

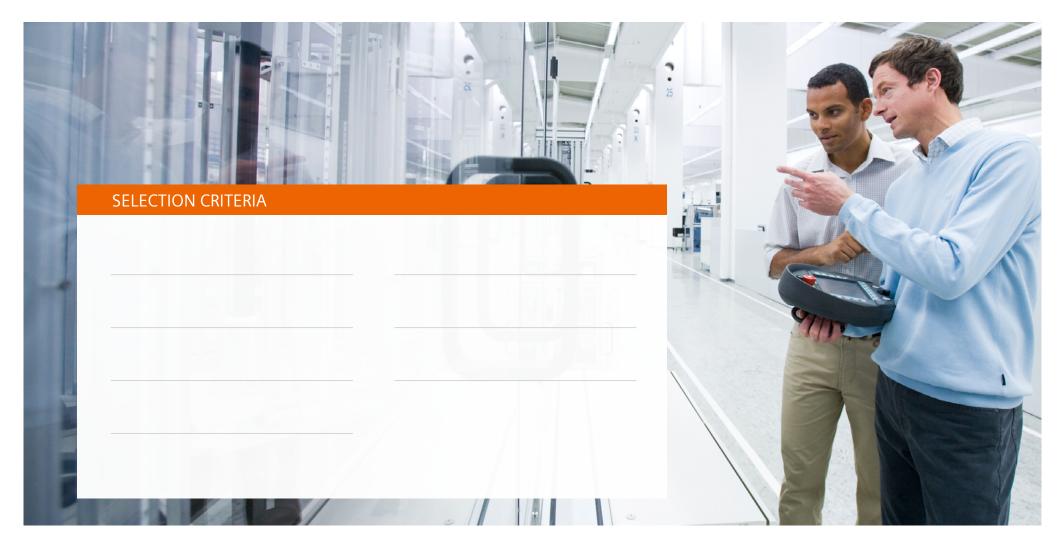
SCALANCE X – The comprehensive range of Industrial Ethernet Switches

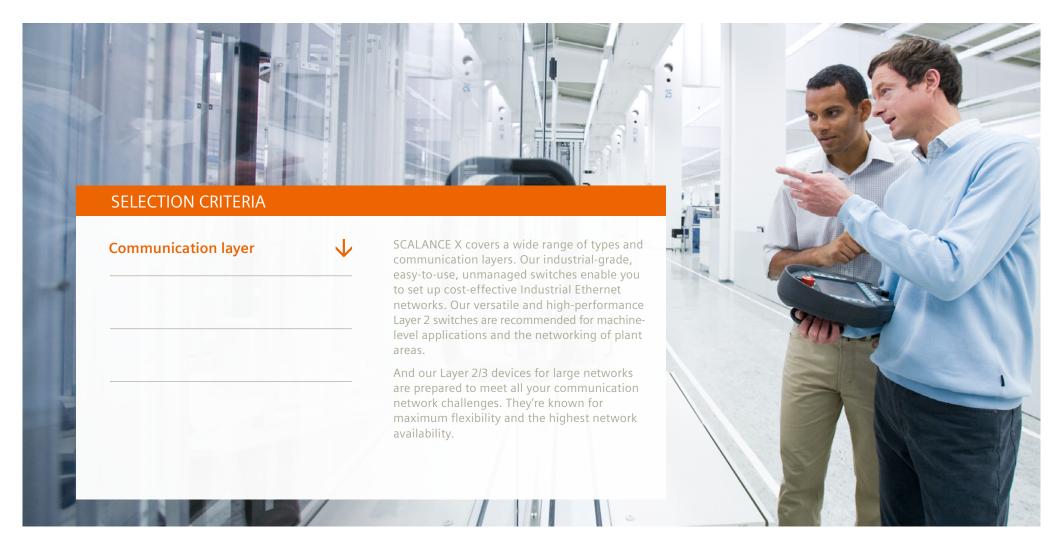
SIEMENS

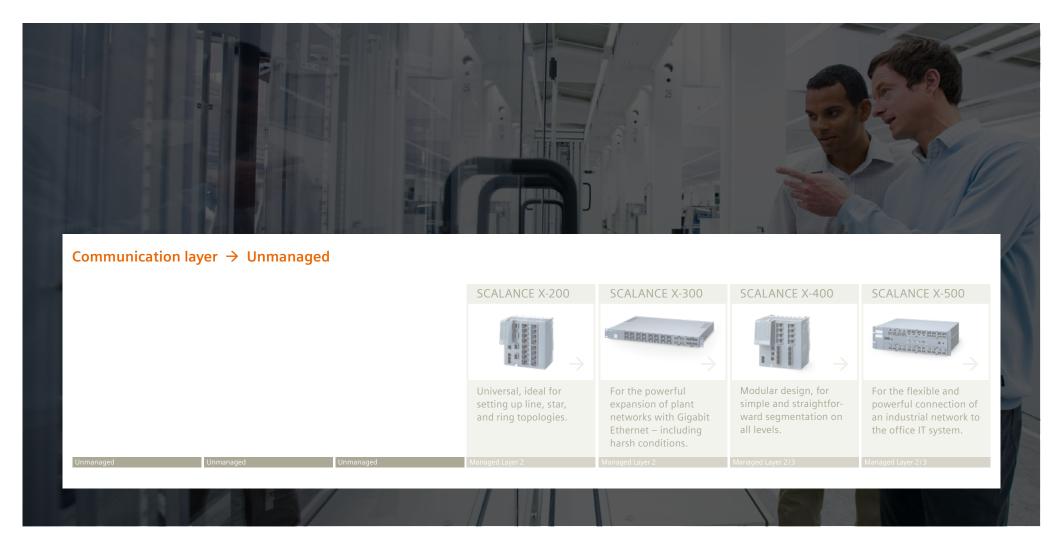
The demands placed on industrial networks are tremendous. Our answer to these challenges is SCALANCE X. Are you already familiar with our system family? Here you'll quickly find the right Industrial Ethernet Switch for your application.

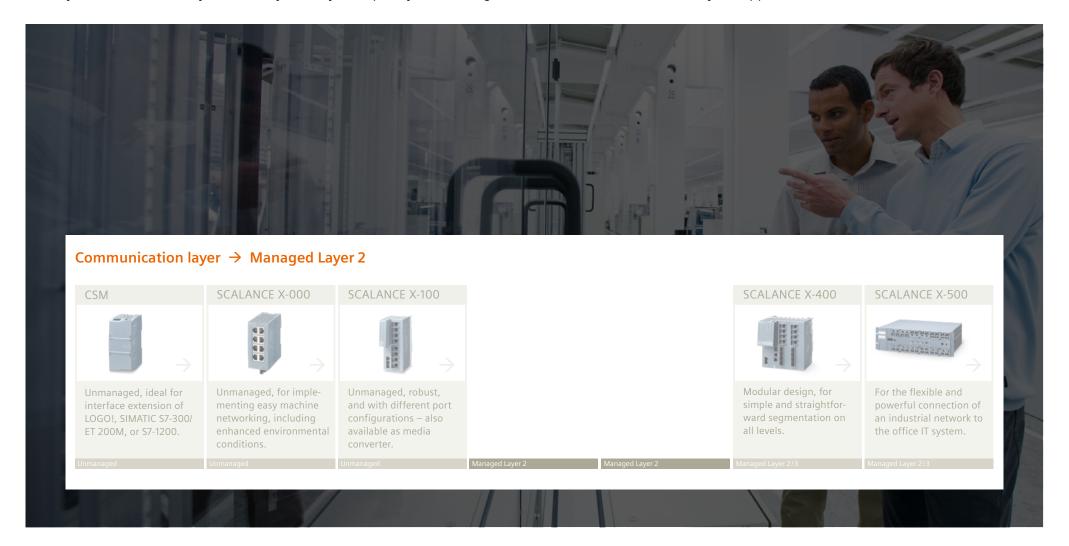
PRODUCT PORTFOLIO

Backbone layer	Unmanaged	Managed
Aggregation layer		
Cell layer		
		X-200RNA
		Device versions with IRT functionality (isochronous real time)
	I	

