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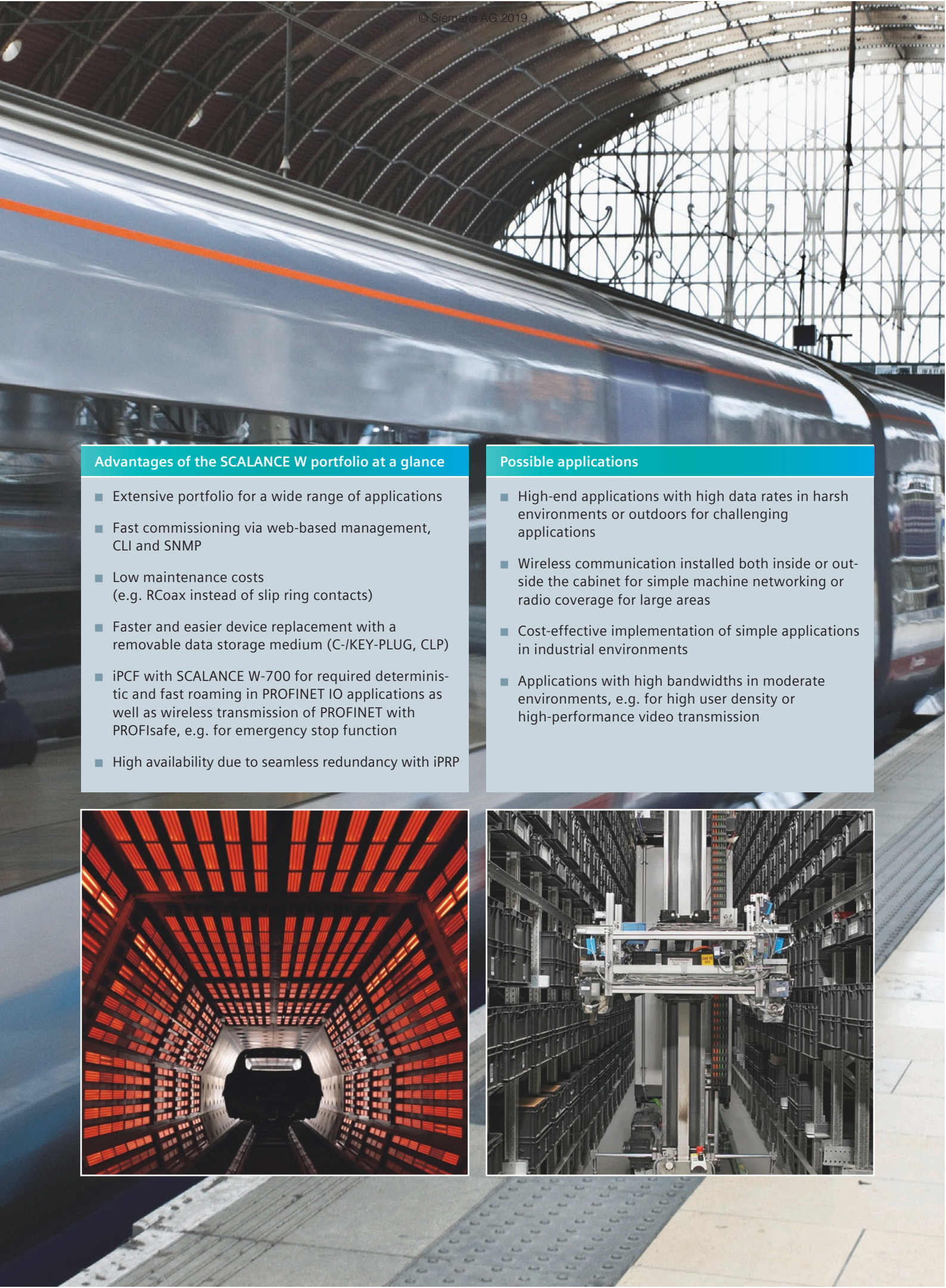
Industrial Wireless Communication

