

Invest for today, plan for tomorrow

iBusway for Data Centers
Monitored busway system
for rack power distribution

Schneider
Electric



By using a monitored solution IT Room Busway you reduce the power consumption of your IT installation

Optimize your investment and reduce your power consumption

Information technology undergoes constant change. What will future servers be like? What technical, environmental and economic constraints will determine their maximum capacity within safe operating limits? All these questions are hard to answer, but they influence your decisions today.

How can you plan ahead for these changes?

> The Schneider Electric iBusway for Data Centers is a power distribution system for server racks, meeting your requirements for electrical power availability, energy savings and return on investment, while still allowing you to flexibly adapt to changing needs.

> The iBusway solution helps improve the continuity of service in your data center, optimize site energy efficiency, and reduce the long-term impact on the environment by reducing cabling and the waste generated during traditional retrofits.

This flexible, scalable and sustainable solution lets you invest for today's needs while preparing for tomorrow's possibilities.



Adaptable

The iBusway for Data Centers is designed for facilities from 150 m² to more than 5,000 m², with a power supply ranging from 150 to more than 10,000 kVA.

A simple, secure solution

The Schneider Electric iBusway for Data Centers is the key component for high availability power distribution to all server racks in your data center. Based on the Canalis KS prefabricated busbar trunking system, with plug-in tap-off units, monitoring and a specific control and supervision system, iBusway for Data Centers is a “plug-&-play” solution for quickly installing or upgrading an IT facility.

iBusway for Data Centers, a solution that is...

Flexible

Its modular format easily adapts to all types of data centers offering easy facility upgrading and equipment replacement while also providing energy consumption measurements.

Interconnected

The local supervision system gives you a clear view of your computer room in real time: measurement of load factors, circuit-breaker status and power consumption for each individual rack. The system's compatibility allows connection to the data center's overall supervision system.

Easy to install

iBusway is a plug and play solution, with all components pre-wired and tested for fast, secure setup and software tools simplify architecture design. Dedicated services for installation and start-up are also available.

Zero foot print

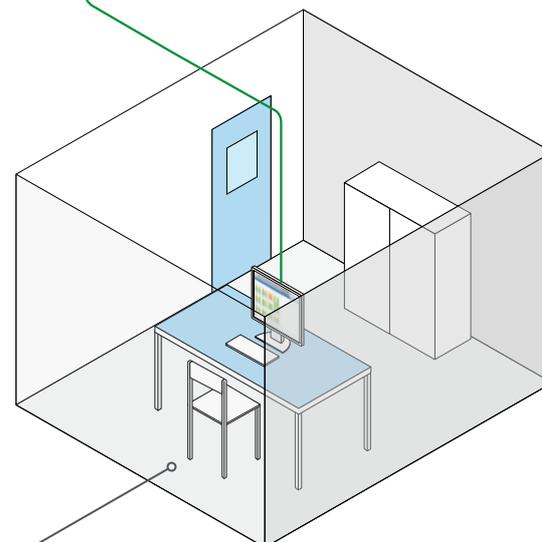
The iBusway solution takes up no floor space and offers more efficient use of dedicated rack areas.

Storage room

> Ready-to-install tap-off units.

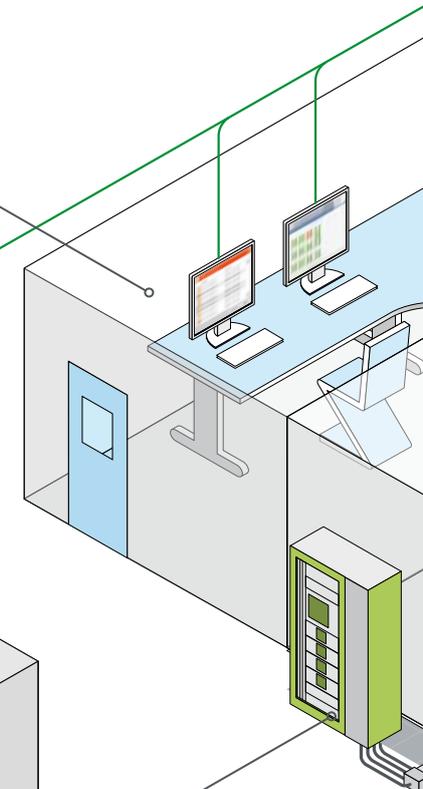
Facility supervision room

> Monitor power distribution and load status.



