



CORESINC SMART BUILDING SOLUTION >

SOLUTION OVERVIEW

molex

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WHAT MAKES A BUILDING SMART?

Building automation isn't new. What sets smart buildings apart?

The heart of what makes a building "smart" is data: what data is collected and how it's collated. What systems or processes can be automated as a result of it. What lessons can be learned from looking back at it. Today, with a huge range of devices and integrations on the market, a building, workspace, facility or campus can be made "smart" in precisely the ways that matter to you.



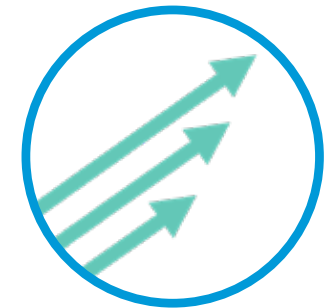
INFORMATION

Without data, decisions are just guesswork. Real-time data from a range of sensors and building systems gives the platform and its users information on which to base their actions.



AUTOMATION

Automation allows smart buildings to take action based on predetermined rules including schedules or sensor data. This frees up time for facilities management and other teams to focus on more strategic and valuable work.



EVOLUTION

Long-term data analysis enables you to learn how the building is really used, where further efficiencies might be made, and where the smart building system itself could be improved.

BENEFITS OF MAKING YOUR BUILDING SMART

There are many factors helping drive interest in smart building technology: rising energy costs; increased acceptance of new ways of working; climate change concerns; and increased understanding of the relationship between indoor environments and occupant health. Smart building technology can deliver on short term projects, like cutting energy costs, while providing the infrastructure for longer term strategic goals - optimizing workspaces, improving sustainability, and improving employee productivity.

SAVE ENERGY

50%

Commercial buildings are notorious for wasting electricity. A wholly smart building with integrated systems can realise savings up to 50%, up to 2.37kWh/sq ft. (1)

IMPROVE PRODUCTIVITY

1.5%

Comfortable workspaces are also productive workspaces. A 1.5% increase in productivity is attributed to LEED Gold and Platinum buildings, equating to roughly \$665 per employee per year. (2)

ATTRACT BETTER RENTS

3.7%

Regulators aren't the only ones who reward sustainability initiatives. Buildings with green certifications attract rent premiums of up to 3.7% (3)

FAST ROI

<2yrs

Return on investment applied to IoT sensors, switches, and analytics can occur in six months to two years. (4) The infrastructure then becomes the foundation for upgrades, improvements or expansions.

References: 1. [Smart Buildings: Using Smart Technology to Save Energy in Existing Buildings](#) 2. [The Costs and Financial Benefits of Green Buildings : A Report to California's Sustainable Building Task Force](#) 3. [Green Buildings Earn Higher Rents. Study Finds | Greenbiz](#) 4. [Ask The Expert: Smart Buildings- What Are They And What Do They Cost?](#)

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SMART BUILDING SOLUTION

Smart building technology has the potential to revolutionize the way we think about spaces: creating healthy, productive workspaces, reducing energy usage, streamlining facilities management.

Modular and customizable, CoreSync enables you to make your facilities smart in the ways that matter to you. A wide range of OEM and compatible devices and a powerful API enable a huge range of options, while a PoE infrastructure provides security and reliability.

Occupant Experience

Control environmental conditions such as light brightness and room temperature to create human-centric spaces that enable occupants to perform at their best.

Sustainability

Achieve your sustainability goals with real-time, granular data, sophisticated automation and easy reporting.

Efficiency

Streamline the workload of facilities teams, enabling them to concentrate on strategic activities that generate real value.



TANGIBLE, MEASURABLE BENEFITS

CoreSync delivers tangible benefits for multiple teams, occupant types and stakeholders. Customizable profiles and user permissions enable the dashboard to be configured to show what's important to those that need it. Data analysis and reporting make sure you can track progress on all your initiatives and provide the evidence when improvements have been made.

