

SDK6 API Connected Applib

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US

Ste.110
3101 Jay Street
Santa Clara, CA 95054, USA
Phone: +1.408.734.8888
Fax: +1.408.734.0788

Hong Kong

Unit A&B, 18/F, Spectrum Tower
53 Hung To Road
Kwun Tong, Kowloon
Phone: +85.2.2806.8711
Fax: +85.2.2806.8722

Korea

6 Floor, Hanwon-Bldg.
Sunae-Dong, 6-1, Bundang-Gu
SeongNam-City, Kyunggi-Do
Republic of Korea 463-825
Phone: +031.717.2780
Fax: +031.717.2782

China - Shanghai

9th Floor, Park Center
1088 Fangdian Road, Pudong New District
Shanghai 201204, China
Phone: +86.21.6088.0608
Fax: +86.21.6088.0366

Taiwan

Suite C1, No. 1, Li-Hsin Road 1
Science-Based Industrial Park
Hsinchu 30078, Taiwan
Phone: +886.3.666.8828
Fax: +886.3.666.1282

Japan - Yokohama

Shin-Yokohama Business Center Bldg. 5th Floor
3-2-6 Shin-Yokohama, Kohoku-ku,
Yokohama, Kanagawa, 222-0033, Japan
Phone: +81.45.548.6150
Fax: +81.45.548.6151

China - Shenzhen

Unit E, 5th Floor
No. 2 Finance Base
8 Ke Fa Road
Shenzhen, 518057, China
Phone: +86.755.3301.0366
Fax: +86.755.3301.0966

II Preface

This document provides technical detail using a set of consistent typographical conventions to help the user differentiate key concepts at a glance.

Conventions include:

Example	Description
AmbaGuiGen, DirectUSB Save, File > Save Power, Reset, Home	Software names GUI commands and command sequences Computer / Hardware buttons
Flash_IO_control da, status, enable	Register names and register fields. For example, Flash_IO_control is the register for global control of Flash I/O, and bit 17 (da) is used for DMA acknowledgement.
GPIO81, CLK_AU	Hardware external pins
VIL, VIH, VOL, VOH	Hardware pin parameters
INT_O, RXDATA_I	Hardware pin signals
amb_performance_t amb_operating_mode_t amb_set_operating_mode()	API details (e.g., functions, structures, and type definitions)
/usr/local/bin success = amb_set_operating_ mode (amb_xxx_base_address, & operating_mode)	User entries into software dialogues and GUI windows File names and paths Command line scripting and Code

Table II-1. *Typographical Conventions for Technical Documents.*

Additional Ambarella typographical conventions include:

- Acronyms are given in UPPER CASE using the default font (e.g., AHB and DDRIO).
- Names of Ambarella documents and publicly available standards, specifications, and databooks appear in *italic* type.

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1 Overview

1.1 Overview: Introduction

This document explains the modules of SDK6 and is divided into the following sections:

- AmbaLink
- CommonService
- DCF
- Display
- Editor
- Format
- Graphic
- Image
- Monitor
- Player
- Still Decode
- Video Decode
- Recorder
- Storage
- System
- Tune
- USB
- Utility

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2 Net Service

2.1 Net Service: Overview

This chapter provides information regarding the network services module, used to manage interactions with a remote device.

Net Service sub-modules include:

1. **ApplibNet_Base**
 - Interfaces for AmbaLink, the Net Service base
2. **ApplibNet_Control**
 - Interfaces for net control service
3. **ApplibNet_Fifo**
 - Interfaces for net FIFO service

2.2 Net Service: List of Functions

- **AppLibNetBase** (Section 2.3)
 - (Section 2.3.1) AppLibNetBase_GetBootStatus
 - (Section 2.3.2) AppLibNetBase_InitAmbaLink
- **AppLibNetControl** (Section 2.4)
 - (Section 2.4.1) AppLibNetControl_Init
 - (Section 2.4.2) AppLibNetControl_ReplyToLnx
- **AppLibNetFifo** (Section 2.5)
 - (Section 2.5.1) AppLibNetFifo_Init
 - (Section 2.5.2) AppLibNetFifo_NotifyAppStateChange
 - (Section 2.5.3) AppLibNetFifo_StartRTSPServer
 - (Section 2.5.4) AppLibNetFifo_StopRTSPServer

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2.3 AppLibNetBase Functions

2.3.1 AppLibNetBase_GetBootStatus

API Syntax:

AppLibNetBase_GetBootStatus (void)

Function Description:

- This function is used to determine the Linux boot status.

Parameters:

None

Returns:

Return	Description
0	Linux has not booted
1	Linux has booted

Table 2-1. Returns for SDK6 ARD AppLib Net Service API **AppLibNetBase_GetBootStatus()**.

Example:

Please refer to Unit Test document.

See Also:

2.3.2 AppLibNetBase_InitAmbaLink

API Syntax:

AppLibNetBase_InitAmbaLink (void * pMemoryPool)

Function Description:

- This function is used to initialize Linux.

Parameters:

Type	Parameter	Description
void *	pMemoryPool	The pointer to the memory pool

Table 2-2. Parameters for SDK6 ARD AppLib Net Service API **AppLibNetBase_InitAmbaLink()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-3. Returns for SDK6 ARD AppLib Net Service API **AppLibNetBase_InitAmbaLink()**.

Example:

Please refer to Unit Test document.

See Also:

2.4 AppLibNetControl Functions

2.4.1 AppLibNetControl_Init

API Syntax:

AppLibNetControl_Init (void)

Function Description:

- This function is used to initialize the net control module.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-4. Returns for SDK6 ARD AppLib Net Service API **AppLibNetControl_Init()**.

Example:

Please refer to Unit Test document.

See Also:

2.4.2 AppLibNetControl_ReplyToLnx

API Syntax:

AppLibNetControl_ReplyToLnx (char * pStr, UINT32 StringLength)

Function Description:

- This function is used to reply to Linux with the result after executing a net control command issued by Linux.

Parameters:

Type	Parameter	Description
char *	pStr	Pointer to JSON string
UINT32	StringLength	The length of the JSON string pStr

Table 2-5. Parameters for SDK6 ARD AppLib Net Service API **AppLibNetControl_ReplyToLnx()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-6. Returns for SDK6 ARD AppLib Net Service API **AppLibNetControl_ReplyToLnx()**.

Example:

Please refer to Unit Test document.

See Also:

2.5 AppLibNetFifo Functions

2.5.1 AppLibNetFifo_Init

API Syntax:

AppLibNetFifo_Init (void)

Function Description:

- This function is used to initialize the net FIFO service.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-7. Returns for SDK6 ARD AppLib Net Service API **AppLibNetFifo_Init()**.

Example:

Please refer to Unit Test document.

See Also:

2.5.2 AppLibNetFifo_NotifyAppStateChange

API Syntax:

AppLibNetFifo_NotifyAppStateChange (AMP_NETFIFO_NOTIFY_TYPE_e state)

Function Description:

- This function is used to notify the net FIFO module that the application state has changed.

Parameters:

Type	Parameter	Description
AMP_NET-FIFO_NOTIFY_TYPE_e	state	The state that the application has changed to

Table 2-8. Parameters for SDK6 ARD AppLib Net Service API **AppLibNetFifo_NotifyAppStateChange()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-9. Returns for SDK6 ARD AppLib Net Service API **AppLibNetFifo_NotifyAppStateChange()**.

Example:

Please refer to Unit Test document.

See Also:

2.5.3 AppLibNetFifo_StartRTSPServer

API Syntax:

AppLibNetFifo_StartRTSPServer (void)

Function Description:

- This function is used to start the RTSP server.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-10. Returns for SDK6 ARD AppLib Net Service API **AppLibNetFifo_StartRTSPServer** ().

Example:

Please refer to Unit Test document.

See Also:

2.5.4 AppLibNetFifo_StopRTSPServer

API Syntax:

AppLibNetFifo_StopRTSPServer (void)

Function Description:

- This function is used to stop the RTSP server.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 2-11. Returns for SDK6 ARD AppLib Net Service API **AppLibNetFifo_StopRTSPServer** ().

Example:

Please refer to Unit Test document.

See Also:

3 CommonService

3.1 CommonService: Overview

This chapter provides details on the common service function. It includes the following:

- Async Operation - APP level
- Host Control Manager Implementaion
- Application Memory Manager
- Common Service's Message
- Timers

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3.2 CommonService: Async Operation - APP level

This section introduces the APIs for the Async Operation - APP level.

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3.2.1 AppLibComSvcAsyncOp_CalibLoadData

API Syntax:

int AppLibComSvcAsyncOp_CalibLoadData (int stage)

Function Description:

- This function is used to load calibration data.

Parameters:

Type	Parameter	Description
[in] int	stage	Stage ID

Table 3-1. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_CalibLoadData()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-2. Returns for CommonService Applib API **AppLibComSvcAsyncOp_CalibLoadData()**.

Example:

None

See Also:

None

3.2.2 AppLibComSvcAsyncOp_CardFormat

API Syntax:

int AppLibComSvcAsyncOp_CardFormat (int slot)

Function Description:

- This function is used to format card.

Parameters:

Type	Parameter	Description
[in] int	slot	Card slot ID

Table 3-3. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_CardFormat()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-4. Returns for CommonService Applib API **AppLibComSvcAsyncOp_CardFormat()**.

Example:

None

See Also:

None

3.2.3 AppLibComSvcAsyncOp_CardInsert

API Syntax:

int AppLibComSvcAsyncOp_CardInsert (int slot)

Function Description:

- This function is used to insert the card.

Parameters:

Type	Parameter	Description
[in] int	slot	Card slot ID

Table 3-5. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_CardInsert()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-6. Returns for CommonService Applib API **AppLibComSvcAsyncOp_CardInsert()**.

Example:

None

See Also:

None

3.2.4 AppLibComSvcAsyncOp_DmfFastFdelAll

API Syntax:

int AppLibComSvcAsyncOp_DmfFastFdelAll (int dmfRootType, UINT32 param)

Function Description:

- This function is used to delete all files with the DMF rule.

Parameters:

Type	Parameter	Description
[in] int	dmfRootType	Media root type
[in] UINT32	param	Parameter

Table 3-7. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_DmfFastFdelAll()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-8. Returns for CommonService Applib API **AppLibComSvcAsyncOp_DmfFastFdelAll()**.

Example:

None

See Also:

None

3.2.5 AppLibComSvcAsyncOp_DmfFcopy

API Syntax:

```
int AppLibComSvcAsyncOp_DmfFcopy (int dmfRootType, char * srcFn, char * dstFn)
```

Function Description:

- This function is used to copy file with the DMF rule.

Parameters:

Type	Parameter	Description
[in] int	dmfRootType	Media root type
[in] char *	srcFn	Source file name
[in] char *	dstFn	Destination file name

Table 3-9. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_DmfFcopy()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-10. Returns for CommonService Applib API **AppLibComSvcAsyncOp_DmfFcopy()**.

Example:

None

See Also:

None

3.2.6 AppLibComSvcAsyncOp_DmfFdel

API Syntax:

```
int AppLibComSvcAsyncOp_DmfFdel (int dmfRootType, char * filename)
```

Function Description:

- This function is used to delete file with the DMF rule.

Parameters:

Type	Parameter	Description
[in] int	dmfRootType	Media root type
[in] char *	filename	File name

Table 3-11. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_DmfFdel()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-12. Returns for CommonService Applib API **AppLibComSvcAsyncOp_DmfFdel()**.

Example:

None

See Also:

None

3.2.7 AppLibComSvcAsyncOp_DmfFmove

API Syntax:

int AppLibComSvcAsyncOp_DmfFmove (int dmfRootType, char * srcFn, char * dstFn)

Function Description:

- This function is used to move file with the DMF rule.

Parameters:

Type	Parameter	Description
[in] int	dmfRootType	Media root type
[in] char *	srcFn	Source file name
[in] char *	dstFn	Destination file name

Table 3-13. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_DmfFmove()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-14. Returns for CommonService Applib API **AppLibComSvcAsyncOp_DmfFmove()**.

Example:

None

See Also:

None

3.2.8 AppLibComSvcAsyncOp_FileCopy

API Syntax:

```
int AppLibComSvcAsyncOp_FileCopy (char * srcFn, char * dstFn)
```

Function Description:

- This function is used to copy the file.

Parameters:

Type	Parameter	Description
[in] char *	srcFn	Source file name
[in] char *	dstFn	Destination file name

Table 3-15. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_FileCopy()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-16. Returns for CommonService Applib API **AppLibComSvcAsyncOp_FileCopy()**.

Example:

None

See Also:

None

3.2.9 AppLibComSvcAsyncOp_FileDel

API Syntax:

```
int AppLibComSvcAsyncOp_FileDel (char * filename)
```

Function Description:

- This function is used to copy the file.

Parameters:

Type	Parameter	Description
[in] char *	filename	File name

Table 3-17. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_FileDel()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-18. Returns for CommonService Applib API **AppLibComSvcAsyncOp_FileDel()**.

Example:

None

See Also:

None

3.2.10 AppLibComSvcAsyncOp_FileMove

API Syntax:

```
int AppLibComSvcAsyncOp_FileMove (char * srcFn, char * dstFn)
```

Function Description:

- This function is used to move the file.

Parameters:

Type	Parameter	Description
[in] char *	srcFn	Source file name
[in] char *	dstFn	Destination file name

Table 3-19. Parameters for CommonService Applib API **AppLibComSvcAsyncOp_FileMove()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-20. Returns for CommonService Applib API **AppLibComSvcAsyncOp_FileMove()**.

Example:

None

See Also:

None

3.2.11 AppLibComSvcAsyncOp_Init

API Syntax:

int AppLibComSvcAsyncOp_Init (void)

Function Description:

- This function is used for initialization of Async operation.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-21. Returns for CommonService Applib API **AppLibComSvcAsyncOp_Init()**.

Example:

None

See Also:

None

3.2.12 AppLibComSvcAsyncOp_Shutdown

API Syntax:

int AppLibComSvcAsyncOp_Shutdown (void)

Function Description:

- This function is used to shut down the system.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-22. Returns for CommonService Applib API **AppLibComSvcAsyncOp_Shutdown()**.

Example:

None

See Also:

None

3.3 CommonService: Host Control Manager

This section explains the host control manager implementation.

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3.3.1 AppLibComSvcHcmgr_AttachHandler

API Syntax:

int AppLibComSvcHcmgr_AttachHandler (APPLIB_HCMGR_HANDLER_s * handler)

Function Description:

- This function is used to attach the handler function.

Parameters:

Type	Parameter	Description
[in] APPLIB_HCMGR_HANDLER_s *	handler	The handler function pointer. Please refer to Section 3.3.1.1 below for more details.

Table 3-23. Parameters for CommonService Applib API **AppLibComSvcHcmgr_AttachHandler()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-24. Returns for CommonService Applib API **AppLibComSvcHcmgr_AttachHandler()**.

Example:

None

See Also:

None

3.3.1.1 AppLibComSvcHcmgr_AttachHandler > APPLIB_HCMGR_HANDLER_s

Type	Field	Description
(int *)	HandlerExit	The exit handler
(void *)	HandlerMain	The main handler

Table 3-25. Definition of **APPLIB_HCMGR_HANDLER_s** for CommonService Applib API **AppLibComSvcHcmgr_AttachHandler()**.

3.3.2 AppLibComSvcHcmgr_DetachHandler

API Syntax:

int AppLibComSvcHcmgr_DetachHandler (void)

Function Description:

- This function is used to detach the handler function.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-26. Returns for CommonService Applib API **AppLibComSvcHcmgr_DetachHandler()**.

Example:

None

See Also:

None

3.3.3 AppLibComSvcHcmgr_Init

API Syntax:

int AppLibComSvcHcmgr_Init (void)

Function Description:

- This function is used Host Control Manager initial function.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-27. Returns for CommonService Applib API **AppLibComSvcHcmgr_Init()**.

Example:

None

See Also:

None

3.3.4 AppLibComSvcHcmgr_PreInit

API Syntax:

int AppLibComSvcHcmgr_PreInit (void)

Function Description:

- This function is used for Host Control Manager pre-initial function.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-28. Returns for CommonService Applib API **AppLibComSvcHcmgr_PreInit()**.

Example:

None

See Also:

None

3.3.5 AppLibComSvcHcmgr_RcvMsg

API Syntax:

```
int AppLibComSvcHcmgr_RcvMsg (APP_MESSAGE_s * msg, UINT32 waitOption)
```

Function Description:

- This function is used to receive the function messages.

Parameters:

Type	Parameter	Description
[in] APP_MESSAGE_s *	msg	The message object
[in] UINT32	waitOption	Wait option

Table 3-29. Parameters for CommonService Applib API **AppLibComSvcHcmgr_RcvMsg()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-30. Returns for CommonService Applib API **AppLibComSvcHcmgr_RcvMsg()**.

Example:

None

See Also:

None

3.3.6 AppLibComSvcHcmgr_ResetHandler

API Syntax:

int AppLibComSvcHcmgr_ResetHandler (void)

Function Description:

- This function is used to reset the handler function pointer.

Parameters:

None

Returns:

Return	Description
≥ 0	Success
< 0	Failure

Table 3-31. Returns for CommonService Applib API **AppLibComSvcHcmgr_ResetHandler()**.

Example:

None

See Also:

None

3.3.7 AppLibComSvcHcmgr_SendMsg

API Syntax:

int AppLibComSvcHcmgr_SendMsg (UINT32 msg, UINT32 param1, UINT32 param2)

Function Description:

- This function is used to send the message to the message queue with the "WAIT_FOREVER" flag.

Parameters:

Type	Parameter	Description
[in] UINT32	msg	The message ID
[in] UINT32	param1	The first parameter
[in] UINT32	param2	The second parameter

Table 3-32. Parameters for CommonService Applib API **AppLibComSvcHcmgr_SendMsg()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-33. Returns for CommonService Applib API **AppLibComSvcHcmgr_SendMsg()**.

Example:

None

See Also:

None

3.3.8 AppLibComSvcHcmgr_SendMsgNoWait

API Syntax:

int AppLibComSvcHcmgr_SendMsgNoWait (UINT32 msg, UINT32 param1, UINT32 param2)

Function Description:

- This function is used to send the message to the message queue with the "NO_WAIT" flag.

Parameters:

Type	Parameter	Description
[in] UINT32	msg	The message ID
[in] UINT32	param1	The first parameter
[in] UINT32	param2	The second parameter

Table 3-34. Parameters for CommonService Applib API **AppLibComSvcHcmgr_SendMsgNoWait()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-35. Returns for CommonService Applib API **AppLibComSvcHcmgr_SendMsgNoWait()**.

Example:

None

See Also:

None

3.3.9 AppLibComSvcHcmgr_SndMsg

API Syntax:

int AppLibComSvcHcmgr_SndMsg (APP_MESSAGE_s * msg, UINT32 waitOption)

Function Description:

- This function is used to send the message function.

Parameters:

Type	Parameter	Description
[in] APP_MESSAGE_s *	msg	The message object. (APP_MESSAGE_s is defined in <code>AppLibComSvc_Hcmgr.h</code>) Please refer to Section 3.3.9.1 below for more details.
[in] UINT32	waitOption	The Wait Option

Table 3-36. Parameters for CommonService Applib API **AppLibComSvcHcmgr_SndMsg()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-37. Returns for CommonService Applib API **AppLibComSvcHcmgr_SndMsg()**.

Example:

None

See Also:

None

3.3.9.1 AppLibComSvcHcmgr_SndMsg > APP_MESSAGE_s

Type	Field	Description
UINT32	MessageID	The message data
UINT32	MessageData [2]	The message Id

Table 3-38. Definition of **APP_MESSAGE_s** for CommonService Applib API **AppLibComSvcHcmgr_SndMsg()**.

3.4 Commom Service: Application Memory Manager

This section explains the APIs for application memory manager.

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3.4.1 AppLibComSvcMemMgr_Init

API Syntax:

```
int AppLibComSvcMemMgr_Init (AMBA_KAL_BYTE_POOL_t * pMPL, AMBA_KAL_BYTE_POOL_t * pNcMPL)
```

Function Description:

- This function is used to set the memory pool for applib.

Parameters:

Type	Parameter	Description
[in] AMBA_KAL_BYTE_POOL_t *	pMPL	The memory address of Cache memory pool
[in] AMBA_KAL_BYTE_POOL_t *	pNcMPL	The memory address of Non-Cache memory pool

Table 3-39. Parameters for CommonService Applib API **AppLibComSvcMemMgr_Init()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-40. Returns for CommonService Applib API **AppLibComSvcMemMgr_Init()**.

Example:

None

See Also:

None

3.4.2 AppLibComSvcMemMgr_SetDspMemory

API Syntax:

int AppLibComSvcMemMgr_SetDspMemory (UINT8 * resvStart, UINT8 * resvLimit, UINT32 resvSize)

Function Description:

- This function is used to set the DSP memory address.

Parameters:

Type	Parameter	Description
[in] UINT8 *	resvStart	The start address
[in] UINT8 *	resvLimit	The end address
[in] UINT32	resevSize	The size

Table 3-41. Parameters for CommonService Applib API **AppLibComSvcMemMgr_SetDspMemory()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-42. Returns for CommonService Applib API **AppLibComSvcMemMgr_SetDspMemory()**.

Example:

None

See Also:

None

3.5 Common Service: Common Service Message

This section provides the APIs for common service message.

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3.6 Common Service: Timer

This section provides the APIs for Timer.

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3.6.1 AppLibComSvcTimer_Handler

API Syntax:

int AppLibComSvcTimer_Handler (int tid)

Function Description:

- This function is used to handle the timer.

Parameters:

Type	Parameter	Description
[in] int	tid	The timer id

Table 3-43. Parameters for CommonService Applib API **AppLibComSvcTimer_Handler()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-44. Returns for CommonService Applib API **AppLibComSvcTimer_Handler()**.

Example:

None

See Also:

None

3.6.2 AppLibComSvcTimer_Init

API Syntax:

int AppLibComSvcTimer_Init (void)

Function Description:

- This function is used for initialization of the timer library.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-45. Returns for CommonService Applib API **AppLibComSvcTimer_Init()**.

Example:

None

See Also:

None

3.6.3 AppLibComSvcTimer_Register

API Syntax:

int AppLibComSvcTimer_Register (int tid, AppTimer_Handler handler)

Function Description:

- This function is used to register a timer.

Parameters:

Type	Parameter	Description
[in] int	tid	The timer id
[in] AppTimer_Handler	handler	The timer handler

Table 3-46. Parameters for CommonService Applib API **AppLibComSvcTimer_Register()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-47. Returns for CommonService Applib API **AppLibComSvcTimer_Register()**.

Example:

None

See Also:

None

3.6.4 AppLibComSvcTimer_UnRegister

API Syntax:

int AppLibComSvcTimer_Unregister (int tid, AppTimer_Handler handler)

Function Description:

- This function is used to unregister a timer.

Parameters:

Type	Parameter	Description
[in] int	tid	The timer id
[in] AppTimer_Handler	handler	The timer handler

Table 3-48. Parameters for CommonService Applib API **AppLibComSvcTimer_UnRegister()**.

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-49. Returns for CommonService Applib API **AppLibComSvcTimer_UnRegister()**.

Example:

None

See Also:

None

3.6.5 AppLibComSvcTimer_UnRegisterAll

API Syntax:

int AppLibComSvcTimer_UnregisterAll (int tid, AppTimer_Handler handler)

Function Description:

- This function is used to unregister all timer, except the auto power off timer.

Parameters:

None

Returns:

Return	Description
>= 0	Success
< 0	Failure

Table 3-50. Returns for CommonService Applib API **AppLibComSvcTimer_UnregisterAll()**.

Example:

None

See Also:

None

4 DCF

4.1 DCF: Overview

The chapter explains the DCF, including the following two modules:

- ApplibDcf_Function
 - It is the function implementation.
- ApplibDcf_Message
 - It is the DCF message.

4.2 DCF: Applib_Function

This section provides the APIs for ApplibDcf_Function.

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4.2.1 AppLibDCF_Create

API Syntax:

APPLIB_DCF_HDLR_s* AppLibDCF_Create (APPLIB_DCF_CFG_s * Config)

Function Description:

- This function is used to create a DCF handler.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_CFG_s *	config	The address of a DCF config data. (APPLIB_DCF_CFG_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.1.1 below for more details.

Table 4-1. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_Create()**.

Returns:

Return	Description
!= NULL	HANDLER
== NULL	FAILURE

Table 4-2. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_Create()**.

Example:

None

See Also:

None

4.2.1.1 AppLibDCF_Create > APPLIB_DCF_CFG_s

Type	Field	Description
UINT8	BrowseMode	The browse mode
UINT32	MixLastIdx	The last mixed recorded object id
UINT8	NamingRule	The naming rule
UINT8	NumberMode	The mode of assigning a new ID
UINT32	PhotoLastIdx	The last recorded photo object id
APPLIB_DCF_ROOT_LIST_s	RootList	Root list
UINT32	SoundLastIdx	The last recorded sound object id
UINT32	VideoLastIdx	The last recorded video object id

Table 4-3. Definition of **APPLIB_DCF_CFG_s** for SDK6 ARD AppLib CommonService API **AppLibDCF_Create()**.

4.2.2 AppLibDCF_CreateExtendedObject

API Syntax:

```
int AppLibDCF_CreateExtendedObject (APPLIB_DCF_HDLR_s * Hdlr, UINT32 ObjId, const char * RootName, UINT8 ExtType, UINT8 SeqNum, const char * ExtName, char * ObjName)
```

Function Description:

- This function is used to create an extended object.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 below for definition.
[in] UINT32	ObjId	The object id
[in]const char *	RootName	The Rootname
[in] UINT8	ExtType	The Extended Object type
[in] UINT8	SeqNum	The sequence number of split file
[in]const char *	ExtName	The extension name
[out]char *	ObjName	The address of object name

Table 4-4. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_CreateExtendedObject()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 4-5. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_CreateExtendedObject()**.

Example:

None

See Also:

None

4.2.2.1 AppLibDCF_CreateExtendedObject > APPLIB_DCF_HDLR_s

Type	Field	Description
UINT8	Active	The active status
UINT8	BrowseMode	The browse mode
UINT32	CurDnum	The current dir num
UINT32	CurObjId	The current object id
AMP_DCF_HDLR_s *	DcfHdlr	The DCF handler
UINT32	LastInternalObjId	The last internal object id
APPLIB_DCF_NAMING_s *	Naming	The naming
UINT8	NamingRule	The naming rule
UINT8	NumberMode	The mode of assigning a new id
UINT32	ObjAmount[APPLIB_DCF_MEDIA_TYPE_AMOUNT+1]	The object amount for every media
APPLIB_DCF_ROOT_LIST_s	RootList	The root list

Table 4-6. Definition of **APPLIB_DCF_HDLR_s** for SDK6 ARD AppLib CommonService API **AppLibDCF_CreateExtendedObject()**.

4.2.3 AppLibDCF_CreateObject

API Syntax:

```
int AppLibDCF_CreateObject (APPLIB_DCF_HDLR_s * Hdlr, const char * RootName, const char * Ext-  
Name, char * ObjName)
```

Function Description:

- This function is used to create an extended object.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.
[in]const char *	RootName	The Rootname
[in]const char *	ExtName	The extension name
[out]char *	ObjName	The address of object name

Table 4-7. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_CreateObject()**.

Returns:

Return	Description
> 0	Object id
< = 0	Failure

Table 4-8. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_CreateObject()**.

Example:

None

See Also:

None

4.2.4 AppLibDCF_Delete

API Syntax:

int AppLibDCF_Delete (APPLIB_DCF_HDLR_s * Hdlr)

Function Description:

- This function is used to delete a handler.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.

Table 4-9. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_Delete()**.

Returns:

Return	Description
> 0	Success
< = 0	Failure

Table 4-10. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_Delete()**.

Example:

None

See Also:

None

4.2.5 AppLibDCF_DeleteObject

API Syntax:

```
int AppLibDCF_DeleteObject (APPLIB_DCF_HDLR_s * Hdlr, UINT32 ObjId)
```

Function Description:

- This function is used to delete object files.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.
[in] UINT32	ObjId	The object id

Table 4-11. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_DeleteObject()**.

Returns:

Return	Description
> 0	Success
<= 0	Failure

Table 4-12. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_DeleteObject()**.

Example:

None

See Also:

None

4.2.6 AppLibDCF_FirstDir

API Syntax:

```
int AppLibDCF_FirstDir (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to go to the first directory and return dnum.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.

Table 4-13. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_FirstDir()**.

Returns:

Return	Description
> 0	Dir number
< = 0	Failure

Table 4-14. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_FirstDir()**.

Example:

None

See Also:

None

4.2.7 AppLibDCF_FirstObject

API Syntax:

```
int AppLibDCF_FirstObject (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to go to the first object and return object id.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.

Table 4-15. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_FirstObject()**.

Returns:

Return	Description
> 0	Object id
< = 0	Failure

Table 4-16. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_FirstObject()**.

Example:

None

See Also:

None

4.2.8 AppLibDCF_GetBrowseMode

API Syntax:

```
int AppLibDCF_GetBrowseMode (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to get the browse mode.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s *	Hdlr	Applib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.

Table 4-17. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetBrowseMode()**.

Returns:

Return	Description
#	Browse mode

Table 4-18. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_GetBrowseMode()**.

Example:

None

See Also:

None

4.2.9 AppLibDCF_GetCurrentObjectId

API Syntax:

UINT32 AppLibDCF_GetCurrentObjectId (APPLIB_DCF_HDLR_s * Hdlr)

Function Description:

- This function is used to get the current object id.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	Applib DCF handler returns object id (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for definition.

Table 4-19. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetCurrentObjectId()**.

Returns:

None

Example:

None

See Also:

None

4.2.10 AppLibDCF_GetDefaultCfg

API Syntax:

```
void AppLibDCF_GetDefaultCfg (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to get the default config data for creating DCF handler.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_CFG_s *	Config	The address of a DCF config data (APPLIB_DCF_CFG_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.1.1 for definition.

Table 4-20. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetDefaultCfg()**.

Returns:

None

Example:

None

See Also:

None

4.2.11 AppLibDCF_GetDefaultInitCfg

API Syntax:

void AppLibDCF_GetDefaultInitCfg (APPLIB_DCF_INIT_CFG_s * InitConfig)

Function Description:

- This function is used for DCF APIs to get the default config for initializing AppLib DCF.

Parameters:

Type	Parameter	Description
[out] APPLIB_DCF_INIT_CFG_s	InitConfig	The address of a AppLibDCF init config data (APPLIB_DCF_CFG_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.11.1 for more details.

Table 4-21. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetDefaultInitCfg()**.

Returns:

None

Example:

None

See Also:

None

4.2.11.1 AppLibDCF_GetDefaultInitCfg > APPLIB_DCF_INIT_CFG_s

Type	Field	Description
UINT8 *	Buffer	The pointer to the buffer
UINT32	BufferSize	The size of the buffer
AMP_CFS_CFG_	CfsCfg	The Cfs config
AMP_DCF_INIT_CFG_s	DcfInitCfg	The DCF init config
UINT32	IntObjAmount	The amount of internal objects (created but not really exist in filesystem)
APPLIB_DCF_MEDIA_LIST_s	MediaTypes	The list of available Media types

Table 4-22. Definition of **APPLIB_DCF_INIT_CFG_s** for SDK6 ARD AppLib CommonService API **AppLibDCF_GetDefaultInitCfg()**.

4.2.12 AppLibDCF_GetDirList

API Syntax:

AMP_DCF_DIR_LIST_s * AppLibDCF_GetDirList (APPLIB_DCF_HDLR_s * Hdlr)

Function Description:

- This function is used to get the dir list of the current dnum.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-23. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetDirList()**.

Returns:

Return	Description
Point	Dir list of current dnum

Table 4-24. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_GetDirList()**.

Example:

None

See Also:

None

4.2.13 AppLibDCF_GetFileList

API Syntax:

AMP_DCF_DIR_LIST_s * AppLibDCF_GetFileList (APPLIB_DCF_HDLR_s * Hdlr, UINT32 ObjId)

Function Description:

- This function is used to get the file list of the current object.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.
[in] UINT32	ObjId	The object id

Table 4-25. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetFileList()**.

Returns:

Return	Description
Point	Address of the file list

Table 4-26. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_GetFileList()**.

Example:

None

See Also:

None

4.2.14 AppLibDCF_GetMediaType

API Syntax:

```
int AppLibDCF_GetMediaType (char * Name)
```

Function Description:

- This function is used to get the media type of an object.

Parameters:

Type	Parameter	Description
[in] char *	Name	The filename

Table 4-27. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetMediaType()**.

Returns:

Return	Description
#	Media Type

Table 4-28. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_GetMediaType()**.

Example:

None

See Also:

None

4.2.15 AppLibDCF_GetNumberMode

API Syntax:

```
void AppLibDCF_GetNumberMode (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to get the number mode.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-29. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetNumberMode()**.

Returns:

Return	Description
#	Number mode

Table 4-30. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_GetNumberMode()**.

Example:

None

See Also:

None

4.2.16 AppLibDCF_GetObjectAmount

API Syntax:

```
int AppLibDCF_GetObjectAmount (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to get the object amount, internal objects are not included.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-31. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_GetObjectAmount()**.

Returns:

Return	Description
#	Object amount

Table 4-32. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_GetObjectAmount()**.

Example:

None

See Also:

None

4.2.17 AppLibDCF_Init

API Syntax:

```
int AppLibDCF_Init (APPLIB_DCF_INIT_CFG_s * InitConfig)
```

Function Description:

- This function is used for DCF APIs to use to initialize AppLib DCF.

Parameters:

Type	Parameter	Description
[out] APPLIB_DCF_INIT_CFG_s	InitConfig	The address of a AppLibDCF init config data (APPLIB_DCF_CFG_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.11.1 for more details.

Table 4-33. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_Init()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 4-34. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_Init()**.

Example:

None

See Also:

None

4.2.18 AppLibDCF_LastDir

API Syntax:

```
int AppLibDCF_LastDir (APPLIB_DCF_INIT_CFG_s * Hdlr)
```

Function Description:

- This function is used to go to the last directory and return the dnum.

Parameters:

Type	Parameter	Description
[out] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-35. Parameters for SDK6 ARD AppLib CommonService API **AppLibDCF_LastDir()**.

Returns:

Return	Description
> = 0	Dir number
< 0	Failure

Table 4-36. Returns for SDK6 ARD AppLib CommonService API **AppLibDCF_LastDir()**.

Example:

None

See Also:

None

4.2.19 AppLibDCF_LastObject

API Syntax:

```
int AppLibDCF_LastObject(APPLIB_DCF_INIT_CFG_s * Hdlr)
```

Function Description:

- This function is used to go to the last object and return the object id.

Parameters:

Type	Parameter	Description
[out] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-37. Parameters for CommonService Applib API **AppLibDCF_LastObject()**.

Returns:

Return	Description
> = 0	Object id
< 0	Failure

Table 4-38. Returns for CommonService Applib API **AppLibDCF_LastObject()**.

Example:

None

See Also:

None

4.2.20 AppLibDCF_ListInternalObject

API Syntax:

void AppLibDCF_ListInternalObject (void)

Function Description:

- This function is used to go to the last object and return the object id.

Parameters:

None

Returns:

None

Example:

None

See Also:

None

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4.2.21 AppLibDCF_NameTold

API Syntax:

UINT32 AppLibDCF_NameTold (APPLIB_DCF_HDLR_s * Hdlr, char * ObjName)

Function Description:

- This function is used to go to translate the object name to the id.

Parameters:

Type	Parameter	Description
[out] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.
char *	ObjName	The object name

Table 4-39. Parameters for CommonService Applib API **AppLibDCF_NameTold()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 4-40. Returns for CommonService Applib API **AppLibDCF_NameTold()**.

Example:

None

See Also:

None

4.2.22 AppLibDCF_NextDir

API Syntax:

```
int AppLibDCF_NextDir (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to go on to the next directory and return the dnum.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-41. Parameters for CommonService Applib API **AppLibDCF_NextDir()**.

Returns:

Return	Description
> = 0	Dir number
< 0	Failure

Table 4-42. Returns for CommonService Applib API **AppLibDCF_NextDir()**.

Example:

None

See Also:

None

4.2.23 AppLibDCF_NextObject

API Syntax:

```
int AppLibDCF_NextObject (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to go to the next object and return the object id.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-43. Parameters for CommonService Applib API **AppLibDCF_NextObject()**.

Returns:

Return	Description
> = 0	Object id
< 0	Failure

Table 4-44. Returns for CommonService Applib API **AppLibDCF_NextObject()**.

Example:

None

See Also:

None

4.2.24 AppLibDCF_PrevDir

API Syntax:

```
int AppLibDCF_PrevDir (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to go to the previous directory and return the dnum.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-45. Parameters for CommonService Applib API **AppLibDCF_PrevDir()**.

Returns:

Return	Description
> = 0	Dir number
< 0	Failure

Table 4-46. Returns for CommonService Applib API **AppLibDCF_PrevDir()**.

Example:

None

See Also:

None

4.2.25 AppLibDCF_PrevObject

API Syntax:

```
int AppLibDCF_PrevObject (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to go to the previous object and return the object id.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-47. Parameters for CommonService Applib API **AppLibDCF_PrevObject()**.

Returns:

Return	Description
> = 0	Object id
< 0	Failure

Table 4-48. Returns for CommonService Applib API **AppLibDCF_PrevObject()**.

Example:

None

See Also:

None

4.2.26 AppLibDCF_Refresh

API Syntax:

```
int AppLibDCF_Refresh (APPLIB_DCF_HDLR_s * Hdlr)
```

Function Description:

- This function is used to refresh DCF and CFS.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>ApplibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.

Table 4-49. Parameters for CommonService Applib API **AppLibDCF_Refresh()**.

Returns:

Return	Description
> = 0	Object id
< 0	Failure

Table 4-50. Returns for CommonService Applib API **AppLibDCF_Refresh()**.

Example:

None

See Also:

None

4.2.27 AppLibDCF_RelDirList

API Syntax:

```
int AppLibDCF_RelDirList (APPLIB_DCF_HDLR_s * Hdlr, AMP_DCF_DIR_LIST_s * List)
```

Function Description:

- This function is used to refresh DCF and CFS.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.
[in] AMP_DCF_DIR_LIST_s *	List	Address of dir list

Table 4-51. Parameters for CommonService Applib API **AppLibDCF_RelDirList()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 4-52. Returns for CommonService Applib API **AppLibDCF_RelDirList()**.

