# **SIEMENS**

## **Data sheet**



SCALANCE XC216-3G PoE manageable Layer 2 IE PoE Switch; 14x 10, 100/1000 Mbps; RJ45 PoE Ports according to IEEE802.3at; 2 ports thereof according to IEEE802.3bt; IEC 62443-4-2 certified 2x 10/100/1,000 Mbps RJ45; 2x 1,000, 10,000 Mbps SFP+; 1x 1,000 Mbps SFP; PoE support for 24 V DC infeed; 120 W PoE power can be distributed among all PoE ports; 1x console port; diagnostics LED; redundant power supply; temperature range -40 °C to +60 °C; mounting on DIN rail/S7 mounting rail /wall; redundancy functions; Office features (RSTP, VLAN, ...); PROFINET device; Ether(\*)

product type designation	SCALANCE
transfer rate	
transfer rate	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s
interfaces / for communication / maximum configuration for mo	dular devices
number of electrical ports / maximum	16
number of electrical ports / with PoE / maximum	14
number of optical ports / maximum	3
interfaces / for communication / integrated	
number of electrical connections	
<ul> <li>for network components or terminal equipment</li> </ul>	16; RJ45
number of 10/100/1000 Mbit/s RJ45 ports / integrated	
with securing collar	16; 12 PoE ports according to IEEE 802.3at (30 W), 2 PoE ports according to IEEE 802.3bt (60 W)
with securing collar / with PoE	14
number of electrical connections	
• for SFP	3
interfaces / for communication / plug-in	
number of electrical connections	
• for SFP	1; SFPs with 1000 Mbit/s, 100 Mbit/s with SFP991-1(LD) A possible
• for SFP+	2; SFPs with 1000 Mbit/s or 10,000 Mbit/s possible; 100 Mbit/s with SFP991-1(LD) A possible
interfaces / other	
number of electrical connections	
for operator console	1
for signaling contact	1
type of electrical connection	
<ul> <li>for operator console</li> </ul>	RJ11
<ul> <li>for signaling contact</li> </ul>	2-pole terminal block
for power supply	4-pole terminal block
design of the removable storage	
• C-PLUG	Yes
signal inputs/outputs	
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
supplied active power / of PSE / with PoE	
• total / maximum	150 W

type of voltage / 1 / of the supply voltage	DC
<ul><li>supply voltage / 1 / rated value</li></ul>	24 V
<ul><li>power loss [W] / 1 / rated value</li></ul>	28 W
<ul><li>supply voltage / 1 / rated value</li></ul>	19.2 31.2 V
<ul><li>consumed current / 1 / maximum</li></ul>	7.8 A
<ul> <li>product component / 1 / fusing at power supply input</li> </ul>	Yes
<ul> <li>fuse protection type / 1 / at input for supply voltage</li> </ul>	15 A / 125 V
ambient conditions	
ambient temperature	
during operation	-40 +60 °C
during storage	-40 +85 °C
during transport	-40 +85 °C
• note	installation position and SFPs used during the operation have to be considered
	(see manual)
relative humidity	
<ul> <li>at 25 °C / without condensation / during operation /</li> </ul>	95 %
maximum	
protection class IP	IP20
design, dimensions and weights	
design	compact
width	180 mm
height	147 mm
depth	125 mm
net weight	1.56 kg
product feature / conformal coating	No
material / of the enclosure	Polycarbonate (PC-GF10) / pressure die cast aluminum
fastening method	
<ul> <li>35 mm top hat DIN rail mounting</li> </ul>	Yes
wall mounting	No
<ul> <li>S7-300 rail mounting</li> </ul>	Yes
<ul> <li>S7-1500 rail mounting</li> </ul>	Yes
product features, product functions, product components / gen	eral
cascading in the case of a redundant ring / at reconfiguration	50
time of <\~0.3\~s	
cascading in cases of star topology	any (depending only on signal propagation time)
product function / QoS according to DSCP	Yes
product feature	
Cut Through switching method	No
Store & Forward switching method	No Yes
Store & Forward switching method product functions / management, configuration, engineering	
• Store & Forward switching method product functions / management, configuration, engineering product function	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function      CLI	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function     CLI     web-based management	Yes Yes Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function     CLI     web-based management     MIB support	Yes Yes Yes Yes Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function     CLI     web-based management     MIB support     TRAPs via email	Yes Yes Yes Yes Yes Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function     CLI     web-based management     MIB support	Yes Yes Yes Yes Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function     CLI     web-based management     MIB support     TRAPs via email	Yes Yes Yes Yes Yes Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7	Yes Yes Yes Yes Yes Yes Yes Yes
Store & Forward switching method product functions / management, configuration, engineering product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON	Yes Yes Yes Yes Yes Yes Yes Yes Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  COS	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  CoS  PROFINET IO diagnosis	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  COS  PROFINET IO diagnosis  PROFINET conformity class	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  CoS  PROFINET IO diagnosis  PROFINET conformity class  network load class / according to PROFINET	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  CoS  PROFINET IO diagnosis  PROFINET conformity class  network load class / according to PROFINET  product function / switch-managed	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  COS  PROFINET IO diagnosis  PROFINET conformity class  network load class / according to PROFINET  product function / switch-managed  telegram length / for Ethernet / maximum	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  COS  PROFINET IO diagnosis  PROFINET conformity class  network load class / according to PROFINET  product function / switch-managed  telegram length / for Ethernet / maximum  protocol / is supported	Yes
Store & Forward switching method  product functions / management, configuration, engineering  product function  CLI  web-based management  MIB support  TRAPs via email  configuration with STEP 7  RMON  SMTP server  port mirroring  multiport mirroring  COS  PROFINET IO diagnosis  PROFINET conformity class network load class / according to PROFINET  product function / switch-managed  telegram length / for Ethernet / maximum  protocol / is supported  Telnet	Yes



