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Data sheet 6GK5778-1GY00-0TB0

product type designation

W778-1 M12 EEC (USA)



IWLAN access point, SCALANCE W778-1 M12 EEC, 1 radio, 2 N-CON antenna port, iFeatures support via KEY-PLUG, IEEE 802.11a/b/g/h/n, 2.4/5 GHz, gross data rate 300 Mbps, 2x M12 max. 100 Mbps, PoE integrated 2-port switch, redundant 24 V DC, M12 A-coded IP65, -30…+75 °C, plug slot WPA2/802.11i/e,conformal coating EN 50155, EN45545, observe national approvals! CERT ID: MSN65-W1-M12-E2 scope of supply: manuals on CD-ROM, German/English; M12 sealing caps, for operation in the USA.

product brand name	SCALANCE
Technical Product Detail Page	https://i.siemens.com/1P6GK5778-1GY00-0TB0
transfer rate	
transfer rate	
● with WLAN / maximum	300 Mbit/s
● for Industrial Ethernet	10, 100 Mbit/s
interfaces	
number of electrical connections	
● for network components or terminal equipment	2
● for power supply	1
● for redundant voltage supply	1
type of electrical connection	
● for network components or terminal equipment	M12 interface (4-pole, D-coded), PoE
● for power supply	M12 interface (4-pole, A-coded)
memory	
design of the removable storage	
● C-PLUG	Yes
● KEY-PLUG	Yes
interfaces / wireless	
number of radio cards / permanently installed	1
transmission mode / for multiple input multiple output (MIMO)	2x2
number of spatial streams	2
number of electrical connections / for external antenna(s)	2
type of electrical connection / for external antenna(s)	N-Connect (socket)
product feature / external antenna can be mounted directly on device	Yes
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage	
● from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af	48 V
consumed current	
● at DC / at 24 V / typical	0.25 A
● with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	0.125 A
power loss [W]	
● at DC / at 24 V / typical	6 W
● with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	6 W

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supply voltage / 1	
● from M12 Power Connector (A-coded) for redundant power supply	16.8 V
supply voltage / 2	
● from M12 Power Connector (A-coded) for redundant power supply	31.2 V
ambient conditions	
ambient temperature	
● during operation	-40 ... +75 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
ambient condition / for operation	When used under hazardous conditions (Zone 2), the SCALANCE W778-1 M12 or W738-1 M12 product must be installed in an housing with at least IP54 degree of protection according to EN 60529 within the scope of EN 50021.
protection class IP	IP65
design, dimensions and weights	
width	140 mm
height	160 mm
depth	45 mm
width / of the enclosure / without antenna	140 mm
height / of the enclosure / without antenna	149 mm
depth / of the enclosure / without antenna	45 mm
net weight	0.95 kg
product feature / conformal coating	Yes
fastening method	35 mm DIN rail mounting only per accessories
● S7-300 rail mounting	No
● S7-1500 rail mounting	No
● 35 mm DIN-rail mounting	Yes
● wall mounting	Yes
radio frequencies	
operating frequency	
● for WLAN in 2.4 GHz frequency band	2.41 ... 2.48 GHz; depending on the country approvals
● for WLAN in 5 GHz frequency band	4.9 ... 5.8 GHz; depending on the country approvals
product features, product functions, product components / general	
product function / Access Point Mode	Yes
product function / client Mode	Yes
number of SSIDs	4
product function	
● iPCF Access Point	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'
● iPCF client	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
● iPCF-MC Access Point	No
● iPCF-MC client	Yes; Only in combination with 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iPCF-capable radio modules	1
product function / iREF	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iREF-capable radio modules	1
product function / iPRP	Yes; In combination with the 'KEY-PLUG W780 iFeatures' only
product functions / management, configuration, engineering	
number of manageable IP addresses / in client	8
product function	
● CLI	Yes
● web-based management	Yes
● MIB support	Yes
● TRAPs via email	Yes
● configuration with STEP 7	Yes
● configuration with STEP 7 in the TIA Portal	Yes
● operation with IWLAN controller	No

