

SIEMENS



Brochure

Edition
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SCALANCE X

Unmanaged Industrial Ethernet switches





Cost-effective setup of small networks

As active network components, Ethernet switches permit the structuring of an industrial communication network into electrical or optical line and star topologies. They distribute data to defined devices, thereby structuring the data traffic, which in turn significantly increases data throughput and network performance. The various versions of the unmanaged Industrial Ethernet switches (SCALANCE X and Compact Switch Modules (CSM)) ensure optimized implementation, whatever the requirements.

Siemens can always offer the right switch – whether for space-saving installation in the control cabinet at low-cost, industry-compatible design, or demanding requirements for EMC, shock and vibration resistance or cabling.

The benefits at a glance

- Cost-effective setup of small networks
- Comprehensive product portfolio
- Simple operation
- Space-saving design
- Data transfer rates from 10/100 Mbit/s or 1 Gbit/s
- Distances up to 26 km
- Auto-crossover / auto-negotiation
- 5-year warranty on all SCALANCE products

				
Compact Switch Modules	LOGO! CSM 12 / 24	LOGO! CSM 230	CSM 1277	CSM 377
Applications	LOGO!		SIMATIC S7-1200	SIMATIC S7-300/ET 200M
Interfaces	4x RJ45			
Transfer rate, max.	10/100 Mbit/s			
Dimensions (WxHxD) in mm	72x90x55		45x100x75	40x125x118
Degree of protection	IP20			
Temperature range	0 °C to +55 °C		0 °C to +60 °C	
Article No.	6GK7177-1MA20-0AA0	6GK7177-1FA10-0AA0	6GK7277-1AA10-0AA0	6GK7377-1AA00-0AA0

Compact Switch Modules(CSM)

Low-cost fan-out unit specially for LOGO! and SIMATIC S7. With these Compact Switch Modules, up to three stations can be connected quickly and easily to LOGO!, SIMATIC S7-1200 or SIMATIC S7-300/ET 200M devices. The CSMs are also ideal for optimum and space-saving installation in the control box or in small control cabinets.

- Inexpensive
- Fast commissioning, as no configuration is necessary
- Simple and fast status display via LEDs on the device
- Industry-compatible, space-saving plastic enclosure

siemens.com/csm





Selection tools

Convenient selection tools are available to help you in selecting these unmanaged Industrial Ethernet switches.

They also assist with selection from the complete portfolio and with configuration of the modular Industrial Ethernet switches:

SIMATIC NET Selection Tool:
siemens.com/snst

TIA Selection Tool:
siemens.com/tia-selection-tool

				
SCALANCE XB-000	XB005¹⁾ / XB005G	XB008 / XB008G	XB004-1¹⁾ / XB004-1G / XB004-1LD¹⁾ / XB004-1LDG	XB004-2
Applications	Machine networking			
Interfaces	5x RJ45	8x RJ45	4x RJ45/1x SC	4x RJ45/2x SC multi-mode
Transfer rate, max.	Up to 1 Gbit/s			
Special features			XB004-1LD: up to 26 km XB004-1LDG: up to 10 km	
Dimensions (WxHxD) in mm	45x100x87			
Degree of protection	IP20			
Temperature range	-10 °C to +60 °C			
Article No.	XB005: 6GK5005-0BA00-1AB2 XB005G: 6GK5005-0GA00-1AB2	XB008: 6GK5008-0BA00-1AB2 XB008G: 6GK5008-0GA00-1AB2	XB004-1: 6GK5004-1BD00-1AB2 XB004-1G: 6GK5004-1GL00-1AB2 XB004-1LD: 6GK5004-1BF00-1AB2 XB004-1LDG: 6GK5004-1GM00-1AB2	6GK5004-2BD00-1AB2

