# GarrettCom Uses PS14P PoE Switch to Power Security Network at Its Corporate HQ

## An Industrial Ethernet Application

### TECHNOLOGY TODAY

Video surveillance has accelerated in the post 9/11 world, and surveillance of corporate premises has also seen unprecedented growth. One of the reasons for this growth is the increasing sophistication and ease-of-use available to install and use networked video cameras and data devices. One of the new enabling technologies is Power Over Ethernet (PoE).

Traditional power lines supplying AC power are not always practical. Networked cameras and video servers are often located in places where traditional power outlets and cabling are difficult to install or simply unavailable. Power over Ethernet (PoE) has emerged that allows devices such as networked cameras to receive power over the same cabling that carries the network data. PoE simplifies the installation and operation, keeping the cabling secure while not interfering with the network operation.

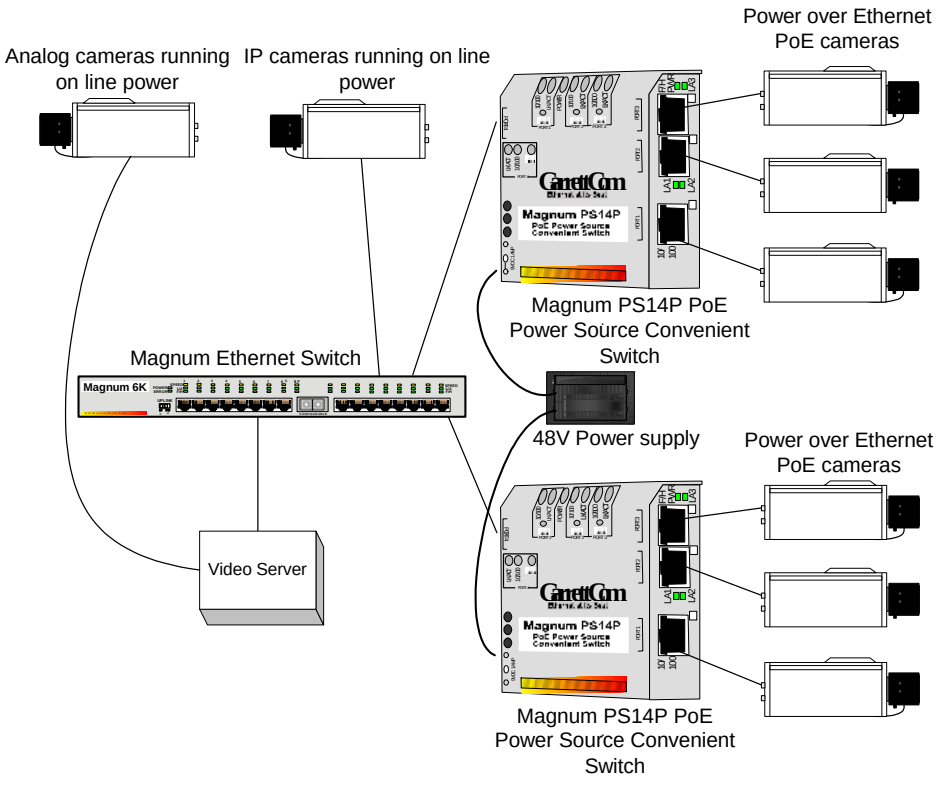
### ABOUT GARRETTCOM

GarrettCom is a leading designer and manufacturer of Magnum Ethernet products for the industrial and telecommunications markets. GarrettCom's focus has been on developing innovative, heavy-duty products that are designed with customer flexibility and high availability in mind. The products have been designed with a variety of fiber ports, and also have many power input options including -48VDC, 24VDC, 12VDC, and 125VDC as well as worldwide AC power. Many of the GarrettCom products are NEBS certified, and come with easy-to-use management software with network security features. In June 2005, GarrettCom developed the first industrial Ethernet switch utilizing the new IEEE 802.3af Power Over Ethernet standard. This new product, the Magnum PS14P PoE Power Source Switch, is the key to GarrettCom's internal security network.