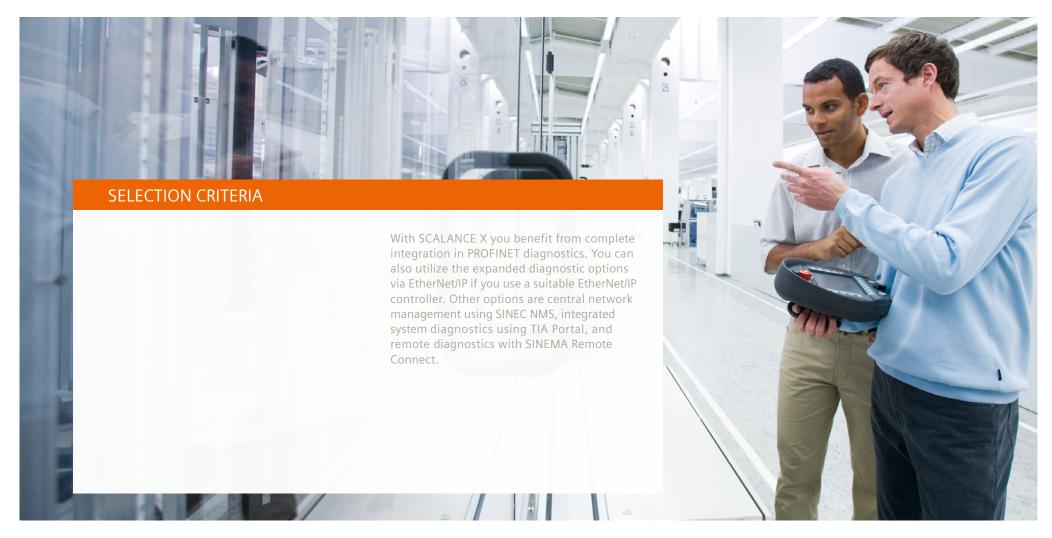


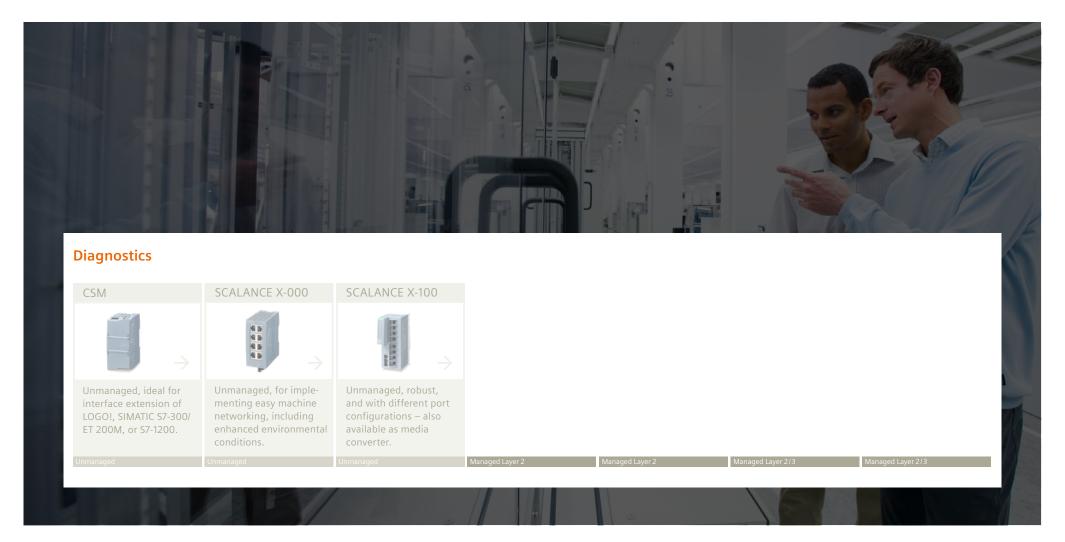


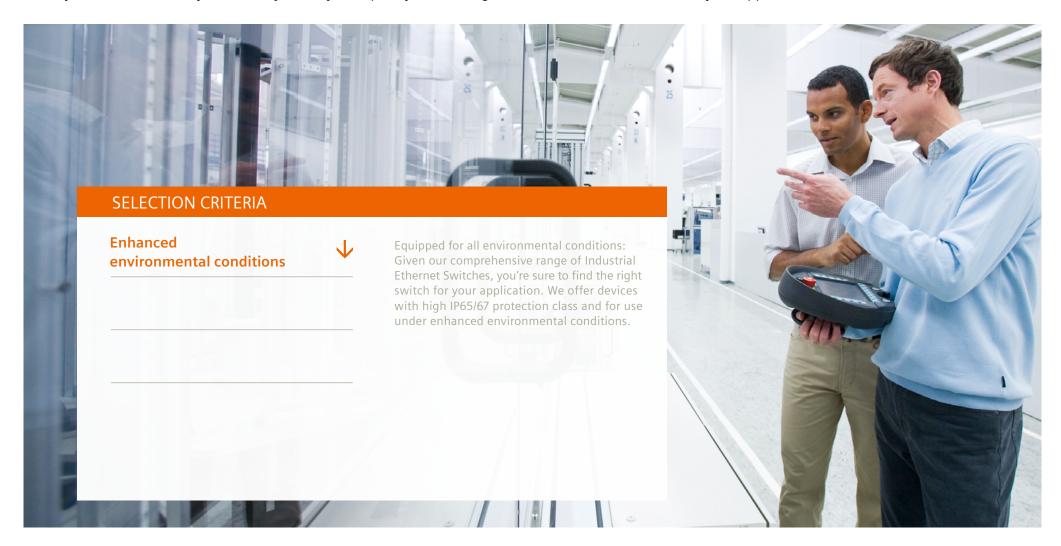


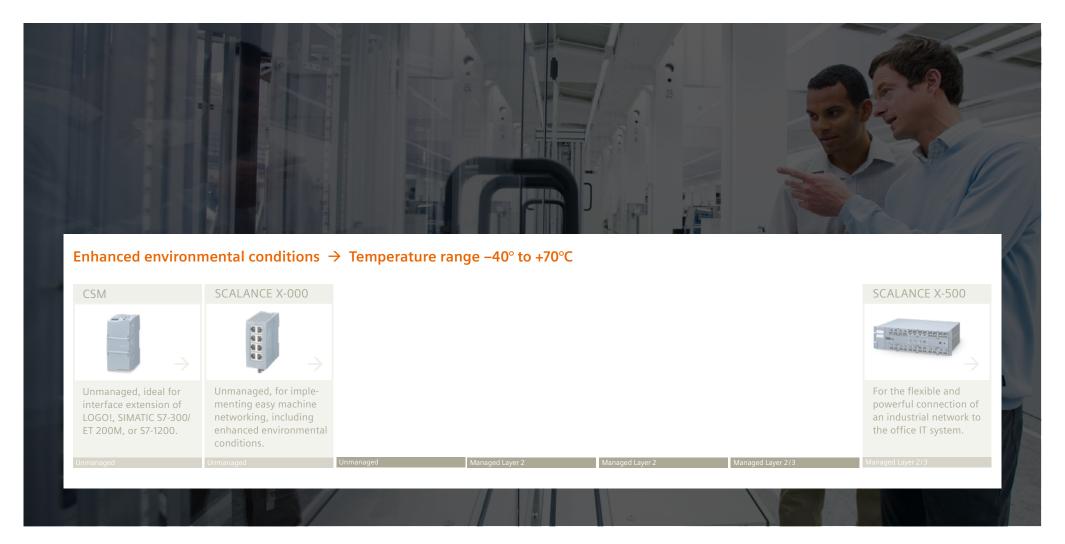


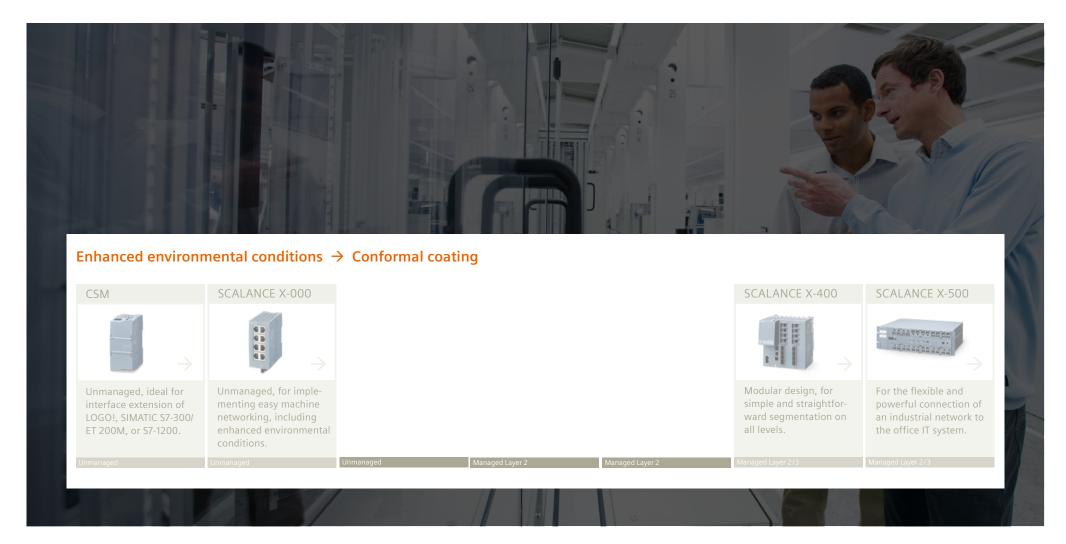


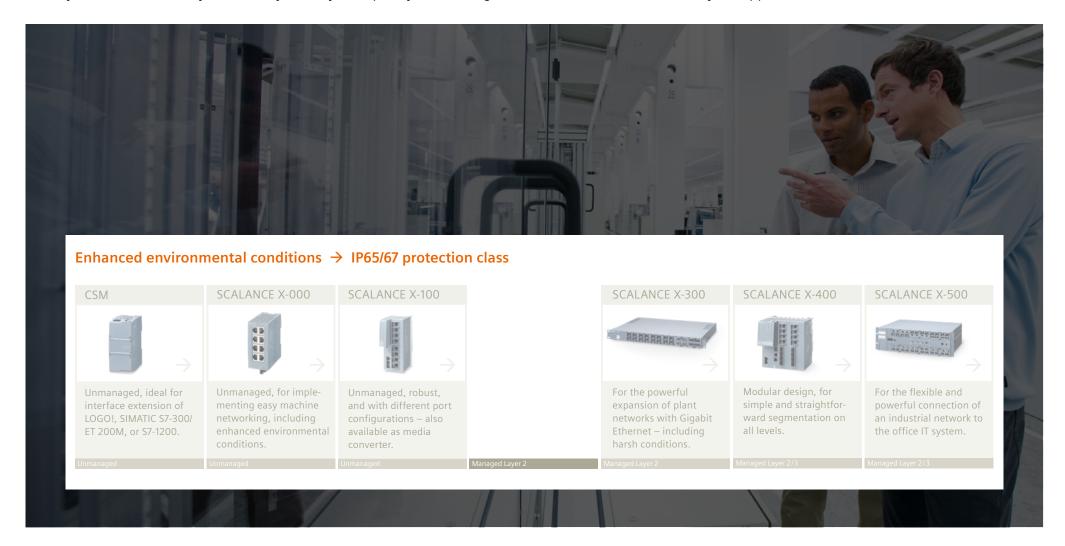


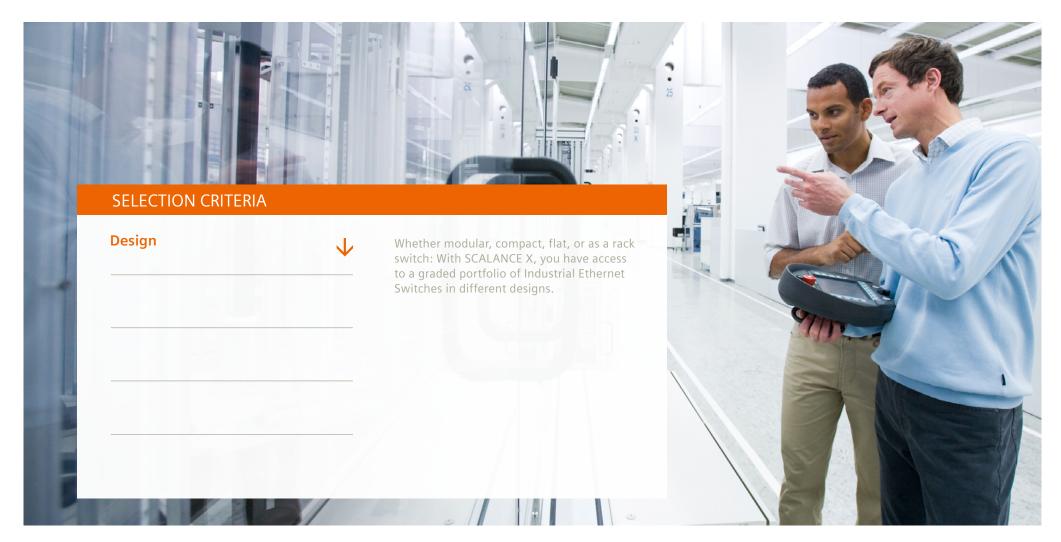


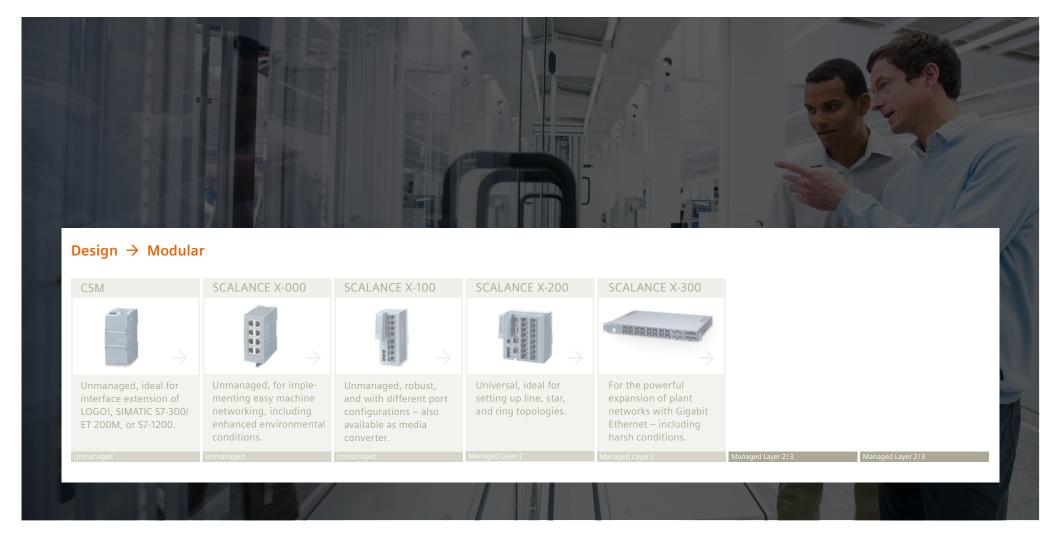


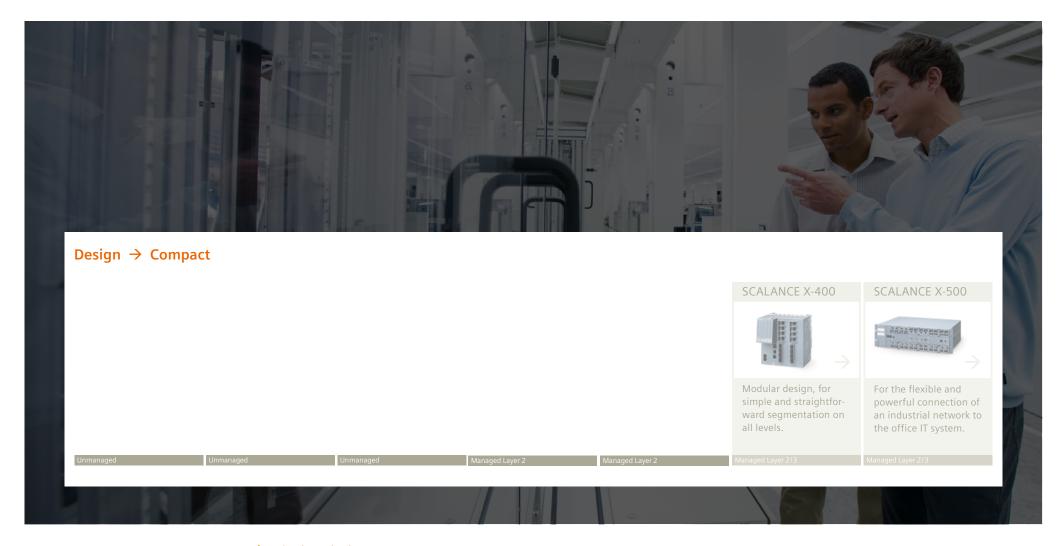




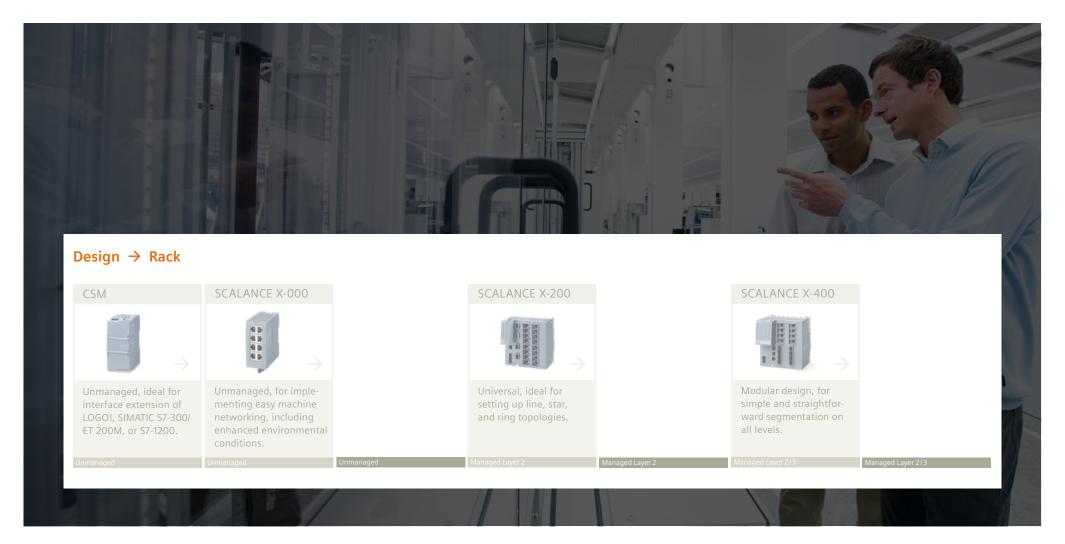


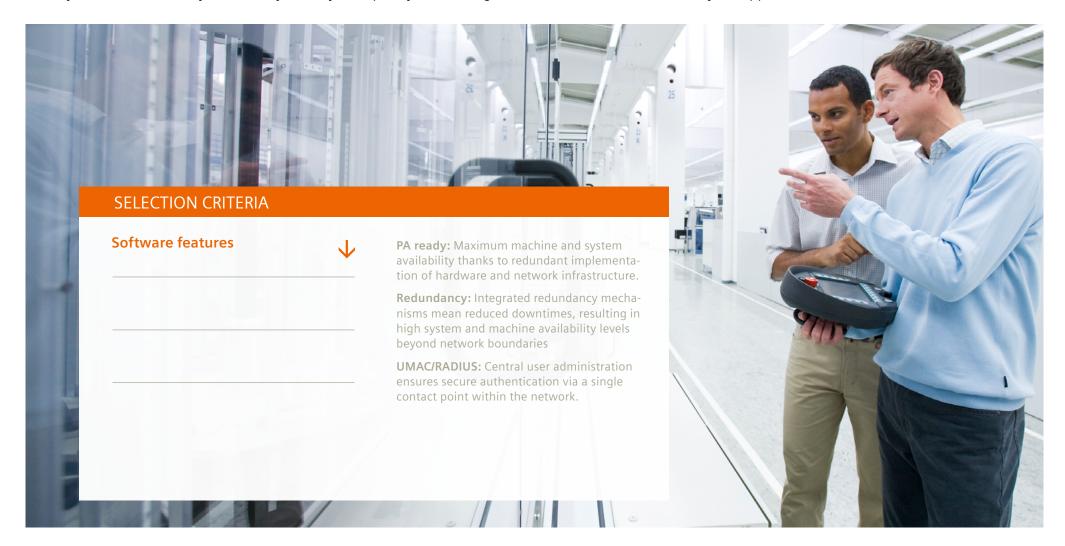


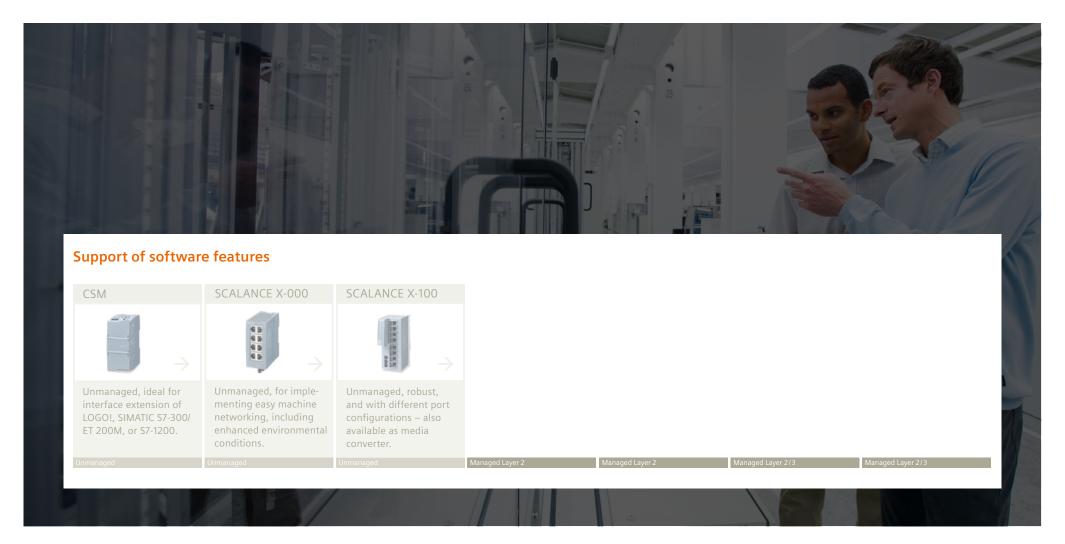


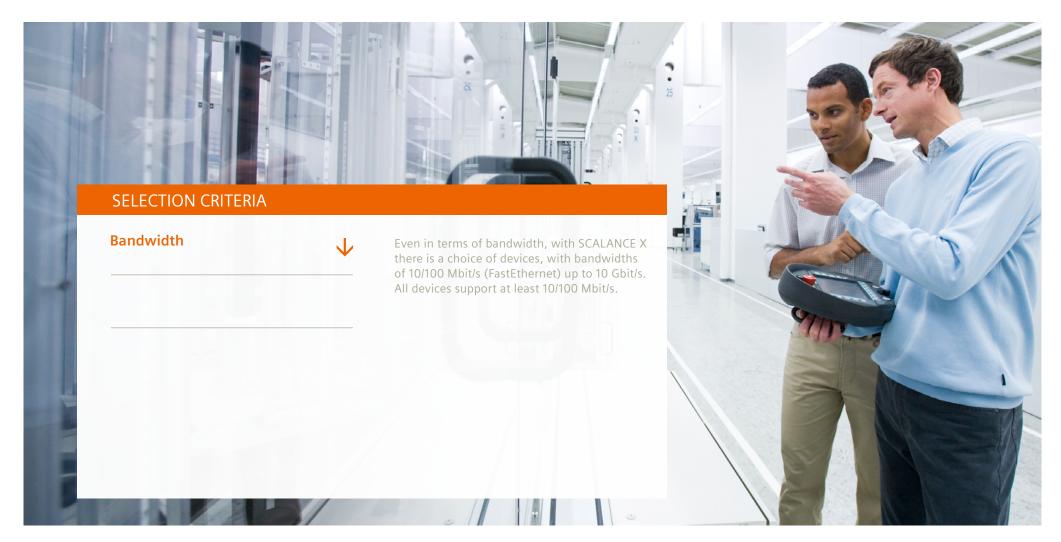


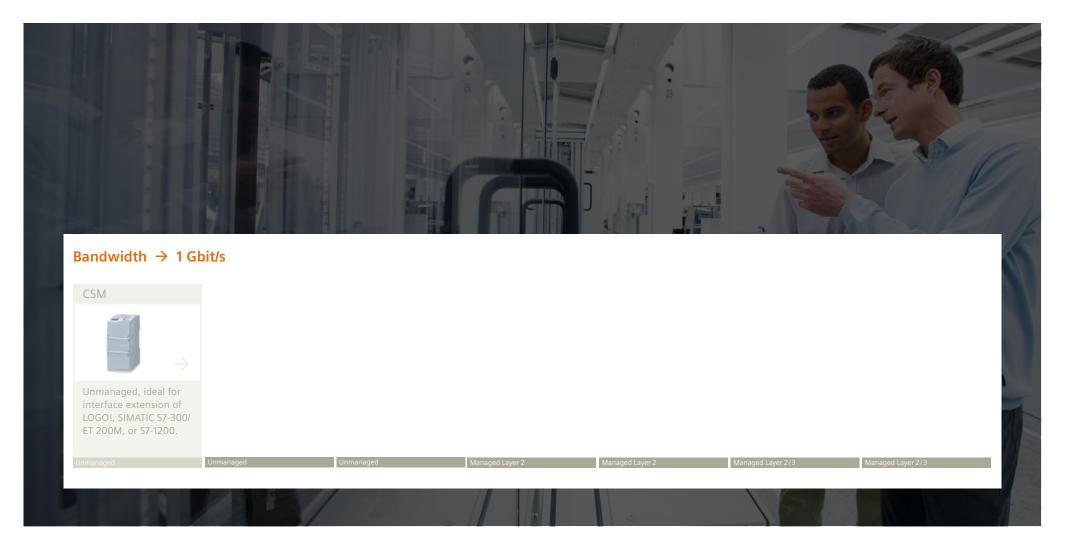


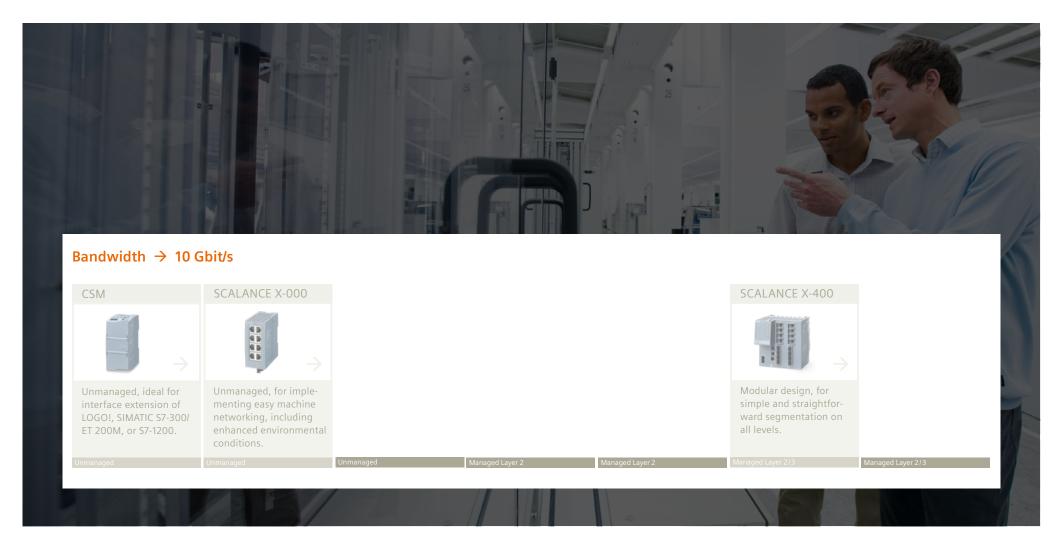


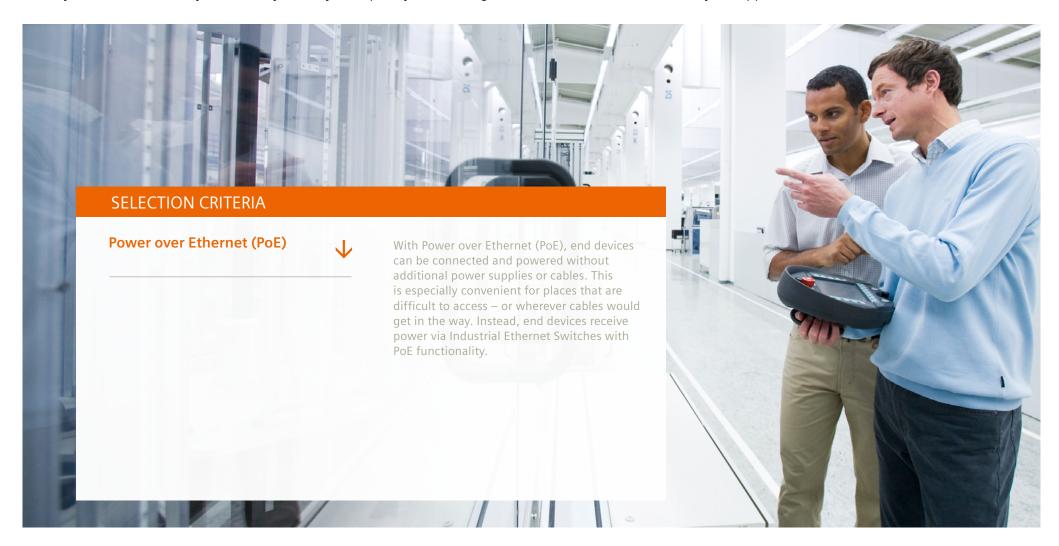


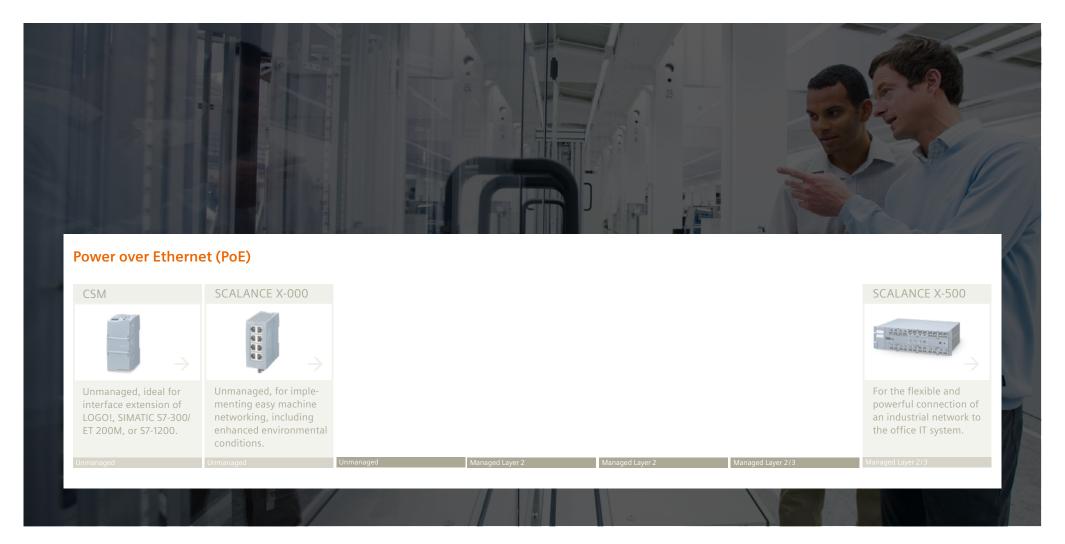


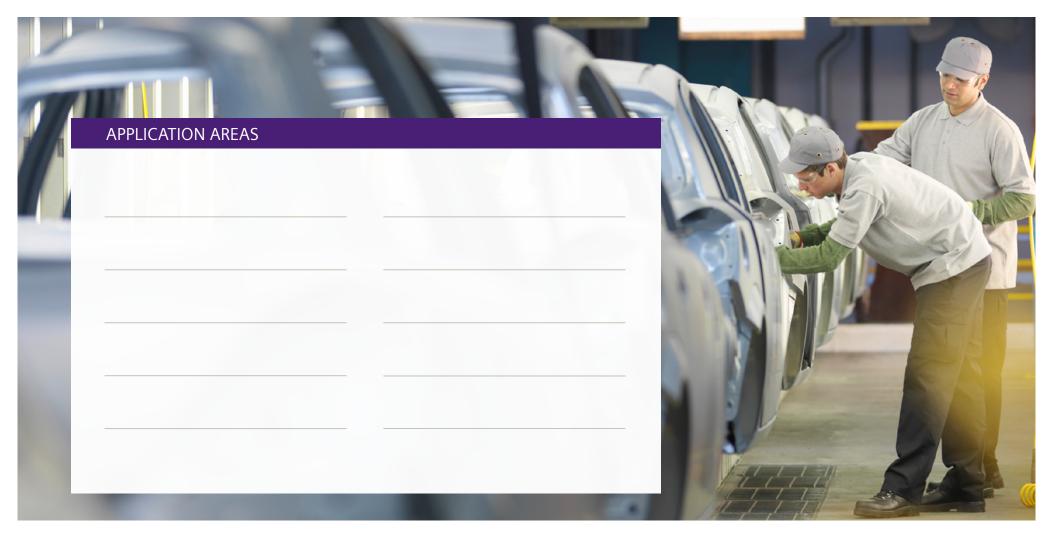


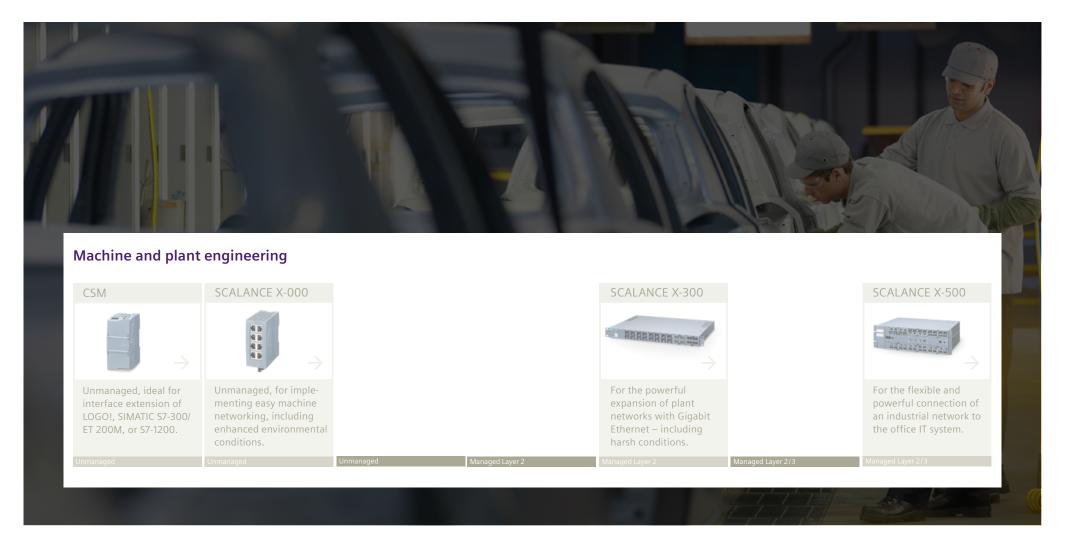


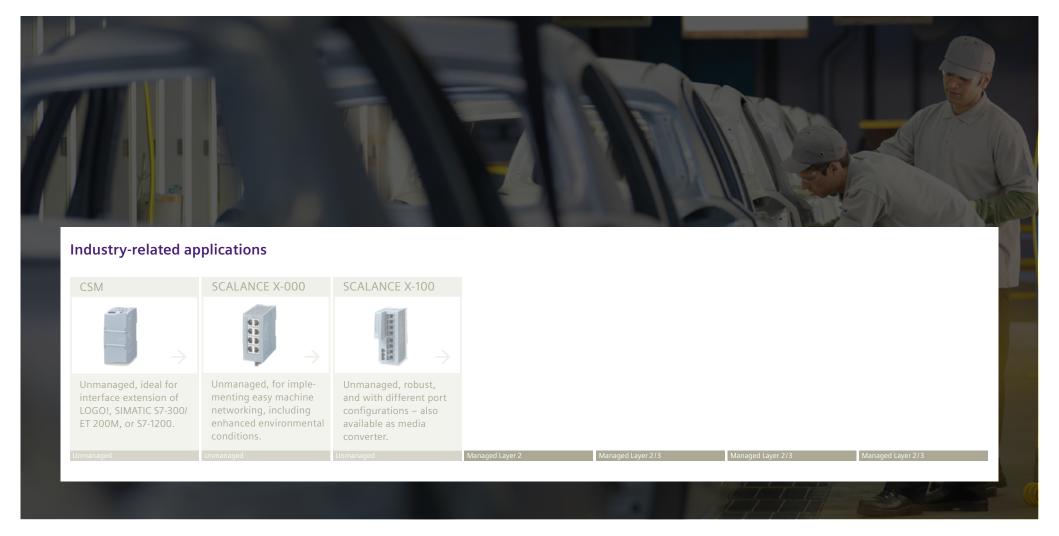


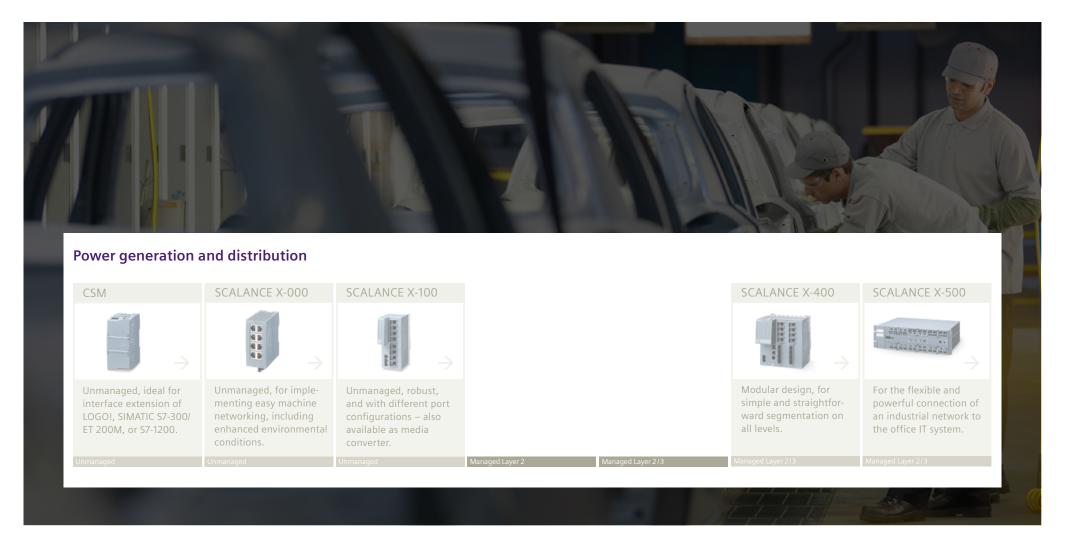


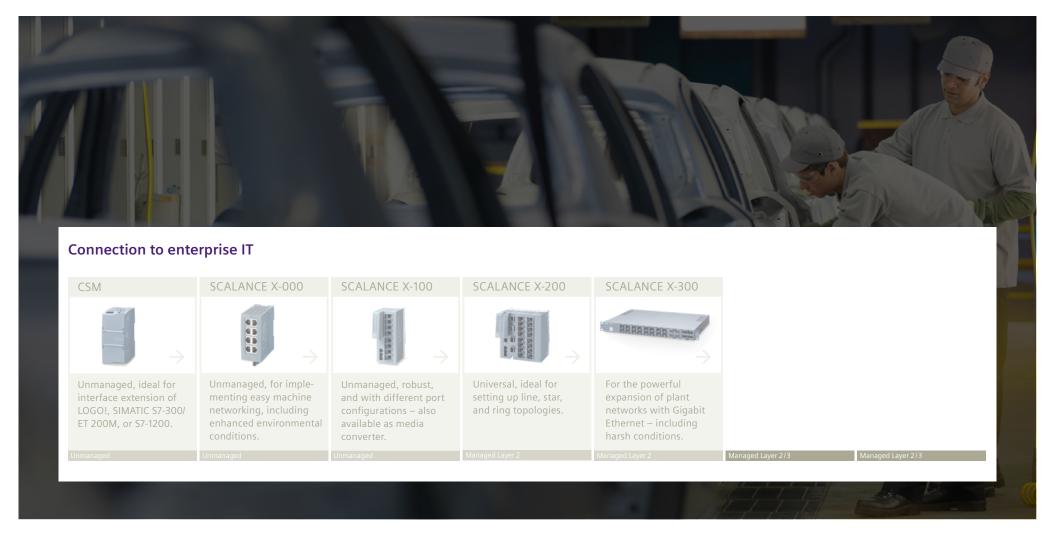


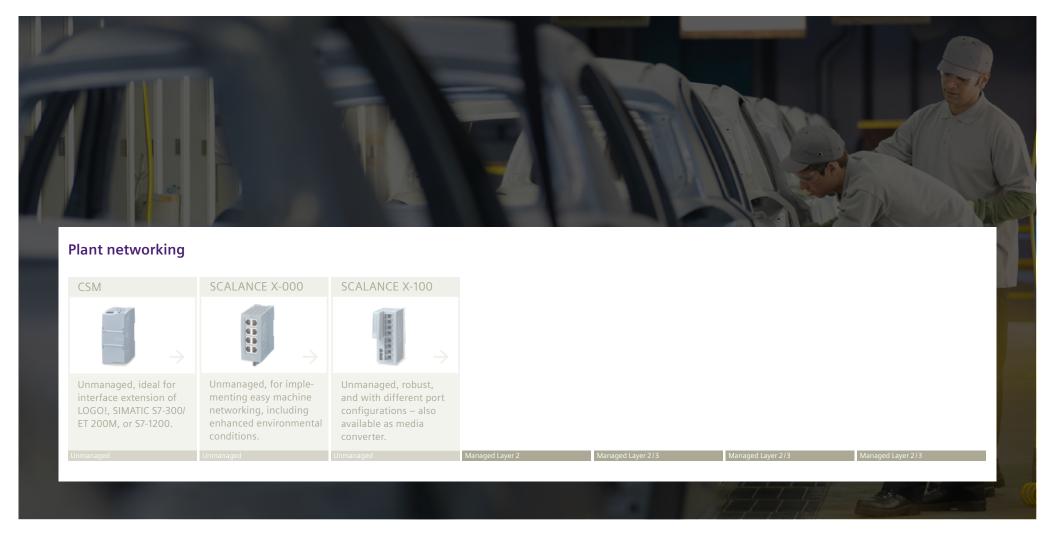


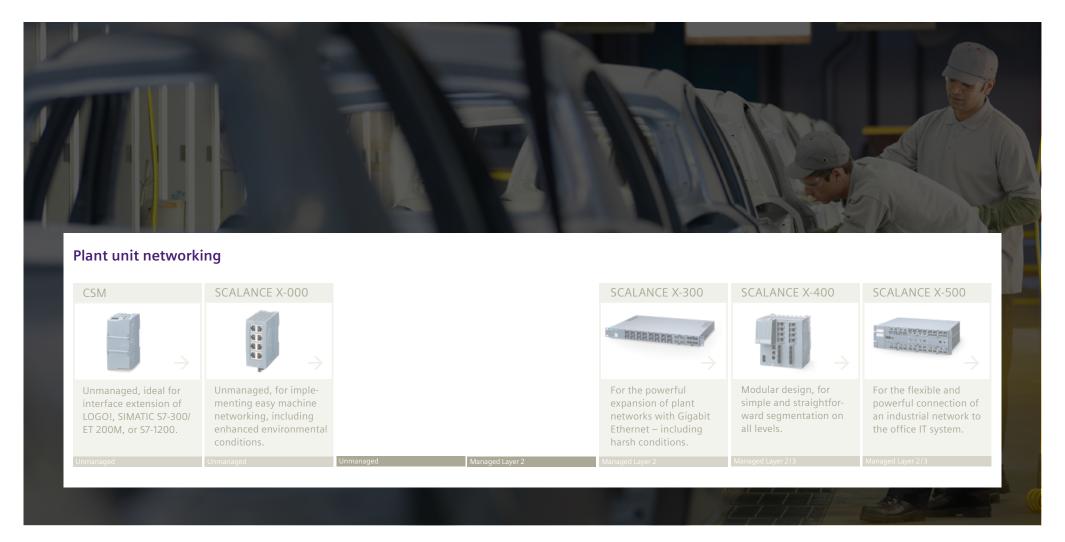


