

# Demo Application UI Guide (QuickRearCam)

Version 0.6.0

## Display Audio

Solution Team



## Release information

The following changes have been made to this document.

### Change History

Date	Change
04 Dec. 2017	First release for v0.6.0

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## Chap 1. Overview

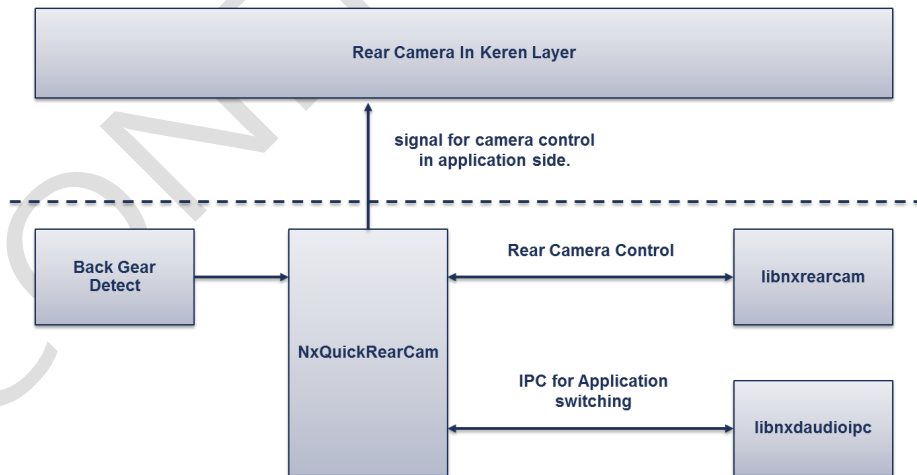
### 1.1 Overview

이 문서는 Display Audio 의 Demo Application 인 NxQuickRearCam 에 대해서 설명한 문서이다. NxQuickRearCam 은 Kernel Layer 의 Camera application 의 동작을 이어받아서 동작하도록 되어있다.

Demo Application 에서는 차량용 Rear Camera System 을 modeling 하기 위하여 GPIO pin 한 개를 후방 기어로 modeling 하였으며, 이를 통하여 application 이 실행되도록 구성되어있다.

### 1.2 Block Diagram

NxQuickRearCam 은 아래와 같이 구성되어있다. Application 시작시에 kernel layer 의 Camera Application 으로부터 제어권을 얻어 오기 위한 signal 을 발생시킨다. 이로부터 application 은 자체적으로 back gear 를 detection 하며 NxQuickRearCam 이 실행되도록 구성되어있다.



### 1.3 Application UI

Application 화면은 다음과 같으며 화면상에 Camera 영상과 Parking Guideline 이 같이 주사된다.

Draw Parking Guideline

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## Chap 2. Camera Library

### 2.1 Overview

Camera 의 동작을 제어하기 위한 libnxrearcam 이 제공되며, 사용방법은 아래와 같다.

### 2.2 APIs

#### 2.2.1 NXDA\_ShowRearCam()

```
int32_t NXDA_ShowRearCam(
    CAMERA_INFO *pCamInfo,
    DISPLAY_INFO *pDspInfo
);
```

##### Description

Show Rear Camera.

##### Parameter

-. pCamInfo : Camera Information  
-. pDspInfo : Display Information

##### Return Value

Please describe return value.

#### 2.2.2 NXDA\_HideRearCam()

```
void NXDA_HideRearCam(
    void
);
```

##### Description

Hide Rear Camera.

##### Parameter

None.

##### Return Value

None

#### 2.2.3 NXDA\_RegRenderCallback()

```
void NXDA_RegRenderCallback(
```

<pre> void *pApp int32_t (callback)(void *, int32_t, void*, int32) ); </pre>
<b>Description</b> Register Rear Camera render callback.
<b>Parameter</b> <pre> -. pApp          : private handle. -. callback      : redering callback.  int32_t callback( void* pApp, int32_t type, void* data, int32_t dataSize ) -. pApp          : private handle. -. type          : callback function type. ( CB_TYPE_BUFFER, CB_TYPE_HIDE, CB_TYPE_SHOW ) -. data          : send data for callback. -. dataSize      : size of data </pre>
<b>Return Value</b> None

#### 2.2.4 NXDA\_RegControlCallback()

<pre> void NXDA_RegControlCallback(     void *pApp,     int32_t (callback)(void *, int32_t, void *, int32_t) ); </pre>
<b>Description</b> Register Rear Camera control callback.
<b>Parameter</b> <pre> -. pApp          : private handle. -. callback      : redering callback.  int32_t callback( void* pApp, int32_t type, void* data, int32_t dataSize ) -. pApp          : private handle. -. type          : callback function type. ( CB_TYPE_BUFFER, CB_TYPE_HIDE, CB_TYPE_SHOW ) -. data          : send data for callback. -. dataSize      : size of data </pre>
<b>Return Value</b> None

#### 2.2.5 NXDA\_StartBackGearDetectService()

<pre> int32_t NXDA_StartBackGearDetectService(     int32_t nGpio,     int32_t nChkDelay ); </pre>
<b>Description</b> Start back gear detection service.

<b>Parameter</b>	
- nGpio	: GPIO port number.
- nChkDelay	: GPIO check delay (mSec)
<b>Return Value</b>	
Zero is returned.	

## 2.2.6 NXDA\_StopBackGearDetectService()

<pre>void NXDA_StopBackGearDetectService(     void );</pre>	
<b>Description</b>	
Start back gear detection service.	
<b>Parameter</b>	
None.	
<b>Return Value</b>	
None.	

## 2.2.7 NXDA\_RegisterBackGearEventCallback()

<pre>void NXDA_RegisterBackGearEventCallback(     void *pAppData,     void (*callback)(void *pAppData, int32_t nOnOff ) );</pre>	
<b>Description</b>	
Please describe this function.	
<b>Parameter</b>	
- pAppData	: private handle.
- callback	: register back gear detection callback.
<pre>void (*callback)(void *pAppData, int32_t nOnOff )</pre>	
- pAppData	: private handle.
- nOnOff	: back gear status.
<b>Return Value</b>	
None.	



## Chap 3. **History**

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### **3.1 Known Issue**

- . Not yet.

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### **3.2 To do list**

- . Audio Focus 전환 시나리오 적용.