

product type designation



W786-2IA RJ45 (USA)

IWLAN Access Point, SCALANCE W786-2IA RJ45, 2 radios, 6 internal antennas, iFeatures support via key plug, IEEE 802.11a/b/g/h/n, 2.4/5GHz, gross 450 Mbit/s per radio, 1x RJ45 max. 1 Gbit/s, PoE, redundant 24 V DC, terminal block, 110 - 230 V AC via PS791-2AC IP65, -40..+60 °C, plug slot, WPA2/802.11i/e, observe national approvals! CERT ID: EAPN-W2-RJ-I3, includes: MPCIE-R1-ABGN-U3, scope of delivery: Manuals on CD-ROM, German/English, 1x terminal block; for operation in the USA

transfer rate	
transfer rate	
<ul style="list-style-type: none"> with WLAN / maximum for Industrial Ethernet 	450 Mbit/s 10, 100, 1000 Mbit/s
transfer rate / for Industrial Ethernet	
<ul style="list-style-type: none"> minimum maximum 	10 Mbit/s 1000 Mbit/s
interfaces	
number of electrical connections	
<ul style="list-style-type: none"> for network components or terminal equipment for power supply for redundant voltage supply 	1 1 1
type of electrical connection	
<ul style="list-style-type: none"> for network components or terminal equipment for power supply 	RJ45 socket 2-pole connector (24 V DC) or optionally available power supply adapter (4-pole 24 V DC or 3-pole 110 to 230 V AC)
design of the removable storage	
<ul style="list-style-type: none"> C-PLUG KEY-PLUG 	Yes Yes
memory	
design of the removable storage	
<ul style="list-style-type: none"> C-PLUG KEY-PLUG 	Yes 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 internal antennas	6
antenna gain compared to spherical radiator / of the WLAN antenna	
<ul style="list-style-type: none"> in the 2.4 GHz frequency band in the 5 GHz frequency band 	3 dB 4 dB
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage	
<ul style="list-style-type: none"> from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af from Power-over-Ethernet according to IEEE802.3at 	48 V 50 V

for type 2	
<ul style="list-style-type: none"> from optional integrable power supply <ul style="list-style-type: none"> at AC at DC 	100 ... 240 V 12 ... 24 V
consumed current	
<ul style="list-style-type: none"> at DC / at 24 V / typical at AC / at 230 V / typical with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical 	0.63 A 0.07 A 0.22 A
power loss [W]	
<ul style="list-style-type: none"> at DC / at 24 V / typical at AC / at 230 V / typical with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical 	15 W 15 W 15 W
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
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> during operation during storage during transport 	-40 ... +60 °C -40 ... +85 °C -40 ... +70 °C
relative humidity / at 25 °C / without condensation / during operation / maximum	100 %
ambient condition / for operation	When using the 100 - 240 V AC power supply, an operating temperature of -40 °C to +60 °C is permissible
protection class IP	IP65
design, dimensions and weights	
width / of the enclosure / without antenna	251 mm
height / of the enclosure / without antenna	251 mm
depth / of the enclosure / without antenna	72 mm
net weight	2.24 kg
fastening method	For mast mounting, 35 mm DIN rail mounting and S7-300 rail mounting, an additional support plate is required
<ul style="list-style-type: none"> S7-300 rail mounting S7-1500 rail mounting 35 mm top hat DIN rail mounting wall mounting 	Yes No Yes Yes
radio frequencies	
operating frequency	
<ul style="list-style-type: none"> for WLAN in 2.4 GHz frequency band for WLAN in 5 GHz frequency band 	2.41 ... 2.48 GHz; depending on the country approvals 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 iPCF client iPCF-MC Access Point iPCF-MC client 	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures' Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' Yes; Only in combination with 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iPCF-capable radio modules	2
product function / iREF	Yes; In combination only with 'KEY-PLUG W780 iFeatures'
number of iREF-capable radio modules	2
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	
<ul style="list-style-type: none"> • STP/RSTP 	Yes
<ul style="list-style-type: none"> • MSTP 	Yes
<ul style="list-style-type: none"> • RSTP 	Yes
product functions / security	
product function	
<ul style="list-style-type: none"> • ACL - MAC-based 	Yes
<ul style="list-style-type: none"> • management security, ACL-IP based 	Yes
<ul style="list-style-type: none"> • IEEE 802.1x (radius) 	Yes
<ul style="list-style-type: none"> • NAT/NAPT 	No
<ul style="list-style-type: none"> • access protection according to IEEE802.11i 	Yes
<ul style="list-style-type: none"> • WPA/WPA2 	Yes
<ul style="list-style-type: none"> • TKIP/AES 	Yes
protocol / is supported	
<ul style="list-style-type: none"> • SSH 	Yes
<ul style="list-style-type: none"> • RADIUS 	Yes

product functions / time	
protocol / is supported	
<ul style="list-style-type: none"> • NTP • Sntp • SIMATIC time synchronization (SIMATIC Time) 	<p>Yes</p> <p>Yes</p> <p>Yes</p>

standards, specifications, approvals

standard	
<ul style="list-style-type: none"> • for FM • for safety / from CSA and UL 	<p>FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4</p> <p>UL 60950-1, CSA C22.2 No. 60950-1</p>
certificate of suitability	
<ul style="list-style-type: none"> • EC Declaration of Conformity • CE marking • C-Tick • E1 approval • railway application in accordance with EN 50155 • railway application in accordance with EN 50121-4 • 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 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
standard for wireless communication	
<ul style="list-style-type: none"> • IEEE 802.11a • IEEE 802.11b • IEEE 802.11e • IEEE 802.11g • IEEE 802.11h • IEEE 802.11i • IEEE 802.11n 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
wireless approval	For operation in the USA, you will find more information under: www.siemens.de/funkzulassungen

standards, specifications, approvals / marine classification

Marine classification association	
<ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • DNV GL • Korean Register of Shipping (KRS) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) • Royal Institution of Naval Architects (RINA) 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

standards, specifications, approvals / hazardous environments

standard / for hazardous zone	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
<ul style="list-style-type: none"> • 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 / CCC / for hazardous zone according to GB standard	Yes

accessories

accessories	24 V DC screw terminal included in scope of delivery
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further information / internet-Links

Internet-Link	
<ul style="list-style-type: none"> • to website: TIA Selection Tool • to web page: selection aid TIA Selection Tool • to the website: IWLAN • to website: Industry Mall • to website: Information and Download Center 	<p>http://www.siemens.com/tia-selection-tool</p> <p>http://www.siemens.com/tia-selection-tool</p> <p>http://www.siemens.com/iwlan</p> <p>https://mall.industry.siemens.com</p> <p>http://www.siemens.com/industry/infocenter</p>

- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

<http://automation.siemens.com/bilddb>

<http://www.siemens.com/cax>

<https://support.industry.siemens.com>

security information

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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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