



# THE RISE OF WIRELESS SYSTEMS FOR COMMERCIAL INTRUSION DETECTION

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During his keynote address at the 2017 Total Tech Summit in Orlando, Florida, Vivek Khemka, CTO of satellite services provider DISH, named security as one of the four industries expected to be most directly transformed by IoT. There are even more changes in the wings with the advent of 5G and new disruptions in video, drones, apps and robotics. As connected devices continue to penetrate our IoT world, the smart money is on smart systems for commercial security.

### **THE RISE OF WIRELESS SYSTEMS FOR COMMERCIAL INTRUSION DETECTION**

Owners of homes and small-to-medium sized businesses were quick to pick up on the potential in wireless perimeter intrusion detection systems. Adoption was slower in the large commercial sector, though popularity has picked up lately, thanks to faster connections through cloud-based connectivity. This means that new wireless systems now hold the key to enhanced security, not just for smaller installations, but also throughout the commercial and industrial enterprise space.

### **LEVERAGING TECHNOLOGY TO ADDRESS COMMERCIAL SECURITY CONCERNS**

Fueled by the increasing number of video surveillance systems, and transformative innovations in wireless networking and predictive analytics, the demand for commercial intrusion systems is rapidly rising, especially

in North America. At present, the perimeter intrusion detection systems market is estimated at USD \$10.73 billion, but research leader Markets and Markets predicts a dramatic jump to USD \$21.75 billion by 2023.

By streamlining the management of security operations, holistic wireless systems provide improved solutions for commercial access control, fire and life safety, industrial loss prevention, intrusion detection, and video surveillance. High speed connectivity creates new ways to integrate technologies for everything from locking doors to prevent intruders to unlocking them to admit first responders.

### **INTRODUCING AN INDUSTRY FIRST: A COMMERCIAL INTRUSION SYSTEM THAT ELIMINATES THE NEED FOR WIRES ON SENSORS AND KEYPADS**

Tyco security solutions is one of the key players in the perimeter intrusion

**“Hardware may cost less for wired systems, but labor and installation time are more expensive.”**

detection systems market. Their integrated solutions help companies implement security best practices to protect people, processes, and production. So it was no surprise when Johnson Controls announced Tyco's release of PowerSeries Pro, the industry's first commercial panel designed to secure large commercial installations without the need for wires on sensors on keypads.

Like most industry firsts, PowerSeries Pro resulted from a need to improve on the status quo. “Wireless security systems had

hit a wall when it came to large installations, such as warehouses, office buildings, factories, and healthcare facilities,” notes Jennifer Doctor, Senior Director of Product Management for Tyco security solutions. “With cyber security a growing concern, Tyco saw an opportunity to use PowerG technology to enhance cyber protection and prevent tampering.

PowerSeries Pro also addressed a general concern with how long it can take to install commercial security systems. “There was too much wiring and installers had to use too many repeaters because of the low device range,” says Doctor. “We addressed these concerns and designed the DSC PowerSeries Pro with growth opportunities. Dealers are easily able to set up and provide scalable commercial installations without the need to run long wires. As a result, the savings on jobs with these runs can be substantial

due to eliminating rolls of copper wires, faster installation time thereby saving labor, and the level of cyber protection is second to none.”

## UNPARALLELED CYBER PROTECTION: THE POWER OF WIRES WITHOUT WIRES

The strength of PowerSeries Pro lies in PowerG, an industry leading wireless intrusion technology that offers all the benefits of traditional wired security, without the hassles and vulnerabilities of wires. A proprietary protocol, PowerG is perfectly suited for a variety of large-scale installations, including manufacturing facilities, construction sites, commercial buildings, chemical plants, public utilities, and hard-to-reach locations. Ultra-reliable, two-way 128-bit AES encrypted communication, and iron-clad blocking of interference deliver unparalleled cyber protection with a minimum number of false alarms. Long-range wireless transmission

enables easy and quick wire-free and repeater-free installations; and adaptive transmission stretches the time between battery changes.

According to Neil Evans, Senior Product Manager for Tyco security solutions, there is nothing especially distinctive about the appearance of PowerSeries Pro. “It doesn’t look that different to the layperson,” he says, “but it’s something groundbreaking for installers. On a very simplistic level, they don’t have to drill hundreds of holes and run miles of wire. The greatest benefits, of course, are improved security and a better bottom line.”

## CHANGING THE GAME

As the first commercial panel capable of handling large commercial installations without the need for wires on sensors and keypads, PowerSeries Pro is a game changer for security conscious owners of large enterprises.

## BENEFITS INCLUDE EVERYTHING FROM SAVINGS AND SECURITY TO FLEXIBILITY AND RELIABILITY:

- **SAVINGS:** Wireless intrusion detection systems reduce the costs associated with labor intensive trenching and wire pulling. “Hardware may cost less for wired systems,” says Evans, “but labor and installation time are more expensive.” Even batteries – a given expense with wireless systems – are less expensive with PowerSeries Pro because Adaptive Transmission Power extends the life of the batteries to up to eight years
- **SECURITY:** Tyco’s PowerG technology with 128-bit encryption

is considered the most secure system on the market. Operations are smoother when physical security is integrated with IT.