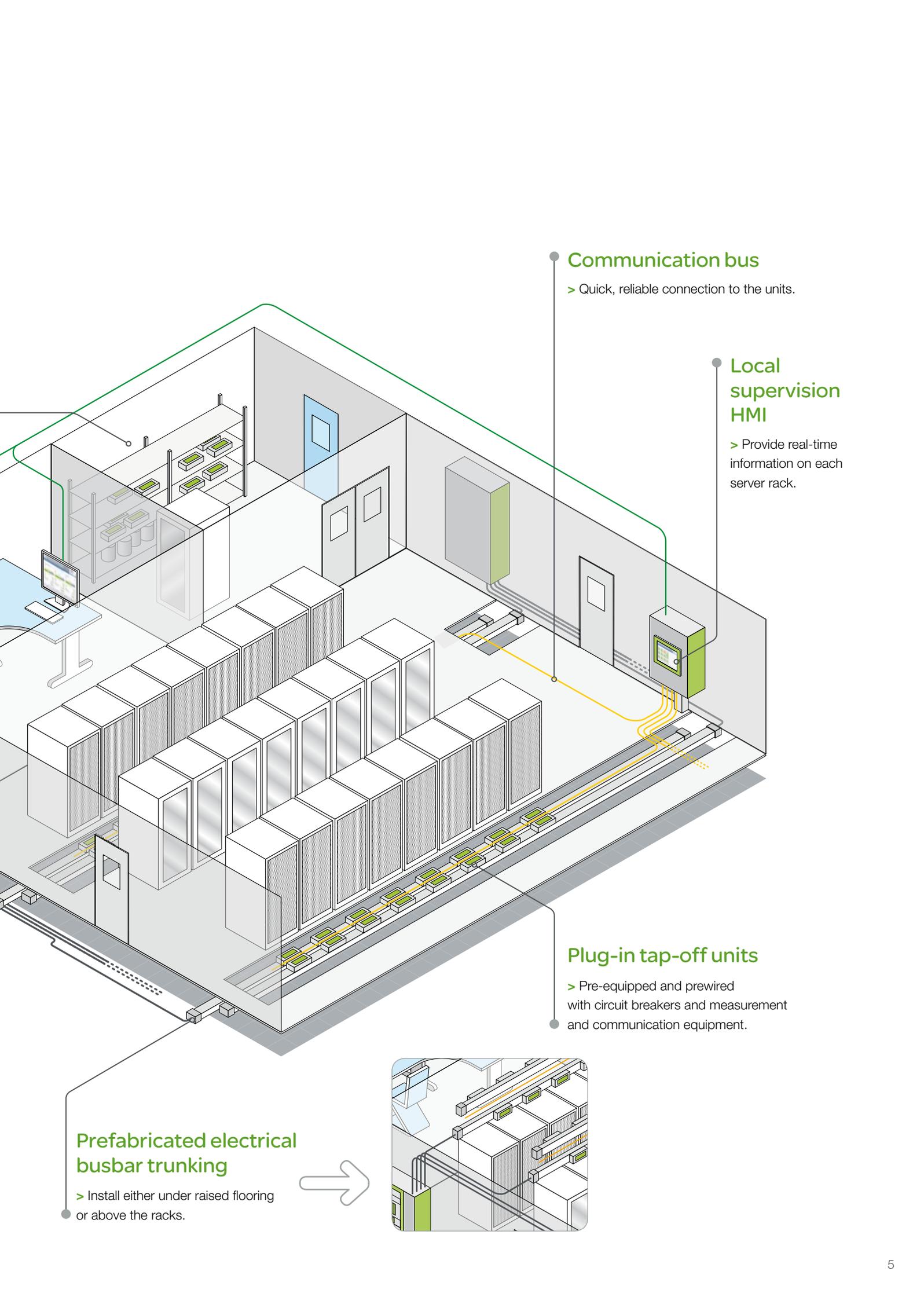
Remote supervision room

> Centralized information to optimizes overall operation of the facilities.