### THE CHALLENGE

GarrettCom wanted to expand its corporate security network by adding a series of video cameras in different locations of its headquarters, typically one pointed at each outside door. The video records would be saved and would be viewable from outside over the Internet in case of a security incident.

**GarrettCom PoE Security Camera Network**




Like a lot of companies seeking to install surveillance cameras, GarrettCom did not have AC power outlets in some of the desired camera locations. Traditionally, cameras would require AC power in order to operate. GarrettCom found that many of the cameras now available have have a built-in Power over Ethernet (PoE) port that would eliminate the AC power requirement. GarrettCom knew that some vendors in the market were offering products known as "midspan solutions" -- a patch-panel sort of device that could be added and used with a standard Ethernet switch to add PoE power for the cameras. GarrettCom always believed this would be a cumbersome approach.

## GarrettCom, Security with PoE

After acquiring PoE-optional cameras, GarrettCom decided on the simple, clean solution for providing power to its new networked surveillance cameras: its own Magnum PS14P PoE Power Source Switch.

### THE SOLUTION

GarrettCom connected a Magnum PS14P PoE Switch into a -48VDC power source and then connected the PoE cameras into the PS14P Switch. Three cameras are connected to the front ports on each PS14P, and a Magnum Ethernet Switch then connects to the rear port. Both data and power are transmitted over the same Ethernet cables. No mid-span device is required because the PS14P does the work of two devices--a standard Ethernet switch and a power-adder (mid-span PoE) device.

With a robust 60 watts max (15/port), each PS14P can easily accommodate multiple PoE cameras. Leading PoE cameras have an average power consumption of about six watts.

The solution was very effective for GarrettCom in terms of installation costs. GarrettCom avoided the need for separate AC power and data cable infrastruture as well as costly AC outlets. No electrician was needed for the installation, rather the IT department simply did the job.

### THE RESULTS

Because of Ethernet's high bandwidth, GarrettCom can now view all key security areas of its corporate facilities in real-time, and can store histories of all time-periods to be reviewed later if a security incident should arise.

The PS14P units have performed perfectly, even in harsh ceiling-plenum locations. Some units were placed in industrial factory floor and outdoor locations. The PS14P's special patent-pending thermal techniques and a heavy-duty metal case keep out dust, dirt, and other impurities that are found in these locations.

### ABOUT PoE AND THE MAGNUM PS14P

The **Magnum PS14P Power Source Switch** is a premium-rated 802.3af PoE switch with four 10/100 RJ-45 ports in a compact package, rated for temperature un-controlled (outdoor) environments. All four RJ-45 Ethernet ports support Power Source PoE per the IEEE 802.3af standard. PS14P units include an integral -48V DC terminal block for power input. The product's ambient temperature rating is -40° to +75° C.

In additon to video surveillance, the PS14P may be used in a variety of other industrial PoE applications, including:

- connecting a VoIP phone
- supporting PoE-powered digital clocks
- integrating an IP badge reader in an outdoor guard station into an indoor LAN
- digital public-address systems in factories
- connecting an IP wireless access point in a warehouse
- network service for PoE-enabled industrial sensors, controllers, and meters
- combining with a Magnum CS14P-48VDC for a fiber optic up-link in any of the above applications.

For a more complete list of appliations, visit www.PoEswitch.com.

### ABOUT GARRETTCOM

GarrettCom, Inc. is the leading manufacturer of industrial and carrier-class Ethernet LAN products. GarrettCom offers a comprehensive line of NEBS and ETSI-certified switches for use in telecommunications, industrial, automation and traffic control environments. The company's management software supports redundant rings and secure web-based access to local and remote networks. GarrettCom markets its products through a network of resellers, OEMs, system integrators, and distributors worldwide. For more information on GarrettCom and its products, visit **www.GarrettCom.com**.

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