



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 integrated;

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|---|--|
| Product type designation | SCALANCE XM416-4C |
| Transmission 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 |

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| Number of connectable extender modules | 1 |
| Interfaces / for communication / pluggable / maximum | |
| 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 / others | |
| Number of electrical connections | |
| • for operator console | 1 |
| • for management purposes | 1 |
| • for signaling contact | 1 |
| • for power supply | 1 |
| • for redundant voltage supply | 1 |
| Type of electrical connection | |
| • for operator console | RJ11 |
| • for management purposes | RJ45 |
| • for signaling contact | 2-pole terminal block |
| • for power supply | 4-pole terminal block |
| Number of extender expansion interfaces | 2 |
| design of the removable storage | |
| • C-PLUG/KEY-PLUG | Yes |
| Product feature / hot-swappable interface modules | Yes |
| Signal-Inputs/outputs | |
| Operating voltage / of the signaling contacts | |
| • at DC / Rated value | 24 V |
| Operating current / of the signaling contacts | |
| • at DC / maximum | 0.1 A |
| Supply voltage, current consumption, power loss | |

| | |
|--|----------------|
| Type of voltage supply / redundant power supply unit | No |
| Type of voltage / of the supply voltage | DC |
| Supply voltage | |
| • external | 24 V |
| • external / minimum | 19.2 V |
| • external / maximum | 28.8 V |
| Product component / fusing at power supply input | Yes |
| Fuse protection type / at input for supply voltage | F 15 A / 125 V |
| Consumed current / maximum | 2 A |
| Power loss [W] | |
| • at DC / at 24 V | 48 W |
| Supplied active power / of PSE / with PoE | |
| • per port / maximum | 30 W |
| • total / maximum | 180 W |

Permitted 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 weight

| | |
|---------------------------|---------|
| Design | modular |
| Width | 140 mm |
| Height | 147 mm |
| Depth | 125 mm |
| Net weight | 1.25 kg |
| Mounting type | |
| • 19-inch installation | No |
| • 35 mm DIN rail mounting | Yes |
| • wall mounting | No |
| • S7-300 rail mounting | Yes |
| • S7-1500 rail mounting | Yes |

Product properties, functions, components / general

| | |
|-------------------------------------|---|
| Cascading in cases of star topology | any (depending only on signal propagation time) |
|-------------------------------------|---|

Product functions / management, configuration

| | |
|------------------------|-----|
| Product function | |
| • CLI | Yes |
| • web-based management | Yes |

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|--|-----------|
| • 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 / Diagnosis

| | |
|--------------------------|-----|
| Product function | |
| • Port diagnostics | Yes |
| • Statistics Packet Size | Yes |
| • Statistics packet type | Yes |
| • Error statistics | Yes |
| • SysLog | Yes |

Product functions / VLAN

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|-------------------------|-----|
| 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 |
| • RIPv6 | Yes |
| • OSPFv2 | Yes |
| • OSPFv3 for IPv6 | Yes |
| • VRRP | Yes |
| • VRRP for IPv6 | Yes |

Product functions / Redundancy

| | |
|--|-----|
| Product function | |
| • Ring redundancy | Yes |
| • High Speed Redundancy Protocol (HRP) | Yes |
| • high speed redundancy protocol (HRP) with redundancy manager | Yes |
| • high speed redundancy protocol (HRP) with standby redundancy | Yes |
| Protocol / is supported / Media Redundancy Protocol (MRP) | Yes |
| Product function | |
| • media redundancy protocol (MRP) with redundancy manager | Yes |
| • redundancy procedure STP | Yes |
| • redundancy procedure RSTP | Yes |
| • redundancy procedure MSTP | Yes |
| • Passive listening | Yes |

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|---|---|
| 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 |
| Product functions / Time | |
| Product function | |
| <ul style="list-style-type: none"> • SICLOCK support | Yes |
| Protocol / is supported | |
| <ul style="list-style-type: none"> • NTP | Yes |
| <ul style="list-style-type: none"> • SNTP | Yes |
| Standards, specifications, approvals | |
| Standard | |
| <ul style="list-style-type: none"> • for FM | FM3611: Class 1, Divison 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4 |
| <ul style="list-style-type: none"> • 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"> • 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 hazardous zone / 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 |
| <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 |
| Standards, specifications, approvals / CE | |
| Certificate of suitability / CE marking | Yes |
| Standards, specifications, approvals / miscellaneous | |
| 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 / ship classification | |
| Marine classification association | |
| <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) | Yes |
| <ul style="list-style-type: none"> • Bureau Veritas (BV) | Yes |
| <ul style="list-style-type: none"> • Det Norske Veritas (DNV) | No |

- Germanische Lloyd (GL)
- DNV GL
- Lloyds Register of Shipping (LRS)
- Nippon Kaiji Kyokai (NK)
- Polski Rejestr Statkow (PRS)
- Royal Institution of Naval Architects (RINA)

No
Yes
Yes
Yes
Yes
Yes

Standards, specifications, approvals / product conformity

MTBF 22 y

Further Information / Internet Links

Internet-Link

- to website: Selector SIMATIC NET 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/snst>
<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>

Security information

Security information

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