

maximum flexibility and the highest net-

work availability.



Communication layer > Unmanaged



SCALANCE X-200



setting up line, star, and ring topologies up

SCALANCE X-300



expansion of plant networks with Gigabit

SCALANCE X-400



Modular design, for simple and straightforward segmentation on

SCALANCE X-500



powerful connection of an industrial network to



Communication layer > Managed layer 2





Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300/ET 200M. or S7-1200.

Unmanage

SCALANCE X-000



menting easy machine networking, including enhanced environmental conditions.

Unmanaged

SCALANCE X-100



unmanaged, robust, and with different port configurations – also available as media converter.

Unmanaged

d

SCALANCE X-400



Modular design, for simple and straightforward segmentation on all levels

Managed

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.



Communication layer > Managed layer 2/3

CSIVI



Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300/ET 200M, or S7-1200.

Unmanage

SCALANCE X-000



Unmanaged, for implementing easy machine networking, including enhanced environmental conditions.

Unmanaged

SCALANCE X-100



Unmanaged, robust, and with different port configurations – also available as media converter.

Unmanaged

SCALANCE X-200



Universal, ideal for setting up line, star, and ring topologies up to 1 Gbit/s.

Managed

SCALANCE X-300

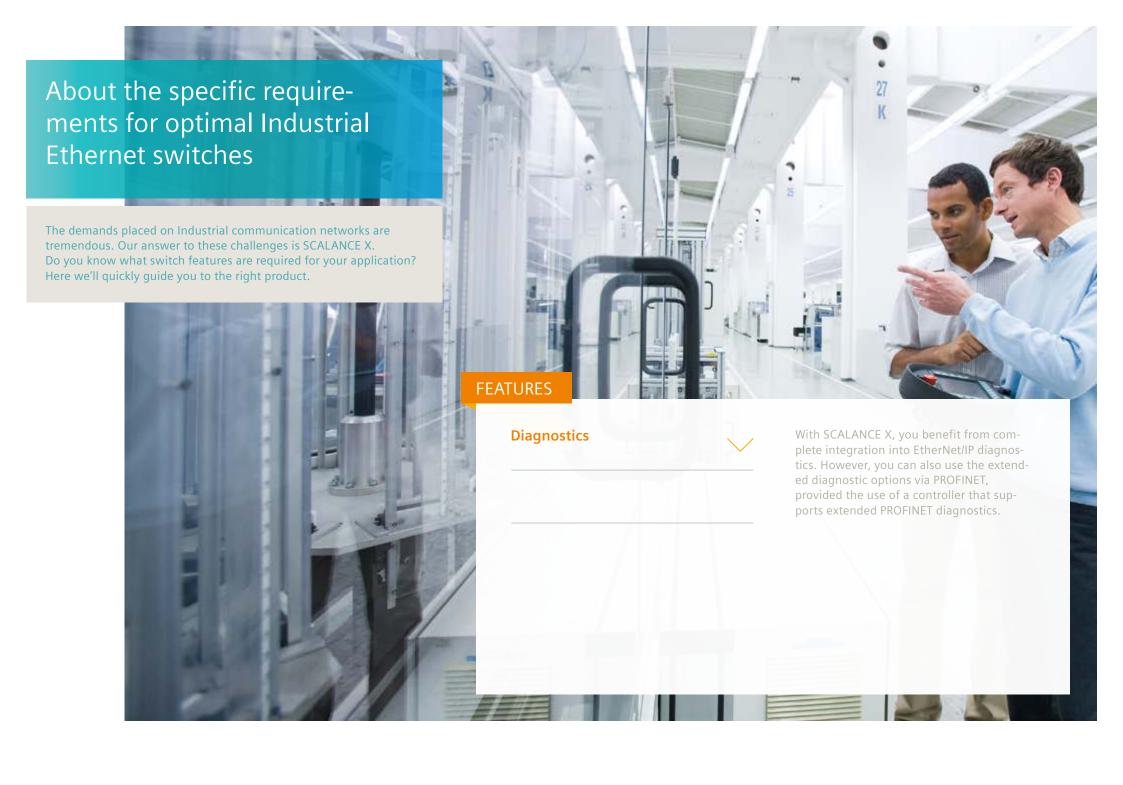


expansion of plant networks with Gigabit Ethernet – including harsh conditions.

Managed

lanaged

Managed





Diagnostics > PROFINET

CSIVI



interface extension of LOGO!, SIMATIC S7-300/ ET 200M, or S7-1200.

Unmanage

SCALANCE X-000



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Unmanage

SCALANCE X-100



Unmanaged, robust, and with different port configurations – also available as media converter.

Unmanaged

naged

Managed

Managed



Diagnostics > EtherNet/IP



SCALANCE X-000



Unmanaged, for implementing easy machine networking, including enhanced environmental

SCALANCE X-100



and with different port configurations – also converter.

SCALANCE X-300



For the powerful expansion of plant networks with Gigabit





Environmental conditions > **Enhanced environmental conditions**



SCALANCE X-100



and with different port configurations – also converter.



SCALANCE X-400

Modular design, for simple and straightforward segmentation on

SCALANCE X-500



powerful connection of an industrial network to



Environmental conditions > **Enhanced environmental conditions**

CSIVI



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Unmanage

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and with different port configurations – also available as media converter.

Unmanaged

SCALANCE X-300



For the powerful expansion of plant networks with Gigabit Ethernet – including harsh conditions.