Example:

None

See Also:

None

4.2.28 AppLibDCF_RelFileList

API Syntax:

```
int AppLibDCF_RelFileList (APPLIB_DCF_HDLR_s * Hdlr, AMP_DCF_DIR_LIST_s * List)
```

Function Description:

- This function is used to refresh DCF and CFS.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.
[in] AMP_DCF_DIR_LIST_s *	List	Address of the file list

Table 4-53. Parameters for CommonService Applib API **AppLibDCF_RelFileList()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 4-54. Returns for CommonService Applib API **AppLibDCF_RelFileList()**.

Example:

None

See Also:

None

4.2.29 AppLibDCF_SetBrowseMode

API Syntax:

UINT32 AppLibDCF_SetBrowseMode (APPLIB_DCF_HDLR_s * Hdlr, APPLIB_DCF_MEDIA_TYPE_e MediaType)

Function Description:

- This function is used to set the browse mode.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s	Hdlr	The AppLibDCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.
[in] APPLIB_DCF_MEDIA_TYPE_e *	MediaType	Media Type return object Id

Table 4-55. Parameters for CommonService Applib API **AppLibDCF_SetBrowseMode()**.

Returns:

None

Example:

None

See Also:

None

4.2.30 AppLibDCF_SetDefaultCfg

API Syntax:

```
void AppLibDCF_SetDefaultCfg (APPLIB_DCF_CFG_s * Config)
```

Function Description:

- This function is used to set the default config data for creating a DCF handler.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_CFG_s *	Config	The address of default config data for creating a DCF handler (APPLIB_DCF_CFG_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.1.1 for more details.

Table 4-56. Parameters for CommonService Applib API **AppLibDCF_SetDefaultCfg()**.

Returns:

None

Example:

None

See Also:

None

4.2.31 AppLibDCF_SetNumberMode

API Syntax:

```
int AppLibDCF_SetNumberMode (APPLIB_DCF_HDLR_s * Hdlr, APPLIB_DCF_NUMBER_MODE_e  
NumberMode, UINT ObjId)
```

Function Description:

- This function is used to set the number mode.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_HDLR_s *	Hdlr	The AppLib DCF handler (APPLIB_DCF_HDLR_s is defined in <code>AppLibDcf.h</code>) Please refer to Section 4.2.2.1 for more details.
[in] APPLIB_DCF_NUMBER_MODE_e	NumberMode	The number mode
[in] UINT	ObjId	Object id of the last object

Table 4-57. Parameters for CommonService Applib API **AppLibDCF_SetNumberMode()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 4-58. Returns for CommonService Applib API **AppLibDCF_SetNumberMode()**.

Example:

None

See Also:

None

5 Display

This chapter explains the display utilities.

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5.1.1 AppLibDisp_ActivateWindow

API Syntax:

int AppLibDisp_ActivateWindow (UINT32 dispChanID, int slot)

Function Description:

- This function is used to activate the window.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	slot	Slot

Table 5-1. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_ActivateWindow()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-2. Returns for SDK6 ARD AppLib Display API **AppLibDisp_ActivateWindow()**.

Example:

None

See Also:

None

5.1.2 AppLibDisp_AddWindow

API Syntax:

```
int AppLibDisp_AddWindow (UINT32 dispChanID, AMP_DISP_WINDOW_CFG_s * config)
```

Function Description:

- This function is used to add a window.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] AMP_DISP_WINDOW_CFG_s *	config	Configuration. Please refer to TBD for more details.

Table 5-3. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_AddWindow()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-4. Returns for SDK6 ARD AppLib Display API **AppLibDisp_AddWindow()**.

Example:

None

See Also:

None

5.1.3 AppLibDisp_CalcPreviewWindowSize

API Syntax:

```
void AppLibDisp_CalcPreviewWindowSize (APPLIB_VOUT_PREVIEW_PARAM_s * prevParam)
```

Function Description:

- This function is used to calculate the preview window size.

Parameters:

Type	Parameter	Description
[in,out] APPLIB_VOUT_PREVIEW_PARAM_s *	prevParam	Configuration. (APPLIB_VOUT_PREVIEW_PARAM_s is found in <code>AppLibDisplay.h</code>) Please refer to Section 5.1.3.1 for more details.

Table 5-5. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_CalcPreviewWindowSize()**.

Returns:

None

Example:

None

See Also:

None

5.1.3.1 AppLibDisp_CalcPreviewWindowSize > APPLIB_VOUT_PREVIEW_PARAM_s

Type	Field	Description
int	AspectRatio	Aspect ratio
UINT32	ChanID	Channel ID
AMP_AREA_s	Preview	Preview size

Table 5-6. Definition of **APPLIB_VOUT_PREVIEW_PARAM_s** for SDK6 ARD AppLib Display API **AppLibDisp_CalcPreviewWindowSize()**.

5.1.4 AppLibDisp_ChanStart

API Syntax:

```
int AppLibDisp_ChanStart (UINT32 dispChanID)
```

Function Description:

- This function is used to start the display channel.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-7. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_ChanStart()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-8. Returns for SDK6 ARD AppLib Display API **AppLibDisp_ChanStart()**.

Example:

None

See Also:

None

5.1.5 AppLibDisp_ChanStop

API Syntax:

int AppLibDisp_ChanStop (UINT32 dispChanID)

Function Description:

- This function is used to stop the display channel.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-9. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_ChanStop()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-10. Returns for SDK6 ARD AppLib Display API **AppLibDisp_ChanStop()**.

Example:

None

See Also:

None

5.1.6 AppLibDisp_CheckChanEnabled

API Syntax:

int AppLibDisp_CheckChanEnabled (UINT32 dispChanID)

Function Description:

- This function is used to check the flag of DChan or FChan.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-11. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_CheckChanEnabled()**.

Returns:

Return	Description
0	Disable
1	Enable

Table 5-12. Returns for SDK6 ARD AppLib Display API **AppLibDisp_CheckChanEnabled()**.

Example:

None

See Also:

None

5.1.7 AppLibDisp_ColorMapping

API Syntax:

int AppLibDisp_ColorMapping (UINT32 dispChanID, UINT32 srcColor, UINT32 dispColor)

Function Description:

- This function is used to setup the color mapping.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] UINT32	srcColor	Source color type
[in] UINT32	dispColor	Display color type

Table 5-13. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_ColorMapping()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-14. Returns for SDK6 ARD AppLib Display API **AppLibDisp_ColorMapping()**.

Example:

None

See Also:

None

5.1.8 AppLibDisp_ConfigMode

API Syntax:

int AppLibDisp_ConfigMode (UINT32 dispChanID, int voutDispMode)

Function Description:

- This function is used to configure the display mode.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	voutDispMode	Display mode

Table 5-15. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_ConfigMode()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-16. Returns for SDK6 ARD AppLib Display API **AppLibDisp_ConfigMode()**.

Example:

None

See Also:

None

5.1.9 AppLibDisp_DeactivateWindow

API Syntax:

int AppLibDisp_DeactivateWindow (UINT32 dispChanID, int slot)

Function Description:

- This function is used to deactivate the window.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	slot	Slot

Table 5-17. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_DeactivateWindow()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-18. Returns for SDK6 ARD AppLib Display API **AppLibDisp_DeactivateWindow()**.

Example:

None

See Also:

None

5.1.10 AppLibDisp_DeleteWindow

API Syntax:

int AppLibDisp_DeleteWindow (UINT32 dispChanID, int slot)

Function Description:

- This function is used to delete the window.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	slot	Slot

Table 5-19. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_DeleteWindow()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-20. Returns for SDK6 ARD AppLib Display API **AppLibDisp_DeleteWindow()**.

Example:

None

See Also:

None

5.1.11 AppLibDisp_DisableChan

API Syntax:

int AppLibDisp_DisableChan (UINT32 dispChanID)

Function Description:

- This function is used to disable the flag of DChan or FChan.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-21. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_DisableChan()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-22. Returns for SDK6 ARD AppLib Display API **AppLibDisp_DisableChan()**.

Example:

None

See Also:

None

5.1.12 AppLibDisp_EnableChan

API Syntax:

int AppLibDisp_EnableChan (UINT32 dispChanID)

Function Description:

- This function is used to enable the flag of DChan or FChan.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-23. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_EnableChan()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-24. Returns for SDK6 ARD AppLib Display API **AppLibDisp_EnableChan()**.

Example:

None

See Also:

None

5.1.13 AppLibDisp_FlushWindow

API Syntax:

int AppLibDisp_FlushWindow (UINT32 dispChanID)

Function Description:

- This function is used to update the window configuration.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-25. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_FlushWindow()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-26. Returns for SDK6 ARD AppLib Display API **AppLibDisp_FlushWindow()**.

Example:

None

See Also:

None

5.1.14 AppLibDisp_Get3DMode

API Syntax:

```
int AppLibDisp_Get3DMode (UINT32 dispChanID)
```

Function Description:

- This function is used to get the 3D output mode.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-27. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_Get3DMode()**.

Returns:

Return	Description
#	3D output mode

Table 5-28. Returns for SDK6 ARD AppLib Display API **AppLibDisp_Get3DMode()**.

Example:

None

See Also:

None

5.1.15 AppLibDisp_GetChanConfig

API Syntax:

```
int AppLibDisp_GetChanConfig (UINT32 dispChanID, AMP_DISP_DEV_CFG_s * config)
```

Function Description:

- This function is used to uget the information if the display configuration.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[out] AMP_DISP_DEV_CFG_s *	config	The configuration

Table 5-29. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetChanConfig()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-30. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetChanConfig()**.

Example:

None

See Also:

None

5.1.16 AppLibDisp_GetChanID

API Syntax:

int AppLibDisp_GetChanID (UINT32 dispChanID)

Function Description:

- This function is used to get the MW channel id.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-31. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetChanID()**.

Returns:

Return	Description
> = 0	MW channel id
< 0	Failure

Table 5-32. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetChanID()**.

Example:

None

See Also:

None

5.1.17 AppLibDisp_GetColorMapping

API Syntax:

```
int AppLibDisp_GetColorMapping (UINT32 dispChanID, UINT32 * srcColor, UINT32 * dispColor)
```

Function Description:

- This function is used to get the color mapping.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[out] UINT32 *	srcColor	Source color type
[out] UINT32 *	dispColor	Display color type

Table 5-33. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetColorMapping()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-34. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetColorMapping()**.

Example:

None

See Also:

None

5.1.18 AppLibDisp_GetDeviceID

API Syntax:

```
int AppLibDisp_GetDeviceID (UINT32 dispChanID)
```

Function Description:

- This function is used to get the device ID.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-35. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetDeviceID()**.

Returns:

Return	Description
#	Device ID

Table 5-36. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetDeviceID()**.

Example:

None

See Also:

None

5.1.19 AppLibDisp_GetDeviceIDInfo

API Syntax:

```
int AppLibDisp_GetDeviceIDInfo (UINT32 dispChanID, AMP_DISP_INFO_s * dispDev)
```

Function Description:

- This function is used to get the information of the display device.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[out] AMP_DISP_INFO_s *	dispDev	The device's information

Table 5-37. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetDeviceIDInfo()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-38. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetDeviceIDInfo()**.

Example:

None

See Also:

None

5.1.20 AppLibDisp_GetDispMode

API Syntax:

```
int AppLibDisp_GetDispMode (UINT32 dispChanID)
```

Function Description:

- This function is used to get the display mode.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-39. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetDispMode()**.

Returns:

Return	Description
#	Display mode
0xFFFF	Error

Table 5-40. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetDispMode()**.

Example:

None

See Also:

None

5.1.21 AppLibDisp_GetWindowConfig

API Syntax:

int AppLibDisp_GetWindowConfig (UINT32 dispChanID, int slot, AMP_DISP_WINDOW_CFG_s * config)

Function Description:

- This function is used to get the window configuration.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	slot	Slot
[out] AMP_DISP_WINDOW_CFG_s*	config	Configuration

Table 5-41. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetWindowConfig()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-42. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetWindowConfig()**.

Example:

None

See Also:

None

5.1.22 AppLibDisp_GetWindowHandler

API Syntax:

AMP_DISP_WINDOW_HDLR_s * AppLibDisp_GetWindowHandler (UINT32 dispChanID, int slot)

Function Description:

- This function is used to get the window handler.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	slot	Slot

Table 5-43. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetWindowHandler()**.

Returns:

Return	Description
#	Window handler

Table 5-44. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetWindowHandler()**.

Example:

None

See Also:

None

5.1.23 AppLibDisp_GetWindowId

API Syntax:

int AppLibDisp_GetWindowId (UINT32 dispChanID, UINT32 slot)

Function Description:

- This function is used to get the window ID.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] UINT32	slot	Slot ID

Table 5-45. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_GetWindowId()**.

Returns:

Return	Description
> = 0	The window id
< 0	Failure

Table 5-46. Returns for SDK6 ARD AppLib Display API **AppLibDisp_GetWindowId()**.

Example:

None

See Also:

None

5.1.24 AppLibDisp_Init

API Syntax:

int AppLibDisp_Init (void)

Function Description:

- This function is used to initialize the display.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-47. Returns for SDK6 ARD AppLib Display API **AppLibDisp_Init()**.

Example:

None

See Also:

None

5.1.25 AppLibDisp_InitWindow

API Syntax:

int AppLibDisp_InitWindow (void)

Function Description:

- This function is used to initialize the window module.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-48. Returns for SDK6 ARD AppLib Display API **AppLibDisp_InitWindow()**.

Example:

None

See Also:

None

5.1.26 AppLibDisp_RotateVideo

API Syntax:

int AppLibDisp_RotateVideo (UINT32 dispChanID, int mode)

Function Description:

- This function is used to rotate the display.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	mode	Mode

Table 5-49. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_RotateVideo()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-50. Returns for SDK6 ARD AppLib Display API **AppLibDisp_RotateVideo()**.

Example:

None

See Also:

None

5.1.27 AppLibDisp_SelectDevice

API Syntax:

int AppLibDisp_SelectDevice (UINT32 dispChanID, UINT32 dispDevId)

Function Description:

- This function is used to check the device type.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] UINT32	dispDevId	Display device id

Table 5-51. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SelectDevice()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-52. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SelectDevice()**.

Example:

None

See Also:

None

5.1.28 AppLibDisp_Set3DMode

API Syntax:

int AppLibDisp_Set3DMode (UINT32 dispChanID, UINT32 mode)

Function Description:

- This function is used to set the 3D output mode.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] UINT32	mode	3D output mode

Table 5-53. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_Set3DMode()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-54. Returns for SDK6 ARD AppLib Display API **AppLibDisp_Set3DMode()**.

Example:

None

See Also:

None

5.1.29 AppLibDisp_SetColorMapping

API Syntax:

int AppLibDisp_SetColorMapping (UINT32 dispChanID, UINT32 srcColor, UINT32 dispColor)

Function Description:

- This function is used to set the color mapping.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] UINT32	srcColor	Source color type
[in] UINT32	dispColor	Display color type

Table 5-55. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SetColorMapping()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-56. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SetColorMapping()**.

Example:

None

See Also:

None

5.1.30 AppLibDisp_SetDispDimension

API Syntax:

int AppLibDisp_SetDispDimension (UINT32 dispChanID, UINT8 outputDimension)

Function Description:

- This function is used to set the display dimension.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] UINT32	outputDimension	Output dimension

Table 5-57. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SetDispDimension()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-58. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SetDispDimension()**.

Example:

None

See Also:

None

5.1.31 AppLibDisp_SetLcdBootReprogram

API Syntax:

int AppLibDisp_SetLcdBootReprogram (UINT32 dispChanID)

Function Description:

- This function is used for the flag that reprograms the LCD after booting the sytem.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-59. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SetLcdBootReprogram()**.

Example:

None

See Also:

None

5.1.32 AppLibDisp_SetupChan

API Syntax:

int AppLibDisp_SetupChan (UINT32 dispChanID)

Function Description:

- This function is used to setup the config.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-60. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SetupChan()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-61. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SetupChan()**.

Example:

None

See Also:

None

5.1.33 AppLibDisp_SetupColorMapping

API Syntax:

int AppLibDisp_SetupColorMapping (UINT32 dispChanID)

Function Description:

- This function is used to setup the color mapping.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID

Table 5-62. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SetupColorMapping()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-63. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SetupColorMapping()**.

Example:

None

See Also:

None

5.1.34 AppLibDisp_SetWindowConfig

API Syntax:

int AppLibDisp_SetWindowConfig (UINT32 dispChanID int slot, AMP_DISP_WINDOW_CFG_s * config)

Function Description:

- This function is used to set the window configuration.

Parameters:

Type	Parameter	Description
[in] UINT32	dispChanID	Channel ID
[in] int	slot	Slot
[in] AMP_DISP_WINDOW_CFG_s *	config	Configuration. Please refer to TBD for more details.

Table 5-64. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SetWindowConfig()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-65. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SetWindowConfig()**.

Example:

None

See Also:

None

5.1.35 AppLibDisp_SwitchDualVoutType

API Syntax:

```
int AppLibDisp_SwitchDualVoutType (int * fchanReturnValue, int * dchanReturnValue)
```

Function Description:

- This function is used to switch the dual-vout type NTSC<->PAL.

Parameters:

Type	Parameter	Description
[out] int *	fchanReturnValue	The return value of FChan
[out] int *	dchanReturnValue	The return value of DChan

Table 5-66. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SwitchDualVoutType()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-67. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SwitchDualVoutType()**.

Example:

None

See Also:

None

5.1.36 AppLibDisp_SwitchSystemType

API Syntax:

```
int AppLibDisp_SwitchSystemType (int voutDispMode)
```

Function Description:

- This function is used to switch the system type NTSC<->PAL.

Parameters:

Type	Parameter	Description
[in] int	voutDispMode	Display mode

Table 5-68. Parameters for SDK6 ARD AppLib Display API **AppLibDisp_SwitchSystemType()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-69. Returns for SDK6 ARD AppLib Display API **AppLibDisp_SwitchSystemType()**.

Example:

None

See Also:

None

5.1.37 AppLibDisp_TriggerLcdBooReprogram

API Syntax:

int AppLibDisp_TriggerLcdBooReprogram (void)

Function Description:

- This function is used to trigger the flow that reprogramming the LCD after booting the system.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 5-70. Returns for SDK6 ARD AppLib Display API **AppLibDisp_TriggerLcdBooReprogram()**.

Example:

None

See Also:

None

6 Editor

6.1 Editor: Overview

This chapter provides the APIs for Editor, including:

- ApplibEditor_Function
- ApplibEditor_Message

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6.2 Editor: ApplibEditor_Function

This section provides the APIs for the Editor related function implementation.

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6.2.1 AppLibEditor_EditComplete

API Syntax:

int AppLibEditor_EditComplete (void)

Function Description:

- This function is used to release the handler after performing editor.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 6-1. Returns for SDK6 ARD AppLib Editor API **AppLibEditor_EditComplete()**.

Example:

None

See Also:

None

6.2.2 AppLibEditor_Init

API Syntax:

int AppLibEditor_Init (void)

Function Description:

- This function is used to initialize the editor module.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 6-2. Returns for SDK6 ARD AppLib Editor API **AppLibEditor_Init()**.

Example:

None

See Also:

None

6.2.3 AppLibEditor_MovieCrop2New

API Syntax:

```
int AppLibEditor_MovieCrop2New (UINT32 nTimeStart, UINT32 nTimeEnd, char * FileNameIn, char *
FileNameOut)
```

Function Description:

- This function is used to crop the clips to a new file.

Parameters:

Type	Parameter	Description
[in] UINT32	nTimeStart	Clip start time (ms)
[in] UINT32	nTimeEnd	Clip end time (ms)
[in] char *	FileNameIn	Input File name
[in] char *	FileNameOut	Output File name

Table 6-3. Parameters for SDK6 ARD AppLib Editor API **AppLibEditor_MovieCrop2New()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 6-4. Returns for SDK6 ARD AppLib Editor API **AppLibEditor_MovieCrop2New()**.

Example:

None

See Also:

None

6.2.4 AppLibEditor_MovieMerge

API Syntax:

```
int AppLibEditor_MovieMerge (char * FileNameIn1, char * FileNameIn2)
```

Function Description:

- This function is used to crop the clips to a new file.

Parameters:

Type	Parameter	Description
[in] char *	FileNameIn1	File 1 to merge
[in] char *	FileNameIn2	File 2 to merge

Table 6-5. Parameters for SDK6 ARD AppLib Editor API **AppLibEditor_MovieMerge()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 6-6. Returns for SDK6 ARD AppLib Editor API **AppLibEditor_MovieMerge()**.

Example:

None

See Also:

None

6.2.5 AppLibEditor_MovieRecover

API Syntax:

```
int AppLibEditor_MovieRecover (char * fileName)
```

Function Description:

- This function is used to recover the video clips.

Parameters:

Type	Parameter	Description
[in] char *	fileName	File name

Table 6-7. Parameters for SDK6 ARD AppLib Editor API **AppLibEditor_MovieRecover()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 6-8. Returns for SDK6 ARD AppLib Editor API **AppLibEditor_MovieRecover()**.

Example:

None

See Also:

None

6.2.6 AppLibEditor_MovieRecoverComplete

API Syntax:

int AppLibEditor_MovieRecoverComplete (void)

Function Description:

- This function is used to release the resource when the system finishes recovering the clip.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 6-9. Returns for SDK6 ARD AppLib Editor API **AppLibEditor_MovieRecoverComplete()**.

Example:

None

See Also:

None

7 Format

7.1 Format: Overview

This chapter describes the APIs for the following modules:

- ApplibFormat
 - MW format utility
- ApplibFormat_DemuxExif
 - EXIF demux
- ApplibFormat_DemuxMp4
 - Mp4 demux
- ApplibFormat_Message
 - Format related message
- ApplibFormat_MuxerManager
 - Muxer manager
- ApplibFormat_Muxer
 - Muxer format
- ApplibFormat_PrecMux
 - Pre-record mux flow implementation

7.2 Format: MW Format Utility

This section provides the APIs for the MW Format Utility.

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7.2.1 AppLibFormat_DemuxerInit

API Syntax:

int AppLibFormat_DemuxerInit (void)

Function Description:

- This function is used to initialize the demuxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-1. Returns for SDK6 ARD AppLib Format API **AppLibFormat_DemuxerInit()**.

Example:

None

See Also:

None

7.2.2 AppLibFormat_GetFileFormat

API Syntax:

APPLIB_FILE_FORMAT_e AppLibFormat_GetFileFormat (const char * fn)

Function Description:

- This function is used to get the file format based on the file name extension.

Parameters:

Type	Parameter	Description
[in] const char *	fn	File name

Table 7-2. Parameters for SDK6 ARD AppLib Format API **AppLibFormat_GetFileFormat()**.

Returns:

Return	Description
#	Enumeration of file format

Table 7-3. Returns for SDK6 ARD AppLib Format API **AppLibFormat_GetFileFormat()**.

Example:

None

See Also:

None

7.2.3 AppLibFormat_GetMediaInfo

API Syntax:

```
int AppLibFormat_GetMediaInfo (char * fn, APPLIB_MEDIA_INFO_s * mediaInfo )
```

Function Description:

- This function is used to determine the type of media information (Video, image or sound) by file-name extension.

Parameters:

Type	Parameter	Description
[in] char *	fn	File name
[in] APPLIB_MEDIA_INFO_s *	mediaInfo	Media information

Table 7-4. Parameters for SDK6 ARD AppLib Format API **AppLibFormat_GetMediaInfo()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-5. Returns for SDK6 ARD AppLib Format API **AppLibFormat_GetMediaInfo()**.

Example:

None

See Also:

None

7.2.4 AppLibFormat_Init

API Syntax:

int AppLibFormat_Init (void)

Function Description:

- This function is used to initialize the format module.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-6. Returns for SDK6 ARD AppLib Format API **AppLibFormat_Init()**.

Example:

None

See Also:

None

7.2.5 AppLibFormat_MuxerInit

API Syntax:

int AppLibFormat_MuxerInit (void)

Function Description:

- This function is used to initialize the muxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-7. Returns for SDK6 ARD AppLib Format API **AppLibFormat_MuxerInit()**.

Example:

None

See Also:

None

7.2.6 ApplibFormatLib_AdjustDTS

API Syntax:

int ApplibFormatLib_AdjustDTS (AMP_MOVIE_INFO_s * movie)

Function Description:

- This function is used to format library adjust DTS.

Parameters:

Type	Parameter	Description
[in] APPLIB_MOVIE_INFO_s *	movie	Movie information

Table 7-8. Parameters for SDK6 ARD AppLib Format API **ApplibFormatLib_AdjustDTS()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-9. Returns for SDK6 ARD AppLib Format API **ApplibFormatLib_AdjustDTS()**.

Example:

None

See Also:

None

7.2.7 ApplibFormatLib_GetDefaultTrack

API Syntax:

AMP_MEDIA_TRACK_INFO_s* **ApplibFormatLib_GetDefaultTrack** (AMP_MEDIA_INFO_s * media, UINT8 trackType)

Function Description:

- This function is used to format library to get the default track.

Parameters:

Type	Parameter	Description
[in] APPLIB_MEDIA_INFO_s *	media	Media information
[in] UINT8	trackType	Track type

Table 7-10. Parameters for SDK6 ARD AppLib Format API **ApplibFormatLib_GetDefaultTrack()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-11. Returns for SDK6 ARD AppLib Format API **ApplibFormatLib_GetDefaultTrack()**.

Example:

None

See Also:

None

7.2.8 ApplibFormatLib_GetShortestTrack

API Syntax:

AMP_MEDIA_TRACK_INFO_s* ApplibFormatLib_GetShortestTrack (AMP_MEDIA_INFO_s * media)

Function Description:

- This function is used to format library to get the shortest track.

Parameters:

Type	Parameter	Description
[in] APPLIB_MEDIA_INFO_s *	media	Media information

Table 7-12. Parameters for SDK6 ARD AppLib Format API **ApplibFormatLib_GetShortestTrack()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-13. Returns for SDK6 ARD AppLib Format API **ApplibFormatLib_GetShortestTrack()**.

Example:

None

See Also:

None

7.2.9 ApplibFormatLib_ResetMuxMediaInfo

API Syntax:

int ApplibFormatLib_ResetMuxMediaInfo (AMP_MEDIA_INFO_s * media)

Function Description:

- This function is used to reset the muxer media information.

Parameters:

Type	Parameter	Description
[in] APPLIB_MEDIA_INFO_s *	media	Media information

Table 7-14. Parameters for SDK6 ARD AppLib Format API **ApplibFormatLib_ResetMuxMediaInfo()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-15. Returns for SDK6 ARD AppLib Format API **ApplibFormatLib_ResetMuxMediaInfo()**.

Example:

None

See Also:

None

7.2.10 ApplibFormatLib_ResetPTS

API Syntax:

```
void ApplibFormatLib_ResetPTS (AMP_MEDIA_TRACK_INFO_s * track)
```

Function Description:

- This function is used to format the library to reset PTS.

Parameters:

Type	Parameter	Description
[in] APPLIB_MEDIA_TRACK_INFO_s *	track	Media track information

Table 7-16. Parameters for SDK6 ARD AppLib Format API **ApplibFormatLib_ResetPTS()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-17. Returns for SDK6 ARD AppLib Format API **ApplibFormatLib_ResetPTS()**.

Example:

None

See Also:

None

7.2.11 ApplibFormatLib_RestoreDTS

API Syntax:

```
int ApplibFormatLib_RestoreDTS (AMP_MEDIA_INFO_s * media)
```

Function Description:

- This function is used to format the library to restore PTS.

Parameters:

Type	Parameter	Description
[in] APPLIB_MEDIA_INFO_s *	media	Media information

Table 7-18. Parameters for SDK6 ARD AppLib Format API **ApplibFormatLib_RestoreDTS()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-19. Returns for SDK6 ARD AppLib Format API **ApplibFormatLib_RestoreDTS()**.

Example:

None

See Also:

None

7.2.12 AppLibFormatMuxExif_Close

API Syntax:

int AppLibFormatMuxExif_Close (void)

Function Description:

- This function is used to close the EXIF muxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-20. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxExif_Close()**.

Example:

None

See Also:

None

7.2.13 AppLibFormatMuxExif_Start

API Syntax:

int AppLibFormatMuxExif_Start (void)

Function Description:

- This function is used to start the EXIF muxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-21. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxExif_Start()**.

Example:

None

See Also:

None

7.2.14 AppLibFormatMuxMp4_Close

API Syntax:

int AppLibFormatMuxMp4_Close (void)

Function Description:

- This function is used to close the Mp4 muxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-22. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMp4_Close()**.

Example:

None

See Also:

None

7.2.15 AppLibFormatMuxMp4_ForceSplit

API Syntax:

int AppLibFormatMuxMp4_ForceSplit (int SplitTime)

Function Description:

- This function is used to force to split the function.

Parameters:

Type	Parameter	Description
[in] int	SplitTime	Set the maximum duration to force clip split

Table 7-23. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMp4_ForceSplit()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-24. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMp4_ForceSplit()**.

Example:

None

See Also:

None

7.2.16 AppLibFormatMuxMp4_SetAutoSplitFileType

API Syntax:

int AppLibFormatMuxMp4_SetAutoSplitFileType (UINT32 Type)

Function Description:

- This function is used to create the split file.

Parameters:

Type	Parameter	Description
[in] UINT32	Type	By AutoSplitType create split file

Table 7-25. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMp4_SetAutoSplitFileType()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-26. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMp4_SetAutoSplitFileType()**.

Example:

None

See Also:

None

7.2.17 AppLibFormatMuxMp4_Start

API Syntax:

int AppLibFormatMuxMp4_Start (UINT32 Type)

Function Description:

- This function is used to start the Mp4 muxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-27. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMp4_Start()**.

Example:

None

See Also:

None

7.3 Format: `ApplibFormat_DemuxExif`

This section describes the EXIF demux.

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7.3.1 AppLibFormatDemuxExif_Feed

API Syntax:

```
int AppLibFormatDemuxExif_Feed (void * codecHdlr, char * Fn, UINT8 ImageSource, void * RawBuf,  
UINT32 SizeRawBuf, UINT8 MPOImage, UINT8 MPOIdx, UINT32 * ImageWidth, UINT32 * ImageHeigh)
```

Function Description:

- This function is used to feed the image into raw buffer.

Parameters:

Type	Parameter	Description
[in] void *	codecHdlr	Pointer to the still decode handler
[in] char *	Fn	File name. Full path of an image
[in] UINT8	ImageSource	The decode source of file. 0: Fullview 1: Thumbnail 2: Scrennail
[in] void *	RawBuf	Address of raw buffer
[in] UINT32	SizeRawBuf	Size of raw buffer
[in] UINT8	MPOImage	MPO Image
[in] UINT8	MPOIdx	MPO Index
[out] UINT32 *	ImageWidth	Width of the image
[out] UINT32 *	ImageHeight	Height of the image

Table 7-28. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxExif_Feed()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-29. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxExif_Feed()**.

Example:

None

See Also:

None

7.3.2 AppLibFormatDemuxExif_Init

API Syntax:

int AppLibFormatDemuxExif_Init (void)

Function Description:

- This function is used for initialization of the EXIF demuxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-30. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxExif_Init()**.

Example:

None

See Also:

None

7.4 Format: ApplibFormat_DemuxMp4

This section describes the Mp4 demux.

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7.4.1 AppLibFormatDemuxMp4_Close

API Syntax:

int AppLibFormatDemuxMp4_Close (const UINT8 isEraseFifo)

Function Description:

- This function is used to close the Mp4 demuxer and erase FIFO data for vide decode only.

Parameters:

Type	Parameter	Description
[in] const UINT8	isEraseFifo	Whether erase the data in video FIFO and reset read/write

Table 7-31. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Close()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-32. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Close()**.

Example:

None

See Also:

None

7.4.2 AppLibFormatDemuxMp4_DemuxOnDataRequest

API Syntax:

int AppLibFormatDemuxMp4_DemuxOnDataRequest (void)

Function Description:

- This function is used to request the demuxer to feed more data.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-33. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_DemuxOnDataRequest()**.

Example:

None

See Also:

None

7.4.3 AppLibFormatDemuxMp4_Feed

API Syntax:

```
int AppLibFormatDemuxMp4_Feed (void * codecHdlr, char * Fn, void * RawBuf, UINT32 SizeRawBuf,
UINT32 * ImageWidth, UINT32 * ImageHeigh)
```

Function Description:

- This function is used to feed the data into the raw buffer.

Parameters:

Type	Parameter	Description
[in] void *	codecHdlr	Pointer to the still decode handler
[in] char *	Fn	File name. Full path of a video or image
[in] void *	RawBuf	Address of raw buffer
[in] UINT32	SizeRawBuf	Size of raw buffer
[out] UINT32 *	ImageWidth	Width of the image
[out] UINT32 *	ImageHeight	Height of the image

Table 7-34. Parameters for SDK6 ARD AppLib Format API **AppLib AppLibFormatDemuxMp4_Feed()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-35. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxExif_Feed()**.

Example:

None

See Also:

None

7.4.4 AppLibFormatDemuxMp4_GetMovieSize

API Syntax:

```
int AppLibFormatDemuxMp4_GetMovieSize (UINT32 * Width, UINT32 * Heigh)
```

Function Description:

- This function is used to set the information of the codec handler.

Parameters:

Type	Parameter	Description
[out] UINT32 *	Width	Width of the video
[out] UINT32 *	Height	Height of the video

Table 7-36. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_GetMovieSize()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-37. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_GetMovieSize()**.

Example:

None

See Also:

None

7.4.5 AppLibFormatDemuxMp4_Init

API Syntax:

int AppLibFormatDemuxMp4_Init (void)

Function Description:

- This function is used for the initialization of the Mp4 demuxer.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-38. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Init()**.

Example:

None

See Also:

None

7.4.6 AppLibFormatDemuxMp4_Open

API Syntax:

int AppLibFormatDemuxMp4_Open (char * Fn, UINT32 StartTime, UINT8 Direction, UINT32 Speed, UINT8 isErase, UINT32 timeOffset, UINT8 isFeedEos, AMP_CALLBACK_fcbEventHdlr)

Function Description:

- This function is used to open the Mp4 demuxer.

Parameters:

Type	Parameter	Description
[in] char *	Fn	File name
[in] UINT32	StartTime	Start time
[in] UINT8	Direction	Play direction
[in] UINT32	Speed	Play speed
[in] UINT8	isErase	Whether erase the data processed before and reset
[in] UINT32	timeOffset	Time offset (in ms) for each frame
[in] UINT8	isFeedEos	Feed EOS to DSP at the end of the file
[in] AMP_CALLBACK_f	cbEventHdlr	Callback event handler

Table 7-39. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Open()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-40. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Open()**.

Example:

None

See Also:

None

7.4.7 AppLibFormatDemuxMp4_OpenStart

API Syntax:

int AppLibFormatDemuxMp4_OpenStart (char * Fn, UINT32 StartTime, UINT8 Direction, UINT32 Speed, UINT8 isErase, UINT32 timeOffset, UINT8 isFeedEos, AMP_CALLBACK_fcbEventHdlr)

Function Description:

- This function is used to open and start the Mp4 demuxer.

Parameters:

Type	Parameter	Description
[in] char *	Fn	File name
[in] UINT32	StartTime	Start time
[in] UINT8	Direction	Play direction
[in] UINT32	Speed	Play speed
[in] UINT8	isErase	Whether erase the data processed before and reset
[in] UINT32	timeOffset	Time Offset (in ms) for each frame
[in] UINT8	isFeedEos	Feed EOS to DSP at the end of the file
[in] AMP_CALLBACK_f	cbEventHdlr	Callback event handler

Table 7-41. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_OpenStart()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-42. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_OpenStart()**.

Example:

None

See Also:

None

7.4.8 AppLibFormatDemuxMp4_SetCodecHdlrInfo

API Syntax:

int AppLibFormatDemuxMp4_SetCodecHdlrInfo (void * vidCodecHdlr, void * audCodecHdlr, void * vidRawBuf, UINT32 szVidRawBuf, void * audRawBuf, UINT32 szAudRawBuf)

Function Description:

- This function is used to set information of codec handler.

Parameters:

Type	Parameter	Description
[in] void *	vidCodecHdlr	Pointer to the video or the still decode handler
[in] void *	audCodecHdlr	Pointer to the audio decode handler
[in] void *	vidRawBuf	Address of the video raw buffer
[in] UINT32	szVidRawBuf	Size of the video raw buffer
[in] void *	audRawBuf	Address of the audio raw buffer
[in] UINT32 *	szAudRawBuf	Size of the audio raw buffer

Table 7-43. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_SetCodecHdlrInfo()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-44. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_SetCodecHdlrInfo()**.

Example:

None

See Also:

None

7.4.9 AppLibFormatDemuxMp4_Start

API Syntax:

int AppLibFormatDemuxMp4_Start (UINT32 startTime, UINT8 direction, UINT32 speed)

Function Description:

- This function is used to start the Mp4 demuxer.

Parameters:

Type	Parameter	Description
[in] UINT32	startTime	Start time
[in] UINT8	direction	Play direction
[in] UINT32	speed	Play speed

Table 7-45. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Start()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-46. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Start ()**.

Example:

None

See Also:

None

7.4.10 AppLibFormatDemuxMp4_StillDec_Close

API Syntax:

int AppLibFormatDemuxMp4_StillDec_Close (void)

Function Description:

- This function is used to close the Mp4 demuxer without erasing the FIFO data. For still decode only.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-47. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_StillDec_Close()**.

Example:

None

See Also:

None

7.4.11 AppLibFormatDemuxMp4_Stop

API Syntax:

int AppLibFormatDemuxMp4_Stop (const UINT8 isEraseFifo)

Function Description:

- This function is used to stop the demuxer.

Parameters:

Type	Parameter	Description
[in] const UINT8	isEraseFifo	Whether erase the data in video FIFO and reset read/write

Table 7-48. Parameters for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Close()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-49. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_Stop()**.

Example:

None

See Also:

None

7.4.12 AppLibFormatDemuxMp4_CanRequestData

API Syntax:

int AppLibFormatDemuxMp4_CanRequestData (void)

Function Description:

- This function is used to request data.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-50. Returns for SDK6 ARD AppLib Format API **AppLibFormatDemuxMp4_CanRequestData()**.