Electrical distribution switchboards

> Conforms to international standards; equipped with Compact NSX intelligent and interconnected circuit breakers.



Communication bus

> Quick, reliable connection to the units.

Local supervision HMI

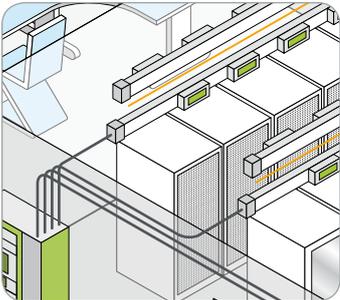
> Provide real-time information on each server rack.

Plug-in tap-off units

> Pre-equipped and prewired with circuit breakers and measurement and communication equipment.

Prefabricated electrical busbar trunking

> Install either under raised flooring or above the racks.





Enhance continuity of service

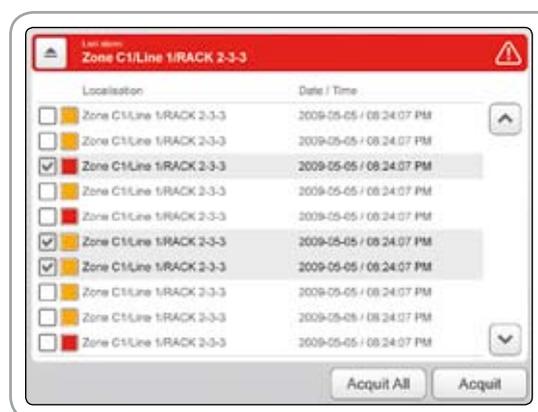
Power availability is a major concern for data centers and other IT facilities. Compared to a conventional cabled solution, iBusway increases power availability by 160% over a traditional installation.

Provide a safe servicing environment

- > The close proximity of the iBusway for Data Centers to the racks, together with the lack of cabling provides remarkable installation clarity and perfect legibility of its structure.
- > All operations ensure maximum security for personnel and equipment.
- > The system design prevents the accidental inversion of the units' connection directions, so it offers maximum safety for people and equipment.
- > The plug-in tap-off units can be connected and disconnected without shutting down the system, so you have no interruption of service when adding or removing a server rack.

Simplify maintenance

- > Reduce service outages: monitoring rack power supply parameters allows you to anticipate any stoppage and quickly locate the fault.
- > Make service operations easier, reduce errors: decentralized power distribution to the base of the rack lets you turn off a power supply quickly, without affecting neighbouring racks. Maintenance is easier and the risk of human error is reduced.
- > Maintenance free: silver-coated copper electrical contacts of the Canalis prefabricated busbar trunking require zero maintenance.



Supervision system

Be alerted

- > Incoming data allows you to diagnose faults and take action rapidly without shutting down operations.



Reduce design and installation time

You often find the time needed for installation of a new computer room too long? The iBusway for Data Centers reduces the design and installation times for rapid commissioning in complete security.

Facilitate design

- > iBusway is a Schneider Electric tested, validated and guaranteed modular solution.
- > For each new computer room, there is no need to redo the whole design. Simply begin with an existing architecture, and adapt it to the specific features and constraints of your new room.

Reduce on site commissioning times

- > iBusways supports an optimized deployment process: installation of the busbar trunking and tap-off units can be performed in parallel with other on-site job processes; all components are prewired and pretested, so on-site testing is fast and easy.



Supervision system

Configure quickly

- > Control and supervision software is pre-configured and pretested and designed to be very user-friendly, so Technicians can configure a computer room in just a few clicks.



Upgrade at your own pace

The modular design of the iBusway for Data Centers is suitable for all environments and all technical specifications. You simply invest in what is needed today without compromising your ability to meet future requirements.

Optimize your installation throughout its life cycle

> As you add new generations of servers you require increasingly high power levels. With the iBusway for Data Centers, you can increase the available capacity whenever it's needed, but still optimize your return on investment by buying only what you need today.

> Our solution enables you to easily handle ongoing expansion by allowing you to:

- reorganize your computer room easily by grouping the servers according to density and electric power requirements;
- add or remove a unit at any point on the prefabricated busbar trunking without shutting down the main trunking system;
- carry out these operations in complete safety;
- control the increase in power consumption;
- maintain the flexibility and maximum availability of your installation.



