

# 1

## Development Starter Kit Quick Start Guide

Install BeeKit™ Wireless Connectivity Toolkit provided on the BeeKit CD. BeeKit Software is not required to run the demonstration application that is pre-loaded on the development boards. However, BeeKit software is required for further demonstration and development. Instructions on how to install and run BeeKit are contained in the *BeeKit Wireless Connectivity ToolKit Quick Start Guide (BKWCTKQSG)*.

# 2

## DSK Hardware setup and demonstration

### Description

The 1320x-QE128-DSK boards are pre-programmed to provide a demonstration of a dimmable light and dimmable switch based on the ZigBee® Home Automation (HA) profile.

### Required components



1 X BeeKit CD



2 x 1320x-QE128-EVB



4 X AA batteries

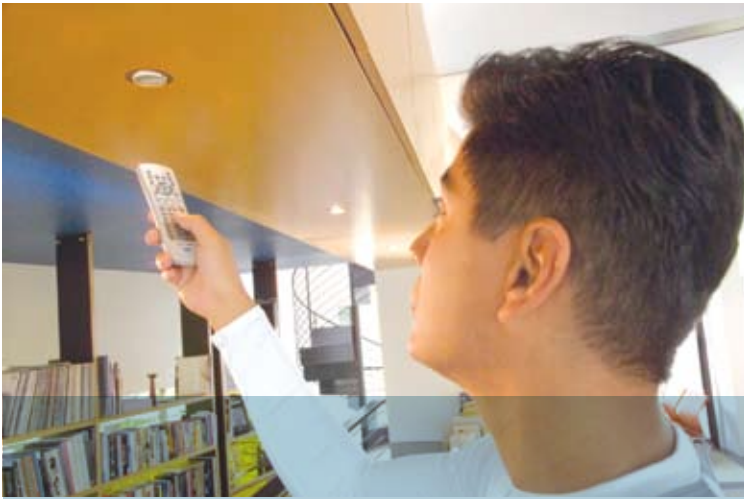
### Visual setup



1 x 1320x-QE128-EVB



1 x 1320x-QE128-EVB



# Hardware Setup

**Step 1.** Install the batteries on the 1320x-QE128-EVB development boards. Note the board names on the back of the boards: “Dimmable Light” and “Dimmer Switch”.

**Step 2.** Power on the Dimmable Light board using the slide switch SW1. LED1 blinks to indicate that the node has not formed a ZigBee Network. The LCD displays “HaDimmableLight” on line 1 and “Cfg” on line 2 of the LCD.

**Step 3.** On the Dimmable Light board, press SW2 to start the process of forming the ZigBee Network. The Dimmable Light board LEDs flash and the LCD briefly displays “Starting Network”. When the network is formed, LED1 and LED2 are on. LED1 indicates the network is formed and LED2 indicates that it is ready to allow other nodes to join the network. The LCD displays “Running Device” on line 1, and on line 2 displays “Cfg” and the PAN short address “0000”.

**Step 4.** Power on the Dimmer Switch board using the slide switch SW1. LED1 blinks to indicate that the Dimmer Switch has not joined a ZigBee Network. The LCD displays “HaDimmer Switch” on line 1 and on line 2 displays “Cfg”.

**Step 5.** On the Dimmer Switch board, press SW2 to start the process of joining the ZigBee Network. The Dimmer Switch board LEDs flash and the LCD briefly displays “Joining Network”. When it has joined the network, LED1 is on to indicate it has successfully joined the network. The LCD displays “Running Device” on line 1 and on line 2 displays “Cfg” and the PAN short address “796F”.

**Step 6.** Press SW4 on each board to bind them in the network. On both boards, LED3 blinks and the LCD displays “Binding” until the binding process is complete. Once binding is complete, LED3 on both boards stays on and both LCDs display “Binding Success” on line 1.

**Step 7.** To place each board in Application Mode, press and hold SW2 on each board for at least 2 seconds. All LEDs on both boards turn off, and on line 2 of both LCDs, “Cfg” changes to “App”.

**Step 8.** Now users can control the Dimmable Light board using the Dimmer Switch board. Pressing SW3 from 1 to 3 times on the Dimmer Switch board turns on LEDs 2 through 4 on the Dimmable Light board. Pressing SW2 from 1 to 4 times on the Dimmer Switch board turns off LEDs 4 through 2 on the Dimmable Light board. Line 1 on the Dimmable Light LCD displays “Level = “ to indicate the current level of light, or “Light Off”.

**Step 9.** Recommended Reading:

Instructions on how to run BeeKit are contained in the *BeeKit Wireless Connectivity ToolKit Quick Start Guide* (BKWCTKQSG) and the *BeeKit Wireless Connectivity ToolKit User’s Guide* (BKWCTKUG).

Instructions on how to run the SMAC demonstration applications are contained in the *Running SMAC Demonstration Operations Application Note* (AN3231).

Instructions on how to run the MAC demonstration application are contained in the *802.15.4 Media Access Controller (MAC) MyStarNetworkworkApp User’s Guide* (802154MSNAUG) and the *802.15.4 Media Access Controller (MAC) MyWirelessApp User’s Guide* (802154MWAUG).

Instructions on how to run the ZigBee demonstration applications that come with BeeStack are contained in the *ZigBee Applications User’s Guide* (ZAUG). To start developing custom BeeStack applications, see the *BeeStack Application Development Guide* (BSADG).

## Learn More:

For more information about Freescale products, please visit [www.freescale.com](http://www.freescale.com).