Ember’s ZigBee Wireless Platform Enables Integrated Home Automation

Home Automation systems are enhancing the convenience, safety, comfort, and energy efficiency of a growing number of homes around the world. Once restricted for only the most elaborate homes, integrated home automation systems are now within the reach of mainstream consumers through custom installers, high-end electronics retail outlets, or as a complete home awareness/security service offered by broadband, wireless or security service providers. The use of simple, reliable, and low-cost wireless networking is a key cost-enabler for bringing these systems into the mainstream.

ZigBee – The Standard for Wireless Home Automation

ZigBee has emerged as the dominant wireless control networking standard, displacing the patchwork of proprietary niche solutions of the past. ZigBee’s simple, scalable, self-configuring, and self-healing mesh networking is multi-vendor standard that allows Home Automation systems developers the choice of building their own vendor-specific integrated systems, a fully open, multi-system vendor offering, or a combination of both.

The Ember ZigBee Platform – Professional Grade ZigBee

Ember is the ZigBee leader, delivering a series of industry firsts:

- First fully integrated System-on-Chip combining processor, memory and radio on a single chip
- First ZigBee co-processor simplifying the addition of ZigBee networking to a wide range of systems
- First ZigBee PRO Feature Set stack, enabling truly scalable, robust, and reliable ZigBee networks

Ember’s long experience in delivering a fully integrated ZigBee platform – chip, software, and tools – has resulted in the most reliable, scalable, and widely adopted ZigBee solution available.

In addition to leading silicon and ZigBee stack software, Ember also provides the software and tools infrastructure to deliver complete, robust solutions quickly. This includes utilities for reliable over-the-air software updating, complete reference applications for Home Automation devices, industry leading development tools that speed system development, and manufacturing test library options that enable high-volume manufacturing.

It is no surprise that the top home automation companies have partnered with Ember for their ZigBee wireless control solutions.

Ember AppBuilder

Ember’s AppBuilder makes ZigBee Certified Home Automation applications quick and easy. Select the desired device type, security and other options, and AppBuilder configures a complete, compliant template application ready for your vendor-specific code.
ZigBee: The Home Automation Standard
- Mature, stable, open multi-vendor standard
- Self-configuring, self-healing mesh networking
- Strong security with build-in encryption
- Standard messaging through Home Automation Profile
- Proven, robust coexistence with other wireless technologies

Ember’s Complete ZigBee Platform
- Silicon – EM250 and EM260
  - First ZigBee SoC and ZigBee Co-processor
  - Leading 2.4GHz radio performance
- Software – EmberZNet PRO
  - First ZigBee PRO Feature Set stack
  - Most mature, robust, and reliable implementation
- Tools – InSight Development Environment
  - AppBuilder for ZigBee Certified HA products – fast!
  - Integrated debugging from 1 chip to 100’s of nodes

EmberZNet PRO – Professional Grade ZigBee
Enabling ZigBee Networks that are:
- Larger – proven to 100’s and 1000’s of node
- Denser – robust in high density topologies
- Lower Power – advanced “sleep” for battery operation
- More Mobile – seamless movement of nodes
- More Secure – network and link-level encryption
- More Resilient – interference avoidance and tolerance reliable co-existence

ZigBee Wireless HA Device Examples
- Lighting switches/dimmers
- Light fixtures
- Pluggable switches & dimmers
- Entertainment remote controls
- Wall-mounted home displays/controllers
- Portable display systems/controllers
- Thermostats and sensors
- Passive infrared motion sensors
- Window and door sensors
- Home control gateways
- Music & video servers
- Speaker systems
- High-current load control switches
- Irrigation controllers
- Water leak sensors/detectors
- Security key fobs
- Window covering controllers
- Security shutter controllers
- Appliances

Ember Home Automation Customers
- Alertme.com
- AMX
- Centralite
- Control 4
- Crestron
- Colorado vNet
- Eaton Home HeartBeat
- France Telecom
- Kalirel
- LG Electronic
- Plugwise
- Remote Technologies Inc.
- SK Telecom

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