• BOOTP	No
• GMRP	Yes
• DCP	Yes
• LLDP	Yes
EtherNet/IP	Yes
• SNMP v1	Yes
• SNMP v2	Yes
• SNMP v3	Yes
	Yes
IGMP (snooping/querier)  identification 2 maintanance function	165
identification & maintenance function	Ver
1&M0 - device-specific information	Yes
I&M1 - higher level designation/location designation	Yes
product functions / diagnostics	
product function	
<ul> <li>port diagnostics</li> </ul>	Yes
statistics Packet Size	Yes
<ul> <li>statistics packet type</li> </ul>	Yes
<ul> <li>error statistics</li> </ul>	Yes
<ul><li>SysLog</li></ul>	Yes
product functions / VLAN	
product function	
VLAN - port based	Yes
VLAN - protocol-based	No
VLAN - IP-based	No
number of VLANs / maximum	257
number of VLANs - dynamic / maximum	257
number of VLANs / at ring redundancy (HRP; MRP; standby link)	257
protocol / is supported / GVRP	Yes
product functions / DHCP	
product function	
DHCP server	Yes
<ul> <li>DHCP client</li> </ul>	Yes
DHCP Option 82	Yes
DHCP Option 66	Yes
DHCP Option 67	Yes
product functions / redundancy	
product function	
of the PROFINET IO device / is supported / PROFINET system redundancy	Yes
• ring redundancy	Yes
High Speed Redundancy Protocol (HRP)	Yes
high speed redundancy protocol (HRP) with redundancy manager	Yes
<ul> <li>high speed redundancy protocol (HRP) with standby redundancy</li> </ul>	Yes
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	100
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
-	Vac
redundancy procedure STP     redundancy procedure BSTP	Yes
redundancy procedure RSTP     redundancy procedure RSTP	Yes
redundancy procedure RSTP+	Yes
redundancy procedure MSTP	Yes
<ul> <li>Parallel Redundancy Protocol (PRP)/operation in the PRP-network</li> </ul>	Yes
<ul> <li>Parallel Redundancy Protocol (PRP)/Redundant Network Access (RNA)</li> </ul>	No
passive listening	Yes
protocol / is supported	



