

SIEMENS



Industrial Wireless LAN – SCALANCE W

Making the most of air

Answers for industry.

“Safety via wireless – that was new to us. ... The Siemens solution using PROFINET and providing safety via IWLAN completely meets our requirements – and offers us cost advantages in maintenance and repair. The new system from Siemens has won me over.”

EUROPA-PARK, Rust

“Based on the positive experience we’ve had with the Siemens IWLAN system, we would use and recommend this system with the new safety concept for future projects worldwide.”

HHLA Container Terminal Altenwerder, Hamburg



“After the wireless system was installed, we measured the signal strengths and did not have to tweak very much. As a result, the commissioning time was significantly reduced and operation began without a hitch.”

Swiss Steel AG, Emmenbrücke

“As the backbone of the entire application, the automation and communications technology from Siemens ensures reliable communication over the long term and the efficient, smooth flow of engines, materials, and data.”

MDC Power GmbH, Köllede



Industrial Wireless LAN: wireless on the data highway.



When it comes to wireless data transmission, an industrial setting is particularly demanding – especially in light of the often difficult environmental conditions. Not only are efficiency and flexibility important properties of wireless data communication, but so are durability and reliability.

Maximum freedom of design

The Siemens IWLAN solutions not only meet the requirements of industrial wireless data communication, they provide virtually limitless freedom for you to implement all your ideas – thanks to innovations like deterministic wireless transmission of the PROFINET standard for Industrial Ethernet, flexible use indoors and outdoors, in control cabinets, and at the field level, plus safety via wireless LAN.











Expanded possibilities

Don't limit yourself when implementing your automation solutions: The Siemens SCALANCE W portfolio enables wireless data transmission at all levels, to meet any requirements, with high-performance wireless solutions compliant with IEEE 802.11.

SCALANCE W: advantages all around

- Wireless machine networking – simple and cost-effective
- Data transmission also for outdoor areas
- Data rates of up to 450 Mbps
- Secure real-time data transmission
- Also suitable for harsh environments
- Unique solution for safety via wireless LAN
- Space-saving installation in the control cabinet

The SCALANCE W portfolio: always the right solution.

	Client Modules			Access Points		
	SCALANCE					
	W720	W730	W740	W760	W770	W780
For outdoor use						
For indoor use						
For use in a control cabinet						
Industrial Wireless LAN Controller	SCALANCE WLC711 					

*can also be configured as client modules

Discover more possibilities: the new SCALANCE W products.

Two new product lines for countless possibilities: With the expanded Siemens IWLAN portfolio, we support you even more comprehensively in all aspects of wireless data transmission.

SCALANCE W760



SCALANCE W760 and W720

Simple, wireless communication from a control cabinet: The SCALANCE W760 access points and SCALANCE W720 client modules deliver what we promise. Discover the cost-effective solution that precisely matches your requirements, especially for wireless exchange of data in difficult-to-access or tight areas.

So that you can seamlessly integrate automation components into your IWLAN, we set an especially high priority on Simatic design.

SCALANCE W760 and W720 offer you:

- Space-saving installation, thanks to the compact model in the SIMATIC ET 200SP design
- Flexible use thanks to support of 2.4 GHz or 5 GHz
- Data transmission rates of up to 150 Mbps
- Stable data transmission with the RCoax radiating cable
- Combinable with the SCALANCE W antenna portfolio

SCALANCE W770



SCALANCE W770 and W730

From simple machine networks to large wireless areas: The SCALANCE W770 access points and SCALANCE W730 client modules are optimal all-around solutions.

The IWLAN system delivers real benefits, especially in combination with a SIMATIC controller. It enables coverage of large wireless areas with a data rate of up to 300 Mbps. Even wireless real-time data transmission via PROFINET IO is possible, thanks to optional iFeatures provided by the KEY-PLUG W700 iFeatures.

SCALANCE W770 and W730 offer you:

- Space-saving integration into the control cabinet thanks to the compact model in the SIMATIC S7-1500 and ET 200MP designs
- Flexible use thanks to support of 2.4 GHz or 5 GHz
- Secure communication via PROFINET with PROFIsafe
- Data transmission rates of up to 300 Mbps
- Reliable communication, even in harsh environments, thanks to MIMO antenna technology
- Optional activation of more functions using KEY-PLUG
- Combinable with the SCALANCE W antenna portfolio

Prepared for any conditions: the proven Scalance W portfolio.

SCALANCE W780 and W740

Reliable data transmission and real-time communication: The SCALANCE W780 access points and SCALANCE W740 client modules easily manage challenging tasks. They enable data rates of up to 450 Mbps and can be used with maximum flexibility for example, along railway tracks, in adventure parks, or in applications with an "emergency stop" function via a mobile panel – whether it's indoor, outdoor, and even in harsh environmental conditions.

Our proven solution:

- For use in a control cabinet, indoor, and outdoor
- Flexible use thanks to support of 2.4 GHz or 5 GHz
- Data transmission rates of up to 450 Mbps
- Safety via wireless, thanks to KEY-PLUG W700 iFeatures
- Combinable options with the SCALANCE W antenna portfolio

SCALANCE W780



SCALANCE WLC711 IWLAN controller

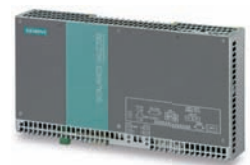
Manage large wireless networks from a central location: This is a job for the SCALANCE WLC711 IWLAN controller and the SCALANCE W780C controller-based access points. They feature simple configuration, monitoring, and documentation.











