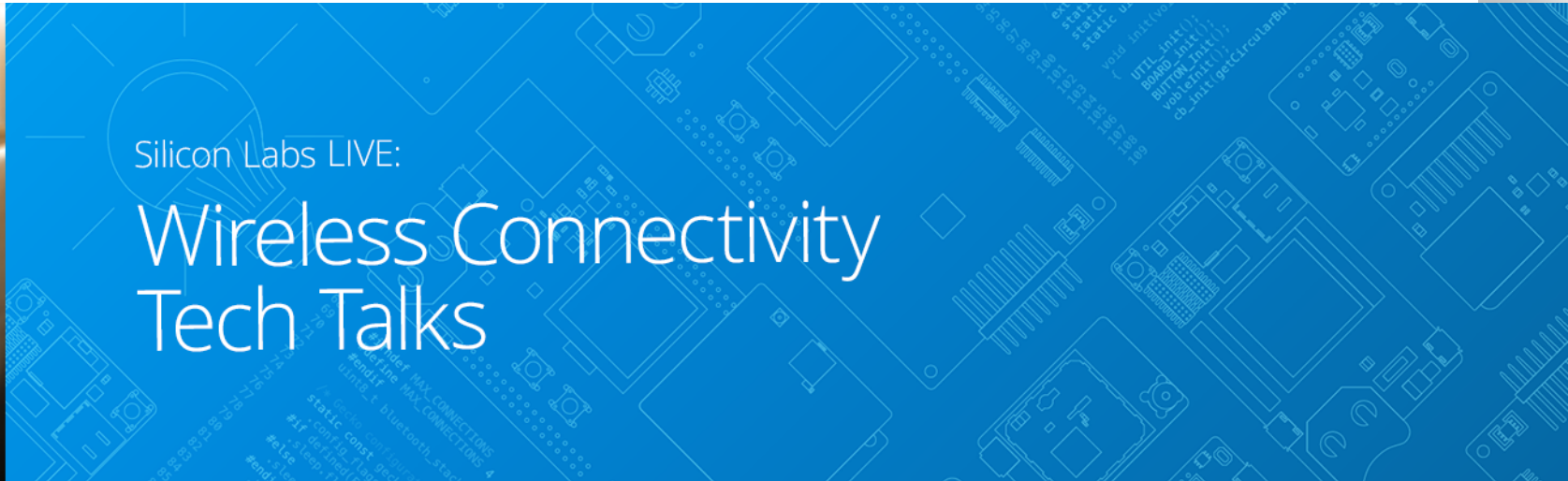


WELCOME



Silicon Labs LIVE:

Wireless Connectivity Tech Talks

Z-Wave Overview Will Begin Shortly

Tech Talks LIVE Schedule

Topic	Date
Connected Home Over IP (CHIP) for Beginners	Tuesday, April 21
Z-Wave Overview	Thursday, April 23
Battery Optimization with BG22	Tuesday, April 28
Max Performance on BLE – Simultaneous Connections, Beacons and Scanning	Thursday, April 30
SubGHz proprietary and Connect software stack	Tuesday, May 5
How to measure and debug network performance - Using Silicon Labs network analyzer	Thursday, May 7

