



SCALANCE XC316-8 managed layer 2 IE switch, 16x 10/100/1000 Mbit/s RJ45, 8x 1/10 Gbit/s SFP+ port, LED diagnostics, error signaling contact with select/set pushbutton, PROFINET IO device, network management, redundancy functions, office features (RSTP, VLAN, IGMP,...) CLP included in scope of supply assembly: DIN rail/S7 mounting rail .

product type designation	
product brand name	SCALANCE
transfer rate	
transfer rate	10, 100, 1000 Mbit/s
transfer rate	10 Gbit/s
interfaces / for communication / integrated	
number of electrical connections • for network components or terminal equipment	16; RJ45
number of 10/100/1000 Mbit/s RJ45 ports • with securing collar	16
number of electrical connections • for SFP+	8; 1000 Mbps and 10000 Mbps SFP usable
interfaces / other	
number of electrical connections • for operator console • for signaling contact • for power supply	1 1 1
design of the removable storage • CLP	Yes
operating voltage / of the signaling contacts • at DC / rated value	24 V
operational current / of the signaling contacts • at DC / maximum	0.1 A
supply voltage, current consumption, power loss	
product component / connection for redundant voltage supply	Yes
type of voltage / 1 / of the supply voltage • supply voltage / 1 / rated value • power loss [W] / 1 / rated value • power loss [W] / at DC / at 24 V / typical • supply voltage / 1 / rated value • consumed current / 1 / maximum • consumed current / at DC / at 24 V / typical • product component / 1 / fusing at power supply input	24 V 43.2 W 25.92 W 19.2 ... 28.8 V 1.8 A 1.08 A Yes
ambient conditions	
ambient temperature • during operation • during storage • during transport	-40 ... +60 °C -40 ... +85 °C -40 ... +85 °C
relative humidity • at 25 °C / without condensation / during operation /	95 %

maximum	
operating condition / fanless operation	Yes
protection class IP	IP20
design, dimensions and weights	
design	compact
width	210 mm
height	147 mm
depth	125 mm
net weight	1.8 kg
fastening method	
• 19-inch installation	No
• 35 mm DIN-rail mounting	Yes
• wall mounting	Yes
• S7-300 rail mounting	Yes
• S7-1500 rail mounting	Yes
product features, product functions, product components / general	
cascading in the case of a redundant ring / at reconfiguration time of $\leq 0.3\text{ s}$	50
number of automatically learnable MAC addresses	16382
number of QoS queues / per port	8
product function	
• QoS according to IEEE 802.1Q	Yes
product feature	
• Store & Forward switching method	Yes
product functions / management, configuration, engineering	
product function	
• CLI	Yes
• web-based management	Yes
• MIB support	Yes
• TRAPs via email	Yes
• configuration with STEP 7	Yes
• RMON	Yes
• port mirroring	Yes
• multiport mirroring	Yes
• CoS	Yes
• PROFINET IO diagnosis	Yes
• switch-managed	Yes
PROFINET conformity class	B
network load class / according to PROFINET	III
telegram length / for Ethernet / maximum	2048 byte
protocol / is supported	
• Telnet	Yes
• HTTP	Yes
• HTTPS	Yes
• TFTP	Yes
• FTP	Yes
• SFTP	Yes
• BOOTP	No
• NETCONF	No
• GMRP	Yes
• DCP	Yes
• LLDP	Yes
• EtherNet/IP	Yes
• SNMP v1	Yes
• SNMP v2	Yes
• SNMP v3	Yes
• IGMP (snooping/querier)	Yes
identification & maintenance function	
• I&M0 - device-specific information	Yes
• I&M1 - higher level designation/location designation	Yes
product functions / diagnostics	

product function	
• port diagnostics	Yes
• statistics Packet Size	Yes
• statistics packet type	Yes
• error statistics	Yes
• SysLog	Yes

product functions / VLAN

product function	
• VLAN - port based	Yes
• VLAN - protocol-based	No
• VLAN - IP-based	No
• VLAN dynamic	Yes
number of VLANs / maximum	257
number of VLANs - dynamic / maximum	257
number of VLANs / at ring redundancy (HRP; MRP; standby link)	257

product functions / DHCP

product function	
• DHCP server	Yes
• DHCP client	Yes
• DHCP Option 82	Yes
• DHCP Option 66	Yes
• DHCP Option 67	Yes

product functions / redundancy

protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	
• media redundancy protocol (MRP) with redundancy manager	Yes
• Media Redundancy Protocol Interconnection (MRP-I)	Yes
• of the PROFINET IO device / is supported / H-Sync forwarding	Yes
• of the PROFINET IO device / is supported / PROFINET system redundancy	Yes
• ring redundancy	Yes
• high speed redundancy protocol (HRP) with redundancy manager	Yes
• high speed redundancy protocol (HRP) with standby redundancy	Yes
• redundancy procedure STP	Yes
• redundancy procedure RSTP	Yes
• redundancy procedure RSTP+	Yes
• redundancy procedure MSTP	Yes
• High-availability Seamless Redundancy (HSR)	Yes
• Parallel Redundancy Protocol (PRP)/operation in the PRP-network	Yes
• Parallel Redundancy Protocol (PRP)/Redundant Network Access (RNA)	Yes
• passive listening	Yes
• eRSTP	Yes
protocol / is supported	
• STP/RSTP	Yes
• STP	Yes
• RSTP	Yes
• MSTP	No
• RSTP big network support	Yes
• LACP	Yes