Supervision system

Manage your upgrades

> The supervision system informs you of the power used by each line and each rack. You have a clear view of capacity available for new servers - so as you increase rack density, you optimize energy efficiency.



Energy efficiency, a new source of savings

Today, reducing energy consumption is essential to reduce electricity costs and to comply with sustainable development standards.

A less energy-hungry solution...

- > Compared to a cabled installations, busbar trunking can reduce Joule effect losses by up to 20%.
- > The system's small space requirements allows for better ventilation, which in turn offers smaller loads for cooling systems.

... Helping you control your PUE*

- > Analysis of the power and consumption measurements for each load enables you to assess their impact on the total PUE and define actions needed to improve cooling efficiency.

Dedicated services

- > Take the energy efficiency of your facility further. Schneider Electric has energy efficiency programs tailored for your applications. Contact your local Schneider Electric representative for more details.



Supervision system

Make informed decisions

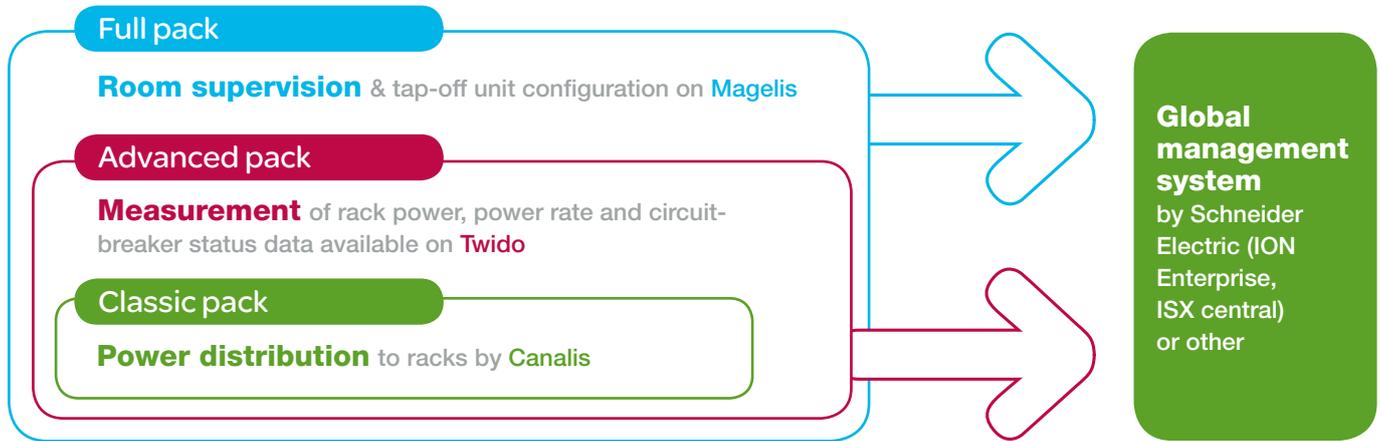
- > The monitoring system of the iBusway solution measures consumption and load factors for each line and for each rack PDU**.
- > Define consumption reduction actions by combining data center information with whole facility data.
- > Accurately allocate and charge the energy costs for each server to promote consumption management.
- > The monitoring system is compatible with any facility supervision system, including Schneider Electric ION Enterprise and ISX Central systems.

* PUE: Power Usage Effectiveness. It is calculated by measuring the ratio between total power consumption (servers + cooling) and the power consumed by the servers

** Rack Power Distribution Unit

A modular solution...

iBusway for Data Centers offers three monitoring levels.