- **INSTALLATION:** PowerSeries Pro has an increased focus on ease of installation. It comes with a user-friendly installation app.
- **GROWTH OPPORTUNITIES:** In addition to being simple for dealers to set up, PowerSeries Pro provides scalable commercial installations without the need to run long wires. Not limited by the scope of the initial installation, it is designed to accommodate additional buildings and areas, as well as additional functions, such as temperature monitoring and predictive analytics.

### • INTEGRATION CAPABILITIES:

By integrating with third party peripherals, such as Building Management Software (BMS), PowerSeries Pro is better able to accommodate the needs of the customer and cut costs.

### • DIAGNOSTIC CAPABILITIES:

PowerSeries Pro is also the leader in diagnostics, providing far more information about the general health of the system.

### • FLEXIBILITY:

PowerSeries Pro is able to function in a broad range of locations and in extreme climatic conditions.

### • RELIABILITY & INSURABILITY:

PowerSeries Pro meets the highest standards for reliability.

## EXPLAINING THE TECHNOLOGY

PowerSeries Pro by far exceeds its individual parts, but the parts are also impressive on their own:

- **Commercial grade (EN Grade 3) security panel:** Like students and athletes, security systems receive certificates and scores, according to how well they perform. In the case of an intrusion detection system, criteria include quality, functionality, ability to withstand the elements, and resistance to external variables, such as mechanical interference and electromagnetic fields. Grade 3 certification is reserved for systems that can protect large commercial and industrial enterprises from entry at every possible point.
- **LTE (Long-term Evolution) communicators:** a standard for high speed wireless communication, LTE improves the quality and speed of transmissions. Features include end-to-end service, increased data capacity, increased speed of wireless data networks, improved mobile support, and an all-IP flat network architecture.

“ Adaptive Transmission Power improves the overall performance of PowerSeries Pro by adjusting transmission power.

- **On-board Ethernet:** The PowerSeries Pro panel uses an Ethernet cable to connect to the Internet. This ensures long-lasting value.
- **Increased on board power:** As the physical size of installations grow, additional current is the utmost importance. The PowerSeries Pro offers two (2) amps of current from the main panel. In addition, two (2) or three (3) amp supervised power supplies can be added for additional current.
- **Corbus Extender / Power Supply:** Although PowerSeries Pro supports wireless PowerG keypads, the PowerSeries Pro panel uses a 4-wire Corbus connection to communicate with wired keypads if needed. A status LED is illuminated when the keypad is enrolled and indicates problems with the alarm panel supervision and low voltage. The Corbus supports “Home Run”, “Star”, and “Daisy Chain” wiring types and can also support the transmission of visual verification frames to the panel.
- **Built-in 128-bit encryption technology:** A cutting edge defence against cyber attacks, Tyco’s 128-bit encryption offers an exceptionally high level of protection against analysis tools and digital attacks.
- **Frequency Hopping Spread Spectrum technology:** PowerSeries Pro uses Frequency Hopping Spread Spectrum technology to ensure the dependability and security of communications. Designed to cover large areas, this technology repeatedly switches frequencies

in order to minimize purposeful or incidental interference of radio signals and prevent interception and obstruction during transmission.

- **Time Division Multiple Access (TDMA):** A complex, digital, cellular telephone technology, TDMA reduces interference when multiple users share the same frequency. By using TDMA to split channels into different time slots, PowerSeries Pro increases the transmission of data and prevents the collision of messages. A high rate of transmission ensures reliable communication within up to 2km, thereby reducing unnecessary site checks and spiraling costs related to false alarms.
- **Adaptive Transmission Power:** Adaptive Transmission Power improves the overall performance of PowerSeries Pro by adjusting transmission power. Distributing the traffic load cuts costs for wireless systems by managing power more efficiently and extending the life of the battery to up to eight years.
- **Support for Building Management Software (BMS):** PowerSeries Pro supports multiple third-party integrations, including Building Management Software (BMS), computer software that monitors and regulates a building’s electrical and mechanical systems, including fire prevention systems, security systems, ventilation, lighting, power, heating and cooling.

To learn more about commercial security, please visit [www.dsc.com/PowerSeriesPro](http://www.dsc.com/PowerSeriesPro)

## ABOUT TYCO

Tyco and its portfolio of brands form one of the largest security portfolios in the world. Engineers specializing in video security, access control, location-based security, and intrusion security give Tyco a competitive advantage when it comes to system integration. The company's focus is on turning data from sensors and systems into sharp insights and services that can solve those challenges and improve its customers' operations and performance. With more than a billion sensors and devices already in place across the globe, Tyco is in a unique position to deliver that future and make the Internet of Things work for its customers.

Visit [www.tycosecurityproducts.com](http://www.tycosecurityproducts.com) to find out more.

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