Critical Power and IT Data continuity for Healthcare

Sustainable, resilient, care-centric and efficient healthcare for power and digital infrastructure solutions

se.com/industrial-business-continuity

Life Is On | Schneider Electric

The Healthcare Revolution

Power is crucial for facilities such as hospitals. Unplanned outages can threaten occupant safety, damage reputations, and create financial strain. In the face of high demand, hospitals need to maintain their operations and rapidly scale capacity while accounting for safety, reliability, and resiliency.

At Schneider Electric, we understand the importance of power and its continuous availability throughout the continuum of care.

Our IoT-enabled infrastructure and smart systems ensure that power and powerful technologies are always accessible, keeping people safe and hospitals secure.

With specialized expertise and planning tools, we design, modernize, and optimize your entire building systems infrastructure; enhancing project efficiency and maximizing facility operations for cost-savings today, and intelligent planning tomorrow.

Our digital technologies unify disparate systems for enhanced performance. From electrical systems to building automation technologies, we bring together core systems to help you achieve uncompromising clinical outcomes, infrastructure resilience, operational efficiency, and smart energy management.

At Schneider Electric, we believe nothing should hold your healthcare facility behind. Join us today as we journey towards the healthcare facility ahead of its time.

Providing integrated, digital solutions designed with patients, staff, and visitors front-of-mind, we empower patient autonomy and streamline workflows to improve experiences for all. With our solutions, healthcare facilities can enhance patient care, optimize operations, and create a care-centric environment.

Welcome to the Healthcare Revolution, where Schneider Electric revolutionizes the power and digital solutions landscape to shape a future of safe, efficient, and patient-centered healthcare.

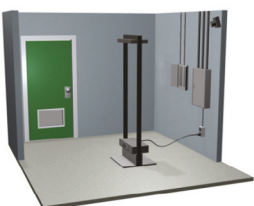# IT Infrastructure to support Healthcare digital transformation

In today's digital age, hospitals and healthcare institutions rely heavily on technology to deliver efficient and high-quality patient care. Data centers play a pivotal role in supporting these healthcare facilities by providing a robust and secure infrastructure for managing and storing critical medical and administrative data.

Data centers are integral to the functioning of modern hospitals for several reasons:

- Electronic Health Records (EHRs): Hospitals generate and manage vast amounts of patient data, including electronic health records (EHRs). Data centers ensure the secure storage and accessibility of these records, allowing healthcare providers to access patient information efficiently and accurately.

- Diagnostic Imaging: Modern healthcare relies heavily on diagnostic imaging technologies like MRI, CT scans, and X-rays. The high-resolution images generated by these devices require substantial storage and processing capabilities, which data centers provide.

- Telemedicine: With the rise of telemedicine, hospitals need reliable and high-speed data connections. Data centers support the infrastructure required for video consultations, remote monitoring, and telehealth services.

- Data Security and Compliance: Patient confidentiality and data security are paramount in healthcare. Data centers employ advanced security measures and compliance standards to protect sensitive medical information.

- Disaster Recovery: Hospitals can't afford downtime. Data centers implement robust disaster recovery and backup solutions to ensure data availability even in the face of natural disasters or system failures.

- Efficiency and Scalability: Data centers provide the computational power and storage capacity required to handle the growing demands of hospital applications. They can scale resources up or down as needed, ensuring optimal performance.
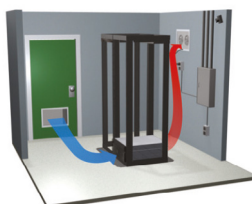
Small
- Rack systems
- Wall mount
- 2-/4-post open frame
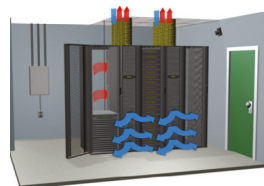- 4-post enclosures
- Rack accessories

Medium
- UPS system
- Video surveillance
- Access control
- Environmental monitoring
- HVAC system

Large
- Power distribution
- Management software
- Project management and installation services
- Warranty and break-fix

Areas in a hospital that can benefit from UPS, Cooling, Software & Services

Operating room

Requires full availability of quality electrical power to ensure maximum patient safety, with a specific medical IT panel for isolation from the normal electrical network

