

product type designation



W748-1 M12

product announced for discontinuation; IWLAN client, SCALANCE W748-1 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, signaling contact 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	
<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	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	
<ul style="list-style-type: none"> from Power-over-Ethernet according to IEEE802.3af for type 1 and IEEE802.3af from Power-over-Ethernet according to IEEE802.3af for type 2 	48 V 50 V
consumed current	

<ul style="list-style-type: none"> • at DC / at 24 V / typical 	0.45 A
<ul style="list-style-type: none"> • with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical 	0.22 A
<ul style="list-style-type: none"> • with Power-over-Ethernet according to IEEE802.3at for type 2 / typical 	0.21 A
power loss [W]	
<ul style="list-style-type: none"> • at DC / at 24 V / typical 	10.7 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 	10.7 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	100 %
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	No
product function / client Mode	Yes
product function	
<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 client 	No; Only in combination with 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iPCF-capable radio modules	1
product function / iPRP	Yes; In combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 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 • WDS 	<p>Yes</p> <p>No</p>
<p>protocol / is supported</p> <ul style="list-style-type: none"> • Address Resolution Protocol (ARP) • ICMP • Telnet • HTTP • HTTPS • TFTP • DCP • LLDP 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>identification & maintenance function</p> <ul style="list-style-type: none"> • I&M0 - device-specific information • I&M1 – higher level designation/location designation 	<p>Yes</p> <p>Yes</p>
product functions / diagnostics	
<p>product function</p> <ul style="list-style-type: none"> • PROFINET IO diagnosis • link check • connection monitoring IP-Alive • SysLog 	<p>Yes</p> <p>No</p> <p>No</p> <p>Yes</p>
<p>protocol / is supported</p> <ul style="list-style-type: none"> • SNMP v1 • SNMP v2 • SNMP v3 	<p>Yes</p> <p>Yes</p> <p>Yes</p>
product functions / VLAN	
<p>product function</p> <ul style="list-style-type: none"> • function VLAN with IWLAN 	<p>No</p>
product functions / DHCP	
<p>product function</p> <ul style="list-style-type: none"> • DHCP client • DHCP server • DHCP Option 82 	<p>Yes</p> <p>Yes</p> <p>Yes</p>
product functions / redundancy	
<p>protocol / is supported</p> <ul style="list-style-type: none"> • STP/RSTP • MSTP • RSTP 	<p>Yes</p> <p>Yes</p> <p>Yes</p>
product functions / security	
<p>product function</p> <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 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>protocol / is supported</p> <ul style="list-style-type: none"> • SSH • RADIUS 	<p>Yes</p> <p>Yes</p>
product functions / time	
<p>protocol / is supported</p> <ul style="list-style-type: none"> • NTP • SNTP • SIMATIC time synchronization (SIMATIC Time) 	<p>Yes</p> <p>Yes</p> <p>Yes</p>
standards, specifications, approvals	
<p>standard</p> <ul style="list-style-type: none"> • for FM • for safety / from CSA and UL 	<p>FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4</p> <p>UL 60950-1, CSA C22.2 No. 60950-1</p>

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 • 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 	<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>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	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) • 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
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes

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 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.
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