OCCUPANTS



- Improved comfort
- Biodynamic lighting
- Window shades control
- Real time environmental data
- Integrated emergency lighting

FACILITIES MGR



- Manage multiple facilities & building systems from one dashboard
- Intelligent alerts for proactive maintenance, reduced downtime

MANAGEMENT



- Improved sustainability & compliance
- Operational efficiency
- Reduce costs
- Easily generate reports

IT



- Secure and reliable
- Easy to scale and reconfigure
- Familiar PoE connectivity
- Inherently safe SELV power

INTEGRATORS



- Fast deployment
- Easy install devices & Standards-based APIs
- Partner certification and training
- A global brand with expert technical support

REDUCE ENERGY, INCREASE SUSTAINABILITY

Sustainability is an increasing priority for anyone who owns or operates commercial real estate. Governments and regulators worldwide are incentivizing companies to go greener and penalizing those who fall behind. Tenants and employees are looking at the green credentials of landlords when evaluating a move. And of course, cutting energy wastage saves costs. CoreSync can help you achieve your sustainability goals with real-time, granular data and sophisticated automation.



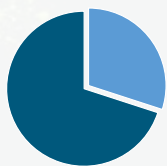
80%

Amount of energy potentially saved by CoreSync advanced lighting controls (1)



20%

Savings in lighting maintenance cost (1)



33%

Amount of office energy use attributed to plug loads (2)



25%

Amount of commercial plug load attributed to vampire loads –power drawn when equipment is not in use, or even powered off (2)

KEY FEATURES:

Save energy by switching off lights and devices based on real-time data such as occupancy, local controls, schedules, or a combination of all

Plug control feature allows you to centrally monitor the electricity usage from *any* mains powered device – photocopiers, AV, microwaves, PoS - and to remotely shut off power, preventing “vampire” energy draw from equipment not in use

PoE switch shutdown feature enables nonessential system infrastructure to be powered down when not in use. Powering up again takes seconds and can be triggered by schedules, sensor data or manually

Real-time data enables you to track the progress of sustainability initiatives and identify potential issues immediately as they arise, enabling you to take swift action

Easily compile data for stakeholder reports, compliance documentation and regulatory requirements

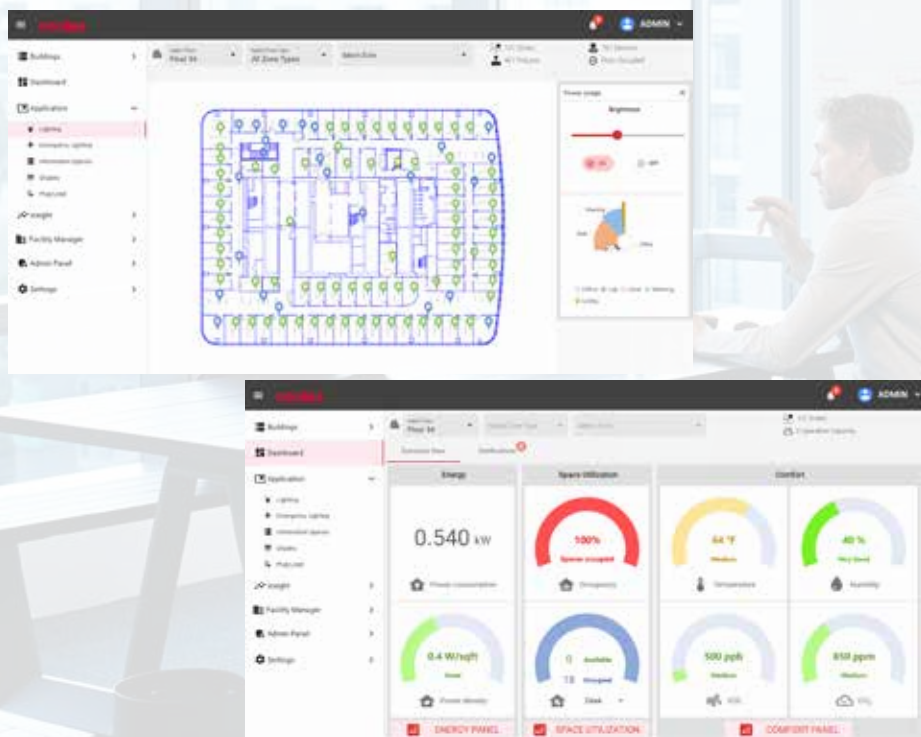
References: 1. Calculations based on building size ~ 104,229 sqft, LPD (Lighting Power Density): 0.397 W/sqft, Lighting EUI (Energy Usage Intensity): 3.5 KWh/sqft. 2. [What's the Spook on Vampire Loads? A Halloween Special on Plug Loads](#)