Managed

SCALANCE X-400



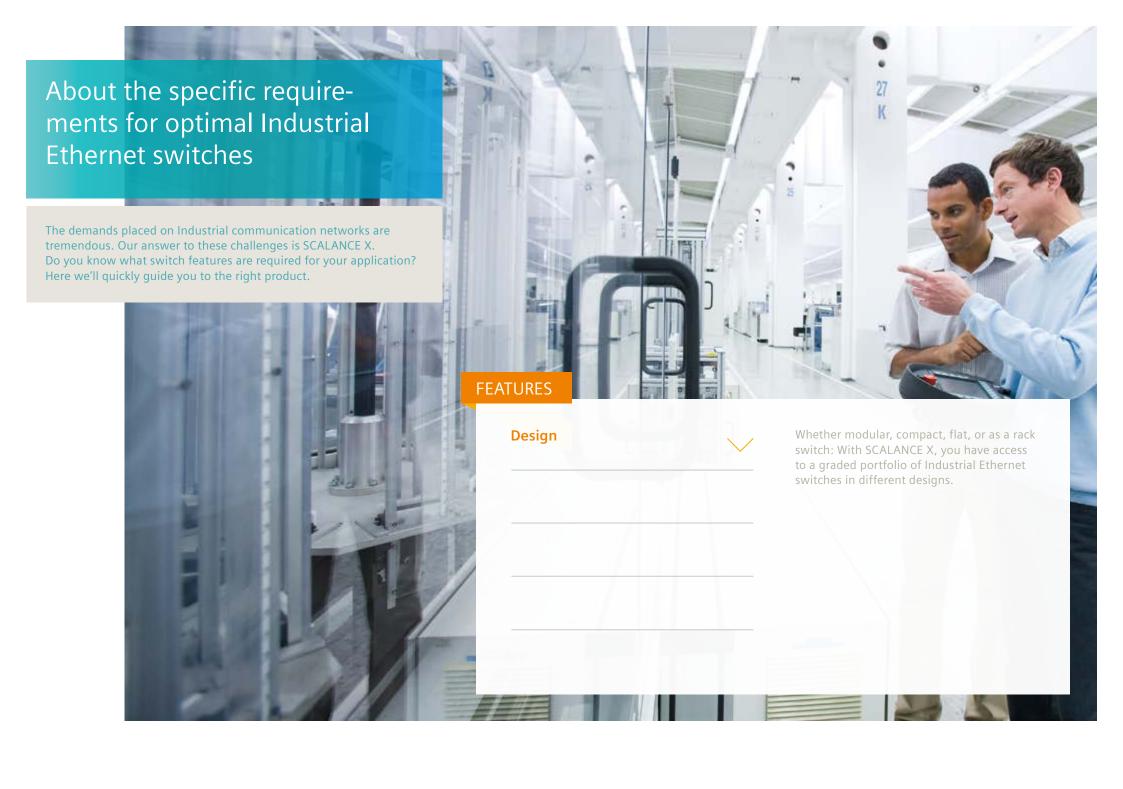
Modular design, for simple and straightforward segmentation on all levels.

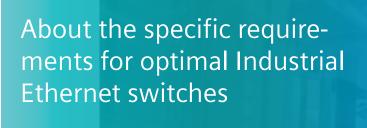
Manage

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.





Design > Modular

CSIVI



interface extension of LOGO!, SIMATIC S7-300/ ET 200M, or S7-1200.

Unmanage

SCALANCE X-000



Unmanaged, for implementing easy machine networking, including enhanced environmental conditions.

Unmanage

SCALANCE X-100



Unmanaged, robust, and with different port configurations – also available as media converter.

Unmanaged

Manageo

Managed

Managed

naged



Design > Compact

SCALANCE X-400



Modular design, for simple and straightforward segmentation on all levels.

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.

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Unmanage

Unmanaged

Managed

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Design > Flat

CSM



Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300 ET 200M, or S7-1200.

Unmanage

SCALANCE X-000



menting easy machine networking, including enhanced environmental conditions.

Unmanaged

SCALANCE X-100



Unmanaged, robust, and with different port configurations – also available as media converter.

Unmanaged

SCALANCE X-300



expansion of plant networks with Gigabit Ethernet – including harsh conditions.

Managed

SCALANCE X-400



Modular design, for simple and straightforward segmentation on all levels.

Managed

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.



Design > Rack





Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300, ET 200M, or S7-1200.

Unmanag

SCALANCE X-000



Unmanaged, for implementing easy machine networking, including enhanced environmental conditions.

Jnmanaged

SCALANCE X-200



Universal, ideal for setting up line, star, and ring topologies up to 1 Gbit/s.

Manageo

SCALANCE X-400

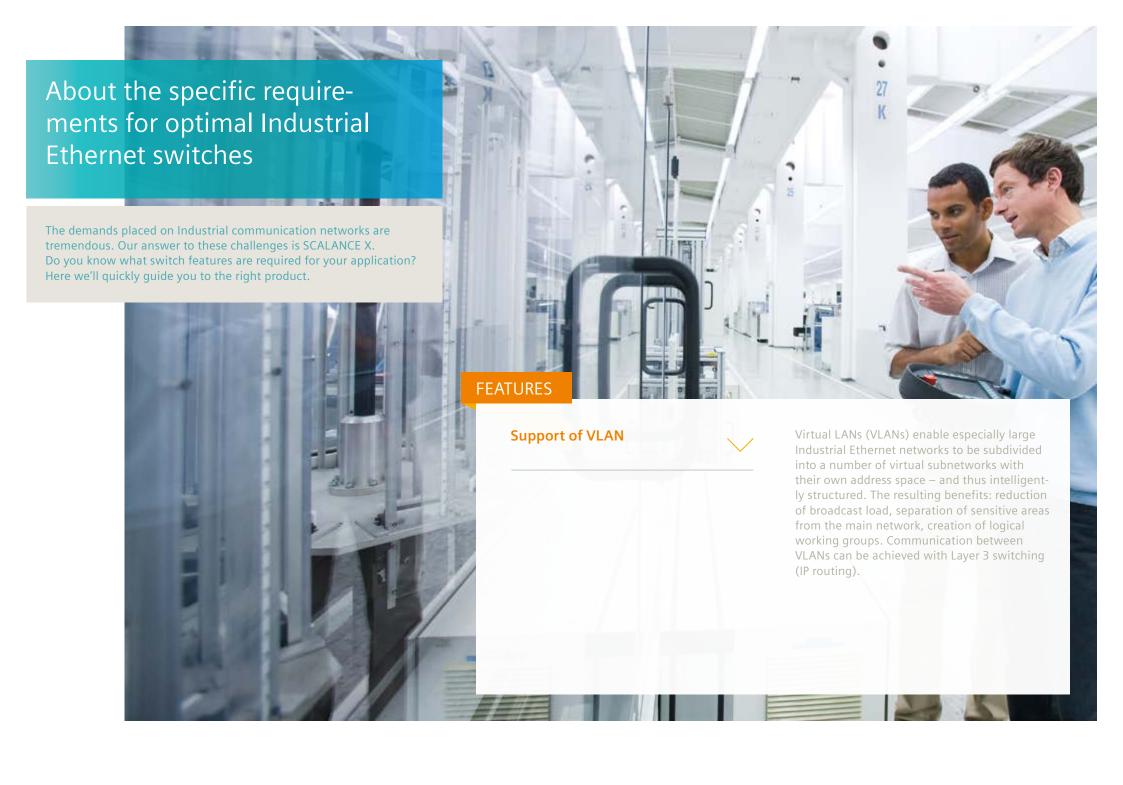


Modular design, for simple and straightforward segmentation on all levels.

Manage

Managed







Support of VLAN

CSM



interface extension of LOGO!, SIMATIC S7-300/ET 200M, or S7-1200.

Unmanage

SCALANCE X-000



Unmanaged, for implementing easy machine networking, including enhanced environmental conditions.

