



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 delivery; Layer 3 with key plug available

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| 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 • for network components or terminal equipment | 16; RJ45 with securing collar |
| number of 10/100/1000 Mbit/s RJ45 ports / integrated • with securing collar | 16 |
| number of electrical connections • for SFP | 4; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver |
| 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 • with securing collar | 8 |
| • with securing collar / with PoE | 8 |
| number of 100 Mbit/s LC ports • for multimode | 12 |
| • for single mode (LD) | 12 |
| • for single mode (LH+) | 12 |
| • for single mode (ELH200) | 12 |
| number of 1000 Mbit/s LC ports • for multimode | 12 |
| • for single mode (LD) | 12 |
| • for single mode (LH) | 12 |
| • for single mode (LH+) | 12 |
| • for single mode (ELH) | 12 |
| number of electrical connections • for SFP | 12; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver |
| interfaces / other | |
| number of electrical connections | |

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| <ul style="list-style-type: none"> • for operator console • for management purposes • for signaling contact • for power supply | 1 |
| type of electrical connection | |
| <ul style="list-style-type: none"> • for operator console • for management purposes • for signaling contact • for power supply | RJ11 RJ45 2-pole terminal block 4-pole terminal block |
| number of extender expansion interfaces | 2 |
| design of the removable storage | |
| <ul style="list-style-type: none"> • C-PLUG/KEY-PLUG | 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 |
| type of voltage supply / redundant power supply unit | No |
| 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 | DC |
| <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 | 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"> • 19-inch installation • 35 mm top hat DIN rail mounting • wall mounting • S7-300 rail mounting • S7-1500 rail mounting | No Yes No Yes Yes |
| product features, product functions, product components / general | |
| 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 | Yes |

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| • 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 |
| 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 |
| • 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 in combination with KEY-PLUG XM-400 |
| product function | |
| • static IP routing | Yes |
| • static IP routing IPv6 | Yes |
| • dynamic IP routing | Yes |
| • dynamic IP routing IPv6 | Yes |

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| protocol / is supported | |
| <ul style="list-style-type: none"> • RIPv2 • RIPnG for IPv6 • OSPFv2 • OSPFv3 for IPv6 • VRRP • VRRP for IPv6 | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| product functions / redundancy | |
| product function | |
| <ul style="list-style-type: none"> • ring redundancy • High Speed Redundancy Protocol (HRP) • high speed redundancy protocol (HRP) with redundancy manager • high speed redundancy protocol (HRP) with standby redundancy | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| protocol / is supported / Media Redundancy Protocol (MRP) | Yes |
| product function | |
| <ul style="list-style-type: none"> • media redundancy protocol (MRP) with redundancy manager • Media Redundancy Protocol Interconnection (MRP-I) • redundancy procedure STP • redundancy procedure RSTP • redundancy procedure RSTP+ • redundancy procedure MSTP • passive listening | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| 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 • ACL - port/MAC-based • IEEE 802.1x (radius) • broadcast/multicast/unicast limiter • broadcast blocking | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| protocol / is supported | |
| <ul style="list-style-type: none"> • SSH | Yes |
| product functions / time | |
| product function | |
| <ul style="list-style-type: none"> • SICLOCK support | Yes |
| protocol / is supported | |
| <ul style="list-style-type: none"> • NTP • SNTP | <p>Yes</p> <p>Yes</p> |
| standards, specifications, approvals | |
| standard | |
| <ul style="list-style-type: none"> • for FM • for safety / from CSA and UL • for emitted interference • for interference immunity | <p>FM3611: Class 1, Divison 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4</p> <p>UL 508, UL 60950-1, CSA C22.2 Nr. 60950-1-03</p> <p>EN 61000-6-4 (Class A)</p> <p>EN 61000-6-2</p> |
| MTBF | 22 y |
| standards, specifications, approvals / CE | |
| certificate of suitability / CE marking | Yes |
| 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 |

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| certificate of suitability | |
| <ul style="list-style-type: none"> • CCC / for hazardous zone according to GB standard | Yes |
| standards, specifications, approvals / other | |
| certificate of suitability | EN 61000-6-2, EN 61000-6-4 |
| <ul style="list-style-type: none"> • C-Tick | Yes |
| <ul style="list-style-type: none"> • KC approval | Yes |
| standards, specifications, approvals / marine classification | |
| Marine classification association | |
| <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) | Yes |
| <ul style="list-style-type: none"> • French marine classification society (BV) | Yes |
| <ul style="list-style-type: none"> • Det Norske Veritas (DNV) | No |
| <ul style="list-style-type: none"> • Germanische Lloyd (GL) | No |
| <ul style="list-style-type: none"> • DNV GL | Yes |
| <ul style="list-style-type: none"> • Lloyds Register of Shipping (LRS) | Yes |
| <ul style="list-style-type: none"> • Nippon Kaiji Kyokai (NK) | Yes |
| <ul style="list-style-type: none"> • Polski Rejestr Statkow (PRS) | Yes |
| <ul style="list-style-type: none"> • Royal Institution of Naval Architects (RINA) | Yes |
| further information / internet-Links | |
| Internet-Link | |
| <ul style="list-style-type: none"> • to website: Industrial communication | http://www.siemens.com/simatic-net |
| <ul style="list-style-type: none"> • to website: Industry Mall | https://mall.industry.siemens.com |
| <ul style="list-style-type: none"> • to website: Information and Download Center | http://www.siemens.com/industry/infocenter |
| <ul style="list-style-type: none"> • to website: Image database | http://automation.siemens.com/bilddb |
| <ul style="list-style-type: none"> • to website: CAX-Download-Manager | http://www.siemens.com/cax |
| <ul style="list-style-type: none"> • to website: Industry Online Support | 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, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action(e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit http://www.siemens.com/industrialsecurity . To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit http://support.automation.siemens.com . (V3.4) |

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