SIEMENS

## Data sheet 6GK5778-1GY00-0AB0

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| **product type designation** | **W778-1 M12 (USA)** |




IWLAN access point, SCALANCE W778-1 M12, 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, observe national approvals! CERT ID: MSN65-W1-M12-E2 FCC ID: LYHMSN65V1 scope of supply: manuals on CD-ROM, German/English; M12 sealing caps, for operation in the USA

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|---|---|
| product brand name | SCALANCE |
| Technical Product Detail Page | https://i.siemens.com/1P6GK5778-1GY00-0AB0 |
| **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 | -20 ... +60 °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 |
| 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 |
| ● operation with Enterasys WLAN controller | No |


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| ● 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 |
| **standards, specifications, approvals** | |


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| 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 | No |
| ● railway application in accordance with EN 50121-4 | No |
| ● 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 |
| ● to website: Industrial communication | https://www.siemens.com/simatic-net |
| ● to web page: SiePortal | https://sieportal.siemens.com/ |


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| ● 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**

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| 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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