

zigbee 4.0 Features Overview

Zigbee 4.0 is the foundation for harmonizing traditional Zigbee and Smart Energy devices. It includes comprehensive and proactive security updates, advances user experience with Zigbee Direct, extends the supported bands to sub-GHz frequencies, and provides a number of network stability enhancements to overall network operations, commissioning of devices in dense network environments, and optimization of sleepy-sleepy device communication. Its flexible, largely optional features let manufacturers tailor capabilities to their needs while maintaining backward compatibility with billions of deployed Zigbee devices.

APPLICATION FRAMEWORK



Lighting



Smart Energy



Building



Home Automation



Custom Apps

KEY ZIGBEE PRO 2023 PLATFORM FEATURES



Enhanced Security

SPEKE and curve25519 for secure, encrypted Trust Center key establishment



Device Interview

Verify device capabilities and security before commissioning



Zigbee Direct

Uses Bluetooth Low Energy for easy commissioning and direct control from smartphones



Sub-GHz Support

Supports 800 MHz (EU) and 900 MHz (NA) for better range and less interference



Works with All Hubs

Improves network resiliency by connecting to the best available parent node



Smart Energy Coexistence

Better integration and coexistence with high-security Smart Energy (ZSE) devices

PLATFORM ABSTRACTION LAYER

Hardware Abstraction | OS Adaptation | Drivers

MCU / SoC

NXP | Silicon Labs | TI | Nordic | STMicroelectronics | and More

Residential



Commercial



Industrial



Energy



zigbee 4.0 Why You Should Care

Zigbee 4.0 builds on more than a decade of proven, large-scale deployments to deliver a more secure, reliable, interoperable, and future-ready platform for connected products. It strengthens network performance and power efficiency while maintaining backward compatibility with billions of deployed Zigbee devices, helping protect existing product investments. Combined with streamlined certification and new recertification programs that accelerate product updates, Zigbee 4.0 gives manufacturers a mature, long-term platform designed to support products throughout their lifecycle.



Security that survives the real world

- Security updates aligned with evolving international security standards and regulations
- Better control over key lifecycle, from install to long-term operation
- Trust Center resilience built-in, not assumed
- Evolution, not disruption where the existing deployments remain protected



The network you can rely on

- Low-power mesh designed to heal and scale on its own
- Zigbee 4.0 provides the foundation solutions are built on with robustness improvements that strengthen the network with standardized network-level retries, more reliable data polling of sleepy end-devices, prevention of routing loops, and prescribed APS acknowledgements



Backward compatible & interoperable

- Backward compatible with billions of deployed Zigbee devices
- Continued vendor investment in multiprotocol SoCs and SDKs confirms Zigbee as a stable, future-proof choice



Mature long-term platform

- Over a decade of learning and real-world deployments at scale
- Transitioned from feature growth to security, reliability, and lifecycle hardening with Zigbee 4.0
- Designed for 10–20-year deployments



Low power at scale

- Zigbee's low-power mesh architecture remains one of the few proven approaches at scale with multi-year battery life, minimal maintenance, and negligible energy consumption
- Interoperable with Zigbee Green Power that supports energy harvesting devices with no wires, no batteries, no costly installations and no maintenance



Faster time-to-market with new recertifications

- Rapid Recertification program reduces the time, cost, and complexity of bringing updated products to market
- FastTrack Recertification program further simplifies product updates utilizing the Alliance Interoperability Lab for Zigbee.
- Test Automation with the Zigbee Unified Test Harness (ZUTH)



connectivity
standards
alliance

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