



SCALANCE XM416-4C; managed modular IE switch; 16x 10/100/1000 Mbit/s RJ45; 4x 100/1000 Mbit/s SFP; contains 4 combo ports; in total 16 ports can be used; expandable to 24 ports electrical or optical; assembly: DIN rail/S7 mounting rail, PROFINET IO device; redundancy functions; office features (RSTP, VLAN, IGMP,...); C-PLUG in scope of supply; Layer 3 integrated;

product type designation	
product brand name	SCALANCE
product type designation	XM416-4C
Technical Product Detail Page	https://i.siemens.com/1P6GK5416-4GR00-2AM2
transfer rate	
transfer rate	10, 100, 1000 Mbit/s
interfaces / for communication / integrated	
number of electrical connections	16; RJ45 with securing collar
<ul style="list-style-type: none"> for network components or terminal equipment 	
number of 10/100/1000 Mbit/s RJ45 ports	16
<ul style="list-style-type: none"> with securing collar 	
number of electrical connections	4; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver
<ul style="list-style-type: none"> for SFP 	
number of combo ports / with RJ45 interface for optical plug-in transceiver	4; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver
interfaces / for communication / plug-in	
number of 10/100/1000 Mbit/s RJ45 ports	8
<ul style="list-style-type: none"> with securing collar 	
<ul style="list-style-type: none"> with securing collar / with PoE 	8
number of 100 Mbit/s LC ports	12
<ul style="list-style-type: none"> for multimode 	
<ul style="list-style-type: none"> for single mode (LD) 	12
<ul style="list-style-type: none"> for single mode (LH+) 	12
<ul style="list-style-type: none"> for single mode (ELH200) 	12
number of 1000 Mbit/s LC ports	12
<ul style="list-style-type: none"> for multimode 	
<ul style="list-style-type: none"> for single mode (LD) 	12
<ul style="list-style-type: none"> for single mode (LH) 	12
<ul style="list-style-type: none"> for single mode (LH+) 	12
<ul style="list-style-type: none"> for single mode (ELH) 	12
number of electrical connections	12
<ul style="list-style-type: none"> for SFP 	
interfaces / other	
number of electrical connections	1
<ul style="list-style-type: none"> for operator console 	
<ul style="list-style-type: none"> for signaling contact 	1
<ul style="list-style-type: none"> for power supply 	1
number of extender expansion interfaces	2
design of the removable storage	

• C-PLUG	Yes
product feature / hot-swappable interface modules	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
supplied active power / of PSE / with PoE	
• per port / maximum	30 W
• total / maximum	180 W
type of voltage / 1 / of the supply voltage	
• supply voltage / 1 / rated value	24 V
• power loss [W] / 1 / rated value	48 W
• supply voltage / 1 / voltage range	19.2 ... 28.8
• consumed current / 1 / maximum	2 A
• product component / 1 / fusing at power supply input	Yes
ambient conditions	
ambient temperature	
• during operation	-40 ... +70 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity	
• at 25 °C / without condensation / during operation / maximum	95 %
protection class IP	IP20
design, dimensions and weights	
design	modular
width	140 mm
height	147 mm
depth	125 mm
net weight	1.25 kg
fastening method	
• 35 mm DIN-rail 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
cascading in cases of star topology	any (depending only on signal propagation time)
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
telegram length / for Ethernet / maximum	9216 byte
protocol / is supported	
• Telnet	Yes
• HTTP	Yes
• HTTPS	Yes

• TFTP	Yes
• FTP	Yes
• BOOTP	Yes
• 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	Yes
• VLAN - IP-based	Yes
• VLAN dynamic	Yes
number of VLANs / maximum	255
number of VLANs - dynamic / maximum	255
product functions / DHCP	
product function	
• 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	Yes
• dynamic IP routing	Yes
• dynamic IP routing IPv6	Yes
protocol / is supported	
• RIPv2	Yes
• RIPnG for IPv6	Yes
• OSPFv2	Yes
• OSPFv3 for IPv6	Yes
• VRRP	Yes
• VRRP for IPv6	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

