

product type designation



W788-2 M12 (USA)

IWLAN Access Point, SCALANCE W788-2 M12, 2 radios, 6 N-CON antenna port, iFeatures support via KEY-PLUG, IEEE 802.11a/b/g/h/n, 2.4/5 GHz, 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-W2-M12-E3, includes: MPCIE-R1-ABGN-U3, FCC ID: LYHMPCIE1V1 scope of delivery: manuals on CD-ROM, German/English, M12 sealing caps, only for operation in the USA.

transfer rate	
transfer rate	
<ul style="list-style-type: none"> with WLAN / maximum for Industrial Ethernet 	450 Mbit/s 10, 100, 1000 Mbit/s
transfer rate / for Industrial Ethernet	
<ul style="list-style-type: none"> minimum maximum 	10 Mbit/s 1000 Mbit/s
interfaces	
number of electrical connections	
<ul style="list-style-type: none"> for network components or terminal equipment for power supply for redundant voltage supply 	1 1 1
type of electrical connection	
<ul style="list-style-type: none"> for network components or terminal equipment for power supply 	M12 interface (8-pole, X-coded), PoE M12 interface (4-pole, A-coded)
design of the removable storage	
<ul style="list-style-type: none"> C-PLUG KEY-PLUG 	Yes Yes
memory	
design of the removable storage	
<ul style="list-style-type: none"> C-PLUG KEY-PLUG 	Yes Yes
interfaces / wireless	
number of radio cards / permanently installed	2
transmission mode / for multiple input multiple output (MIMO)	3x3
number of spatial streams	3
number of electrical connections / for external antenna(s)	6
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	
<ul style="list-style-type: none"> from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af from Power-over-Ethernet according to IEEE802.3at for type 2 	48 V 50 V
consumed current	
<ul style="list-style-type: none"> at DC / at 24 V / typical with Power-over-Ethernet according to IEEE802.3at for 	0.63 A 0.22 A

type 1 and IEEE802.3af / typical	
<ul style="list-style-type: none"> with Power-over-Ethernet according to IEEE802.3at for type 2 / typical 	0.3 A
power loss [W]	
<ul style="list-style-type: none"> at DC / at 24 V / typical 	15 W
<ul style="list-style-type: none"> with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical 	10.7 W
<ul style="list-style-type: none"> with Power-over-Ethernet according to IEEE802.3at for type 2 / typical 	15 W
supply voltage / 1	
<ul style="list-style-type: none"> from M12 Power Connector (A-coded) for redundant power supply 	19.2 V
supply voltage / 2	
<ul style="list-style-type: none"> from M12 Power Connector (A-coded) for redundant power supply 	28.8 V
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> during operation 	-20 ... +60 °C
<ul style="list-style-type: none"> during storage 	-40 ... +85 °C
<ul style="list-style-type: none"> during transport 	-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	For 35 mm DIN rail mounting an additional mounting adapter is required
<ul style="list-style-type: none"> S7-300 rail mounting 	Yes
<ul style="list-style-type: none"> S7-1500 rail mounting 	Yes
<ul style="list-style-type: none"> 35 mm top hat DIN rail mounting 	Yes
<ul style="list-style-type: none"> wall mounting 	Yes
radio frequencies	
operating frequency	
<ul style="list-style-type: none"> for WLAN in 2.4 GHz frequency band 	2.41 ... 2.48 GHz; depending on the country approvals
<ul style="list-style-type: none"> 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	16
product function	
<ul style="list-style-type: none"> iPCF Access Point 	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'
<ul style="list-style-type: none"> iPCF client 	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
<ul style="list-style-type: none"> iPCF-MC Access Point 	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'
<ul style="list-style-type: none"> iPCF-MC client 	Yes; Only in combination with 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iPCF-capable radio modules	2
product function / iREF	No; In combination only with 'KEY-PLUG W780 iFeatures'
number of iREF-capable radio modules	2
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	
<ul style="list-style-type: none"> CLI 	Yes
<ul style="list-style-type: none"> web-based management 	Yes
<ul style="list-style-type: none"> MIB support 	Yes
<ul style="list-style-type: none"> TRAPs via email 	Yes
<ul style="list-style-type: none"> configuration with STEP 7 	Yes