<https://www.silabs.com/support/training>

Z-Wave Enables the Smart Home



100%
Interoperable
3000+ Certified Products

+100M
Products Deployed

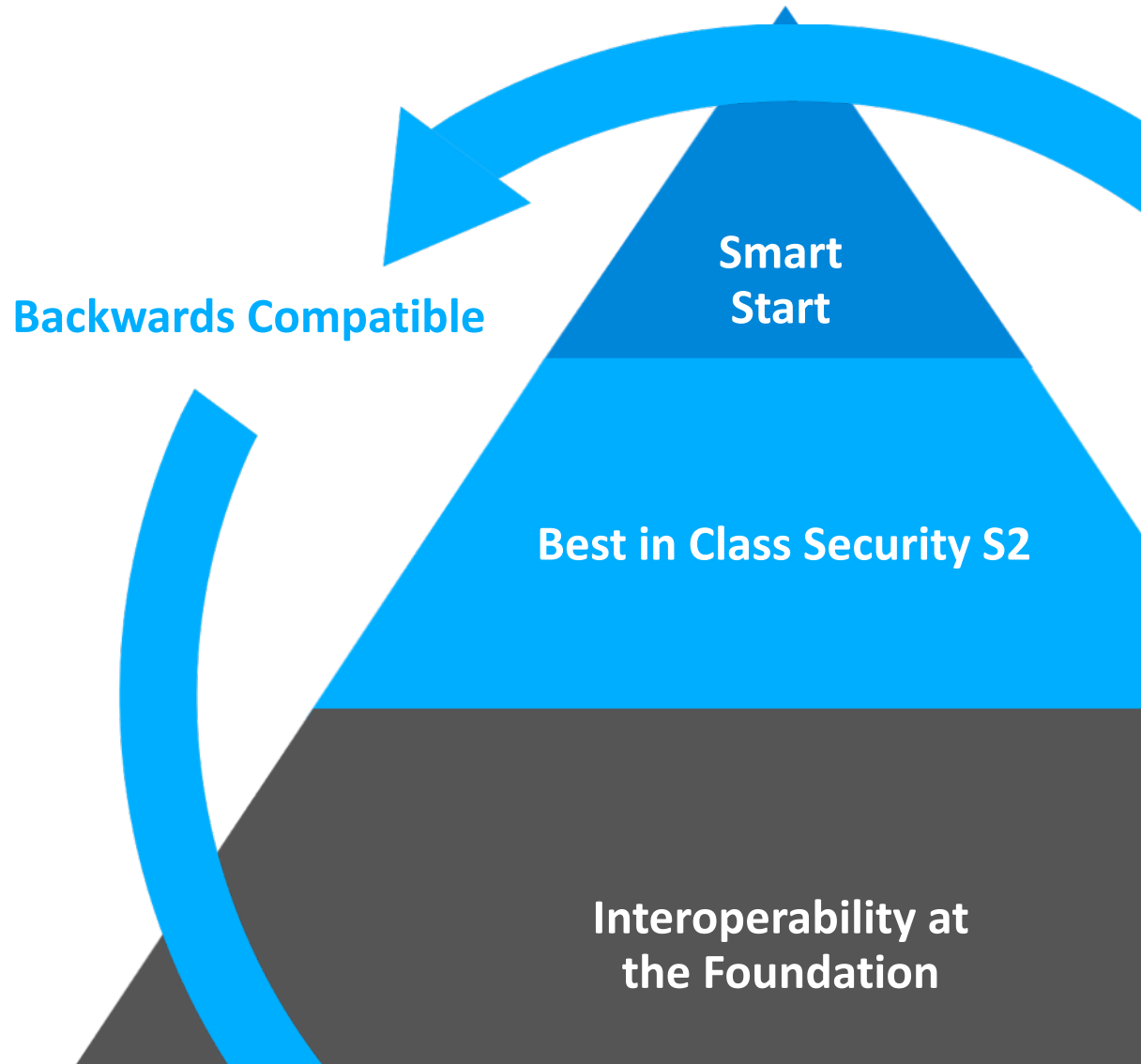
SubGHz
Penetrates Walls
Longer Range
Less Interference

Mesh
All Mains-Powered
Nodes are Routers

+17%
US Homes have Z-Wave-
powered products

+90%
US Market Share in Traditional
Security Monitoring Providers

Z-Wave is Simple, Secure, Interoperable



- 20+ years of interoperable products
 - Certification ensures interoperability
- World Class Security
 - Elliptic Curve Diffie-Hellman key exchange
 - Strong AES 128 encryption
- SmartStart automatic setup
 - Pull battery tab - joins automatically
- Backwards compatibility for the last two decades and the future

SmartStart Delivers Automatic Secure Inclusion



- Pre-Kit packaged solutions
 - Scan QR code on package during kitting
 - Devices automatically join when powered
- Scan QR codes to initiate plug and play secure installation
- Easy installation for DIY
- Fast installation for installers
- Enable consistent quality of install, every time, for every device
- Encourage shift from single device to whole home automation
- Supply service providers with tools to increase productivity and ROI