system modification during operation

product function / configuration in RUN via CiR/H-CiR	Yes
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product functions / security

product function	
• IEEE 802.1x (radius)	Yes
• broadcast/multicast/unicast limiter	Yes
• broadcast blocking	Yes

protocol / is supported	
<ul style="list-style-type: none"> • SSH • SSL 	<p>Yes</p> <p>Yes</p>
product functions / time	
product function	
<ul style="list-style-type: none"> • SICLOCK support • NTP-client • SNTP client • IEEE 1588 v2 transparent forwarding 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
protocol / is supported	
<ul style="list-style-type: none"> • NTP • SNTP • IEEE 1588 profile default 	<p>Yes</p> <p>Yes</p> <p>No</p>
accuracy / at IEEE 1588 v2	
<ul style="list-style-type: none"> • not less than • typical 	<p>100 µs</p> <p>50 ns</p>
standards, specifications, approvals	
certificate of suitability	
<ul style="list-style-type: none"> • CE marking • UKCA marking • cULus approval • KC approval • Regulatory Compliance Mark (RCM) 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
product conformity / according to EMC-guideline	2014/30/EU
standard	
<ul style="list-style-type: none"> • for EMC interference emission • for immunity to EMC • for safety / from CSA and UL 	<p>EN 61000-6-4</p> <p>EN 61000-6-2</p> <p>UL-61010-2 E85972</p>
standards, specifications, approvals / hazardous environments	
certificate of suitability	
<ul style="list-style-type: none"> • ATEX • UKEX • IECEx • ULhazloc approval • CCC / for hazardous zone according to GB standard • FM registration 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
standards, specifications, approvals / other	
certificate of suitability	
<ul style="list-style-type: none"> • railway application in accordance with EN 50121-4 • railway application in accordance with EN 50125-3 	<p>Yes; use only in areas not accessible to the public</p> <p>Yes; Section 4.2: Class AX (up to 2000m); section 4.3: T1: Containers N.T.C and T.C. / Buildings N.C.C and C.C, T2: Containers N.T.C and T.C. / Buildings N.C.C and C.C, TX: Containers N.T.C and T.C. / Buildings N.C.C and C.C., derating according to the manual must be observed when SFP/SFP+ transceivers are used --> only for variants with optical connections; In addition, depending on the installation position, the derating according to the manual must be taken into account; section 4.4: T1: Containers C.C. / Buildings N.C.C and C.C., T2: Containers C.C. / Buildings N.C.C and C.C, T3: Containers C.C. / Buildings N.C.C and C.C; section 4.11: C1: Indoor, C2: Indoor (except condensation), C3: Indoor (except condensation), 4B1, 4S10, UL 61010-2-10; section 4.13: partially, Test Fc: Vibration EN 60068-2-6; IEC 60068-2-6, Test Ea: Shock EN 60068-2-27; IEC 60068-2-27, Test Ec: Rough handling, shocks EN 60068-2-31; IEC 60068-2-31; section 4.14: yes; section 4.15: yes, according to manual.</p>
resistance to air pollution / conformity according to ANSI/ISA-71.04	Yes; G3
IT security for industrial automation systems / according to IEC 62443-4-2:2019	Yes
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> • total • during manufacturing • during operation • after end of life 	<p>1244.3 kg</p> <p>122.74 kg</p> <p>1120.64 kg</p> <p>0.91 kg</p>
product functions / general	

MTBF	13.4 a
reference code	KF KFE
Warranty period	5 a
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022






further information / internet links

internet link	<ul style="list-style-type: none"> to website: Selection guide for cables and connectors https://support.industry.siemens.com/cs/ww/en/view/109766358 to web page: selection aid TIA Selection Tool https://www.siemens.com/tstcloud to website: Industrial communication https://www.siemens.com/simatic-net to web page: SiePortal https://sieportal.siemens.com/ to website: Image database https://www.automation.siemens.com/bilddb to website: CAx-Download-Manager https://www.siemens.com/cax to website: Industry Online Support https://support.industry.siemens.com
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security information

security information	<p>Siemens provides products and solutions with industrial cybersecurity 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 cybersecurity 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 an 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 cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. 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 customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)</p>
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Approvals / Certificates

General Product Approval		For use in hazardous locations	
	Miscellaneous	TUEV	
			
			FM
For use in hazardous locations		Test Certificates	Environment
CCC-Ex		Type Test Certificates/Test Report	
			PROFINET

last modified: 7/15/2025 