SCALANCE X-100



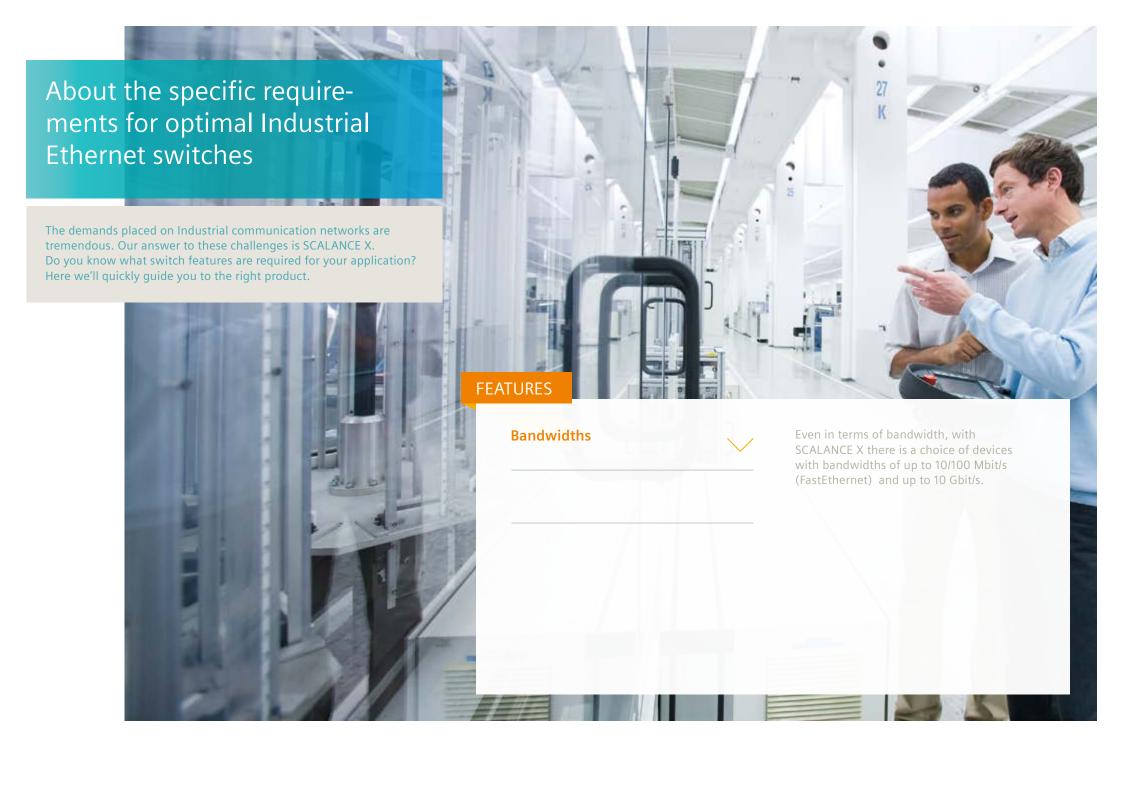
Unmanaged, robust, and with different port configurations – also available as media converter.

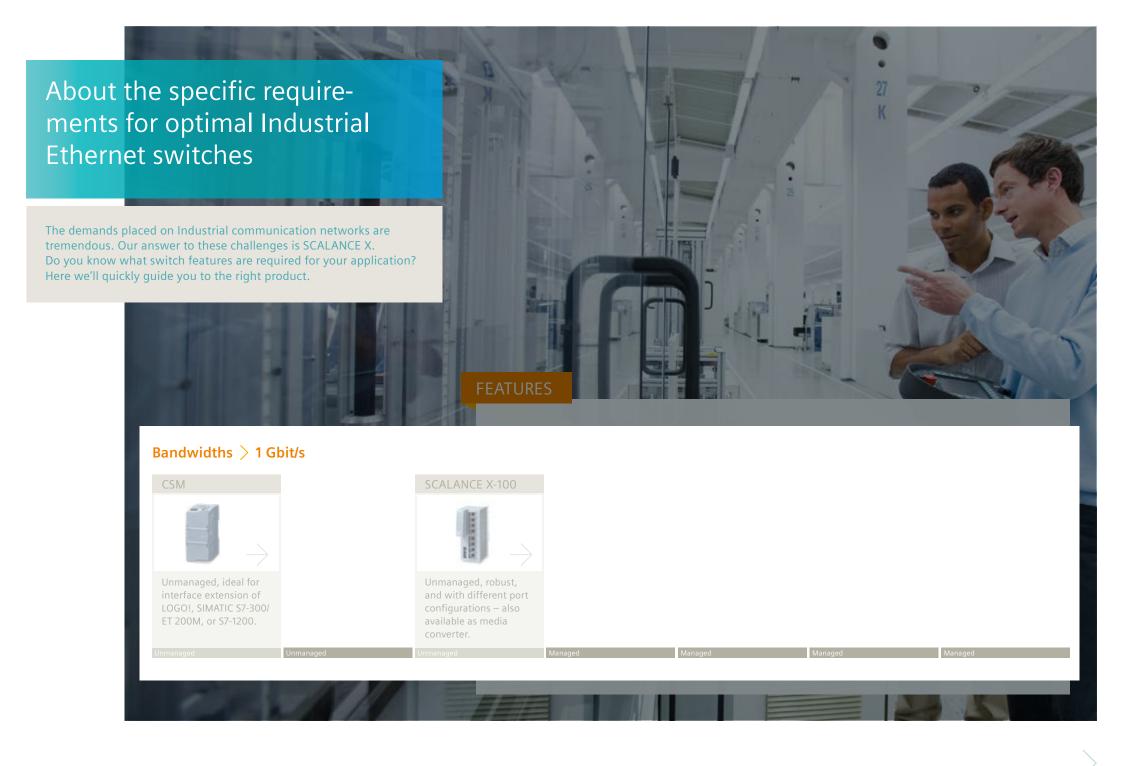
aed

Managed

Managed

*Not all X-200 are VLAN-compatible







Bandwidths > 10 Gbit/s

CSIVI



Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300/ET 200M. or S7-1200.

Unmanage

SCALANCE X-000



menting easy machine networking, including enhanced environmental conditions.

Unmanaged

SCALANCE X-100



and with different port configurations – also available as media converter.

Unmanaged

SCALANCE X-200



Universal, ideal for setting up line, star, and ring topologies up to 1 Gbit/s.

Managed

SCALANCE X-300



expansion of plant networks with Gigabit Ethernet – including harsh conditions.