Wireless connected
with SCALANCE W!
Industrial Wireless LAN

Brochure

Edition
03/2019

siemens.com/iwlan

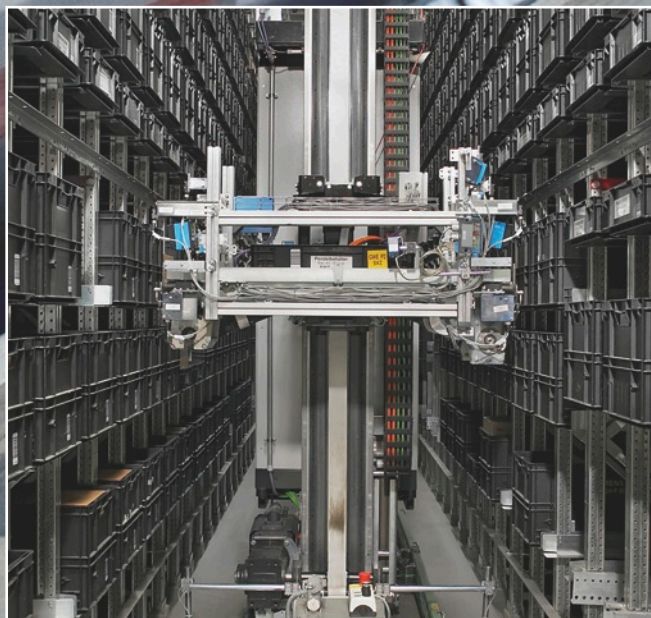
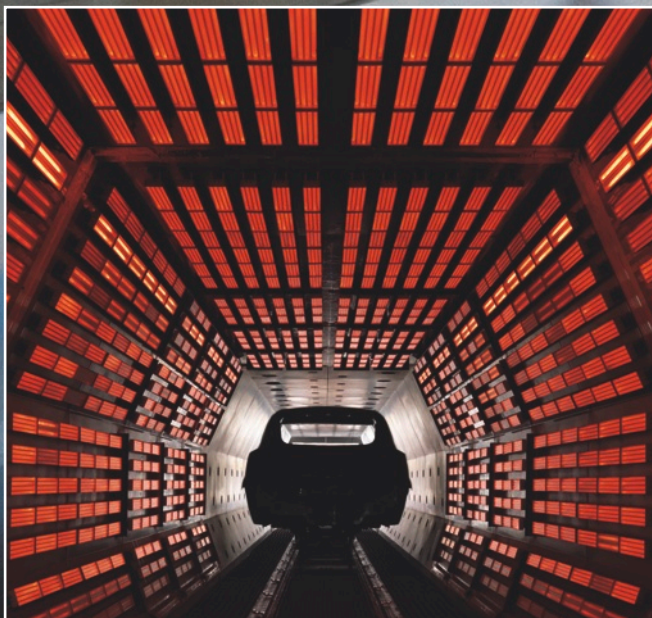


Advantages of the SCALANCE W portfolio at a glance

- Extensive portfolio for a wide range of applications
- Fast commissioning via web-based management, CLI and SNMP
- Low maintenance costs (e.g. RCoax instead of slip ring contacts)
- Faster and easier device replacement with a removable data storage medium (C-/KEY-PLUG, CLP)
- iPCF with SCALANCE W-700 for required deterministic and fast roaming in PROFINET IO applications as well as wireless transmission of PROFINET with PROFI-safe, e.g. for emergency stop function
- High availability due to seamless redundancy with iPRP

Possible applications

- High-end applications with high data rates in harsh environments or outdoors for challenging applications
- Wireless communication installed both inside or outside the cabinet for simple machine networking or radio coverage for large areas
- Cost-effective implementation of simple applications in industrial environments
- Applications with high bandwidths in moderate environments, e.g. for high user density or high-performance video transmission



Unique range of opportunities – with SCALANCE W

Wireless networks offer numerous options: The comprehensive SCALANCE W portfolio from Siemens comes into play particularly where it is impossible to lay cables in small spaces. We have the right solution for all your requirements!

