

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 |
| • for Industrial Ethernet | 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Mbit/s, 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 • from terminal block	19.2 V
Supply voltage / 2 • from terminal block	28.8 V
Supply voltage • 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 • 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] • 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 • during operation • during storage • during transport	-20 ... +60 °C -40 ... +85 °C -40 ... +85 °C
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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	For mounting on 35 mm DIN rail, an additional mounting adapter is required
• S7-300 rail mounting	Yes
• S7-1500 rail mounting	Yes
• 35 mm DIN rail mounting	Yes
• wall mounting	Yes

Wireless frequencies

Operating frequency	
• for WLAN in 2.4 GHz frequency band	2.41 ... 2.48 GHz
• 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	
• iPCF client	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
• 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 functions / management, configuration

Number of manageable IP addresses / in client	8
Product function	
• CLI	Yes
• web-based management	Yes
• MIB support	Yes
• TRAPs via email	Yes
• Configuration with STEP 7	Yes
• configuration with STEP 7 in the TIA Portal	Yes
• WDS	No
Protocol / is supported	

• Address Resolution Protocol (ARP)	Yes
• ICMP	Yes
• Telnet	Yes
• HTTP	Yes
• HTTPS	Yes
• TFTP	Yes
• DCP	Yes
• LLDP	Yes
Identification & maintenance function	
• I&M0 - device-specific information	Yes
• I&M1 – higher-level designation/location designation	Yes

Product functions / Diagnosis

Product function	
• PROFINET IO diagnosis	Yes
• Link Check	No
• connection monitoring IP-Alive	No
• SysLog	Yes
Protocol / is supported	
• SNMP v1	Yes
• SNMP v2	Yes
• SNMP v3	Yes

Product functions / VLAN

Product function	
• function VLAN with IWLAN	No

Product functions / DHCP

Product function	
• DHCP client	Yes
• in Client Mode / DHCP server via LAN	Yes
• DHCP Option 82	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
- RADIUS

Yes
Yes

Product functions / Time

Protocol / is supported

- NTP
- SNTP
- SIMATIC Time

Yes
Yes
Yes

Standards, specifications, approvals

Standard

- for FM
- for hazardous zone
- for safety / from CSA and UL
- for hazardous zone / from CSA and UL

FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4
EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
UL 60950-1 CSA C22.2 No. 60950-1
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

Certificate of suitability

- EC declaration of conformity
- CE marking
- C-Tick
- CCC
- E1 approval
- Railway application in accordance with EN 50155
- 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

Yes
Yes
Yes
No
Yes
No
No
No
No
Yes
Yes

Standard for wireless communication

- IEEE 802.11a
- IEEE 802.11b
- IEEE 802.11e
- IEEE 802.11g
- IEEE 802.11h
- IEEE 802.11i
- IEEE 802.11n

Yes
Yes
Yes
Yes
Yes
Yes
Yes

Wireless approval

You will find the current list of countries at:
www.siemens.de/funkzulassungen

Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	Yes
• Bureau Veritas (BV)	Yes
• DNV GL	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (NK)	Yes
• Polski Rejestr Statkow (PRS)	Yes
• Royal Institution of Naval Architects (RINA)	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	
• to website: TIA Selection Tool	http://www.siemens.com/tia-selection-tool
• to the website: IWLAN	http://www.siemens.com/iwlan
• to website: Industry Mall	https://mall.industry.siemens.com
• to website: Information and Download Center	http://www.siemens.com/industry/infocenter
• to website: Image database	http://automation.siemens.com/bilddb
• to website: CAx Download Manager	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com

Security information	
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