• LACP	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
protocol / is supported	
NTP	Yes
• SNTP	Yes
IEEE 1588 profile default	Yes
system modification during operation	
product function / configuration in RUN via CiR/H-CiR	Yes
standards, specifications, approvals	
standard	
for emitted interference	EN 61000-6-4:2001 (Class A)
for interference immunity	EN 61000-6-2:2001
IT security for industrial automation systems / according to IEC	Yes
62443-4-2:2019	165
MTBF	24.6 a
reference code	
<ul> <li>according to IEC 81346-2</li> </ul>	KF
• according to IEC 81346-2:2019	KFE
standards, specifications, approvals / CE	
certificate of suitability / CE marking	Yes
product conformity / according to EMC-guideline	2014/30/EU
standard	
for EMC interference emission	EN 61000-6-4, EN 50121-15
• for immunity to EMC	EN 61000-6-2, EN 50121-4
certificate of suitability / RoHS conformity	Yes; 2011/65/EU
standards, specifications, approvals / hazardous environments	
certificate of suitability	
• ATEX	Yes; EN IEC 60079-0, EN 60079-7
• for ATEX / as marking	II 3 G Ex ec IIC T4 Gc
for ATEX / as certificate	DEKRA 18ATEX0025 X
• IECEx	Yes; IEC 60079-0, IEC 60079-7
• for IECEx / as marking	Ex ec IIC T4 Gc
• for IECEx / as certificate	IECEX DEK 18.0017X
CCC / for hazardous zone according to GB standard	Yes; GB3836.1, GB3836.8
CCC / for hazardous zone according to GB standard / as	Ex nA IIC T4 Gc
marking	EXTRA LICE TO SE
• for cULus HazLoc / as marking	CL1, DIV2, Group A,B,C,D T4, CL1, Zone 2, Group IIC, T4
• for cULus HazLoc / as File Nr.	CL1, DIV2, Gloup A,B,C,D 14, CL1, Zolle 2, Gloup IIC, 14
	E223122
FM registration	E223122 FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL
	E223122 FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019
• for FM / as marking	E223122 FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019 CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C
for FM / as marking for FM / as certificate	E223122 FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019
for FM / as marking     for FM / as certificate standards, specifications, approvals / other	E223122 FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019 CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C
for FM / as marking for FM / as certificate	E223122 FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019 CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C
for FM / as marking     for FM / as certificate  standards, specifications, approvals / other  certificate of suitability      KC approval	E223122  FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019  CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C FM19US0167X  Yes
for FM / as marking     for FM / as certificate  standards, specifications, approvals / other  certificate of suitability     KC approval     railway application in accordance with EN 50121-4	E223122  FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019  CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C FM19US0167X  Yes Yes
for FM / as marking     for FM / as certificate  standards, specifications, approvals / other  certificate of suitability     KC approval     railway application in accordance with EN 50121-4     Regulatory Compliance Mark (RCM)	E223122  FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019  CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C FM19US0167X  Yes
for FM / as marking     for FM / as certificate  standards, specifications, approvals / other  certificate of suitability     KC approval     railway application in accordance with EN 50121-4	E223122  FM Class 3600:2022, FM Class 3611:2021, FM Class 3810:2021, ANSI/UL 121201:2021, ANSI/UL 61010-1:2019  CL1, DIV2, group A,B,C,D T4, CL1, Zone 2, group IIC, T4 Ta: -40 °C +70 °C FM19US0167X  Yes Yes



#### standards, specifications, approvals / marine classification Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) Yes • Chinese Classification Society (CCS) Yes DNV GL Yes • Korean Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Polski Rejestr Statkow (PRS) Yes Royal Institution of Naval Architects (RINA) Yes standards, specifications, approvals / Environmental Product De **Environmental Product Declaration** Yes • Global Warming Potential [CO2 eq] / total 942.3 kg • Global Warming Potential [CO2 eq] / during 63.42 kg manufacturing • Global Warming Potential [CO2 eq] / during operation 878.11 kg

accessories

product extension / optional / C-PLUG

Yes

0.76 kg

### further information / internet links

#### internet link

• to web page: selection aid TIA Selection Tool

• global warming potential [CO2 eq] / after end of life

• to website: Industrial communication

• to website: Industry Mall

• to website: Information and Download Center

• to website: Selection guide for cables and connectors

• to website: Image database

• to website: CAx-Download-Manager

• to website: Industry Online Support

http://www.siemens.com/tia-selection-tool

http://www.siemens.com/simatic-net

https://mall.industry.siemens.com

http://www.siemens.com/industry/infocenter

https://sie.ag/2QdlxcP

http://automation.siemens.com/bilddb

http://www.siemens.com/cax

https://support.industry.siemens.com

## security information

security information

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 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 security measures that may be implemented, please visit

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## Approvals / Certificates

For use in hazardous locations

**Declaration of Conformity** 

ATEX-Zone 2-Declaration



<u>FM</u>

CCC-Ex





## Marine / Shipping













other



PROFINET-Certifica-		
tion		

11/9/2023 last modified:

