

Wireless Networks for Automation in Manufacturing

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SCALANCE – Complete Industrial Ethernet Infrastructure Solution

SCALANCE W



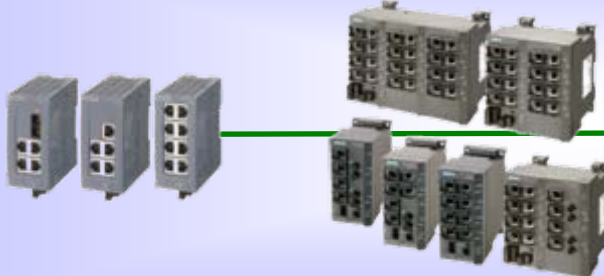
robust - reliable - secure
Industrial WLAN

SCALANCE S



Protect your automation
Industrial Security

SCALANCE X



Industrial Switching scalable for every application



Wireless Networks for Automation in Manufacturing



- **Deterministic Data communication** and **Rapid Roaming** through data rate reservation and iPCF
- **Increased reliability** in locations where interferences exist
- **Store configuration data**, using the Memory Module, reducing maintenance costs
- **Wi-Fi Protected Access (WPA2)** security, and **Advanced Encryption Standard (AES)** with 128-bit encryptions

Positioning of Scalance Wireless Access Points/Clients

■ SCALANCE W784

- Economical
- IP30 requirement on the Access Points and Clients
- Desire to mount Access Point inside a panel
- Power up through 24VDC or PoE
- 1 radio only



■ SCALANCE W786

- Wireless being implemented outdoors or inside a factory
- IP65 requirement on the Access Points and Clients
- Extended temperature range -40°C .. +70°C
- Desire to have a tamper proof product (No visible connectors)
- 3 radios required
- Power up through 110VAC or 24VDC or PoE



■ SCALANCE W788

- Wireless being implemented inside a factory
- IP65 requirement on the Access Points and Clients
- Customer desires a metal housing
- Power up through 24VDC or PoE



Wireless Networks for Automation in Manufacturing

- **Applications of Wireless technology in Manufacturing**
 - **Visualization and Monitoring**
 - SCADA applications

 - **Control**
 - Deterministic
 - Safety
 - Stable and Reliable Signal

 - **Plant Pervasive Wireless**
 - Merging of Voice and Data networks to a converged network
 - Central management, administration and coordination of the WLAN infrastructure through a Wireless Controller
 - Benefits include Increased security and intrusion protection, seamless Roaming, Improved manageability and traffic optimizations

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Wireless Networks for Automation in Manufacturing

■ Issues in deploying wireless technology in manufacturing

■ Planning

- Modeling, Simulation, Site Survey etc

■ Reliability

- Signal Strength and Distortion
 - Client monitor the signal strength
 - High availability and channel optimization in areas where interference exist for example Bluetooth

■ Deterministic Control

■ Security

- RCOAX
- Standards