... With the best products from Schneider Electric



Power distribution to the rack

- > Canalis KS length & feed units
- > Canalis KS plug-in units
- > MCB, RCB, Auxiliary (Multi 9 range)
- > MCCB Compact NSX breakers

Measurement on the rack

- > Energy meters (EN40, PM9-P)
- > AS interface (4I Module, bus)
- > KBA trunking
- > Twido PLCs & power supplies
- > MicroLogic (Compact NSX) breakers & connections

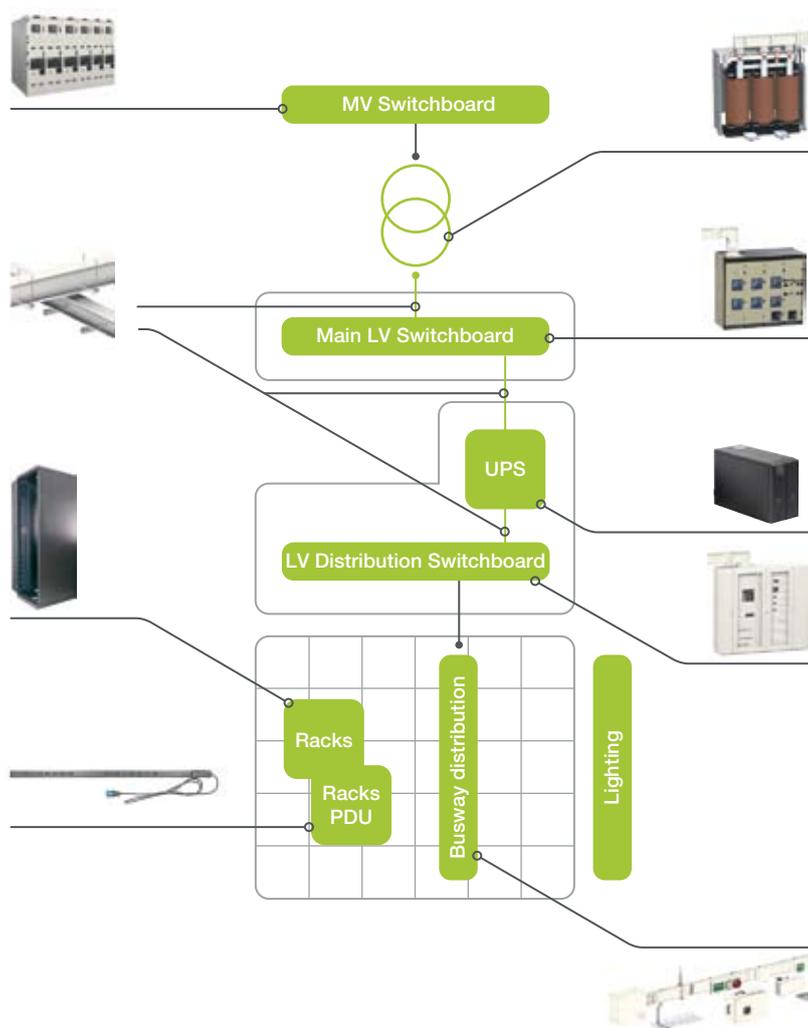


Room supervision

- > Power supplies
- > PLC M340
- > Magelis HMI
- > Enclosures

iBusway is a key element of our comprehensive data centers solution

Schneider Electric is world leader in integrated solutions for data centers: power distribution, secure power, cooling, pre-wired busbar trunking, control and supervision.



Advantages of the solution

- > Optimization of investment: coherent design from the electricity supplier through to the servers, without need for overbuilding to obtain required availability levels.
- > Perfect coordination between redundancy levels, equipment configuration and maintenance constraints.
- > Tested and reliable solutions: complete technical architectures for operating dependability, on-site feedback, continual process improvement, and solution standardization.
- > Map solutions to quantified characteristics: availability, scalability, capital and operating costs.
- > Flexible, scalable solutions for power distribution, monitoring and control.
- > Open protocols for monitoring and control.
- > Energy efficiency and environmental conservation.

The comprehensive offering includes:

- > MV and LV switchboards
- > Switching and paralleling systems
- > Prefabricated busbar trunking
- > Power monitoring units and protective relays
- > Control and monitoring systems
- > UPS systems and batteries



iBusway for Data Centers contributes to sustainable development

- > No hazardous substances in IT Room Busway components (no PVC)
- > Canalis Busway is designed in compliance with the European RoHS recommendations
- > Busways reduce copper losses for higher energy efficiency
- > Busways have a long life cycle and can easily be dismantled, cleaned and reused
- > All the components of our products and materials used in our packaging can be recycled



> **Make the most of your energy**

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