Managed

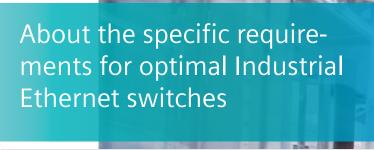
SCALANCE X-400

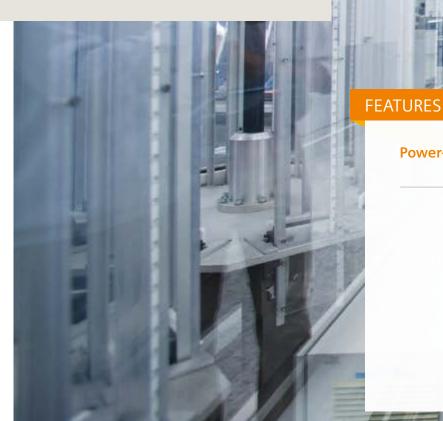


Modular design, for simple and straightforward segmentation on all levels.

Manage

Managed





Power-over-Ethernet (PoE)



With Power-over-Ethernet (PoE), devices can be connected and powered without additional power supply units or cables. This is especially convenient for places that are difficult to access — or wherever cables would get in the way. Instead, devices draw power via Industrial Ethernet switches with PoE functionality.



Power-over-Ethernet (PoE)

interface extension of

SCALANCE X-000



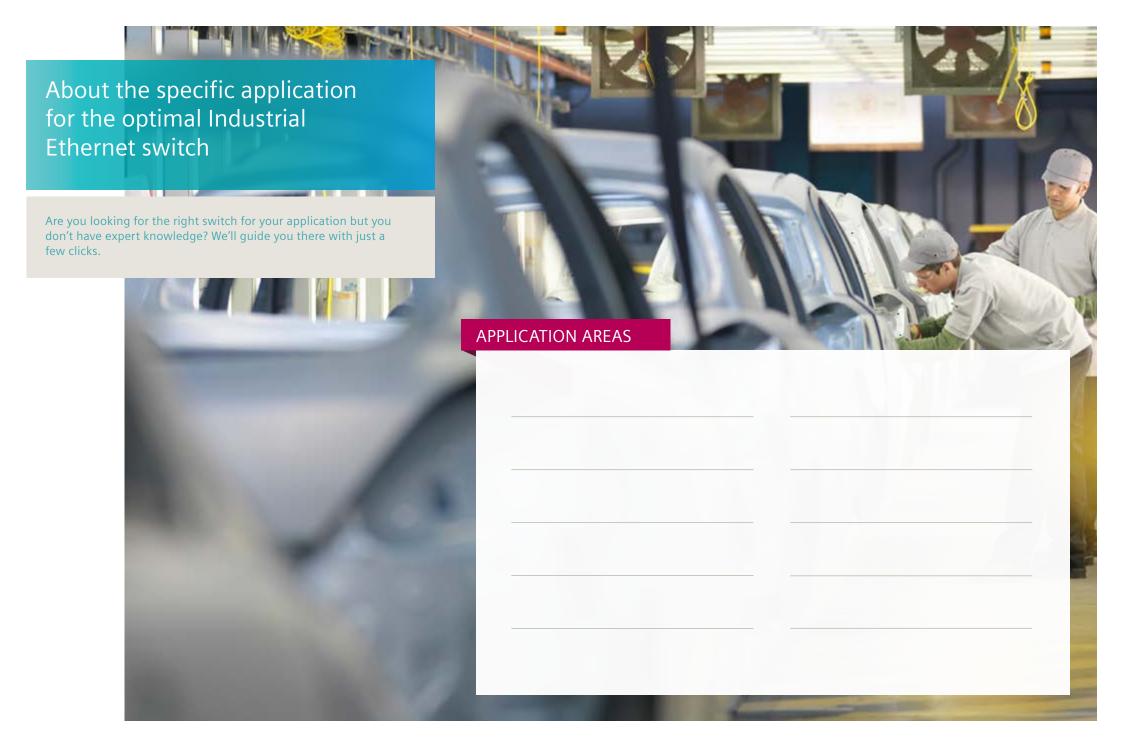
Unmanaged, for implementing easy machine networking, including enhanced environmental

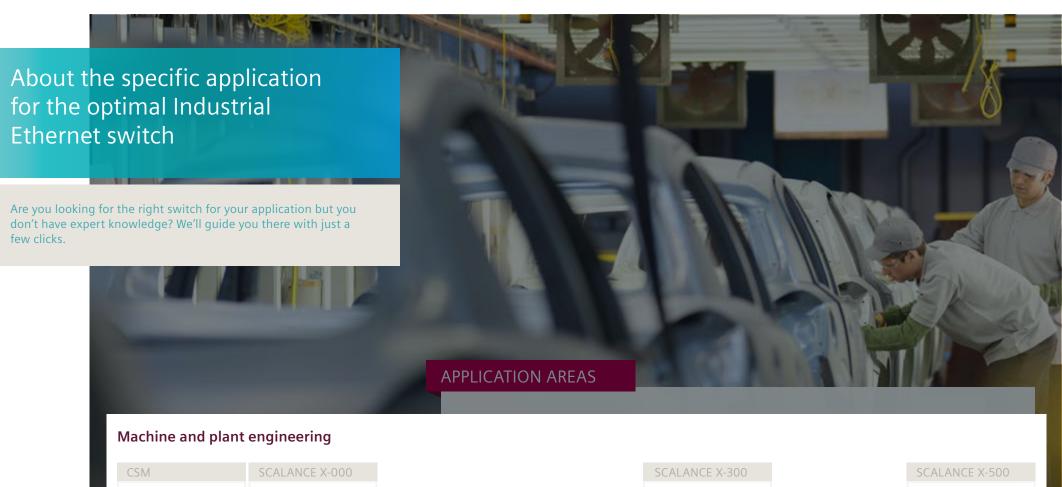
SCALANCE X-200



setting up line, star, and ring topologies up

*Not all switches are suitable for PoE









For the powerful expansion of plant networks with Gigabit Ethernet – including harsh conditions.

