

IWLAN Access Point, SCALANCE W788-2 M12 EEC USA, 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, -40...+70 °C, plug slot WPA2/802.11i/e,conformal coating EN 50155, EN 45545, 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, only for operation in USA



Transfer rate

Transfer rate	
<ul style="list-style-type: none"> with WLAN / maximum for Industrial Ethernet 	<p>450 Mbit/s</p> <p>10, 100, 1000 Mbit/s</p>
Transfer rate / for Industrial Ethernet	
<ul style="list-style-type: none"> minimum maximum 	<p>10 Mbit/s</p> <p>1000 Mbit/s</p>

Interfaces

Number of electrical connections	
<ul style="list-style-type: none"> for network components or terminal equipment for power supply for redundant voltage supply 	<p>1</p> <p>1</p> <p>1</p>
Type of electrical connection	
<ul style="list-style-type: none"> for network components or terminal equipment for power supply 	<p>M12 interface (8-pole, X-coded), PoE</p> <p>M12 interface (4-pole, A-coded)</p>
design of the removable storage	
<ul style="list-style-type: none"> C-PLUG KEY-PLUG 	<p>Yes</p> <p>Yes</p>

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 / 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
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	0.63 A 0.22 A 0.3 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	15 W 10.7 W 15 W

Ambient conditions

Ambient temperature <ul style="list-style-type: none">• during operation• during storage• during transport	-40 ... +74 °C -40 ... +85 °C -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
Product feature / conformal coating	Yes
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	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	0
Product function / iREF	No; In combination only with 'KEY-PLUG W780 iFeatures'
Number of iREF-capable radio modules	0
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 	Yes
<ul style="list-style-type: none"> • operation with IWLAN controller 	No
<ul style="list-style-type: none"> • operation with Enterasys WLAN controller 	No
<ul style="list-style-type: none"> • forced roaming on IP down with IWLAN 	Yes
<ul style="list-style-type: none"> • forced roaming on link down with IWLAN 	Yes
<ul style="list-style-type: none"> • WDS 	Yes
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"> • localization via Aeroscout 	Yes
<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 	Yes

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

- | | |
|------------|-----|
| • STP/RSTP | Yes |
| • MSTP | Yes |
| • 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 |
| • for hazardous zone / 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 |

Certificate of suitability

- | | |
|---|-----|
| • EC declaration of conformity | Yes |
| • CE marking | Yes |
| • C-Tick | Yes |
| • E1 approval | Yes |
| • Railway application in accordance with EN 50155 | Yes |
| • Railway application in accordance with EN 50121-4 | Yes |
| • Fire protection in accordance with EN 45545-2 | Yes |

<ul style="list-style-type: none"> • NEMA TS2 	Yes
<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 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	For operation in the USA, you will find more information under: www.siemens.de/funkzulassungen
Marine classification association	
<ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) 	Yes
<ul style="list-style-type: none"> • Bureau Veritas (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

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 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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