- UPS: Smart UPS, Easy UPS, Galaxy V Series
- Cooling: Uniflair Room Cooling

Emergency department

Mobile Modalities and critical medical equipment

- UPS: Smart UPS, Easy UPS, Galaxy V Series
- Cooling: Uniflair Room Cooling

Switch room/telecom closets

Electrical panel and IT based equipment like switches and routers

- UPS: Smart UPS
- Cooling: Uniflair Room Cooling
- Racks: NetShelterTM LX, SX

Nursing stations

Reception area, PC, phones, and miscellaneous electronic equipment

- UPS: Smart UPS
- Cooling: Uniflair Cooling
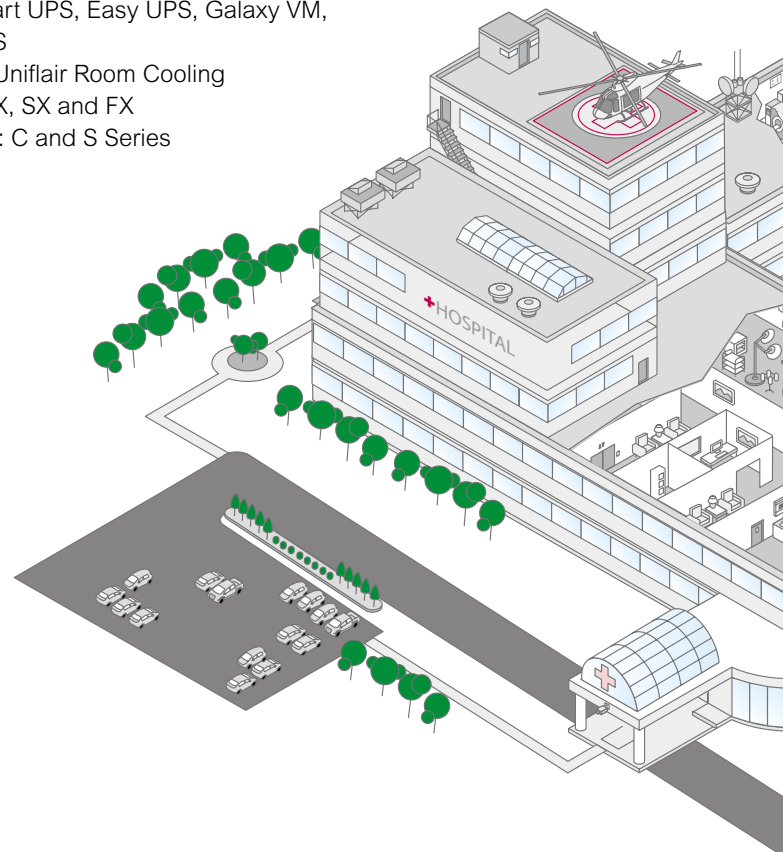- Racks: Netshelter LX, SX

CCTV (closed-circuit TV)

Area where we are supervising the security of the hospital, access of the parking area
- UPS: Smart UPS
- Cooling: Uniflair Room Cooling
- Micro DC: C and S Series

Radiology/imaging department

Responsible for supervising the security and access of the hospital and parking areas

- UPS: Smart UPS, Easy UPS, Galaxy VM, Galaxy VS
- Cooling: Uniflair Room Cooling
- Racks: CX, SX and FX
- Micro DC: C and S Series

Data center

The IT Hub of the hospital supporting the Hospital Information System

- Datacenter: EcoStruxure Datacenter
- Micro DC: C and S Series
- PreFab: EcoStruxure Modular Data Center

