

### 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, 2.4/5 GHz, gross 450 Mbps per radio, 1x RJ45 max. 1 Gbps, PoE, redundant 24 V DC, joint 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 supply: manuals on CD-ROM, German/English, 1x joint block; for operation in the USA.

### product brand name

SCALANCE

### Technical Product Detail Page

<https://l.siemens.com/1P6GK5786-2HC00-0AB0>

### transfer rate

#### transfer rate

- |                           |                      |
|---------------------------|----------------------|
| • with WLAN / maximum     | 450 Mbit/s           |
| • for Industrial Ethernet | 10, 100, 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) |

### memory

#### 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

- |                                                                                |               |
|--------------------------------------------------------------------------------|---------------|
| • from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af | 48 V          |
| • from Power-over-Ethernet according 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

|                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at DC / at 24 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>                | 0.63 A<br>0.07 A<br>0.22 A                                                                                                                                                                                                                                                                                     |
| power loss [W] <ul style="list-style-type: none"> <li>• at DC / at 24 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> | 15 W<br>15 W<br>15 W                                                                                                                                                                                                                                                                                           |
| <b>supply voltage / 1</b> <ul style="list-style-type: none"> <li>• from terminal block</li> </ul>                                                                                                                                    | 19.2 V                                                                                                                                                                                                                                                                                                         |
| <b>supply voltage / 2</b> <ul style="list-style-type: none"> <li>• from terminal block</li> </ul>                                                                                                                                    | 28.8 V                                                                                                                                                                                                                                                                                                         |
| <b>ambient conditions</b>                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                |
| ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>                                                                                       | -40 ... +60 °C<br>-40 ... +85 °C<br>-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                                                                                                                                                                                                                                                                                                           |
| <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                                                                                                                                                                                                                                                                                                        |
| fastening method <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>                                               | For mast mounting, 35 mm DIN rail mounting and S7-300 rail mounting, an additional support plate is required<br><br>Yes<br>No<br>Yes<br>Yes                                                                                                                                                                    |
| <b>radio frequencies</b>                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                |
| 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; depending on the country approvals<br>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                                                                                                                                                                                                                      | 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'<br>Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'<br>Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'<br>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                                                                                                                                                                                                                                                    |
| <b>product functions / management, configuration, engineering</b>                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                |
| 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<br>Yes<br>Yes<br>Yes<br>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> | Yes<br>No<br>No<br>Yes<br>Yes<br>Yes                 |
| protocol / is supported <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>                                                                                 | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| 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>                                                                                                            | Yes<br>Yes                                           |
| product function / is supported / identification link                                                                                                                                                                                                                                                           | Yes; acc. to IEC 61406-1:2022                        |
| <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>                                                                                              | Yes<br>No<br>No<br>Yes<br>Yes                        |
| protocol / is supported <ul style="list-style-type: none"> <li>• SNMP v1</li> <li>• SNMP v2</li> <li>• SNMP v3</li> </ul>                                                                                                                                                                                       | Yes<br>Yes<br>Yes                                    |
| <b>product functions / VLAN</b>                                                                                                                                                                                                                                                                                 |                                                      |
| product function <ul style="list-style-type: none"> <li>• function VLAN with IWLAN</li> </ul>                                                                                                                                                                                                                   | Yes                                                  |
| <b>product functions / DHCP</b>                                                                                                                                                                                                                                                                                 |                                                      |
| product function <ul style="list-style-type: none"> <li>• DHCP client</li> <li>• DHCP server</li> <li>• DHCP Option 82</li> </ul>                                                                                                                                                                               | Yes<br>Yes<br>Yes                                    |
| <b>product functions / redundancy</b>                                                                                                                                                                                                                                                                           |                                                      |
| protocol / is supported <ul style="list-style-type: none"> <li>• STP/RSTP</li> <li>• MSTP</li> <li>• RSTP</li> </ul>                                                                                                                                                                                            | Yes<br>Yes<br>Yes                                    |
| <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>                             | Yes<br>Yes<br>Yes<br>No<br>Yes<br>Yes<br>Yes         |
| protocol / is supported <ul style="list-style-type: none"> <li>• SSH</li> <li>• RADIUS</li> </ul>                                                                                                                                                                                                               | Yes<br>Yes                                           |
| <b>product functions / time</b>                                                                                                                                                                                                                                                                                 |                                                      |
| protocol / is supported <ul style="list-style-type: none"> <li>• NTP</li> <li>• SNTP</li> </ul>                                                                                                                                                                                                                 | Yes<br>Yes                                           |

