Demo Application UI Guide (NxAVIn)

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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Contact us

[11595] BundangYemiji Bldg. 12F, 31 Hwangsaeul-ro 258 beon gil, Bundang-gu, Sungnam-city, Gyeonggi-do, Korea.

TEL: 82-31-698-7400

FAX:82-31-698-7455

http://www.nexell.co.kr

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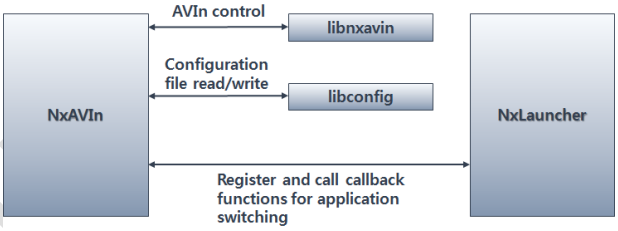
Chap 1. Overview

1.1 Overview

이 문서는 Display Audio 의 Demo Application 인 NxAVIn 에 대해서 설명한 문서이다. NxAVIn 은 AVIn Hardware(TW9900)를 통하여 입력된 CVBS 화면을 출력하여 주는 역할을 하며, 화면 전체를 보여주기 위하여 Status Bar 를 toggle 할 수 있는 기능을 제공하여 준다.

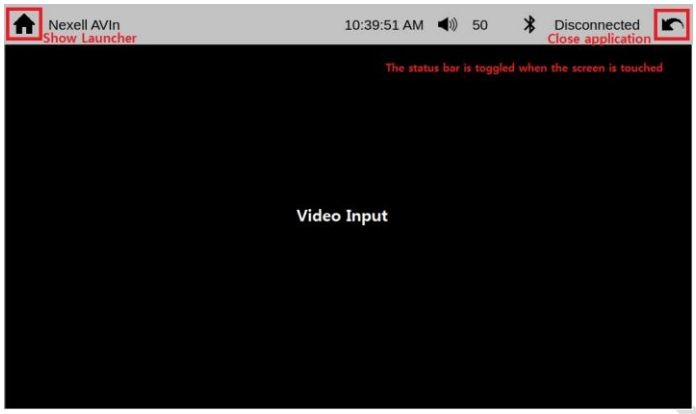
1.2 Block Diagram

NxAVIn 은 AVIn 기능을 제어하기 위한 libnxavin 과 configuration file 을 위한 libconfig 및 application 화면전환 및 정책을 위한 callback 함수들을 application 과 launcher 간에 상호 등록하고 호출하는 부분으로 구성되어 있다.



1.3 Application UI

Application 화면은 다음과 같으며, Status Bar 에 따른 Application 전환은 Status Bar 정책을 따른다. NxAVIn 의 경우 화면 touch 시에 status bar 가 toggle 된다.



1.4 Configuration File

Configuration file(config.xml)은 display 를 위한 configuration 값들이 포함되어 있다. Configuration file 은 "/nexell/daudio/NxAVIn/"에 위치한다. 파일이 존재하지 않을 경우, application 은 default value 들로 실행되며 application 이 종료되면 default 값으로 setting 된 configuration file 이 생성된다. configuration 값은 display 를 위한 crtc index 와 layer index 를 갖는다. 첫 번째 crtc 의 video layer 에 display 를 원할 경우 crtc index 는 "0", layer index 는 "0"으로 setting 하면 된다.

Configuration file 의 형식은 다음과 같다.

[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. AVIn Library

2.1 Overview

AVIn 을 제어하기 위하여 libnxavin library 를 제공하며, 사용방법은 아래와 같다.

2.2 APIs

2.2.1 NXDA_StartAVInService()

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

Description

Start AVIn Service.

Parameter

-. pCamInfo : Camera Information

-. pDspInfo : Display Information

Return Value

Zero is successful. -1 is failed.

2.2.2 NXDA_StopAVInService()

```
void NXDA_StopAVInService(
        void
);
```

Description

Stop AVIn Service.

Parameter

None.

Return Value

None

2.2.3 NXDA_SetAVInVideoPosition()

```
int32_t NXDA_SetAVInvideoPosition(
```

```
        int32_t x,
        int32_t y,
        int32_t width,
        int32_t height
);
```

Description

Set video position.

Parameter

-. x : x position of video

-. y : y position of video.

-. width : width of video.

-. height : height of video.

Return Value

Zero is successful, -1 is failed.

2.2.4 NXDA_RegAVInRenderCallback()

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

Description

Register AVIn 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

2.2.5 NXDA_RegAVInControlCallback()

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

Description

Register AVIn 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	

Chap 3. History

3.1 Known Issue

-. Nothing.

3.2 To do list

-. Audio focus 관련 기능 구현.