Demo Application UI Guide (QuickRearCam)

Version 0.7.0

Display Audio

Solution Team

Release information

The following changes have been make to this document.

Change History

Date	Change
15 Nov. 2018	Applying single application framework and Using configuration file for display for v0.7.0
04 Dec. 2017	First release for v0.6.0

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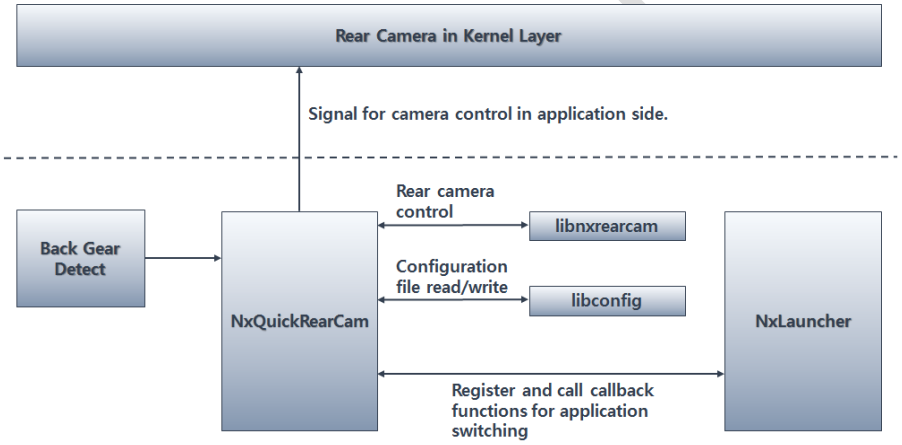
Chap 1. Overview

1.1 Overview

This document describes NxQuickRearCam that is demo application for Display Audio. The NxQuickRearCam is operated after taking over camera application of kernel layer. In demo application, the GPIO pin is back-gear. The application is run by GPIO pin.

1.2 Block Diagram

The NxQuickRearCam structure see as below. The application send signal to kernel for obtain control when it is started. The application is run automatically by back-gear detection.



1.3 Application UI

The Application see as below, this is displayed camera screen and parking guideline.

1.4 Configuration File

The configuration file (config.xml) includes configuration values for display. It is in the folder "/nexell/daudio/NxQuickRearCam". If the file does not exist, the application is run by default values and the configuration file is created with default values when the application is stopped. Configuration values are crtc index and layer index for display. If crtc index is "0" and layer index is "0", video images are displayed at video layer of 1st crtc.

The format is as in the following.

[config.xml]

```
<?xml version="1.0" encoding="UTF-8"?>
<map>
    <string name="ctrc_idx">0</string>
    <string name="layer_idx">0</string>
</map>
```

Chap 2. Camera Library

2.1 Overview

The libnxrearcam provides to manage camera. This usage of library see as below.

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(
        void *pApp
```

```
        int32_t (callback)(void *, int32_t, void*, int32)
);
```

Description

Register Rear Camera render callback.

Parameter

-. 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

Return Value

None

2.2.4 NXDA_RegControlCallback()

```
void NXDA_RegControlCallback(
        void *pApp,
        int32_t (callback)(void *, int32_t, void *, int32_t)
);
```

Description

Register Rear Camera control callback.

Parameter

-. 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

Return Value

None

2.2.5 NXDA_StartBackGearDetectService()

```
int32_t NXDA_StartBackGearDetectService(
        int32_t nGpio,
        int32_t nChkDelay
);
```

Description

Start back gear detection service.

Parameter

-. nGpio	: GPIO port number.
-. nChkDelay	: GPIO check delay (mSec)
Return Value	
Zero is returned.	

2.2.6 NXDA_StopBackGearDetectService()

```
void NXDA_StopBackGearDetectService(
        void
);
```

Description

Start back gear detection service.

Parameter

None.

Return Value

None.

2.2.7 NXDA_RegisterBackGearEventCallback()

```
void NXDA_RegisterBackGearEventCallback(
        void *pAppData,
        void (*callback)(void *pAppData, int32_t nOnOff )
);
```

Description

Please describe this function.

Parameter

-. pAppData : private handle.

-. callback : register back gear detection callback.

void (*callback)(void *pAppData, int32_t nOnOff)

-. pAppData : private handle.

-. nOnOff : back gear status.

Return Value

None.

Chap 3. History

3.1 Known Issue

-. Not yet.

3.2 To do list

-. Apply to change audio focus scenario.