Qualcomm Developer Project C865DK-super\_resolution1.0

Project Submission

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| **Project Title**\* | **CM2290 Performance Kit** | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | CM2290.png  CM2290 [alt tag: “CM2290 Performance Kit using the CM2290 which is designed based on the Qualcomm QCM2290/QCS2290 platform.”] **Type-C.png**   |  | | --- | | **typc** |   [alt tag: “**using the type-c line to develop on C865DK development board.** ”]  [alt tag: “use mini-hdmi line to connect display **.**”]  IP-Camera.png  ip-camera | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | Use the CM2290 to test its performance by testing the maximum number of video cameras supported. | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | 1. Show the powerful decoding power of CM 2290 2. Try to test the maximum number of road camera displays supported | |
| **Materials Required / Parts List / Tools** | Part Name | Link to purchase |
| CM2290 | https://www.thundercomm.com/zh/product/cm2290-c2290-som/ |
| 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 |
| IP Camera | https://item.jd.com/ |
| Models | <https://github.com/tulasiram58827/ocr_tflite> |
|  |  |
| Description | Link |
| [Source Code](https://github.com/canyudeguang/Home_Automation) | [https://github.com/ThunderSoft-XA/CM2290 Performance Kit](https://github.com/ThunderSoft-XA/C865DK-super_resolution1.0) |
| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* |  |  |
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| Resource Title | Link or File Name (and provide file) |
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| **Additional Resources**  *List related links or resources such as websites, videos, presentations, or other materials* |  |  |
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| **Build / Assembly Instructions** | Sample outline:   1. Overall design framework and Test environment construction method.   middle_img_v2_2ef7b8b6-5002-482f-be1a-4296b96436cg   1. Software Build Instructions   Prepare a PC (Ubuntu 16.04/ window10/ MAC);   1. Install app to CM2290 device   adb device; adb install C865DK-picture-text-recognition1.0.apk | |
|  | Sample outline:   1. How does it work?   The CM2290 Performerce Kit App are connected to the same LAN, and the IP camera tests whether there is frame drop and lag by increasing the number of routes. The CM2290 connects to the display through HDMI, and the CM2290 obtains the video stream from the IP Camera through RTSP protocol to display multichannel images. Project directory structure:  Main structure of java： ├── eBox //Main function directory│   ├── Activity //group-box control│   ├── Adapter│   ├── AI // AI task to do picture text recognition│   ├── Config //Configuration module│   ├── Constants│   ├── Data //some AI data structure│   ├── Database//Database processing│   ├── Gl //display module│   ├── Log│   ├── Model│   ├── Utils //some common functions│   └── VIew //display interface├── gateway //some info structure│   ├── data│   └── utils├── libyuv //the color conversion├── rtsp //rtsp client module└── util //common functions Function support by cpp：  ├── Affinity //CPU binding functions  ├── BasicUsageEnvironment  │   └── include  ├── groupsock //live555 feature  │   └── include  ├── libbitmap //same bitmap functions  ├── libyuv //mage color space conversion  │   └── libyuv  │   ├── build\_overrides  │   ├── docs  │   ├── include  │   │   └── libyuv  │   ├── infra  │   │   └── config  │   ├── source  │   ├── tools\_libyuv  │   │   ├── autoroller  │   │   │   └── unittests  │   │   │   └── testdata  │   │   ├── msan  │   │   ├── ubsan  │   │   └── valgrind  │   │   └── memcheck  │   ├── unit\_test  │   │   └── testdata  │   └── util  ├── liveMedia //live555 feature  │   └── include  ├── RtspClient //live555 feature  │   └── include  └── UsageEnvironment //live555 feature  └── include | |
| **Usage Instructions** | Sample outline:   1. Install app to CM 2290 device   adb install CM2290 Performerce Kit.apk   1. Start app.   1)connect wifi/wired network, start “performerce kit client” app  ic_launcher.png  2)Click Settings and click “+” to add RTSP URL  Screenshot_20210323-101538.png   1. Back to get the video from the camera 2. 1a3cf468763e1c74f6be1823e4ef9fc | |
| **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 CM 2290 Som |
| **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  √ Smart Retail |

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