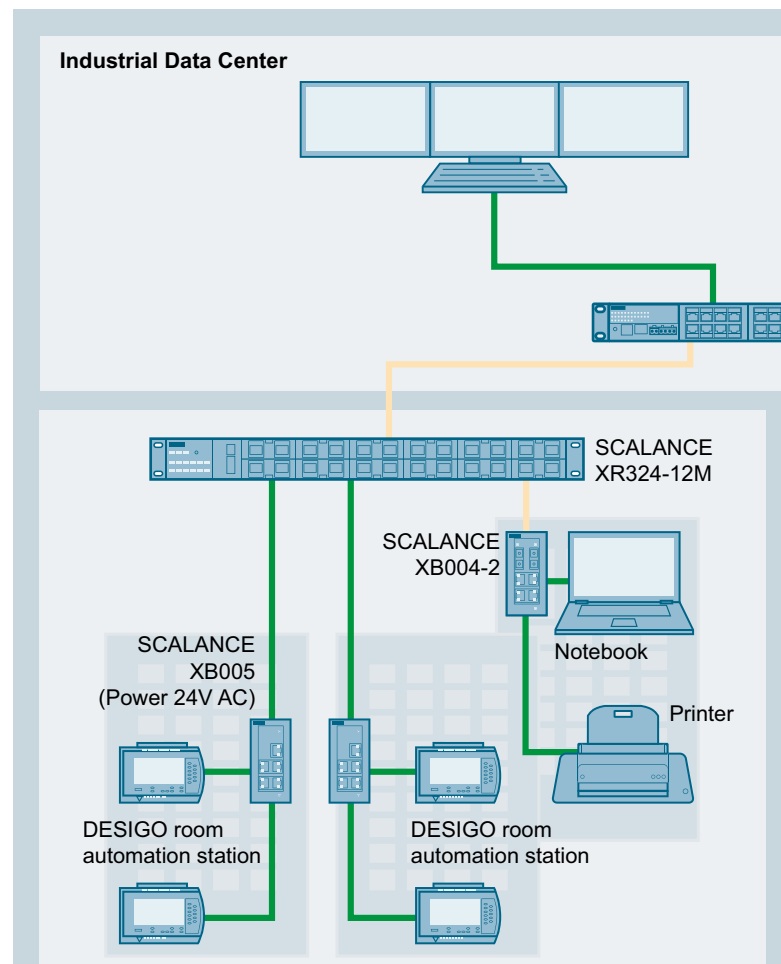
¹⁾ 24 V DC and 24 V AC power supplies possible

SCALANCE XB-000






Simple, space-saving, industry-compatible: The SCALANCE XB-000 range enables the cost-effective setup of networks in a compact format. The devices achieve gigabit data transmission over distances up to 26 km with fiber optic cables.

- Easy handling
- Space-saving installation in control boxes, cabinets or for wall mounting
- Electrical and electrical/optical variants, some with gigabit cabling
- Industry-standard plastic enclosure
- Creation of line topologies with two fiber optic interfaces (SCALANCE XB004-2)
- Variants with 24 V AC for building automation

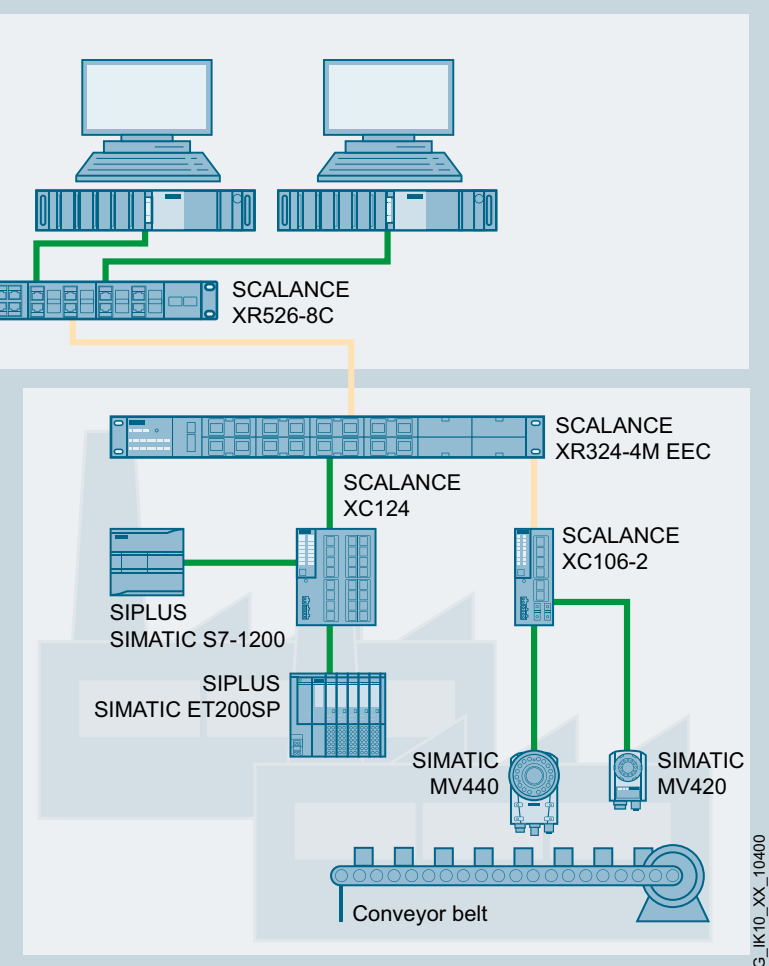
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- Industrial Ethernet (Twisted Pair)
- Industrial Ethernet (Fiber Optic)