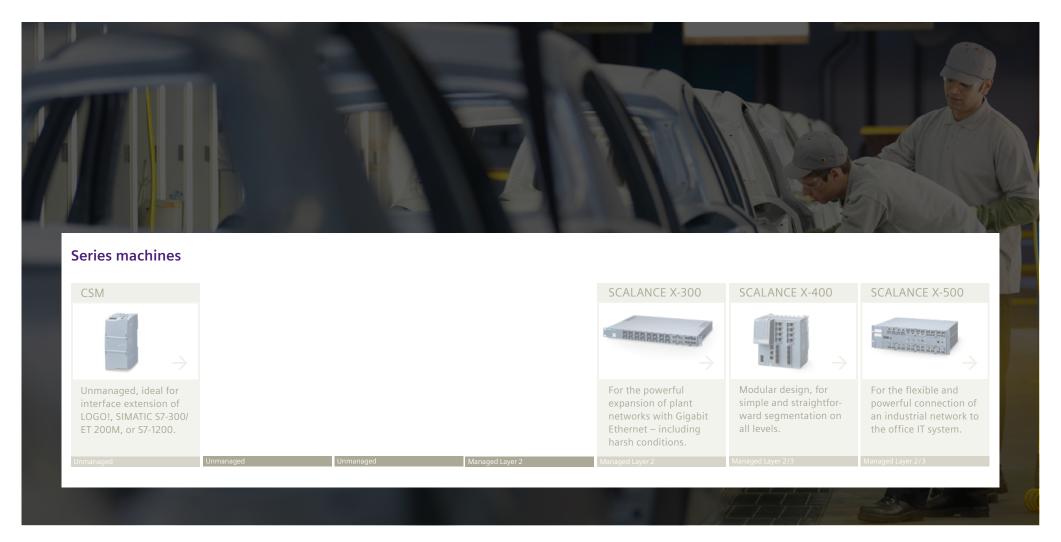


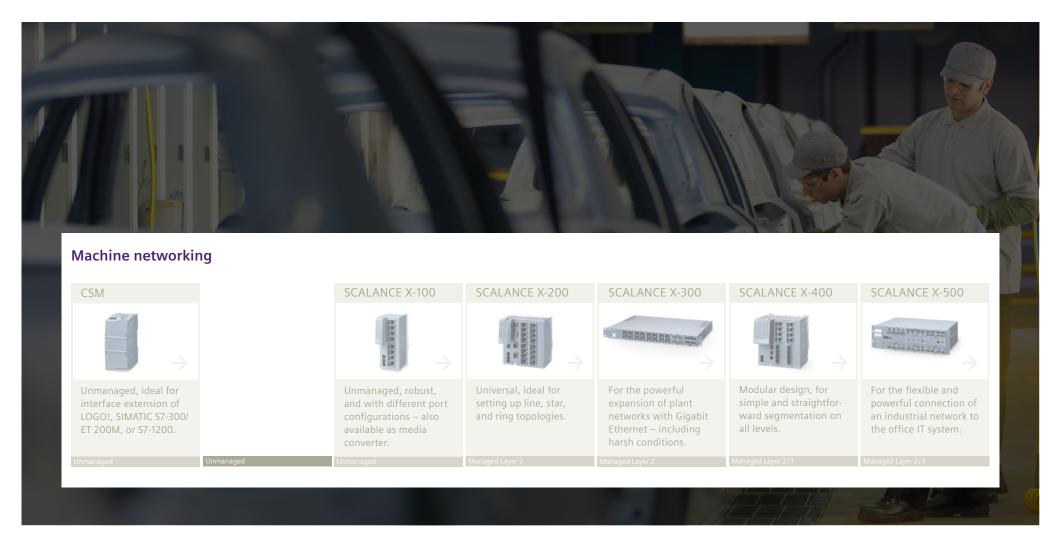


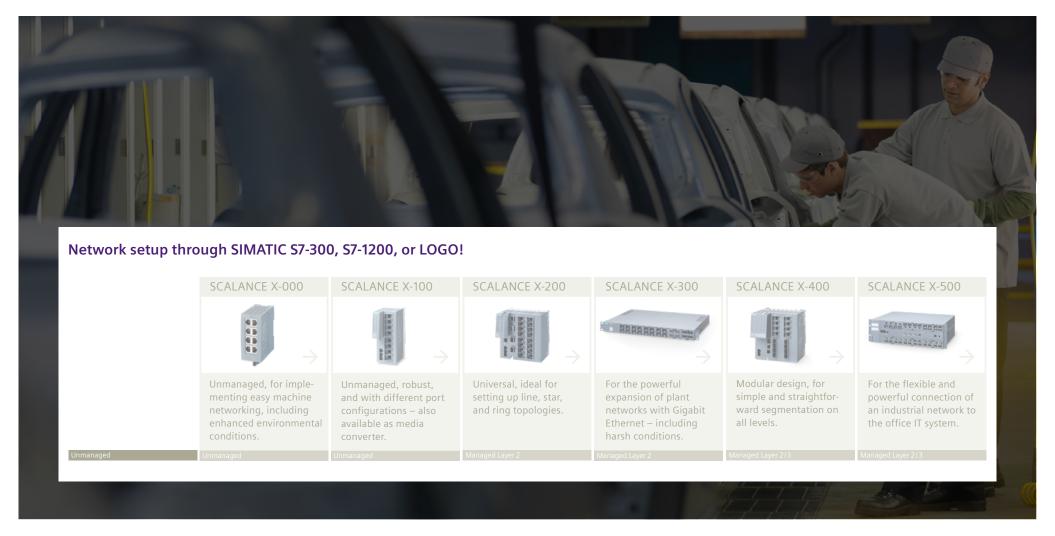












Compact Switch Modules CSM

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

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 stand-alone use as an unmanaged 4-port switch for Industrial Ethernet networks

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 guickly connected.

More information



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.







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 AC 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)



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 $+60^{\circ}$ 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 up to 10 Gbit/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 different 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
- Rack version with 6×1 Gbit/s and 2×10 Gbit/s ports



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 (24 V DC/AC).

