Silicon Labs ZigBee Onboarding Roadmap with unfinished document

ZigBee Introduction:

ug103-01-fundamentals-wireless-network ug103-02-fundamentals-zigbee

802.15.4 MAC / DSSS PHY (Mesh onboarding curriculum) Node Types, PAN IDs, Addresses (Mesh onboarding curriculum Clusters, Endpoints, and Devices (Mesh onboarding curriculum

ZigBee 3.0 versus legacy (Mesh onboarding curriculum)

ZigBee network basics:

Network Activities (Form, Join, Rejoin, Leave) (Mesh onboarding

Asymmetric Link Detection (Link Status) (Mesh onboarding curriculum)

Messaging (Unicast, Broadcast, and Multicast) (Mesh onboarding curriculum)

Routing (Traditional) (Mesh onboarding curriculum)

Routing (Many-to-One, Source) (Mesh onboarding curriculum) End Devices and Polling (Mesh onboarding curriculum)

Binding (Mesh onboarding curriculum)

Address table (Mesh onboarding curriculum)

ZDO (Address and Service Discovery) (Mesh onboarding

Frequency Agility (Mesh onboarding curriculum)

ZigBee application basics:

ZCL Frame Format (Mesh onboarding curriculum)

Manufacturer's Extensions (Mesh onboarding curriculum) Attributes: Reading, Writing, and Reporting (Mesh onboarding curriculum)

ZigBee Commissioning: Network Steering (centralized vs. distrib.) (Mesh onboarding curriculum)

Zigbee Commissioning: Find & Bind (Mesh onboarding

Resetting to Factory Defaults (Mesh onboarding curriculum) Poll Control Cluster (Mesh onboarding curriculum)

ZigBee Security:

Zigbee Security (Mesh onboarding curriculum) (Mesh onboarding

Z3.0 Security Considerations (Rejoining, Link Keys) (Mesh onboarding curriculum)

Companion Lab: ZigBee 3.0 Security Models (Mesh onboarding curriculum)

ug103-05-fundamentals-security

an1089-using-installation-codes-with-zigbee-devices

Touchlinking:

Touchlinking (Mesh onboarding curriculum)

ug103-09-fundamentals-zll

ug103-06-fundamentals-bootloading

Bootloader: Overview (Mesh onboarding curriculum)

Coexistence: Overview (Mesh onboarding curriculum)

an1017-coexistence-with-WiFi

an1084-gecko-bootloader-emberznet-silicon-labs-thread

an1218-secure-boot-with-rtsl

Silicon Labs ZigBee solution:

Quick Start Guide Expanded / Getting Started (Mesh onboarding

qsg106-ef²32-zigbee-pro ug103-08-fundamentals-tools ug162-simplicity-commander-reference-guide

EFR32 Microcontroller:

EFR32 portfolio overview (Mesh onboarding curriculum) HAL architecture (Mesh onboarding curriculum)

ug103-04-fundamentals-hal

Gecko SDK (EMLib, EMDrv) (Mesh onboarding curriculum)

Packet Trace Interface (Mesh onboarding curriculum) UART and Serial API (Mesh onboarding curriculum)

an961-custom-nodes-efr32

an1115-32-bit-device-peripheral-configuration-in-simplicity-studio

Application framework:

ug391-zigbee-app-framework-dev-guide

ug105-adv-app-programming

CLI (Mesh onboarding curriculum)

Event Control (Mesh onboarding curriculum)

Plugins (Mesh onboarding curriculum) Callbacks (Mesh onboarding curriculum)

an724-multi-network

API Reference: https://docs.silabs.com/zigbee/latest/

Nonvolatile memory and tokens:

Simulated EEPROM and Tokens (Mesh onboarding curriculum)

ug103-07-non-volatile-data-storage-fundamentals an703-simulated-eeprom

an1135-using-third-generation-nonvolatile-memory

an1154-tokens-for-non-volatile-storage

Bootloader:

ug266-gecko-bootloader-users-guide

Coexistence:

EmberZNet Serial Protocol (EZSP):

EZSP-SPI (Mesh onboarding curriculum)

EZSP-UART (Mesh onboarding curriculum)

Differences from SOC (Mesh onboarding curriculum)

ug100-ezsp-reference-guide

ug101-uart-gateway-protocol-reference

an706-ezsp-uart-host-interfacing-guide

an711-ezsp-spi-host-interfacing-guide

an1125-creating-and-using-a-secure-ezsp-host-to-ncp-interface

NCP (network coprocessor):

NCP Framework (Mesh onboarding curriculum) Companion Lab: XNCP Host and NCP (Mesh onboarding curriculum)

an1010-customized-ncp

Dvnamic Multiprotocol:

ug103-16-multiprotocol-fundamentals

ug305-dynamic-multiprotocol-users-guide

an1133-dynamic-multiprotocol-bluetooth-zigbee

qsg155-dynamic-multiprotocol-demo-quick-start-guide

Over-the-air upgrade:

OTA Upgrading (Mesh onboarding curriculum)

an716-image-builder-instructions

an728-ota-client-server-setup

Smart Energy:

Security Enhancements (Mesh onboarding curriculum)

Certificate-Based Key Establishment (CBKE) (Mesh onboarding curriculum)

Clusters Used (Mesh onboarding curriculum)

Registration Process (Mesh onboarding curriculum) Endpoint Mirroring (Mesh onboarding curriculum)

Inter-PAN Messaging (Mesh onboarding curriculum)

Companion Lab: SE ESI and Display (Mesh onboarding

an708-setting-manufacturing-certificates an714-smart-energy-ecc-enabled-device-setup

Green power:

(Device Types, Commissioning Process, Application Support (re: EmberZNet, AppBuilder)) (Mesh onboarding curriculum)

ug103-15-green-power-fundamentals ug392-using-sl-green-power-with-ezp

Certification:

Compliance and Certification (Mesh onboarding curriculum) an1118-certifying-zigbee-30-devices

More resources:

ZigBee Alliance Document: https://zigbee.org/zigbee-for-developers/zigbee-3-0/ Silicon Labs Community: https://www.silabs.com/community/wireless/zigbee-and-thread

Debug and Test:

ug104-test-debug-apps

an1019-node-test

an718-mfg-test-overview

an1138-zigbee-mesh-network-performance

an1142-mesh-network-performance-comparison