<ul style="list-style-type: none"> ring redundancy 	Yes
<ul style="list-style-type: none"> high speed redundancy protocol (HRP) with redundancy manager 	Yes
<ul style="list-style-type: none"> high speed redundancy protocol (HRP) with standby redundancy 	Yes
<ul style="list-style-type: none"> redundancy procedure STP 	Yes
<ul style="list-style-type: none"> redundancy procedure RSTP 	Yes
<ul style="list-style-type: none"> redundancy procedure RSTP+ 	Yes
<ul style="list-style-type: none"> redundancy procedure MSTP 	Yes
<ul style="list-style-type: none"> passive listening 	Yes
protocol / is supported	
<ul style="list-style-type: none"> LACP 	Yes
system modification during operation	
product function / configuration in RUN via CiR/H-CiR	Yes
product functions / security	
product function	
<ul style="list-style-type: none"> IEEE 802.1x (radius) 	Yes
<ul style="list-style-type: none"> broadcast/multicast/unicast limiter 	Yes
<ul style="list-style-type: none"> broadcast blocking 	Yes
protocol / is supported	
<ul style="list-style-type: none"> SSH 	Yes
<ul style="list-style-type: none"> SSL 	Yes
product functions / time	
product function	
<ul style="list-style-type: none"> SICLOCK support 	Yes
<ul style="list-style-type: none"> NTP-client 	Yes
<ul style="list-style-type: none"> SNTP client 	Yes
protocol / is supported	
<ul style="list-style-type: none"> NTP 	Yes
<ul style="list-style-type: none"> SNTP 	Yes
standards, specifications, approvals	
certificate of suitability	
<ul style="list-style-type: none"> CE marking 	Yes
<ul style="list-style-type: none"> UKCA marking 	Yes
<ul style="list-style-type: none"> cULus approval 	Yes
<ul style="list-style-type: none"> KC approval 	Yes
<ul style="list-style-type: none"> Regulatory Compliance Mark (RCM) 	Yes
standard	
<ul style="list-style-type: none"> for EMC interference emission 	EN 61000-6-4 (Class A)
<ul style="list-style-type: none"> for immunity to EMC 	EN 61000-6-2
<ul style="list-style-type: none"> for safety / from CSA and UL 	UL 508, UL 60950-1, CSA C22.2 Nr. 60950-1-03
standards, specifications, approvals / hazardous environments	
certificate of suitability	
<ul style="list-style-type: none"> ATEX 	Yes
<ul style="list-style-type: none"> UKEX 	Yes
<ul style="list-style-type: none"> IECEX 	Yes
<ul style="list-style-type: none"> ULhazloc approval 	Yes
<ul style="list-style-type: none"> CCC / for hazardous zone according to GB standard 	Yes
<ul style="list-style-type: none"> FM registration 	Yes
standards, specifications, approvals / other	
certificate of suitability	
<ul style="list-style-type: none"> RoHS conformity 	Yes
resistance to air pollution / conformity according to ANSI/ISA-71.04	Yes; G3
standards, specifications, approvals / marine classification	
Marine classification association	
<ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) 	No
<ul style="list-style-type: none"> French marine classification society (BV) 	No
<ul style="list-style-type: none"> Chinese Classification Society (CCS) 	No

• Det Norske Veritas (DNV)	No
• Korean Register of Shipping (KRS)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No
• Polski Rejestr Statkow (PRS)	No
• Royal Institution of Naval Architects (RINA)	Yes

product functions / general

MTBF	22 a
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



[Declaration of Conformity](#)



[China RoHS](#)



General Product Approval **EMV** **For use in hazardous locations**



[KC](#)



[FM](#)

[CCC-Ex](#)

Test Certificates **Maritime application**

[Type Test Certificates/Test Report](#)



[NK / Nippon Kaiji Kyokai](#)

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