Example:

None

See Also:

None

7.5 Format: ApplibFormat_Message

This section explains the format related messages of the APIs of ApplibFormat_Message.

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7.6 Format: `ApplibFormat_MuxerManager`

This section explains the APIs of the muxer manager.

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7.6.1 AppLibFormatMuxMgr_DataEos

API Syntax:

```
int AppLibFormatMuxMgr_DataEos (void * handler, void * info)
```

Function Description:

- This function is used to receive the data of the EOS event.

Parameters:

Type	Parameter	Description
[in] void *	handler	Handler
[in] void *	info	Information

Table 7-51. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_DataEos()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-52. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_DataEos()**.

Example:

None

See Also:

None

7.6.2 AppLibFormatMuxMgr_DataReady

API Syntax:

```
int AppLibFormatMuxMgr_DataReady (void * handler, void * info)
```

Function Description:

- This function is used to receive the data of the ready event.

Parameters:

Type	Parameter	Description
[in] void *	handler	Handler
[in] void *	info	Information

Table 7-53. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_DataReady()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-54. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_DataReady()**.

Example:

None

See Also:

None

7.6.3 AppLibFormatMuxMgr_Init

API Syntax:

int AppLibFormatMuxMgr_Init (void)

Function Description:

- This function is used for the initialization of the muxer manager.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-55. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_Init()**.

Example:

None

See Also:

None

7.6.4 AppLibFormatMuxMgr_MuxEnd

API Syntax:

```
int AppLibFormatMuxMgr_MuxEnd (void * handler, void * info)
```

Function Description:

- This function is for muxer end.

Parameters:

Type	Parameter	Description
[in] void *	handler	FIFO handler
[in] void *	info	Information

Table 7-56. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_MuxEnd()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-57. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_MuxEnd()**.

Example:

None

See Also:

None

7.6.5 AppLibFormatMuxMgr_MuxStart

API Syntax:

int AppLibFormatMuxMgr_MuxStart (void * handler, void * info)

Function Description:

- This function is for muxer start.

Parameters:

Type	Parameter	Description
[in] void *	handler	FIFO handler
[in] void *	info	Information

Table 7-58. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_MuxStart()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-59. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_MuxStart()**.

Example:

None

See Also:

None

7.6.6 AppLibFormatMuxMgr_RegMuxHandler

API Syntax:

```
int AppLibFormatMuxMgr_RegMuxHandler (APPLIB_MUX_MGR_HANDLER_s * muxerHandler)
```

Function Description:

- This function is used to register muxer handler.

Parameters:

Type	Parameter	Description
[in] APPLIB_MUX_MGR_HANDLER_s *	muxerhandler	Muxer handler. Please refer to Section 7.6.6.1 below for more details.

Table 7-60. Parameters for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_RegMuxHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 7-61. Returns for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_RegMuxHandler()**.

Example:

None

See Also:

None

7.6.6.1 AppLibFormatMuxMgr_RegMuxHandler > APPLIB_MUX_MGR_HANDLER_s

Type	field	Description
int*	MuxerInit	The initial function of muxer
int*	MuxerOpen	The function to open muxer
int*	MuxerClose	The function to close muxer
UINT16	DataReadyNum	The number of data ready
UINT16	Used	The flag that this handler is used

Table 7-62. Definition of **APPLIB_MUX_MGR_HANDLER_s** for SDK6 ARD AppLib Format API **AppLibFormatMuxMgr_RegMuxHandler()**.

7.7 Format: ApplibFormat_Muxer

This section explains the APIs for muxer format.

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7.7.1 ApplibMuxer_Create

API Syntax:

```
int ApplibMuxer_Create (APPLIB_MUXER_PIPE_CFG_s * Config, APPLIB_MUXER_PIPE_HDLR_s **  
Pipe)
```

Function Description:

- This function is used to create a mux pipe.

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_PIPE_CFG_s *	Config	The config of the muxer. Please refer to Section 7.7.1.1 below for more details.
[out] APPLIB_MUXER_PIPE_HDLR_s **	Pipe	The double pointer to get the pipe. Please refer to Section 7.7.1.2 below for more details.

Table 7-63. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-64. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

Example:

None

See Also:

None

7.7.1.1 ApplibMuxer_Create > APPLIB_MUXER_PIPE_CFG_s

Type	Field	Description
AMP_MUX_FORMAT_HDLR_s*	Format [AMP_MUXER_MAX_FORMAT_PER_PIPE]	Formats. TBD
UINT8	FormatCount	Number of muxer formats
APPLIB_MUXER_GET_NAME_FP	GetName	The callback function to get the filename
APPLIB_MUXER_MEDIA_CFG_s	MediaCfg [AMP_MUXER_MAX_FORMAT_PER_PIPE]	Media information of each format. Please refer to Section 7.7.1.3 below for more details.
APPLIB_MUXER_ON_EVENT_FP	OnEvent	The callback function to pass event to the APP
APPLIB_MUXER_AUTO_SPLIT_CFG_s	SplitCfg	Split config. Please refer to Section 7.7.1.4 below for more details.
APPLIB_MUXER_TASK_CFG_s	TaskCfg	Task config. Please refer to Section 7.7.1.5 below for more details.

Table 7-65. Definition of **APPLIB_MUXER_PIPE_CFG_s** for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

7.7.1.2 ApplibMuxer_Create > APPLIB_MUXER_PIPE_HDLR_s

Type	Field	Description
UINT8	Resv [4]	Reserved

Table 7-66. Definition of **APPLIB_MUXER_PIPE_HDLR_s** for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

7.7.1.3 ApplibMuxer_Create > APPLIB_MUXER_MEDIA_CFG_s

Type	Field	Description
union { ... }	Info	Information
UINT8	MediaType	Media type
WCHAR APPLIB_MUXER_MEDIA_CFG_s	Name [MAX_FILENAME_LENGTH]	sz name

Table 7-67. Definition of **APPLIB_MUXER_MEDIA_CFG_s** for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

7.7.1.4 ApplibMuxer_Create > APPLIB_MUXER_AUTO_SPLIT_CFG_s

Type	Field	Description
UINT32	MaxDuration	The maximum duration of a clip, would trigger auto split
UINT64	MaxSize	The maximum size of a clip, would trigger auto split
UINT8	SplitMode	APPLIB_MUXER_SPLIT_MODE_e

Table 7-68. Definition of **APPLIB_MUXER_AUTO_SPLIT_CFG_s** for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

7.7.1.5 ApplibMuxer_Create > APPLIB_MUXER_TASK_CFG_s

Type	Field	Description
BOOL8	NewTask	New task or not
UINT32	TaskPriority	The task priority (if bNewTask is enabled)

Table 7-69. Definition of **APPLIB_MUXER_TASK_CFG_s** for SDK6 ARD AppLib Format API **ApplibMuxer_Create()**.

7.7.2 ApplibMuxer_Delete

API Syntax:

int ApplibMuxer_Delete (APPLIB_MUXER_PIPE_CFG_s * Pipe)

Function Description:

- This function is used to delete a muxer pipe.

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_PIPE_HDLR_s *	Pipe	The muxer pipe to close. Please refer to Section 7.7.1.2 below for more details.

Table 7-70. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_Delete()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-71. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_Delete()**.

Example:

None

See Also:

None

7.7.3 ApplibMuxer_GetDefaultCfg

API Syntax:

int ApplibMuxer_GetDefaultCfg (APPLIB_MUXER_PIPE_CFG_s * Config)

Function Description:

- This function is used to get the default muxer pipe config.

Parameters:

Type	Parameter	Description
[out] APPLIB_MUXER_PIPE_CFG_s *	Config	The buffer to get the default config. Please refer to Section 7.7.1.1 for more details.

Table 7-72. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_GetDefaultCfg()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-73. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_GetDefaultCfg()**.

Example:

None

See Also:

None

7.7.4 ApplibMuxer_GetInitDefaultCfg

API Syntax:

int ApplibMuxer_GetInitDefaultCfg (APPLIB_MUXER_INIT_CFG_s * Config)

Function Description:

- This function is used to get the default muxer manager config.

Parameters:

Type	Parameter	Description
[out] APPLIB_MUXER_INIT_CFG_s *	Config	The buffer to get the default config. Please refer to Section 7.7.4.1 below for details.

Table 7-74. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_GetInitDefaultCfg()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-75. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_GetInitDefaultCfg()**.

Example:

None

See Also:

None

7.7.4.1 ApplibMuxer_GetInitDefaultCfg > APPLIB_MUXER_INIT_CFG_s

Type	Field	Description
UINT8 *	Buffer	Buffer
UINT32	BufferSize	BufferSize

Table 7-76. Definition **APPLIB_MUXER_INIT_CFG_s** for SDK6 ARD AppLib Format API **ApplibMuxer_GetInitDefaultCfg()**.

7.7.5 ApplibMuxer_Init

API Syntax:

int ApplibMuxer_Init (APPLIB_MUXER_INIT_CFG_s * Config)

Function Description:

- This function is used to initiate the core of MMGR.

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_INIT_CFG_s *	Config	The init config. Please refer to Section 7.7.4.1 below for details.

Table 7-77. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_Init()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-78. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_Init()**.

Example:

None

See Also:

None

7.7.6 ApplibMuxer_OnDataReady

API Syntax:

int ApplibMuxer_OnDataReady (AMP_FIFO_HDLR_s * Fifo)

Function Description:

- This function is used to notify that new frames are available.

Parameters:

Type	Parameter	Description
[in] AMP_FIFO_HDLR_s *	Fifo	The FIFO

Table 7-79. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_OnDataReady()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-80. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_OnDataReady()**.

Example:

None

See Also:

None

7.7.7 ApplibMuxer_OnEOS

API Syntax:

int ApplibMuxer_OnEOS (AMP_FIFO_HDLR_s * Fifo)

Function Description:

- This function is used to notify that EOS frames has in buffer.

Parameters:

Type	Parameter	Description
[in] AMP_FIFO_HDLR_s *	Fifo	The FIFO

Table 7-81. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_OnEOS()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-82. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_OnEOS()**.

Example:

None

See Also:

None

7.7.8 ApplibMuxer_Prerecord

API Syntax:

int ApplibMuxer_Prerecord (APPLIB_MUXER_PIPE_HDLR_s * Pipe, UINT32 Length)

Function Description:

- This function is used to start pre-record.

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_PIPE_HDLR_s *	Pipe	The muxer pipe to pre-record
[in] UINT32	Length	The length to pre-record (in ms)

Table 7-83. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_Prerecord()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-84. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_Prerecord()**.

Example:

None

See Also:

None

7.7.9 ApplibMuxer_Start

API Syntax:

int ApplibMuxer_Start (APPLIB_MUXER_PIPE_HDLR_s * Pipe)

Function Description:

- This function is used to start a muxer pipe (no wait complete).

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_PIPE_HDLR_s *	Pipe	The muxer pipe to start. Please refer to Section 7.7.1.2 for more details.

Table 7-85. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_Start()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-86. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_Start()**.

Example:

None

See Also:

None

7.7.10 ApplibMuxer_Stop

API Syntax:

int ApplibMuxer_Stop (APPLIB_MUXER_PIPE_HDLR_s * Pipe)

Function Description:

- This function is used to stop a muxer pipe (stop at the last IDR/I/P).

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_PIPE_HDLR_s *	Pipe	The muxer pipe to stop. Please refer to Section 7.7.1.2 for more details.

Table 7-87. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_Stop()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-88. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_Stop()**.

Example:

None

See Also:

None

7.7.11 ApplibMuxer_WaitComplete

API Syntax:

int ApplibMuxer_WaitComplete (APPLIB_MUXER_PIPE_HDLR_s * Pipe, UINT32, TimeOut)

Function Description:

- This function is used to wait for a pipe to complete (EOS).

Parameters:

Type	Parameter	Description
[in] APPLIB_MUXER_PIPE_HDLR_s *	Pipe	The pipe. Please refer to Section 7.7.1.2 for more details.
UINT32	TimeOut	The timeout value

Table 7-89. Parameters for SDK6 ARD AppLib Format API **ApplibMuxer_WaitComplete()**.

Returns:

Return	Description
0	Success
- 1	Failure

Table 7-90. Returns for SDK6 ARD AppLib Format API **ApplibMuxer_WaitComplete()**.

Example:

None

See Also:

None

8 Graphics

8.1 Graphics: Overview

This chapter provides information regarding the graphics module, used to manage imagery (such as icons or logos) and text displayed on-screen.

Graphics sub-modules include:

1. UI Objects (**ApplibGraphics_UIObj**)
 - UI Object is an on-screen target that applications can operate arbitrarily. So far, graphics Applib provides three types of UI Objects: Shape, String, Bitmap.
2. Graphics Objects
 - **ApplibGraphics_BMP**
 - Bitmap is a type of memory organization where a pixelmap is used for images with multiple bits per pixel.
 - Applications can decide which icon is shown and where the icon is displayed, and all the definitions are in **ApplibGraphics_BMP**.
 - **ApplibGraphics_Shape**
 - Shape is a geometric figure having the orientation, color and size; such as, Line, Rectangle, and Circle available
 - The basic definitions of the geometric shapes are all in **ApplibGraphics_Shape**.
 - **ApplibGraphics_String**
 - String is a sequence of characters which are either letters or numerals.
 - The application can decide the location, height, color and context. In addition, the BMP font and Freetype font are mutually exclusive. Please refer to **ApplibGraphics_String**.
3. Graphics Utility
 - **ApplibGraphics_Canvas**
 - Canvas represents a blank rectangular area of the screen onto which the application can draw or from which the application can trap input events from the user. It has the management mechanism for UI objects.
 - The priority of an UI Object is based on the layer of **APPLIB_GRAPHICS_UIOBJ_s** ([Section 8.3.1.1](#)) from the user.
 - **ApplibGraphics_Obj**
 - UI object is to application what Object is to Graphics Applib. All operation targets in Graphics Applib are called Object.
 - Object not only has the attributes from the user, it also has the local information in Graphics Applib. The transformations from the UI Object to Object are in [Section 8.3](#).
 - **ApplibGraphics_Render**
 - Rendering definitions for graphics functions
 - Render is a module generating an image from an Object. Graphics Applib gives the

target buffer with the settings of width / height / pitch / pixels. The Render module plots these settings.

- **ApplibGraphics_Stamp**
 - Stamp definitions for graphics functions

4. **ApplibGraphics_Graphics**

- ApplibGraphics_Graphics is the key interface between the application and applib. The APIs can be used as per need of the application.

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8.2 Graphics: List of Functions

- **UI Object (Section 8.3)**
 - (Section 8.3.1) [AppLibBMP_CreateObj](#)
 - (Section 8.3.2) [AppLibCirc_CreateObj](#)
 - (Section 8.3.3) [AppLibGraphic_CreateObj](#)
 - (Section 8.3.4) [AppLibLine_CreateObj](#)
 - (Section 8.3.5) [AppLibRect_CreateObj](#)
 - (Section 8.3.6) [AppLibStr_CreateObj](#)
- **Graphics Object (Section 8.4)**
 - (Section 8.4.1) [AppLibBMP_GetOneBMPSize](#)
 - (Section 8.4.2) [AppLibBMP_GetTotalBMPSize](#)
 - (Section 8.4.3) [AppLibBMP_InitBMPBuffer](#)
 - (Section 8.4.4) [AppLibBMP_LoadBMP](#)
 - (Section 8.4.5) [AppLibCirc_CalcArea](#)
 - (Section 8.4.6) [AppLibCirc_Draw](#)
 - (Section 8.4.7) [AppLibCirc_Dump](#)
 - (Section 8.4.8) [AppLibLine_CalcArea](#)
 - (Section 8.4.9) [AppLibLine_Draw](#)
 - (Section 8.4.10) [AppLibLine_Dump](#)
 - (Section 8.4.11) [AppLibRect_CalcArea](#)
 - (Section 8.4.12) [AppLibRect_Draw](#)
 - (Section 8.4.13) [AppLibRect_Dump](#)
 - (Section 8.4.14) [AppLibStr_CalcLangSizeFromROMFS](#)
 - (Section 8.4.15) [AppLibStr_InitFromROMFS](#)
 - (Section 8.4.16) [AppLibBMPPFont_GetSizeFromROMFS](#)
 - (Section 8.4.17) [AppLibBMPPFont_GetStrHeight](#)
 - (Section 8.4.18) [AppLibBMPPFont_GetStrWidth](#)
 - (Section 8.4.19) [AppLibBMPPFont_InitFromFS](#)
 - (Section 8.4.20) [AppLibBMPPFont_InitFromROMFS](#)
 - (Section 8.4.21) [AppLibBMPPFont_PutStr](#)
 - (Section 8.4.22) [AppLibFTFont_DrawString](#)
 - (Section 8.4.23) [AppLibFTFont_GetSizeFromROMFS](#)
 - (Section 8.4.24) [AppLibFTFont_GetStrHeight](#)
 - (Section 8.4.25) [AppLibFTFont_GetStrWidth](#)
 - (Section 8.4.26) [AppLibFTFont_InitFromROMFS](#)
- **Graphics Utility (Section 8.5)**
 - (Section 8.5.1) [AppLibCanvas_CalMemSize](#)
 - (Section 8.5.2) [AppLibCanvas_Create](#)
 - (Section 8.5.3) [AppLibCanvas_Delete](#)
 - (Section 8.5.4) [AppLibCanvas_Draw](#)
 - (Section 8.5.5) [AppLibCanvas_GetDefCfg](#)
 - (Section 8.5.6) [AppLibCanvas_Update](#)
 - (Section 8.5.7) [AppLibGraphicObj_HideAll](#)
 - (Section 8.5.8) [AppLibGraphicObj_SetShow](#)
 - (Section 8.5.9) [AppLibGraphicObjList_Add](#)

- (Section 8.5.10) AppLibGraphicObjList_Delete
- (Section 8.5.11) AppLibGraphicObjList_Query
- (Section 8.5.12) AppLibGraphicObjList_Update
- (Section 8.5.13) AppLibRender_Init
- (Section 8.5.14) AppLibBlend_AddBlendArea
- (Section 8.5.15) AppLibStamp_GetBlendBuf
- (Section 8.5.16) AppLibStamp_Init

- **ApplibGraphics_Graphics (Section 8.6)**

- (Section 8.6.2) AppLibGraph_AddStampArea
- (Section 8.6.4) AppLibGraph_Draw
- (Section 8.6.6) AppLibGraph_GetStringWidth
- (Section 8.6.7) AppLibGraph_Hide
- (Section 8.6.8) AppLibGraph_HideAll
- (Section 8.6.9) AppLibGraph_Init
- (Section 8.6.10) AppLibGraph_InitStamp
- (Section 8.6.13) AppLibGraph_SaveAsBMP
- (Section 8.6.15) AppLibGraph_SetGUILayout
- (Section 8.6.16) AppLibGraph_SetMaxObjectNum
- (Section 8.6.17) AppLibGraph_SetOsdSize
- (Section 8.6.18) AppLibGraph_SetPixelFormat
- (Section 8.6.20) AppLibGraph_Show
- (Section 8.6.21) AppLibGraph_ShowShape
- (Section 8.6.15) AppLibGraph_Start
- (Section 8.6.22) AppLibGraph_UpdateBMP
- (Section 8.6.23) AppLibGraph_UpdateColor
- (Section 8.6.24) AppLibGraph_UpdatePosition
- (Section 8.6.25) AppLibGraph_UpdateSize
- (Section 8.6.27) AppLibGraph_UpdateString
- (Section 8.6.28) AppLibGraph_UpdateStringContext
- (Section 8.6.22) AppLibGraph_WindowUpdate

8.3 Graphics: AppLibGraphics_UIObj

8.3.1 AppLibBMP_CreateObj

API Syntax:

AppLibBMP_CreateObj (APPLIB_GRAPHIC_UIOBJ_s * descUIObj, APPLIB_GRAPHIC_OBJ_s * dstBmpObj)

Function Description:

- This function is used to create a bitmap (BMP) entry by enabling the transition between the BMP UI object structure and the BMP object structure.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_UIOBJ_s *	descUIObj	The bitmap UI object configuration, describing graphics attributes (Section 8.3.1.1)
APPLIB_GRAPHIC_OBJ_s *	dstBmpObj	The bitmap object configuration (Section 8.3.1.17)

Table 8-1. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMP_CreateObj()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 ..

Table 8-2. Returns for SDK6 ARD AppLib Graphics API **AppLibBMP_CreateObj()**.

Example:

Please refer to Unit Test document.

See Also:

8.3.1.1 AppLibBMP_CreateObj > APPLIB_GRAPHIC_UIOBJ_s

Type	Field	Description
AMP_AREA_s	UIObjDisplayBox	Position and limit bounding of the UI object
UINT32 *	AlphaTable	Alpha table of the UI object
UINT32	Layer	Canvas layer on which graphics object is drawn
UINT32	Group	Graphics content group
UINT8	DefaultShow	Determines whether graphics are shown or not
APPLIB_GRAPHIC_UIOBJ_e	Type	Graphics type APPLIB_GRAPHIC_UIOBJ_LINE: Line object type APPLIB_GRAPHIC_UIOBJ_RECT: Rectangle object type APPLIB_GRAPHIC_UIOBJ_CIRCLE: Circle object type APPLIB_GRAPHIC_UIOBJ_ELLIPSE: Ellipse object type APPLIB_GRAPHIC_UIOBJ_BMP: BMP object type APPLIB_GRAPHIC_UIOBJ_STRING: String object type
APPLIB_GRAPHIC_UIOBJ_DESC_u	Cnt	Graphics content descriptor (Section 8.3.1.2)

Table 8-3. Definition of **APPLIB_GRAPHIC_UIOBJ_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.2 AppLibBMP_CreateObj > APPLIB_GRAPHIC_UIOBJ_DESC_u

Type	Field	Description
APPLIB_GRAPHIC_LINE_CNT_s	Line	Union item: Line (Section 8.3.1.3)
APPLIB_GRAPHIC_RECT_CNT_s	Rect	Union item: Rectangle (Section 8.3.1.4)
APPLIB_GRAPHIC_CIRCLE_CNT_s	Circle	Union item: Circle (Section 8.3.1.6)
APPLIB_GRAPHIC_ELLIPSE_CNT_s	Ellipse	Union item: Ellipse (Section 8.3.1.7)
APPLIB_GRAPHIC_BMP_CNT_s	Bmp	Union item: BMP (Section 8.3.1.8)
APPLIB_GRAPHIC_STR_CNT_s	Str	Union item: String (Section 8.3.1.12)

Table 8-4. Definition of **APPLIB_GRAPHIC_UIOBJ_DESC_u** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.3 AppLibBMP_CreateObj > APPLIB_GRAPHIC_LINE_CNT_s

Type	Field	Description
UINT32	X1	X1 coordinate of the graphics object
UINT32	Y1	Y1 coordinate of the graphics object
UINT32	X2	X2 coordinate of the graphics object
UINT32	Y2	Y2 coordinate of the graphics object
UINT32	Thickness	Thickness of the graphics object
UINT32	ColorFore	Foreground color of the graphics object
UINT32	ColorBack	Background color of the graphics object

Table 8-5. Definition of **APPLIB_GRAPHIC_LINE_CNT_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.4 AppLibBMP_CreateObj > APPLIB_GRAPHIC_RECT_CNT_s

Type	Field	Description
UINT32	X1	X1 coordinate of the graphics object
UINT32	Y1	Y1 coordinate of the graphics object
UINT32	X2	X2 coordinate of the graphics object
UINT32	Y2	Y2 coordinate of the graphics object
UINT32	Thickness	Thickness of the graphics object
UINT32	ColorFore	Foreground color of the graphics object
UINT32	ColorBack	Background color of the graphics object
APPLIB_GRAPHIC_RECT_SHADOW_s	Shadow	Shadow settings of the graphics object (Section 8.3.1.5)

Table 8-6. Definition of **APPLIB_GRAPHIC_RECT_CNT_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.5 AppLibBMP_CreateObj > APPLIB_GRAPHIC_RECT_SHADOW_s

Type	Field	Description
UINT8	Enable	Enable shadow function
APPLIB_GRAPHIC_SHAPE_SHADOW_POSITION_e	Position	Shadow position APPLIB_GRAPHIC_SHAPE_SHADOW_TL: Top-left shadow APPLIB_GRAPHIC_SHAPE_SHADOW_TM: Top-middle shadow APPLIB_GRAPHIC_SHAPE_SHADOW_TR: Top-right shadow APPLIB_GRAPHIC_SHAPE_SHADOW_ML: Middle-left shadow APPLIB_GRAPHIC_SHAPE_SHADOW_MM: Middle-middle shadow APPLIB_GRAPHIC_SHAPE_SHADOW_MR: Middle-right shadow APPLIB_GRAPHIC_SHAPE_SHADOW_BL: Bottom-left shadow APPLIB_GRAPHIC_SHAPE_SHADOW_BM: Bottom-middle shadow APPLIB_GRAPHIC_SHAPE_SHADOW_BR: Bottom-right shadow
UINT32	Distance	Shadow distance
UINT32	Color	Shadow color

Table 8-7. Definition of **APPLIB_GRAPHIC_RECT_SHADOW_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.6 AppLibBMP_CreateObj > APPLIB_GRAPHIC_CIRCLE_CNT_s

Type	Field	Description
UINT32	CenterX	Center X coordinate of the graphics object
UINT32	CenterY	Center Y coordinate of the graphics object
UINT32	Radius	Radius length of the graphics object
UINT32	Thickness	Thickness of the graphics object
UINT32	ColorFore	Foreground color of the graphics object
UINT32	ColorBack	Background color of the graphics object

Table 8-8. Definition of **APPLIB_GRAPHIC_CIRCLE_CNT_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.7 AppLibBMP_CreateObj > APPLIB_GRAPHIC_ELLIPSE_CNT_s

Type	Field	Description
UINT32	CenterX	Center X coordinate of the graphics object
UINT32	CenterY	Center Y coordinate of the graphics object
UINT32	RadiusH	Horizontal radius length of the graphics object
UINT32	RadiusV	Vertical radius length of the graphics object
UINT32	Thickness	Thickness of the graphics object
UINT32	ColorFore	Foreground color of the graphics object
UINT32	ColorBack	Background color of the graphics object

Table 8-9. Definition of **APPLIB_GRAPHIC_ELLIPSE_CNT_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.8 AppLibBMP_CreateObj > APPLIB_GRAPHIC_BMP_CNT_t

Type	Field	Description
UINT32	Left	X coordinate of the GUI object's top-left
UINT32	Bottom	Y coordinate of the GUI object's top-left
UINT32	ResIdx	Resolution index of graphics objects in bin file
UINT32	BMPIIdx	Bitmap index of graphics objects in bin file
APPLIB_GRAPHIC_BMP_BIN_INFO_s *	BmpInfo	Bin header file for the GUI object (Section 8.3.1.9)
APPLIB_GRAPHIC_BMP_BIN_DESC_s *	BmpDescPtr	Bin file descriptor format for the GUI object (Section 8.3.1.10)

Table 8-10. Definition of **APPLIB_GRAPHIC_BMP_CNT_t** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.9 AppLibBMP_CreateObj > APPLIB_GRAPHIC_BMP_BIN_INFO_s

Type	Field	Description
char	BinFileName[64]	The filename of <code>BMP.bin</code>
UINT32	ResIdx	Resolution index of BMP BIN INFO
UINT32	BmpNum	Number of BMPs with this resolution
APPLIB_GRAPHIC_BMP_BIN_DESC_s *	DescTab	BMP Description pointer table array (Section 8.3.1.10)

Table 8-11. Definition of `APPLIB_GRAPHIC_BMP_BIN_INFO_s` for Graphics API `AppLibBMP_CreateObj()`.

8.3.1.10 AppLibBMP_CreateObj > APPLIB_GRAPHIC_BMP_BIN_DESC_s

Type	Field	Description
UINT32	Offset	File position
UINT32	Size	BMP size
APPLIB_BMP_STATUS_e	Flags	Internal flags for loader BMP_STATUS_INIT: Bitmap is initialized BMP_STATUS_LOADED: Bitmap is loaded BMP_INIT_STATUS_END: Bitmap status end
UINT16	Count	Internal count for loader
APPLIB_GRAPHIC_BMP_s *	BmpPtr	Internal pointer for loader (Section 8.3.1.11)

Table 8-12. Definition of `APPLIB_GRAPHIC_BMP_BIN_DESC_s` for Graphics API `AppLibBMP_CreateObj()`.

8.3.1.11 AppLibBMP_CreateObj > APPLIB_GRAPHIC_BMP_s

Type	Field	Description
APPLIB_BMP_ENCODE_TYPE_e	Flags	Encode type ENCODE_BMP_BMF2_RAW: Bitmap is not encoded ENCODE_BMP_BMF2_AMBARLE: Bitmap is RLE encoded ENCODE_BMP_BMF2_AVCHDRLE: Bitmap is AVCHD RLE encoded ENCODE_BMP_BMF2_STDRLE: Bitmap is STD RLE encoded ENCODE_BMP_BMF2_ANM: Bitmap is animation ENCODE_BMP_END: Bitmap encode end
UINT8	Bits	1, 2, 4, 8, 16, or 24
UINT16	Width	In pixels
UINT16	Height	In pixels
AMP_DISP_OSD_HW_RESCALER_TYPE_e	Pxf	Bitmap pixel format
UINT8	Reserved	Reserved byte
UINT32	TColor	Transparency color for > 8bpp bitmaps
UINT8 *	Ptr	Bitmap data pointer

Table 8-13. Definition of `APPLIB_GRAPHIC_BMP_s` for Graphics API `AppLibBMP_CreateObj()`.

8.3.1.12 AppLibBMP_CreateObj > APPLIB_GRAPHIC_STR_CNT_s

Type	Field	Description
UINT32	Left	X coordinate of graphic object's bottom-left
UINT32	Bottom	Y coordinate of graphic object's bottom-left
UINT32	StrBoxWidth	String box width
UINT32	StrBoxHeight	String box height
UINT32	StrSize	Font height
UINT32	ColorBack	Background color
UINT32	ColorFore	Foreground color
APPLIB_GRAPHIC_FONT_s *	FontAttr	Fonts descriptor structure (Section 8.3.1.13)
APPLIB_GRAPHIC_STRING_ALIGN_e	Alignment	Font alignment APPLIB_GRAPHIC_STRING_ALIGN_TL: top-left position APPLIB_GRAPHIC_STRING_ALIGN_TM: top-middle position APPLIB_GRAPHIC_STRING_ALIGN_TR: top-right position APPLIB_GRAPHIC_STRING_ALIGN_ML: middle-right position APPLIB_GRAPHIC_STRING_ALIGN_MM: middle-middle position APPLIB_GRAPHIC_STRING_ALIGN_MR: middle-right position APPLIB_GRAPHIC_STRING_ALIGN_BL: bottom-left position APPLIB_GRAPHIC_STRING_ALIGN_BM: bottom-middle position APPLIB_GRAPHIC_STRING_ALIGN_BR: bottom-right position
UINT32	LangIdx	Language index of graphic objects in <code>bin</code> file
UINT32	MsgIdx	Message index of graphic objects in <code>bin</code> file
APPLIB_GRAPHIC_STRING_SHADOW_s	Shadow	Shadow settings of the graphics object (Section 8.3.1.14)
APPLIB_GRAPHIC_STR_BIN_INFO_s *	StrInfo	Bin header file information for the graphics object (Section 8.3.1.15)
APPLIB_GRAPHIC_STR_BIN_DESC_s *	StrDesc	String descriptor information for the graphics object (Section 8.3.1.16)

Table 8-14. Definition of **APPLIB_GRAPHIC_STR_CNT_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.13 AppLibBMP_CreateObj > APPLIB_GRAPHIC_FONT_s

Type	Field	Description
APPLIB_GRAPH_FONT_TYPE_e	FontType	Font type FONT_TYPE_BMP: BMP font FONT_TYPE_FREETYPE: Freetype font FONT_TYPE_NUM: Total font number
UINT8 *	FontData	Buffer address to a static buffer for loading font. Size of buffer should be larger than <code>font.bin</code> .
UINT32	SizeFontData	Size of the buffer to which FontData points
UINT8 *	LangTable	Pointer to language table
UINT8 *	PageTable	Pointer to page table

Type	Field	Description
int (*) (const APPLIB_GRAPHIC_RENDER_s *render, struct _APPLIB_GRAPHIC_FONT_s *font, APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s drawConfig)	Draw_f	Draw function
UINT32 (*) (const struct _APPLIB_GRAPHIC_FONT_s *font, UINT32 strSize, UINT16 *str)	GetStrWidth_f	Retrieve string width function
UINT32 (*) (const struct _APPLIB_GRAPHIC_FONT_s *font, UINT32 strSize, UINT16 *str)	GetStrHeight_f	Retrieve string height function

Table 8-15. Definition of **APPLIB_GRAPHIC_FONT_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.14 AppLibBMP_CreateObj > APPLIB_GRAPHIC_STRING_SHADOW_s

Type	Field	Description
UINT8	Enable	Enable shadow function
APPLIB_GRAPHIC_STRING_SHADOW_POSITION_e	Position	Shadow position APPLIB_GRAPHIC_STRING_SHADOW_TL: Top-left shadow APPLIB_GRAPHIC_STRING_SHADOW_TM: Top-middle shadow APPLIB_GRAPHIC_STRING_SHADOW_TR: Top-right shadow APPLIB_GRAPHIC_STRING_SHADOW_ML: Middle-left shadow APPLIB_GRAPHIC_STRING_SHADOW_MM: Middle-middle shadow APPLIB_GRAPHIC_STRING_SHADOW_MR: Middle-right shadow APPLIB_GRAPHIC_STRING_SHADOW_BL: Bottom-left shadow APPLIB_GRAPHIC_STRING_SHADOW_BM: Bottom-middle shadow APPLIB_GRAPHIC_STRING_SHADOW_BR: Bottom-right shadow
UINT32	Distance	Shadow distance
UINT32	Color	Shadow color

Table 8-16. Definition of **APPLIB_GRAPHIC_STRING_SHADOW_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.15 AppLibBMP_CreateObj > APPLIB_GRAPHIC_STR_BIN_INFO_s

Type	Field	Description
char	BinFileName[64]	The filename of BMP.bin
UINT16	LangIdx	Language index
UINT16	MsgNum	Number of messages (>= 1)
APPLIB_GRAPHIC_STR_BIN_DESC_s *	DescTable	Description structure in BIN code of string [Str0 Str1 Str2 ...] (Section 8.3.1.16)

Table 8-17. Definition of **APPLIB_GRAPHIC_STR_BIN_INFO_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.16 AppLibBMP_CreateObj > APPLIB_GRAPHIC_STR_BIN_DESC_s

Type	Field	Description
UINT32	Offset	File position
UINT32	Size	String size
UINT16	Flags	Internal flags for loader
UINT16	Count	Internal count for loader
WCHAR *	Ptr	Internal pointer for loader

Table 8-18. Definition of **APPLIB_GRAPHIC_STR_BIN_DESC_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.1.17 AppLibBMP_CreateObj > APPLIB_GRAPHIC_OBJ_s

Type	Field	Description
APPLIB_GRAPHIC_OBJ_ID_t	ID	Object ID
UINT8	Exist	Does object exist or not
AMP_AREA_s	DisplayBox	Object area on a canvas
AMP_AREA_s	LastDisplayBox	Object's last area on a canvas
UINT32 *	AlphaTable	Object alpha value
UINT32	Layer	Canvas layer on which object is drawn
UINT32	Group	Object content group
UINT8	Show	Is object shown or not
AMBA_KAL_MUTEX_t	Mutex	Mutex of graphics object
APPLIB_OBJ_STAT_e	Stat	Object status OBJ_STAT_INVALID: Object is invalid OBJ_STAT_NORMAL: Object is normal OBJ_STAT_UPDATING: Object is updating content OBJ_STAT_UPDATE: Object has been updated OBJ_STAT_DRAM: Object is on drawing OBJ_STAT_DELETE: Object is going to be deleted OBJ_STAT_HIDING: Object is going to hide OBJ_STAT_HIDED: Object has been hidden
void *	Content	Object content descriptor pointer
int (*) (struct _APPLIB_GRAPHIC_OBJ_s *obj)	CalcArea_f	Retrieve graphics object area
int (*) (struct _APPLIB_GRAPHIC_OBJ_s *obj)	Dump_f	Dump graphics object content
int (*) (APPLIB_GRAPHIC_RENDER_s *render, AMP_AREA_s *drawArea, struct _APPLIB_GRAPHIC_OBJ_s *obj)	Draw_f	Draw a graphics object on a canvas

Table 8-19. Definition of **APPLIB_GRAPHIC_OBJ_s** for Graphics API **AppLibBMP_CreateObj()**.

8.3.2 AppLibCirc_CreateObj

API Syntax:

AppLibCirc_CreateObj (APPLIB_GRAPHIC_UIOBJ_s * descUIObj, APPLIB_GRAPHIC_OBJ_s * dstCircObj)

Function Description:

- This function is used to create a circle entry by enabling the transition between the circle UI object structure and the circle object structure.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_UIOBJ_s *	descUIObj	The circle UI object configuration, describing graphics attributes (Section 8.3.1.1)
APPLIB_GRAPHIC_OBJ_s *	dstCircObj	The object configuration (Section 8.3.1.17)

Table 8-20. Parameters for SDK6 ARD AppLib Graphics API **AppLibCirc_CreateObj()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-21. Returns for SDK6 ARD AppLib Graphics API **AppLibCirc_CreateObj()**.

Example:

Please refer to Unit Test document.

See Also:

8.3.3 AppLibGraphic_CreateObj

API Syntax:

AppLibGraphic_CreateObj (APPLIB_GRAPHIC_UIOBJ_s * descUIObj, APPLIB_GRAPHIC_OBJ_s * dstObj)

Function Description:

- This function is used to create an entry by enabling the transition between the UI object structure and the object structure.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_UIOBJ_s *	descUIObj	The UI object configuration, describing graphics attributes (Section 8.3.1.1)
APPLIB_GRAPHIC_OBJ_s *	dstObj	The object configuration (Section 8.3.1.17)

Table 8-22. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphic_CreateObj** ().

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-23. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphic_CreateObj** ().

Example:

Please refer to Unit Test document.

