Qualcomm Developer Project ImageMosaic-demo

Project Submission

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| **Project Title**\* | **ImageMosaic** | |
| **Images**  *Upload up to 5 images of your project*  *Please submit/send the original JPEG/PNG files for all images included in the document* | **Qualcomm® RB1**  RB2  [Alt tag: “ImageMosaic-demo using The Qualcomm® QRB2210 SOC Open Kit”]  **Type-c usb line**   |  | | --- | | **typc** |   [Alt tag: “using the USB line to develop on Qualcomm® QRB2210 SOC Open Kit” ]  **charger**  charger  [Alt tag: “using round-hole charger to power Qualcomm® QRB2210 SOC Open Kit”]  **Camera Module**  **camera** | |
| **Description**\*  *High level description of the project* ***(75 words or less)*** | This project is based on the QRB2210 development kit system source code, running on the QRB2210 development board, make full use of the development kit diverse and powerful connection and computing power. HostAPD and UDHCPD tools were used to enable AP WIFI, GStreamer and ZLMediaKit were used to complete RTSP streaming media function, and image stitching function was realized based on the traditional opencv algorithm. | |
| **Objective**   * *What inspired you to create this project?* * *What is your desired outcome?* | Sometimes the camera can not capture the whole picture completely, so it needs to shoot several times to record the complete picture. So I wanted to be able to seamlessly combine the contents of multiple frames when I was shooting, so I came up with the idea of writing this example. | |
| **Materials Required / Parts List / Tools** | Part Name | Link to purchase |
| Qualcomm® QRB2210 SOC Open Kit | https://www.thundercomm.com/zh/product/qualcomm-robotics-rb1-platform/ |
| USB Line | https://item.jd.com/40759941966.html |
| Charger | https://www.thundercomm.com/zh/product/qualcomm-robotics-rb1-platform/ |
| Cameramodule | https://www.thundercomm.com/zh/product/qualcomm-robotics-rb1-platform/ |
| **Source Code / Source Examples / Application Executable**  *Link to open source / shareable code repository* | Description | Link |
| Source Code | https://github.com/ThunderSoft-XA/RB1-ImageMosaic |
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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:  No special compilation method is required. After configuring the RB1 special SDK, the product can be generated directly by Cmake compilation. | |
|  | Sample outline:   1. How does it work? 2. Quickly build AP WIFI through command line tools. 3. Using MediaServer tool and start up the push stream server. 4. Run the gst\_mosaic\_test command to complete camera data collection and image stitching/mosaic. Push the results to the local port of the device through appsrc.The MediaServer stream server generates the RTSP stream. 5. The mobile connects to QRB2210 AP wifi and plays RTSP streams for show image mosaic result by EasyPlayer. | |
| **Usage Instructions** | The Demo running results are as follows：  final result:  mosiac_result | |
| **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 QRB2210 | 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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