provide a cost-effective way to distribute back-up power for a single Ethernet terminal. This capability increases IP telephony service reliability by ensuring that IP phones keep working in the event of power failures.

Capgemini selected Microsemi's PowerDsine PD6548 Midspan, which increases network availability while reducing installation and maintenance costs by eliminating the need for expensive installation of standard power cables. The PD6548 Midspans are also generally compatible with any type of Ethernet switch and terminal, and they include SNMP power modules and Web-based power management, as well as other flexible power-management features.

(continued on reverse side)

*“...it is possible to cut overall costs by as much as 60 percent to 80 percent by adding PoE Midspans to existing non-PoE infrastructure...”*



## Capgemini Faces Numerous Choices, Leverage Midspans Reliability and Flexibility

Companies who are deploying IP telephony have two PoE implementation options – either replace the entire network switch infrastructure with new PoE switches, or preserve the current switching-infrastructure investment by adding external power injectors in the form of PoE Midspans. Capgemini chose the latter.

The PD6548 PoE Midspans that Capgemini chose are power hubs which connect to standard Category 5 and above cabling and sit between an existing Ethernet switch and powered devices. They enable simultaneous delivery of power and Ethernet data to these devices, and protect customer investment both in Category 5 and above infrastructure and in Ethernet switch equipment. Each Midspan provides safe power over standard Ethernet cabling to 48 terminals simultaneously, without requiring any changes to the existing Ethernet switches. The PowerDsine 6548 Midspan is the optimal solution for powering IP phones in large installations, offering a revolutionary approach that provides twice the port density in a 19” rack mountable, 1U device.

Additionally, the Midspans feature an advanced and secure power management software kit, with dual support of SNMP MIB commands and Web-based remote management capabilities, which enables remote control of Midspan ports and the IP phones connected to them. The kit enables centralized control of multi-site or multi-building installations with support for immediate alert (e.g. E911) and response in case of IP phones status changes. Advanced, full IEEE 802.3af and Cisco legacy inline power-compliant detection mechanisms guarantee PowerDsine Midspan product interoperability with most IP phone sets, both standard and pre-standard.



*For detailed information about the PowerDsine Family of products, visit [www.microsemi.com](http://www.microsemi.com) or contact any of the regional offices listed below.*

### ACTUAL BUSINESS VALUE

Numerous studies clearly indicate that investment in PoE Midspans dramatically reduces businesses' Total Cost of Ownership (TCO), offering both purchase and installation cost savings, as well as long-lasting benefits derived from reduced support and maintenance costs and increased productivity achieved through decreased device downtime. In large installations of 250 ports or more, PoE Midspans deliver a number of key economic benefits. First, by adding PoE Midspans to an existing network switch such as a Cisco Catalyst, it is possible to save from 25 percent to 40 percent on the immediate purchase price, as compared to replacing the entire infrastructure with new, PoE-enabled switches. Secondly, adding Midspans to the existing infrastructure and avoiding downtime and outsourced IT and electrical labor dramatically reduces overall costs, including installation overhead savings of approximately 20 percent. Altogether, it is possible to cut overall costs by as much as 60 percent to 80 percent by adding PoE Midspans to existing non-PoE switching infrastructure in a large VoIP deployment.



#### International

Microsemi Corporation  
1 Hanagar Street  
P.O. Box 7220  
Hod Hasharon 45421  
Israel  
Tel: +972-9-7755100  
Fax: +972-9-7755111  
[PowerDsine@Microsemi.com](mailto:PowerDsine@Microsemi.com)

#### North America

Microsemi Corporation  
290 BroadHollow Road  
Suite 305E  
Melville, NY 11747  
Tel: +1-631-756-4680  
Fax: +1-631-756-4691  
[PowerDsineUSA@Microsemi.com](mailto:PowerDsineUSA@Microsemi.com)

#### United Kingdom

Microsemi Corporation  
Lakeside House  
1 Furzeground Way  
Stockley Park, Uxbridge  
UB11 1BD, United Kingdom  
Tel: +44 (0) 208 622 3107  
Fax: +44 (0) 208 622 3200  
[UK\\_AMSG@Microsemi.com](mailto:UK_AMSG@Microsemi.com)

#### India

Microsemi Corporation  
112, UDYOG KSHETRA  
1st Floor, Link road, Mulund (West)  
Mumbai-400 080  
Tel: +91 22-55229031  
[India\\_AMSG@Microsemi.com](mailto:India_AMSG@Microsemi.com)

#### France & BeNeLux

Microsemi Corporation  
10/12 avenue de l'Arche  
Faubourg de l'Arche  
92149 Courbevoix Cedex  
France  
Tel: +33(0)1 46.91.11.08  
Fax: +33(0)1 46.91.88.00  
[France\\_AMSG@microsemi.com](mailto:France_AMSG@microsemi.com)

#### Germany

Microsemi Corporation  
DACH  
Tel: +33(0)1 46.91.11.08  
Fax: +33(0)1 46.91.88.00  
[DACH\\_AMSG@microsemi.com](mailto:DACH_AMSG@microsemi.com)