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IMPROVE EFFICIENCY AND OPTIMIZE SPACES

Facility managers are responsible for major corporate assets that often account for **35 to 50 percent** of an organization's balance sheet (1). Traditional reactive maintenance is **3 to 9 times more expensive** than a smart-enabled predictive approach (2). Juggling multiple systems is time consuming and complex, yet 81% of facilities managers use **three or more systems on a daily basis** (3).

CoreSync enables you to streamline, automate and improve the workload of your facilities team, enabling them to concentrate on strategic activities that generate real value.



KEY FEATURES:

Integrate data from multiple systems into a single dashboard for at-a-glance monitoring and cross referencing. Alternatively, integrate data from a CoreSync network into existing systems, providing the information needed for better understanding and control

Set up proactive alerts and warnings to let you know when systems aren't performing as expected, enabling you to investigate and take action before things become critical

Check in from any browser, anywhere, and make changes on the fly - no need to be physically in the office to make schedule changes or run a report

Analyze occupancy data over time to understand utilization patterns and evaluate if spaces or assets could be better organized

Set up different profiles for different teams, enabling them to find the answers they need without information overload

References: 1 [Improving Facilities Lifecycle Management using RFID Localization and BIM-Based Visual Analytics](#) 2 [Smart Buildings are Smart Business: ABB](#) 3. [Big data: A new revolution in the UK facilities management sector \(RICS\)](#)

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POWER OVER ETHERNET: THE IDEAL INFRASTRUCTURE

The infrastructure of your smart building will affect how reliably it can transport data, how easy it is to upgrade, and how easy it is to maintain.

Providing both safe, low-voltage power - more than enough for IoT devices- and robust data connectivity on a single cable, Power over Ethernet is the ideal infrastructure for smart buildings.

FAMILIAR

Ethernet technology is familiar to most personnel in IT, facilities management, and many other teams

PoE is an established, widespread technology with a huge range of compatible devices and vendors

PoE is low-voltage, making it is inherently safe for users and devices. It can be altered or upgraded without the need for professional electricians or safety precautions

FLEXIBLE

The latest PoE Standards deliver up to 71W - enough for a huge range of innovative applications

Devices are simple to connect and disconnect, making it easy to scale up, scale down, modify or reconfigure as required

Products are available for a range of nonstandard conditions such as dust-proof for use in factories, weather-proof for use outdoors, or antimicrobial for use in hospitals

BEYOND CABLES

PoE may be cable-based, but it's easy to connect wireless sensors and devices

The control system and dashboards can be accessed remotely through any browser - check on urgent alerts, change schedules on the fly or download data while in a meeting

PoE is natively IP based, making it easy to connect to other systems



CASE STUDY:

POWERHOUSE BRATTØRKAIA

The Powerhouse Alliance wanted to build a net zero energy smart building that would serve as a leading example for the northern hemisphere: one that produces more energy than it consumes over its lifespan.

In order to achieve their challenging goals, Powerhouse Brattørkaia evaluated every building system and leveraged a series of technologies including heat recovery systems, energy efficient appliances, and CoreSync smart building management.



