Qualcomm Developer Project

PP-OCR on RB3G2

Project Submission

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| **Project Title**\* | PP-OCR on RB3 Gen2 | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | **RB3Gen2**  rb3gen2-visionkit-1  [Alt tag: “Blurred Image Clearness Processing using the C6490P Develop Kit”]  **Type-c usb line**  **typc**  [Alt tag: “using the USB line to develop on C6490P Develop Kit” ]  **Charger**  charger  [Alt tag: “using round-hole charger to power C6490P Develop Kit”] | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | The project built a CLI application that runs the open-source model “PP-OCR” on the ARM Linux platform, utilizing the CPU to perform inference based on input images at a speed of 0.5s per image.. | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | PP-OCR is a highly acclaimed optical character recognition (OCR) model developed by PaddlePaddle, known for its high accuracy and efficiency in text detection and recognition. Its deployment on various platforms, including mobile devices, holds significant practical significance and profound implications for real-world applications, facilitating the seamless integration of OCR technology into daily life. This advancement serves as a crucial lever for the democratization of text recognition capabilities, making it accessible for a wide range of users and industries. Moreover, PP-OCR has made invaluable contributions to the development and refinement of OCR technologies, paving the way for enhanced automation and improved efficiency across diverse sectors. | |
| **Materials Required / Parts List / Tools** | Part Name | Link to purchase |
| RB3 Gen2 | https://www.thundercomm.com/zh/product/qualcomm-rb3-gen-2/ |
| USB Line | https://item.jd.com/40759941966.html |
| Charger | https://www.thundercomm.com/zh/product/qualcomm-rb3-gen-2/ |
| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* | Description | Link |
| Source Code | https://github.com/ThunderSoft-XA/PP-OCR |
| **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 | https://github.com/ThunderSoft-XA/PP-OCR/doc/usage.mp4 |
| **Build / Assembly Instructions** | # when RB3 Gen2 is activated  ./build.sh | |
| **Usage Instructions** | Due to copyright requirements, Paddle Lite and the model files are not provided directly. Download Paddle Lite from https://github.com/PaddlePaddle/Paddle-Lite and compile it, selecting the develop branch. Remotely log in to the RB3Gen2 device, then download and compile the Paddle Lite code. After completion, generate the corresponding Paddle Lite library, and place the demo code in the appropriate directory of Paddle Lite. Download the OCR model from https://github.com/PaddlePaddle/PaddleOCR/blob/release/2.6/doc/doc\_ch/models\_list.md, following the instructions in the markdown for downloading, and convert it to Paddle Lite's .nb file. After compiling the demo source code, generate the corresponding executable demo file, then run the demo by executing the run.sh script and check the results. | |
| **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  Qualcomm C6490P | MDM920x LTE for IoT  QCA-402x WiFi/BLE/Zigbee  Qualcomm Robotics RBx Dev Kit  √ Qualcomm C8550 DK |
| **Software Tools** | 3D Audio Plugin for Unity  Adreno GPU SDK  Hexagon DSP SDK | Neural Processing SDK for AI  √ 　Qualcomm AI Engine Direct  　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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