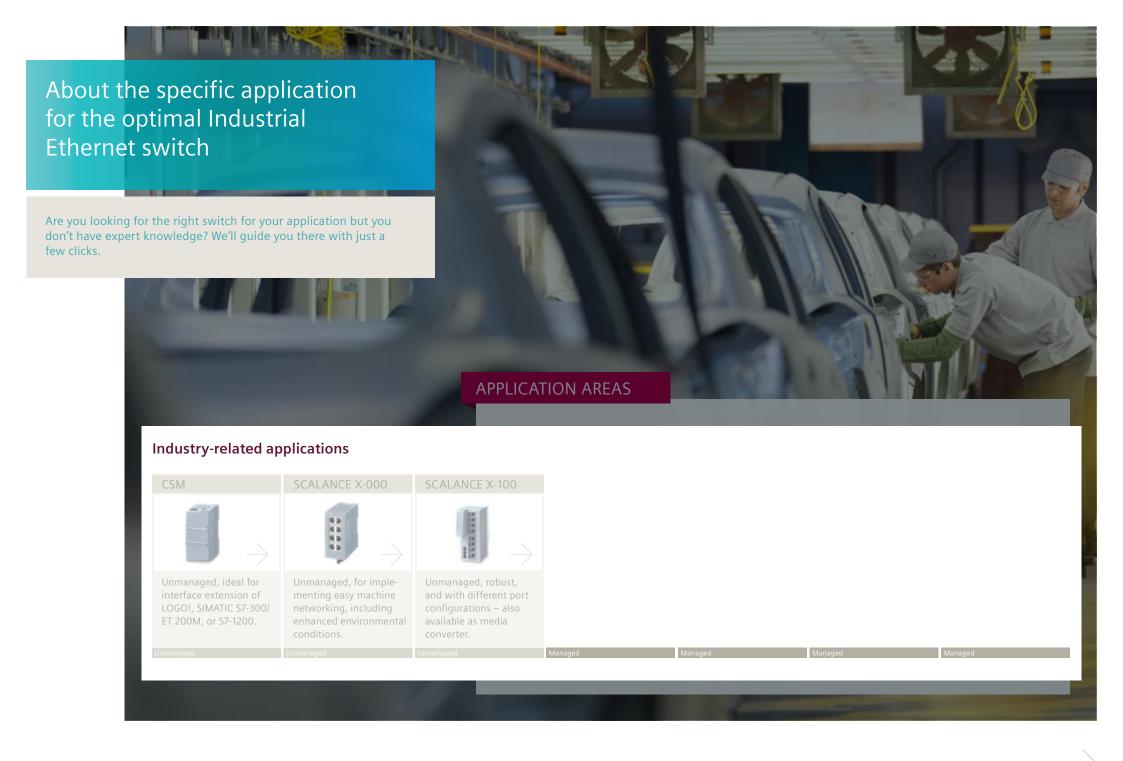
Managed

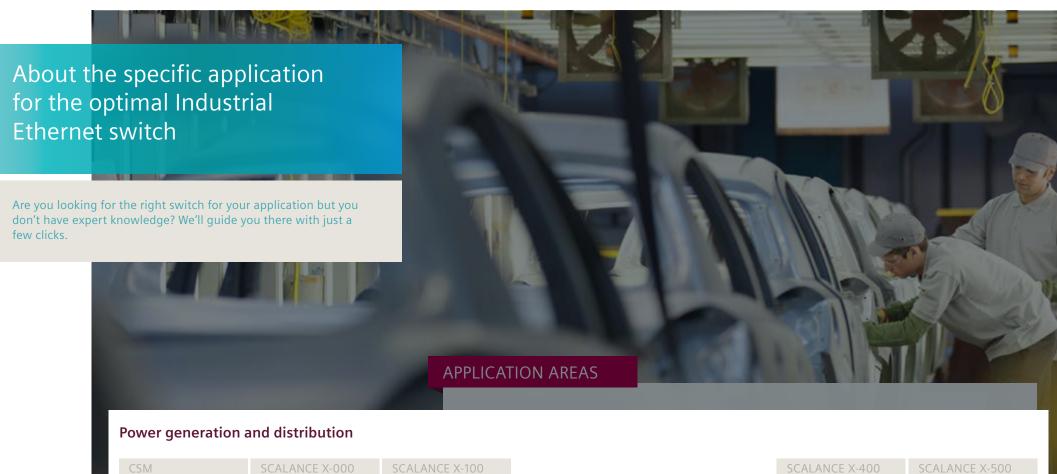


powerful connection of an industrial network to the corporate IT system.

Managed

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Unmanaged, for implementing easy machine networking, including enhanced environmental



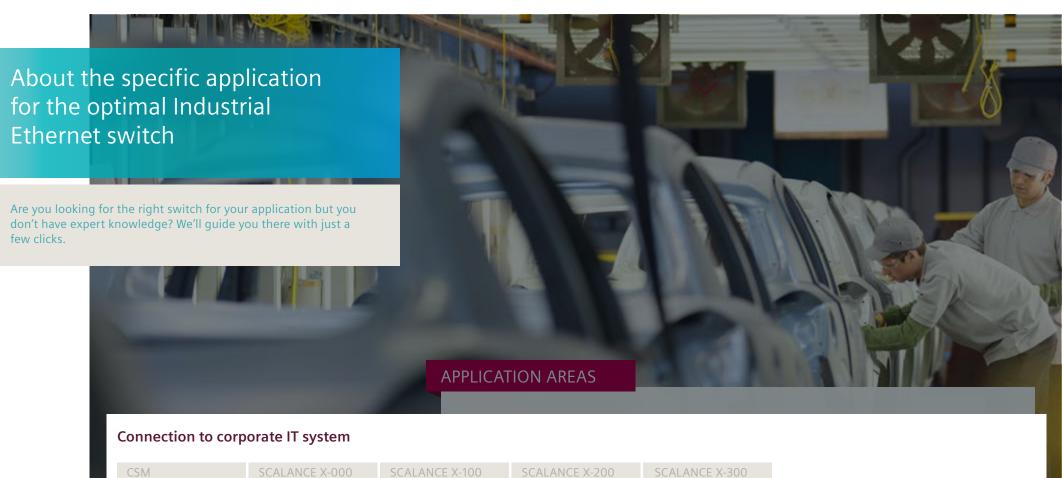
and with different port configurations – also converter.



Modular design, for simple and straightforward segmentation on



For the flexible and powerful connection of an industrial network to the corporate IT





LOGO!, SIMATIC S7-300/



Unmanaged, for implementing easy machine networking, including enhanced environmental

SCALANCE X-100



and with different port configurations – also converter.