Utilities room

Responsible for electrical distribution, generator, and backup power

- UPS: Easy UPS, Galaxy V Series
- Cooling: Uniflair Perimeter Cooling
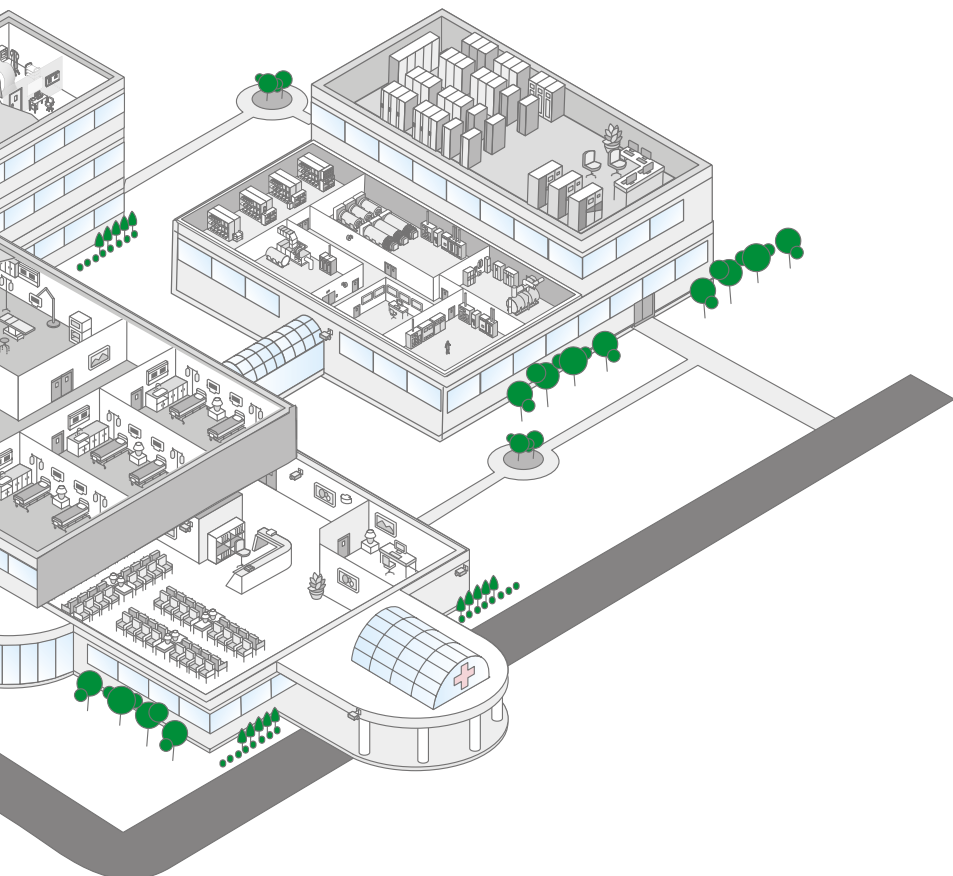
Wastewater treatment

Area of the hospital where we treat the wastewater with specific automation process

- UPS: Smart UPS RT, Easy UPS

Laboratories

Area for clinical investigation which has many critical equipment for analysis

- UPS: Smart UPS, Easy UPS, Galaxy V Series
- Cooling: Uniflair Room Cooling
- Racks: CX, SX and FX
- Micro DC: C and S Series

Healthcare market trends demand new solutions

The mission-critical nature of healthcare facilities requires information technology (IT) infrastructure that enables patient safety and comfort, ease of access to real-time data, and high availability of services in order to accommodate new trends. The recent growth of outpatient facilities, telemedicine, and digital access control systems has further bolstered demand for IT systems that are not only increasingly powerful and connected, but flexible in configuration and more compact in size.

These local edge computing systems store and manage the information generated from many connected Internet of Things (IoT) devices such as sensors, security cameras, medical equipment modalities, and intelligent room environmental controllers.

Edge computing deployments benefit healthcare organizations in three important ways:

- By placing compute power and analysis closer to where source data is being generated, information access is more reliable and less expensive.
- By avoiding data latency issues, real-time decision-making is now possible.
- • By preventing downtime at locations with unstable network connections
- Edge computing solutions help healthcare stakeholders meet new and growing market challenges by increasing systems' reliability and enabling real-time decision-making with the flexibility of working with a hybrid environment, where both cloud and edge can be leveraged

EcoStruxure IT monitoring and maintenance solutions

Managing edge computing sites is critical to ensuring business continuity, requiring around-the-clock monitoring and proactive maintenance to detect and correct issues before they occur.

