



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	SCALANCE XM416-4C
transfer rate	
transfer rate	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s
number of ports / maximum	24
interfaces / for communication / maximum configuration for modular devices	
number of electrical ports / maximum	24
number of electrical ports / with PoE / maximum	8
number of optical ports / maximum	12
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 / integrated	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
number of connectable extender modules	1
interfaces / for communication / plug-in	
number of 10/100/1000 Mbit/s RJ45 ports	8
<ul style="list-style-type: none"> with securing collar 	
	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) 	
<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) 	
<ul style="list-style-type: none"> for single mode (LH) 	
<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; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver
<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 management purposes 	
	1
<ul style="list-style-type: none"> for signaling contact 	1

<ul style="list-style-type: none"> • for power supply 	1
type of electrical connection <ul style="list-style-type: none"> • for operator console • for management purposes • for signaling contact 	RJ11 RJ45 2-pole terminal block
number of extender expansion interfaces	2
design of the removable storage <ul style="list-style-type: none"> • C-PLUG • C-PLUG/KEY-PLUG 	Yes Yes
product feature / hot-swappable interface modules	Yes
signal inputs/outputs	
operating voltage / of the signaling contacts <ul style="list-style-type: none"> • at DC / rated value 	24 V
operational current / of the signaling contacts <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • per port / maximum • total / maximum 	30 W 180 W
type of voltage / 1 / of the supply voltage <ul style="list-style-type: none"> • supply voltage / 1 / rated value • power loss [W] / 1 / rated value • supply voltage / 1 / rated value • consumed current / 1 / maximum • type of electrical connection / 1 / for power supply • product component / 1 / fusing at power supply input 	DC 24 V 48 W 19.2 ... 28.8 V 2 A 4-pole terminal block Yes
ambient conditions	
ambient temperature <ul style="list-style-type: none"> • during operation • during storage • during transport 	-40 ... +70 °C -40 ... +85 °C -40 ... +85 °C
relative humidity <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 35 mm top hat DIN rail mounting • S7-300 rail mounting • S7-1500 rail mounting 	Yes Yes Yes
product features, product functions, product components / general	
cascading in the case of a redundant ring / at reconfiguration time of ≤ 0.31-s	50
cascading in cases of star topology	any (depending only on signal propagation time)
product functions / management, configuration, engineering	
product function <ul style="list-style-type: none"> • CLI • web-based management • MIB support • TRAPs via email • configuration with STEP 7 • RMON • port mirroring • multiport mirroring • CoS 	Yes Yes Yes Yes Yes Yes Yes Yes Yes

• PROFINET IO diagnosis	Yes
PROFINET conformity class	B
product function / switch-managed	Yes
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
protocol / is supported / GVRP	Yes
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	
product function	

<ul style="list-style-type: none"> 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) 	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
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	
<ul style="list-style-type: none"> media redundancy protocol (MRP) with redundancy manager 	Yes
<ul style="list-style-type: none"> Media Redundancy Protocol Interconnection (MRP-I) 	Yes
<ul style="list-style-type: none"> of the PROFINET IO device / is supported / H-Sync forwarding 	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
product functions / security	
product function	
<ul style="list-style-type: none"> ACL - MAC-based 	Yes
<ul style="list-style-type: none"> ACL - port/MAC-based 	Yes
<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
system modification during operation	
product function / configuration in RUN via CiR/H-CiR	Yes
standards, specifications, approvals	
standard	
<ul style="list-style-type: none"> for FM 	FM3611: Class 1, Division 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4
<ul style="list-style-type: none"> for safety / from CSA and UL 	UL 508, UL 60950-1, CSA C22.2 Nr. 60950-1-03
<ul style="list-style-type: none"> for emitted interference 	EN 61000-6-4 (Class A)
<ul style="list-style-type: none"> for interference immunity 	EN 61000-6-2
MTBF	22 a
reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 	KF
<ul style="list-style-type: none"> according to IEC 81346-2:2019 	KFE
standards, specifications, approvals / CE	
certificate of suitability / CE marking	Yes
certificate of suitability / RoHS conformity	Yes; 2011/65/EU
standards, specifications, approvals / hazardous environments	
standard / for hazardous zone	EN 60079-0: 2009, EN60079-15: 2010, II 3 G Ex nA IIC T4 Gc, KEMA 07 ATEX 0145 X, IECEx DEK 14.0025X
<ul style="list-style-type: none"> from CSA and UL 	ISA 12.12.01-2012 (Hazardous Location), Class 1 / Division 2 / Group A, B, C, D / T4, Class 1 / Zone 2 / Group IIC / T4
certificate of suitability	
<ul style="list-style-type: none"> CCC / for hazardous zone according to GB standard 	Yes

<ul style="list-style-type: none"> • CCC / for hazardous zone according to GB standard / as marking 	Ex nA IIC T4 Gc
standards, specifications, approvals / other	
certificate of suitability <ul style="list-style-type: none"> • C-Tick • KC approval 	EN 61000-6-2, EN 61000-6-4 Yes Yes
standards, specifications, approvals / marine classification	
Marine classification association <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • DNV GL • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) • Royal Institution of Naval Architects (RINA) 	Yes Yes Yes Yes Yes Yes Yes
further information / internet links	
internet link <ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool • to website: Industrial communication • to website: Industry Mall • to website: Information and Download Center • 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 http://automation.siemens.com/bilddb http://www.siemens.com/cax https://support.industry.siemens.com
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