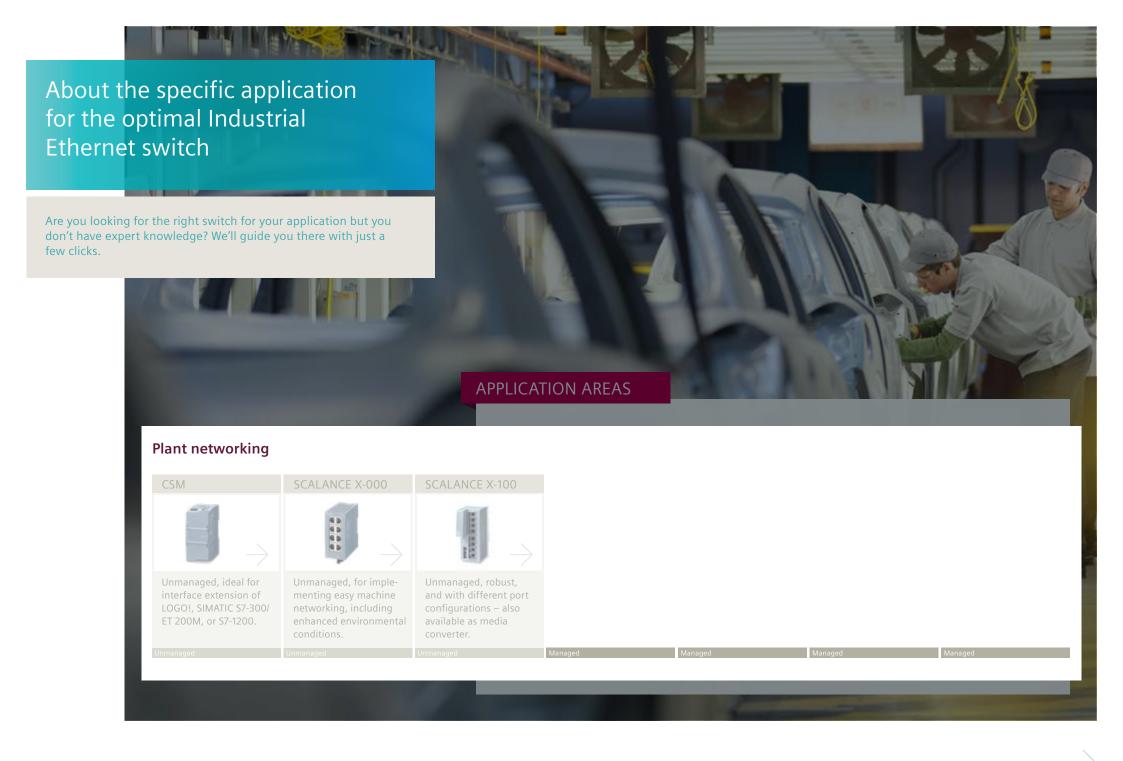


setting up line, star, and ring topologies up

SCALANCE X-300



For the powerful expansion of plant networks with Gigabit Ethernet – including





Are you looking for the right switch for your application but you don't have expert knowledge? We'll guide you there with just a few clicks.

Plant unit networking



Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300, ET 200M, or S7-1200.

Unmanage

SCALANCE X-000



Unmanaged, for implementing easy machine networking, including enhanced environmental conditions

Unmanage

Unmanaged

Manageo

APPLICATION AREAS

SCALANCE X-300



For the powerful expansion of plant networks with Gigabit Ethernet – including harsh conditions.

anaged

SCALANCE X-400



Modular design, for simple and straightforward segmentation on all levels.

Managed

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.



Are you looking for the right switch for your application but you don't have expert knowledge? We'll guide you there with just a few clicks.

APPLICATION AREAS

Series machines





Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300/ ET 200M, or S7-1200.

Unmanage

Unmanaged

Unmanaged

Manage

SCALANCE X-300



For the powerful expansion of plant networks with Gigabit Ethernet – including harsh conditions.

anaged

SCALANCE X-400



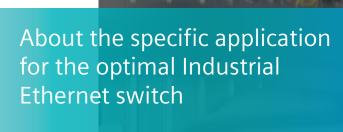
Modular design, for simple and straightforward segmentation on all levels.

Managed

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.



Are you looking for the right switch for your application but you don't have expert knowledge? We'll guide you there with just a few clicks.

Machine networking





Unmanaged, ideal for interface extension of LOGO!, SIMATIC S7-300/ ET 200M, or S7-1200.

Unmanage

Unmanaged

SCALANCE X-100



Unmanaged, robust, and with different port configurations – also available as media converter.

Unmanage

SCALANCE X-200



Universal, ideal for setting up line, star, and ring topologies up to 1 Gbit/s.

Managed

APPLICATION AREAS

SCALANCE X-300



For the powerful expansion of plant networks with Gigabit Ethernet – including harsh conditions.

Managed

SCALANCE X-400



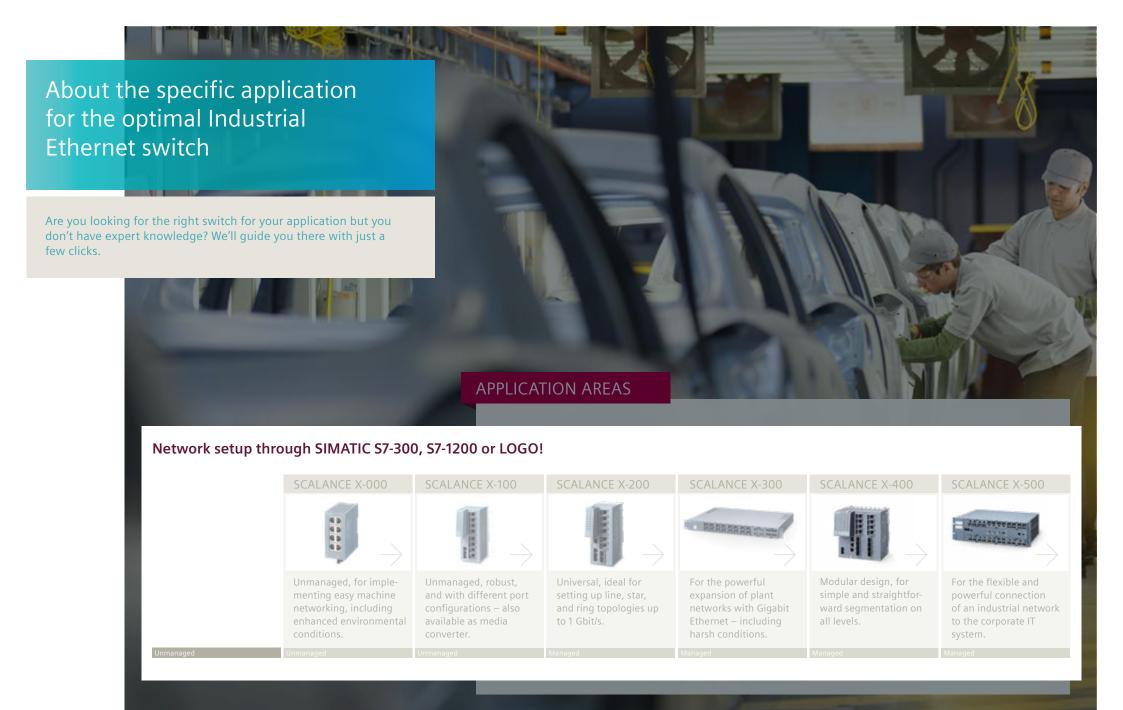
Modular design, for simple and straightforward segmentation on all levels.

Manage

SCALANCE X-500



powerful connection of an industrial network to the corporate IT system.



