Z-WAVE CONTROLLER DEVELOPMENT KIT

The resources and assets you need to develop feature-rich, IoT-enabled Z-Wave Controllers

FASTER TIME TO MARKET AND REDUCED COST

The Z-Wave controller developers kit give you the fastest and easiest way to develop feature rich Z-Wave controller applications. It contains both the Z/IP Gateway and Z-Ware offering as full source code releases, to use and/or modify for your Z-Wave Controller.

INTELLIGENCE IN THE HOME

The Z-Wave for CE SDK contains a working IoT gateway prototype. Just connect power and download the Z/IP Gateway application on the supplied BeagleBone board that is all you need to do to bring all of your Z-Wave devices to the Internet of Things.

Along with the Z/IP gateway you get the Z-Ware C Library which converts your Z-Wave devices to easily manageable software objects for you to build your own IoT application on top off putting all the smart home intelligence in the home.

INTELLIGENCE IN THE CLOUD

The Z-Wave for Portal SDK contains a Z-Wave Plus certified portal evaluation server running on Ubuntu Linux. The server is built on open source software such as Apache webserver and OpenLDAP that is combined with Z-Ware C Library and Z-Ware web API plugin to form a solid prototype for an IoT Smart Home Service.

The evaluation server utilizes the ZIPR low cost Z/IP Gateway reference design in the home and the Z-Ware intelligence in the cloud service.

BUY A DEV KIT

For a list of global distributors and details about what is included in a Z-Wave Dev Kit

contact a distributor »

KEY BENEFITS

- Faster time to market
- Reduced development cost
- SDKs contains full source code
- One kit covers all Z-Wave regions
- Access to Z-Wave technical website
- Rapid IoT gateway development
- Industry-standard TI BeagleBone™
- License to use Z-Wave technology world-wide

TARGET APPLICATIONS

- Gateways
- Televisions
- Set-top boxes
- Consumer electronics
- Cloud-based services

SDK Building Blocks

Z/IP GATEWAY

Z/IP is a UDP/IP wrapper for Z-Wave command classes, Z/IP Gateway is an application that handles all communication between Z-Wave and Z/IP in a similar way that a home router handles the communication between the home PC and the internet. The Z/IP gateway handles all the Z-Wave housekeeping such as network managment, Z-Wave Security, mailbox for battery driven devices, Z/IP packaging and multichannel support. Z/IP Gateway utilizes DTLS for LAN security and can also connect to a remote server through a secure TLS1.1 tunnel making it ideal for use with a portal server.

ZIPGW 2.X REQUIREMENTS

- FLASH memory 4Mb (code size: 500kb, non-volatile memory: 512kb, libssl+libusb1: 2Mb, firmware update)
- SRAM memory 8Mb
- Linux system
    - libssl, libusb1
    - TUN/TAP and 802 Ethernet bridge
    - 32-bit MCUs (200MHz+) capable of running Linux

Z-WARE C LIBRARY

The library contains a C API that can connect to a Z/IP Gateway and discover all connect Z-Wave devices exposing them as software objects. The Software objects can be used as building blocks to design an intelligent home gateway or combined with the Z-Ware Apache Web API Plugin as part of an intelligent Portal solution.

Z-WARE C LIBRARY REQUIREMENTS

- FLASH: 1MB
- RAM: 1MB
    - 32-bit MCUs (200MHz+) capable of running Linux

Z-WARE APACHE WEB API PLUGIN

The plugin is used to combine Z-Ware C Library and Z-Ware Apps with standard technologies, such as OpenLDAP and Apache Server, to form a starting point for portal solution developers. The Z-Ware Portal is designed to serve a Z/IP Gateway, such as the ZIPR, through secure IP tunnels.

Z-WARE WEB API PLUGIN REQUIREMENTS

- Apache Web server
- Ubuntu Linux 12.04LTS

Z-WARE APPS

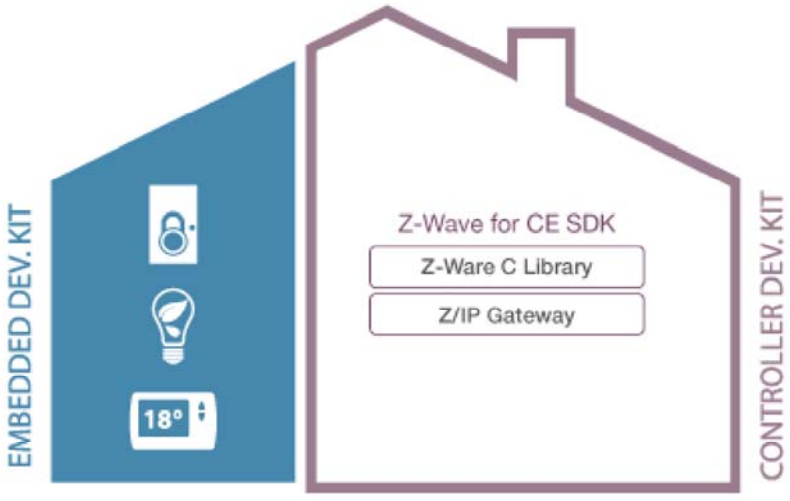
Z-Ware Apps is a collection of user interface samples for smart TVs, PCs, tablets, smart phones.

Z-Ware Apps provide a cohesive design across all platforms, creating a consistent user experience for Z-Ware Portal and allowing the end consumer to perform complex tasks with the touch of a button.

The Z-Ware Apps is designed with a focus on optimizing consumer experience. Z-Ware Apps offers a consistent experience no matter which device is being used.