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

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

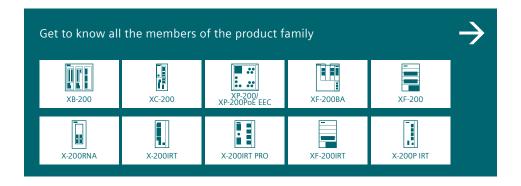
For the fast and low-cost conversion of electrical signals into optical signals.

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 (10/100/1000/10000 Mbit/s) with MRP Interconnect in ring and RSTP+ as redundant connection for electrical or optical paths? The SCALANCE X-200 switches do just that. They also have a compact design available in various port configurations. They offer 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 mounting system
- Support of MRP Interconnect and RSTP+ redundancy processes
- Versions with PoE and 2×10 Gbit/s SFP ports



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



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

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



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

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.

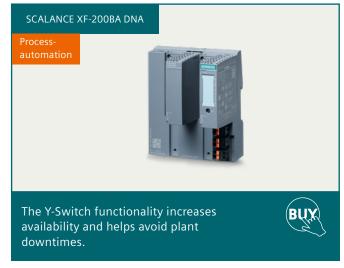




Specially designed for strict real-time applications: for use in an exceptionally wide range of applications.

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

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.





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

Increased plant availability with NAMUR-compliant SCALANCE XC200EEC.

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.

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
- Versions with PoE and 2×10 Gbit/s
- Versions with function extender interface e.g. for connection to SCALANCE LPE

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). Some device types also support up to 10 Gbit/s and Power over Ethernet (PoE).



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.



Compact switches for setting up electrical and/or optical line, ring and star structures

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 offers thanks to its modular design. It also boasts maximum flexibility in the automation network.