And using the controller-based solution, you can easily expand your network without altering it.









Our proven solution:

- Reduced commissioning overhead and operating costs, thanks to configuration from a central location
- Option to use Voice-over-IP, video, or Internet access in a single wireless network
- Highly reliable wireless connection, even under extreme conditions
- Increased security, thanks to expanded security functions

SCALANCE WLC711



Type of antenna	Frequency (GHz)	Antennas		SCALANCE W780 / W740	SCALANCE W770 / W730	SCALANCE W760 / W720
Omnidirectional	2.4		ANT792-6MN	●	●	●
	2.4 and 5		ANT795-4MA	●	●	●
			ANT795-4MC	●		
			ANT795-4MD	●		
			ANT795-6MN	●	●	●
			ANT795-4MT	●		
	5		ANT793-6MN	●	●	●
Sector	2.4 and 5		ANT795-6DC	●	●	
	5		ANT793-6DG	●	●	
			ANT793-6DT	●		

Type of antenna	Frequency (GHz)	Antennas		SCALANCE W780 / W740	SCALANCE W770 / W730	SCALANCE W760 / W720
Directional	2.4		ANT792-8DN	●		
	5		ANT793-8DP	●		
			ANT793-8DJ	●		
			ANT793-8DK	●		
	5		RCoax radiating cable, 2.4 GHz	●	●	●
RCoax	2.4 and 5		ANT792-4DN	●	●	●
	5		RCoax radiating cable, 5 GHz	●	●	●
			ANT793-4MN	●	●	●

Always transmitting in every direction: with the extensive antenna portfolio.

Rely on an outstanding team – the Siemens SCALANCE W products in conjunction with our extensive antenna portfolio. They will optimize your signal reception and transmission while ensuring reliable data communication.

A solution to cover all possibilities

A comprehensive offering that meets every need. For your special tasks, we offer just the right antenna accessories – from directional and omnidirectional antennas to solutions for all types of indoor and outdoor applications to special antennas.

Doubly practical: dual antennas

To transmit two data streams simultaneously, you can use antennas with two connections. This means two antennas in one housing – with different polarization levels.

Proven three times over: MIMO antennas

Antennas with three connections allow you to transmit three data streams simultaneously. This configuration takes advantage of multipath propagation. The result is both increased data throughput and reliable data transmission.

An extensive antenna portfolio for:

- Solutions for a wide variety of radio-relay architectures
- 2.4 GHz or 5 GHz applications



Easily handles special tasks: the RCoax radiating cable.

With its top capabilities, the RCoax radiating cable performs superbly, especially in challenging environments. That's where it operates simply as an antenna – and so ensures a reliable wireless connection.

For radio challenges

The IWLAN RCoax cable performs extremely well in environments where conventional antennas can be installed only at considerable expense – as an intelligent solution for reliable data transmission in applications like cranes, elevators, and rail-mounted vehicles.

Extremely easy application

The radiating cable can simply be routed alongside the traversing path of the mobile stations – for example, in the rail of an overhead monorail conveyor. In this case, it works like a relocatable antenna: A defined radio-relay section develops along the laid cable, providing reliable data transmission at all times.

At work on your tasks

Implement your wireless communication projects without restriction – the RCoax cable expands your possibilities. In addition to its easy application and flexibility, the radiating cable comes in two versions for use in Industrial Wireless LAN, with frequency bands of 2.4 GHz or 5 GHz.

The RCoax cable offers you:

- A high degree of reliability in a controlled, defined radio-relay section
- Simple application in challenging radio areas
- Wear-free and low-maintenance operation, thanks to contact-free data transmission
- Reduction in costs and installation effort
- Valuable flexibility



Fit for Industrial Wireless LAN: additional functions with KEY-PLUG and C-PLUG.



Clever extra functions for industry, our iFeatures, make a wide variety of SCALANCE W components available for special demands. The answer to your challenges: more functions that can be activated optionally, using swap media – without replacing devices and without specialized personnel.

C-PLUG swap medium

For fast and simple device replacement in the event of an error and for automatic backup of configuration or project planning data.

KEY-PLUG swap medium

The KEY-PLUG contains all the functionalities of C-PLUG – and offers quite a bit more. It ensures that SCALANCE W products are optimally equipped for end-to-end real-time transmission via IWLAN. Activate these functions as needed; we've developed them especially for industrial use.

Quick and easy

Easily meet important requirements in industrial applications:

The **iPCF (industrial Point Coordination Function)** provides the necessary deterministic algorithm and fast roaming in PROFINET IO applications, enabling the required real-time transmission via IWLAN. It uses PROFINET IO to achieve cycle times of up to 16 ms.

With the **iREF (industrial Range Extension Function)**, you open up new fields of application: It enables you to cover a longer distance or a larger area with a single access point, which reduces the number of channels and access points used.



Further information

More about SIMATIC NET

siemens.com/simatic-net

More about the TIA Selection Tool

siemens.com/tia-selection-tool

More about Industrial Wireless LAN

siemens.com/iwlan



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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>.