- Dynamic control of over 2000 luminaires, based on schedules and real-time data from over 2500 sensors
- Biodynamic lighting manages color tone to match the shift of natural daylight. This is essential in locations like northern Norway where long winter nights can significantly impact mental health
- PoE infrastructure requires less cable than mains powered smart buildings, reducing the amount of physical material used
- Nonessential PoE switches power down when not in use. Full functionality can be restored in seconds when required
- Powerhouse Brattørkaia produces more than twice as much electricity as it needs. It has received the BREEAM Outstanding certification, the highest possible ranking.

CASE STUDY:

CISCO PENN 1

PENN 1, a 42,000 square-foot Midtown Manhattan building constructed in the 1970s, was never designed to be smart or data-driven. The global pandemic, however, has forever altered the dynamics between companies, their workers, and workspaces.

The new Cisco PENN 1's foundational network features a single interface called 'Spaces', for integrating and extracting the data from the network system. This network system comprises of Cisco Catalyst 9000 switches and access points, PoE technology that provides data connectivity and electrical power for the building's subsystems. CoreSync's smart building platform effectively optimizes PENN 1's subsystems and environmental conditions. It is 100% run on PoE, thereby

minimizing costs and saving energy.

In addition to controlling and automating the lighting in the building's common areas and workspaces, CoreSync provides an emergency lighting system that removes the need for separate emergency lights and local battery backups. It also delivers a granular sensory network that monitors air quality, temperature, humidity, space utilization, and more. CoreSync and its connected devices are natively integrated with Cisco's Spaces to aggregate and visualize subsystem data and manage those subsystems collectively instead of individually.



CASE STUDY:

GEORGIA PACIFIC

Georgia Pacific wanted their landmark Atlanta building's refit to incorporate Smart Building technology to improve the workplace experience for employees and visitors, orchestrate multiple building systems, and embody the office of the future.

Its systems utilize a state-of-the-art Power over Ethernet (PoE) infrastructure and CoreSync Smart Building Platform, deployed on Cisco Systems technology and integrating with Johnson Controls Metasys® workspace automation platform from Johnson Controls.

Data from CoreSync sensors informs room scheduling, lighting, AV, HVAC and more, automatically ensuring comfort and productivity.



CORES SYNC ALLIANCE

The CoreSync Alliance brings together a range of companies to provide network connected services in commercial buildings and everyday life. Alliance members are committed to elegant, high-quality design, bringing their expertise to create better-lit, contemporary spaces and digital experiences. Through combined expertise and innovation, the Alliance is developing friction-less integration that delivers improved efficiency, enhanced outcomes, real-time data and monitoring to commercial building owners, managers and tenants.

TECHNOLOGY ALLIANCE

Through combined expertise and innovation, the CoreSync Technology Alliance is developing friction-less integration that delivers improved efficiency, enhanced outcomes, real-time data and monitoring to commercial building owners, managers and tenants. The Alliance enables end users to specify a range of IoT end devices and BMS products in the knowledge that these technologies are fully compatible with the CoreSync PoE open system architecture.

APPROVED INTEGRATORS

CoreSync Approved Integrators are industry-leading independent network companies able to support your needs for system design, installation, commissioning and user training. Through a tiered approach, the Molex certification program allows integrators to become accredited in a specialized field: design, integration, programming, or achieving all three to become a CoreSync master integrator. Approved integrators receive regular product and training updates to ensure they are able to provide end-users with the advantages of the latest CoreSync technology developments.

LIGHTING ALLIANCE ASSOCIATES

The Lighting Alliance brings together a number of top lighting fixture manufacturers who have collaborated with Molex to configure and test their products to operate with the CoreSync PoE open system architecture. These companies have years of experience in the field of lighting design and in depth knowledge of the CoreSync system.

Members include:



Related Links

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