Compact Switch Modules (CSM)

Simply more connectivity to SIMATIC: These unmanaged switches stand for optimal interface extension for SIMATIC S7-300/ET 200M, and S7-1200.

Low-cost fan-out unit specially for LOGO! and SIMATIC S7-300/ET 200M or S7-1200. With these Compact Switch Modules, up to three stations can be quickly connected.

Your benefits at a glance

- Low-cost setup of small, local Industrial Ethernet networks
- Fast and simple connection of SIMATIC S7, ET 200M, or LOGO! logic modules to Industrial Ethernet networks
- Flexible expansion of the network thanks to simple connection of the CSM
- Space-saving design of each terminal device, such as SIMATIC or LOGO!
- Support for standalone use as an unmanaged 4-port switch for Industrial Ethernet networks

More information

Get to know all the members of the product family



Compact Switch Modules (CSM)

Simply more connectivity to SIMATIC: These unmanaged switches stand for optimal interface extension for SIMATIC S7-300/ET 200M, and S7-1200.



To increase the number of interfaces for SIMATIC S7-1200.



To increase the number of interfaces for the LOGO! logic model.



To increase the number of interfaces for SIMATIC S7-300, S7-mEC, or ET 200M.

Join the world of Industrial Ethernet network topologies: Use the SCALANCE X-000 switches to implement simple machine networks that are compact and low-cost.

The SCALANCE X-000 unmanaged Industrial Ethernet switches are the space-saving solution for setting up small Industrial Ethernet networks with transmission rates of 10/100 Mbit/s in a line or star topology. Their small size and cost-efficiency make them the ideal entry-level solution for simple machine networking. Selected SCALANCE XB-000 versions with a network voltage of 24 V can also be used in building automation.

Your benefits at a glance

- Simple handling
- Space-saving installation in the control cabinet or wall mounting
- Industry-standard for use in machine networks
- Switched-mode power supply (24 V DC/AC)

More information

Get to know all the members of the product family



Join the world of Industrial Ethernet network topologies: Use the SCALANCE X-000 switches to implement simple machine networks that are compact and low-cost.

For setting up small Industrial Ethernet star and line topologies with switching functionality.

Version with plastic enclosure for use in less demanding industrial environments from -10°C to +60°C.

You can rely on these unmanaged Industrial Ethernet switches in machine-level applications for electrical or optical networks – even under harsh environmental conditions.

The unmanaged Industrial Ethernet switches in the SCALANCE X-100 product line are ideal for setting up Industrial Ethernet networks with transmission rates of 10/100 Mbit/s in line and star topologies. They guarantee perfect data transmission at ambient temperatures from -40°C to +70°C.

Your benefits at a glance

- Fail-safe thanks to redundant voltage infeed
- Full industrial compatibility thanks to rugged enclosure for RJ45 ports, including 19" design
- PROFINET (CC-A)
- Versions for harsh environmental conditions (-40°C to +70°C)
- High-performance in hazardous areas of Zone 2 (ATEX, IECEx)
- Cost-saving due to product versions (up to 24 ports, Power-over-Ethernet)
- Industry-compliant retaining collar for data transmission
- Fast error detection thanks to clear diagnostic LEDs
- Different device versions

More information

Get to know all the members of the product family

| The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family | The product family

You can rely on these unmanaged Industrial Ethernet switches in machine-level applications for electrical or optical networks – even under harsh environmental conditions.

For setting up line and star topologies, especially suited for applications in building automation (24V DC/AC).

For use in control rooms and other industry-related environments.

With extended applications: e.g. in hazardous areas.

For the fast and low-cost conversion of electrical signals into optical signals.

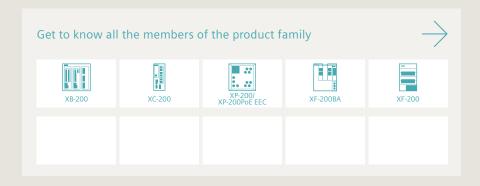
Perfection for all network topologies – from machine-level applications to networked plant units: With these highly versatile Industrial Ethernet switches, you rely on a universal solution for setting up line, star, and ring topologies.

Are you planning to set up line, star, and ring topologies (10/100 Mbit/s) with high-speed redundancy in the ring for electrical or optical paths? The SCALANCE X-200 switches do just that. They also have a compact design available in various port configurations. With up to 24 electrical and optical ports in ST/BFOC and SC, as well as versatile configuration through SFP transceivers for distances of up to 200 km. The system family also includes switches with IRT functionality designed for strict real-time applications.

Your benefits at a glance

- Customized design of small and large industrial networks
- Easily expandable electrical or optical networks
- Consistent, reliable, and powerful data networks based on proven standards and redundancy procedures
- Continuous network monitoring, diagnostics, and reporting for maximum transparency in industrial networks
- Easy assembly on site without errors using the FastConnect installation system

More information



Perfection for all network topologies – from machine-level applications to networked plant units: With these highly versatile Industrial Ethernet switches, you rely on a universal solution for setting up line, star, and ring topologies.

Real-time communication supported by PROFINET and EtherNet/IP.

VLAN and the complete PROFINET or EtherNet/IP diagnostics in one device. Up to four Gigabit ports enable the transfer of large volumes of data.

The Y-Switch functionality increases availability and helps avoid plant standstills.

For networks in which high availability or remote diagnostics options are required.

Learn about the IRT-capable members of the SCALANCE X-200 family.

SCALANCE X-200IRT

Real-time applications on the field level, all the way to high-performance motion control applications – SCALANCE X-200IRT switches based on PROFINET meet these requirements. These extremely versatile switches for setting up isochronous real-time (IRT) Industrial Ethernet networks provide you with a universal solution for the setup of line, star, and ring topologies in time-critical applications.

Specially designed for strict

use in an exceptionally wide

real-time applications: for

range of applications.



dant ring connections.

SCALANCE X-200IRT PRO



For setting up IRT line and star topologies – also suitable for ring topologies and redun-



SCALANCE XF-200IRT

For setting up IRT line and star topologies – with future-oriented switching technology.

For setting up IRT line and star topologies with polymer optical fiber (POF) – also suitable for ring topologies and redundant ring connections.

Production plants have been designed for and calculated to ensure high availability. This means plant failures often result in cost-intensive downtimes, high restart costs, and the loss of valuable data or materials. Redundant control systems or networks in redundant design offer protection from automation system failures. In the event of a fault, the high-availability communication can take over automatically without any consequences for the plant.

For connecting non-HSRenabled and non-PRP-enabled terminal devices to networks that require high availability.