					
SCALANCE XC-100	XC108 / XC106-2		XC116	XC124	XC-100OBR
Applications	Machine networking and small networks				Optical bypass relays
Interfaces	8x RJ45 / 6x RJ45 2x ST/BFOC		16x RJ45	24x RJ45	4x SC
Transfer rate, max.	From 10 to 100 Mbit/s				100/1000 Mbit/s
Special features	Tested in acc. with Highly Accelerated Life Test (HALT)				
Dimensions (WxHxD) in mm	60x125x124 / 60x147x125		120x125x124	180x125x124	50x140x125
Degree of protection	IP20				
Temperature range	-40 °C to +70 °C				
Article No.	XC108: 6GK5108-0BA00-2AC2 XC106-2: 6GK5106-2BB00-2AC2 (ST/BFOC) 6GK5106-2BD00-2AC2 (SC)		6GK5116-0BA00-2AC2	6GK5124-0BA00-2AC2	6GK5100-4AV00-2DA2 (SM without TAP) 6GK5100-4AV00-2FA2 (SM with TAP) 6GK5100-4AW00-2FA2 (MM with TAP)

SCALANCE XC-100



SCALANCE XC-100 in all its versions with different numbers of ports enables small networks to be constructed with the right switch for the respective application, e.g. for hazardous zones (IECEX, ATEX Zone 2). The available density of ports helps to save costs. In addition, all SCALANCE XC-100 devices undergo a Highly Accelerated Life Test (HALT). This involves subjecting the products to extreme overload test cycles to determine weaknesses in materials and design in an "accelerated lifecycle".

- Rugged plastic/metal enclosure with collar
- Various devices with different numbers of ports
- Redundant power supply via 4-pole terminal block (2x 24 V DC)
- Clearly positioned interfaces and diagnostics LEDs
- Motor vehicle approval for SCALANCE XC108
- High temperature range from -40 °C to +70 °C
- Highly Accelerated Life Test (HALT)
- Multitude of mounting options, including on walls, SIMATIC S7-1500 controllers and 35 mm DIN rails

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SCALANCE X-000 / SCALANCE X-100

X005 / X005TS

X108PoE

SCALANCE X-100 media converter

X101-1

X101-1LD

Applications	Machine networking and simple networks		Machine-level applications for implementation between different media	
Interfaces	5x RJ45	8x RJ45	1x RJ45 1x multi-mode FO ST/BFOC	1x RJ45 1x single-mode FO ST/BFOC
Transfer rate, max.	From 10 to 100 Mbit/s		From 10 to 100 Mbit/s	
Special features	X005TS: with railway approval	Power-over-Ethernet (for 2 ports)	Up to 5 km	Up to 26 km
Dimensions (WxHxD) in mm	60x125x124		40x125x124	
Degree of protection	IP30		IP30	
Temperature range	-40 °C to +70 °C	-20 °C to +60 °C	-10 °C to +60 °C	
Article No.	XB005: 6GK5005-0BA00-1AA3 XB005TS: 6GK5005-0BA00-1CA3	6GK5108-0PA00-2AA3	6GK5101-1BB00-2AA3	6GK5101-1BC00-2AA3

SCALANCE X-000 / SCALANCE X-100

The rugged SCALANCE X-000 and X108PoE Industrial Ethernet Switches allow the low-cost implementation of simple machine networks and represent the ideal solution for the creation of small star or line topologies with switching functionality in machine and/or plant islands.

SCALANCE X-100 media converter

The unmanaged Industrial Ethernet media converters from the SCALANCE X-100 product line are ideally suited to the conversion of different transmission media in Industrial Ethernet networks at data transfer rates of 10/100 Mbit/s in line, star and ring topologies. They are easy to handle and enable the flexible and cost-effective combination of copper and fiber optic cables.

- Rugged metal enclosure (IP30)
- Full industrial compatibility, thanks to collar and enclosure design for RJ45 ports.
- Use in railway and road traffic applications (SCALANCE X-000)
- Various devices with different numbers of ports
- Redundant power supply and signaling contact (SCALANCE X108PoE)
- High temperature range from -40 °C to +70 °C (SCALANCE X005TS)
- Supports Power-over-Ethernet (PoE) (SCALANCE X108PoE)

