

product type designation



W788-1 M12

product announced for discontinuation; IWLAN Access Point, SCALANCE W788-1 M12, 1 radio, 3 N-CON antenna port, iFeatures support via KEY-PLUG, IEEE 802.11a/b/g/h/n, 2.4/5GHz, gross 450 Mbps per radio, 1x M12 max. 1 Gbps, PoE, redundant 24 V DC, M12 A-coded IP65, -20...+60 °C, plug slot, WPA2/802.11i/e, observe national approvals! cert ID: RAPN-W1-M12-E3, includes: MPCIE-R1-ABGN-U3, scope of delivery: manuals on CD-ROM, German/English, M12 sealing caps, for operation outside of USA/Israel

transfer rate

transfer rate	
• with WLAN / maximum	450 Mbit/s
• for Industrial Ethernet	10, 100, 1000 Mbit/s
transfer rate / for Industrial Ethernet	
• minimum	10 Mbit/s
• maximum	1000 Mbit/s

interfaces

number of electrical connections	
• for network components or terminal equipment	1
• for power supply	1
• for redundant voltage supply	1
type of electrical connection	
• for network components or terminal equipment	M12 interface (8-pole, X-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)	3x3
number of spatial streams	3
number of electrical connections / for external antenna(s)	3
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 IEEE802.3af for type 1 and IEEE802.3af	48 V
• from Power-over-Ethernet according to IEEE802.3af for type 2	50 V
consumed current	
• at DC / at 24 V / typical	0.45 A
• with Power-over-Ethernet according to IEEE802.3af for type 1 and IEEE802.3af / typical	0.22 A
power loss [W]	
• at DC / at 24 V / typical	10.7 W

supply voltage / 1 • from M12 Power Connector (A-coded) for redundant power supply	19.2 V
supply voltage / 2 • from M12 Power Connector (A-coded) for redundant power supply	28.8 V
ambient conditions	
ambient temperature • during operation • during storage • during transport	-20 ... +60 °C -40 ... +85 °C -40 ... +85 °C
relative humidity / at 25 °C / without condensation / during operation / maximum	90 %
ambient condition / for operation	When used under hazardous conditions (Zone 2), the SCALANCE W788-x or W748-x product must be installed in an enclosure. To comply with EN 50021, this enclosure must meet the requirements of at least IP 54 in compliance with EN 60529.
protection class IP	IP65
design, dimensions and weights	
width / of the enclosure / without antenna	200 mm
height / of the enclosure / without antenna	176 mm
depth / of the enclosure / without antenna	79 mm
net weight	1.7 kg
fastening method • S7-300 rail mounting • S7-1500 rail mounting • 35 mm top hat DIN rail mounting • wall mounting	For 35 mm DIN rail mounting an additional mounting adapter is required Yes Yes Yes Yes
radio frequencies	
operating frequency • for WLAN in 2.4 GHz frequency band • for WLAN in 5 GHz frequency band	2.41 ... 2.48 GHz; depending on the country approvals 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	8
product function • iPCF Access Point • iPCF client • iPCF-MC Access Point • iPCF-MC client	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures' No 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; In combination only with 'KEY-PLUG W780 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 • web-based management • MIB support • TRAPs via email • configuration with STEP 7 • configuration with STEP 7 in the TIA Portal • operation with IWLAN controller • operation with Enterasys WLAN controller • forced roaming on IP down with IWLAN • forced roaming on link down with IWLAN • WDS	Yes Yes Yes Yes Yes Yes No No Yes Yes Yes
protocol / is supported • Address Resolution Protocol (ARP)	Yes

• ICMP • Telnet • HTTP • HTTPS • TFTP • DCP • LLDP	Yes Yes Yes Yes Yes Yes Yes
identification & maintenance function • I&M0 - device-specific information • I&M1 - higher level designation/location designation	Yes Yes
product functions / diagnostics	
product function • PROFINET IO diagnosis • link check • connection monitoring IP-Alive • localization via Aeroscout • SysLog	Yes No No Yes Yes
protocol / is supported • SNMP v1 • SNMP v2 • SNMP v3	Yes Yes Yes
product functions / VLAN	
product function • function VLAN with IWLAN	Yes
product functions / DHCP	
product function • DHCP client • DHCP server • DHCP Option 82	Yes Yes Yes
product functions / redundancy	
protocol / is supported • STP/RSTP • MSTP • RSTP	Yes Yes Yes
product functions / security	
product function • ACL - MAC-based • management security, ACL-IP based • IEEE 802.1x (radius) • NAT/NAPT • access protection according to IEEE802.11i • WPA/WPA2 • TKIP/AES	Yes Yes Yes No Yes Yes Yes
protocol / is supported • SSH • RADIUS	Yes Yes
product functions / time	
protocol / is supported • NTP • SNTP • SIMATIC time synchronization (SIMATIC Time)	Yes Yes Yes
standards, specifications, approvals	
standard • for FM • for safety / from CSA and UL	FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4, FM16US0205X UL 60950-1 E115352, CSA C22.2 No. 60950-1
certificate of suitability • EC Declaration of Conformity • CE marking • C-Tick • E1 approval	Yes Yes Yes Yes

• railway application in accordance with EN 50155 • railway application in accordance with EN 50121-4 • fire protection in accordance with EN 45545-2 • NEMA TS2 • IEC 61375 • IEC 61850-3 • NEMA4X • Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af • Power-over-Ethernet according to IEEE802.3at for type 2	Yes Yes Yes No No No No Yes Yes
standard for wireless communication • IEEE 802.11a • IEEE 802.11b • IEEE 802.11e • IEEE 802.11g • IEEE 802.11h • IEEE 802.11i • IEEE 802.11n	Yes Yes Yes Yes Yes Yes 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) • French marine classification society (BV) • DNV GL • Korean Register of Shipping (KRS) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) • Royal Institution of Naval Architects (RINA)	Yes Yes Yes Yes Yes Yes Yes Yes
standards, specifications, approvals / hazardous environments	
standard / for hazardous zone • from CSA and UL	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X 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 • as marking	Yes; GB3836.1, GB3836.8 Ex nA IIC T4 Gc
further information / internet links	
internet link • to web page: WLAN country approval • to web page: SiePortal • to website: Image database • to website: Industry Online Support	https://www.siemens.com/wireless-approvals https://sieportal.siemens.com/ https://www.automation.siemens.com/bilddb 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



[Manufacturer Declaration](#)



[Declaration of Conformity](#)



For use in hazardous locations	Radio Equipment Type Approval Certificate			Marine / Shipping
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[EM](#)

[CCC-Ex](#)

[Miscellaneous](#)

[Miscellaneous](#)



Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



Marine / Shipping	Environment
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[Confirmation](#)

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