In the course of ongoing digitalization, the data volume in the process industry is growing at an ever increasing rate. Big data necessitates end-to-end communication down to the field level and calls for flexible and reliable communication networks – with the reliable SCALANCE X Industrial Ethernet switches. PROFINET supports flexible network architectures and also allows the integration of existing PROFINET field buses.

Process automation

SCALANCE XF-200BA DNA

The Y-Switch functionality ensures higher availability and prevents plant downtimes.



With SCALANCE XF-200BA Ethernet communication and existing PROFIBUS infrastructures.

Up to four Gigabit ports enable the transfer of large volumes of data.

Increased plant availability with NAMUR-compliant SCALANCE XC200EEC

Managed SCALANCE X

With their VLAN functionality, these devices make it possible to divide physical Industrial Ethernet networks into virtual subnetworks – for more flexibility in assigning devices to network segments and for improved performance and security – because VLANs offer higher protection against cyber threats.

VLAN

VLAN and complete PROFINET or EtherNet/IP diagnostics in one device.

VLAN for high availability in plant networks.

Seamless integration of automation networks into existing corporate networks by establishing virtual LANs.

For structuring Industrial Ethernet networks with a fast-growing number of users, a physically existing network can be divided into several virtual subnetworks.

High functionality and extreme flexibility – these are the features characterizing the SCALANCE X-300 managed Industrial Ethernet switches as compact devices or as 19" rack versions. They enable you to easily expand your plant networks with Gigabit Ethernet.

The SCALANCE X-300 switches are valued for their small mounting depth – two switches can be comfortably installed in one control cabinet. This makes them ideally suited for a wide variety of industry-related applications. The SCALANCE X-300 product family features up to 28 Gigabit ports and combo ports and can also bridge long distances thanks to their fiber optic interfaces (SFP).

Your benefits at a glance

- Cost-effective and space-saving 19" control cabinet
- Can also be used in hazardous areas
- Full integration into PROFINET or EtherNet/IP diagnostics

More information

Get to know all the members of the product family

XR-300WG

XR-300WG

XR-300

High functionality and extreme flexibility – these are the features characterizing the SCALANCE X-300 managed Industrial Ethernet switches as compact devices or as 19" rack versions. They enable you to easily expand your plant networks with Gigabit Ethernet.

Thanks to modular design: plant expansion with up to 24 electrical or four optical ports.

For switched networks with high requirements in terms of availability, diagnostics, and transfer rate.

Switches with small mounting depths for saving space in the control cabinet – flexibly and economically.

Primarily for high-performance plant networks with connections to the corporate network.

High performance when space is restricted – that's exactly what the SCALANCE X-400 product line has to offer, thanks to its modular design. It also boasts of maximum flexibility in the automation network.

The demands placed on the communication network are growing. With a plug-in transceiver for distances up to 200 km, the SCALANCE X-400 product family offers you tremendous flexibility in the automation network. Thanks to the modular design, you can expand your Industrial Ethernet switches with additional port extenders – tool-free. But that's not all: You can improve performance even further by activating layer 3 functions.

Your benefits at a glance

- Mobile network diagnostics via smartphone or tablet
- Electrical or optical networking via combo ports even during operation
- High performance and network availability, e.g. via virtual networks (VLANs)
- Tool-free network expansion even during operation (hot swappable)

More information

Get to know all the members of the product family







High performance when space is restricted – that's exactly what the SCALANCE X-400 product line has to offer, thanks to its modular design. It also boasts of maximum flexibility in the automation network.

Expandable by port extenders and plug-in transceivers for a maximum configuration with up to 24 ports.

Thanks to extender modules, network expansions can be performed easily and conveniently without the use of tools – including during operation.

Are you planning to restructure your plant network? SCALANCE X-500 gives you the freedom to choose your connection media and use various redundancy concepts. You can easily link your plant network to your corporate IT system.



With SCALANCE X-500, you have a genuine structure manager as a central component for your plant network that gives you new design freedom when choosing your connection media and accessing the different redundancy concepts. This allows you to connect your plant network to your corporate IT system, which in turn ensures maximum network availability – and for you this means: continued security in the future with all three basic devices in the SCALANCE X-500 product family and their different media modules up to 10 Gbit/s.

Your benefits at a glance

- Unlimited flexibility in network expansions
- Modifications thanks to full modularity
- Electrical or optical networking via combo ports (SCALANCE XR524-8C/XR526-8C) during operation
- Reduction of stock-keeping costs for different device types due to fully modular design
- Optional retrofitting of layer 3 functions without exchanging the hardware
- High availability due to redundant power supply and redundancy functions
- Diverse versions with different (AC/DC) and optionally redundant power supply for all requirements
- High device performance and transfer of large amounts of data via 10 Gbit/s ports

More information

Get to know all the members of the product family

X-500

Are you planning to restructure your plant network? SCALANCE X-500 gives you the freedom to choose your connection media and use various redundancy concepts. You can easily link your plant network to your corporate IT system.

Thanks to full modularity, unlimited flexibility in network expansions with widely variable installation options.

SCALANCE X for transportation

Punctual rail traffic – thanks to network communication building the foundation for reliable monitoring and precise control of more and more complex transportation infrastructure. Scalance X switches comply with all relevant certifications for wayside/trackside rail traffic as well as onboard/trainside requirements (i.e. EN 50121, EN 50155, or EN 45545).



For configuration of small-scale Industrial Ethernet star and line topology topologies with switching functionality.

Specifically for demanding applications, i.e in Ex environments, also suited for Gigabit topologies.

Flexible design for plant networks, including connectivity to the enterprise network.

Reliable, compact design for high availability.

Exceptional performance thanks to high network availability: modular and powerful.

Extendable with PE408PoE port extenders and plug-in transceivers for full system expansion upto 24 ports.

SCALANCE X for building automation

Well connected in buildings, thanks to a reliable communication infrastructure. A high-performance and highly available network is often required to enable many single-room control solutions, for example, along with security functions such as intrusion detection, surveillance cameras or card readers and the integration into fire detection technology. SCALANCE X Industrial Ethernet switches are perfectly suited to meet these specific demands in building automation, including 24 AC V (50/60 Hz) voltage supply, simple configuration, or fanless operation.

Model with plastic enclosure for fanless operation in the control cabinet or suspended ceiling from -10°C to +60°C.

For configuration of line or tar structures with switching functionality, can be used in the control cabinet. Fiber-optic connection for troublefree networking between different floor levels, for redundant network design with MRP or RSTR.



For large-scale networks with high bandwidths, simple device swapping in the case of a failure using the C-Plug removable media. Layer 3 switch for segmentation of larger networks, can be expanded with port extenders and plug-in transceivers with upto 24 ports.

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

Security information

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept. For more information about industrial security, please visit https://www.siemens.com/industrialsecurity.

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