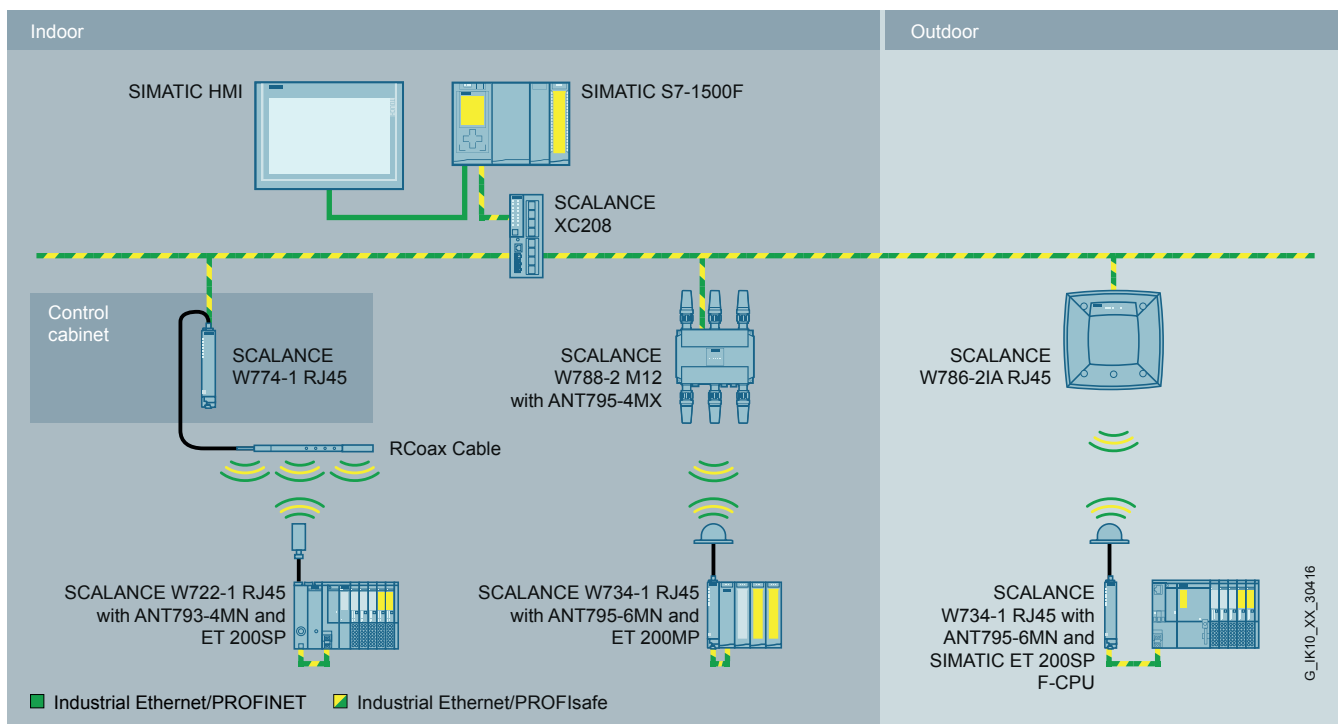
Whether for the control cabinet or for indoor and outdoor use, our Industrial Wireless LAN (IWLAN) portfolio includes the right components – providing robustness and reliability. The design of the SCALANCE W devices makes them perfect for communication from the control cabinet together with SIMATIC S7-1500, ET 200MP, ET 200SP or ET 200SP HA. Smooth wireless communication can be achieved even without SIMATIC end devices. Or the housing is so robust, that they can be used in harsh environments outside the control cabinet, even outdoors.

Our SCALANCE W products are compatible with the SIMATIC world and can be integrated in the TIA Portal. The portfolio is also scalable in price and performance, with solutions for price-sensitive applications up to high-performance applica-

tions with data rates of up to 450 Mbit/s with the 11n standard. The new WLAN standard IEEE 802.11ac Wave 2 enables wireless applications with high bandwidths to be optimally implemented thanks to gigabit data rates up to 1733 Mbit/s, e.g. for high-performance transmission of video data. The devices are available for worldwide use with the appropriate wireless approvals and country-specific versions.