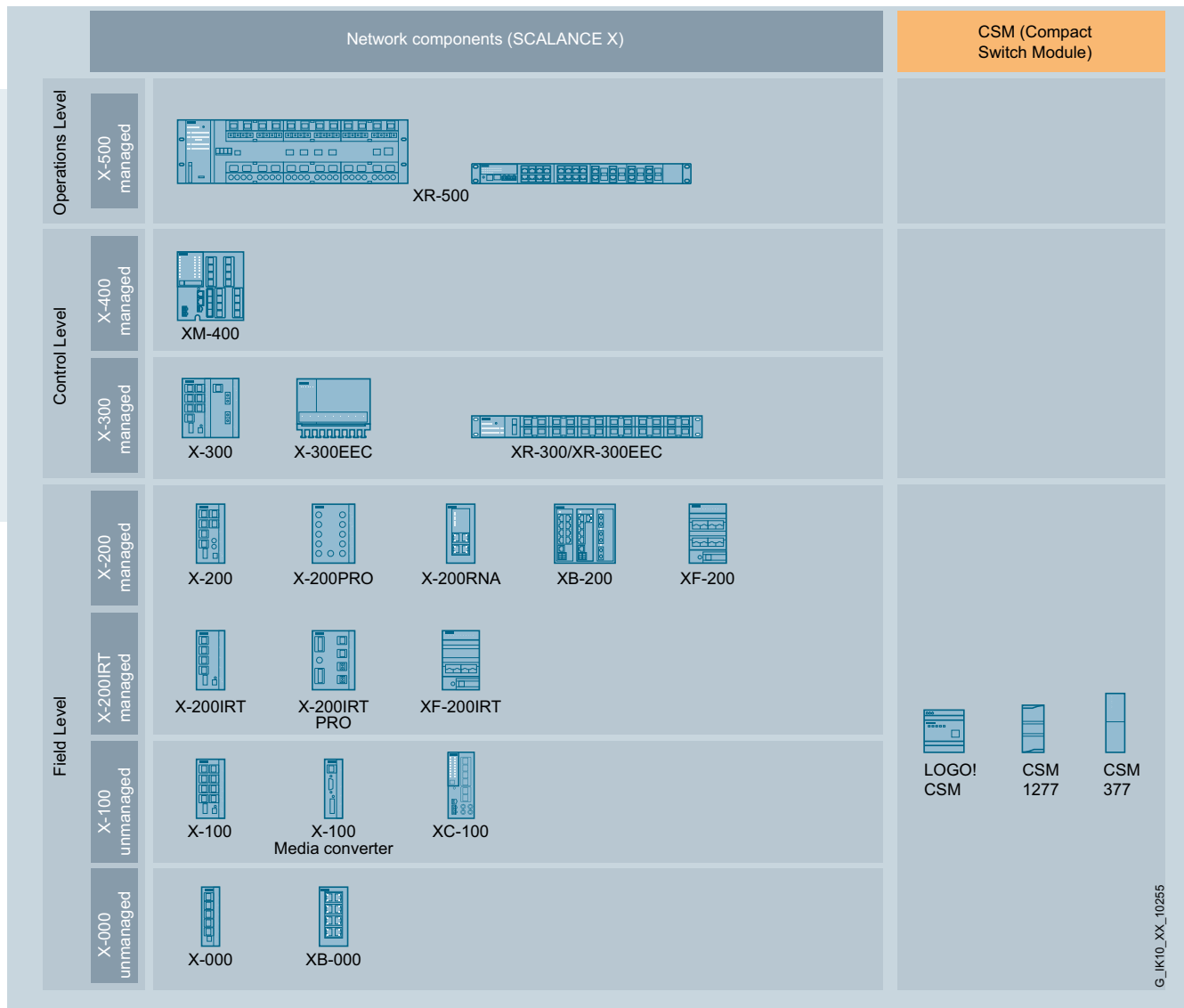
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- Diagnostics on the device using LEDs (power, link status, data communication) and signaling contact (signaling mask can be set on site using buttons)
- Rugged metal enclosure (IP30)
- Full industrial compatibility, thanks to collar and enclosure design for RJ45 ports
- Redundant power supply

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SCALANCE X Industrial Ethernet Switches

With a graded portfolio, Siemens is able to offer the right switch for any industrial communication network requirements.



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Security information

Siemens provides automation and drive products with industrial security functions that support the secure operation of plants or machines. They are an important component in a holistic industrial security concept. With this in mind, our products undergo continuous development. We therefore recommend that you keep yourself informed with respect to our product updates. Please find further information and newsletters on this subject at: www.support.industry.siemens.com

To ensure the secure operation of a plant or machine, it is also necessary to take suitable preventive action (e.g. cell protection concept) and to integrate the automation and drive components into a holistic, state-of-the-art industrial security concept for the entire plant or machine. Products used from other manufacturers should also be taken into account here. For more information, go to www.siemens.com/industrialsecurity

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