<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> Yes No No Yes Yes Yes
protocol / is supported <ul style="list-style-type: none"> • Address Resolution Protocol (ARP) • ICMP • Telnet • HTTP • HTTPS • TFTP • DCP • LLDP 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes Yes
identification & maintenance function <ul style="list-style-type: none"> • I&M0 - device-specific information • I&M1 - higher level designation/location designation 	<ul style="list-style-type: none"> Yes Yes
product functions / diagnostics	
product function <ul style="list-style-type: none"> • PROFINET IO diagnosis • link check • connection monitoring IP-Alive • localization via Aeroscout • SysLog 	<ul style="list-style-type: none"> Yes No No Yes Yes
protocol / is supported <ul style="list-style-type: none"> • SNMP v1 • SNMP v2 • SNMP v3 	<ul style="list-style-type: none"> Yes Yes Yes
product functions / VLAN	
product function <ul style="list-style-type: none"> • function VLAN with IWLAN 	<ul style="list-style-type: none"> Yes
product functions / DHCP	
product function <ul style="list-style-type: none"> • DHCP client • DHCP server • DHCP Option 82 	<ul style="list-style-type: none"> Yes Yes Yes
product functions / redundancy	
protocol / is supported <ul style="list-style-type: none"> • STP/RSTP • MSTP • RSTP 	<ul style="list-style-type: none"> Yes Yes Yes
product functions / security	
product function <ul style="list-style-type: none"> • ACL - MAC-based • management security, ACL-IP based • IEEE 802.1x (radius) • NAT/NAPT • access protection according to IEEE802.11i • WPA/WPA2 • TKIP/AES 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes
protocol / is supported <ul style="list-style-type: none"> • SSH • RADIUS 	<ul style="list-style-type: none"> Yes Yes
product functions / time	
protocol / is supported <ul style="list-style-type: none"> • NTP • SNTP • SIMATIC time synchronization (SIMATIC Time) 	<ul style="list-style-type: none"> Yes Yes Yes
standards, specifications, approvals	

standard	
<ul style="list-style-type: none"> for FM 	FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4, FM16US0205X
certificate of suitability	
<ul style="list-style-type: none"> EC Declaration of Conformity CE marking C-Tick E1 approval 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 to IEEE802.3at for type 1 and IEEE802.3af Power-over-Ethernet according to IEEE802.3at for type 2 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p>
standard for wireless communication	
<ul style="list-style-type: none"> IEEE 802.11a IEEE 802.11b IEEE 802.11e IEEE 802.11g IEEE 802.11h IEEE 802.11i IEEE 802.11n 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
wireless approval	For operation in the USA, you will find more information under: www.siemens.de/funkzulassungen

standards, specifications, approvals / marine classification

Marine classification association	
<ul style="list-style-type: none"> 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) 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> as marking 	Ex nA IIC T4 Gc

further information / internet links

internet link	
<ul style="list-style-type: none"> to website: TIA Selection Tool to web page: selection aid TIA Selection Tool to the website: IWLAN to website: Industry Mall to website: Information and Download Center to website: Image database to website: CAx-Download-Manager to website: Industry Online Support 	<p>http://www.siemens.com/tia-selection-tool</p> <p>http://www.siemens.com/tia-selection-tool</p> <p>http://www.siemens.com/iwlan</p> <p>https://mall.industry.siemens.com</p> <p>http://www.siemens.com/industry/infocenter</p> <p>http://automation.siemens.com/bilddb</p> <p>http://www.siemens.com/cax</p> <p>https://support.industry.siemens.com</p>

security information

security information	Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action(e.g. cell protection
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concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit <http://www.siemens.com/industrialsecurity>. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit <http://support.automation.siemens.com>. (V3.4)

last modified:

5/27/2023 

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