The SCALANCE W portfolio comprises Access Points and Client Modules, all of which support the 2.4 and 5 GHz frequencies. The portfolio is rounded off with various IWLAN antennas with different characteristics and RCoax radiating cables for special applications, in addition to mounting accessories. It is also possible to enable special industrial functions – so-called iFeatures – using KEY-PLUGs, in order to facilitate fail-safe communication via PROFINET with PROFIsafe, for example.

Radio field planning, a prerequisite for a stable, powerful WLAN network, is just one of many services available from Siemens or our certified Solution Partners.










The SCALANCE W portfolio

Client Modules (Clients)

					
	SCALANCE W721-1 RJ45 W722-1 RJ45	SCALANCE W734-1 RJ45	SCALANCE W738-1 M12	SCALANCE W748-1 RJ45 W748-1 M12	SCALANCE W1748-1 M12
Wireless standard	IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11ac Wave 2
Operating mode	Client	Client	Client	Client	Client
Wireless interfaces	1 radio (2.4 GHz or 5 GHz)	1 radio (2.4 GHz or 5 GHz)	1 radio (2.4 GHz or 5 GHz)	1 radio (2.4 GHz or 5 GHz)	1 radio (2.4 GHz or 5 GHz)
Max. data rate (brutto in Mbit/s)	150	300	300	450	1733
Temperature range, protection class, housing material	0 to +55 °C, IP20, plastic	-20 to +60 °C, IP30, aluminum	-20 to +60 °C, IP65, aluminum	-20 to +60 °C, IP30, aluminum; Only W748-1 M12: IP65	-20 to +70 °C, IP65, aluminum/plastic
LAN interfaces/ Power-over-Ethernet (PoE)	1x RJ45 for 10/100 Mbit/s	1x PoE, 2x RJ45 (one with PoE) for 10/100 Mbit/s	1x PoE, 2x M12 (one with PoE) for 10/100 Mbit/s	1x RJ45 (PoE) for 10/100/1 000 Mbit/s Only W748-1 M12: 1x M12 (PoE) for 10/100/1000 Mbit/s	2x M12 (one with PoE) for 10/100/1000Mbit/s
Antenna connections	1x R-SMA	2x R-SMA	2x N-Connect	3x R-SMA Only W748-1 M12: 3x N-Connect	4x N-Connect
Mounting	35 mm DIN rail	S7-300 mounting rail, S7-1500 mounting rail, 35 mm DIN rail; wall mounting	35 mm DIN rail, DIN rail mounting front or vertical (with accessories); wall mounting	S7-300 mounting rail, S7-1500 mounting rail, 35 mm DIN rail (with accessories); wall mounting	S7-300 mounting rail, S7-1500 mounting rail, 35 mm DIN rail (with accessories); wall mounting (with accessories)
PLUG functions	Only W722-1 RJ45: No C-PLUG, iFeatures integrated	C-PLUG, KEY-PLUG W740 iFeatures, KEY-PLUG W780 iFeatures	C-PLUG, KEY-PLUG W740 iFeatures, KEY-PLUG W780 iFeatures	C-PLUG, KEY-PLUG W740 iFeatures, KEY-PLUG W780 iFeatures	CLP 2GB, CLP 2GB 1740 iFeatures, CLP 2GB 1780 iFeatures
Additional functions	-	-	-	-	-

The SCALANCE W portfolio

Access Points (AP)

