Qualcomm Developer Project FaceDetectorApp

Project Submission

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| **Project Title**\* | **FaceDetectionApp** | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | **865HDK.png**  865HDK **[alt tag: “FaceDetectionApp using the Snapdragon™ 865 Mobile Hardware Development Kit development board.**”] **Type-C.png**   |  | | --- | | **typc** |   [alt tag: “**using the type-c line to develop on 865HDK development board.** ”]  [alt tag: “use mini-hdmi line to connect display **.**”]  HIKVISION\_Camera.png  HIKVISION_Camera | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | Using 865hdk-c865, the data of 1080 cameras are collected by RTSP, decoded and sent to the face detection algorithm module for detection, and then the rectangular frame of face position is drawn and output to HDMI display. | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | Show the powerful decoding and AI computing power of 865HDK-c865 through 16 decoding videos. | |
| **Materials Required / Parts List / Tools** | Part Name | Link to purchase |
| 865HDK | https://www.thundercomm.com/app\_zh/product/1580977369756523?index=0&categoryId=79&tabIndex=1 |
| Type-c line | https://detail.tmall.com/item.htm?id=44425281296&ali\_refid=a3\_430582\_1006:1103572855:N:8BFxSxK119dzkfQCc2yGI2us815vvcUHETWnj5g1swo=:6399b40850a40201c56536531a885bcf&ali\_trackid=1\_6399b40850a40201c56536531a885bcf&spm=a230r.1.14.11 |
| HIKVISION\_Camera | https://item.jd.com/100006551428.html |
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| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* | Description | Link |
| [Source Code](https://github.com/canyudeguang/Home_Automation) | <https://github.com/ThunderSoft-XA/demo-Smart-Motion-detector> |
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| **Additional Resources**  *List related links or resources such as websites, videos, presentations, or other materials* | Resource Title | Link or File Name (and provide file) |
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| **Build / Assembly Instructions** | Sample outline:   1. Overall design framework and Test environment construction method.   11   1. Software Build Instructions    1. Prepare a PC (Ubuntu 16.04/ window10/ MAC);    2. Install adb and Qualcomm® Snapdragon™ Profiler tools; 2. Install app to 865 hdk device   Adb device; adb install FaceDetectionApp.apk | |
|  | Sample outline:   1. How does it work?   Below are some usage instructions to test the project.Now let's introduce the FaceDetectionAppApp ’s workflow. It .  FaceDetectionApp application realizes the simultaneous decoding with ace detection algorithm and display of video data of 16-way RTSP camera.  The design scheme and flow chart are as follows(Reference documents《AI Face detection doc》):  Data flow  未命名文件 Definition of core thread Faceinputtask face recognition algorithm thread is responsible for returning face recognition results.  App启动流程  NOTE:  Project source code description.  There are some module design sensitive information in the open engineering source code (APP project), which can not be fully open source. However, it keeps the module interface list, which is convenient for developers to improve the module creatively according to the function. | |
| **Usage Instructions** | Sample outline:   1. Install app to 865 hdk device   adb install FaceDetectionApp.apk   1. Start app. 2. connect wifi/wired network, start “edgebox client” app      1. Click control to add RTSP URL(support up to 16 channels)   test4  c . Click OK to start playing  17   1. How to use Qualcomm® Snapdragon™ Profiler tools ? 2. Log in to the official website of Qualcomm and register your account.   https://www.qualcomm.cn/   1. Find the document "How to capture snapshot with SnapdragonProfiler" and use the profiler for reference.   Profiler-savefile.png    Profiler.png  profiler0 | |
| **Contributor(s) Info**  *Feel free to include headshots!* | Name | Title  Company |
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Filters and Tags for QDN projects page

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| **Platform/Hardware** | CSR 101x/102x Bluetooth  DragonBoard 410c  mangOH Red/Yellow | MDM920x LTE for IoT  QCA-402x WiFi/BLE/Zigbee  √     Qualcomm Robotics RBx Dev Kit |
| **Software Tools** | 3D Audio Plugin for Unity  Adreno GPU SDK  Hexagon DSP SDK | Neural Processing SDK for AI  √ Snapdragon Profiler |
| **Operating System** | √ Android  Linux  ThreadX RTOS | Ubuntu Core  Windows 10 IoT Core |
| **Cloud Services/Platform** | Sierra Wireless AirVantage  Gizwits Cloud Platform  AT&T M2X  IBM Bluemix | IBM Watson IoT  Microsoft Azure IoT  Amazon AWS IoT |
| **Skill Level Required** | √ Advanced  Beginner  Intermediate |  |
| **Areas of Focus** | 3D Printing & Modeling  Alexa Voice Service  Artificial Intelligence  Bluetooth  Computer Vision  Digital Signage  √ Education  √ Embedded  Gaming | √ Healthcare  √ IoT  √ Robotics  √ Security  Sensors  √ Smart Cities  √ Smart Home  √ Toys |

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