

Product type designation

SCALANCE W748-1 RJ45

IWLAN Client, SCALANCE W748-1 RJ45, 1 radio, 3 R-SMA antenna connector, iFeatures support via KEY-PLUG, IEEE 802.11a/b/g/h/n, 2,4/5GHz, brutto 450 MBit/s per radio, 1x RJ45 max. 1 Gbit/s, PoE, redundant DC 24 V, term. block, IP30, Temp: -20 ...+60°C, WPA2/802.11i/e, signal contact Note national approvals! CERT ID: RAPN-W1-RJ-E3, contains: MPCIE-R1-ABGN-U3, scope of supply: manuals on CD, German/English, 2x terminal block; for use outside USA/Israel



Transmission rate

• Transfer rate / with WLAN / maximum	450 Mbit/s
• Transfer rate / 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	RJ45 socket
• for power supply	4-pole screw terminal, PoE
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)	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

Permitted ambient conditions

Ambient temperature <ul style="list-style-type: none">• during operation	-20 ... +60 °C
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<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 weight

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	
<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

Wireless frequencies

Operating frequency	
<ul style="list-style-type: none"> • for WLAN in 2.4 GHz frequency band 	2.41 ... 2.48 GHz
<ul style="list-style-type: none"> • for WLAN in 5 GHz frequency band 	4.9 ... 5.8 GHz

Product properties, functions, 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

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 	Yes No
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 / Diagnosis

Product function	
<ul style="list-style-type: none"> • PROFINET IO diagnosis • Link Check • connection monitoring IP-Alive • SysLog 	Yes No No 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 	No

Product functions / DHCP

Product function	
<ul style="list-style-type: none"> • DHCP client • in Client Mode / DHCP server via LAN • 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	
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• 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	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
• IEEE 802.11b	Yes

<ul style="list-style-type: none"> • IEEE 802.11e • IEEE 802.11g • IEEE 802.11h • IEEE 802.11i • IEEE 802.11n 	Yes Yes Yes Yes Yes
Wireless approval	You will find the current list of countries at: www.siemens.de/funkzulassungen
Marine classification association <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • Bureau Veritas (BV) • DNV GL • 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
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	
Internet-Link <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 	http://www.siemens.com/tia-selection-tool http://www.siemens.com/iwlan https://mall.industry.siemens.com http://www.siemens.com/industry/infocenter http://automation.siemens.com/bilddb http://www.siemens.com/cax https://support.industry.siemens.com
Security information	

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