



THE SUSTAINABLE INTELLIGENT BUILDING:

How Digital Building Shapes Core Efficiency



THRIVE IN YOUR ELEMENT

Total performance has reached a new standard. Intelligent Building Solutions have changed the ways that people access power and data. Connecting automation through a single IP network is poised to become the preferred form of technology in many working and living structures. Advancing the movement of leading-edge design is increasingly attainable. The evolving objectives of wellness, efficiency and total productivity all empower sustainability in the spaces you occupy.

Superior Essex Communications provides products designed to enhance, inspire and engage the intelligent building elements of the future. Automated access allows for the control of lighting, security, audio visual programming and more. Our pioneering product leadership has demonstrated expertise in developing intelligent building solutions for enterprise, hospitality, education, reception, hospital and more.

“Developing smart buildings will give rise to smart campuses, which will foster smart communities and eventually smart cities.”

-Harry G. Smeenck

Vice President of Program Development at the Telecommunications Industry Association, in Smart Buildings Magazine

PoE connects building systems to a central power source, decreasing wiring and installation costs.

PowerWise® Fiber supports power and data transmission at lengths beyond 100 meters.

PowerWise® CMR-CMX is designed for indoor and outdoor spaces.

PowerWise® 10G 4PPoE is the first patented 10 Gigabit Ethernet plenum cable dedicated to 100W application and deployment.

10Gain® XP Category 6A U/UTP CMP 0.25 inch O.D. is the industry's smallest Category 6A cable.

The segmented tape shielding of the 10Gain® XP Category 6A U/UTP CMP fully protects against alien crosstalk.

97% ENERGY EFFICIENCY

Save money, installation time and resources



CONVERGENCE IS NOW



100% FEP

Insulation yields longest system life span

3RD PARTY CERTIFIED

Sustainably manufactured in a third-party certified Zero Waste to Landfill Facility

INTELLIGENT BUILDING IS WELLNESS WHERE YOU DWELL

Our Power-over-Ethernet (PoE) PowerWise® solutions offer copper, fiber and hybrid cables to power your environment in a broad range of industries and applications. Superior Essex Communications unites its partners in a Sustainable Intelligent Building Ecosystem. The objective is to create customized top-performing solutions for architect and design professionals who aim to optimize new buildings and retrofit existing frameworks for an ideal occupant experience.

Our wide portfolio of products contribute to all green building standards including the U.S. Green Building Council's LEED, WELL Building, the Living Building Challenge to meet the increased need for wellness in working, living and recreational environments. The imperatives continue. Superior Essex is the only communications cable manufacturer third-party certified for Zero Waste to Landfill with Red List free materials.

“The average office can save 18% of its whole building energy usage through the installation of smart technologies.”

