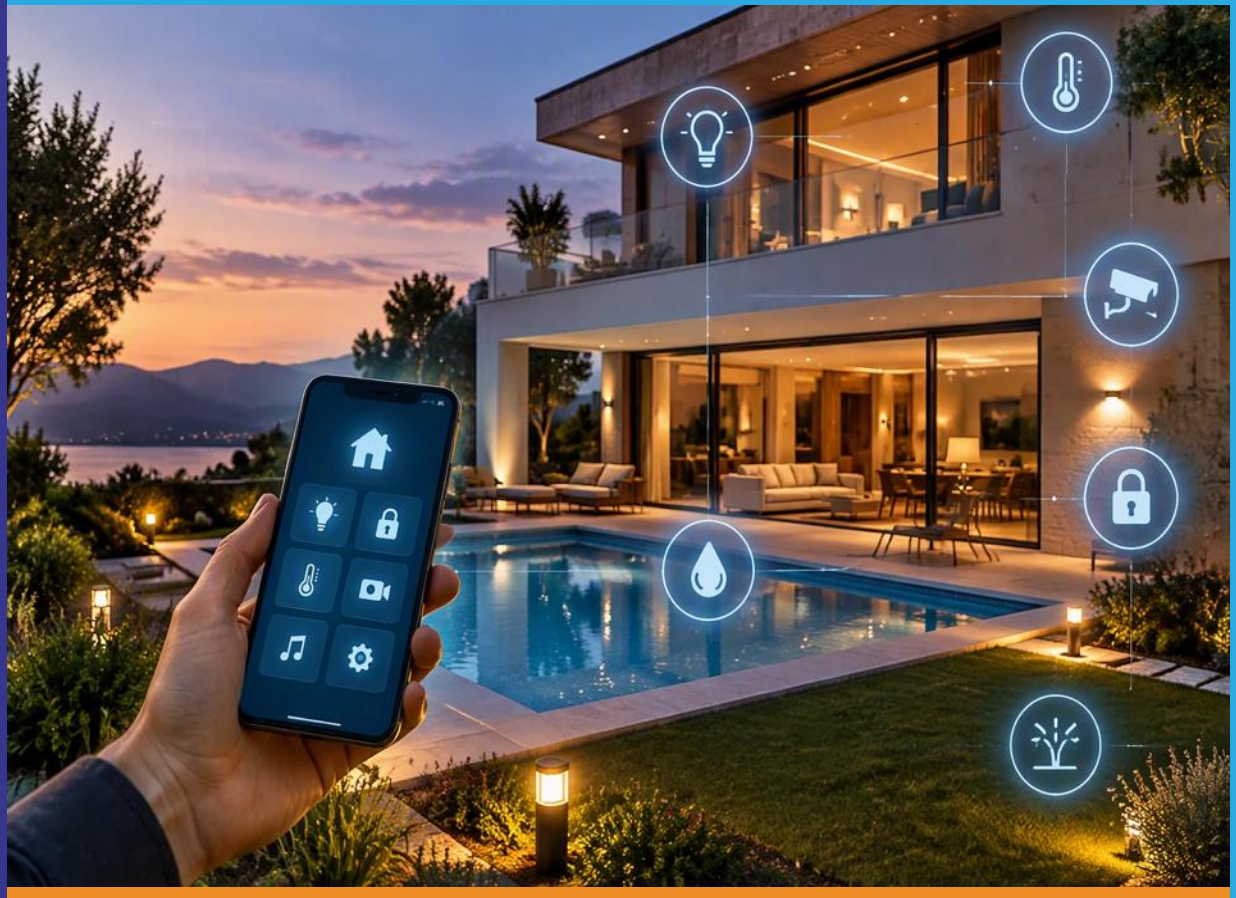
SOLARENA ENGINEERING

Wireless Automation Systems



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Wireless Automation Systems

Overview

A wireless home automation system connects smart devices through wireless communication technologies such as Wi-Fi, Zigbee, Z-Wave, Thread, and Matter.

It enables convenient control of lighting, climate, curtains, security, appliances, and other home functions without extensive control cabling, making it particularly suitable for finished homes and renovation projects..





Features:

- **Minimal wiring and reduced installation disruption.**
- **Flexible installation in new or existing properties.**
- **Centralized control through mobile applications and compatible smart hubs.**
- **Remote monitoring and control when supported by the selected platform.**
- **Custom scenes, schedules, and automated routines.**
- **Expandable system that allows compatible devices to be added gradually.**
- **Battery-powered sensors for flexible placement.**
- **Voice control through compatible smart assistants.**
- **Mesh-network options that allow compatible devices to relay signals and extend coverage.**
- **Multi-brand integration using compatible platforms and standards such as Matter**

Wireless Automation Systems

Applications



- **Villas, apartments, and existing residential properties.**
- **Smart control of lighting, climate, curtains, security, appliances, and entertainment equipment.**
- **Renovation and retrofit projects where new control cabling is impractical.**
- **Individual rooms or complete-home automation.**
- **Future expansion through additional compatible devices**



Specifications:

- **Architecture:** Wireless, hub-based, direct-to-router, or hybrid.
- **Communication options:** Wi-Fi, Zigbee, Z-Wave, Thread, Bluetooth, or Matter.
- **Main components:** Smart hub or controller, sensors, switches, relays, smart devices, and mobile application.
- **Controls:** Mobile application, wireless switches, sensors, schedules, scenes, and compatible voice assistants.
- **Network type:** Direct wireless connection or mesh network, depending on the selected protocol.
- **Power supply:** Mains-powered devices or battery-operated sensors.
- **Installation:** Surface-mounted or concealed devices with minimal additional cabling.
- **Design requirement:** Device compatibility, wireless coverage, network capacity, and platform support must be assessed for each project.

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