



**SIEMENS**

*Ingenuity for life*



# Making the most of air

Industrial Wireless LAN –  
SCALANCE W

[siemens.com/iwlan](https://www.siemens.com/iwlan)

# Communication without boundaries



## Supported frequencies

Two frequencies are used for wireless networks based on 802.11n and 802.11ac standards: 2.4 GHz and 5 GHz. Whichever frequency you choose for your network, you'll find the right product in our range of SCALANCE W components.



## Data transmission rate

You can use our SCALANCE W components to handle any data rates. From 150 Mbit/s, 300 Mbit/s and 450 Mbit/s, right up to 1733 Mbit/s, our graduated portfolio offers the full range of data transmission rates for your applications.



## Combined with antenna portfolio

From omnidirectional antennas and directional antennas to RCoax solutions, our SCALANCE W components can always be combined with suitable antennas for all applications.



Digitalization is opening up new prospects in all industrial sectors, from forward-looking planning of manufacturing processes, increased resource and cost efficiency in the process industry, pioneering concepts in the field of energy supply, to effective control of road and rail traffic.

These are all based on powerful industrial communication networks. Particularly when dealing with wireless data transmission, the network components are subject to very specific requirements: Our Industrial Wireless LAN (IWLAN) solutions guarantee maximum reliability and performance.



**Many applications, exact solutions**

From crane applications and automated guided vehicles to overhead monorails, our wireless communication components cover a wide range of applications for both indoor and outdoor use. They are uniquely suited to industrial applications, even under the harshest conditions.

The open Industrial Ethernet standard PROFINET or EtherNet/IP as well as PROFINsafe via WLAN also ensure increased efficiency, flexibility and security. Discover the many benefits of wireless data transmission for your applications with Siemens.

Radio field coverage and planning are prerequisites for a stable, powerful WLAN network and are among the many services available from Siemens or our certified Solution Partners.



**Activation of additional functions**

Additional industrial functions, called iFeatures, can be activated via KEY-PLUG W700 iFeatures in selected devices in the SCALANCE W-700 range. These enable, for example, wireless real-time data transmission via PROFINET and PROFINsafe.



**Robust design**

Our robust devices with IP65 protection class are designed for use in the most demanding applications under challenging environmental conditions, even for outdoor use.

**Benefits**

- Simple, cost-optimized machine networking
- Reliable data transmission, even for outdoor use
- Flexibility without cables
- Secured real-time data transmission
- Redundancy and safety via WLAN
- More space in the control cabinet

# Unique range of opportunities

Our range of SCALANCE W components is suitable for use in any application – simple and convenient.

Wireless LAN technology is the way ahead. Data transmission rates and stability have increased vastly in recent years, opening up new applications for WLAN in industry.

From IWLAN solutions for the food industry and automated guided vehicles in container ports to wireless-operated rail vehicles in adventure parks: Backed by our comprehensive range of wireless network components and our expertise in industrial communications, we have implemented countless innovative IWLAN applications for our customers – and we can find the right, customized solution for every individual requirement.



SCALANCE W760 and W720



### For use in the control cabinet

SCALANCE W760 Access Points and SCALANCE W720 Client Modules are the perfect choice if you are looking for simple, wireless communication from the control cabinet, especially in tight spaces that are difficult to access. The SIMATIC design means that automation components such as the distributed I/O SIMATIC ET 200SP can be incorporated seamlessly in your IWLAN network, for example. The SCALANCE W722 Client Module with integrated features is the ideal solution for such automation tasks.

See the entire SCALANCE W range online at: [siemens.com/iwlan](http://siemens.com/iwlan)

|                                       | Client Modules                       |      |      | Access Points |      |      |       | Access Points with integrated management |
|---------------------------------------|--------------------------------------|------|------|---------------|------|------|-------|--|
|                                       | also configurable as a Client Module |      |      |               |      |      |       |  |
| SCALANCE                              |                                      |      |      |               |      |      |       |  |
|                                       | W720                                 | W730 | W740 | W760          | W770 | W780 | W1780 | W1750D                                   |
| For extended environmental conditions |                                      |      |      |               |      |      |       |  |
| For outdoor use                       |                                      |      |      |               |      |      |       |  |
| For production hall mounting          |                                      |      |      |               |      |      |       |  |
| For use in control cabinet            |                                      |      |      |               |      |      |       |  |
| For moderate environments             |                                      |      |      |               |      |      |       |  |
| iFeatures (optional)                  | ●                                    | ●    | ●    |               | ●    | ●    |       |  |

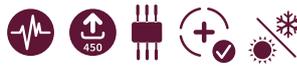
The SCALANCE W range at a glance



SCALANCE W774 and W734



SCALANCE W778 and W738



SCALANCE W780 and W740



SCALANCE W1750D



SCALANCE W1788

### For use inside and outside the control cabinet

SCALANCE W770 Access Points and SCALANCE W730 Client Modules are the right solution for more demanding applications. With data rates up to 300 Mbit/s, it is even possible to cover larger wireless ranges. The KEY-PLUG W700 iFeatures allow you to achieve secured real-time data transmission via PROFINET with PROFINsafe.

SCALANCE W774 Access Points and W734 Client Modules with the SIMATIC design are the perfect way of ensuring wireless communication between the control system (e.g. SIMATIC S7-1500) and a SIMATIC ET 200MP.

With their IP65 protection class, SCALANCE W778 Access Points and W738 Client Modules are also ideally suited to wireless data transmission in harsh environments and especially in applications outside the control cabinet, offering you maximum flexibility.