EcoStruxure IT cloud-based management solutions enable users to mitigate and anticipate risk of failure of critical IT infrastructure while reducing operational expenses through an open, vendor-agnostic platform.

Schneider Electric's global footprint and domain expertise in IT infrastructure provide users visibility, insights, 24/7 expert remote monitoring, and on-site support.

EcoStruxure IT gives users peace of mind as they take advantage of everything that Industry 4.0 has to offer.

Comprehensive, integrated UPS solutions

Long-term peace of mind

We provide your critical power solution, and the service excellence required to maintain optimal performance. Proper care and regular maintenance will save you time and money, and prolong the life of your equipment. We offer warranties and service plans, preventive maintenance, continuous upgrades, and remote monitoring services. Should you require on-site assistance, our field technicians and service personnel are conveniently located worldwide to accommodate you, wherever you operate.

Schneider Electric's advantages

- End-to-end power solutions
- Full protection against disturbances in power availability and quality
- Long service life
- Adaptable or fully customizable solutions
- Compliance with all types of environments
- Streamlined project management
- Personnel training
- Ongoing support and maintenance

10 Reasons to use a UPS

1. Mitigate the risk of power failures with high levels of power availability and quality
2. Avoid costly nonproductive time and remediation
3. Reduce energy costs — one of your largest operating expenses — by up to 30%
4. Keep critical processes and facilities online
5. Maintain data continuity
6. Maximize both operations and energy efficiency
7. Ensure regulatory compliance
8. Protect your crew and the environment
9. Enhance security
10. Sustainability

UPS solution for Healthcare

Smart UPS and Galaxy UPS solutions are standard and adaptable solutions

Single-phase UPS: APC Smart UPS Online, Easy UPS BVS, DIN Rail UPS, Easy UPS SRVS

Smart-UPS
On-Line
(1-10kVA)

Smart-UPS
Modular Ultra

Easy UPS
(1-10kVA)

- Available from 0.5 to 20 kVA, 50 and 60 Hz (lower rating also available)
- Designed to be installed in racks or cabinets
- Hot-swappable, user-replaceable batteries
- Modbus communication enabled
- IEC and UL standard
- Elevation:1000m no-derating, above contact us
- Protection of critical hardware from damaging surges and power failures

3-Phase Online UPS: Galaxy V Series, Easy UPS 3-Phase

Easy UPS
3-Phase
Modular*

Galaxy VS**

Galaxy VL**

Easy UPS 3S

Easy UPS 3L

Easy UPS 3M

*Lithium-ion battery, Live Swap

**eConversion, Lithium-ion battery, Live Swap

- Double conversion on-line topology UPS for ultra-high efficiency and power protection with harmonic free input rectifier
- Comes parallel-ready, so you can pay as you grow and meet your future needs
- Flexible protection ratings IP20 by default; optional kits for ratings up to IP52
- Backup times up to two hours
- Fault-tolerant architecture and maintenance bypass in a compact footprint
- Full front access with a user-friendly interface
- Operating temperature: 0 to 40°C
- IEC and UL standard

Data Center solution future ready for Healthcare

Our solutions are designed to be adaptive to respond to changing demands and expectations, resilient to withstand challenges to power availability, and efficient to reduce costs — all of which can contribute to lowering your environmental impact. With operations in more than 100 countries and decades of experience deploying scalable data centers, we're your digital partner for sustainability and efficiency.

Racks

Find exactly what you need, from full aisles to individual racks, along with enclosure accessories like shelving and cable management. Pick from standard racks for normal applications or ruggedized versions for harsh or industrial environments. And for those situations where one size doesn't fit all, our custom rack systems help you pull together the specific solution you or your client require.

Learn more

EcoStruxure™ Pod Data Center:

Free-standing, rack-ready systems for rapid deployment. Each unit adapts to your cooling, containment, and power distribution needs. Support necessary IT infrastructure while providing air containment to easily roll racks in and out.

Learn more

Rack-mount transfer switches:

Keep power flowing smoothly with industry-leading transfer time and improved outlet connections for power switching without interrupting critical loads.

Learn more

Power distribution units:

Your PDU requirements are fully covered, with in-rack, in-row, and in-room options from our APC NetShelter™ and Easy series. Provide enhanced power availability with power metering and control options as well as environmental monitoring.