It All Comes Together

ring



Z-Wave 700 Key Benefits

LONG RANGE



Reach end of yard
-97 dBm sensitivity

LOW POWER



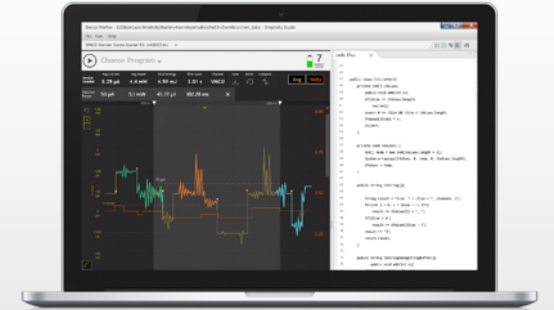
10 years on a coin cell
EM4 sleep mode $<1 \mu\text{A}$

INCREASED COMPUTATION



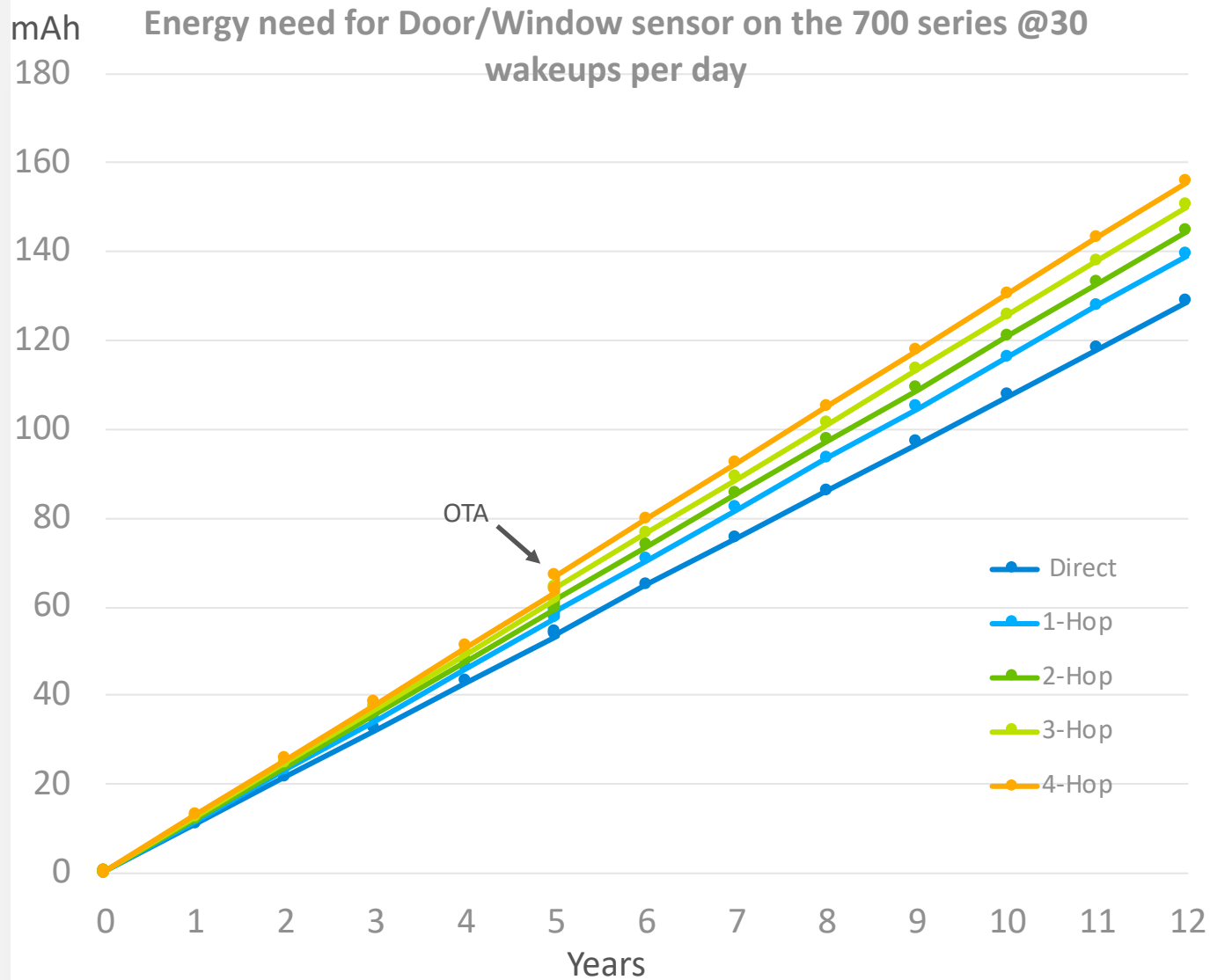
Smarter at the device level
Arm Cortex M4