### For use in harsh environments

SCALANCE W780 Access Points and SCALANCE W740 Client Modules are reliable, powerful and extremely robust: ideal for handling your most demanding tasks. Devices with IP30 protection class are suitable for use in the control cabinet, whereas IP65 devices are perfect for use outside the control cabinet and under harsh environmental conditions. In combination with KEY-PLUG W700 iFeatures and data rates of up to 450 Mbit/s, a wide range of additional applications is possible – for example, along railway tracks.

### For extremely high bandwidths

Thanks to gigabit data rates of up to 1733 Mbit/s, the new WLAN standard IEEE 802.11ac Wave 2 enables the implementation of wireless applications with high bandwidths. The new SCALANCE W-1700 product family supports state-of-the-art radio transmission in both industrial and moderate environments. Typical areas of application include networks with high user density and high-performance video transmission. The new SCALANCE W1788 Access Points with IP65 protection class are especially suitable for use in harsh industrial environments. The integrated switch with two managed Ethernet Gigabit ports also facilitates multiple networking options such as link aggregation. Thanks to MU-MIMO (Multiuser MIMO) technology, complex data streams can be created for achieving even more efficient data transmission rates.

In moderate environments, the SCALANCE W1750D Direct Access Points can be used to scalably configure and centrally manage wireless networks with up to 64 Access Points and more, thanks to an integrated, virtual WLAN controller.

# Wide range of accessories

We offer a comprehensive range of antennas and accessories to accompany our Access Points and Client Modules.



## Antennas

Signal reception is all-important in WLAN networks. By designing the wireless network correctly and using the appropriate components, it is possible to avoid dead spots from the outset, thus considerably reducing the commissioning time. Our antennas for SCALANCE W components optimize signal reception and emission, leading to reliable communication.

We can offer the right antennas to suit every requirement, providing you with the perfect solution for all types of wireless field architecture. It doesn't matter whether your application is indoor or outdoor, or whether it needs to be able to meet specific requirements – we have the answer.



## Our comprehensive antenna range includes:

- Omnidirectional antennas to cover a large wireless field in all directions
- Directional antennas for a directional wireless field
- Sector or wide-angle antennas for large wireless fields
- Special antennas for RCoax applications

For more information see: [siemens.com/iwlan-antenna](https://www.siemens.com/iwlan-antenna)

## RCoax radiating cables

If conventional antennas are not suitable for a particular communication requirement, RCoax may be the answer. Coaxial cables are robust and easy to install, and they are especially suited for crane applications, elevators or rail vehicles.

With RCoax radiating cables, you can use Wireless LAN without any of the restrictions: the RCoax radiating cable acts as an antenna for SCALANCE W Access Points. The cable is laid along the route used by the relevant transmitters/receivers and provides a guaranteed and reliable wireless connection thanks to its special radiation properties.

For more information see: [siemens.com/rcoax](https://www.siemens.com/rcoax)



### PLUGs for network components

Replace your SCALANCE W components quickly and safely in the event of faults using our removable media. You can also activate smart additional functions (iFeatures) in this way.

**C-PLUG:** Automatically backs up configuration data and firmware so that the SCALANCE W-700 can easily be replaced in the event of faults.

**KEY-PLUG:** Includes all C-PLUG functions and activates special additional functions for selected SCALANCE W-700 devices.

**CLP:** In various versions, the CLP stores the configuration data for the SCALANCE W-1700 family.

### All iFeatures at a glance:

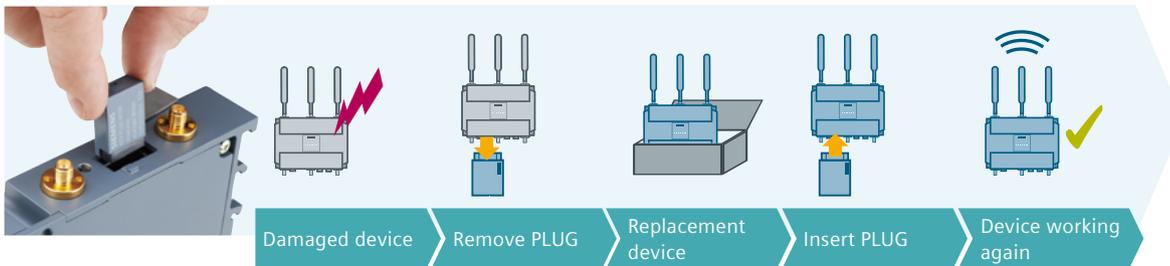
- **iPCF** (Industrial Point Coordination Function): ensures required deterministic behavior and fast roaming in PROFINET and EtherNet/IP applications – including for gross data rates up to 54 Mbit/s.
- **iPCF-MC** (iPCF Management Channel): ensures required deterministic behavior and real-time communication in applications with free-moving clients.
- **iPRP** (Industrial Parallel Redundancy Protocol): ensures redundant, reliable WLAN communication.
- **iREF** (Industrial Range Extension Function): makes it possible to cover longer distances with a single Access Point.



- **Inter AP-Blocking:** defines communication partners and gateways for WLAN clients, thus minimizing the security risk in a network environment with a number of Access Points.

For more information see: [siemens.com/plugs](https://www.siemens.com/plugs)

### Application:



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**Security information**

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 only form one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the Internet where necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens guidelines on appropriate security measures should be observed. For more information about industrial security, please visit  
<http://www.siemens.com/industrialsecurity>.

Siemens products and solutions undergo continuous development to make them more secure. Siemens strongly recommends applying product updates as soon as they are available and always using the latest product versions. Using versions that are obsolete or are no longer supported can increase the risk of cyber threats.

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