



SCALANCE XC416-8 managed Layer 3 IE switch, 16x 10/100/1000 Mbps RJ45, 8x 1G/10 Gbps SFP+ port, LED diagnostics, error signaling contact with select/set button; 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 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s
interfaces / for communication / integrated	
number of electrical connections	
• for network components or terminal equipment	16; RJ45 with securing collar
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	1
• for signaling contact	1
• for power supply	2
type of electrical connection	
• for operator console	USB (2.0 Port, Type B, serial via USB)
• for signaling contact	2-pole terminal block
• for power supply	2 x 2-pin terminal block
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 supply / redundant power supply unit	No
type of voltage / 1 / of the supply voltage	DC
• supply voltage / 1 / rated value	24 V
• power loss [W] / 1 / rated value	43.2 W
• supply voltage / 1 / rated value	19.2 ... 28.8 V
• consumed current / 1 / maximum	1.8 A
• type of electrical connection / 1 / for power supply	2 x 2-pole terminal block
• product component / 1 / fusing at power supply input	Yes
• fuse protection type / 1 / at input for supply voltage	F 10 A / 250 V
ambient conditions	
ambient temperature	
• during operation	-40 ... +60 °C

- during storage - during transport	-40 ... +85 °C
relative humidity	
at 25 °C / without condensation / during operation / maximum	95 %
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 35 mm top hat DIN rail mounting - wall mounting - S7-300 rail mounting - S7-1500 rail mounting	No Yes Yes Yes Yes
product features, product functions, product components / general	
cascading in the case of a redundant ring / at reconfiguration time of <1~0.3~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 - web-based management - MIB support - TRAPs via email - configuration with STEP 7 - RMON - port mirroring - multiport mirroring - CoS - PROFINET IO diagnosis - switch-managed	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
PROFINET conformity class	B
network load class / according to PROFINET	3
telegram length / for Ethernet / maximum	9194 byte
protocol / is supported	
- Telnet - HTTP - HTTPS - TFTP - FTP - SFTP - BOOTP - NETCONF - GMRP - DCP - LLDP - EtherNet/IP - SNMP v1 - SNMP v2 - SNMP v3 - IGMP (snooping/querier)	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes 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 / routing	
service / routing / note	IP routing integrated
product function	
• static IP routing	Yes
• static IP routing IPv6	No
• dynamic IP routing	Yes
• dynamic IP routing IPv6	No
protocol / is supported	
• RIPv2	Yes
• RIPnG for IPv6	No
• OSPFv2	Yes
• OSPFv3 for IPv6	No
• VRRP	Yes
• VRRP for IPv6	No
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 / 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	Yes

Access (RNA)	
• passive listening	Yes
protocol / is supported	
• LACP	Yes
system modification during operation	
product function / configuration in RUN via CiR/H-CiR	Yes
product functions / security	
product function	
• IEEE 802.1x (radius)	Yes
• broadcast/multicast/unicast limiter	Yes
• broadcast blocking	Yes
protocol / is supported	
• SSH	Yes
• SSL	Yes
product functions / time	
product function	
• SICLOCK support	Yes
• NTP-client	Yes
• SNTP client	Yes
• IEEE 1588 v2 transparent forwarding	Yes
protocol / is supported	
• NTP	Yes
• SNTP	Yes
accuracy / at IEEE 1588 v2	
• not less than	100 µs
• typical	50 ns
standards, specifications, approvals	
certificate of suitability	
• CE marking	Yes
• KC approval	Yes
• Regulatory Compliance Mark (RCM)	Yes
standard	
• for EMC interference emission	EN 61000-6-4 (Class A)
• for immunity to EMC	EN 61000-6-2
• for safety / from CSA and UL	UL 60950-1; CSA C22.2 No. 213-M1987
standards, specifications, approvals / other	
certificate of suitability	
• railway application in accordance with EN 50125-3	Yes
IT security for industrial automation systems / according to IEC 62443-4-2:2019	Yes
standards, specifications, approvals / marine classification	
Marine classification association	
• Det Norske Veritas (DNV)	No
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
• total	1244.3 kg
• during manufacturing	122.74 kg
• during operation	1120.64 kg
• after end of life	0.91 kg
product functions / general	
reference code	
• according to IEC 81346-2	KF
• according to IEC 81346-2:2019	KFE
Warranty period	5 a
further information / internet links	
internet link	
• 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
- to website: Image database
- to website: CAX-Download-Manager
- to website: Industry Online Support

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<https://www.automation.siemens.com/bilddb>
<https://www.siemens.com/cax>
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Approvals / Certificates

General Product Approval				For use in hazardous locations	
		Declaration of Conformity			CCC-Ex
Test Certificates	Environment	Industrial Communication			
Type Test Certificates/Test Report		PROFINET			

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