						
SCALANCE W761-1 RJ45	SCALANCE W774-1 RJ45, W774-1 M12 EEC	SCALANCE W778-1 M12, W778-1 M12 EEC	SCALANCE W788-1 RJ45, W788-2 RJ45, W788-1 M12, W788-2 M12, W788-2 M12 EEC	SCALANCE W786-1 RJ45, W786-2 RJ45, W786-2IA RJ45, W786-2 SFP	SCALANCE W1788-1 M12, W1788-2 M12, W1788-2 M12 EEC, W1788-2IA M12	Direct Access Point SCALANCE W1750D-2IA RJ45
IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11a/b/g/n	IEEE 802.11ac Wave 2	IEEE 802.11ac Wave 2
AP and Client	AP and Client	AP and Client	AP and Client	AP and Client	AP and Client	AP
1 radio (2.4 GHz or 5 GHz)	1 radio (2.4 GHz or 5 GHz)	1 radio (2.4 GHz or 5 GHz)	2 independent radios (2.4 GHz and/or 5 GHz)	2 independent radios (2.4 GHz and/or 5 GHz)	Up to 2 Radios (2,4 GHz or 5 GHz)	2 independent radios (1x 2.4 GHz and 1x 5 GHz)
150	300	300	450	450	1733	1733
0 to +55 °C, IP20, plastic	-20 to +60 °C, -30 to +65 °C (EEC), IP30, aluminum	-20 to +60 °C, -30 to +75 °C (EEC), IP65, aluminum	-20 to +60 °C, -40 to +74 °C (EEC), IP65, aluminum; Only W788 M12: IP65	-40 to +60 °C, IP65, aluminum/plastic	-40 to +75 °C, IP65, aluminum/plastic	0 to +50 °C, aluminum/plastic
1x RJ45 for 10/100 Mbit/s	W774-1 RJ45: 1x PoE, 2x RJ45 (one with PoE); W774-1 M12 EEC: 1x PoE, 2x M12 (one with PoE), for 10/100 Mbit/s	1x PoE, 2x M12 (one with PoE) for 10/100 Mbit/s	1x RJ45 (PoE) for 10/100/1 000 Mbit/s; Only W788 M12: 1x M12 (PoE) for 10/100/1000 Mbit/s	For all W786: 1x RJ45 (PoE) for 10/100/1 000 Mbit/s, Except W786-2 SFP: 2x SFP for 1 000 Mbit/s	2x M12 (one with PoE) for 10/100/1000Mbit/s	2x RJ45 for 10/100/1 000 Mbit/s
1x R-SMA	2x R-SMA	2x N-Connect	W788-1 RJ45: 3x R-SMA; W788-2 RJ45: 2x 3 R-SMA; W788-1 M12: 3x N-Connect; W788-2 M12 (ECC): 2x 3 N-Connect	W786-1 RJ45: 3x R-SMA; W786-2 RJ45: 2x3 R-SMA; W786-2IA RJ45: 2x3 internal; W786-2 SFP: 2x3 R-SMA	Up to 8x N-Connect; Only W1788-2IA M12: internal	2x 4 internal
35 mm DIN rail	S7-300 mounting rail, S7-1500 mounting rail, 35 mm DIN rail; wall mounting	35 mm DIN rail (with accessories); wall mounting	S7-300 mounting rail, S7-1500 mounting rail, 35 mm DIN rail (with accessories); wall mounting	S7-300 mounting rail, 35 mm DIN rail; mast mounting (with accessories); wall mounting	S7-300 mounting rail, S7-1500 mounting rail, 35 mm DIN rail (with accessories); wall mounting (with accessories)	Ceiling and wall mounting (with accessories)
–	C-PLUG, KEY-PLUG W780 iFeatures, KEY-PLUG W740 iFeatures, KEY-PLUG W700 Security	C-PLUG, KEY-PLUG W780 iFeatures, KEY-PLUG W740 iFeatures, KEY-PLUG W700 Security	C-PLUG, KEY-PLUG W780 iFeatures, KEY-PLUG W740 iFeatures, KEY-PLUG W700 Security	C-PLUG, KEY-PLUG W780 iFeatures, KEY-PLUG W740 iFeatures, KEY-PLUG W700 Security	CLP 2GB, CLP 2GB 1740 iFeatures, CLP 2GB 1780 iFeatures	–
–	W774-1 M12 EEC: conformal coating, EN 50121-4, EN 50155	–	Only W788-2 M12 EEC: conformal coating, EN 50121-4, EN 50155, EN 45545-2, NEMA TS2	Only W786-2 RJ45 and W786-2 SFP: railway applications acc. to EN 50121-4	Only W1788-2 M12 EEC: Conformal Coating, EN 50155, EN 45545-2, EN 50121-4, EN 50121-3-2	–

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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.

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