The ACEEE report
Smart Buildings: A Deeper Dive into
Market Segments

PoE APPLICATIONS

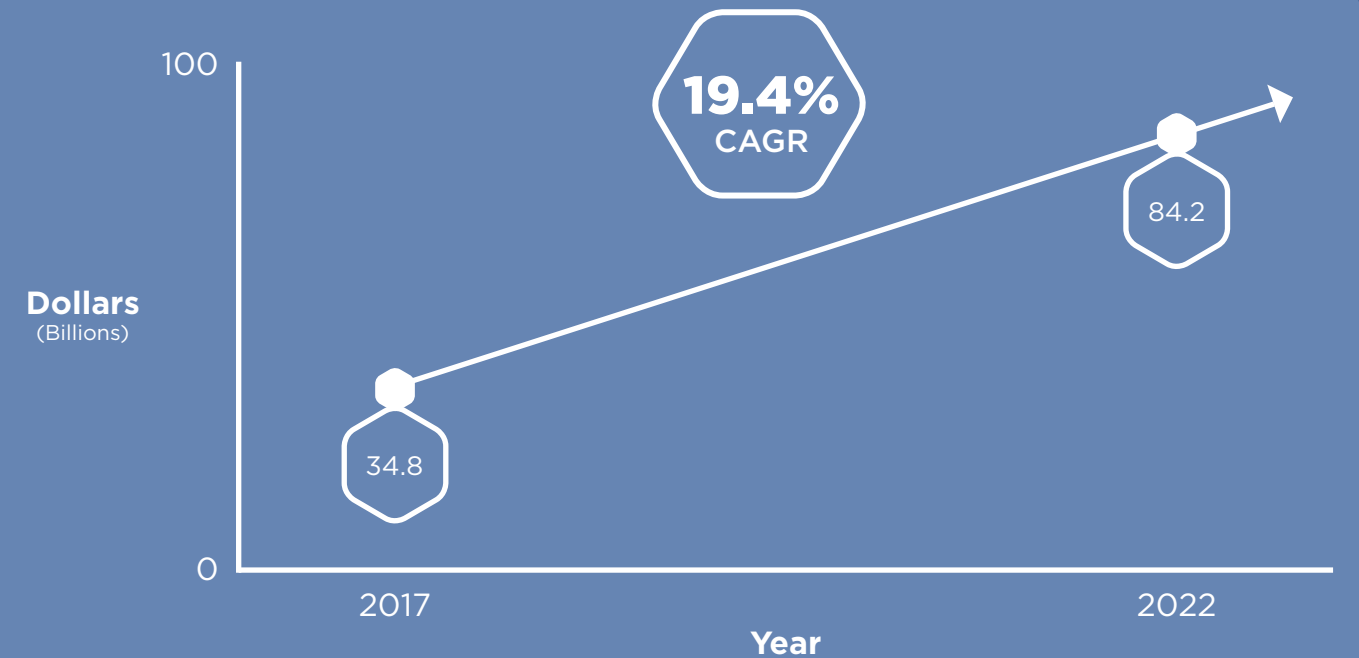


Occupancy-based wireless
thermostats can save
5-10% of HVAC energy.

- The ACEEE, Smart Buildings:
A Deeper Dive into Market Segments



INTERNET OF THINGS PROJECTED GROWTH



- Data derived from Memoori research

**Commercial buildings
could save up to \$60B
if energy efficiency
investments were raised
by just 1-4%.**

- American Council for an
Energy Efficient Economy

Seventeen common sense efficiency measures could save the United States 22% of projected energy use in 2030.

- Buildings.com, How Smart Buildings Save Energy

Revenue from Building Energy and Control Systems (BECS) made up the largest proportion of the market, with sales of \$33.4B.

- Memoori research

“Cities are undergoing a profound transformation at the convergence of digital information and physical environment. Towns are now made not only of bricks but of bits.”

-Carlo Ratti

Director of MIT's Senseable Cities Lab

THE BUILDINGS IN WHICH WE
**WORK, LIVE,
LEARN, & PLAY**
CHANGE
ACCORDINGLY
IN ORDER TO DELIVER
**PRODUCTIVE,
SAFE, SECURE,
& ENERGY EFFICIENT
SPACES SUITED FOR
TODAY'S WORLD.**

- American Planning Association, Digital Buildings, Harvard University Graduate School of Design

PowerWise® Sustainable Intelligent Building Success Stories

West Baden Springs Hotel A Futureproof, IoT-Ready Building Solution

Built in 1902, The West Baden Hotel, in West Baden Springs, Indiana, is a marvel of early modern architecture. For more than 50 years, its 200-foot atrium was the world's largest free-spanning dome and was called the Eighth Wonder of the World in early tourism advertisements. To modernize the structure while retaining its historic splendor, Superior Essex provided 30,000 feet of PowerWise® Ethernet cable to be used with hundreds of light fixtures, Power-over-Ethernet nodes, and several cabinets filled with PoE switches and network hardware. The networked lighting offered fine-grain control of each specific lighting device and endpoint, as plug-and-play hardware easily accommodates maintenance, potential moves, additions and changes.