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● operation with Enterasys WLAN controller	No
● forced roaming on IP down with IWLAN	Yes
● forced roaming on link down with IWLAN	Yes
● WDS	Yes
protocol / is supported	
● Address Resolution Protocol (ARP)	Yes
● ICMP	Yes
● Telnet	Yes
● HTTP	Yes
● HTTPS	Yes
● TFTP	Yes
● DCP	Yes
● LLDP	Yes
identification & maintenance function	
● I&M0 - device-specific information	Yes
● I&M1 - higher level designation/location designation	Yes
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / diagnostics	
product function	
● PROFINET IO diagnosis	Yes
● link check	No
● connection monitoring IP-Alive	No
● localization via Aeroscout	Yes
● SysLog	Yes
protocol / is supported	
● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v3	Yes
product functions / VLAN	
product function	
● function VLAN with IWLAN	Yes
product functions / DHCP	
product function	
● DHCP client	Yes
● DHCP server	Yes
● DHCP Option 82	Yes
product functions / redundancy	
protocol / is supported	
● STP/RSTP	Yes
● MSTP	Yes
● RSTP	Yes
product functions / security	
product function	
● ACL - MAC-based	Yes
● management security, ACL-IP based	Yes
● IEEE 802.1x (radius)	Yes
● NAT/NAPT	Yes
● access protection according to IEEE802.11i	Yes
● WPA/WPA2	Yes
● TKIP/AES	Yes
protocol / is supported	
● SSH	Yes
● RADIUS	Yes
product functions / time	
protocol / is supported	
● NTP	Yes
● SNTP	Yes
● SIMATIC time synchronization (SIMATIC Time)	Yes

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standards, specifications, approvals	
standard	
● for FM	FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4, FM16US0205X
● for safety / from CSA and UL	UL 61010-2-201 E85972, CSA C22.2 no. 60950-1
certificate of suitability	
● EC Declaration of Conformity	Yes
● CE marking	Yes
● C-Tick	Yes
● E1 approval	Yes
● railway application in accordance with EN 50155	Yes
● railway application in accordance with EN 50121-4	Yes
● fire protection in accordance with EN 45545-2	Yes
● NEMA TS2	No
● IEC 61375	No
● IEC 61850-3	No
● NEMA4X	No
● Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af	Yes
● Power-over-Ethernet according to IEEE802.3at for type 2	Yes
standard for wireless communication	
● IEEE 802.11a	Yes
● IEEE 802.11b	Yes
● IEEE 802.11e	Yes
● IEEE 802.11g	Yes
● IEEE 802.11h	Yes
● IEEE 802.11i	Yes
● IEEE 802.11n	Yes
wireless approval	You will find the current list of countries at: www.siemens.de/funkzulassungen
standards, specifications, approvals / marine classification	
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	Yes
● French marine classification society (BV)	Yes
● DNV GL	Yes
● Korean Register of Shipping (KRS)	Yes
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (NK)	Yes
● Polski Rejestr Statkow (PRS)	Yes
● Royal Institution of Naval Architects (RINA)	Yes
standards, specifications, approvals / hazardous environments	
standard / for hazardous zone	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
● from CSA and UL	ANSI/ISA 12.12.01-2013, CAN/CSA C22.2 No.213-M1987, Cl. 1, div. 2, GP. A, B, C, D, T4 / Cl. 1, Zone 2, GP IIC E240480
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes; GB3836.1, GB3836.8
● as marking	Ex nA IIC T4 Gc
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	199.95 kg
● during manufacturing	33.7 kg
● during operation	166.06 kg
● after end of life	0.19 kg
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 web page: WLAN country approval	https://www.siemens.com/wireless-approvals
● to the website: IWLAN	https://www.siemens.com/iwlan

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● 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

General Product Approval				For use in hazardous locations	
Declaration of Conformity	EAC	Manufacturer Declaration	China RoHS	IECEx	ATEX

For use in hazardous locations	Radio Equipment Type Approval Certificate	Maritime application			
CCC-Ex	Miscellaneous	ABS	BUREAU VERITAS	DNV	LRS

Maritime application		Railway	Environment
NK / Nippon Kaiji Kyokai	RINA	Confirmation	EPD

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