

Product type designation

SCALANCE W788-2 M12 EEC

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



Transmission rate

Transfer rate	
• with WLAN / maximum	450 Mbit/s
• 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	M12 interface (8-pole, X-coded), PoE
• for power supply	M12 interface (4-pole, A-coded)
design of the removable storage	
• C-PLUG	Yes

- KEY-PLUG

Yes

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 • from M12 Power Connector (A-coded) for redundant power supply	19.2 V
Supply voltage / 2 • from M12 Power Connector (A-coded) for redundant power supply	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	0.63 A 0.22 A 0.3 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	15 W 10.7 W 15 W

Permitted ambient conditions

Ambient temperature • 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 weight

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
• 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	Yes
Product function / Client Mode	Yes
Number of SSIDs	16
Product function	
• iPCF Access Point	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'
• iPCF client	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
• iPCF-MC Access Point	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'
• 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

Number of manageable IP addresses / in client	8
Product function	
• CLI	Yes
• web-based management	Yes
• MIB support	Yes

• TRAPs via email • Configuration with STEP 7 • configuration with STEP 7 in the TIA Portal • operation with IWLAN controller • operation with Enterasys WLAN controller • forced roaming on IP down with IWLAN • forced roaming on link down with IWLAN • WDS	Yes Yes Yes No No Yes Yes Yes
Protocol / is supported • Address Resolution Protocol (ARP) • ICMP • Telnet • HTTP • HTTPS • TFTP • DCP • LLDP	Yes Yes Yes Yes Yes Yes Yes Yes
Identification & maintenance function • I&M0 - device-specific information • I&M1 – higher-level designation/location designation	Yes Yes

Product functions / Diagnosis

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

Product functions / VLAN

Product function • function VLAN with IWLAN	Yes
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Product functions / DHCP

Product function • DHCP client • DHCP server • DHCP Option 82	Yes Yes Yes
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Product functions / Redundancy

Protocol / is supported

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|------------|-----|
| • 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

- | | |
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| • 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 |

• 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 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
Marine classification association • 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

Further Information / Internet Links

Internet-Link	
• 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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