

### product type designation



### W786-1PRO (USA)

\*\*\*\*\* spare part \*\*\*\*\* IWLAN access point SCALANCE W786-1PRO, only for operation in USA, IEEE 802.11b/g/a/h, Industrial Wireless LAN (IWLAN) 2.4/5 GHz, up to 54 Mbit/s, WPA2/802.11i/11E, observe national approvals, 48 V DC, IP65 (-40-+70 °C), 2x internal antennas 1 radio interface, FO (glass FOC, multimode) socket scope of delivery: mounting hardware, manual on CD-ROM (German/English) only available as spare part.

transfer rate	
transfer rate	
<ul style="list-style-type: none"> <li>with WLAN / maximum</li> <li>for Industrial Ethernet</li> </ul>	54 Mbit/s 10, 100 Mbit/s
transfer rate / for Industrial Ethernet	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	10 Mbit/s 100 Mbit/s
transfer rate / note	Due to the simultaneous use of several radio channels, a transmission rate of 108 Mbit/s is possible (turbo mode)
interfaces	
number of electrical connections	
<ul style="list-style-type: none"> <li>for power supply</li> <li>for redundant voltage supply</li> </ul>	1 1
type of electrical connection	
<ul style="list-style-type: none"> <li>for power supply</li> </ul>	2-pin connector (48 V DC) or optionally available power supply adapter (4-pin 12 to 24 V DC or 3-pin 100 to 240 V AC)
design of the optical interface	
<ul style="list-style-type: none"> <li>for fiber optic cable / at 100 Mbit/s</li> </ul>	Duplex multimode FOC (ST)
design of the removable storage	
<ul style="list-style-type: none"> <li>C-PLUG</li> <li>KEY-PLUG</li> </ul>	Yes No
memory	
design of the removable storage	
<ul style="list-style-type: none"> <li>C-PLUG</li> <li>KEY-PLUG</li> </ul>	Yes No
interfaces / wireless	
number of radio cards / permanently installed	1
number of internal antennas	2
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage	
<ul style="list-style-type: none"> <li>from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af</li> <li>from optional integrable power supply                             <ul style="list-style-type: none"> <li>— at AC</li> <li>— at DC</li> </ul> </li> </ul>	48 V 100 ... 240 V 12 ... 24 V
consumed current	
<ul style="list-style-type: none"> <li>at DC / at 24 V / typical</li> <li>at DC / at 48 V / typical</li> <li>at AC / at 230 V / typical</li> </ul>	0.34 A 0.17 A 0.04 A

<ul style="list-style-type: none"> <li>with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical</li> </ul>	0.34 A
<b>power loss [W]</b> <ul style="list-style-type: none"> <li>at DC / at 24 V / typical</li> <li>at DC / at 48 V / typical</li> <li>at AC / at 230 V / typical</li> <li>with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical</li> </ul>	8 W 8 W 8 W 8 W
<b>supply voltage / 1</b> <ul style="list-style-type: none"> <li>from terminal block</li> </ul>	48 V
<b>ambient conditions</b>	
<b>ambient temperature</b> <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>	-40 ... +70 °C -40 ... +85 °C -40 ... +85 °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
<b>design, dimensions and weights</b>	
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
<b>fastening method</b> <ul style="list-style-type: none"> <li>S7-1500 rail mounting</li> <li>wall mounting</li> </ul>	For most mounting, 35 mm DIN rail mounting and S7-300 rail mounting, an additional support plate is required  No Yes
<b>radio frequencies</b>	
<b>operating frequency</b> <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; depending on the country approvals 4.9 ... 5.8 GHz; depending on the country approvals
<b>product features, product functions, product components / general</b>	
product function / Access Point Mode	Yes
product function / client Mode	Yes
number of SSIDs	8
<b>product function</b> <ul style="list-style-type: none"> <li>dual client</li> <li>iHOP</li> <li>iPCF Access Point</li> <li>iPCF client</li> <li>iPCF-MC Access Point</li> <li>iPCF-MC client</li> </ul>	No No No No No No
number of iPCF-capable radio modules	0
<b>product functions / management, configuration, engineering</b>	
number of manageable IP addresses / in client	8
<b>product function</b> <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> <li>configuration with STEP 7 in the TIA Portal</li> <li>operation with IWLAN controller</li> <li>operation with Enterasys WLAN controller</li> <li>iQoS</li> <li>forced roaming with IWLAN</li> <li>WDS</li> </ul>	Yes Yes Yes Yes Yes Yes No No Yes Yes Yes
<b>protocol / is supported</b> <ul style="list-style-type: none"> <li>Address Resolution Protocol (ARP)</li> <li>ICMP</li> </ul>	Yes Yes