See Also:

8.3.4 AppLibLine_CreateObj

API Syntax:

AppLibLine_CreateObj (APPLIB_GRAPHIC_UIOBJ_s * descUIObj, APPLIB_GRAPHIC_OBJ_s * dstLineObj)

Function Description:

- This function is used to create a line entry by enabling the transition between the line UI object structure and the line object structure.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_UIOBJ_s *	descUIObj	The line UI object configuration, describing graphics attributes (Section 8.3.1.1)
APPLIB_GRAPHIC_OBJ_s *	dstLineObj	The object configuration (Section 8.3.1.17)

Table 8-24. Parameters for SDK6 ARD AppLib Graphics API **AppLibLine_CreateObj** ().

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-25. Returns for SDK6 ARD AppLib Graphics API **AppLibLine_CreateObj** ().

Example:

Please refer to Unit Test document.

See Also:

8.3.5 AppLibRect_CreateObj

API Syntax:

AppLibRect_CreateObj (APPLIB_GRAPHIC_UIOBJ_s * descUIObj, APPLIB_GRAPHIC_OBJ_s * dstRectObj)

Function Description:

- This function is used to create a rectangle entry by enabling the transition between the rectangle UI object structure and the rectangle object structure.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_UIOBJ_s *	descUIObj	The rectangle UI object configuration, describing graphics attributes (Section 8.3.1.1)
APPLIB_GRAPHIC_OBJ_s *	dstRectObj	The object configuration (Section 8.3.1.17)

Table 8-26. Parameters for SDK6 ARD AppLib Graphics API **AppLibRect_CreateObj()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-27. Returns for SDK6 ARD AppLib Graphics API **AppLibRect_CreateObj()**.

Example:

Please refer to Unit Test document.

See Also:

8.3.6 AppLibStr_CreateObj

API Syntax:

AppLibStr_CreateObj (APPLIB_GRAPHIC_UIOBJ_s * descUIObj, APPLIB_GRAPHIC_OBJ_s * dst-StrObj)

Function Description:

- This function is used to create a string entry by enabling the transition between the string UI object structure and the string object structure.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_UIOBJ_s *	descUIObj	The string UI object configuration, describing graphics attributes (Section 8.3.1.1)
APPLIB_GRAPHIC_OBJ_s *	dstStrObj	The object configuration (Section 8.3.1.17)

Table 8-28. Parameters for SDK6 ARD AppLib Graphics API **AppLibStr_CreateObj()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-29. Returns for SDK6 ARD AppLib Graphics API **AppLibStr_CreateObj()**.

Example:

Please refer to Unit Test document.

See Also:

8.4 Graphics: Graphics Objects

8.4.1 AppLibBMP_GetOneBMPSize

API Syntax:

AppLibBMP_GetOneBMPSize (const char * fileName, UINT32 ResIdx, UINT32 BMPIdx, UINT32 * BMP-Size)

Function Description:

- This function is used to retrieve the size information for a bitmap of a specified resolution contained within BIN in ROM.

Parameters:

Type	Parameter	Description
const char *	fileName	The xxx.bin file generated by AmbaGUIGen
UINT32	ResIdx	The resolution used for BMP size calculations
UINT32	BMPIdx	Returned total BMP number in BMP bin file
UINT32 *	BMPSize	The size of the specified BMP at the specified resolution

Table 8-30. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMP_GetOneBMPSize()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-31. Returns for SDK6 ARD AppLib Graphics API **AppLibBMP_GetOneBMPSize()**.

Example:

Please refer to Unit Test document.

See Also:

8.4.2 AppLibBMP_GetTotalBMPSize

API Syntax:

AppLibBMP_GetTotalBMPSize (const char * fileName, UINT32 resIdx, UINT32 * bmpTotalNum, UINT32 * bufferSize)

Function Description:

- This function is used to retrieve the size information for all bitmaps of a specified resolution contained within BIN in ROM.
- This Buffer includes the required index/header of the BMP `bin` buffer structure: **APPLIB_GRAPHIC_BMP_BIN_INFO_t** BMP `bin` information, **APPLIB_GRAPHIC_BMP_BIN_DESC_s** BMP descriptor array (**index**), and **APPLIB_GRAPHIC_BMP_s** BMP data array (**BMPbuffer**)

Parameters:

Type	Parameter	Description
const char *	fileName	The <code>xxx.bin</code> file generated by AmbaGUIGen
UINT32	resIdx	The resolution used for BMP size calculations
UINT32	bmpTotalNum	Returned total BMP number in BMP <code>bin</code> file
UINT32 *	bufferSize	Returned BMP buffer size

Table 8-32. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMP_GetTotalBMPSize()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-33. Returns for SDK6 ARD AppLib Graphics API **AppLibBMP_GetTotalBMPSize()**.

Example:

Please refer to Unit Test document.

See Also:

8.4.3 AppLibBMP_InitBMPBuffer

API Syntax:

AppLibBMP_InitBMPBuffer (const char * fileName, UINT32 resIdx, void * bmpBuf, UINT8 loadBMP)

Function Description:

- This function is used to initialize one resolution of BMPs in `BMP.bin`.
- Construct indexes in Buffer. The index includes **APPLIB_GRAPHIC_BMP_BIN_HEADER_s** and **APPLIB_GRAPHIC_BMP_BIN_INFO_t**.

Parameters:

Type	Parameter	Description
const char *	fileName	The <code>xxx.bin</code> file generated by AmbaGUIGen
UINT32	resIdx	The specific resolution in BMP BIN
void *	bmpBuf	The BMP buffer
UINT8 *	loadBMP	Load the entire BMP from BIN or not

Table 8-34. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMP_InitBMPBuffer()**.

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-35. Returns for SDK6 ARD AppLib Graphics API **AppLibBMP_InitBMPBuffer()**.

Example:

Please refer to Unit Test document.

See Also:

8.4.4 AppLibBMP_LoadBMP

API Syntax:

AppLibBMP_LoadBMP (const char * fileName, UINT32 resIdx, UINT32 bmpIdx, void * bmpBuf, APPLIB_GRAPHIC_BMP_s ** bmp)

Function Description:

- This function is used to get one BMP.
- Load BMP data from BMP BIN.

Parameters:

Type	Parameter	Description
const char *	fileName	The xxx.bin file generated by AmbaGUIGen
UINT32	resIdx	The specific resolution in BMP BIN
UINT32 *	bmpIdx	The specific BMP index in BMP BIN
void *	bmpBuf	The desired BMP buffer
APPLIB_GRAPHIC_BMP_s **	bmp	The desired BMP data (Section 8.4.4.1)

Table 8-36. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMP_LoadBMP** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-37. Returns for SDK6 ARD AppLib Graphics API **AppLibBMP_LoadBMP** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.4.1 AppLibBMP_LoadBMP > APPLIB_GRAPHIC_BMP_s

Type	Field	Description
APPLIB_BMP_ENCODE_TYPE_e	Flags	Combination of flags: ENCODE_BMP_BMF2_RAW: Bitmap is not encoded ENCODE_BMP_BMF2_AMBARLE: Bitmap is RLE encoded ENCODE_BMP_BMF2_AVCHDRLE: Bitmap is AVCHD RLE encoded ENCODE_BMP_BMF2_STDRLE: Bitmap is STD RLE encoded ENCODE_BMP_BMF2_ANM: Bitmap is animation ENCODE_BMP_END: Bitmap encode end
UINT8	Bits	1, 2, 4, 8, 16, or 24
UINT16	Width	In pixels
UINT16	Height	In pixels
AMP_DISP_OSD_HW_RESCALER_TYPE_e	Pxf	Bitmap pixel format
UINT8	Reserved	Reserved
UINT32	TColor	Transparent color for > 8bpp bitmaps
UINT8 *	Ptr	Bitmap data pointer

Table 8-38. Definition of **APPLIB_GRAPHIC_BMP_s** for Graphics API **AppLibBMP_LoadBMP()**.

8.4.5 AppLibCirc_CalcArea

API Syntax:

AppLibCirc_CalcArea (struct _APPLIB_GRAPHIC_OBJ_s_ * obj)

Function Description:

- This function is used to calculate the position and the size of the circle.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_OBJ_s_*	obj	The configuration of the circle (Section 8.3.1.17)

Table 8-39. Parameters for SDK6 ARD AppLib Graphics API **AppLibCirc_CalcArea** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-40. Returns for SDK6 ARD AppLib Graphics API **AppLibCirc_CalcArea** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.6 AppLibCirc_Draw

API Syntax:

AppLibCirc_Draw (APPLIB_GRAPHIC_RENDER_s * render, AMP_AREA_s * drawArea, struct _APPLIB_GRAPHIC_OBJ_s * obj)

Function Description:

- This function is used to draw the circle object.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_RENDER_s *	render	The OSD render to draw on (Section 8.4.6.1)
AMP_AREA_s *	drawArea	Drawing area of OSD buffer
APPLIB_GRAPHIC_OBJ_s *	obj	The graphics object on which to operate (Section 8.3.1.17)

Table 8-41. Parameters for SDK6 ARD AppLib Graphics API **AppLibCirc_Draw** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-42. Returns for SDK6 ARD AppLib Graphics API **AppLibCirc_Draw** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.6.1 AppLibCirc_Draw > APPLIB_GRAPHIC_RENDER_s

Type	Field	Description
void *	Buf	Buffer to plot on
UINT32 *	RowStartAddr	Cache to store start address of each row(size = sizeof(void*)*bufHeight); NULL to disable (but slow)
void *	Cursor	Cursor to plot on
UINT32	BufPitch	Buffer pitch in bytes
UINT32	BufHeight	Buffer height
UINT8	BufPixelSize	Buffer pixel size
void(*) (const struct _APPLIB_GRAPHIC_RENDER_s *render, void **dst, UINT32 x, UINT32 y)	MoveTo_f	Move cursor to (x,y)
void(*) (void **pen)	MoveNext_f	Move cursor to next pixel
void(*) (void **pen, UINT32 l)	MoveNextFew_f	Move cursor to next few pixels in the same line
void(*) (void *dst, UINT32 *color)	GetPixel_f	Get a color of pixel at pen
void(*) (void *dst, UINT32 color)	PlotPixel_f	Plot pixel at cursor; cursor moves to next pixel (will not change line)
void(*) (void *dst, UINT32 w, UINT32 color)	PlotHLine_f	Plot line from cursor.x to x+w-1; cursor moves to end of line pixel (will not change line)
void(*) (const struct _APPLIB_GRAPHIC_RENDER_s *render, UINT32 x, UINT32 y, UINT32 color)	PlotPixelAt_f	Plot pixel at cursor; cursor moves to next pixel (will not change line)
void(*) (const struct _APPLIB_GRAPHIC_RENDER_s *render, UINT32 x, UINT32 y, UINT32 w, UINT32 color)	PlotHLineAt_f	Plot line from cursor.x to x+w-1; cursor moves to end of line pixel (will not change line) <

Table 8-43. Definition of **APPLIB_GRAPHIC_RENDER_s** for Graphics API **AppLibCirc_Draw()**.

8.4.7 AppLibCirc_Dump

API Syntax:

AppLibCirc_Dump (struct _APPLIB_GRAPHIC_OBJ_s_ * obj)

Function Description:

- This function is used to dump the information of the circle object.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_OBJ_s_*	obj	The configuration of the circle (Section 8.3.1.17)

Table 8-44. Parameters for SDK6 ARD AppLib Graphics API **AppLibCirc_Dump** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-45. Returns for SDK6 ARD AppLib Graphics API **AppLibCirc_Dump** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.8 AppLibLine_CalcArea

API Syntax:

AppLibLine_CalcArea (struct _APPLIB_GRAPHIC_OBJ_s_ * obj)

Function Description:

- This function is used to calculate the position and the size of the line.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_OBJ_s_*	obj	The configuration of the line (Section 8.3.1.17)

Table 8-46. Parameters for SDK6 ARD AppLib Graphics API **AppLibLine_CalcArea** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-47. Returns for SDK6 ARD AppLib Graphics API **AppLibLine_CalcArea** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.9 AppLibLine_Draw

API Syntax:

AppLibLine_Draw (APPLIB_GRAPHIC_RENDER_s * render, AMP_AREA_s * drawArea, struct _APPLIB_GRAPHIC_OBJ_s * obj)

Function Description:

- This function is used to draw the line object.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_RENDER_s *	render	The OSD render to draw on (Section 8.4.6.1)
AMP_AREA_s *	drawArea	Drawing area of OSD buffer
APPLIB_GRAPHIC_OBJ_s *	obj	The graphics object on which to operate (Section 8.3.1.17)

Table 8-48. Parameters for SDK6 ARD AppLib Graphics API **AppLibLine_Draw** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-49. Returns for SDK6 ARD AppLib Graphics API **AppLibLine_Draw** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.10 AppLibLine_Dump

API Syntax:

AppLibLine_Dump (struct _APPLIB_GRAPHIC_OBJ_s_ * obj)

Function Description:

- This function is used to dump the information of the line object.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_OBJ_s_*	obj	The configuration of the line (Section 8.3.1.17)

Table 8-50. Parameters for SDK6 ARD AppLib Graphics API **AppLibLine_Dump** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-51. Returns for SDK6 ARD AppLib Graphics API **AppLibLine_Dump** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.11 AppLibRect_CalcArea

API Syntax:

AppLibRect_CalcArea (struct _APPLIB_GRAPHIC_OBJ_s_ * obj)

Function Description:

- This function is used to calculate the position and the size of the rectangle.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_OBJ_s_*	obj	The configuration of the rectangle (Section 8.3.1.17)

Table 8-52. Parameters for SDK6 ARD AppLib Graphics API **AppLibRect_CalcArea** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-53. Returns for SDK6 ARD AppLib Graphics API **AppLibRect_CalcArea** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.12 AppLibRect_Draw

API Syntax:

AppLibRect_Draw (APPLIB_GRAPHIC_RENDER_s * render, AMP_AREA_s * drawArea, struct _APPLIB_GRAPHIC_OBJ_s * obj)

Function Description:

- This function is used to draw the rectangle object.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_RENDER_s *	render	The OSD render to draw on (Section 8.4.6.1)
AMP_AREA_s *	drawArea	Drawing area of OSD buffer
APPLIB_GRAPHIC_OBJ_s *	obj	The graphics object on which to operate (Section 8.3.1.17)

Table 8-54. Parameters for SDK6 ARD AppLib Graphics API **AppLibRect_Draw** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-55. Returns for SDK6 ARD AppLib Graphics API **AppLibRect_Draw** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.13 AppLibRect_Dump

API Syntax:

AppLibRect_Dump (struct _APPLIB_GRAPHIC_OBJ_s_ * obj)

Function Description:

- This function is used to dump the information of the rectangle object.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_OBJ_s_*	obj	The configuration of the rectangle (Section 8.3.1.17)

Table 8-56. Parameters for SDK6 ARD AppLib Graphics API **AppLibRect_Dump** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-57. Returns for SDK6 ARD AppLib Graphics API **AppLibRect_Dump** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.14 AppLibStr_CalcLangSizeFromROMFS

API Syntax:

AppLibStr_CalcLangSizeFromROMFS (const char * fileName, UINT32 langIdx, UINT32 * msgNum, UINT32 * strBufSize, UINT32 * tmpBufSize)

Function Description:

- Calculate the total size of string from ROM file system.
- Calculate required string buffer size for a language from `String.bin` in ROMFS. This buffer includes required index/header of the String bin.

Parameters:

Type	Parameter	Description
const char *	fileName	Indicates which <code>.bin</code> file is generated by AmbaGUIGen
UINT32	langIdx	Indicates which language will be calculated
UINT32 *	msgNum	Returned message number of the specified language
UINT32 *	strBufSize	Returned required string buffer size
UINT32 *	tmpBufSize	Returned required string temporary buffer size

Table 8-58. Parameters for SDK6 ARD AppLib Graphics API **AppLibStr_CalcLangSizeFromROMFS** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-59. Returns for SDK6 ARD AppLib Graphics API **AppLibStr_CalcLangSizeFromROMFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.15 AppLibStr_InitFromROMFS

API Syntax:

AppLibStr_InitFromROMFS (const char * fileName, UINT32 langIdx, void * strBuf, void * tmpBuf)

Function Description:

- Initialize one resolution of BMPs in `BMP.bin`.
- Initialize one language of strings in `str.bin`. Construct indexes in **strBuf**; the index includes content of **APPLIB_GRAPHIC_BMP_BIN_INFO_t**.

Parameters:

Type	Parameter	Description
const char *	fileName	Indicates which <code>.bin</code> file is generated by AmbaGUIGen
UINT32	langIdx	Specify which language to initialize
void *	strBuf	An allocated buffer for loading string and string index
void *	tmpBuf	An allocated buffer for temporary use when loading messages; can be released immediately after function called

Table 8-60. Parameters for SDK6 ARD AppLib Graphics API **AppLibStr_InitFromROMFS** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-61. Returns for SDK6 ARD AppLib Graphics API **AppLibStr_InitFromROMFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.16 AppLibBMPFont_GetSizeFromROMFS

API Syntax:

AppLibBMPFont_GetSizeFromROMFS (const char * fontFn)

Function Description:

- Get the size of the BMP font.

Parameters:

Type	Parameter	Description
const char *	fontFn	The BMP font's filename

Table 8-62. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMPFont_GetSizeFromROMFS** ().

Returns:

Return	Description
Total size of the BMP font	Total size of the BMP font

Table 8-63. Returns for SDK6 ARD AppLib Graphics API **AppLibBMPFont_GetSizeFromROMFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.17 AppLibBMPFont_GetStrHeight

API Syntax:

AppLibBMPFont_GetStrHeight (const APPLIB_GRAPHIC_FONT_s * strFont, UINT32 strSize, UINT16 * str)

Function Description:

- Calculate a string's height according to its font size.

Parameters:

Type	Parameter	Description
const APPLIB_GRAPHIC_FONT_s *	strFont	The string's font (Section 8.3.1.13)
UINT32	strSize	The string's size (height)
UINT16 *	str	The string

Table 8-64. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMPFont_GetStrHeight** ().

Returns:

Return	Description
The height of the input string	The height of the input string

Table 8-65. Returns for SDK6 ARD AppLib Graphics API **AppLibBMPFont_GetStrHeight** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.18 AppLibBMPFont_GetStrWidth

API Syntax:

```
AppLibBMPFont_GetStrWidth ( const APPLIB_GRAPHIC_FONT_s * strFont, UINT32 strSize, UINT16 * str )
```

Function Description:

- Calculate a string's width according to its font size.

Parameters:

Type	Parameter	Description
const APPLIB_GRAPHIC_FONT_s *	strFont	The string's font (Section 8.3.1.13)
UINT32	strSize	The string's size (height)
UINT16 *	str	The string

Table 8-66. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMPFont_GetStrWidth** ().

Returns:

Return	Description
The total width of the input string	The total width of the input string

Table 8-67. Returns for SDK6 ARD AppLib Graphics API **AppLibBMPFont_GetStrWidth** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.19 AppLibBMPFont_InitFromFS

API Syntax:

AppLibBMPFont_InitFromFS (APPLIB_GRAPHIC_FONT_s * font, const char * fontFn, UINT8 loadAllPage)

Function Description:

- AppLibBMPFont_InitFromFS Init APPLIB_GRAPHIC_BMPFONT_s from file

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_FONT_s *	font	The font (Section 8.3.1.13)
const char *	fontFn	Font.bin filename
UINT8	loadAllPage	N/A

Table 8-68. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMPFont_InitFromFS** ().

Returns:

Return	Description
AMP_OK	

Table 8-69. Returns for SDK6 ARD AppLib Graphics API **AppLibBMPFont_InitFromFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.20 AppLibBMPFont_InitFromROMFS

API Syntax:

AppLibBMPFont_InitFromROMFS (APPLIB_GRAPHIC_FONT_s * font, const char * fontFn, UINT8 loadAllPage)

Function Description:

- AppLibBMPFont_InitFromROMFS Init APPLIB_GRAPHIC_BMPFONT_s from ROMFS

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_FONT_s *	font	The font (Section 8.3.1.13)
const char *	fontFn	Font.bin filename
UINT8	loadAllPage	N/A

Table 8-70. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMPFont_InitFromROMFS** ().

Returns:

Return	Description
AMP_OK	

Table 8-71. Returns for SDK6 ARD AppLib Graphics API **AppLibBMPFont_InitFromROMFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.21 AppLibBMPFont_PutStr

API Syntax:

AppLibBMPFont_PutStr (const APPLIB_GRAPHIC_RENDER_s * render, APPLIB_GRAPHIC_FONT_s * font, APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s drawConfig)

Function Description:

- This function is used to put the string to the buffer.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_RENDER_s *	render	Target render (Section 8.4.6.1)
APPLIB_GRAPHIC_FONT_s *	font	An initialized font structure (Section 8.3.1.13)
APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s	drawConfig	The configuration of the drawing (Section 8.4.21.1)

Table 8-72. Parameters for SDK6 ARD AppLib Graphics API **AppLibBMPFont_PutStr** ().

Returns:

Return	Description
AMP_OK	

Table 8-73. Returns for SDK6 ARD AppLib Graphics API **AppLibBMPFont_PutStr** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.21.1 AppLibBMPFont_PutStr > APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s

Type	Field	Description
UINT32	x	x-position
UINT32	y	y-position
UINT32	h	Height
UINT16 *	str	String
UINT32	colorFore	Foreground color
UINT32	colorBack	Background color
AMP_AREA_s *	updateArea	Updated area
UINT8	drawingUVPair	Drawing UV pair

Table 8-74. Definition of **APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s** for Graphics API **AppLibBMPFont_PutStr()**.

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8.4.22 AppLibFTFont_DrawString

API Syntax:

AppLibFTFont_DrawString (const APPLIB_GRAPHIC_RENDER_s * render, APPLIB_GRAPHIC_FONT_s * font, APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s drawConfig)

Function Description:

- This function is used to draw a string.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_RENDER_s *	render	The render for drawing (Section 8.4.6.1)
APPLIB_GRAPHIC_FONT_s *	font	The font configuration structure (Section 8.3.1.13)
APPLIB_GRAPHIC_FONT_DRAW_CONFIG_s	drawConfig	The configuration of the drawing for the specified string (Section 8.4.21.1)

Table 8-75. Parameters for SDK6 ARD AppLib Graphics API **AppLibFTFont_DrawString** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-76. Returns for SDK6 ARD AppLib Graphics API **AppLibFTFont_DrawString** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.23 AppLibFTFont_GetSizeFromROMFS

API Syntax:

AppLibFTFont_GetSizeFromROMFS (const char * fontFn)

Function Description:

- Get freetype total size from ROM file system.

Parameters:

Type	Parameter	Description
const char *	fontFn	The filename of the freetype

Table 8-77. Parameters for SDK6 ARD AppLib Graphics API **AppLibFTFont_GetSizeFromROMFS** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-78. Returns for SDK6 ARD AppLib Graphics API **AppLibFTFont_GetSizeFromROMFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.24 AppLibFTFont_GetStrHeight

API Syntax:

AppLibFTFont_GetStrHeight (const APPLIB_GRAPHIC_FONT_s * strFont, UINT32 strSize, UINT16 * str)

Function Description:

- This function is used to get the height of a specified string.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_FONT_s *	strFont	The font configuration structure (Section 8.3.1.13)
UINT32	strSize	The height of a character
UINT16 *	str	The specified string

Table 8-79. Parameters for SDK6 ARD AppLib Graphics API **AppLibFTFont_GetStrHeight** ().

Returns:

Return	Description
The height of the string	The height of the string

Table 8-80. Returns for SDK6 ARD AppLib Graphics API **AppLibFTFont_GetStrHeight** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.25 AppLibFTFont_GetStrWidth

API Syntax:

AppLibFTFont_GetStrWidth (const APPLIB_GRAPHIC_FONT_s * strFont, UINT32 strSize, UINT16 * str)

Function Description:

- This function is used to get the total width of a specified string.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_FONT_s *	strFont	The font configuration structure (Section 8.3.1.13)
UINT32	strSize	The height of a character
UINT16 *	str	The specified string

Table 8-81. Parameters for SDK6 ARD AppLib Graphics API **AppLibFTFont_GetStrWidth** ().

Returns:

Return	Description
The width of the string	The width of the string

Table 8-82. Returns for SDK6 ARD AppLib Graphics API **AppLibFTFont_GetStrWidth** ().

Example:

Please refer to Unit Test document.

See Also:

8.4.26 AppLibFTFont_InitFromROMFS

API Syntax:

AppLibFTFont_InitFromROMFS (APPLIB_GRAPHIC_FONT_s * font, const char * fontFn, UINT8 loadAllPage)

Function Description:

- This function is used to initialize the freetype module from the ROM file system.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_FONT_s *	font	The font configuration structure (Section 8.3.1.13)
const char *	fontFn	The filename of freetype
UINT8	loadAllPage	Load all freetypes simultaneously

Table 8-83. Parameters for SDK6 ARD AppLib Graphics API **AppLibFTFont_InitFromROMFS** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-84. Returns for SDK6 ARD AppLib Graphics API **AppLibFTFont_InitFromROMFS** ().

Example:

Please refer to Unit Test document.

See Also:

8.5 Graphics: Graphics Utility

8.5.1 AppLibCanvas_CalMemSize

API Syntax:

AppLibCanvas_CalMemSize (APPLIB_CANVAS_CFG_s * canvasCfg, UINT32 * BufSz)

Function Description:

- This function is used to calculate the required memory space for a canvas object.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_CFG_s *	canvasCfg	Canvas configuration to calculate (Section 8.5.1.1)
UINT32 *	BufSz	Resulting buffer size

Table 8-85. Parameters for SDK6 ARD AppLib Graphics API **AppLibCanvas_CalMemSize()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-86. Returns for SDK6 ARD AppLib Graphics API **AppLibCanvas_CalMemSize()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.1.1 AppLibCanvas_CalMemSize > APPLIB_CANVAS_CFG_s

Type	Field	Description
AMP_AREA_s	Area	Canvas area in buffer
UINT32	Alpha	Canvas alpha
UINT32	Backcolor	Canvas background color
UINT32	ObjNumMax	Maximum number of graphics objects in list
UINT8	ObjPartEna	Enable graphics object partition
UINT8	Reserved	Reserved
UINT32	ObjPartCol	Graphics object partition columns; used for partial update/ space partition
UINT32	ObjPartRow	Graphics object partition rows; used for partial update/space partition
UINT32	LayerMax	Graphics object layer maximum
void *	CanvasCacheBaseAddr	Cache base address for canvas
UINT32	CanvasCacheSize	Cache size for canvas

Table 8-87. Definition of **APPLIB_CANVAS_CFG_s** for Graphics API **AppLibCanvas_CalMemSize()**.

8.5.2 AppLibCanvas_Create

API Syntax:

AppLibCanvas_Create (APPLIB_CANVAS_s * newCanvas, APPLIB_CANVAS_CFG_s * canvasCfg, APPLIB_GRAPHIC_RENDER_s * render)

Function Description:

- This function is used to create a canvas object to manage graphics. Initialize object member, set variables.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	newCanvas	An allocated empty APPLIB_CANVAS_t instance (Section 8.5.2.1)
APPLIB_CANVAS_CFG_s *	canvasCfg	An APPLIB_CANVAS_CFG_s instance for creating a canvas (Section 8.5.1.1)
APPLIB_GRAPHIC_RENDER_s *	render	The render of target OSD buffer (Section 8.4.6.1)

Table 8-88. Parameters for SDK6 ARD AppLib Graphics API **AppLibCanvas_Create()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-89. Returns for SDK6 ARD AppLib Graphics API **AppLibCanvas_Create()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.2.1 AppLibCanvas_Create > APPLIB_CANVAS_s

Type	Field	Description
AMP_AREA_s	Area	Canvas area in buffer
UINT32	Alpha	Canvas alpha
UINT32	Backcolor	Canvas background color
APPLIB_GRAPHIC_RENDER_s *	Render	Canvas render
void *	CanvasCacheBaseAddr	The address pointing to store graphics object list; must be allocated by user
UINT32	CanvasCacheSize	Cache size for canvas
UINT32	ObjNum	Number of graphics objects in list
UINT32	ObjNumMax	Maximum number of graphics objects in list
UINT32	ObjPartCol	Graphics object partition columns; used for partial update/space partition
UINT32	ObjPartRow	Graphics object partition rows; used for partial update/space partition
APPLIB_GRAPHIC_OBJ_ID_t	ObjIDmax	Maximum ID number of graphics objects in list
APPLIB_GRAPHIC_OBJ_LIST_s *	ObjListHead	Head of the graphics object list (Section 8.5.2.2)
APPLIB_GRAPHIC_OBJ_LIST_s *	ObjListTail	Pointer to the tail of the graphics object list (Section 8.5.2.2)
int(*) (struct _APPLIB_CANVAS_s *targetCanvas, APPLIB_GRAPHIC_OBJ_s *newObj)	ObjAdd_f	Add a graphics object onto canvas
int(*) (struct _APPLIB_CANVAS_s *targetCanvas, const APPLIB_GRAPHIC_OBJ_ID_t targetGID)	ObjDelete_f	Delete a graphics object from canvas
int(*) (struct _APPLIB_CANVAS_s *targetCanvas, const APPLIB_GRAPHIC_OBJ_ID_t targetGID, const APPLIB_GRAPHIC_OBJ_s *newObj)	ObjUpdate_f	Update a graphics object on canvas
int(*) (struct _APPLIB_CANVAS_s *targetCanvas, const APPLIB_GRAPHIC_OBJ_ID_t targetID, APPLIB_GRAPHIC_OBJ_s *queryObj)	ObjQuery_f	Query a graphics object on canvas
int(*) (struct _APPLIB_CANVAS_s *targetCanvas, const APPLIB_GRAPHIC_OBJ_ID_t targetGID)	ObjSetShow_f	Set whether or not a graphics object is shown on canvas
int(*) (struct _APPLIB_CANVAS_s *targetCanvas)	ObjHideAll_f	Hide all objects on canvas
int(*) (struct _APPLIB_CANVAS_CFG_s *canvasCfg, APPLIB_GRAPHIC_RENDER_s *NewRender)	CanvasUpdate_f	Update canvas attributes

Type	Field	Description
int(*) (struct _APPLIB_CANVAS_s *targetCanvas)	CanvasDraw_f	Update all graphics objects and draw canvas content onto buffer
int(*) (struct _APPLIB_CANVAS_s *targetCanvas)	CanvasDelete_f	Delete canvas; cleanup

Table 8-90. Definition of **APPLIB_CANVAS_s** for Graphics API **AppLibCanvas_Create()**.

8.5.2.2 AppLibCanvas_Create > APPLIB_GRAPHIC_OBJ_LIST_s

Type	Field	Description
APPLIB_GRAPHIC_OBJ_s *	Attr	Graphics attributes (Section 8.3.1.17)
APPLIB_GRAPHIC_OBJ_LIST_s *	PrevObj	Pointer to the previous graphics object on the list
APPLIB_GRAPHIC_OBJ_LIST_s *	NextObj	Pointer to the next graphics object on the list

Table 8-91. Definition of **APPLIB_GRAPHIC_OBJ_LIST_s** for Graphics API **AppLibCanvas_Create()**.

8.5.3 AppLibCanvas_Delete

API Syntax:

AppLibCanvas_Delete (APPLIB_CANVAS_s * targetCanvas)

Function Description:

- This function is used to delete a specified canvas.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)

Table 8-92. Parameters for SDK6 ARD AppLib Graphics API **AppLibCanvas_Delete()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-93. Returns for SDK6 ARD AppLib Graphics API **AppLibCanvas_Delete()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.4 AppLibCanvas_Draw

API Syntax:

AppLibCanvas_Draw (APPLIB_CANVAS_s * targetCanvas)

Function Description:

- This function is used to draw the specified canvas.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)

Table 8-94. Parameters for SDK6 ARD AppLib Graphics API **AppLibCanvas_Draw()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-95. Returns for SDK6 ARD AppLib Graphics API **AppLibCanvas_Draw()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.5 AppLibCanvas_GetDefCfg

API Syntax:

AppLibCanvas_GetDefCfg (APPLIB_CANVAS_CFG_s * canvasCfg)

Function Description:

- This function is used to get the default configuration settings for canvas creation.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_CFG_s *	canvasCfg	An allocated empty APPLIB_CANVAS_CFG_t instance (Section 8.5.1.1)

Table 8-96. Parameters for SDK6 ARD AppLib Graphics API **AppLibCanvas_GetDefCfg()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-97. Returns for SDK6 ARD AppLib Graphics API **AppLibCanvas_GetDefCfg()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.6 AppLibCanvas_Update

API Syntax:

AppLibCanvas_Update (APPLIB_CANVAS_s * targetCanvas, APPLIB_CANVAS_CFG_s * canvasCfg, APPLIB_GRAPHIC_RENDER_s * newRender)

Function Description:

- This function is used to update objects' settings in canvas.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)
APPLIB_CANVAS_CFG_s *	canvasCfg	An APPLIB_CANVAS_CFG_s instance for updating (Section 8.5.1.1)
APPLIB_GRAPHIC_RENDER_s *	newRender	The new render of target OSD buffer; can be NULL (Section 8.4.6.1)

Table 8-98. Parameters for SDK6 ARD AppLib Graphics API **AppLibCanvas_Update()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-99. Returns for SDK6 ARD AppLib Graphics API **AppLibCanvas_Update()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.7 AppLibGraphicObj_HideAll

API Syntax:

AppLibGraphicObj_HideAll (APPLIB_CANVAS_s * targetCanvas)

Function Description:

- This function is used to hide all objects on a canvas.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)

Table 8-100. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphicObj_HideAll** ().

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-101. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphicObj_HideAll** ().

Example:

Please refer to Unit Test document.

See Also:

8.5.8 AppLibGraphicObj_SetShow

API Syntax:

AppLibGraphicObj_SetShow (APPLIB_CANVAS_s * targetCanvas, APPLIB_GRAPHIC_OBJ_ID_t targetID)

Function Description:

- This function is used to set whether or not a graphics object is shown on a canvas.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)
APPLIB_GRAPHIC_OBJ_ID_t	targetID	Object ID to be updated

Table 8-102. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphicObj_SetShow()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-103. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphicObj_SetShow()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.9 AppLibGraphicObjList_Add

API Syntax:

AppLibGraphicObjList_Add (APPLIB_CANVAS_s * targetCanvas, APPLIB_GRAPHIC_OBJ_s * newObj)

Function Description:

- This function is used to add a graphics object into a list. Initialize object member, obj-list operation. **targetCanvas** will copy all input attributes as a new object in the canvas itself.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)
APPLIB_GRAPHIC_OBJ_s *	newObj	Object ID to be added (Section 8.3.1.17)

Table 8-104. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Add()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-105. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Add()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.10 AppLibGraphicObjList_Delete

API Syntax:

AppLibGraphicObjList_Delete (APPLIB_CANVAS_s * targetCanvas, APPLIB_GRAPHIC_OBJ_ID_t targetID)

Function Description:

- This function is used to delete a graphics object from a list.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)
APPLIB_GRAPHIC_OBJ_ID_t	targetID	Object ID to be deleted

Table 8-106. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Delete** ().

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-107. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Delete** ().

Example:

Please refer to Unit Test document.

See Also:

8.5.11 AppLibGraphicObjList_Query

API Syntax:

AppLibGraphicObjList_Query (APPLIB_CANVAS_s * targetCanvas, APPLIB_GRAPHIC_OBJ_ID_t targetID, APPLIB_GRAPHIC_OBJ_s * queryObj)

Function Description:

- This function is used to query a graphics object from a list.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)
APPLIB_GRAPHIC_OBJ_ID_t	targetID	Object ID to be queried
APPLIB_GRAPHIC_OBJ_s *	queryObj	Referent object (Section 8.3.1.17)

Table 8-108. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Query()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-109. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Query()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.12 AppLibGraphicObjList_Update

API Syntax:

AppLibGraphicObjList_Update (APPLIB_CANVAS_s * targetCanvas, const APPLIB_GRAPHIC_OBJ_ID_t targetID, const APPLIB_GRAPHIC_OBJ_s * newObj)

Function Description:

- This function is used to update a graphics object from a list.

Parameters:

Type	Parameter	Description
APPLIB_CANVAS_s *	targetCanvas	Target canvas for operation (Section 8.5.2.1)
APPLIB_GRAPHIC_OBJ_ID_t	targetID	Object ID to be updated
APPLIB_GRAPHIC_OBJ_s *	newObj	Referent object (Section 8.3.1.17)

Table 8-110. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Update()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-111. Returns for SDK6 ARD AppLib Graphics API **AppLibGraphicObjList_Update()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.13 AppLibRender_Init

API Syntax:

AppLibRender_Init (APPLIB_GRAPHIC_RENDER_s * render)

Function Description:

- This function is used to initialize Amba Render. Suggest **render** → **RowStartAddr** for speed.

Parameters:

Type	Parameter	Description
APPLIB_GRAPHIC_RENDER_s *	render	The specified render (Section 8.4.6.1)

Table 8-112. Parameters for SDK6 ARD AppLib Graphics API **AppLibRender_Init** ().

Returns:

Return	Description
0	Success
All other	AMP_ER_CODE_e. Refer to errors defined in Chapter 17 .

Table 8-113. Returns for SDK6 ARD AppLib Graphics API **AppLibRender_Init** ().

Example:

Please refer to Unit Test document.

See Also:

8.5.14 AppLibBlend_AddBlendArea

API Syntax:

AppLibBlend_AddBlendArea (UINT8 stampArealId, APPLIB_GRAPHIC_SOURCE_BUF_INFO_s * sourceBufInfo, APPLIB_GRAPH_COLOR_FORMAT_e colorFormat)

Function Description:

- This function is used to add one new buffer for blending.

Parameters:

Type	Parameter	Description
UINT8	stampArealId	The specified ID for blending buffer
APPLIB_GRAPHIC_SOURCE_BUF_INFO_s *	sourceBufInfo	The blending buffer (Section 8.5.14.1)
APPLIB_GRAPH_COLOR_FORMAT_e *	colorFormat	The color format of the source buffer: COLOR_FORMAT_YUV422: YUV422 encode format COLOR_FORMAT_YUV420: YUV420 encode format COLOR_FORMAT_NUM: Total encode format number

Table 8-114. Parameters for SDK6 ARD AppLib Graphics API **AppLibBlend_AddBlendArea()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-115. Returns for SDK6 ARD AppLib Graphics API **AppLibBlend_AddBlendArea()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.14.1 AppLibBlend_AddBlendArea > APPLIB_GRAPHIC_SOURCE_BUF_INFO_s

Type	Field	Description
APPLIB_GRAPHIC_RENDER_s *	SourceRender	Source render (Section 8.4.6.1)
AMP_AREA_s	SourceDisplayBox	Source display box

Table 8-116. Definition of **APPLIB_GRAPHIC_SOURCE_BUF_INFO_s** for Graphics API **AppLibBlend_AddBlendArea()**.

