

IWLAN client, SCALANCE W748-1 RJ45, 1 radio, 3 R-SMA antenna port, iFeatures support via key plug, IEEE 802.11a/b/g/h/n, 2.4/5GHz, gross 450 Mbit/s per radio, 1x RJ45 max. 1 Gbit/s, PoE, redundant 24 V DC, terminal block, IP30, Temp: -20 ...+60 °C, WPA2/802.11i/e, Signaling contact observe national approvals! CERT ID: RAPN-W1-RJ-E3, includes: MPCIE-R1-ABGN-U3, scope of delivery: Manuals on CD-ROM, German/English, 2x terminal blocks; 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 	RJ45 socket 4-pole screw terminal, PoE
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)	R-SMA (socket)
Product feature / external antenna can be mounted directly on device	Yes

Signal inputs/outputs	
Number of digital inputs	1
Number of digital outputs	1
Type of electrical connection / at the digital inputs/outputs	4-pole screw terminal
Signal range / at digital input	24 V DC, safety extra-low voltage
Signal range / at digital output	24 V DC / 1 A

Supply voltage, current consumption, power loss	
Type of voltage / of the supply voltage	DC
Supply voltage / 1 <ul style="list-style-type: none"> • from terminal block 	19.2 V
Supply voltage / 2 <ul style="list-style-type: none"> • from terminal block 	28.8 V
Supply voltage <ul style="list-style-type: none"> • from Power-over-Ethernet acc. to IEEE802.3at for type 1 and IEEE802.3af • from Power-over-Ethernet acc. 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 type 1 and IEEE802.3af / typical • with Power-over-Ethernet according to IEEE802.3at for type 2 / typical 	0.45 A 0.22 A 0.21 A
Power loss [W] <ul style="list-style-type: none"> • at DC / at 24 V / typical • with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical • with Power-over-Ethernet according to IEEE802.3at for type 2 / typical 	10.7 W 10.7 W 10.7 W

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	IP30

Design, dimensions and weights

Width / of the enclosure / without antenna	200 mm
Height / of the enclosure / without antenna	158 mm
Depth / of the enclosure / without antenna	79 mm
Net weight	1.7 kg
Mounting type	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 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 	Yes
<ul style="list-style-type: none"> • WDS 	No
Protocol / is supported	
<ul style="list-style-type: none"> • Address Resolution Protocol (ARP) 	Yes
<ul style="list-style-type: none"> • ICMP 	Yes
<ul style="list-style-type: none"> • Telnet 	Yes
<ul style="list-style-type: none"> • HTTP 	Yes
<ul style="list-style-type: none"> • HTTPS 	Yes
<ul style="list-style-type: none"> • TFTP 	Yes
<ul style="list-style-type: none"> • DCP 	Yes
<ul style="list-style-type: none"> • LLDP 	Yes
Identification & maintenance function	
<ul style="list-style-type: none"> • I&M0 - device-specific information 	Yes
<ul style="list-style-type: none"> • I&M1 – higher-level designation/location designation 	Yes

Product functions / Diagnostics

Product function	
<ul style="list-style-type: none"> • PROFINET IO diagnosis 	Yes
<ul style="list-style-type: none"> • Link Check 	No
<ul style="list-style-type: none"> • connection monitoring IP-Alive 	No
<ul style="list-style-type: none"> • SysLog 	Yes
Protocol / is supported	
<ul style="list-style-type: none"> • SNMP v1 	Yes
<ul style="list-style-type: none"> • SNMP v2 	Yes
<ul style="list-style-type: none"> • SNMP v3 	Yes

Product functions / VLAN

Product function	
<ul style="list-style-type: none"> • function VLAN with IWLAN 	No

Product functions / DHCP

Product function	
<ul style="list-style-type: none"> • DHCP client 	Yes
<ul style="list-style-type: none"> • DHCP server 	Yes
<ul style="list-style-type: none"> • DHCP Option 82 	Yes

Product functions / redundancy

Protocol / is supported	
<ul style="list-style-type: none"> • STP/RSTP 	Yes
<ul style="list-style-type: none"> • MSTP 	Yes
<ul style="list-style-type: none"> • 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

Standard	
• for FM	FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4
• for hazardous zone	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
• for safety / from CSA and UL	UL 60950-1, 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

<ul style="list-style-type: none"> • 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>
Wireless approval	For operation in the USA, you will find more information under: www.siemens.de/funkzulassungen
<p>Marine classification association</p> <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • Bureau Veritas (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>

accessories	
accessories	24 V DC screw terminal and screw terminal for digital input and output included in the scope of delivery

Further information / Internet-Links	
<p>Internet-Link</p> <ul style="list-style-type: none"> • to website: 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/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

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