EASY DEVELOPMENT



Fast time to market
Pre-certified code

Z-Wave 700 enables 10 years on coin cell



Door Window Sensor on Coin Cell

Energy estimation

- CR2032 coin cell battery capacity: 225mAh
- Door/Window Sensor with 30 activations/day in direct range needs: 110mAh during 10 years operation incl. 1 x inclusion and 1 x OTA

Depending on network conditions

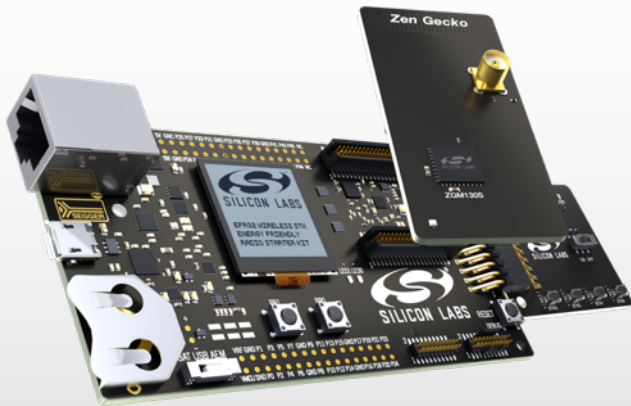
Interoperability Certification Guarantees All Products Work Together



- Certification program maintains:
 - Interoperability between vendors
 - Backwards compatibility
 - Uniform ease of use and high security
- Certification program provides:
 - Specifications for products and services
 - High quality test tools
- Interoperability Result:
 - Ensures all products speak the same language
 - Control Z-Wave products with a single app
 - Provides thousands of configuration options

