

### Product type designation

### SCALANCE W786-2IA RJ45

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 outside of USA/Israel



### 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 RJ45 socket
- for power supply 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

- 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 internal antennas	6
Antenna gain compared to spherical radiator / of the WLAN antenna	
• in the 2.4 GHz frequency band	3 dB
• in the 5 GHz frequency band	4 dB

### 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	48 V
• from Power-over-Ethernet acc. to IEEE802.3at for type 2	50 V
• from optional integrable power supply	
— at AC	100 ... 240 V
— at DC	12 ... 24 V
Consumed current	
• at DC / at 24 V / typical	0.63 A
• at AC / at 230 V / typical	0.07 A
• with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	0.22 A
Power loss [W]	
• at DC / at 24 V / typical	15 W
• at AC / at 230 V / typical	15 W
• with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	15 W

### Permitted ambient conditions

Ambient temperature	
• during operation	-40 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +70 °C
Relative humidity / at 25 °C / without condensation / during operation / maximum	100 %

Ambient condition / for operation	When using the power supply 100 to 240 V AC, an operating temperature of -40 °C to +60 °C is permissible
Protection class IP	IP65

### Design, dimensions and weight

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
Mounting type	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"> <li>• S7-300 rail mounting</li> <li>• S7-1500 rail mounting</li> <li>• 35 mm DIN rail mounting</li> <li>• wall mounting</li> </ul>	Yes No Yes Yes

### Wireless frequencies

Operating frequency	
<ul style="list-style-type: none"> <li>• for WLAN in 2.4 GHz frequency band</li> <li>• for WLAN in 5 GHz frequency band</li> </ul>	2.41 ... 2.48 GHz 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	
<ul style="list-style-type: none"> <li>• iPCF Access Point</li> <li>• iPCF client</li> <li>• iPCF-MC Access Point</li> <li>• iPCF-MC client</li> </ul>	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

Number of manageable IP addresses / in client	8
Product function	
<ul style="list-style-type: none"> <li>• CLI</li> <li>• web-based management</li> <li>• MIB support</li> <li>• TRAPs via email</li> <li>• Configuration with STEP 7</li> </ul>	Yes Yes Yes Yes Yes

<ul style="list-style-type: none"> <li>• configuration with STEP 7 in the TIA Portal</li> <li>• operation with IWLAN controller</li> <li>• operation with Enterasys WLAN controller</li> <li>• forced roaming on IP down with IWLAN</li> <li>• forced roaming on link down with IWLAN</li> <li>• WDS</li> </ul>	<p>Yes</p> <p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<b>Protocol / is supported</b> <ul style="list-style-type: none"> <li>• Address Resolution Protocol (ARP)</li> <li>• ICMP</li> <li>• Telnet</li> <li>• HTTP</li> <li>• HTTPS</li> <li>• TFTP</li> <li>• DCP</li> <li>• LLDP</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<b>Identification &amp; maintenance function</b> <ul style="list-style-type: none"> <li>• I&amp;M0 - device-specific information</li> <li>• I&amp;M1 – higher-level designation/location designation</li> </ul>	<p>Yes</p> <p>Yes</p>

### Product functions / Diagnosis

<b>Product function</b> <ul style="list-style-type: none"> <li>• PROFINET IO diagnosis</li> <li>• Link Check</li> <li>• connection monitoring IP-Alive</li> <li>• localization via Aeroscout</li> <li>• SysLog</li> </ul>	<p>Yes</p> <p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p>
<b>Protocol / is supported</b> <ul style="list-style-type: none"> <li>• SNMP v1</li> <li>• SNMP v2</li> <li>• SNMP v3</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>

### Product functions / VLAN

<b>Product function</b> <ul style="list-style-type: none"> <li>• function VLAN with IWLAN</li> </ul>	<p>Yes</p>
------------------------------------------------------------------------------------------------------	------------

### Product functions / DHCP

<b>Product function</b> <ul style="list-style-type: none"> <li>• DHCP client</li> <li>• in Client Mode / DHCP server via LAN</li> <li>• DHCP Option 82</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------

### Product functions / Redundancy

<b>Protocol / is supported</b>	
--------------------------------	--

• 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	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
• E1 approval	Yes
• Railway application in accordance with EN 50155	No
• Railway application in accordance with EN 50121-4	No
• NEMA TS2	No
• IEC 61375	No
• IEC 61850-3	No

<ul style="list-style-type: none"> <li>• NEMA4X</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Power-over-Ethernet according to IEEE802.3at for type 2</li> </ul>	Yes
Standard for wireless communication	
<ul style="list-style-type: none"> <li>• IEEE 802.11a</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• IEEE 802.11b</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• IEEE 802.11e</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• IEEE 802.11g</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• IEEE 802.11h</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• IEEE 802.11i</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• IEEE 802.11n</li> </ul>	Yes
Wireless approval	You will find the current list of countries at: <a href="http://www.siemens.de/funkzulassungen">www.siemens.de/funkzulassungen</a>
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Bureau Veritas (BV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• DNV GL</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Royal Institution of Naval Architects (RINA)</li> </ul>	Yes

## Accessories

accessories	24 V DC screw terminal included in scope of delivery
-------------	------------------------------------------------------

## Further Information / Internet Links

Internet-Link	
<ul style="list-style-type: none"> <li>• to website: TIA Selection Tool</li> </ul>	<a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a>
<ul style="list-style-type: none"> <li>• to the website: IWLAN</li> </ul>	<a href="http://www.siemens.com/iwlan">http://www.siemens.com/iwlan</a>
<ul style="list-style-type: none"> <li>• to website: Industry Mall</li> </ul>	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>
<ul style="list-style-type: none"> <li>• to website: Information and Download Center</li> </ul>	<a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a>
<ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>	<a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a>
<ul style="list-style-type: none"> <li>• to website: CAx Download Manager</li> </ul>	<a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>
<ul style="list-style-type: none"> <li>• to website: Industry Online Support</li> </ul>	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>

## 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)

**last modified:**

12/14/2018