<ul style="list-style-type: none"> <li>• Telnet</li> <li>• HTTP</li> <li>• HTTPS</li> <li>• TFTP</li> <li>• DCP</li> <li>• LLDP</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
identification & maintenance function <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>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> </ul>
<b>product functions / diagnostics</b>	
product function <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>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
protocol / is supported <ul style="list-style-type: none"> <li>• SNMP v1</li> <li>• SNMP v2</li> <li>• SNMP v3</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>product functions / VLAN</b>	
product function <ul style="list-style-type: none"> <li>• function VLAN with IWLAN</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>
<b>product functions / DHCP</b>	
product function <ul style="list-style-type: none"> <li>• DHCP client</li> <li>• DHCP server</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> </ul>
<b>product functions / redundancy</b>	
protocol / is supported <ul style="list-style-type: none"> <li>• STP/RSTP</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>
<b>product functions / security</b>	
product function <ul style="list-style-type: none"> <li>• ACL - MAC-based</li> <li>• management security, ACL-IP based</li> <li>• IEEE 802.1x (radius)</li> <li>• NAT/NAPT</li> <li>• access protection according to IEEE802.11i</li> <li>• WPA/WPA2</li> <li>• TKIP/AES</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
protocol / is supported <ul style="list-style-type: none"> <li>• SSH</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>
<b>product functions / time</b>	
protocol / is supported <ul style="list-style-type: none"> <li>• SNTP</li> <li>• SIMATIC time synchronization (SIMATIC Time)</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>
<b>standards, specifications, approvals</b>	
standard <ul style="list-style-type: none"> <li>• for FM</li> <li>• for safety / from CSA and UL</li> </ul>	<ul style="list-style-type: none"> <li>FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4</li> <li>UL 60950-1, CSA C22.2 No. 60950-1</li> </ul>
certificate of suitability <ul style="list-style-type: none"> <li>• EC Declaration of Conformity</li> <li>• CE marking</li> <li>• C-Tick</li> <li>• E1 approval</li> <li>• railway application in accordance with EN 50155</li> <li>• NEMA4X</li> <li>• Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>Yes</li> </ul>
standard for wireless communication <ul style="list-style-type: none"> <li>• IEEE 802.11a</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>

<ul style="list-style-type: none"> <li>• IEEE 802.11b</li> <li>• IEEE 802.11e</li> <li>• IEEE 802.11g</li> <li>• IEEE 802.11h</li> <li>• IEEE 802.11i</li> <li>• IEEE 802.11n</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p>
wireless approval	For operation in the USA, you will find more information under: <a href="http://www.siemens.de/funkzulassungen">www.siemens.de/funkzulassungen</a>
<b>standards, specifications, approvals / marine classification</b>	
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Germanische Lloyd (GL)</li> <li>• Korean Register of Shipping (KRS)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	<p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p>
<b>standards, specifications, approvals / hazardous environments</b>	
standard / for hazardous zone	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
<b>accessories</b>	
accessories	48 V DC terminal block included in scope of delivery
<b>further information / internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to website: TIA Selection Tool</li> <li>• to web page: selection aid TIA Selection Tool</li> <li>• to the website: IWLAN</li> <li>• to website: Industry Mall</li> <li>• to website: Information and Download Center</li> <li>• to website: Image database</li> <li>• to website: CAx-Download-Manager</li> <li>• to website: Industry Online Support</li> </ul>	<p><a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a></p> <p><a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a></p> <p><a href="http://www.siemens.com/iwlan">http://www.siemens.com/iwlan</a></p> <p><a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a></p> <p><a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a></p> <p><a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a></p> <p><a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a></p> <p><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a></p>
<b>security information</b>	
security information	<p>Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial security measures that may be implemented, please visit <a href="https://www.siemens.com/industrialsecurity">https://www.siemens.com/industrialsecurity</a>. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under <a href="https://www.siemens.com/cert">https://www.siemens.com/cert</a>. (V4.6)</p>

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