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Data sheet 6GK5424-8TR00-2AC2



SCALANCE XC416-8 managed Layer 3 IE switch, 16x 10/100/1000 Mbps RJ45, 8x 1G/10 Gbps SFP+ port, LED diagnostics,error signaling contact with select/set button; PROFINET IO; device; network management, redundancy functions; office features (RSTP, VLAN, IGMP,..); CLP included in scope of supply; assembly: DIN rail/S7 mounting rail

product type designation	
product brand name	SCALANCE
product type designation	XC416-8
Technical Product Detail Page	https://i.siemens.com/1P6GK5424-8TR00-2AC2
transfer rate	
transfer rate	10, 100, 1000 Mbit/s
transfer rate	10 Gbit/s
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	
● with securing collar	16
number of electrical connections	
● for SFP+	8; 1000 Mbps and 10000 Mbps SFP usable
interfaces / other	
number of electrical connections	
● for operator console	1
● for signaling contact	1
● for power supply	2
type of electrical connection	
● for operator console	USB (2.0 type B, USB-to-serial adapter)
● for signaling contact	2-pole terminal block
● for power supply	2 x 2-pole terminal block
design of the removable storage	
● CLP	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
type of voltage supply / redundant power supply unit	No
type of voltage / 1 / of the supply voltage	DC
● supply voltage / 1 / rated value	24 V
● power loss [W] / 1 / rated value	43.2 W
● power loss [W] / at DC / at 24 V / typical	25.92 W
● supply voltage / 1 / voltage range	19.2 ... 28.8
● consumed current / 1 / maximum	1.8 A
● consumed current / at DC / at 24 V / typical	1.08 A

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● type of electrical connection / 1 / for power supply	2 x 2-pole terminal block
● product component / 1 / fusing at power supply input	Yes
● fuse protection type / 1 / at input for supply voltage	F 10 A / 250 V
ambient conditions	
ambient temperature	
● during operation	-40 ... +60 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
relative humidity	
● at 25 °C / without condensation / during operation / maximum	95 %
operating condition / fanless operation	Yes
protection class IP	IP20
design, dimensions and weights	
design	compact
width	210 mm
height	147 mm
depth	125 mm
net weight	1.8 kg
fastening method	
● 19-inch installation	No
● 35 mm DIN-rail mounting	Yes
● wall 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 <\~0.3\~s	50
number of automatically learnable MAC addresses	16382
number of QoS queues / per port	8
product function	
● QoS according to IEEE 802.1Q	Yes
product feature	
● Store & Forward switching method	Yes
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
network load class / according to PROFINET	III
telegram length / for Ethernet / maximum	9194 byte
protocol / is supported	
● Telnet	Yes
● HTTP	Yes
● HTTPS	Yes
● TFTP	Yes
● FTP	Yes
● SFTP	Yes
● BOOTP	Yes
● NETCONF	No

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● 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	No
● VLAN - IP-based	No
● VLAN dynamic	Yes
number of VLANs / maximum	257
number of VLANs - dynamic / maximum	257
number of VLANs / at ring redundancy (HRP; MRP; standby link)	257
product function / VXLAN according to RFC 7348	Yes
product functions / DHCP	
product function	
● DHCP server	Yes
● 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	No
● dynamic IP routing	Yes
● dynamic IP routing IPv6	No
protocol / is supported	
● RIPv2	Yes
● RIPnG for IPv6	No
● OSPFv2	Yes
● OSPFv3 for IPv6	No
● VRRP	Yes
● VRRP for IPv6	No
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; LC mode
● of the PROFINET IO device / is supported / PROFINET system redundancy	Yes
● ring redundancy	Yes

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● high speed redundancy protocol (HRP) with redundancy manager	Yes
● high speed redundancy protocol (HRP) with standby redundancy	Yes
● redundancy procedure STP	Yes
● redundancy procedure RSTP	Yes
● redundancy procedure RSTP+	Yes
● redundancy procedure MSTP	Yes
● High-availability Seamless Redundancy (HSR)	Yes
● Parallel Redundancy Protocol (PRP)/operation in the PRP-network	Yes
● Parallel Redundancy Protocol (PRP)/Redundant Network Access (RNA)	Yes
● passive listening	Yes
protocol / is supported	
● STP/RSTP	Yes
● STP	Yes
● RSTP	Yes
● MSTP	Yes
● RSTP big network support	Yes
● LACP	Yes
system modification during operation	
product function / configuration in RUN via CiR/H-CiR	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
● IEEE 1588 v2 transparent forwarding	Yes
protocol / is supported	
● NTP	Yes
● SNTP	Yes
accuracy / at IEEE 1588 v2	
● not less than	100 ns
● typical	50 ns
standards, specifications, approvals	
certificate of suitability	
● CE marking	Yes
● UKCA marking	Yes
● cULus approval	Yes
● KC approval	Yes
● Regulatory Compliance Mark (RCM)	Yes
standard	
● for EMC interference emission	EN 61000-6-4 (Class A)
● for immunity to EMC	EN 61000-6-2
● for safety / from CSA and UL	UL 60950-1; CSA C22.2 No. 213-M1987
standards, specifications, approvals / hazardous environments	
certificate of suitability	
● CCC / for hazardous zone according to GB standard	Yes
standards, specifications, approvals / other	
certificate of suitability	
● railway application in accordance with EN 50125-3	Yes; Section 4.2: Class AX (up to 2000m); section 4.3: T1: Containers N.T.C

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	and T.C. / Buildings N.C.C and C.C, T2: Containers N.T.C and T.C. / Buildings N.C.C and C.C, TX: Containers N.T.C and T.C. / Buildings N.C.C and C.C., derating according to the manual must be observed when SFP/SFP+ transceivers are used --> only for variants with optical connections; In addition, depending on the installation position, the derating according to the manual must be taken into account; section 4.4: T1: Containers C.C. / Buildings N.C.C and C.C., T2: Containers C.C. / Buildings N.C.C and C.C, T3: Containers C.C. / Buildings N.C.C and C.C; section 4.11: C1: Indoor, C2: Indoor (except condensation), C3: Indoor (except condensation), 4B1, 4S10, UL 61010-2-10; section 4.13: partially, Test Fc: Vibration EN 60068-2-6; IEC 60068-2-6, Test Ea: Shock EN 60068-2-27; IEC 60068-2-27, Test Ec: Rough handling, shocks EN 60068-2-31; IEC 60068-2-31; section 4.14: yes; section 4.15: yes, according to manual.
resistance to air pollution / conformity according to ANSI/ISA-71.04	Yes; G3
IT security for industrial automation systems / according to IEC 62443-4-2:2019	Yes
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	1244.3 kg
● during manufacturing	122.74 kg
● during operation	1120.64 kg
● after end of life	0.91 kg
product functions / general	
warranty period	5 a
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
further information / internet links	
internet link	
● 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
security information	
security information	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)
Approvals / Certificates	
Environmental Product Declaration	
● global warming potential [CO2 eq] / during manufacturing	122.74 kg
● global warming potential [CO2 eq] / during operation	1120.64 kg
● global warming potential [CO2 eq] / after end of life	0.91 kg
● global warming potential [CO2 eq] / total	1244.3 kg
Environment	**General Product Approval**

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General Product Approval		For use in hazardous locations			
China RoHS	Manufacturer Declaration	ATEX	IECEx	FM	CCC-Ex

Test Certificates	Industrial Communication
Type Test Certificates/Test Report	PROFINET

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