Zigbee\_Lamp\_Content

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| **Attribution:** | ZigBee Lamp | | |
| **Email address** | [yanggh0703@thundersoft.com](mailto:yanggh0703@thundersoft.com)  [hanfd0702@thundersoft.com](mailto:hanfd0702@thundersoft.com)  [zhouxiang0419@thundersoft.com](mailto:zhouxiang0419@thundersoft.com) | | |
| **Project Title**\* | QCA402x Zigbee lamp | | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | This demo consists of QCA4020 development kit,Sengled bulb,holder and mobile phone(Android O) which belong to one part of Home Automation Master,then users can control bulb on/off,color temperature and dim via the app”Home\_Console” freely. | | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | IMG_7064 IMG_7063 1537444405(1)  IMG_7065 | | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | The main objective of this demo is to create a intelligent lighting using the QCA4020 development kit. This is done by using an application on the mobile phone (Android O) to connect to the QCA4020 via Zigbee and control the sengled bulb. | | |
| **Operation System**\*  (Android, Linux, Windows 10 IoT Core) | Android   Linux   RTOS | | Windows 10 IoT Core   Ubuntu Core |
| **Cloud Services/Platform**  AT&T M2X, AWS IoT, IBM Bluemix, IBM Watson IoT, Such as Microsoft Azure IoT) | Amazon AWS IoT   AT&T M2x   IBM Bluemix | | IBM Watson IoT   Microsoft Azure IoT  Google Cloud Platform |
| **Skill Level Required**  (Beginner, Intermediate, Advanced) | Advanced   Beginner | | Intermediate |
| **Areas of Focus**  (e.g., IoT, smart cities, smart home, robotics, hardware, gaming, healthcare, automotive, digital signage, etc.) | 3D Printing & Modeling   Alexa Voice Service   Bluetooth   Computer Vision   Digital Signage   Education   Embedded    Gaming | | Healthcare   IoT   Robotics   Security   Sensors   Smart Cities   Smart Home   Toys   ZigBee |
| **Materials Required / Parts List / Tools** | Part Name | Link | |
| QCA4020 board | https://www.qualcomm.com/products/qca4020 | |
| Sengled bulb | https://www.amazon.com/Element-Plus-Sengled-2700-6500KSmartThings/dp/B01MQVYNFL/ref=sr\_1\_8?s=hi&ie=UTF8&qid=1523987884&sr=1-8&keywords=sengled+smart+bulb | |
| Lamp holder | https://item.m.jd.com/product/31912759280.html?ShareTm=pRYzt%2BY0bcuAYJHKosVgO%2B6g4QMPvCTgHHayaxLuN934yGW0ixCXpnTHCubwkoJjBMTrBiX5fdVZLMg0SLHZpL2ChVLi%2FgNTr2xnl%2Fn0itiT3EK87e6%2B2TteNvaxqWP5KzoZFR8WWiHUeN%2FdSAyycbow9%2FTdxahwR9r1DAg5hmY%3D&ad\_od=share&utm\_source=androidapp&utm\_medium=appshare&utm\_campaign=t\_335139774&utm\_term=Wxfriends | |
| Adaptor | unspecified | |
| Mobile phone | Android O | |
| Transformer(220v->110v) | unspecified | |
| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* | Description | Link | |
| Source Code | https://github.com/canyudeguang/Zigbee\_lamp | |
|  |  | |
| **Additional Resources**  *List related links or resources such as websites, videos, presentations, or other materials* | Resource Title | Link or File Name (and provide file) | |
| Video of “Zigbee lamp” | Link:<https://pan.baidu.com/s/12SLeAJ92Yi1_T3Uq6TJQ5w> Password:8eht | |
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| **Build / Assembly Instructions** | 1536633158(1)760866187568094928  Firstly,we should install the jumper of dev board according to the image and sheet above,then make sure the board can power on.  1537444811(1)  Secondly,we need make sure transformer,Zigbee lamp,QCA4020 and mobile phone ready and connect with power supply. | | |
| **Usage Instructions** | 1.Downloading code from github according to the repository in “Additional resource” sheet.  2.Compile the code and flash the image as described in “[Hello world with QCA4020 Development Kit](https://developer.qualcomm.com/project/hello-world-w-qca4020-dev-kit)” project.  3.Power on the QCA4020 via the power button,and the QCA4020 will build Zigbee network automatically.  4.Power on the Zigbee bulb,and it will join the Zigbee network automatically.  5.Using “Azure\_console” app on the mobile phone to control on or off status of bulb via clicking “Open” or “Close” button.  6.Using “Azure\_console” app on the mobile phone to control color temperature via setting the values ranged from “0x0000~0xFFFF” .  7.Using “Azure\_console” app on the mobile phone to control dim via setting the values ranged from “0~255”. | | |
| **Contributor(s) Info**  *Feel free to include headshots!* | Name | Title  Company | |
| Yang | Thundersoft | |
| Jay | Thundersoft | |
| Scott | Thundersoft | |

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