

product type designation



W788-2 M12

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, 2.4/5GHz, gross 450 Mbit/s per radio, 1x M12 max. 1 Gbit/s, 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, 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)
design of the removable storage	
• C-PLUG	Yes
• KEY-PLUG	Yes

memory

design of the removable storage	
• C-PLUG	Yes
• KEY-PLUG	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	
• from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af	48 V
• from Power-over-Ethernet according to IEEE802.3at for type 2	50 V
consumed current	
• at DC / at 24 V / typical	0.63 A
• with Power-over-Ethernet according to IEEE802.3at for	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 	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 	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 	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 	Yes No No Yes Yes
protocol / is supported <ul style="list-style-type: none"> • SNMP v1 • SNMP v2 • SNMP v3 	Yes Yes Yes
product functions / VLAN	
product function <ul style="list-style-type: none"> • function VLAN with IWLAN 	Yes
product functions / DHCP	
product function <ul style="list-style-type: none"> • DHCP client • DHCP server • DHCP Option 82 	Yes Yes Yes
product functions / redundancy	
protocol / is supported <ul style="list-style-type: none"> • STP/RSTP • MSTP • RSTP 	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 	Yes Yes Yes No Yes Yes Yes
protocol / is supported <ul style="list-style-type: none"> • SSH • RADIUS 	Yes Yes
product functions / time	
protocol / is supported <ul style="list-style-type: none"> • NTP • SNTP • SIMATIC time synchronization (SIMATIC Time) 	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 	Yes
<ul style="list-style-type: none"> CE marking 	Yes
<ul style="list-style-type: none"> C-Tick 	Yes
<ul style="list-style-type: none"> E1 approval 	Yes
<ul style="list-style-type: none"> railway application in accordance with EN 50155 	Yes
<ul style="list-style-type: none"> railway application in accordance with EN 50121-4 	Yes
<ul style="list-style-type: none"> fire protection in accordance with EN 45545-2 	Yes
<ul style="list-style-type: none"> NEMA TS2 	No
<ul style="list-style-type: none"> IEC 61375 	No
<ul style="list-style-type: none"> IEC 61850-3 	No
<ul style="list-style-type: none"> NEMA4X 	No
<ul style="list-style-type: none"> Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af 	Yes
<ul style="list-style-type: none"> Power-over-Ethernet according to IEEE802.3at for type 2 	Yes
standard for wireless communication	
<ul style="list-style-type: none"> IEEE 802.11a 	Yes
<ul style="list-style-type: none"> IEEE 802.11b 	Yes
<ul style="list-style-type: none"> IEEE 802.11e 	Yes
<ul style="list-style-type: none"> IEEE 802.11g 	Yes
<ul style="list-style-type: none"> IEEE 802.11h 	Yes
<ul style="list-style-type: none"> IEEE 802.11i 	Yes
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) 	Yes
<ul style="list-style-type: none"> French marine classification society (BV) 	Yes
<ul style="list-style-type: none"> DNV GL 	Yes
<ul style="list-style-type: none"> Korean Register of Shipping (KRS) 	Yes
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	Yes
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (NK) 	Yes
<ul style="list-style-type: none"> Polski Rejestr Statkow (PRS) 	Yes
<ul style="list-style-type: none"> 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
<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 	http://www.siemens.com/tia-selection-tool
<ul style="list-style-type: none"> to web page: selection aid TIA Selection Tool 	http://www.siemens.com/tia-selection-tool
<ul style="list-style-type: none"> to the website: IWLAN 	http://www.siemens.com/iwlan
<ul style="list-style-type: none"> to website: Industry Mall 	https://mall.industry.siemens.com
<ul style="list-style-type: none"> to website: Information and Download Center 	http://www.siemens.com/industry/infocenter
<ul style="list-style-type: none"> to website: Image database 	http://automation.siemens.com/bilddb
<ul style="list-style-type: none"> to website: CAx-Download-Manager 	http://www.siemens.com/cax
<ul style="list-style-type: none"> to website: Industry Online Support 	https://support.industry.siemens.com
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 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)

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