

### Product type designation



### SCALANCE W788-1RR

IWLAN Access Point SCALANCE W788-1RR, for operation outside of USA 1 radio interface, IEEE 802.11 b/g/a/h, Industrial Wireless LAN with rapid roaming (IWLAN RR), 2.4/5 GHz, up to 54 Mbit/s, WPA2/802.11i/11E, Observe national approvals, PoE, IP65 (-20-+60°C), EN 50155, Scope of delivery: 2x ANT795-4MR, IP67 hybrid plug-in connector, mounting hardware, manual on CD-ROM only as spare part overhead

### Transmission rate

|                                         |                                                                                                                   |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Transfer rate                           |                                                                                                                   |
| • with WLAN / maximum                   | 54 Mbit/s                                                                                                         |
| • for Industrial Ethernet               | 10, 100 Mbit/s                                                                                                    |
| Transfer rate / for Industrial Ethernet |                                                                                                                   |
| • minimum                               | 10 Mbit/s                                                                                                         |
| • maximum                               | 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               |                                                     |
| • 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 | Hybrid socket, RJ45 integrated                      |
| • for power supply                             | M12 interface (4-pole, A-coded), hybrid socket, PoE |
| design of the removable storage                |                                                     |

- C-PLUG
- KEY-PLUG

Yes

No

#### Interfaces / wireless

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| Number of radio cards / permanently installed                        | 1              |
| Number of electrical connections / for external antenna(s)           | 2              |
| Type of electrical connection / for external antenna(s)              | R-SMA (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                                                                                                                         |         |
| <ul style="list-style-type: none"> <li>• from M12 Power Connector (A-coded) for redundant power supply</li> </ul>                          | 24 V    |
| <ul style="list-style-type: none"> <li>• from IE Hybrid Cable 2x2 + 4x0.34</li> </ul>                                                      | 24 V    |
| Supply voltage / 2                                                                                                                         |         |
| <ul style="list-style-type: none"> <li>• from M12 Power Connector (A-coded) for redundant power supply</li> </ul>                          | 48 V    |
| <ul style="list-style-type: none"> <li>• from IE Hybrid Cable 2x2 + 4x0.34</li> </ul>                                                      | 48 V    |
| Supply voltage                                                                                                                             |         |
| <ul style="list-style-type: none"> <li>• from Power-over-Ethernet acc. to IEEE802.3at for type 1 and IEEE802.3af</li> </ul>                | 48 V    |
| Consumed current                                                                                                                           |         |
| <ul style="list-style-type: none"> <li>• at DC / at 24 V / typical</li> </ul>                                                              | 0.25 A  |
| <ul style="list-style-type: none"> <li>• at DC / at 48 V / typical</li> </ul>                                                              | 0.125 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> | 0.125 A |
| Power loss [W]                                                                                                                             |         |
| <ul style="list-style-type: none"> <li>• at DC / at 24 V / typical</li> </ul>                                                              | 7 W     |
| <ul style="list-style-type: none"> <li>• at DC / at 48 V / typical</li> </ul>                                                              | 7 W     |
| <ul style="list-style-type: none"> <li>• with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical</li> </ul> | 7 W     |