Data gathering and analytics available for the system and environment created the foundation for a complete in-building IoT platform. Each of the lights required 50W of power or less, at approximately 2700K, significantly less than the incandescent fixtures they replaced. With 60W power consumption over 50 meters, this measures only 2.5% power loss, helps build user return on investment in power savings. It is the industry's lowest heat increase in 22 AWG conductors. By using PowerWise® 1G 4PPoE cabling to transmit power and data to each light, the need for AC wiring systems at each fixture was eliminated. Additionally, PoE-enabled LED lights increased energy efficiency by 98.5%.

Superior Essex PowerWise® 1 Gigabit 4-pair Power-over-Ethernet (4PPoE) cabling runs from the server room down through the atrium directly to the lights.

By using PowerWise® 1G 4PPoE cabling to transmit power and data to each light, the need for AC wiring systems at each fixture was eliminated.

PoE-enabled LED lights increase energy efficiency by 98.5%.

The 60W power consumption over 50 meters, with only 2.5% power loss, helps build user ROI in energy savings.

The 22 AWG conductors deliver the lowest heat increase on the market.

PowerWise® Sustainable Intelligent Building Success Stories

Sinclair Marriott Autograph Hotel

From Office Space to Cutting-Edge Intelligent Building

The Sinclair Marriott is part of the Autograph Hotel collection in Fort Worth, Texas. The structure was originally known as the Sinclair, a 1930s-era Art Deco office complex. The owner, Sinclair Holdings, LLC wanted to modify the building into a 165-room four-star hotel to offer classic, yet contemporary accommodations in Fort Worth's bustling downtown area. They sought the expertise and resources of Superior Essex to convert the space into a Sustainable Intelligent Building.

The PowerWise® 4-pair Power-over-Ethernet (4PPoE) products connected the IP communications, control, and lighting devices. The 22 AWG conductors maximized power efficiency to for lights and any PoE application. A single Optical Line Terminal (OLT) in the main data center of the Sinclair Buildings serves all 16-stories of the Sinclair Building, and connects the 8-story STS Tower and 13-story Hotel Texas. What's more, the use of Single Mode Fiber (SMF) cable and Passive Optical Lan (POL) in combination with PoE infrastructure will enable future applications due to its extended reach by traveling 12-miles in distance without active electronics.

The 22 AWG conductors maximize power efficiency delivered to lights and any PoE application.

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Use of Single Mode Fiber (SMF) cable and Passive Optical Lan (POL), in combination with PoE infrastructure, will enable future applications.

POL and SMF can travel 12 miles in distance without active electronics.



PowerWise® Sustainable Intelligent Building Success Stories

Launch Fishers

Evolution to Convergence for a Intelligent Building

Launch Fishers in Fishers, Indiana is a 52,000 square foot co-working space designed to accelerate entrepreneurial and technological endeavors in the region. Meeting the demands on future buildings like this one requires advanced, converged solutions, primarily the support of high-speed data communications, lighting and power delivery through a sophisticated network. Sustainable Intelligent Building creates measurable efficiency gains through PoE-enabled systems that can work from existing IT infrastructure.

To meet these needs, Superior Essex provided 10,000 feet of its PowerWise® CAT 5e+ copper cables to connect from the switches to the lights. By using 22 AWG copper conductors, PowerWise CAT 5e+ delivered the necessary 60W Watts of power to support LED lights with 97% power efficiency, while also supporting one gigabit data transmission. In ceiling spaces with hundreds of LEDs, this unparalleled power efficiency can yield an energy savings of thousands of kilowatt hours per year, which translates to thousands of dollars in saved utilities costs. Additionally, PowerWise® CAT 5e+ cable was manufactured using sustainable processes in a third-party certified Zero Waste to Landfill facility.

PowerWise® CAT 5e+ 4PPoE cable was designed to meet the high power and data demands of PoE applications.

Superior Essex provided 10,000 feet of its PowerWise® CAT 5e+ copper cables to connect from the switches to the lights.

Utilizing 22 AWG copper conductors, PowerWise® CAT 5e+ delivered 60W of power for LED lights with 97% power efficiency, while supporting 1 gigabit data transmission.

PowerWise® CAT 5e+ cable was manufactured using sustainable processes in a third-party certified Zero Waste to Landfill facility.





www.superioressexcommunications.com

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