

Product type designation

SCALANCE W788-2 M12

IWLAN Access Point, SCALANCE W788-2 M12, 2 radios, 6 N-CON antenna connector, iFeatures support via KEY-PLUG, IEEE 802.11a/b/g/h/n, 2,4/5GHz, brutto 450 MBit/s per radio, 1x M12 max. 1 Gbit/s, PoE, redundant DC 24 V, M12 A-coded IP65, -20...+60°C, plug slot, WPA2/802.11i/e, Note national approvals! CERT ID. RAPN-W2-M12-E3, contains: MPCIE-R1-ABGN-U3, scope of supply: manuals on CD, German/English, caps M12, 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 | 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	-20 ... +60 °C -40 ... +85 °C -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	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
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	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	2
Product function / iREF	No; In combination only with 'KEY-PLUG W780 iFeatures'
Number of iREF-capable radio modules	2
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
• operation with IWLAN controller	No
• operation with Enterasys WLAN controller	No

• WDS	Yes
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
• localization via Aeroscout	Yes
• SysLog	Yes
Protocol / is supported	
• SNMP v1	Yes
• SNMP v2	Yes
• SNMP v3	Yes

Product functions / VLAN

Product function	
• function VLAN with IWLAN	Yes

Product functions / DHCP

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

Product functions / Redundancy

Protocol / is supported	
• STP/RSTP	Yes

Product functions / Security

Product function	
• ACL - MAC-based	Yes
• Management security, ACL-IP based	Yes

• IEEE 802.1x (radius)	Yes
• NAT/NAPT	No
• 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
• 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
• CCC	No
• E1 approval	Yes
• Railway application in accordance with EN 50155	Yes
• Fire protection in accordance with EN 45545-2	Yes
• 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

• 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 • 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

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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