APC NetBotz™ rack access:

A fully integrated, scalable rack management solution designed to protect your IT infrastructure. Safeguard assets against environmental threats such as temperature, humidity, smoke, and water leaks while managing and controlling access privileges from a single, easy-to-use interface.
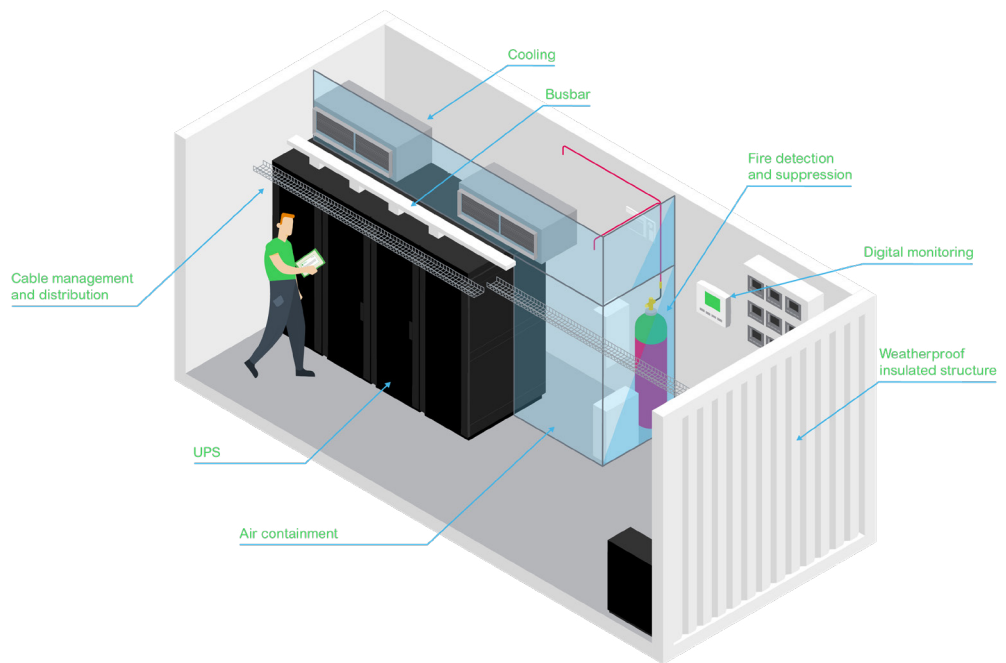
Learn more

Prefabricated modular data centers

Save time, money, and space with customizable solutions.

When a full build is neither practical nor necessary but you're still facing a tight timeline, a prefabricated data center can be the perfect answer. Select from IT modules or power modules to fit your needs.

- Cooling
- Busbar
- Fire detection and suppression
- Digital monitoring
- Cable management and distribution
- Weatherproof insulated structure
- UPS
- Air containment

IT modules

Available in a range of sizes and configurations, these systems are designed for easy deployment. From a single module to a full data hall or room, each self-contained unit includes white space, power, and cooling.

Learn more

Power modules

Optimized for easy scalability, our power modules significantly reduce the time and complexity of deploying critical data center power. Available with integrated UPS, switchgear, and management software.

Learn more

Power skids

Scalable and flexible, our prefabricated power skids allow for larger power ranges in a small footprint. They arrive on site ready to be installed, saving you time and money.

Learn more

Visibility and peace of mind

EcoStruxure IT enables resilient, secure, and sustainable data centers and IT environments

Schneider Electric's comprehensive Data Center Infrastructure Management (DCIM) solution, EcoStruxure IT, ensures business continuity by enabling secure monitoring, management, insights, planning, and modeling — whether from a single IT rack to hyper-scale IT — on-premises, in the cloud, and at the edge.
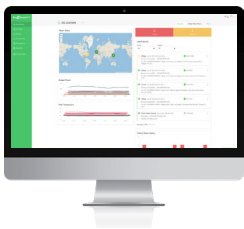
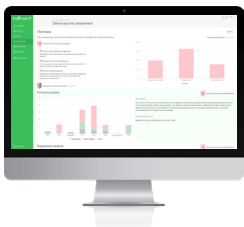**Resilient**   **Secure**   **Sustainable**