Your benefits at a glance

- 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)
- Support for MRP Interconnect and RSTP+ redundancy processes

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.



High performance when space is restricted – that's exactly what the SCALANCE X-400 product line offers thanks to its modular design. It also boasts 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.



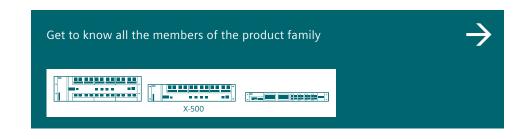
Are you planning to restructure your plant network? SCALANCE X-500 gives you the freedom to choose your connection media and use various redundancy concepts. You can easily link your plant network to your enterprise IT.



A key component with the SCALANCE X-500 is a genuine topology manager for your system network. This creates new scope for creativity when you select your connection media and access the various redundancy options. As a result, you can connect your system network to your office IT system. That means you can enjoy maximum network avail-ability – and you'll continue to enjoy security in the future with all three base devices in the SCALANCE X-500 product family, with their range of 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
- Layer 2 and Layer 3 versions available
- 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



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 enterprise IT.

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).



Specifically for demanding applications, for example 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 with up to 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 V AC (50/60 Hz) voltage supply, simple configuration, and fanless operation.

Model with plastic enclosure for fanless operation in the control cabinet or suspended ceiling from -10° C to $+60^{\circ}$ C.

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

Layer 3 switch for segmentation of larger networks. Can be expanded with port extenders and plug-in transceivers to up to 24 ports.

Published by Siemens AG

Digital Industries Process Automation Östliche Rheinbrückenstr. 50 76187 Karlsruhe, Germany

For the U.S. published by Siemens Industry Inc.

100 Technology Drive Alpharetta, GA 30005 United States

Article no. DIPA-I10014-7600-02, i-PDF Dispo 26000 WS 09220.0

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Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines, and networks.

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.

Customers are responsible for preventing unauthorized access to their plants, systems, machines, and networks. Such systems, machines, and components should only be connected to the enterprise network or the Internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g., firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit: https://www.siemens.com/industrialsecurity.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates, may increase customers' exposure to cyber threats.

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