Z-Wave 700 Components

WIRELESS STARTER KIT



One kit for both end device and gateway development

ZGM130S – SiP MODULE



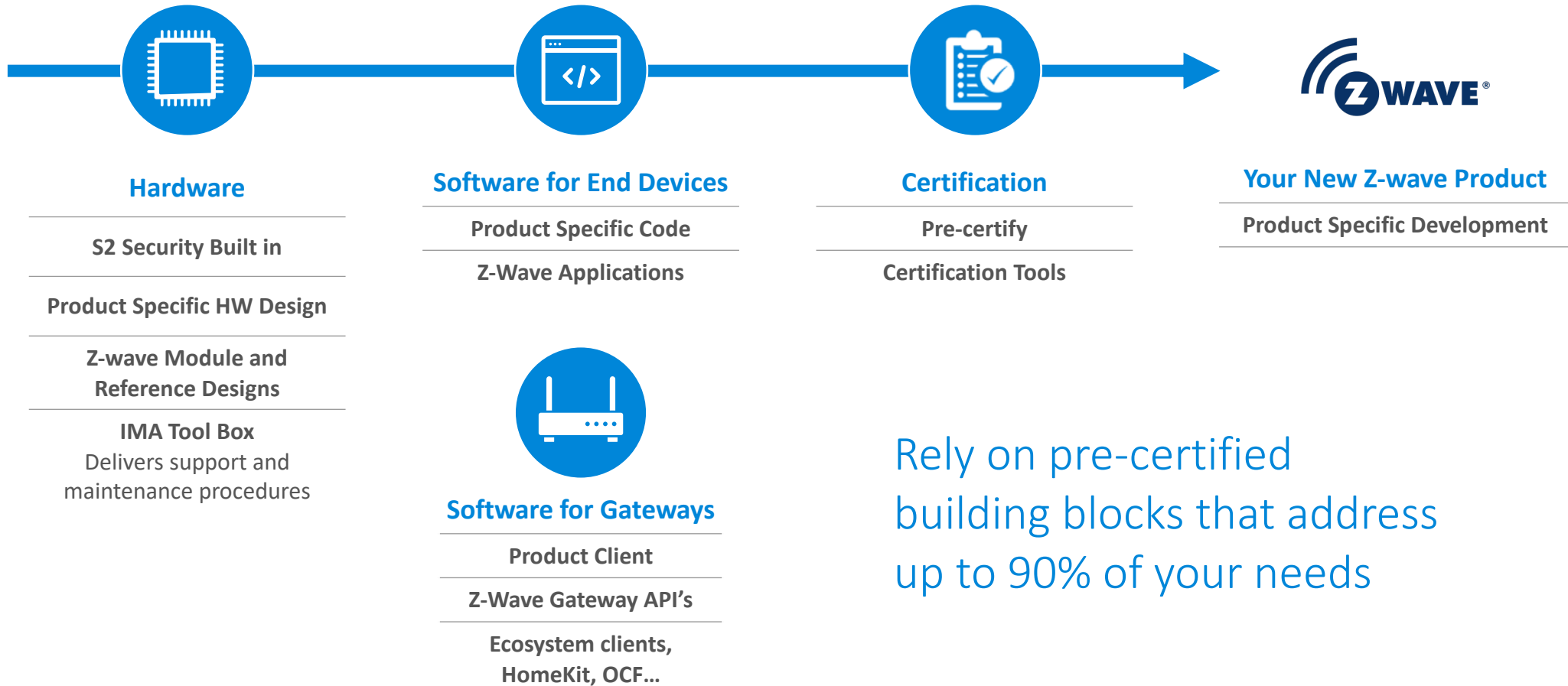
End-devices & gateways
LGA64 9x9 mm SiP

EFR32ZG14 – MODEM SoC



Gateways only
QFN32 5x5 mm SoC

Build a new Z-Wave product in 6 months



Rely on pre-certified building blocks that address up to 90% of your needs

Z-Wave Open Standard with Second Source Silicon & Stacks

- February 2012 Z-Wave ITU.G9959 MAC/PHY specification released
- December 2019 Silicon Labs announces the Z-Wave specification will be an open standard
- Summer 2020
 - Z-Wave Alliance transitions to a Standards Development Organization (SDO)
 - Silicon Labs and four other companies are the founding members
 - Alliance is actively recruiting other silicon providers
 - Alliance members can join Working Groups to enhance specification
 - Desired goal is Rev 0.9 by Works With conference in September and Rev 1.0 by year end 2020
 - Software stacks can be licensed from Silicon Labs or develop your own
 - Silicon/Stack Certification test tool development underway available by EOY2020
- January 2021
 - First Open Z-Wave certified product expected to be released



Z-Wave as the Defacto Sub-GHz Standard – Z-Wave EVERYWHERE

- **Take Z-Wave to the Next Step in its Evolution: More Innovation**
 - Allowing for multiple partners to steer and enhance technology direction
 - Enables ecosystem of Hardware/Software partners to deploy on an existing robust <GHz technology
- **Remove Artificial Barriers: More Markets**
 - Access to More Markets: China, India, etc.
 - Removes single source supplier barrier to broader ecosystem adoption
 - Allows for broader flexibility in IoT Ecosystem use models
- **Addressing the Industry Need: Less Confusion**
 - Reduces need for other non-standard <GHz standards for long range
 - Leverages the huge existing installed base
- **More Vendors: More Verticals**
 - Through new HW/SW channels targeting other markets
 - Broader market offering of Z-Wave solutions tailored to specific verticals





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Thank You | Questions and Answers

Webinar will be available soon at:

<https://www.silabs.com/about-us/events/tech-talks>

Previous webinars on CHIP, Bluetooth and Security are already posted

Check out my Z-Wave blog at DrZWave.blog