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8.5.15 AppLibStamp_GetBlendBuf

API Syntax:

AppLibStamp_GetBlendBuf (UINT32 blendBufId, APPLIB_GRAPHIC_STAMP_BUF_CONFIG_s * bufInfo)

Function Description:

- This function is used to get a buffer for blending.

Parameters:

Type	Parameter	Description
UINT32	blendBufId	The specified ID for blending buffer
APPLIB_GRAPHIC_STAMP_BUF_CONFIG_s *	bufInfo	The information of the blending buffer (Section 8.5.15.1)

Table 8-117. Parameters for SDK6 ARD AppLib Graphics API **AppLibStamp_GetBlendBuf()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-118. Returns for SDK6 ARD AppLib Graphics API **AppLibStamp_GetBlendBuf()**.

Example:

Please refer to Unit Test document.

See Also:

8.5.15.1 AppLibStamp_GetBlendBuf > APPLIB_GRAPHIC_STAMP_BUF_CONFIG_s *

Type	Field	Description
UINT32	OffsetX	Offset X
UINT32	OffsetY	Offset Y
UINT32	Width	Width
UINT32	Height	Height
UINT8 *	YAddr	Y address
UINT8 *	UVAddr	UV address
UINT8 *	AlphaYAddr	Alpha address for Y channel
UINT8 *	AlphaUVAddr	Alpha address for UV channel

Table 8-119. Definition of **APPLIB_GRAPHIC_STAMP_BUF_CONFIG_s** * for Graphics API **AppLibStamp_GetBlendBuf()**.

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8.5.16 AppLibStamp_Init

API Syntax:

AppLibStamp_Init (void * blendingBufAddress)

Function Description:

- This function is used to initialize the stamp module.

Parameters:

Type	Parameter	Description
void *	blendingBufAddress	The specified blending buffer

Table 8-120. Parameters for SDK6 ARD AppLib Graphics API **AppLibStamp_Init()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-121. Returns for SDK6 ARD AppLib Graphics API **AppLibStamp_Init()**.

Example:

Please refer to Unit Test document.

See Also:

8.6 Graphics: Graphics

8.6.1 AppLibGraph_ActivateWindow

API Syntax:

AppLibGraph_ActivateWindow (UINT32 graphChannelId)

Function Description:

- This function is used to activate the window for Graphics display.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel

Table 8-122. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_ActivateWindow()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-123. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_ActivateWindow()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.2 AppLibGraph_AddStampArea

API Syntax:

AppLibGraph_AddStampArea (AMP_AREA_s stampArea, APPLIB_GRAPH_ENCODE_FORMAT_e encodeFormat)

Function Description:

- This function is used to add a new stamp area.

Parameters:

Type	Parameter	Description
UINT32	stampArea	The display config of the stamp
APPLIB_GRAPH_ENCODE_FORMAT_e	encodeFormat	The color format definition for encoding ENCODE_FORMAT_YUV422: YUV422 format ENCODE_FORMAT_YUV420 YUV420 format ENCODE_FORMAT_NUM Total number of encode formats

Table 8-124. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_AddStampArea()**.

Returns:

Return	Description
>=0	The sample ID

Table 8-125. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_AddStampArea()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.3 AppLibGraph_DeactivateWindow

API Syntax:

AppLibGraph_DeactivateWindow (UINT32 graphChannelId)

Function Description:

- This function is used to deactivate the window for the Graphics display.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel

Table 8-126. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_DeactivateWindow()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-127. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_DeactivateWindow()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.4 AppLibGraph_Draw

API Syntax:

AppLibGraph_Draw (UINT32 graphChannelId)

Function Description:

- This function is used to draw all objects on the canvas.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel

Table 8-128. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_Draw()**.

Returns:

Return	Description
0	Success

Table 8-129. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_Draw()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.5 AppLibGraph_FlushWindow

API Syntax:

AppLibGraph_FlushWindow (UINT32 graphChannelId)

Function Description:

- This function is used to flush the window for the Graphics display.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel

Table 8-130. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_FlushWindow()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-131. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_FlushWindow()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.6 AppLibGraph_GetStringWidth

API Syntax:

AppLibGraph_GetStringWidth (UINT32 strSize, UINT16 * str)

Function Description:

- This function is used to get the width of the string.

Parameters:

Type	Parameter	Description
UINT32	strSize	The string height
UINT16 *	str	The specified string

Table 8-132. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_GetStringWidth()**.

Returns:

Return	Description
>=0	The width of the specified string from the user

Table 8-133. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_GetStringWidth()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.7 AppLibGraph_Hide

API Syntax:

AppLibGraph_Hide (UINT32 graphChannelId, UINT32 guild)

Function Description:

- This function is used to hide the specific UI Object from the user.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel
UINT32	guild	The specific UI Object ID

Table 8-134. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_Hide()**.

Returns:

Return	Description
0	Success
-1	Fail

Table 8-135. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_Hide()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.8 AppLibGraph_HideAll

API Syntax:

AppLibGraph_HideAll (UINT32 graphChannelId)

Function Description:

- This function is used to hide all GUI objects on the specified channel.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel

Table 8-136. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_HideAll()**.

Returns:

Return	Description
0	Success

Table 8-137. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_HideAll()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.9 AppLibGraph_Init

API Syntax:

AppLibGraph_Init (void)

Function Description:

- This function is used to initialize the graphics modules such as OSD module, display module, font module, etc.
- Graphics module should be initialized only after the DSP is ready.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-138. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_Init()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.10 AppLibGraph_InitStamp

API Syntax:

AppLibGraph_InitStamp (void)

Function Description:

- This function is used to prepare all settings for stamp such as allocate the blending buffer and reset all local information and variables.

Parameters:

None

Returns:

Return	Description
none	

Table 8-139. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_InitStamp()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.11 AppLibGraph_ResetStamp

API Syntax:

AppLibGraph_ResetStamp (void)

Function Description:

- This function is used to reset the blending buffer and stamp ID. It should be called before every stamp function.

Parameters:

None

Returns:

Return	Description
None	

Table 8-140. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_ResetStamp()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.12 AppLibGraph_RetrieveObjInfo

API Syntax:

AppLibGraph_RetrieveObjInfo (UINT32 graphChannelId, UINT32 guild, AMP_AREA_s *areaInfo)

Function Description:

- This function is used to get all the display configures of the Object.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel
UINT32	guild	The specified object ID
AMP_AREA_s*	areaInfo	The display information of the specific Object

Table 8-141. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_RetrieveObjInfo()**.

Returns:

Return	Description
none	

Table 8-142. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_RetrieveObjInfo()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.13 AppLibGraph_SaveAsBMP

API Syntax:

AppLibGraph_SaveAsBMP (UINT32 graphChannelId)

Function Description:

- This function is used to save a graphic as a BMP file.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual Channel

Table 8-143. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SaveAsBMP()**.

Returns:

Return	Description
none	

Table 8-144. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SaveAsBMP()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.14 AppLibGraph_SetDefaultConfig

API Syntax:

AppLibGraph_SetDefaultConfig (APPLIB_GRAPH_INIT_CONFIG_s initConfig)

Function Description:

- This function is used to configure the Graphics module. Please set the configuration before AppLibGraph_Init().

Parameters:

Type	Parameter	Description
APPLIB_GRAPH_INIT_CONFIG_s	initConfig	Users can choose the own files of clut table, strings, fonts, and BMP. Please refer to Section 8.6.14.1 .

Table 8-145. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SetDefaultConfig()**.

Returns:

Return	Description
None	

Table 8-146. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SetDefaultConfig()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.14.1 AppLibGraph_SetDefaultConfig > APPLIB_GRAPH_INIT_CONFIG_s

Type	Field	Description
const char*	FontFileName	The filename of Font.bin
APPLIB_GRAPH_FONT_TYPE_e	FontType	The font type FONT_TYPE_BMP: bitmap font FONT_TYPE_FREETYPE: freetype font
const char*	ClutFileName	The filename of clut.bin
const char*	BMPFileName	The filename of BMP.bin
const char*	StringFileName	The filename of strings.bin
UINT8	DchanEnable	The enable / disable flag of D-chan
UINT8	FchanEnable	The enable / disable flag of F-chan
UINT8	BlendEnable	The enable / disable flag of blending

Table 8-147. Definition of **APPLIB_GRAPH_INIT_CONFIG_s** for Grpahics Applib API **AppLibGraph_SetDefaultConfig()**.

8.6.15 AppLibGraph_SetGUILayout

API Syntax:

AppLibGraph_SetGUILayout (UINT32 graphChannelId, UINT32 layoutId, APPLIB_GRAPHIC_UIOBJ_s * uiObjTable[], UINT32 langIdx)

Function Description:

- This function is used to set the layout of the GUI.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel ID
UINT32	layoutId	The layout ID for the specified channel
APPLIB_GRAPHIC_UIOBJ_s *	uiObjTable[]	The GUI table (Section 8.3.1.1)
UINT32	langIdx	The language ID of the GUI table

Table 8-148. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SetGUILayout()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-149. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SetGUILayout()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.16 AppLibGraph_SetMaxObjectNum

API Syntax:

AppLibGraph_SetMaxObjectNum (UINT32 graphChannelId, UINT32 objectNum)

Function Description:

- This function is used to set the maximum number of objects.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel ID
UINT32	objectNum	Total number of objects

Table 8-150. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SetMaxObjectNum()**.

Returns:

Return	Description
0	Success

Table 8-151. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SetMaxObjectNum()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.17 AppLibGraph_SetOsdSize

API Syntax:

AppLibGraph_SetOsdSize (UINT32 graphChannelId, int width, int height)

Function Description:

- This function is used to set the OSD size.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of graphic
int	width	The width of OSD
int	height	The height of OSD

Table 8-152. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SetOsdSize()**.

Returns:

Return	Description
0	Success

Table 8-153. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SetOsdSize()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.18 AppLibGraph_SetPixelFormat

API Syntax:

AppLibGraph_SetPixelFormat (UINT32 graphChannelId, AMP_DISP_OSD_FORMAT_e format)

Function Description:

- This function is used to set the pixel format.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of graphic
AMP_DISP_OSD_FORMAT_e	format	Pixel format

Table 8-154. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SetPixelFormat()**.

Returns:

Return	Description
0	Success

Table 8-155. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SetPixelFormat()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.19 AppLibGraph_SetWindowConfig

API Syntax:

AppLibGraph_SetWindowConfig (UINT32 graphChannelId)

Function Description:

- This function is used to update the configures of the window.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The channel ID of Graphics 0x01: F-Chan 0x02: D-Chan 0x03: Dual channel

Table 8-156. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_SetWindowConfig()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-157. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_SetWindowConfig()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.20 AppLibGraph_Show

API Syntax:

AppLibGraph_Show (UINT32 graphChannelId, UINT32 guild)

Function Description:

- This function is used to show GUI objects.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel
UINT32	guild	The specified object ID

Table 8-158. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_Show()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-159. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_Show()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.21 AppLibGraph_ShowShape

API Syntax:

AppLibGraph_ShowShape (UINT32 graphChannelId, APPLIB_GRAPHIC_UIOBJ_s * uiObj)

Function Description:

- This function is used to show a shape (e.g., rectangle, line, circle).

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel ID
APPLIB_GRAPHIC_UIOBJ_s *	uiObj	The shape object (Section 8.3.1.1)

Table 8-160. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_ShowShape()**.

Returns:

Return	Description
0	Success

Table 8-161. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_ShowShape()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.22 AppLibGraph_UpdateBMP

API Syntax:

AppLibGraph_UpdateBMP (UINT32 graphChannelId, UINT32 guild, UINT32 bmpId)

Function Description:

- This function is used to change a specified BMP manually.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel
UINT32	guild	The GUI table ID
UINT32	bmpId	The modified BMP ID

Table 8-162. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateBMP()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-163. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateBMP()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.23 AppLibGraph_UpdateColor

API Syntax:

AppLibGraph_UpdateColor (UINT32 graphChannelId, UINT32 guild, UINT32 foreColor, UINT32 backColor)

Function Description:

- This function is used to change a GUI object's color.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel
UINT32	guild	The GUI table ID
UINT32	foreColor	Foreground color of the GUI ID
UINT32	backColor	Background color of the GUI ID

Table 8-164. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateColor()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-165. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateColor()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.24 AppLibGraph_UpdatePosition

API Syntax:

AppLibGraph_UpdatePosition (UINT32 graphChannelId, UINT32 guild, UINT32 left, UINT32 bottom)

Function Description:

- This function is used to change a GUI object's position.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel
UINT32	guild	The GUI table ID
UINT32	left	X coordinate of graphic object's bottom-left
UINT32	bottom	Y coordinate of graphic object's bottom-right

Table 8-166. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdatePosition()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-167. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdatePosition()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.25 AppLibGraph_UpdateSize

API Syntax:

AppLibGraph_UpdateSize (UINT32 graphChannelId, UINT32 guild, UINT32 width, UINT32 height, UINT32 strSize)

Function Description:

- This function is used to change a GUI object's size.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel
UINT32	guild	The GUI table ID
UINT32	width	The GUI's modified width
UINT32	height	The GUI's modified height
UINT32	strSize	The string's modified height

Table 8-168. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateSize()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-169. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateSize()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.26 AppLibGraph_UpdateStampArea

API Syntax:

AppLibGraph_UpdateStampArea (UINT32 stampAreaId, AMP_AREA_s stampArea, APPLIB_GRAPH_ENCODE_FORMAT_e encodeFormat)

Function Description:

- This function is used to update the stamp location.

Parameters:

Type	Parameter	Description
UINT8	stampAreaId	The stamp ID
AMP_AREA_s	stampArea	The display information
APPLIB_GRAPH_ENCODE_FORMAT_e	encodeFormat	The encode format

Table 8-170. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateStampArea()**.

Returns:

Return	Description
None	

Table 8-171. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateStampArea()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.27 AppLibGraph_UpdateString

API Syntax:

AppLibGraph_UpdateString (UINT32 graphChannelId, UINT32 guild, UINT32 strId)

Function Description:

- This function is used to change a specified string manually.

Parameters:

Type	Parameter	Description
UINT32	graphChannelId	The specified channel
UINT32	guild	The GUI table ID
UINT32	strId	The modified string ID

Table 8-172. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateString()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-173. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateString()**.

Example:

Please refer to Unit Test document.

See Also:

8.6.28 AppLibGraph_UpdateStringContext

API Syntax:

AppLibGraph_UpdateStringContext (UINT32 langIdx, UINT32 strId, UINT16 * str)

Function Description:

- This function is used to update string's context in BIN.

Parameters:

Type	Parameter	Description
UINT32	langIdx	The language ID of the specified string
UINT32	strId	The specified string ID
UINT16 *	str	The updated string

Table 8-174. Parameters for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateStringContext()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 8-175. Returns for SDK6 ARD AppLib Graphics API **AppLibGraph_UpdateStringContext()**.

Example:

Please refer to Unit Test document.

See Also:

9 Image

9.1 Image: Overview

This chapter provides the APIs for the image utility interface.

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9.1.1 AppLibImage_CfaHandler

API Syntax:

int AppLibImage_CfaHandler (void * hdlr, UINT32 event, void * info)

Function Description:

- This function is used for the image CFA handler.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler
[in] UINT32	event	Event
[in] void *	info	Information

Table 9-1. Parameters for SDK6 ARD AppLib Image API **AppLibImage_CfaHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-2. Returns for SDK6 ARD AppLib Image API **AppLibImage_CfaHandler()**.

Example:

None

See Also:

APPLIB_ER_CODE_e

9.1.2 AppLibImage_CreatelmgSchdlr

API Syntax:

int AppLibImage_CreatelmgSchdlr (AMP_IMG_SCHDLR_CFG_s * param, UINT32 index)

Function Description:

- This function is used to create an image scheduler.

Parameters:

Type	Parameter	Description
[in] AMP_IMG_SCHDLR_CFG_s *	param	Scheduler parameter
[in] UINT32	index	Scheduler index

Table 9-3. Parameters for SDK6 ARD AppLib Image API **AppLibImage_CreatelmgSchdlr()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-4. Returns for SDK6 ARD AppLib Image API **AppLibImage_CreatelmgSchdlr()**.

Example:

None

See Also:

APPLIB_ER_CODE_e

9.1.3 AppLibImage_DeletelmgSchdlr

API Syntax:

int AppLibImage_DeletelmgSchdlr (UINT32 index)

Function Description:

- This function is used to delete an image scheduler.

Parameters:

Type	Parameter	Description
[in] UINT32	index	Scheduler index

Table 9-5. Parameters for SDK6 ARD AppLib Image API **AppLibImage_DeletelmgSchdlr()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-6. Returns for SDK6 ARD AppLib Image API **AppLibImage_DeletelmgSchdlr()**.

Example:

None

See Also:

APPLIB_ER_CODE_e

9.1.4 AppLibImage_EnableImgSchdlr

API Syntax:

int AppLibImage_EnableImgSchdlr (UINT32 index, UINT32 enable)

Function Description:

- This function is used to enable an image scheduler.

Parameters:

Type	Parameter	Description
[in] UINT32	index	Scheduler index
[in] UINT32	enable	Enable/disable

Table 9-7. Parameters for SDK6 ARD AppLib Image API **AppLibImage_EnableImgSchdlr()**.

Returns:

Return	Description
#	The setting of flash light

Table 9-8. Returns for SDK6 ARD AppLib Image API **AppLibImage_EnableImgSchdlr()**.

Example:

None

See Also:

APPLIB_ER_CODE_e

9.1.5 AppLibImage_Init

API Syntax:

```
int AppLibImage_Init (UINT32 * rGain, UINT32 * gGain, UINT32 * bGain)
```

Function Description:

- This function is used to get the setting of the Applib module initialization.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-9. Returns for SDK6 ARD AppLib Image API **AppLibImage_Init()**.

Example:

None

See Also:

None

9.1.6 AppLibImage_LockAE

API Syntax:

UINT32 AppLibImage_LockAE (void)

Function Description:

- This function is used to lock AE.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-10. Returns for SDK6 ARD AppLib Image API **AppLibImage_LockAE()**.

Example:

None

See Also:

None

9.1.7 AppLibImage_Set3A

API Syntax:

int AppLibImage_Set3A (int enable)

Function Description:

- This function is used to set the 3A enabled.

Parameters:

Type	Parameter	Description
[in] int	enable	Enable parameter

Table 9-11. Parameters for SDK6 ARD AppLib Image API **AppLibImage_Set3A()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-12. Returns for SDK6 ARD AppLib Image API **AppLibImage_Set3A()**.

Example:

None

See Also:

None

9.1.8 AppLibImage_Stop3A

API Syntax:

int AppLibImage_Stop3A (void * hdlr)

Function Description:

- This function is used to stop the 3A image.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler

Table 9-13. Parameters for SDK6 ARD AppLib Image API **AppLibImage_Stop3A()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-14. Returns for SDK6 ARD AppLib Image API **AppLibImage_Stop3A()**.

Example:

None

See Also:

None

9.1.9 AppLibImage_StopImgSchdlr

API Syntax:

int AppLibImage_StopImgSchdlr (UINT32 index)

Function Description:

- This function is used to stop the image scheduler.

Parameters:

Type	Parameter	Description
[in] UINT32	index	Scheduler index

Table 9-15. Parameters for SDK6 ARD AppLib Image API **AppLibImage_StopImgSchdlr**().

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-16. Returns for SDK6 ARD AppLib Image API **AppLibImage_StopImgSchdlr**().

Example:

None

See Also:

None

9.1.10 AppLibImage_UnLockAE

API Syntax:

UINT32 AppLibImage_UnLockAE (void)

Function Description:

- This function is used to unlock AE.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-17. Returns for SDK6 ARD AppLib Image API **AppLibImage_UnLockAE()**.

Example:

None

See Also:

None

9.1.11 AppLibImage_VDspRgbHandler

API Syntax:

int AppLibImage_VDspRgbHandler (void * dlr, UINT32 event, void * info)

Function Description:

- This function is used for image RGB handler.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler
[in] UINT32	event	Event
[in] void *	info	Information

Table 9-18. Parameters for SDK6 ARD AppLib Image API **AppLibImage_VDspRgbHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-19. Returns for SDK6 ARD AppLib Image API **AppLibImage_VDspRgbHandler()**.

Example:

None

See Also:

None

9.1.12 AppLibImage_VinChangedPostCallbackFunc

API Syntax:

int AppLibImage_VinChangedPostCallbackFunc (void * hdlr UINT32 event, void * info)

Function Description:

- This function is used for VIN changed post callback function.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler
[in] UINT32	event	Event
[in] void *	info	Information

Table 9-20. Parameters for SDK6 ARD AppLib Image API **AppLibImage_VinChangedPostCallbackFunc()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-21. Returns for SDK6 ARD AppLib Image API **AppLibImage_VinChangedPostCallbackFunc()**.

Example:

None

See Also:

None

9.1.13 AppLibImage_VinChangedPriorCallbackFunc

API Syntax:

```
int AppLibImage_VinChangedPriorCallbackFunc(void * hdlr, UINT32 event, void * info)
```

Function Description:

- This function is used for VIN changed prior callback function.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler
[in] UINT32	event	Event
[in] void *	info	Information

Table 9-22. Parameters for SDK6 ARD AppLib Image API **AppLibImage_VinChangedPriorCallbackFunc()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-23. Returns for SDK6 ARD AppLib Image API **AppLibImage_VinChangedPriorCallbackFunc()**.

Example:

None

See Also:

None

9.1.14 AppLibImage_VinInvalidCallbackFunc

API Syntax:

int AppLibImage_VinInvalidCallbackFunc (void * hdlr, UINT32 event, void * info)

Function Description:

- This function is used for VIN invalid callback function.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler
[in] UINT32	event	Event
[in] void *	info	Information

Table 9-24. Parameters for SDK6 ARD AppLib Image API **AppLibImage_VinInvalidCallbackFunc()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-25. Returns for SDK6 ARD AppLib Image API **AppLibImage_VinInvalidCallbackFunc()**.

Example:

None

See Also:

None

9.1.15 AppLibImage_VinValidCallbackFunc

API Syntax:

```
int AppLibImage_VinValidCallbackFunc (void * hdlr, UINT32 event, void * info)
```

Function Description:

- This function is used for VIN valid callback function.

Parameters:

Type	Parameter	Description
[in] void *	hdlr	Handler
[in] UINT32	event	Event
[in] void *	info	Information

Table 9-26. Parameters for SDK6 ARD AppLib Image API **AppLibImage_VinValidCallbackFunc()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-27. Returns for SDK6 ARD AppLib Image API **AppLibImage_VinValidCallbackFunc()**.

Example:

None

See Also:

None

9.1.16 AppLibImage_Set3APhotoMode

API Syntax:

int AppLibImage_Set3APhotoMode (UINT32 photoMode)

Function Description:

- This function is used to set the photo mode of 3A.

Parameters:

Type	Parameter	Description
[in] UINT32	photoMode	mode

Table 9-28. Parameters for SDK6 ARD AppLib Image API **AppLibImage_Set3APhotoMode()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 9-29. Returns for SDK6 ARD AppLib Image API **AppLibImage_Set3APhotoMode()**.

Example:

None

See Also:

None

10 Monitor

10.1 Monitor: Overview

This chapter explains APIs for monitor utility interface, including:

- ApplibMonitor
 - Monitor Utility interface
- ApplibMonitor_BrcHandler
 - Bitrate control handler interface
- ApplibMonitor_Message
 - Monitor related message
- ApplibMonitor_Timer
 - Timer Monitor Utility interface

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10.2 Monitor: ApplibMonitor

This section explains the monitor utility interface.

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10.2.1 AppLibMonitor_Init

API Syntax:

int AppLibMonitor_Init (void)

Function Description:

- This function is used for applib monitor module initialization.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-1. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitor_Init()**.

Example:

None

See Also:

None

10.2.2 AppLibMonitorBitrate_Config

API Syntax:

int AppLibMonitorBitrate_Config (UINT8 mode, Bitrate_monitor_config_s * config)

Function Description:

- This function is used for config bit rate monitor.

Parameters:

Type	Parameter	Description
[in] UINT8	mode	Mode
[in] Bitrate_monitor_config_s *	config	(Bitrate_monitor_config_s is defined in AppLibMonitor.h) Please refer to Section 10.2.2.1 for more details.

Table 10-2. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorBitrate_Config()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-3. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorBitrate_Config()**.

Example:

None

See Also:

None

10.2.2.1 AppLibMonitorBitrate_Config > Bitrate_monitor_config_s

Type	Field	Description
int	MonitorId	Monitor id
UINT8	StreamId	Stream Id: 1: Primary 2: Secondary
UINT8	Enable	Enable/disable brc monitor
UINT8	EnableDzoomChk	Bitrate control: Dzoom
UINT8	EnableLumaChk	Bitrate control: Luma
UINT8	EnablFrateChg	Bitrate control: Frame rate change
UINT8	EnableBWChk	Bitrate control: Bandwidth check
UINT8	EnableCustomChk	Bitrate control: Customer defined
UINT8	Reseved	Reseved
UINT8	Debug	Debug
UINT8	Reserved1	Reserved1
AMP_AVENC_HDLR_s *	Hdlr	Hdlr
void(* DzoomCb)	(UINT32 *targetBitrate, UINT32 CurrBitrate, UINT8 streamId)	Dzoom CB funtion
float	DzoomFactorThres	Dzoom factor threshold
void(* LumaCb)	(UINT32 *targetBitrate, UINT32 CurrBitrate, UINT8 streamId)	Luma CB function
int	LumaThres	Luma threshold
int	LumaLowThres	Luma low threshold
UINT32	FrateUpFactorThres	Frame rate up factor threshold
UINT32	FrateDownFactorThres	Frame rate down factor threshold
UINT32	FrateDownFactorMax	Frame rate down factor maximum
void(* SceneComplexityCb)	(UINT32 *targetBitrate, UINT32 currBitrate, UINT8 streamId)	Scene complexity CB function
int(* SceneGetDayLumaThresCb)	(int mode, UINT32 *threshold)	Scene get day luma threshodl CB function
int(* SceneGetRangeCb)	(int mode, UINT32 *complexMin, UINT32 *complexMid, UINT32 *complexMax)	Scene get range CB function
void(* SceneGetPipeModeCb)	(UINT8 *isVideoHdr, UINT8 *isOversample)	Scene get pipe mode CB function
void(* BandwidthCb)	(UINT32 *targetBitrate, UINT32 CurrBitrate, UINT8 streamId)	Bandwidth CB function
void(* CustomCb)	(UINT32 *targetBitrate, UINT32 CurrBitrate, UINT8 streamId)	Custom CB function

Table 10-4. Definition of **Bitrate_monitor_config_s** for SDK6 ARD AppLib Monitor API **AppLibMonitorBitrate_Config()**.

10.2.3 AppLibMonitorBitrate_InitCB

API Syntax:

```
void AppLibMonitorBitrate_InitCB (void)
```

Function Description:

- This function is used for bit rate monitor initialization callback.

Parameters:

None

Returns:

None

Example:

None

See Also:

None

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10.2.4 AppLibMonitorHdmi_Init

API Syntax:

int AppLibMonitorHdmi_Init (UINT32 taskpriority)

Function Description:

- This function is used to initialize the HDMI hot-plug monitor.

Parameters:

Type	Parameter	Description
[in] UINT32	taskpriority	Priority of the collection task

Table 10-5. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorHdmi_Init()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-6. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorHdmi_Init()**.

Example:

None

See Also:

None

10.2.5 AppLibMonitorSd_Init

API Syntax:

int AppLibMonitorSd_Init (UINT32 taskpriority)

Function Description:

- This function is used to initialize the SD card monitor task.

Parameters:

Type	Parameter	Description
[in] UINT32	taskpriority	Task priority

Table 10-7. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorSd_Init()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-8. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorSd_Init()**.

Example:

None

See Also:

None

10.2.6 AppLibMonitorStorage_Enable

API Syntax:

int AppLibMonitorStorage_Enable (UINT32 enable)

Function Description:

- This function is used to enable monitor's flow to detect the storage place.

Parameters:

Type	Parameter	Description
[in] UINT32	enable	Enable flag

Table 10-9. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_Enable()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-10. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_Enable()**.

Example:

None

See Also:

None

10.2.7 AppLibMonitorStorage_EnableMsg

API Syntax:

int AppLibMonitorStorage_EnableMsg (UINT32 enable)

Function Description:

- This function is used to enable monitor's flow to send messages.

Parameters:

Type	Parameter	Description
[in] UINT32	enable	Enable flag

Table 10-11. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_EnableMsg()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-12. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_EnableMsg()**.

Example:

None

See Also:

None

10.2.8 AppLibMonitorStorage_Init

API Syntax:

int AppLibMonitorStorage_Init (UINT32 taskpriority)

Function Description:

- This function is used to initialize the storage monitor.

Parameters:

Type	Parameter	Description
[in] UINT32	taskpriority	Priority of the collection task

Table 10-13. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_Init()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-14. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_Init()**.

Example:

None

See Also:

None

10.2.9 AppLibMonitorStorage_SetThreshold

API Syntax:

int AppLibMonitorStorage_SetThreshold (UINT32 threshold)

Function Description:

- This function is used to set free space check threshold.

Parameters:

Type	Parameter	Description
[in] UINT32	threshold	Threshold size kbyte

Table 10-15. Parameters for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_SetThreshold()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-16. Returns for SDK6 ARD AppLib Monitor API **AppLibMonitorStorage_SetThreshold()**.

Example:

None

See Also:

None

10.3 Monitor: ApplibMonitor_Timer

This section explains the timer monitor utility interface.

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10.3.1 AppLibTimerBasedMonitor_EnableHandler

API Syntax:

int AppLibTimerBasedMonitor_EnableHandler (UINT32 id, UINT32 enable)

Function Description:

- This function is used to enable/ disable a timer based handler.

Parameters:

Type	Parameter	Description
[in] UINT32	id	Handler ID
[in] UINT32	enable	Enable/disable

Table 10-17. Parameters for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_EnableHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-18. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_EnableHandler()**.

Example:

None

See Also:

None

10.3.2 AppLibTimerBasedMonitor_GetHandlerPeriod

API Syntax:

int AppLibTimerBasedMonitor_GetHandlerPeriod (UINT32 id)

Function Description:

- This function is used to get handler based on id.

Parameters:

Type	Parameter	Description
[in] UINT32	id	Handler id

Table 10-19. Parameters for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_GetHandlerPeriod()**.

Returns:

Return	Description
> = 0	Period
< 0	Failure

Table 10-20. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_GetHandlerPeriod()**.

Example:

None

See Also:

None

10.3.3 AppLibTimerBasedMonitor_Init

API Syntax:

```
int AppLibTimerBasedMonitor_Init (UINT32 taskPriority, void * pStack, UINT32 stackSize)
```

Function Description:

- This function is used to get handler based on ID.

Parameters:

Type	Parameter	Description
[in] UINT32	taskPriority	Priority of the collection task
void *	pStack	Stack for the task
[in] UINT32	stacksize	Size of the stack

Table 10-21. Parameters for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_Init()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-22. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_Init()**.

Example:

None

See Also:

None

10.3.4 AppLibTimerBasedMonitor_RegisterHandler

API Syntax:

```
int AppLibTimerBasedMonitor_RegisterHandler (APPLIB_TIMER_BASED_MONITOR_HANDLER_s *  
hdlr)
```

Function Description:

- This function is used to get handler based on id.

Parameters:

Type	Parameter	Description
APPLIB_TIMER_BASED_MONITOR_HANDLER_s *	hdlr	Monitor handler. (APPLIB_TIMER_BASED_MONITOR_HANDLER_s is defined in <code>AppLibTimerMonitor.h</code>) Please refer to more details.

Table 10-23. Parameters for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_RegisterHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-24. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_RegisterHandler()**.

Example:

None

See Also:

None

10.3.4.1 AppLibTimerBasedMonitor_RegisterHandler > APPLIB_TIMER_BASED_MONITOR_HANDLER_s

Type	Field	Description
void*	MonitorInit	Invokes when enabling handler
void*	TimeUpCallBack	Invoke every time when time is up
UINT32	Period	Period to trigger TimeUpCallCallBack()

Table 10-25. Definition of **APPLIB_TIMER_BASED_MONITOR_HANDLER_s** for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_RegisterHandler()**.

10.3.5 AppLibTimerBasedMonitor_Release

API Syntax:

int AppLibTimerBasedMonitor_Release (void)

Function Description:

- This function is used to release timer based monitor.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-26. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_Release()**.

Example:

None

See Also:

None

10.3.6 AppLibTimerBasedMonitor_SetHandlerPeriod

API Syntax:

int AppLibTimerBasedMonitor_SetHandlerPeriod (UINT32 id, UINT32 period)

Function Description:

- This function is used to set handler period based on id.

Parameters:

Type	Parameter	Description
[in] UINT32	id	handler id
[in] UINT32	period	Handler period

Table 10-27. Parameters for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_SetHandlerPeriod()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-28. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_SetHandlerPeriod()**.

Example:

None

See Also:

None

10.3.7 AppLibTimerBasedMonitor_UnregisterHandler

API Syntax:

int AppLibTimerBasedMonitor_UnregisterHandler (UINT32 id)

Function Description:

- This function is used to unregister a timer based handler.

Parameters:

Type	Parameter	Description
[in] UINT32	id	handler id

Table 10-29. Parameters for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_UnregisterHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 10-30. Returns for SDK6 ARD AppLib Monitor API **AppLibTimerBasedMonitor_UnregisterHandler()**.

Example:

None

See Also:

None

11 Player

11.1 Player: Overview

This chapter introduces media player in Applib for playing video, still images, etc. It includes the following:

- Decode utility
 - Commonly used functions and definitions
- Still Decode
 - Modules of still decoding
- Video Decode
 - Modules of video decoding
- ApplibPlayer_Message
 - Definition of decoder's message

11.2 Decode utility: Overview

This section explains the following three modules:

1. ApplibPlayer_Common
Common functions and definitions used by other modules.
2. ApplibPlayer_Internal
Common functions and definitions only used by player modules
3. ApplibPlayer_StillTask
A task handling the processes of displaying images on screen

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11.2.1 Applib_Convert_ChannelIdx_To_VoutChannel

API Syntax:

UINT32 Applib_Convert_ChannelIdx_To_VoutChannel (const UINT32 ChannelIdx, UINT32 * Output-VoutChannel)

Function Description:

- This function is used to convert the index of VOUT buffer in a VOUT buffer manager to the channel defined in `ApplibDisplay.h`.

Parameters:

Type	Parameter	Description
[in] const UINT32	ChannelIdx	Channel array index
[out] UINT32 *	OutputVoutChannel	Vout channel

Table 11-1. Parameters for SDK6 ARD AppLib Player API **Applib_Convert_ChannelIdx_To_VoutChannel()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-2. Returns for SDK6 ARD AppLib Player API **Applib_Convert_ChannelIdx_To_VoutChannel()**.

Example:

None

See Also:

None

11.2.2 Applib_Convert_VoutChannel_To_ChannelIdx

API Syntax:

UINT32 Applib_Convert_VoutChannel_To_ChannelIdx (const UINT32 VoutChannel, UINT32 * OutputChannelIndex)

Function Description:

- This function is used to convert the channel defined in `ApplibDisplay.h` to the index of VOUT buffer in a VOUT buffer manager.

Parameters:

Type	Parameter	Description
[in] const UINT32	VoutChannel	VOUT channel
[out] UINT32 *	OutputChannelIdx	Channel array index

Table 11-3. Parameters for SDK6 ARD AppLib Player API **Applib_Convert_VoutChannel_To_ChannelIdx()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-4. Returns for SDK6 ARD AppLib Player API **Applib_Convert_VoutChannel_To_ChannelIdx()**.

Example:

None

See Also:

None

11.2.3 AppLibStillDecModule_Deinit

API Syntax:

int AppLibStillDecModule_Deinit (void)

Function Description:

- This function is used to release still decode module.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-5. Returns for SDK6 ARD AppLib Player API **AppLibStillDecModule_Deinit()**.

Example:

None

See Also:

None

11.2.4 AppLibStillDecModule_Init

API Syntax:

int AppLibStillDecModule_Init (void)

Function Description:

- This function is used to initialize still decode module.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-6. Returns for SDK6 ARD AppLib Player API **AppLibStillDecModule_Init()**.

Example:

None

See Also:

None

11.2.5 AppLibVoutBuffer_Alloc

API Syntax:

UINT32 AppLibVoutBuffer_Alloc (const UINT32 BufferNumber[DISP_CH_NUM], AMBA_KAL_BYTE_POOL_t * MemoryPool, APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr)

Function Description:

- This function is used to allocate memory for VOUT buffer in available (not all) VOUT channel.
- Do nothing when the memory has already been allocated.
- The number of buffers in a channel is determined by **BufferNumber**.
- The elements of **VoutBufMgr** receives return values.
- If **BufferNumber** = 0, return error.

Parameters:

Type	Parameter	Description
[in] const UINT32	BufferNumber[DISP_CH_NUM]	Array with size of DISP_CH_NUM storing number of buffers in each channel
[in] AMBA_KAL_BYTE_POOL_t *	MemoryPool	Memory byte pool
[out] AP-PLIB_VOUT_BUFFER_MANAGER_s *	VoutBufMgr	VOUT buffer manager (APPLIB_VOUT_BUFFER_MANAGER_s is defined in <code>ApplibPlayer_Common.h</code>) Please refer to for more details.

Table 11-7. Parameters for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Alloc()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-8. Returns for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Alloc()**.

Example:

None

See Also:

None

11.2.5.1 AppLibVoutBuffer_Alloc > APPLIB_VOUT_BUFFER_MANAGER_s

Type	Field	Description
APPLIB_VOUT_BUFFER_ARRAY_s	VoutBuffer	Array of Vout buffer array of each channel
AMBA_KAL_MUTEX_t	Mutex	Mutex for protecting the buffer during multiple access
UINT8	IsInit	Whether the buffer has been initialized
int(*) (void *Hdlr, UINT32 EventID, void *Info)	DisplayEndCB	Callback function that is invoked right after receiving the DSP that the display request is done.
int(*) (void *Hdlr, UINT32 EventID, void *Info)	DisplayAllChanEndCB	Callback function that is invoked right after receiving the last DSP callback of all channels that the display request is done.