#### Permitted ambient conditions

|                                                                                  |                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature                                                              |                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>             | -20 ... +60 °C                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>               | -40 ... +70 °C                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>             | -40 ... +70 °C                                                                                                                                                                                                                                        |
| Relative humidity / at 25 °C / without condensation / during operation / maximum | 100 %                                                                                                                                                                                                                                                 |
| Ambient condition / for operation                                                | When used under hazardous conditions (Zone 2), the SCALANCE W788-xPRO/RR or W74x-1PRO/RR 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              |
| <b>Design, dimensions and weight</b>                       |                   |
| Width / of the enclosure / without antenna                 | 125 mm            |
| Height / of the enclosure / without antenna                | 88 mm             |
| Depth / of the enclosure / without antenna                 | 108 mm            |
| Net weight                                                 | 1.05 kg           |
| Mounting type                                              |                   |
| • S7-300 rail mounting                                     | Yes               |
| • S7-1500 rail mounting                                    | No                |
| • wall mounting                                            | Yes               |
| <b>Wireless frequencies</b>                                |                   |
| 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   |
| <b>Product properties, functions, components / general</b> |                   |
| Product function / Access Point Mode                       | Yes               |
| Product function / Client Mode                             | Yes               |
| Number of SSIDs                                            | 8                 |
| Product function                                           |                   |
| • Dual Client                                              | Yes               |
| • iHOP                                                     | Yes               |
| • iPCF Access Point                                        | Yes               |
| • iPCF client                                              | Yes               |
| • iPCF-MC Access Point                                     | No                |
| • iPCF-MC client                                           | Yes               |
| Number of iPCF-capable radio modules                       | 1                 |
| <b>Product functions / management, configuration</b>       |                   |
| 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                |
| • iQoS                                                     | Yes               |
| • forced roaming with IWLAN                                | Yes               |
| • 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                     | Yes |
| • connection monitoring IP-Alive | Yes |
| • 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 |

#### Product functions / Redundancy

|                         |     |
|-------------------------|-----|
| Protocol / is supported |     |
| • STP/RSTP              | Yes |

#### Product functions / Security

|                                     |     |
|-------------------------------------|-----|
| Product function                    |     |
| • ACL - MAC-based                   | Yes |
| • Management security, ACL-IP based | No  |
| • IEEE 802.1x (radius)              | Yes |
| • NAT/NAPT                          | Yes |

|                                              |     |
|----------------------------------------------|-----|
| • access protection according to IEEE802.11i | Yes |
| • WPA/WPA2                                   | Yes |
| • TKIP/AES                                   | Yes |
| Protocol / is supported                      |     |
| • SSH                                        | Yes |

#### Product functions / Time

|                         |     |
|-------------------------|-----|
| Protocol / is supported |     |
| • SNTP                  | Yes |
| • SIMATIC Time          | No  |

#### 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                                 | ISA 12.12.01-2000, CSA C22.2 No. 213-M1987, CL. 1, Div. 2, GP. A,B,C,D, T4 / CL. 1, Zone 2, GP IIC, T4 / CL. 1, Zone 2, AEx nC IIC, T4 |
| Certificate of suitability                                             |                                                                                                                                        |
| • EC declaration of conformity                                         | Yes                                                                                                                                    |
| • CE marking                                                           | Yes                                                                                                                                    |
| • C-Tick                                                               | Yes                                                                                                                                    |
| • E1 approval                                                          | Yes                                                                                                                                    |
| • Railway application in accordance with EN 50155                      | Yes                                                                                                                                    |
| • NEMA4X                                                               | No                                                                                                                                     |
| • Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af | Yes                                                                                                                                    |
| Standard for wireless communication                                    |                                                                                                                                        |
| • IEEE 802.11a                                                         | Yes                                                                                                                                    |
| • IEEE 802.11b                                                         | Yes                                                                                                                                    |
| • IEEE 802.11e                                                         | Yes                                                                                                                                    |
| • IEEE 802.11g                                                         | Yes                                                                                                                                    |
| • IEEE 802.11h                                                         | Yes                                                                                                                                    |
| • IEEE 802.11i                                                         | Yes                                                                                                                                    |
| • IEEE 802.11n                                                         | No                                                                                                                                     |
| • IEEE 802.11ac                                                        | No                                                                                                                                     |
| Wireless approval                                                      | You will find the current list of countries at:<br><a href="http://www.siemens.de/funkzulassungen">www.siemens.de/funkzulassungen</a>  |
| Marine classification association                                      |                                                                                                                                        |

- American Bureau of Shipping Europe Ltd. (ABS)
- Bureau Veritas (BV)
- Det Norske Veritas (DNV)
- Germanische Lloyd (GL)
- Lloyds Register of Shipping (LRS)
- Nippon Kaiji Kyokai (NK)
- Polski Rejestr Statkow (PRS)

Yes  
Yes  
No  
Yes  
Yes  
Yes  
Yes

## Accessories

accessories

2 antennas, hybrid connector included in scope of delivery

## 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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