|                                                                                                                          |                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• SIMATIC time synchronization (SIMATIC Time)</li> </ul>                          | Yes                                                                                                                                                   |
| <b>standards, specifications, approvals</b>                                                                              |                                                                                                                                                       |
| standard                                                                                                                 |                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• for FM</li> </ul>                                                               | FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4, FM16US0205X                                                        |
| <ul style="list-style-type: none"> <li>• for safety / from CSA and UL</li> </ul>                                         | UL 60950-1 E115352, CSA C22.2 No. 60950-1                                                                                                             |
| certificate of suitability                                                                                               |                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• EC Declaration of Conformity</li> </ul>                                         | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• CE marking</li> </ul>                                                           | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• C-Tick</li> </ul>                                                               | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• E1 approval</li> </ul>                                                          | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• railway application in accordance with EN 50155</li> </ul>                      | No                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• railway application in accordance with EN 50121-4</li> </ul>                    | No                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• NEMA TS2</li> </ul>                                                             | No                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• IEC 61375</li> </ul>                                                            | No                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• IEC 61850-3</li> </ul>                                                          | 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                                                                                                        | For operation in the USA, you will find more information under:<br><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> </ul>                        | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>                            | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• DNV GL</li> </ul>                                                               | Yes                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• Korean Register of Shipping (KRS)</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                                                                                                                                                   |
| <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                                                                              |
| <ul style="list-style-type: none"> <li>• from CSA and UL</li> </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 E240480                                 |
| certificate of suitability / CCC / for hazardous zone according to GB standard                                           | Yes; GB3836.1, GB3836.8                                                                                                                               |
| <ul style="list-style-type: none"> <li>• as marking</li> </ul>                                                           | Ex nA IIC T4 Gc                                                                                                                                       |
| <b>accessories</b>                                                                                                       |                                                                                                                                                       |
| accessories                                                                                                              | 24 V DC screw terminal included in scope of delivery                                                                                                  |
| <b>further information / internet links</b>                                                                              |                                                                                                                                                       |
| internet link                                                                                                            |                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> </ul>                | <a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a>               |
| <ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>                        | <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>                                                                       |
| <ul style="list-style-type: none"> <li>• to web page: WLAN country approval</li> </ul>                                   | <a href="https://www.siemens.com/wireless-approvals">https://www.siemens.com/wireless-approvals</a>                                                   |
| <ul style="list-style-type: none"> <li>• to the website: IWLAN</li> </ul>                                                | <a href="https://www.siemens.com/iwlan">https://www.siemens.com/iwlan</a>                                                                             |
| <ul style="list-style-type: none"> <li>• to website: Industrial communication</li> </ul>                                 | <a href="https://www.siemens.com/simatic-net">https://www.siemens.com/simatic-net</a>                                                                 |
| <ul style="list-style-type: none"> <li>• to web page: SiePortal</li> </ul>                                               | <a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a>                                                                           |
| <ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>                                           | <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a>                                                     |
| <ul style="list-style-type: none"> <li>• to website: CAX-Download-Manager</li> </ul>                                     | <a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>                                                                                 |

## security information

### security information

Siemens provides products and solutions with industrial cybersecurity 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 cybersecurity 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 cybersecurity measures that may be implemented, please visit [www.siemens.com/cybersecurity-industry](http://www.siemens.com/cybersecurity-industry). 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 Cybersecurity RSS Feed under <https://www.siemens.com/cert>. (V4.7)

## Approvals / Certificates

### General Product Approval



EG-Konf.

[Declaration of Conformity](#)



CCC



[Manufacturer Declaration](#)

[China RoHS](#)

### General Product Approval

### For use in hazardous locations

### Radio Equipment Type Approval Certificate

[Miscellaneous](#)

[China RoHS](#)



IECEx



ATEX

[CCC-Ex](#)

[Miscellaneous](#)

## Maritime application



LRS

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