Table 11-9. Definition of **APPLIB_VOUT_BUFFER_MANAGER_s** for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Alloc()**.

11.2.6 ApplibVoutBuffer_CleanVoutBuffer

API Syntax:

```
int ApplibVoutBuffer_CleanVoutBuffer (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr,  
const UINT32 RequestID, const UINT32 VoutChannel)
```

Function Description:

- This function is used to set VOUT buffer in **VoutChannel** with specified **RequestID** to the background color (i.e. black).

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	RequestID	Request ID
[in] const UINT32	VoutChannel	VOUT channel

Table 11-10. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_CleanVoutBuffer()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-11. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_CleanVoutBuffer()**.

Example:

None

See Also:

None

11.2.7 ApplibVoutBuffer_CleanVoutBuffer_AllChannel

API Syntax:

```
int ApplibVoutBuffer_CleanVoutBuffer_AllChannel (const APPLIB_VOUT_BUFFER_MANAGER_s *  
VoutBufMgr, const UINT32 RequestID)
```

Function Description:

- This function is used to set VOUT buffer in all channel with specified id to the background color (i.e. black).

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	RequestID	Request ID

Table 11-12. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_CleanVoutBuffer_AllChannel()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-13. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_CleanVoutBuffer_AllChannel()**.

Example:

None

See Also:

None

11.2.8 ApplibVoutBuffer_DisplayVoutBuffer

API Syntax:

```
int ApplibVoutBuffer_DisplayVoutBuffer (APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, const
UINT32 VoutChannel, const UINT8 * LumaAddr, const UINT8 * ChromaAddr)
```

Function Description:

- This function is used to display a buffer in **VoutChannel** and release buffers that are no longer displayed.

Parameters:

Type	Parameter	Description
[in] AP-PLIB_VOUT_BUFFER_MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32 *	VoutChannel	Vout channel
[in] const UINT8 *	LumaAddr	Luma address of the displayed buffer
[in] const UINT8 *	ChromaAddr	Chroma address of the displayed buffer

Table 11-14. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_DisplayVoutBuffer()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-15. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_DisplayVoutBuffer()**.

Example:

None

See Also:

None

11.2.9 ApplibVoutBuffer_GetVoutBuffer

API Syntax:

```
int ApplibVoutBuffer_GetVoutBuffer (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, const
UINT32 VoutChannel, const UINT32 * LumaAddr, const AMP_YUV_BUFFER_s * OutputBuffer)
```

Function Description:

- This function is used to get the VOUT buffer in **Voutchannel** with specified **RequestID** and custom AOI.
- All elements except AOI of **OutputBuffer** would be changed

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[in] const UINT32	RequestID	Request ID
[out] AMP_YUV_ BUFFER_s *	OutputBuffer	Buffer with custom AOI

Table 11-16. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutBuffer()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-17. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutBuffer()**.

Example:

None

See Also:

None

11.2.10 ApplibVoutBuffer_GetVoutChromaAddr

API Syntax:

```
int ApplibVoutBuffer_GetVoutChromaAddr (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr,  
const UINT32 VoutChannel, const UINT32 * RequestID, const UINT8 ** OutputChromaAddr)
```

Function Description:

- This function is used to get the VOUT buffer chroma address in VoutChannel with specified RequestID.

Parameters:

Type	Parameter	Description
[in] const APPLIB_VOUT_BUFFER_MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[in] const UINT32	RequestID	Request ID
[out] UINT8 **	OutputChromaAddr	Buffer with custom AOI

Table 11-18. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutChromaAddr()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-19. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutChromaAddr()**.

Example:

None

See Also:

None

11.2.11 ApplibVoutBuffer_GetVoutColorFormat

API Syntax:

```
int ApplibVoutBuffer_GetVoutColorFormat (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr,  
const UINT32 VoutChannel, AMP_COLOR_FORMAT_e * OutputChromaAddr)
```

Function Description:

- This function is used to get the VOUT buffer color format in **Voutchannel**.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[out] AMP_COL- OR_FORMAT_e *	OutputChromaAddr	Buffer with custom AOI

Table 11-20. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutColorFormat()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-21. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutColorFormat()**.

Example:

None

See Also:

None

11.2.12 ApplibVoutBuffer_GetVoutHeight

API Syntax:

```
int ApplibVoutBuffer_GetVoutHeight (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, const
UINT32 VoutChannel, UINT32 * OutputHeight)
```

Function Description:

- This function is used to get the VOUT buffer height in **Voutchannel**.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in ApplibPlayer_Common.h) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[out] UINT32 *	OutputHeight	Buffer height

Table 11-22. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutHeight()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-23. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutHeight()**.

Example:

None

See Also:

None

11.2.13 ApplibVoutBuffer_GetVoutLumaAddr

API Syntax:

```
int ApplibVoutBuffer_GetVoutLumaAddr (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr,  
const UINT32 VoutChannel, UINT8 * OutputLumaAddr)
```

Function Description:

- This function is used to get the VOUT buffer luma address in **Voutchannel** with specified **RequestID**.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[in] const UINT32	RequestID	Request ID
[out] UINT8 **	OutputLumaAddr	Luma address

Table 11-24. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutLumaAddr()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-25. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutLumaAddr()**.

Example:

None

See Also:

None

11.2.14 ApplibVoutBuffer_GetVoutPitch

API Syntax:

```
int ApplibVoutBuffer_GetVoutPitch (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, const
UINT32 VoutChannel, UINT32 * OutputPitch)
```

Function Description:

- This function is used to get the VOUT buffer pitch in **Voutchannel**.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[out] UINT32 **	OutputPitch	Buffer pitch

Table 11-26. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutPitch()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-27. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutPitch()**.

Example:

None

See Also:

None

11.2.15 ApplibVoutBuffer_GetVoutWidth

API Syntax:

```
int ApplibVoutBuffer_GetVoutWidth (const APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, const
UINT32 VoutChannel, UINT32 * Outputwidth)
```

Function Description:

- This function is used to get the VOUT buffer width in **Voutchannel**.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in ApplibPlayer_Common.h) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[out] UINT32 *	OutputWidth	Buffer width

Table 11-28. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutWidth()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-29. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_GetVoutWidth()**.

Example:

None

See Also:

None

11.2.16 AppLibVoutBuffer_Init

API Syntax:

```
int AppLibVoutBuffer_Init (APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, int(*) (void *Hdlr,
UINT32 EventID, void *Info) DisplayEndCB, int(*) (void *Hdlr, UINT32 EventID, void *Info) DisplayAll-
ChanEndCB)
```

Function Description:

- This function is used to initialize the VOUT buffer manager.

Parameters:

Type	Parameter	Description
[in] AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] int(*) (void *Hdlr, UINT32 EventID, void *Info)	DisplayEndCB	Display the end CB
[in] int(*) (void *Hdlr, UINT32 EventID, void *Info) *	DisplayAllChanEndCB	Display all channels of end CB

Table 11-30. Parameters for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Init()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-31. Returns for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Init()**.

Example:

None

See Also:

None

11.2.17 ApplibVoutBuffer_IsVoutReady

API Syntax:

UINT8 ApplibVoutBuffer_IsVoutReady (const APPLIB_VOUT_BUFFER_MANAGER_s *
VoutBufMgr, const UINT32 VoutChannel)

Function Description:

- This function is used to determine if the buffer in the **VoutChannel** is ready to work.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	Vout channel

Table 11-32. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_IsVoutReady()**.

Returns:

Return	Description
0	Not ready
others	Ready

Table 11-33. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_IsVoutReady()**.

Example:

None

See Also:

None

11.2.18 AppLibVoutBuffer_Release

API Syntax:

```
int AppLibVoutBuffer_Release (APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr)
```

Function Description:

- This function is used to release all VOUT buffers in all VOUT channels.
- Reset all the elements of **VoutBufMgr**.

Parameters:

Type	Parameter	Description
[in] AP-PLIB_VOUT_BUFFER_MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.

Table 11-34. Parameters for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Release()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-35. Returns for SDK6 ARD AppLib Player API **AppLibVoutBuffer_Release()**.

Example:

None

See Also:

None

11.2.19 ApplibVoutBuffer_TakeVoutBuffer

API Syntax:

```
int ApplibVoutBuffer_TakeVoutBuffer (APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, const
UINT32 VoutChannel, UINT32 * OutputRequestID)
```

Function Description:

- This function is used to take a free and clean (ie., black) VOUT buffer in **Voutchannel**.
- The process of giving buffer is done in **ApplibVoutBuffer_DisplayVoutBuffer**.

Parameters:

Type	Parameter	Description
[in] AP- PLIB_VOUT_ BUFFER_ MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in ApplibPlayer_Common.h) Please refer to Section 11.2.5.1 for more details.
[in] const UINT32	VoutChannel	VOUT channel
[out] UINT32 *	OutputRequestID	Request ID

Table 11-36. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_TakeVoutBuffer()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-37. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_TakeVoutBuffer()**.

Example:

None

See Also:

None

11.2.20 ApplibVoutBuffer_TakeVoutBuffer_AllChannel

API Syntax:

```
int ApplibVoutBuffer_TakeVoutBuffer_AllChannel (APPLIB_VOUT_BUFFER_MANAGER_s * VoutBufMgr, UINT32 * OutputRequestID)
```

Function Description:

- This function is used to take a free and clean (ie., black) VOUT buffer in all channel.
- The process of giving buffer is done in **ApplibVoutBuffer_DisplayVoutBuffer**.

Parameters:

Type	Parameter	Description
[in] AP-PLIB_VOUT_BUFFER_MANAGER_s *	VoutBufMgr	Vout buffer manager (APPLIB_VOUT_BUFFER_MANAGER_S is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.2.5.1 for more details.
[out] UINT32 *	OutputRequestID	Request ID

Table 11-38. Parameters for SDK6 ARD AppLib Player API **ApplibVoutBuffer_TakeVoutBuffer_AllChannel()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-39. Returns for SDK6 ARD AppLib Player API **ApplibVoutBuffer_TakeVoutBuffer_AllChannel()**.

Example:

None

See Also:

None

11.3 Player: ApplibPlayer_Internal

The section explains the common functions and definitions only used by player modules.

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11.3.1 Applib_DisplaySizeCal

API Syntax:

int Applib_DisplaySizeCal (APPLIB_DISP_SIZE_CAL_s * param)

Function Description:

- This function is used to calculate the location and size of an image in order to display the original aspect ratio on the screen. Resize the image to fit the window, and center it horizontally and vertically. Zoom and shift the image .

Parameters:

Type	Parameter	Description
[in] APPLIB_DISP_SIZE_CAL_s *	param	Include input and output of the function (APPLIB_DISP_SIZE_CAL_s is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.3.1.1 for more details.

Table 11-40. Parameters for SDK6 ARD AppLib Player API **Applib_DisplaySizeCal()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-41. Returns for SDK6 ARD AppLib Player API **Applib_DisplaySizeCal()**.

Example:

None

See Also:

None

11.3.1.1 Applib_DisplaySizeCal > APPLIB_DISP_SIZE_CAL_s

Type	Field	Description
UINT32	ImageWidth	[Input] Width of the image in main/cache buffer BEFORE rotation. Pixels may not be square when the image is stored in a cache buffer.
UINT32	ImageHeight	[Input] Height of the image in main/cache buffer BEFORE rotation. Pixels may not be square when the image is stored in a cache buffer.
UINT32	ImageAr	[Input] The aspect ratio of the original image BEFORE rotation.
AMP_ROTATION_e	ImageRotate	[Input] Rotate option of the image
UINT32	DeviceAr	[Input] Aspect ratio of the screen measured by the physical length (not pixels). An aspect ratio of 4:3, for example, would be 0x0403.
UINT32	DeviceWidth	[Input] Width of the screen (number of pixels)
UINT32	DeviceHeight	[Input] Height of the screen (number of pixels)
UINT32	WindowWidth	[Input] Width, in pixels on screen, of the image
UINT32	WindowHeight	[Input] Height, in pixels on screen, of the window (a portion of the screen of display image)
INT32	ImageShiftX	[Input] How many pixels of the geometric center of image are to shift along x-axis. The pixels are square ones of the original image. Area of the image outside of the window will be cropped. Set ImageShiftX = 0 to keep position along x-axis after the image is centered in and stretched to the window. Set ImageShiftX > 0 to shift the image right. Set ImageShiftX < 0 to shift the image left.
INT32	ImageShiftY	[Input] How many pixels of the geometric center of image are to shift along y-axis. The pixels are square ones of the original image. Area of the image outside of the window will be cropped. Set ImageShiftY = 0 to keep position along y-axis after the image is centered in and stretched to the window. Set ImageShiftY > 0 to shift the image right. Set ImageShiftY < 0 to shift the image up.
UINT32	MagFactor	[Input] Magnification Factor. Percentage of displayed image relative to the original one that is centered in and stretched to the window. Area of the image outside of the window will be cropped. Set MagFactor = 100 to get the original image. Set MagFactor = 200 to get an image twice as large as the original one.
UINT8	AutoAdjust	[Input] Adjust the position of the image automatically when the zoom and shift are applied. 0: Do not adjust image 1: Adjust image
UINT32	OutputOffsetX	[Output] X coordinate relative to upper-left corner of the window
UINT32	OutputOffsetY	[Output] Y coordinate relative to upper-left corner of the window
UINT32	OutputWidth	[Output] Width, in pixels on screen, of the image
UINT32	OutputHeight	[Output] Height, in pixels on screen, of the image

Type	Field	Description
double	OutputSrcImgOffsetX	[Output] X coordinate of AOI of the source image in YUV buffer
double	OutputSrcImgOffsetY	[Output] Y coordinate of AOI of the source image in YUV buffer
double	OutputSrcImgWidth	[Output] Width of AOI of the source image in YUV buffer
double	OutputSrcImgHeight	[Output] Height of AOI of the source image in YUV buffer
INT32	OutputReallImageShiftX	[Output] The eventual number of pixels (of the original image) shifted along X-axis. When adjustment are made (AutoAdjust = 1), there may be difference between OutputReallImageShiftX and ImageShiftX . Otherwise, OutputReallImageShiftX and ImageShiftX are equal.
INT32	OutputReallImageShiftY	[Output] The eventual number of pixels (of the original image) shifted along Y-axis. When adjustment are made (AutoAdjust = 1), there may be difference between OutputReallImageShiftY and ImageShiftY . Otherwise, OutputReallImageShiftY and ImageShiftY are equal.

Table 11-42. Definiton of **APPLIB_DISP_SIZE_CAL_s** for SDK6 ARD AppLib Player API **Applib_DisplaySizeCal()**.

11.3.2 Applib_DisplaySizeCal_MultiChannel

API Syntax:

```
int Applib_DisplaySizeCal_MultiChannel (APPLIB_DISP_SIZE_CAL_s * param, const INT32 InputShiftX,  
const INT32 InputShiftY, INT32 * OutputShiftX, INT32 * OutputShiftY)
```

Function Description:

- This function is used to calculate the location and size of an image in multiple channel. Force the the shift of a image in different channels to be consistent. Exclude channel with its address in **param** equal to NULL. If all channels are NULL, simply assign input shift to output shift.

Parameters:

Type	Parameter	Description
[in,out] APPLIB_DISP_SIZE_CAL_s *	param	Calculation parameter for all channels (APPLIB_DISP_SIZE_CAL_s is defined in <code>ApplibPlayer_Common.h</code>) Please refer to Section 11.3.1.1 for more details.
[in] const INT32	InputShiftX	Requested shift on the X-axis
[in] const INT32	InputShiftY	Requested shift on the Y-axis
[out] INT32 *	OutputShiftX	Eventual shift on the X-axis
[out] INT32 *	OutputShiftY	Eventual shift on the Y-axis

Table 11-43. Parameters for SDK6 ARD AppLib Player API **Applib_DisplaySizeCal_MultiChannel()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-44. Returns for SDK6 ARD AppLib Player API **Applib_DisplaySizeCal_MultiChannel()**.

Example:

None

See Also:

None

11.3.3 Applib_Draw_Frame

API Syntax:

```
int Applib_Draw_Frame (APPLIB_DRAW_FRAME_CONFIG_s * param)
```

Function Description:

- This function is used to draw a frame in a YUV buffer.

Parameters:

Type	Parameter	Description
[in] APPLIB_DRAW_FRAME_CONFIG_s *	param	Include target buffer, frame color, and frame size (APPLIB_DRAW_FRAME_CONFIG_s is defined in <code>Applib-Player_Internal.h</code>) Please refer to Section 11.3.3.1 for more details.

Table 11-45. Parameters for SDK6 ARD AppLib Player API **Applib_Draw_Frame()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-46. Returns for SDK6 ARD AppLib Player API **Applib_Draw_Frame()**.

Example:

None

See Also:

None

11.3.3.1 Applib_Draw_Frame > APPLIB_DRAW_FRAME_CONFIG_s

Type	Field	Description
AMP_YUV_BUFFER_s	TargetBuffer	Target of drawing
APPLIB_DRAW_COLOR_s	FrameColor	Color of frame
UINT32	Thickness	Thickness of frame (number of pixels)

Table 11-47. Definition of **APPLIB_DRAW_FRAME_CONFIG_s** for SDK6 ARD AppLib Player API **Applib_Draw_Frame()**.

11.3.4 Applib_Draw_Rectangle

API Syntax:

```
int Applib_Draw_Rectangle (const AMP_YUV_BUFFER_s * TargetBuffer, const APPLIB_DRAW_COLOR_s * RectColor)
```

Function Description:

- This function is used to draw a solid rectangle in a YUV buffer.

Parameters:

Type	Parameter	Description
[in] const AMP_YUV_BUFFER_s *	TargetBuffer	Target of drawing
[in] const APPLIB_DRAW_COLOR_s *	RectColor	Color of rectangle (APPLIB_DRAW_COLOR_s is defined in <code>ApplibPlayer_Internal.h</code>) Please refer to Section 11.3.4.1 for more details.

Table 11-48. Parameters for SDK6 ARD AppLib Player API **Applib_Draw_Rectangle()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-49. Returns for SDK6 ARD AppLib Player API **Applib_Draw_Rectangle()**.

Example:

None

See Also:

None

11.3.4.1 Applib_Draw_Rectangle > APPLIB_DRAW_COLOR_s

Type	Field	Description
UINT8	PenColorY	Y value of pen's color. 0 - 255
UINT8	PenColorU	U value of pen's color. 0 - 255
UINT8	PenColorV	V value of pen's color. 0 - 255
UINT8	PenColorAlpha	Alpha value (for blending) value of pen's color. 0 - 255

Table 11-50. Definition of **APPLIB_DRAW_COLOR_s** for SDK6 ARD AppLib Player API **Applib_Draw_Rectangle()**.

11.3.5 Applib_PipFrameSizeCal

API Syntax:

```
int Applib_PipFrameSizeCal (APPLIB_PIP_FRAME_CAL_s * param )
```

Function Description:

- This function is used to calculate the location and size of a pip frame.

Parameters:

Type	Parameter	Description
[in] APPLIB_PIP_FRAME_CAL_s *	param	Include input and output of the function (APPLIB_PIP_FRAME_CAL_s is defined in <code>ApplibPlayer_Internal.h</code>) Please refer to Section 11.3.5.1 for more details.

Table 11-51. Parameters for SDK6 ARD AppLib Player API **Applib_PipFrameSizeCal()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-52. Returns for SDK6 ARD AppLib Player API **Applib_PipFrameSizeCal()**.

Example:

None

See Also:

None

11.3.5.1 Applib_PipFrameSizeCal > APPLIB_PIP_FRAME_CAL_s

Type	Field	Description
UINT32	ImageSrcWidth	Buffer width of image source
UINT32	ImageSrcHeight	Buffer height of image source
AMP_AREA_s	ImageSrcAOI	Display area of image source
AMP_AREA_s	ImagePipAOI	PIP AOI in VOUT buffer
AMP_ROTATION_e	ImageRotate	Rotate and flip setting
AMP_AREA_s	OutputPipFrameAOI	PIP frame AOI in VOUT buffer. It is a subset of PIP area.

Table 11-53. Definition of **APPLIB_PIP_FRAME_CAL_s** for SDK6 ARD AppLib Player API **Applib_PipFrameSizeCal()**.

11.3.6 AppLib_SetYuvBuf_Black

API Syntax:

```
void AppLib_SetYuvBuf_Black (UINT8 * StartLumaAddr, UINT8 * StartChromaAddr, const UINT32 YBuf-  
Size, const UINT32 UvBufSize)
```

Function Description:

- This function is used to set color of YUV buffer to black.
- YUV buffer is composed of Y buffer and UV buffer. Both buffer have (BufSize) bytes.
- YUV value of black color:
 - 0: Y
 - 128: U
 - 128: V

Parameters:

Type	Parameter	Description
[in] UINT8 *	StartLumaAddr	Start address of Y. Set each byte of the buffer to 0.
[in] UINT8 *	StartChromaAddr	Start address of UV. Set each byte of the buffer to 128.
[in] const UINT32	YBufSize	The size, in bytes, of Y buffer
[in] const UINT32	UvBufSize	The size, in bytes, of UV buffer

Table 11-54. Parameters for SDK6 ARD AppLib Player API **AppLib_SetYuvBuf_Black()**.

Returns:

None

Example:

None

See Also:

None

11.4 Player: ApplibPlayer_StillTask

This section introduces a task handling the processes of displaying images on screen.

Decode process is separated into 4 steps.

1. Feed
2. Decode
3. Rescale
4. Display

With combinations of those steps images can be displayed.

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11.4.1 AppLibStillDec_DeinitTask

API Syntax:

int AppLibStillDec_DeinitTask (void)

Function Description:

- This function is used to delete still decode task and still display task.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-55. Returns for SDK6 ARD AppLib Player API **AppLibStillDec_DeinitTask()**.

Example:

None

See Also:

None

11.4.2 AppLibStillDec_InitTask

API Syntax:

int AppLibStillDec_InitTask (void)

Function Description:

- This function is used to create still decode task and still display task.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-56. Returns for SDK6 ARD AppLib Player API **AppLibStillDec_InitTask()**.

Example:

None

See Also:

None

11.4.3 AppLibStillDec_InitVoutMsgOutput_BeforeLoad

API Syntax:

```
int AppLibStillDec_InitVoutMsgOutput_BeforeLoad (APPLIB_STILL_TASK_OUTPUT_s * MsgOut )
```

Function Description:

- This function is used to reset the output of a Vout message before loading (= feeding + decoding) an image.

Parameters:

Type	Parameter	Description
[in, out] APPLIB_STILL_TASK_OUTPUT_s *	MsgOut	VOUT message to be initialized (partially) (APPLIB_STILL_TASK_OUTPUT_s is defined in <code>AppLibPlayer_StillTask.h</code>) Please refer to Section 11.4.3.1 for more details.

Table 11-57. Parameters for SDK6 ARD AppLib Player API **AppLibStillDec_InitVoutMsgOutput_BeforeLoad()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-58. Returns for SDK6 ARD AppLib Player API **AppLibStillDec_InitVoutMsgOutput_BeforeLoad()**.

Example:

None

See Also:

None

11.4.3.1 AppLibStillDec_InitVoutMsgOutput_BeforeLoad > APPLIB_STILL_TASK_OUTPUT_s

Type	Field	Description
APPLIB_STILL_TASK_RESULT_e	ResultCode	Task result
APPLIB_STILL_TASK_STATE_e	VoutState	VOUT state
UINT32	ImageWidth	Width of the original image. It is also the width of the image in main buffer.
UINT32	ImageHeight	Height of the original image. It is also the height of the image in main buffer.
UINT32	ImagePitch	Pitch of the image in the main buffer
AMP_COLOR_FORMAT_e	ImageColorFmt	Color format of the image in the main buffer
UINT8 *	ImageDecChromaAddr	Chroma address of the image in the main buffer

Table 11-59. Definition of **APPLIB_STILL_TASK_OUTPUT_s** for SDK6 ARD AppLib Player API **AppLibStillDec_InitVoutMsgOutput_BeforeLoad()**.

11.4.4 AppLibStillDec_InitVoutMsgOutput_BeforeShow

API Syntax:

int AppLibStillDec_InitVoutMsgOutput_BeforeShow (APPLIB_STILL_TASK_OUTPUT_s * MsgOut)

Function Description:

- This function is used to reset the output of a VOUT message before showing (= rescaling + displaying) an image.

Parameters:

Type	Parameter	Description
[in, out] APPLIB_STILL_TASK_OUTPUT_s *	MsgOut	VOUT message to be initialized (partially) (APPLIB_STILL_TASK_OUTPUT_s is defined in <code>AppLibPlayer_StillTask.h</code>) Please refer to Section 11.4.3.1 for more details.

Table 11-60. Parameters for SDK6 ARD AppLib Player API **AppLibStillDec_InitVoutMsgOutput_BeforeShow()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-61. Returns for SDK6 ARD AppLib Player API **AppLibStillDec_InitVoutMsgOutput_BeforeShow()**.

Example:

None

See Also:

None

11.4.5 AppLibStillDec_IsTaskInitialized

API Syntax:

int AppLibStillDec_IsTaskInitialized (void)

Function Description:

- This function is used to determine if the task has been initialized.

Parameters:

None

Returns:

Return	Description
0	Not initialized
others	Already initialized

Table 11-62. Returns for SDK6 ARD AppLib Player API **AppLibStillDec_IsTaskInitialized()**.

Example:

None

See Also:

None

11.4.6 AppLibStillDec_SendVoutMsg

API Syntax:

```
int AppLibStillDec_SendVoutMsg (const APPLIB_STILL_TASK_MSG_s * DispMsg, const UINT32 Timeout)
```

Function Description:

- This function is used to send a display message to the still display task.

Parameters:

Type	Parameter	Description
[in] const APPLIB_STILL_TASK_MSG_s *	DispMsg	Message to task (APPLIB_STILL_TASK_MSG_s is defined in AppLibPlayer_StillTask.h) Please refer to Section 11.4.6.1 for more details.
const UINT32	Timeout	Limitation of time (in ms) to run this function

Table 11-63. Parameters for SDK6 ARD AppLib Player API **AppLibStillDec_SendVoutMsg()**.

Returns:

Return	Description
0	Success
- 1	The task is not initialized
others	AMP_MSG_QUEUE_RESULT_e

Table 11-64. Returns for SDK6 ARD AppLib Player API **AppLibStillDec_SendVoutMsg()**.

Example:

None

See Also:

None

11.4.6.1 AppLibStillDec_SendVout_Msg > APPLIB_STILL_VOUT_TASK_MSG_s

Type	Field	Description
APPLIB_STILL_TASK_MSG_e	MessageType	Type of message
AMP_STLDEC_HDLR_s *	StlDecHdlr	Still decode handler
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	BeginCB	Callback function that is invoked right after dealing with the first message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	EndCB	Callback function that is invoked right after dealing with the last message of a specific channel.
APPLIB_STILL_VOUT_TASK_OUTPUT_s *	Output	[Output] Output from Still Task. Please refer to Section 11.4.3.1 for more details.
APPLIB_STILL_VOUT_TASK_MSG_CTX_u	Message	Message context which varies according to MessageType

Table 11-65. Definition of **APPLIB_STILL_TASK_MSG_s** for SDK6 ARD AppLib Player API **AppLibStillDec_SendVoutMsg()**.

11.5 Player: Still Decode

This section introduces the modules of still decoding including.

- AppLibPlayer_Still_Single

Decode and display an image with zooming and shifting features.

There are two steps of displaying an image.

1. Load

Read a file and decode it

2. Show

Display a decoded image (or a part of it) on screen

- AppLib_Thumb_Basic

Decode and display 6 images tiled on screen.

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11.5.1 AppLibStillSingle_ClearScreen

API Syntax:

int AppLibStillSingle_ClearScreen (UINT32 * OutputWaitEventID)

Function Description:

- This function is used to show black on screen. It is a non-blocking function.

Parameters:

Type	Parameter	Description
[in] UINT32 *	OutputWaitEventID	An identifier connected with the request

Table 11-66. Parameters for SDK6 ARD AppLib Player API **AppLibStillSingle_ClearScreen()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-67. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_ClearScreen()**.

Example:

None

See Also:

None

11.5.2 AppLibStillSingle_Deinit

API Syntax:

int AppLibStillSingle_Deinit (void)

Function Description:

- This function is used to stop single still decoder and release all the resources.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-68. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_Deinit()**.

Example:

None

See Also:

None

11.5.3 AppLibStillSingle_Init

API Syntax:

int AppLibStillSingle_Init (void)

Function Description:

- This function is used to initialize single still decoder which support displaying, zooming and shifting a still in a window.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-69. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_ClearScreen()**.

Example:

None

See Also:

None

11.5.4 AppLibStillSingle_Load

API Syntax:

int AppLibStillSingle_Load (APPLIB_STILL_FILE_s * StillFile)

Function Description:

- This function is used to load single still file. It is a non-blocking function.

Parameters:

Type	Parameter	Description
[in] APPLIB_STILL_FILE_s *	StillFile	Information to decode a file. (APPLIB_STILL_SINGLE_s is include in <code>AppLibPlayer_Still_Single.h</code>) Please refer to Section 11.5.4.1 for definition.

Table 11-70. Parameters for SDK6 ARD AppLib Player API **AppLibStillSingle_Load()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-71. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_Load()**.

Example:

None

See Also:

None

11.5.4.1 AppLibStillSingle_Load > APPLIB_STILL_FILE_s

Type	Field	Description
WCHAR	Filename [MAX_FILENAME_LENGTH]	Filename. Full path of an image
UINT32	FileSource	The decode source of file. 0: Fullview 1: Thumbnail 2: Screenrail comparison of resolution Fullview > screenrail > thumbnail Comparison of decode speed: Thumbnail > screenrail > fullview
[Output] UINT32 *	OutputWaitEventID	An identifier as an input to AppLibStillSingle_Show() to wait until the request is complete.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	FeedBeginCB	Callback function that is invoked right before dealing with the first feed message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	FeedEndCB	Callback function that is invoked right before dealing with the last feed message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DecodeBeginCB	Callback function that is invoked right before dealing with the first decode message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DecodeEndCB	Callback function that is invoked right before dealing with the last decode message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	LoadEndCB	Callback function that is invoked right after finishing all the feed and decode message.

Table 11-72. Definition of **APPLIB_STILL_FILE_s** for SDK6 ARD AppLib Player API **AppLibStillSingle_Load()**.

11.5.5 AppLibStillSingle_Show

API Syntax:

```
int AppLibStillSingle_Show (APPLIB_STILL_SINGLE_s * StillInfo)
```

Function Description:

- This function is used to show single still on window. It is a non-blocking function.

Parameters:

Type	Parameter	Description
[in] AP- PLIB_STILL_ SINGLE_s *	StillInfo	Information to display an image, such as location, size etc. (APPLIB_STILL_SINGLE_s is include in AppLibPlayer_Still_Single.h) Please refer to Section 11.5.5.1 for definition.

Table 11-73. Parameters for SDK6 ARD AppLib Player API **AppLibStillSingle_Show()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-74. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_Show()**.

Example:

None

See Also:

None

11.5.5.1 AppLibStillSingle_Show > APPLIB_STILL_SINGLE_s

Type	Field	Description
[input] AMP_ AREA_s	AreaDchanDisplayMain	Displayed area (of digital channel) on screen. The area is defined in an unique coordinate system which divides width and height of the screen into 10000 pieces.

Type	Field	Description
[input] AMP_ AREA_s	AreaDchanPIP	PIP (Picture in Picture) area of digital channel. Typically shows up when an image is enlarged. PIP is a small window illustrating the entire image, with a frame indicating the displayed area relative to the entire image. PIP is always in front of the displayed image. If the user does not want to show the PIP area, simply set AreaPIP.Width = 0 or AreaPIP.Height = 0. The area is defined in an unique coordinate system which divides width and height of the screen into 10000 pieces.
[input] AMP_ AREA_s	AreaFchanDisplayMain	Displayed area (of full channel) on screen. The area is defined in an unique coordinate system which divides width and height of the screen into 10000 pieces.
[input] AMP_ AREA_s	AreaFchanPIP	PIP (Picture in Picture) area of full channel. Typically shows up when an image is enlarged. PIP is a small window illustrating the entire image, with a frame indicating the displayed area relative to the entire image. PIP is always in front of the displayed image. If the user does not want to show the PIP area, simply set AreaPIP.Width = 0 or AreaPIP.Height = 0. The area is defined in an unique coordinate system which divides width and height of the screen into 10000 pieces.
[input] INT32	ImageShiftX	Number of pixels (of the original image) to shift along X-axis. Area of the image outside of the window will be cropped. ImageShiftX < 0: Image moves to the left ImageShiftX = 0: Image is centered horizontally ImageShiftX > 0: Image moves to the right.
INT32	ImageShiftY	Number of pixels (of the original image) to shift along Y-axis. Area of the image outside of the window will be cropped. ImageShiftY < 0: Image moves up ImageShiftY = 0: Image is centered hvertically ImageShiftY > 0: Image moves to the down.
[input] UINT32	MagFactor	Magnification factor. Percentage of the size of displayed image relative to the original one that is centered in and stretched to the window. Area of the image outside the window will be cropped. MagFactor < 100: Image becomes larger MagFactor = 100: Image is centered in and stretched to the window, as long as it is not shifted. MagFactor > 100: Image becomes smaller. For instance, setting MagFactor = 200 results in an image twice as large as the original one.
[input] AMP_ ROTATION_e	ImageRotate	Rotate and flip setting
[output] INT32	OutputReallImageShiftX	The eventual number of pixels (of the original image) shifting along X-axis. When adjustment are made (AutoAdjust = 1), there may be difference between OutputReallImageShiftX and ImageShiftX . Otherwise, OutputReallImageShiftX and ImageShiftX are equal.
INT32	OutputReallImageShiftY	The eventual number of pixels (of the original image) shifting along Y-axis. When adjustment are made (AutoAdjust = 1), there may be difference between OutputReallImageShiftY and ImageShiftY . Otherwise, OutputReallImageTShiftY and ImageShiftY are equal.
[Output] UINT32 *	OutputWaitEventID	An identifier as an input to AppLibStillSingle_Show to wait until the request is complete.

Type	Field	Description
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	RescaleBeginCB	Callback function that is invoked right before dealing with the first rescale message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	RescaleEndCB	Callback function that is invoked right after dealing with the last rescale message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	RescaleAllChanBeginCB	Callback function that is invoked right before dealing with the first rescale message of all channels.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	RescaleAllChanEndCB	Callback function that is invoked right before dealing with the last rescale message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DisplayBeginCB	Callback function that is invoked right before dealing with the first display message of a specific channel.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DisplayWaitCB	Callback function that is invoked right after dealing with the last display message of a specific channel (and waiting for DSP callback).
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DisplayEndCB	Callback function that is invoked right after receiving the DSP callback that the display request is done.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DisplayAllChanBeginCB	Callback function that is invoked right before dealing with the first display message of all channels.
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DisplayAllChanWaitCB	Callback function that is invoked right after dealing with the last display message of all channels (and waiting for DSP callback).
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	DisplayAllChanEndCB	Callback function that is invoked right after receiving the last DSP callback of all channels that the display request is done.

Type	Field	Description
int(*) (AMP_STLDEC_HDLR_s *Hdlr, UINT32 EventID, void *Info)	ShowEndCB	Callback function that is invoked right after finishing all the rescale and display messages.

Table 11-75. Definition of **APPLIB_STILL_SINGLE_s** for SDK6 ARD AppLib Player API **AppLibStillSingle_Show()**.

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11.5.6 AppLibStillSingle_WaitClearScreen

API Syntax:

```
int AppLibStillSingle_WaitClearScreen (UINT32 WaitEventID )
```

Function Description:

- This function is used to wait until the request connected with the ID is complete.

Parameters:

Type	Parameter	Description
[in] UINT32	WaitEventID	An identifier connected with the request

Table 11-76. Parameters for SDK6 ARD AppLib Player API **AppLibStillSingle_WaitClearScreen()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-77. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_WaitClearScreen()**.

Example:

None

See Also:

None

11.5.7 AppLibStillSingle_WaitLoad

API Syntax:

```
int AppLibStillSingle_WaitLoad (UINT32 WaitEventID )
```

Function Description:

- This function is used to wait until the request with the WaitEventID is complete.

Parameters:

Type	Parameter	Description
[in] UINT32	WaitEventID	An identifier connected with the request

Table 11-78. Parameters for SDK6 ARD AppLib Player API **AppLibStillSingle_WaitLoad()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-79. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_WaitLoad()**.

Example:

None

See Also:

None

11.5.8 AppLibStillSingle_WaitShow

API Syntax:

int AppLibStillSingle_WaitShow (UINT32 WaitEventID)

Function Description:

- This function is used to wait until the request connected with the ID is complete.

Parameters:

Type	Parameter	Description
[in] UINT32	WaitEventID	An identifier connected with the request

Table 11-80. Parameters for SDK6 ARD AppLib Player API **AppLibStillSingle_WaitShow()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-81. Returns for SDK6 ARD AppLib Player API **AppLibStillSingle_WaitShow()**.

Example:

None

See Also:

None

11.5.9 AppLibThmBasic_ClearScreen

API Syntax:

int AppLibThmBasic_ClearScreen (void)

Function Description:

- This function is used to show black on screen.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-82. Returns for SDK6 ARD AppLib Player API **AppLibThmBasic_ClearScreen()**.

Example:

None

See Also:

None

11.5.10 AppLibThmBasic_Deinit

API Syntax:

int AppLibThmBasic_Deinit (void)

Function Description:

- This function is used to deinit the basic thumbnail.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-83. Returns for SDK6 ARD AppLib Player API **AppLibThmBasic_Deinit()**.

Example:

None

See Also:

None

11.5.11 AppLibThmBasic_Init

API Syntax:

int AppLibThmBasic_Init (void)

Function Description:

- This function is used to initialize the basic thumbnail and supports to display thumbnail on at least two windows

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-84. Returns for SDK6 ARD AppLib Player API **AppLibThmBasic_Init()**.