Visibility everywhere

Monitoring and management software streamlines data center device management:

EcoStruxure IT Expert provides you a hands-on approach with cloud-based monitoring software that synthesizes and analyzes performance and alert data into proactive recommendations and enables wherever-you-go visibility from any device.
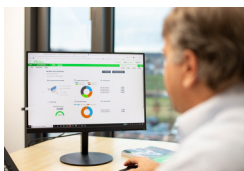Try it now: www.ecostruxureit.com/ecostruxure-it-expert/#trial

EcoStruxure Data Center Expert is a scalable end-to-end on-premise monitoring software that collects, organizes, and distributes critical device information, providing a comprehensive view of your company-wide, multi-vendor physical infrastructure.

24/7 peace of mind

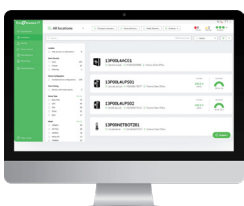Digital services proactively monitor your critical devices:

EcoStruxure Asset Advisor* for secure power and cooling provides you a hands-off approach with 24/7 remote monitoring service by the Schneider Electric Connected Services Hub experts.

We monitor and troubleshoot, you relax.

Operations, optimized

Planning and modeling software transforms data into performance insights:

EcoStruxure IT Advisor is a data center infrastructure planning and modeling solution that provides Data Center Managers in large enterprises and colocation data centers with full insights into their infrastructure to improve profitability, sustainability, and resiliency.

Comprehensive on-site services

Start-up service: included with UPS

- Commission the installation in accordance with manufacturer's recommendations. Ensure optimal system performance from Day 1

Schneider Electric-certified installation services

- Expert configuration of your equipment for optimal performance and reliability

Maintenance services

- Ensure proper care of your mission-critical applications
- Preventive maintenance and response time upgrades, where available

Flexible service plans/ on-site extended warranty

- Hassle-free system maintenance
- Improve uptime at a predictable cost

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* Contact your local representative for availability.

Maximum sustainability to reduce healthcare operation cost

Enjoy the highest energy efficiency available today without sacrificing load protection. Every Galaxy V-series UPS includes eConversion mode and delivers these benefits:

Class 1 protection

Choose eConversion mode with confidence; its performance has been certified Class 1 per IEC® 62040-3, the same class as Double Conversion.

Third-party certified performance

eConversion is the first UL-verified high efficiency mode. It has passed the rigorous testing of this 3rd-party, industry-leading certification agency.

Excellent load protection, including patented zero-break transfer design

The UPS continues to deliver input power factor correction, harmonic filtering, and no-break transfer to Double Conversion mode or battery operation.

Continuously charging batteries

With eConversion mode, your batteries are ready when you need runtime.
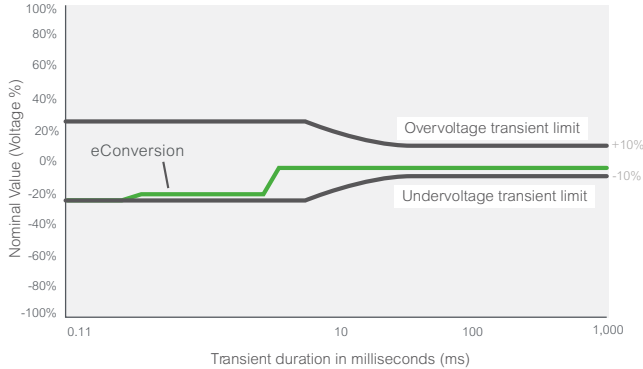
Over 8 years of field deployment

Since its launch in 2014, eConversion has been successfully deployed all over the world. Join thousands of customers who use it daily to protect their critical loads.

Ideal for IT and non-IT applications

- Data centers
- Factories
- Commercial offices
- Transportation
- Hospitals

eConversion meets Class 1 of IEC 62040-3: zero-break transfer during power outage.

To learn more about secure power solutions,
visit our website.

se.com/industrial-business-continuity

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