Z-Ware Apps are easily customizable and can be modifi ed to include company names, logos and even a color scheme to keep with branding look and feel guidelines. Z-Ware Apps are supplied as source code, as part of the Z-Ware for Portal SDK enabling developers to customize the user interface and tailor it for specific end-customer needs.

Z-Wave For CE SDK



BeagleBone™ Black

UZB USB Stick Bridge

INTELLIGENCE IN THE HOME

The SDK is targeted at contains all the software building blocks needed to design a Smart Home solution. Taking the complexity of the Z-Wave protocol away and representing all the devices in the Z-Wave Network as software objects that you as a developer can use.

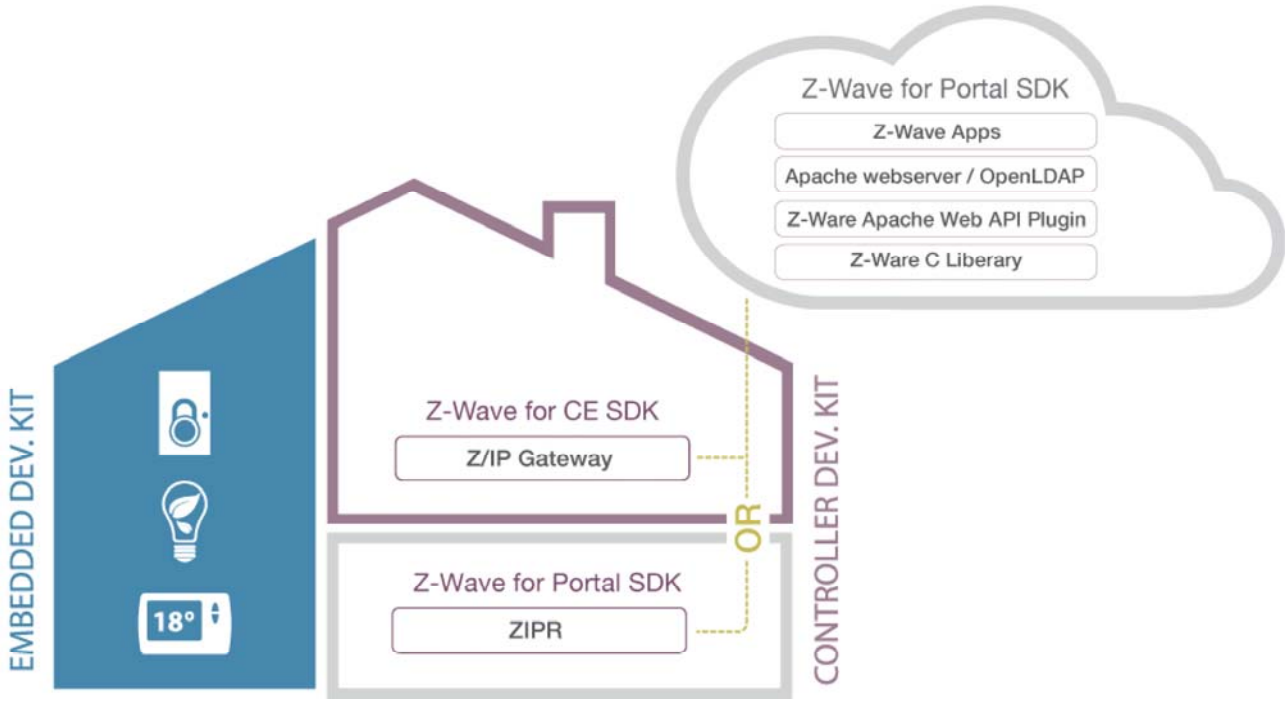
The Z/IP Gateway is included with a host build environment in Ubuntu Linux creating targets for the TI BeagleBone Black. The Z/IP Gateway connects to a UZB controller reference design as default but all of the 500 series modules and SoCs can be used with the Z-Wave for CE SDK and SerialAPI binaries are included in the kit.

The Z-Ware C library is offered with an easy-to-understand C API for you as a developer to design an application utilizing.

HARDWARE FOR THE CE SDK

- 3x UZB USB Stick Bridge Controller
    - 1x E HW - contains EU protocol
    - 1x U HW - contains US protocol
    - 1x H HW - contains JP protocol
- 1x TI BeagleBone™ Black

Z-Wave For Portal SDK



INTELLIGENCE IN THE CLOUD

The Z-Ware for Portal SDK contains an evalutaion server running on Ubuntu Linux that combines Z-Ware and Z-Ware Apps with standard technology, such as OpenLDAP and Apache Server, to form a starting point for portal solution developers. The Z-Ware Portal is designed to serve a Z/IP Gateway, such as the ZIPR or the Z/IP Gateway from the Z-Wave for CE SDK. All the components of the server are off ered as source code with a build environment for Ubuntu Linux.

HARDWARE FOR THE PORTAL SDK

- 3x ZIPR-CE
    - 1x E HW - contains EU protocol

    - 1x U HW - contains US protocol
    - 1x H HW - contains JP protocol

FOR RF TEST AND DEBUGGING

- 3x ZDB5101 E/U/H
- 1x UZB-S - USB Stick Network-Sniffer

Controller Dev Kit brochure » (/docs/brochures/Z-Wave_Controller_Dev_Kit_br.pdf)

Where to Buy a Dev Kit

GLOBAL & US DISTRIBUTORS

Digi-Key

Scott Raeker, Z-Wave Specialist
Tel: +1.800.338.4105 x1630
scott.raeker@digikey.com (mailto:scott.raeker@digikey.com)