Example:

None

See Also:

None

11.5.12 AppLibThmBasic_Show

API Syntax:

int AppLibThmBasic_Show (APPLIB_THUMB_BASIC_TABLE_s * LocationInfo, UINT8 NumFiles, APPLIB_THUMB_BASIC_FILE_s * Files, UINT8 Decoded)

Function Description:

- This function is used to show the thumbnail on the window.

Parameters:

Type	Parameter	Description
[in] APPLIB_THUMB_BASIC_TABLE_s *	LocationInfo	The location table. (APPLIB_THUMB_BASIC_TABLE_s is defined in ApplibPlayer_Thumb_Basic.h) Please refer to Section 11.5.12.1 for definition.
[in] UINT8	NumFiles	Number of file to show
[in] APPLIB_THUMB_BASIC_FILE_s *	Files	Array pointer to files to show (APPLIB_THUMB_BASIC_FILE_s is defined in ApplibPlayer_Thumb_Basic.h) Please refer to Section 11.5.12.2 for definition.
[in] UINT8	Decoded	The files have been decoded and there is no need to decode them again.

Table 11-85. Parameters for SDK6 ARD AppLib Player API **AppLibThmBasic_Show()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-86. Returns for SDK6 ARD AppLib Player API **AppLibThmBasic_Show()**.

Example:

None

See Also:

None

11.5.12.1 AppLibThmBasic_Show > APPLIB_THUMB_BASIC_TABLE_s

Type	Type	Description
UINT8	NumScenes	Number of scenes in the basic thumbnail mode
APPLIB_STILL_DISP_DESC_s *	AreaNormal	Display information of each scene
APPLIB_STILL_DISP_DESC_s *	AreaFocused	Display information of each scene when it is focused

Table 11-87. Definition of **APPLIB_THUMB_BASIC_TABLE_s** for SDK6 ARD AppLib Player API **AppLibThmBasic_Show()**.

11.5.12.2 AppLibThmBasic_Show > APPLIB_THUMB_BASIC_FILE_s

Type	Type	Description
WCHAR	Filename [MAX_FILENAME_LENGTH]	Filename
UINT8	Focused	Whether the file is focused
UINT32	FileSource	The source file, indicating to show thumbnail/fullview/screen-nail

Table 11-88. Definition of **APPLIB_THUMB_BASIC_FILE_s** for SDK6 ARD AppLib Player API **AppLibThmBasic_Show()**.

11.6 Player: Video Decode

This section introduces modules of video decoding. The video player with trickplay features, including the following.

- ApplibPlayer_VideoDec

The supported trickplay features are listed below.

1. Speed change
2. Time search
3. Pause
4. Resume
5. Step
6. Zoom
7. Backward

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11.6.1 AppLibVideoDec_Exit

API Syntax:

int AppLibVideoDec_Exit (void)

Function Description:

- This function is used to exit the video.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-89. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Exit()**.

Example:

None

See Also:

None

11.6.2 AppLibVideoDec_FeedNextFile

API Syntax:

int AppLibVideoDec_FeedNextFile (UINT32 startTime)

Function Description:

- This function is used to feed the next file. Used when playing split file.

Parameters:

Type	Parameter	Description
[in] UINT32	startTime	Start time in ms

Table 11-90. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_FeedNextFile()**.

Returns:

Return	Description
0	Success
others	Failure

Table 11-91. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_FeedNextFile()**.

Example:

None

See Also:

None

11.6.3 AppLibVideoDec_GetMultiFileInfo

API Syntax:

```
int AppLibVideoDec_GetMultiFileInfo (APPLIB_VIDEO_START_MULTI_INFO_s * VideoStartInfo)
```

Function Description:

- This function is used to get movie information for multiple videos.

Parameters:

Type	Parameter	Description
[in,out] APPLIB_VIDEO_START_MULTI_INFO_s *	VideoStartInfo	Information for playing multiple videos. (APPLIB_VIDEO_START_MULTI_INFO_s is defined in <code>ApplibPlayer_VideoDec.h</code>) Please refer to Section 11.2.5.1 for definition.

Table 11-92. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_GetMultiFileInfo()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-93. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_GetMultiFileInfo()**.

Example:

None

See Also:

None

11.6.3.1 AppLibVideoDec_GetMultiFileInfo > APPLIB_VIDEO_START_MULTI_INFO_s

Type	Field	Description
APPLIB_VIDEO_FILE_INFO_s *	File	Array of the file information
UINT8	FileNum	Number of files
UINT8	AutoPlay	Play after opening the file successfully. 0: Open and pause the video 1: Open and play the video
UINT32	StartTime	Video start time (in ms)
APPLIB_VIDEO_PLAY_DIRECTION_e	Direction	Play video forward or backward. APPLIB_VIDEO_PLAY_FW: Forward APPLIB_VIDEO_PLAY_BW: Backward

Type	Field	Description
UINT8	ReloadFile	Whether to play videos specified in File or not. 0: Play previous video. File and FileNum are invalid. 1: Play videos specified in File.
UINT8	ResetSpeed	Set playing speed to the default value. 0: Play at a current speed. If the last action prior to start is pause, the video will play at speed = 0. Call resume to play at the speed before pause. 1: Play at normal speed.
UINT8	ResetZoom	Set display size to the default value. 0: Play with current zoom settings 1: Play with original size

Table 11-94. Definition of **APPLIB_VIDEO_START_MULTI_INFO_s** for SDK6 ARD AppLib Player API **AppLibVideo-Dec_GetMultiFileInfo()**.

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11.6.4 AppLibVideoDec_GetMultiStartDefaultCfg

API Syntax:

```
int AppLibVideoDec_GetMultiStartDefaultCfg (APPLIB_VIDEO_START_MULTI_INFO_s * OutputVideoStartInfo)
```

Function Description:

- This function is used to get the default settings for multiple videos.

Parameters:

Type	Parameter	Description
[out] APPLIB_VIDEO_START_MULTI_INFO_s *	OutputVideoStartInfo	Video settings. (APPLIB_VIDEO_START_MULTI_INFO_s is defined in <code>ApplibPlayer_VideoDec.h</code>) Please refer to Section 11.6.3.1 for definition.

Table 11-95. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_GetMultiStartDefaultCfg()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-96. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_GetMultiStartDefaultCfg()**.

Example:

None

See Also:

None

11.6.5 AppLibVideoDec_GetStartDefaultCfg

API Syntax:

int AppLibVideoDec_GetStartDefaultCfg (APPLIB_VIDEO_START_INFO_s * OutputVideoStartInfo)

Function Description:

- This function is used to get the default video settings.

Parameters:

Type	Parameter	Description
[out] APPLIB_VIDEO_START_INFO_s*	OutputVideoStartInfo	Video settings. (APPLIB_VIDEO_START_INFO_s is defined in <code>ApplibPlayer_VideoDec.h</code>) Please refer to Section 11.6.3.1 for definition.

Table 11-97. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_GetStartDefaultCfg()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-98. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_GetStartDefaultCfg()**.

Example:

None

See Also:

None

11.6.5.1 AppLibVideoDec_GetMultiFileInfo > APPLIB_VIDEO_START_INFO_s

Type	Field	Description
WCHAR *	Filename	Start address of filename. Full path of a video
UINT8	AutoPlay	Play after opening the file successfully. 0: Open and pause the video 1: Open and play the video
UINT32	StartTime	Video start time (in ms)
APPLIB_VIDEO_PLAY_DIRECTION_e	Direction	Play video forward or backward. APPLIB_VIDEO_PLAY_FW: Forward APPLIB_VIDEO_PLAY_BW: Backward
UINT8	ResetSpeed	Set playing speed to the default value. 0: Play at a current speed. If the last action prior to start is pause, the video will play at speed = 0. Call resume to play at the speed before pause. 1: Play at normal speed.
UINT8	ResetZoom	Set display size to the default value. 0: Play with current zoom settings 1: Play with original size

Table 11-99. Definition of **APPLIB_VIDEO_START_INFO_s** for SDK6 ARD AppLib Player API **AppLibVideoDec_GetMultiFileInfo()**.

11.6.6 AppLibVideoDec_GetTime

API Syntax:

```
int AppLibVideoDec_GetTime (UINT64 * time)
```

Function Description:

- This function is used to get the video time.

Parameters:

Type	Parameter	Description
[out] UINT64 *	time	Current video time

Table 11-100. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_GetTime()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-101. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_GetTime()**.

Example:

None

See Also:

None

11.6.7 AppLibVideoDec_Init

API Syntax:

int AppLibVideoDec_Init (void)

Function Description:

- This function is used to initialize the video decoder.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-102. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Init()**.

Example:

None

See Also:

None

11.6.8 AppLibVideoDec_Pause

API Syntax:

int AppLibVideoDec_Pause (void)

Function Description:

- This function is used to pause the video decoder.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-103. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Pause()**.

Example:

None

See Also:

None

11.6.9 AppLibVideoDec_Resume

API Syntax:

int AppLibVideoDec_Pause (void)

Function Description:

- This function is used to resume the video. Play at the speed right before the pause action. Do nothing if the video is still playing.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-104. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Resume()**.

Example:

None

See Also:

None

11.6.10 AppLibVideoDec_SetEosPts

API Syntax:

int AppLibVideoDec_SetEosPts (UINT64 eosFiletime, UINT32 timePerFrame, UINT32 timePerSec)

Function Description:

- This function is used to set the PTS value at the end of the video.

Parameters:

Type	Parameter	Description
[in] UINT64	eosFiletime	File time of the last frame
[in] UINT32	timePerFrame	File time of a frame
[in] UINT32	timePerSec	File time in a second

Table 11-105. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_SetEosPts()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-106. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_SetEosPts()**.

Example:

None

See Also:

None

11.6.11 AppLibVideoDec_SetPtsFrame

API Syntax:

int AppLibVideoDec_SetPtsFrame (UINT64 frameCount, UINT32 timePerFrame, UINT32 timePerSec)

Function Description:

- This function is used to set the PTS value at the end of the video.

Parameters:

Type	Parameter	Description
[in] UINT64	frameCount	Number of frames
[in] UINT32	timePerFrame	File time of a frame
[in] UINT32	timePerSec	File time in a second

Table 11-107. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_SetPtsFrame()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-108. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_SetPtsFrame()**.

Example:

None

See Also:

None

11.6.12 AppLibVideoDec_SpeedDown

API Syntax:

```
int AppLibVideoDec_SpeedDown (UINT32 * CurSpeed)
```

Function Description:

- This function is used to slow down the video.

Parameters:

Type	Parameter	Description
[out] UINT32 *	CurSpeed	Playback speed after slowing down. A speed of 256 indicates normal speed.

Table 11-109. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_SpeedDown()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-110. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_SpeedDown()**.

Example:

None

See Also:

None

11.6.13 AppLibVideoDec_SpeedUp

API Syntax:

```
int AppLibVideoDec_SpeedUp (UINT32 * CurSpeed)
```

Function Description:

- This function is used to speed up the video.

Parameters:

Type	Parameter	Description
[out] UINT32 *	CurSpeed	Playback speed after speeding down. A speed of 256 indicates normal speed.

Table 11-111. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_SpeedUp()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-112. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_SpeedUp()**.

Example:

None

See Also:

None

11.6.14 AppLibVideoDec_Start

API Syntax:

```
int AppLibVideoDec_Start (const APPLIB_VIDEO_START_INFO_s * VideoStartInfo )
```

Function Description:

- This function is used to start playing the video.

Parameters:

Type	Parameter	Description
[in] const AP- PLIB_VIDEO_ START_INFO_s *	VideoStartInfo	Information for playing a video. (APPLIB_VIDEO_START_INFO_s is defined in <code>AppLibPlayer_VideoDec.h</code>) Please refer to Section 11.6.5.1 for definiton.

Table 11-113. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_Start()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-114. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Start()**.

Example:

None

See Also:

None

11.6.15 AppLibVideoDec_StartMultiple

API Syntax:

```
int AppLibVideoDec_StartMultiple (const APPLIB_VIDEO_START_MULTI_INFO_s * VideoStartInfo)
```

Function Description:

- This function is used to start playing multiple videos.

Parameters:

Type	Parameter	Description
[in] const APPLIB_VIDEO_START_MULTI_INFO_s*	VideoStartInfo	Information for playing multiple videos. (APPLIB_VIDEO_START_MULTI_INFO_s is defined in <code>AppLibPlayer_VideoDec.h</code>) Please refer to Section 11.6.3.1 for definition.

Table 11-115. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_StartMultiple()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-116. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_StartMultiple()**.

Example:

None

See Also:

None

11.6.16 AppLibVideoDec_Step

API Syntax:

int AppLibVideoDec_Step (void)

Function Description:

- This function is used to step one frame forward.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-117. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Step()**.

Example:

None

See Also:

None

11.6.17 AppLibVideoDec_Step

API Syntax:

int AppLibVideoDec_Step (void)

Function Description:

- This function is used to stop the video.

Parameters:

None

Returns:

Return	Description
0	Success
others	Error

Table 11-118. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Step()**.

Example:

None

See Also:

None

11.6.18 AppLibVideoDec_Zoom

API Syntax:

int AppLibVideoDec_Zoom (const UINT32 Factor, const INT32 X, const INT32 Y)

Function Description:

- This function is used to zoom, shift and play the video.

Parameters:

Type	Parameter	Description
[in] const UINT32	Factor	Magnification Factor. A factor of 100 indicates the original size.
[in] const INT32	x	Shift on X-axis. Number of pixels (of the original image) to shift along X-axis.
[in] const INT32	y	Shift on Y-axis. Number of pixels (of the original image) to shift along Y-axis.

Table 11-119. Parameters for SDK6 ARD AppLib Player API **AppLibVideoDec_Zoom()**.

Returns:

Return	Description
0	Success
others	Error

Table 11-120. Returns for SDK6 ARD AppLib Player API **AppLibVideoDec_Zoom()**.

Example:

None

See Also:

None

12 Recorder

12.1 Recorder: Overview

This chapter provides details on the record related function implementation.

12.2 Recorder: Modules of the System APIs

System APIs are categorized into the following modules:

- (Section 12.3) Recorder: List of APIs for ApplibRecorder_AudioEnc
- (Section 12.4) Recorder: List of APIs for ApplibRecorder_LoopEnc
- (Section 12.5) Recorder: List of APIs for ApplibRecorder_MemMgr
- (Section 12.6) Recorder: List of APIs for ApplibRecorder_Message
- (Section 12.7) Recorder: List of APIs for ApplibRecorder_StillEnc
- (Section 12.8) Recorder: List of APIs for ApplibRecorder_VideoEnc

12.3 Recorder: List of APIs for ApplibRecorder_AudioEnc

The following section lists the audio encode related functions.

12.3.1 AppLibAudioEnc_SetBitrate

API Syntax:

Int AppLibAudioEnc_SetBitrate (INT bitRate)

Function Description:

- This function sets the bit rate.

Parameters:

Type	Parameter	Description
INT	bitRate	Bit rate

Table 12-1. Parameters for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetBitrate().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-2. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetBitrate().

Example:

None

See Also:

None

12.3.2 AppLibAudioEnc_GetBitate

API Syntax:

Int AppLibAudioEnc_GetBitate (void)

Function Description:

- This function gets the bit rate.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-3. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_GetBitate().

Example:

None

See Also:

None

12.3.3 AppLibAudioEnc_SetDualStreams

API Syntax:

Int AppLibAudioEnc_SetDualStreams (INT dualStreams)

Function Description:

- This function sets dual streams.

Parameters:

Type	Parameter	Description
INT	dualStreams	Dual Streams

Table 12-4. Parameters for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetDualStreams().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-5. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetDualStreams().

Example:

None

See Also:

None

12.3.4 AppLibAudioEnc_GetDualStreams

API Syntax:

Int AppLibAudioEnc_GetDualStreams (void)

Function Description:

- This function gets dual streams.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-6. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_GetDualStreams().

Example:

None

See Also:

None

12.3.5 AppLibAudioEnc_Init

API Syntax:

Int AppLibAudioEnc_Init (void)

Function Description:

- This function initializes the video encoder.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-7. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_Init().

Example:

None

See Also:

None

12.3.6 AppLibAudioEnc_Setup

API Syntax:

Int AppLibAudioEnc_Setup (void)

Function Description:

- This function is used to setup the audio encoding parameter.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-8. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_Setup().

Example:

None

See Also:

None

12.3.7 AppLibAudioEnc_EncodeStart

API Syntax:

Int AppLibAudioEnc_EncodeStart (void)

Function Description:

- This function is used to start audio encoding.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-9. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_EncodeStart().

Example:

None

See Also:

None

12.3.8 AppLibAudioEnc_EncodeStop

API Syntax:

Int AppLibAudioEnc_EncodeStop (void)

Function Description:

- This function is used to stop encoding audio.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-10. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_EncodeStop().

Example:

None

See Also:

None

12.3.9 AppLibAudioEnc_SetEncType

API Syntax:

Int AppLibAudioEnc_SetEncType (int enctype)

Function Description:

- This function sets the encode type.

Parameters:

Type	Parameter	Description
INT	enctype	Encode type; 0: PCM, 1: AAC

Table 12-11. Parameters for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetEncType().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-12. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetEncType().

Example:

None

See Also:

None

12.3.10 AppLibAudioEnc_GetEncType

API Syntax:

UINT32 AppLibAudioEnc_GetEncType (void)

Function Description:

- This function gets the encode type.

Returns:

Return	Description
>=0	Encode type; 0: PCM, 1: AAC
<0	Execution failed

Table 12-13. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_GetEncType().

Example:

None

See Also:

None

12.3.11 AppLibAudioEnc_SetSrcSampleRate

API Syntax:

Int AppLibAudioEnc_SetSrcSampleRate (int samplerate)

Function Description:

- This function is used to modify the source sample rate of current encode type.

Parameters:

Type	Parameter	Description
INT	samplerate	Sample rate

Table 12-14. Parameters for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetSrcSampleRate().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-15. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetSrcSampleRate().

Example:

None

See Also:

None

12.3.12 AppLibAudioEnc_SetDstSampleRate

API Syntax:

Int AppLibAudioEnc_SetDstSampleRate (int samplerate)

Function Description:

- This function is used to modify the destination sample rate of current encode type.

Parameters:

Type	Parameter	Description
INT	samplerate	Sample rate

Table 12-16. Parameters for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetDstSampleRate().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-17. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_SetDstSampleRate().

Example:

None

See Also:

None

12.3.13 AppLibAudioEnc_GetSrcSampleRate

API Syntax:

UINT32 AppLibAudioEnc_GetSrcSampleRate (void)

Function Description:

- This function is used to get the source sample rate of current encode type.

Returns:

Return	Description
>=0	Source sample rate
<0	Execution failed

Table 12-18. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_GetSrcSampleRate().

Example:

None

See Also:

None

12.3.14 AppLibAudioEnc_GetSrcChanMode

API Syntax:

UINT32 AppLibAudioEnc_GetSrcChanMode (void)

Function Description:

- This function is used to get the source channel mode of current encode type.

Returns:

Return	Description
>=0	Source channel mode
<0	Execution failed

Table 12-19. Returns for SDK6 ARD AppLib Recorder API AppLibAudioEnc_GetSrcChanMode().

Example:

None

See Also:

None

12.4 Recorder: List of APIs for ApplibRecorder_LoopEnc

This section lists the APIs for the Loop encode related functions.

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12.4.1 AppLibLoopEnc_SndMsg

API Syntax:

Int AppLibLoopEnc_SndMsg (UINT32 msg, UINT32 param1, UINT32 param2)

Function Description:

- This function sends message to the Loop encoder manager

Parameters:

Type	Parameter	Description
UINT32	msg	Message ID
UINT32	param1	First parameter
UINT32	param2	Second parameter

Table 12-20. Parameters for SDK6 ARD AppLib Recorder API AppLibLoopEnc_SndMsg().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-21. Returns for SDK6 ARD AppLib Recorder API AppLibLoopEnc_SendMsg().

Example:

None

See Also:

None

12.4.2 AppLibLoopEnc_Init

API Syntax:

Int AppLibLoopEnc_Init (void)

Function Description:

- This function initializes the loop encoder manager.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-22. Returns for SDK6 ARD AppLib Recorder API AppLibLoopEnc_Init().

Example:

None

See Also:

None

12.4.3 AppLibLoopEnc_StepCheck

API Syntax:

Int AppLibLoopEnc_StepCheck (void)

Function Description:

- This function sends feedback to the Loop encoder function status and returns the loop encoder result to the application.

Returns:

Return	Description
0	Does nothing
1	Loop encoder all done
2	Search file done
-1	Search file error
-2	Delete file error

Table 12-23. Returns for SDK6 ARD AppLib Recorder API AppLibLoopEnc_StepCheck().

Example:

None

See Also:

None

12.5 Recorder: List of APIs for ApplibRecorder_MemMgr

This section lists the APIs for the recorder's buffer manager functions.

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12.5.1 AppLibRecorderMemMgr_BufAllocate

API Syntax:

Int AppLibRecorderMemMgr_BufAllocate (void)

Function Description:

- This function allocates the buffer for the recorder.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-24. Returns for SDK6 ARD AppLib Recorder API AppLibRecorderMemMgr_BufAllocate().

Example:

None

See Also:

None

12.5.2 AppLibRecorderMemMgr_BufFree

API Syntax:

Int AppLibRecorderMemMgr_BufFree (void)

Function Description:

- This function is the free buffer for the recorder.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-25. Returns for SDK6 ARD AppLib Recorder API AppLibRecorderMemMgr_BufFree().

Example:

None

See Also:

None

12.5.3 AppLibRecorderMemMgr_GetBufAddr

API Syntax:

Int **AppLibRecorderMemMgr_GetBufAddr** (UINT8 ** bitsBufAddr, UINT8 ** descBufAddr)

Function Description:

- This function gets the buffer address for the recorder.

Parameters:

Type	Parameter	Description
UINT8 **	bitsBufAddr	Return Bits Buffer Address
UINT8 **	descBufAddr	Return Descriptor Buffer Address

Table 12-26. Parameters for SDK6 ARD AppLib Recorder API **AppLibRecorderMemMgr_GetBufAddr()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-27. Returns for SDK6 ARD AppLib Recorder API **AppLibRecorderMemMgr_GetBufAddr()**.

Example:

None

See Also:

None

12.5.4 AppLibRecorderMemMgr_GetBufSize

API Syntax:

Int **AppLibRecorderMemMgr_GetBufSize** (UINT32 * bitsBufSize, UINT32 * descBufSize)

Function Description:

- This function gets the buffer size for the recorder.

Parameters:

Type	Parameter	Description
UINT32 *	bitsBufSize	Return Bits Buffer Address
UINT32 *	descBufSize	Return Descriptor Buffer Size

Table 12-28. Parameters for SDK6 ARD AppLib Recorder API **AppLibRecorderMemMgr_GetBufSize()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-29. Returns for SDK6 ARD AppLib Recorder API **AppLibRecorderMemMgr_GetBufSize()**.

Example:

None

See Also:

None

12.6 Recorder: List of APIs for ApplibRecorder_Message

This section lists the APIs for the messages defining the recorder functions.

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12.7 Recorder: List of APIs for ApplibRecorder_StillEnc

This section lists the APIs for the still encode related functions.

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12.7.1 AppLibStillEnc_Init

API Syntax:

Int AppLibStillEnc_Init (void)

Function Description:

- This function initializes the photo encoder.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-30. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_Init().

Example:

None

See Also:

None

12.7.2 AppLibStillEnc_LiveViewInit

API Syntax:

Int AppLibStillEnc_LiveViewInit (void)

Function Description:

- This function initializes the live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-31. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_LiveViewInit().

Example:

None

See Also:

None

12.7.3 AppLibStillEnc_LiveViewSetup

API Syntax:

Int AppLibStillEnc_LiveViewSetup (void)

Function Description:

- This function is used to configure the Live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-32. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_LiveViewSetup().

Example:

None

See Also:

None

12.7.4 AppLibStillEnc_LiveViewStart

API Syntax:

Int AppLibStillEnc_LiveViewStart (void)

Function Description:

- This function is used to start the Live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-33. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_LiveViewStart().

Example:

None

See Also:

None

12.7.5 AppLibStillEnc_LiveViewStop

API Syntax:

Int AppLibStillEnc_LiveViewStop (void)

Function Description:

- This function stops Live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-34. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_LiveViewStop().

Example:

None

See Also:

None

12.7.6 AppLibStillEnc_CaptureSingle

API Syntax:

Int AppLibStillEnc_CaptureSingle (void)

Function Description:

- This function is used to capture the photo with a single capture mode.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-35. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_CaptureSingle().

Example:

None

See Also:

None

12.7.7 AppLibStillEnc_SingleCapFreeBuf

API Syntax:

Int AppLibStillEnc_SingleCapFreeBuf (void

Function Description:

- This function is used to free the photo buffer after capture is done.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-36. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SingleCapFreeBuf().

Example:

None

See Also:

None

12.7.8 AppLibStillEnc_CaptureRaw

API Syntax:

Int AppLibStillEnc_CaptureRaw (UINT32 * RawBufAddr)

Function Description:

- This function is used to capture the photo raw file with single capture mode.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-37. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_CaptureRaw().

Example:

None

See Also:

None

12.7.9 AppLibStillEnc_RawCapFreeBuf

API Syntax:

UINT32 AppLibStillEnc_RawCapFreeBuf (void)

Function Description:

- This function is used to free the photo raw buffer after capture raw is done.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-38. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_RawCapFreeBuf().

Example:

None

See Also:

None

12.7.10 AppLibStillEnc_CaptureSingleCont

API Syntax:

Int AppLibStillEnc_CaptureSingleCont (void)

Function Description:

- This function is used to capture the photo with the continuous mode.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-39. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_CaptureSingleCont().

Example:

None

See Also:

None

12.7.11 AppLibStillEnc_SingleCapContFreeBuf

API Syntax:

Int AppLibStillEnc_SingleCapContFreeBuf (void)

Function Description:

- This function is used to free the photo buffer after capture is done.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-40. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SingleCapContFreeBuf().

Example:

None

See Also:

None

12.7.12 AppLibStillEnc_CaptureBurst

API Syntax:

Int AppLibStillEnc_CaptureBurst (void)

Function Description:

- This function is used to capture the photo with the burst mode.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-41. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_CaptureBurst().

Example:

None

See Also:

None

12.7.13 AppLibStillEnc_BurstCapFreeBuf

API Syntax:

Int AppLibStillEnc_BurstCapFreeBuf (void)

Function Description:

- This function is used to free the photo buffer after capture is done.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-42. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_BurstCapFreeBuf().

Example:

None

See Also:

None

12.7.14 AppLibStillEnc_SetMultiCapMode

API Syntax:

Int AppLibStillEnc_SetMultiCapMode (INT capMode)

Function Description:

- This function is used to set multiple frames capture mode.

Parameters:

Type	Parameter	Description
INT	capMode	Capture mode

Table 12-43. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetMultiCapMode().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-44. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetMultiCapMode().

Example:

None

See Also:

None

12.7.15 AppLibStillEnc_SetNormCapMode

API Syntax:

Int AppLibStillEnc_SetNormCapMode (INT capMode)

Function Description:

- This function is used to set the normal capture mode.

Parameters:

Type	Parameter	Description
INT	capMode	Capture mode

Table 12-45. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetNormCapMode().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-46. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetNormCapmode().

Example:

None

See Also:

None

12.7.16 AppLibStillEnc_SetSizeID

API Syntax:

Int AppLibStillEnc_SetSizeID (INT size)

Function Description:

- This function sets the photo size ID.

Parameters:

Type	Parameter	Description
INT	size	Photo size ID

Table 12-47. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetSizeID().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-48. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetSizeID().

Example:

None

See Also:

None

12.7.17 AppLibStillEnc_SetQualityMode

API Syntax:

Int AppLibStillEnc_SetQualityMode (INT qualityMode)

Function Description:

- This function sets the photo quality mode.

Parameters:

Type	Parameter	Description
INT	qualityMode	Quality mode

Table 12-49. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetQualityMode().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-50. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetQualityMode().

Example:

None

See Also:

None

12.7.18 AppLibStillEnc_SetPhotoThumbnailSize

API Syntax:

Int AppLibStillEnc_SetPhotoThumbnailSize (UINT16 width, UINT16 height)

Function Description:

- This function sets the size of the thumbnail.

Parameters:

Type	Parameter	Description
UINT16	width	Width
UINT16	height	Height

Table 12-51. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetPhotoThumbnailSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-52. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetPhotoThumbnailSize().

Example:

None

See Also:

None

12.7.19 AppLibStillEnc_SetPhotoScreennailSize

API Syntax:

Int AppLibStillEnc_SetPhotoScreennailSize (UINT16 width, UINT16 height)

Function Description:

- This function sets the size of the screen nail.

Parameters:

Type	Parameter	Description
UINT16	width	Width
UINT16	height	Height

Table 12-53. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetPhotoScreennailSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-54. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetPhotoScreennailSize().

Example:

None

See Also:

None

12.7.20 AppLibStillEnc_SetThumbnailQuality

API Syntax:

Int AppLibStillEnc_SetThumbnailQuality (UINT8 quality)

Function Description:

- This function sets the quality of the thumbnail.

Parameters:

Type	Parameter	Description
UINT8	quality	Quality

Table 12-55. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetThumbnailQuality().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-56. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetThumbnailQuality().

Example:

None

See Also:

None

12.7.21 AppLibStillEnc_SetScrennailQuality

API Syntax:

Int AppLibStillEnc_SetScrennailQuality (UINT8 quality)

Function Description:

- This function sets the quality of the screen nail.

Parameters:

Type	Parameter	Description
UINT8	quality	Quality

Table 12-57. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetScrennailQuality().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-58. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetScrennailQuality().

Example:

None

See Also:

None

12.7.22 AppLibStillEnc_SetQuickview

API Syntax:

Int AppLibStillEnc_SetQuickview (int qv)

Function Description:

- This function sets the setting of quick view.

Parameters:

Type	Parameter	Description
INT	qv	The setting of quick view

Table 12-59. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetQuickview().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-60. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetQuickview().

Example:

None

See Also:

None

12.7.23 AppLibStillEnc_SetQuickviewDelay

API Syntax:

Int AppLibStillEnc_SetQuickviewDelay (INT qvDelay)

Function Description:

- This function sets the setting of quick view delay.

Parameters:

Type	Parameter	Description
INT	qvDelay	The setting of quick view delay

Table 12-61. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetQuickviewDelay().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-62. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetQuickviewDelay().

Example:

None

See Also:

None

12.7.24 AppLibStillEnc_SetFastAf

API Syntax:

Int AppLibStillEnc_SetFastAf (INT enable)

Function Description:

- This function sets the setting of fast AF.

Parameters:

Type	Parameter	Description
INT	enable	Enable flag

Table 12-63. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetFastAf().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-64. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetFastAf().

Example:

None

See Also:

None

12.7.25 AppLibStillEnc_SetShutterMode

API Syntax:

Int AppLibStillEnc_SetShutterMode (INT mode)

Function Description:

- This function sets the shutter mode.

Parameters:

Type	Parameter	Description
INT	mode	The shutter mode

Table 12-65. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetShutterMode().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-66. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetShutterMode().

Example:

None

See Also:

None

12.7.26 AppLibStillEnc_SetSingleCaptureFlag

API Syntax:

Int AppLibStillEnc_SetSingleCaptureFlag (INT flag)

Function Description:

- This function sets the flag of single capture.

Parameters:

Type	Parameter	Description
INT	flag	The flag

Table 12-67. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetSingleCaptureFlag().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-68. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_SetSingleCaptureFlag().

Example:

None

See Also:

None

12.7.27 AppLibStillEnc_GetSetting

API Syntax:

Int AppLibStillEnc_GetSetting (APPLIB_STILLENC_SETTING_s * setting)

Function Description:

- This function gets the photo module setting.

Parameters:

Type	Parameter	Description
APPLIB_STILLENC_SETTING_s*	setting	The photo module setting. Please see Section 12.7.27.1 for more details.

Table 12-69. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetSetting().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-70. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetSetting().

Example:

None

See Also:

None

12.7.27.1 AppLibStillEnc_GetSetting> APPLIB_STILLENC_SETTING_s

Description:

- This data structure describes the still encode setting.

Type	Field	Description
UINT8	MultiCaptureMode	Multiple photo capture mode
UINT8	NormalCapMode	Normal photo capture mode
UINT16	SizeId	Photo size index
UINT8	Quality	The value of photo quality
UINT8	QualityMode	Photo quality ID
UINT16	ThumbnailWidth	The width of thumbnail

Type	Field	Description
UINT16	ThumbnailHeight	The height of thumbnail
UINT16	ScrennaildWidth	The width of screen nail
UINT16	ScrennailHeight	The height of screen nail
UINT8	ThumbnailQuality	The quality of thumbnail
UINT8	ScrennailQuality	The quality of screen nail
UINT32	CaptureNumber	The capture number
UINT32	QuickviewDelay	Photo quick view delay setting
UINT8	QuickView	Photo quick view on/off
UINT8	ShutterSetting	The shutter setting
UINT8	FastAF	The fast AF mode
UINT8	Reserved	Reserved

Table 12-71. Definition of **APPLIB_STILLENC_SETTING_s** for SDK6 ARD AppLib Recorder API **AppLibStillEnc_GetSetting()**.

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12.7.28 AppLibStillEnc_GetMultiCapMode

API Syntax:

Int AppLibStillEnc_GetMultiCapMode (void)

Function Description:

- This function gets the multiple frames capture mode.

Returns:

Return	Description
#	The multiple frames capture mode

Table 12-72. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetMultiCapMode().

Example:

None

See Also:

None

12.7.29 AppLibStillEnc_GetNormCapMode

API Syntax:

Int AppLibStillEnc_GetNormCapMode (void)

Function Description:

- This function gets the normal capture mode.

Returns:

Return	Description
#	The normal capture mode

Table 12-73. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetNormCapMode().

Example:

None

See Also:

None

12.7.30 AppLibStillEnc_GetSizeID

API Syntax:

Int AppLibStillEnc_GetSizeID (void)

Function Description:

- This function gets the photo size ID.

Returns:

Return	Description
#	The photo size ID

Table 12-74. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetSizeID().

Example:

None

See Also:

None

12.7.31 AppLibStillEnc_GetQuality

API Syntax:

Int AppLibStillEnc_GetQuality (void)

Function Description:

- This function gets the photo quality mode.

Returns:

Return	Description
#	The photo quality mode

Table 12-75. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetQuality().

Example:

None

See Also:

None

12.7.32 AppLibStillEnc_GetPhotoThumbnailSize

API Syntax:

Int AppLibStillEnc_GetPhotoThumbnailSize (UINT16 * width, UINT16 * height)

Function Description:

- This function gets the size of the thumbnail.

Parameters:

Type	Parameter	Description
UINT16*	width	Width
UINT16*	height	Height

Table 12-76. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetPhotoThumbnailSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-77. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetPhotoThumbnailSize().

Example:

None

See Also:

None

12.7.33 AppLibStillEnc_GetPhotoScrennailSize

API Syntax:

Int AppLibStillEnc_GetPhotoScrennailSize (UINT16* width, UINT16* height)

Function Description:

- This function gets the size of the screen nail.

Parameters:

Type	Parameter	Description
UINT16*	width	Width
UINT16*	height	Height

Table 12-78. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetPhotoScrennailSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-79. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetPhotoScrennailSize().

Example:

None

See Also:

None

12.7.34 AppLibStillEnc_GetThumbnailQuality

API Syntax:

```
Int AppLibStillEnc_GetThumbnailQuality (void)
```

Function Description:

- This function gets the quality of the thumbnail.

Returns:

Return	Description
#	The quality of the thumbnail

Table 12-80. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_GetThumbnailQuality()**.

Example:

None

See Also:

None

12.7.35 AppLibStillEnc_GetScrennailQuality

API Syntax:

Int AppLibStillEnc_GetScrennailQuality (void)

Function Description:

- This function gets the quality of the screen nail.

Returns:

Return	Description
#	The quality of the screen nail

Table 12-81. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetScrennailQuality().

Example:

None

See Also:

None

12.7.36 AppLibStillEnc_GetQuickview

API Syntax:

Int AppLibStillEnc_GetQuickview (void)

Function Description:

- This function gets the setting of quick view.

Returns:

Return	Description
#	The setting of quick view

Table 12-82. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetQuickview().

Example:

None

See Also:

None

12.7.37 AppLibStillEnc_GetQuickviewDelay

API Syntax:

Int AppLibStillEnc_GetQuickviewDelay (void)

Function Description:

- This function gets the setting of quick view delay.

Returns:

Return	Description
#	The setting of quick view delay

Table 12-83. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetQuickviewDelay().

Example:

None

See Also:

None

12.7.38 AppLibStillEnc_GetFastAf

API Syntax:

Int AppLibStillEnc_GetFastAf (void)

Function Description:

- This function gets the setting of fast AF.

Returns:

Return	Description
#	The setting of fast AF

Table 12-84. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetFastAf().

Example:

None

See Also:

None

12.7.39 AppLibStillEnc_GetShutterMode

API Syntax:

Int AppLibStillEnc_GetShutterMode (void)

Function Description:

- This function gets the shutter mode.

Returns:

Return	Description
#	The shutter mode

Table 12-85. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetShutterMode().

Example:

None

See Also:

None

12.7.40 AppLibStillEnc_GetCaptureNum

API Syntax:

Int AppLibStillEnc_GetCaptureNum (void)

Function Description:

- This function gets the capture number.

Returns:

Return	Description
#	The capture number

Table 12-86. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_GetCaptureNum()**.

Example:

None

See Also:

None

12.7.41 AppLibStillEnc_GetPhotoPjpegCapMode

API Syntax:

```
Int AppLibStillEnc_GetPhotoPjpegCapMode (void)
```

Function Description:

- This function gets the current capture mode.

Returns:

Return	Description
#	The current capture mode

Table 12-87. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_GetPhotPjpegCapMode()**.

Example:

None

See Also:

None

12.7.42 AppLibStillEnc_GetPhotoPjpegConfigId

API Syntax:

Int AppLibStillEnc_GetPhotoPjpegConfigId (void)

Function Description:

- This function gets the current capture size ID.

Returns:

Return	Description
#	The current capture size ID

Table 12-88. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetPhotoPjpegConfigId().

Example:

None

See Also:

None

12.7.43 AppLibStillEnc_IdspParamSetup

API Syntax:

UINT32 AppLibStillEnc_IdspParamSetup (UINT8 aeldx)

Function Description:

- This function ensures that the Still IDSP parameters setup is done before performing R2Y.

Parameters:

Type	Parameter	Description
UINT8	aeldx	ProcMode can be class as follows: 0 means Allproc. All IDSP params will be setup at one time. 1 means Preproc: fast-calculate IDSP params can be setup before still capture 2 means Postproc:Slow-calculate IDSP params can be setup after raw capture is done User can setup IDSP either by Allproc or Preproc + Postproc, but make sure at correct timing

Table 12-89. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_IdspParamSetup().

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-90. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_IdspParamSetup().

Example:

None

See Also:

None

12.7.44 AppLibStillEnc_initJpegDqt

API Syntax:

Void **AppLibStillEnc_initJpegDqt** (UINT8 * qTable, INT quality)

Function Description:

- This function gets the initial JPEG DQT.

Parameters:

Type	Parameter	Description
UINT8 *	qTable	
INT	quality	

Table 12-91. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_initJpegDqt()**.

Example:

None

See Also:

None

12.7.45 AppLibStillEnc_SetStillWB

API Syntax:

Int **AppLibStillEnc_SetStillWB** (UINT32 chipNo, AMBA_DSP_IMG_MODE_CFG_s* imgMode)

Function Description:

- This function sets still WB.

Parameters:

Type	Parameter	Description
UINT32	chipNo	
AMBA_DSP_IMG_MODE_CFG_s*	imgMode	

Table 12-92. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SetStillWB()**.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-93. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SetStillEnc()**.

Example:

None

See Also:

None

12.7.46 AppLibStillEnc_LiveViewDeInit

API Syntax:

Int AppLibStillEnc_LiveViewDeInit (void)

Function Description:

- This function is used to de-initialize liveview.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-94. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_LiveViewDeInit().

Example:

None

See Also:

None

12.7.47 AppLibStillEnc_SingleCapRegisterStampCB

API Syntax:

Int **AppLibStillEnc_SingleCapRegisterStampCB** (APPLIB_STILLENC_STAMP_SETTING_s stampSetting)

Function Description:

- This function is used to register single capture stamp process callback function.

Parameters:

Type	Parameter	Description
APPLIB_STILLENC_STAMP_SETTING_s	stampSetting	Stamp information

Table 12-95. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SingleCapRegisterStampCB()**.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-96. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SingleCapRegisterStampCB()**.

Example:

None

See Also:

None

12.7.48 AppLibStillEnc_Encode Raw

API Syntax:

Int AppLibStillEnc_EncodeRaw (void)

Function Description:

- This function is used to encode raw to jpeg.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-97. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_EncodeRaw().

Example:

None

See Also:

None

12.7.49 AppLibStillEnc_RawEncFreeBuf

API Syntax:

Int AppLibStillEnc_RawEncFreeBuf (void)

Function Description:

- This function is used to free the photo buffer and remove FIFO entry after raw encode is done.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-98. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_RawEncFreeBuf().

Example:

None

See Also:

None

12.7.50 AppLibStillEnc_RawCaptureSetSensorMode

API Syntax:

UINT32 AppLibStillEnc_RawCaptureSetSensorMode (UINT32 source, UINT16 Mode)

Function Description:

- This function is used to set the raw capture setting.

Parameters:

Type	Parameter	Description
UINT32	source	Sensor mode for the system sensor: 0 or set from API:1
UINT16	Mode	Sensor Mode Data

Table 12-99. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_RawCaptureSetSensorMode().

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-100. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_RawCaptureSetSensorMode().

Example:

None

See Also:

None

12.7.51 AppLibStillEnc_BurstCapRegisterStampCB

API Syntax:

Int **AppLibStillEnc_BurstCapRegisterStampCB** (APPLIB_STILLENC_STAMP_SETTING_s stampSetting)

Function Description:

- This function is used to register singl capture stamp process callback function.

Parameters:

Type	Parameter	Description
APPLIB_STILLENC_STAMP_SETTING_s	stampSetting	Stamp information

Table 12-101. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_BurstCapRegisterStampCB()**.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-102. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_BurstCapRegisterStampCB()**.

Example:

None

See Also:

None

12.7.52 AppLibStillEnc_GetYuvWorkingBuffer

API Syntax:

Int **AppLibStillEnc_GetYuvWorkingBuffer** (UINT32 MainWidth, UINT16 MainHeight, UINT16 RawWidth, UINT16 RawHeight, UINT16 *BufWidth, UINT16 *BufHeight))

Function Description:

- This function is used to calculate the YUV working buffer size.

Parameters:

Type	Parameter	Description
UINT16	MainWidth	Main width
UINT16	MainHeight	Main height
UINT16	RawWidth	Raw Width
UINT16	RawHeight	Raw Height
UINT16*	BufWidth	Buffer width
UINT16*	BufHeight	Buffer height

Table 12-103. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_GetYuvWorkingBuffer()**.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-104. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_GetYuvWorkingBuffer()**.

Example:

None

See Also:

None

12.7.53 AppLibStillEnc_GetJpegPhotoAddr

API Syntax:

Int AppLibStillEnc_GetJpegPhotoAddr (UINT32* PhotoAddr, UINT32* PhotoSize)

Function Description:

- This function is used to calculate the YUV working buffer size.

Parameters:

Type	Parameter	Description
UINT32*	PhotoAddr	Return JPEG photo address
UINT32*	PhotoSize	Return JPEG photo size

Table 12-105. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetJpegPhotoAddr().

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-106. Returns for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetJpegPhotoAddr().

Example:

None

See Also:

None

12.7.54 AppLibStillEnc_SetStillSensorInfo

API Syntax:

Int **AppLibStillEnc_SetStillSensorInfo** (AMBA_DSP_IMG_MODE_CFG_s *imgMode)

Function Description:

- This function is used to calculate the YUV working buffer size.

Parameters:

Type	Parameter	Description
AMBA_DSP_IMG_MODE_CFG_s*	imgMode	Image mode

Table 12-107. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SetStillSensorInfo()**.

Returns:

Return	Description
0	Execution Successful
-1	Execution failed

Table 12-108. Returns for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SetStillSensorInfo()**.

Example:

None

See Also:

None

12.8 Recorder: List of APIs for ApplibRecorder_VideoEnc

This section lists the APIs for the video encode related functions.

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12.8.1 AppLibVideoEnc_Init

API Syntax:

IntAppLibVideoEnc_Init (void)

Function Description:

- This function initializes the video encoder.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-109. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_Init().

Example:

None

See Also:

None

12.8.2 AppLibVideoEnc_LiveViewInit

API Syntax:

Int AppLibVideoEnc_LiveViewInit (void)

Function Description:

- This function initializes the live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-110. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_LiveViewInit().

Example:

None

See Also:

None

12.8.3 AppLibVideoEnc_LiveViewSetup

API Syntax:

Int AppLibVideoEnc_LiveViewSetup (void)

Function Description:

- This function is used to configure the Live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-111. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_LiveViewSetup().

Example:

None

See Also:

None

12.8.4 AppLibVideoEnc_LiveViewStart

API Syntax:

Int AppLibVideoEnc_LiveViewStart (void)

Function Description:

- This function starts the live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-112. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_LiveViewStart().

Example:

None

See Also:

None

12.8.5 AppLibVideoEnc_LiveViewStop

API Syntax:

Int AppLibVideoEnc_LiveViewStop (void)

Function Description:

- This function stops live view.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-113. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_LiveViewStop().

Example:

None

See Also:

None

12.8.6 AppLibVideoEnc_EncodeSetup

API Syntax:

Int AppLibVideoEnc_EncodeSetup (void)

Function Description:

- This function configures the encoder's parameter.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-114. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_EncodeSetup().

Example:

None

See Also:

None

12.8.7 AppLibVideoEnc_EncodeStart

API Syntax:

Int AppLibVideoEnc_EncodeStart (void)

Function Description:

- This function starts to encode.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-115. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_EncodeStart().

Example:

None

See Also:

None

12.8.8 AppLibVideoEnc_EncodePause

API Syntax:

Int AppLibVideoEnc_EncodePause (void)

Function Description:

- This function pauses the encoding.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-116. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_EncodePause().

Example:

None

See Also:

None

12.8.9 AppLibVideoEnc_EncodeResume

API Syntax:

Int AppLibVideoEnc_EncodeResume (void)

Function Description:

- This function is used to resume encoding.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-117. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_EncodeResume().

Example:

None

See Also:

None

12.8.10 AppLibVideoEnc_EncodeStop

API Syntax:

Int AppLibVideoEnc_EncodeStop (void)

Function Description:

- This function is used to stop encoding.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-118. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_EncodeStop().

Example:

None

See Also:

None

12.8.11 AppLibVideoEnc_EncodeTimeLapse

API Syntax:

Int AppLibVideoEnc_EncodeTimeLapse (void)

Function Description:

- This function is used for time lapse encoding.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-119. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_EncodeTimeLapse().

Example:

None

See Also:

None

12.8.12 AppLibVideoEnc_EncodeStamp

API Syntax:

Int **AppLibVideoEnc_EncodeStamp** (UINT8 encodeStreamId, AMP_VIDEOENC_BLEND_INFO_s* blendInfo)

Function Description:

- This function is used for stamp encoding.

Parameters:

Type	Parameter	Description
UINT8	encodeStreamId	Encode stream ID
AMBA_VIDEOENC_BLEND_INFO_s*	blendInfo	Blend information

Table 12-120. Parameters for SDK6 ARD AppLib Recorder API **AppLibStillEnc_SetStillSensorInfo()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-121. Returns for SDK6 ARD AppLib Recorder API **AppLibVideoEnc_EncodeStamp()**.

Example:

None

See Also:

None

12.8.13 AppLibVideoEnc_SetSensorVideoRes

API Syntax:

Int AppLibVideoEnc_SetSensorVideoRes (int videoResID)

Function Description:

- This function is used to set the sendor video resolution ID.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution ID

Table 12-122. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetSensorVideoRes().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-123. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetSensorVideoRes().

Example:

None

See Also:

None

12.8.14 AppLibVideoEnc_SetYuvVideoRes

API Syntax:

Int AppLibVideoEnc_SetYuvVideoRes (int videoResID)

Function Description:

- This function is used to set the YUV device video resolution ID.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution ID

Table 12-124. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetYuvVideoRes().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-125. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetYuvVideoRes().

Example:

None

See Also:

None

12.8.15 AppLibVideoEnc_SetQuality

API Syntax:

Int AppLibVideoEnc_SetQuality (int quality)

Function Description:

- This function is used to set the encode quality setting.

Parameters:

Type	Parameter	Description
INT	quality	Quality

Table 12-126. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetQuality().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-127. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetQuality().

Example:

None

See Also:

None

12.8.16 AppLibVideoEnc_SetPreRecord

API Syntax:

Int AppLibVideoEnc_SetPreRecord (int preRecord)

Function Description:

- This function is used to set the pre-record mode setting.

Parameters:

Type	Parameter	Description
INT	preRecord	Pre-record mode

Table 12-128. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPreRecord().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-129. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPreRecord().

Example:

None

See Also:

None

12.8.17 AppLibVideoEnc_SetTimeLapse

API Syntax:

Int AppLibVideoEnc_SetTimeLapse (int timeLapse)

Function Description:

- This function is used to set the time lapse setting.

Parameters:

Type	Parameter	Description
INT	timeLapse	Time lapse

Table 12-130. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetTimeLapse().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-131. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetTimeLapse().

Example:

None

See Also:

None

12.8.18 AppLibVideoEnc_SetDualStreams

API Syntax:

Int AppLibVideoEnc_SetDualStreams (int dualStreams)

Function Description:

- This function is used to set the dual streams setting.

Parameters:

Type	Parameter	Description
INT	dualStreams	Dual Stream

Table 12-132. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetDualStreams().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-133. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetDualStreams().

Example:

None

See Also:

None

12.8.19 AppLibVideoEnc_SetSplit

API Syntax:

Int AppLibVideoEnc_SetSplit (INT split)

Function Description:

- This function is used to set the split setting.

Parameters:

Type	Parameter	Description
INT	split	Enable flag

Table 12-134. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetSplit().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-135. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetSplit().

Example:

None

See Also:

None

12.8.20 AppLibVideoEnc_SetPivMode

API Syntax:

Int AppLibVideoEnc_SetPivMode (UINT32 pivMode)

Function Description:

- This function is used to set PIV mode.

Parameters:

Type	Parameter	Description
INT	pivMode	PIV mode

Table 12-136. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPivMode().

Returns:

Return	Description
0	Don't care

Table 12-137. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPivMode().

Example:

None

See Also:

None

12.8.21 AppLibVideoEnc_SetPivTileNumber

API Syntax:

Int AppLibVideoEnc_SetPivTileNumber (UINT16 pivTileNum)

Function Description:

- This function is used to set the fixed PIV tile number.

Parameters:

Type	Parameter	Description
UINT16	pivTileNum	PIV tile number (dimensions: 0xVVHH)

Table 12-138. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPivTileNumber().

Returns:

Return	Description
0	Dont' care

Table 12-139. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPivTileNumber().

Example:

None

See Also:

None

12.8.22 AppLibVideoEnc_SetPivThreshold

API Syntax:

Int AppLibVideoEnc_SetPivThreshold (UINT16 pivThreshold)

Function Description:

- This function is used to set the fixed PIV threshold.

Parameters:

Type	Parameter	Description
UINT16	pivThreshold	PIV Threshold (milliseconds)

Table 12-140. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPivThreshold().

Returns:

Return	Description
0	Don't care

Table 12-141. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetPivThreshold().

Example:

None

See Also:

None

12.8.23 AppLibVideoEnc_SetRecMode

API Syntax:

Int AppLibVideoEnc_SetRecMode (UINT8 recMode)

Function Description:

- This function is used to set the record mode setting.

Parameters:

Type	Parameter	Description
UINT8	recMode	Record mode

Table 12-142. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetRecMode().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-143. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetRecMode().

Example:

None

See Also:

None

12.8.24 AppLibVideoEnc_Set2chSecStreamRes

API Syntax:

Int AppLibVideoEnc_Set2chSecStreamRes (UINT8 res)

Function Description:

- This function is used to set the 2-channel second stream resolution.

Parameters:

Type	Parameter	Description
UINT8	res	Resolution ID

Table 12-144. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_Set2chSecStreamRes().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-145. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_Set2chSecStreamRes().

Example:

None

See Also:

None

v

12.8.25 AppLibVideoEnc_SetBitrate

API Syntax:

```
Int AppLibVideoEnc_SetBitrate (INT bitRate)
```

Function Description:

- This function is used to set the bit rate setting.

Parameters:

Type	Parameter	Description
INT	bitRate	Bit rate

Table 12-146. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetBitrate().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-147. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetBitrate().

Example:

```
None
```

See Also:

```
None
```

12.8.26 AppLibVideoEnc_SetBitrateRange

API Syntax:

Int AppLibVideoEnc_SetBitrateRange (INT maxBitRate, int minBitRate)

Function Description:

- This function is used to set the bit rate range.

Parameters:

Type	Parameter	Description
INT	maxBitRate	Maximum bit rate
INT	minBitRate	Minimum bit rate

Table 12-148. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetBitrateRange().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-149. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_SetBitrateRange().

Example:

None

See Also:

None

12.8.27 AppLibVideoEnc_Get2chSecStreamRes

API Syntax:

Int AppLibVideoEnc_Get2chSecStreamRes (void)

Function Description:

- This function is used to get the 2-channel second stream resolution.

Returns:

Return	Description
#	2-channel second stream resolution

Table 12-150. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_Get2chSecStreamRes().

Example:

None

See Also:

None

12.8.28 AppLibVideoEnc_GetSetting

API Syntax:

Int AppLibVideoEnc_GetSetting (APPLIB_VIDEOENC_SETTING_s* setting)

Function Description:

- This function is used to get the video encoding setting.

Parameters:

Type	Parameter	Description
APPLIB_VIDEOENC_SETTING_s*	setting	The video encoding setting. Please see Section 12.8.28.1 for more details.

Table 12-151. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSetting().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-152. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSetting().

Example:

None

See Also:

None

12.8.28.1 AppLibVideoEnc_GetSetting> APPLIB_VIDEOENC_SETTING_s

Description:

- This data structure describes the video encode setting.

Type	Field	Description
UINT8	TwoChSecStreamRes	2 channel second stream resolution
UINT8	SensorVideoRes	Video Sensor Resolution
UINT8	YuvVideoRes	YUV mode resolution
UINT8	Quality	Quality
UINT8	PreRecord	Pre Record On/Off
UINT8	TimeLapse	Time lapse setting
UINT8	DualStreams	Dual stream on/off

Type	Field	Description
UINT8	Split	Split file setting
UINT16	PivMode	PIV mode (skip or blanking)
UINT16	PivTileNumber	Fixed PIV tile number
UINT16	PivThreshold	Fixed PIV threshold
UINT8	RecMode	Record mode
UINT8	Streaming	Streaming setting
UINT32	BitRate	Bit rate
UINT32	MaxBitRate	Max bit rate
UINT32	MinBitRate	Min bit rate

Table 12-153. Definition of **APPLIB_VIDEOENC_SETTING_s** for SDK6 ARD AppLib Recorder API **AppLibVideoEnc_GetSetting()**.

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12.8.29 AppLibVideoEnc_GetSensorVideoRes

API Syntax:

Int AppLibVideoEnc_GetSensorVideoRes (void)

Function Description:

- This function is used to get the setting of the sensor resolution.

Returns:

Return	Description
#	The setting of the sensor resolution

Table 12-154. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSensorVideoRes().

Example:

None

See Also:

None

12.8.30 AppLibVideoEnc_GetYuvVideoRes

API Syntax:

Int AppLibVideoEnc_GetYuvVideoRes (void)

Function Description:

- This function is used to get the setting of the YUV resolution.

Returns:

Return	Description
#	The setting of the YUV resolution

Table 12-155. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetYuvVideoRes().

Example:

None

See Also:

None

12.8.31 AppLibVideoEnc_GetQuality

API Syntax:

Int AppLibVideoEnc_GetQuality (void)

Function Description:

- This function is used to get the setting of video quality.

Returns:

Return	Description
#	The setting of video quality

Table 12-156. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetQuality().

Example:

None

See Also:

None

12.8.32 AppLibVideoEnc_GetPreRecord

API Syntax:

Int AppLibVideoEnc_GetPreRecord (void)

Function Description:

- This function is used to get the pre-record setting.

Returns:

Return	Description
#	The pre-record setting

Table 12-157. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetPreRecord().

Example:

None

See Also:

None

12.8.33 AppLibVideoEnc_GetTimeLapse

API Syntax:

Int AppLibVideoEnc_GetTimeLapse (void)

Function Description:

- This function is used to get the setting of time lapse.

Returns:

Return	Description
#	The setting of time lapse

Table 12-158. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetTimeLapse().

Example:

None

See Also:

None

12.8.34 AppLibVideoEnc_GetDualStreams

API Syntax:

Int AppLibVideoEnc_GetDualStreams (void)

Function Description:

- This function is used to get the dual stream setting.

Returns:

Return	Description
#	The dual stream setting

Table 12-159. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetDualStreams().

Example:

None

See Also:

None

12.8.35 AppLibVideoEnc_GetSplit

API Syntax:

Int AppLibVideoEnc_GetSplit (void)

Function Description:

- This function is used to get the settings of the split file.

Returns:

Return	Description
#	The setting of split file

Table 12-160. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSplit().

Example:

None

See Also:

None

12.8.36 AppLibVideoEnc_GetSplitTimeSize

API Syntax:

Int AppLibVideoEnc_GetSplitTimeSize (UINT32 * splitTime, UINT64 * splitSize)

Function Description:

- This function is used to get the setting of the split file.

Parameters:

Type	Parameter	Description
UINT32*	splitTime	Split setting by time
UINT64*	splitSize	Split setting by size

Table 12-161. Parameters for SDK6 ARD AppLib Recorder API AppLibStillEnc_GetSplitTimeSize().

Returns:

Return	Description
#	The setting of the split file

Table 12-162. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSplitTimeSize().

Example:

None

See Also:

None

12.8.37 AppLibVideoEnc_GetBitate

API Syntax:

Int AppLibVideoEnc_GetBitate (void)

Function Description:

- This function is used to get the bit rate setting.

Returns:

Return	Description
#	Bit rate

Table 12-163. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetBitate().

Example:

None

See Also:

None

12.8.38 AppLibVideoEnc_GetPivMode

API Syntax:

Int AppLibVideoEnc_GetPivMode (void)

Function Description:

- This function is used to get the assigned PIV mode.

Returns:

Return	Description
#	PIV mode

Table 12-164. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetPivMode().

Example:

None

See Also:

None

12.8.39 AppLibVideoEnc_GetPivTileNumber

API Syntax:

```
Int AppLibVideoEnc_GetPivTileNumber (void)
```

Function Description:

- This function is used to get the assigned PIV tile number.

Returns:

Return	Description
#	PIV tile number (dimensions: 0xVVHH)

Table 12-165. Returns for SDK6 ARD AppLib Recorder API **AppLibVideoEnc_GetPivTileNumber()**.

Example:

None

See Also:

None

12.8.40 AppLibVideoEnc_GetPivThreshold

API Syntax:

Int AppLibVideoEnc_GetPivThreshold (void)

Function Description:

- This function is used to get the assigned PIV threshold.

Returns:

Return	Description
#	PIV threshold (milliseconds)

Table 12-166. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetPivThreshold().

Example:

None

See Also:

None

12.8.41 AppLibVideoEnc_GetRecMode

API Syntax:

Int AppLibVideoEnc_GetRecMode (void)

Function Description:

- This function is used to get the record mode.

Returns:

Return	Description
#	Record mode

Table 12-167. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetRecMode().

Example:

None

See Also:

None

12.8.42 AppLibVideoEnc_GetVideoBufSize

API Syntax:

Int AppLibVideoEnc_GetVideoBufSize (void)

Function Description:

- This function is used to get the video buffer size.

Returns:

Return	Description
#	Video buffer size

Table 12-168. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetVideoBufSize().

Example:

None

See Also:

None

12.8.43 AppLibVideoEnc_CapturePIV

API Syntax:

Int AppLibVideoEnc_CapturePIV (void)

Function Description:

- This function is used for capture PIV.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-169. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_Capture PIV().

Example:

None

See Also:

None

12.8.44 AppLibVideoEnc_GetStreamSetting

API Syntax:

AppLibVideoEnc_GetStreamSetting* (INT idx)

Function Description:

- This function is used to get the encoding stream setting.

Parameters:

Type	Parameter	Description
INT	idx	Index

Table 12-170. Parameters for SDK6 ARD AppLib Recorder API **AppLibVideoEnc_GetStreamSetting()**.

Returns:

Return	Description
#	Stream Setting

Table 12-171. Returns for SDK6 ARD AppLib Recorder API **AppLibVideoEnc_GetStreamSetting()**.

Example:

None

See Also:

None

12.8.45 AppLibVideoEnc_PipeChange

API Syntax:

Int AppLibVideoEnc_CapturePIV (void)

Function Description:

- This function is used to change the pipe setting.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 12-172. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_PipeChange().

Example:

None

See Also:

None

12.8.46 AppLibVideoEnc_GetSecStreamW

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamW (void)

Function Description:

- This function gets video second stream width.

Returns:

Return	Description
#	Second stream width

Table 12-173. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamW().

Example:

None

See Also:

None

12.8.47 AppLibVideoEnc_GetSecStreamH

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamH (void)

Function Description:

- This function gets video second stream height.

Returns:

Return	Description
#	Second stream height

Table 12-174. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamH().

Example:

None

See Also:

None

12.8.48 AppLibVideoEnc_GetSecStreamTimeScale

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamTimeScale (void)

Function Description:

- This function gets the video second stream time scale.

Returns:

Return	Description
#	Second stream time scale

Table 12-175. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamTimeScale().

Example:

None

See Also:

None

12.8.49 AppLibVideoEnc_GetSecStreamTick

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamTick (void)

Function Description:

- This function gets the video second stream Tick.

Returns:

Return	Description
#	Second dstream time tick

Table 12-176. Returns for SDK6 ARD AppLib Recorder API **AppLibVideoEnc_GetSecStreamTick()**.

Example:

None

See Also:

None

12.8.50 AppLibVideoEnc_GetSecStreamGopM

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamGopM (void)

Function Description:

- This function gets video second stream GopM.

Returns:

Return	Description
#	Second stream time GopM

Table 12-177. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamGopM().

Example:

None

See Also:

None

12.8.51 AppLibVideoEnc_GetSecStreamGopN

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamGopN (void)

Function Description:

- This function gets video second stream GopN.

Returns:

Return	Description
#	Second stream time GopN

Table 12-178. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamGopN().

Example:

None

See Also:

None

12.8.52 AppLibVideoEnc_GetSecStreamGopIDR

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamGopIDR (void)

Function Description:

- This function gets video second stream GopIDR.

Returns:

Return	Description
#	Second stream time GopIDR

Table 12-179. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamGopIDR().

Example:

None

See Also:

None

12.8.53 AppLibVideoEnc_GetSecStreamBitRate

API Syntax:

UINT32 AppLibVideoEnc_GetSecStreamBitRate (void)

Function Description:

- This function gets video second stream bit rate.

Returns:

Return	Description
#	Second stream time bit rate

Table 12-180. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetSecStreamBitRate().

Example:

None

See Also:

None

12.8.54 AppLibVideoEnc_GetValidStream

API Syntax:

Int AppLibVideoEnc_GetValidStream (APPLIB_VIDEOENC_STREAM_LIST_s* pStreamList)

Function Description:

- This function gets video valid stream.

Parameters:

Type	Parameter	Description
APPLIB_VIDEOENC_STREAM_LIST_s*	pStreamList	Valid stream list

Table 12-181. Parameters for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetValidStream().

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 12-182. Returns for SDK6 ARD AppLib Recorder API AppLibVideoEnc_GetValidStream().

Example:

None

See Also:

None

13 Storage

13.1 Storage: Overview

This chapter provides the storage related function implementation, which includes the following sections:

- ApplibStorage_AsyncOp
 - Storage related async operation
- ApplibStorage_Card
 - Card Utility APIs
- ApplibStorage_Dmf
 - Storage DMF(Digital Media File System) APIs
- ApplibStorage_Message
 - Message definition for storage

13.2 Storage: ApplibStorage_AsyncOp

This section introduces the APIs for ApplibStorage_AsyncOp.

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13.2.1 AppLibLoopEnc_Init

API Syntax:

int AppLibLoopEnc_Init (void)

Function Description:

- This function is used for the initialization of Loop Encoder manager.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-1. Returns for SDK6 ARD AppLib Storage API **AppLibLoopEnc_Init()**.

Example:

None

See Also:

None

13.2.2 AppLibLoopEnc_StepCheck

API Syntax:

int AppLibLoopEnc_StepCheck (void)

Function Description:

- This function is used to feed the back loop enc function status.

Parameters:

None

Returns:

Return	Description
0	Do nothing
1	Loop enc all done
2	Search file done
- 1	Search file error
- 2	Delete file error

Table 13-2. Returns for SDK6 ARD AppLib Storage API **AppLibLoopEnc_StepCheck()**.

Example:

None

See Also:

None

13.2.3 AppLibStorageAsyncOp_Init

API Syntax:

int AppLibStorageAsyncOp_Init (void)

Function Description:

- This function is used for initialization of the async operation.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-3. Returns for SDK6 ARD AppLib Storage API **AppLibStorageAsyncOp_Init()**.

Example:

None

See Also:

None

13.2.4 AppLibStorageAsyncOp_RegHandler

API Syntax:

int AppLibStorageAsyncOp_RegHandler (ENCODE_HANDLER_s * Handler)

Function Description:

- This function is used to register handler for different cmd.
- Receive message function.

Parameters:

Type	Parameter	Description
[in] APPLIB_ENCODE_HANDLER_s *	Handler	Encode handler (APPLIB_ENCODE_HANDLER_s is defined in AppLibStorage_AsyncOp.h) Please refer to Section 13.2.4.1 for more details.

Table 13-4. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageAsyncOp_RegHandler()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-5. Returns for SDK6 ARD AppLib Storage API **AppLibStorageAsyncOp_RegHandler()**.

Example:

None

See Also:

None

13.2.4.1 AppLibStorageAsyncOp_RegHandler > APPLIB_ENCODE_HANDLER_s

Type	Field	Description
int(* FuncSearch)	(UINT32 param1, UINT32 param2)	Search CB function
int(* FuncHandle)	(void)	Handle CB function
int(* FuncReturn)	(void)	Return CB function
UINT32	Command	Function set corresponding command

Table 13-6. Definition of **APPLIB_ENCODE_HANDLER_s** for SDK6 ARD AppLib Storage API **AppLibStorageAsyncOp_RegHandler()**.

13.2.5 AppLibStorageAsyncOp_SndMsg

API Syntax:

```
int AppLibStorageAsyncOp_SndMsg (UINT32 msg, UINT32 param1, UINT32 param2)
```

Function Description:

- This function is used to send message to Loop Encoder manager.

Parameters:

Type	Parameter	Description
[in] UINT32	msg	Message ID
[in] UINT32	param1	First parameter
[in] UINT32	param2	Second parameter

Table 13-7. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageAsyncOp_SndMsg()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-8. Returns for SDK6 ARD AppLib Storage API **AppLibStorageAsyncOp_SndMsg()**.

Example:

None

See Also:

None

13.3 Storage: ApplibStorage_Card

This section introduces the card utility APIs.

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13.3.1 AppLibCard_CheckFormatParam

API Syntax:

int AppLibCard_CheckFormatParam (in slot, char drive)

Function Description:

- This function is used to check the card format type.

Parameters:

Type	Parameter	Description
[in] int	slot	Slot ID
[in] char	drive	Drive ID

Table 13-9. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_CheckFormatParam()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-10. Returns for SDK6 ARD AppLib Storage API **AppLibCard_CheckFormatParam()**.

Example:

None

See Also:

None

13.3.2 AppLibCard_CheckFreespace

API Syntax:

int AppLibCard_CheckFreespace (void)

Function Description:

- This function is used to check the free space of the card.

Parameters:

None

Returns:

Return	Description
> = 0	Enough space
< 0	Not enough space

Table 13-11. Returns for SDK6 ARD AppLib Storage API **AppLibCard_CheckFreespace()**.

Example:

None

See Also:

None

13.3.3 AppLibCard_CheckInsertingCard

API Syntax:

int AppLibCard_CheckInsertingCard (void)

Function Description:

- This function is used to check to make sure whether it is inserting or not.

Parameters:

None

Returns:

Return	Description
> = 0	Yes
< 0	No

Table 13-12. Returns for SDK6 ARD AppLib Storage API **AppLibCard_CheckInsertingCard()**.

Example:

None

See Also:

None

13.3.4 AppLibCard_CheckInsertState

API Syntax:

int AppLibCard_CheckInsertState (void)

Function Description:

- This function is used to check the status of card insert.

Parameters:

None

Returns:

Return	Description
#	The status of card insert

Table 13-13. Returns for SDK6 ARD AppLib Storage API **AppLibCard_CheckInsertState()**.

Example:

None

See Also:

None

13.3.5 AppLibCard_CheckNandStorage

API Syntax:

int AppLibCard_CheckNandStorage (in cardId)

Function Description:

- This function is used to check the valid size of NAND storage.

Parameters:

Type	Parameter	Description
[in] int	cardId	Card ID

Table 13-14. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_CheckNandStorage()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-15. Returns for SDK6 ARD AppLib Storage API **AppLibCard_CheckNandStorage()**.

Example:

None

See Also:

None

13.3.6 AppLibCard_CheckStatus

API Syntax:

int AppLibCard_CheckStatus (UINT32 checkFlags)

Function Description:

- This function is used to check the status of the card.

Parameters:

Type	Parameter	Description
[in] UINT32	checkFlags	Check flag

Table 13-16. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_CheckStatus()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-17. Returns for SDK6 ARD AppLib Storage API **AppLibCard_CheckStatus()**.

Example:

None

See Also:

None

13.3.7 AppLibCard_Format

API Syntax:

int AppLibCard_Format (int slot)

Function Description:

- This function is used to format card.

Parameters:

Type	Parameter	Description
[in] int	slot	Slot ID

Table 13-18. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_Format()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-19. Returns for SDK6 ARD AppLib Storage API **AppLibCard_Format()**.

Example:

None

See Also:

None

13.3.8 AppLibCard_GetActiveCardId

API Syntax:

int AppLibCard_GetActiveCardId (void)

Function Description:

- This function is used to get active card ID.

Parameters:

None

Returns:

Return	Description
> = 0	Card ID
< 0	Failure

Table 13-20. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetActiveCardId()**.

Example:

None

See Also:

None

13.3.9 AppLibCard_GetActiveDrive

API Syntax:

int AppLibCard_GetActiveDrive (void)

Function Description:

- This function is used to get active drive.

Parameters:

None

Returns:

Return	Description
> = 0	Drive ID
< 0	Failure

Table 13-21. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetActiveDrive()**.

Example:

None

See Also:

None

13.3.10 AppLibCard_GetActiveSlot

API Syntax:

int AppLibCard_GetActiveSlot (void)

Function Description:

- This function is used to get the active slot.

Parameters:

None

Returns:

Return	Description
> = 0	Slot ID
< 0	Failure

Table 13-22. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetActiveSlot()**.

Example:

None

See Also:

None

13.3.11 AppLibCard_GetCardId

API Syntax:

int AppLibCard_GetCardId (int slot)

Function Description:

- This function is used to get the card ID.

Parameters:

Type	Parameter	Description
[in] int	slot	Card slot

Table 13-23. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_GetCardId()**.

Returns:

Return	Description
> = 0	Card ID
< 0	Failure

Table 13-24. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetCardId()**.

Example:

None

See Also:

None

13.3.12 AppLibCard_GetDrive

API Syntax:

int AppLibCard_GetDrive (UINT32 cardId)

Function Description:

- This function is used to get the drive ID.

Parameters:

Type	Parameter	Description
[in] UINT32	cardId	Card ID

Table 13-25. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_GetDrive()**.

Returns:

Return	Description
> = 0	Drive ID
< 0	Failure

Table 13-26. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetDrive()**.

Example:

None

See Also:

None

13.3.13 AppLibCard_GetFreeSpace

API Syntax:

UINT64 AppLibCard_GetFreeSpace (void)

Function Description:

- This function is used to check the free space of the card.

Parameters:

None

Returns:

Return	Description
> = 0	Enough space
< 0	Not enough space

Table 13-27. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetFreeSpace()**.

Example:

None

See Also:

None

13.3.14 AppLibCard_GetFreespaceFlag

API Syntax:

int AppLibCard_GetFreespaceFlag (void)

Function Description:

- This function is used to get the flag of the free space.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-28. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetFreespaceFlag()**.

Example:

None

See Also:

None

13.3.15 AppLibCard_GetPrimarySlot

API Syntax:

int AppLibCard_GetPrimarySlot (void)

Function Description:

- This function is used to get the primary slot ID.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-29. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetPrimarySlot()**.

Example:

None

See Also:

None

13.3.16 AppLibCard_GetSlot

API Syntax:

int AppLibCard_GetSlot (UINT32 cardId)

Function Description:

- This function is used to check the free space of the card.

Parameters:

Type	Parameter	Description
[in] UINT32	cardId	Card ID

Table 13-30. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_GetSlot()**.

Returns:

Return	Description
> = 0	Slot ID
< 0	Failure

Table 13-31. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetSlot()**.

Example:

None

See Also:

None

13.3.17 AppLibCard_GetSlotFromChar

API Syntax:

int AppLibCard_GetSlotFromChar (char drive)

Function Description:

- This function is used to check the slot ID from drive ID.

Parameters:

Type	Parameter	Description
[in] char	drive	Drive ID

Table 13-32. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_GetSlotFromChar()**.

Returns:

Return	Description
> = 0	Slot ID
< 0	Failure

Table 13-33. Returns for SDK6 ARD AppLib Storage API **AppLibCard_GetSlotFromChar()**.

Example:

None

See Also:

None

13.3.18 AppLibCard_Init

API Syntax:

int AppLibCard_Init (void)

Function Description:

- This function is used for initialization of the card module.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-34. Returns for SDK6 ARD AppLib Storage API **AppLibCard_Init()**.

Example:

None

See Also:

None

13.3.19 AppLibCard_Insert

API Syntax:

int AppLibCard_Insert (int slot)

Function Description:

- This function is used to insert card.

Parameters:

Type	Parameter	Description
[in] int	slot	Card slot

Table 13-35. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_Insert()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-36. Returns for SDK6 ARD AppLib Storage API **AppLibCard_Insert()**.

Example:

None

See Also:

None

13.3.20 AppLibCard_Polling

API Syntax:

int AppLibCard_Polling (UINT32 cardId)

Function Description:

- This function is used for polling card insert status.

Parameters:

Type	Parameter	Description
[in] UINT32	cardId	Card ID

Table 13-37. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_Polling()**.

Returns:

Return	Description
> = 0	Insert card ID
< 0	Failure

Table 13-38. Returns for SDK6 ARD AppLib Storage API **AppLibCard_Polling()**.

Example:

None

See Also:

None

13.3.21 AppLibCard_Remove

API Syntax:

int AppLibCard_Remove (int slot)

Function Description:

- This function is used to remove card.

Parameters:

Type	Parameter	Description
[in] int	slot	Card slot

Table 13-39. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_Remove()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-40. Returns for SDK6 ARD AppLib Storage API **AppLibCard_Remove()**.

Example:

None

See Also:

None

13.3.22 AppLibCard_SetInsertingSlot

API Syntax:

int AppLibCard_SetInsertingSlot (int slot)

Function Description:

- This function is used to set a flag for inserting slot.

Parameters:

Type	Parameter	Description
[in] int	slot	Slot ID

Table 13-41. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_SetInsertingSlot()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-42. Returns for SDK6 ARD AppLib Storage API **AppLibCard_SetInsertingSlot()**.

Example:

None

See Also:

None

13.3.23 AppLibCard_SetThreshold

API Syntax:

int AppLibCard_SetThreshold (int threshold)

Function Description:

- This function is used to change free space threshold.

Parameters:

Type	Parameter	Description
[in] int	threshold	Value of free space threshold

Table 13-43. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_SetThreshold()**.

Returns:

Return	Description
0	Success

Table 13-44. Returns for SDK6 ARD AppLib Storage API **AppLibCard_SetThreshold()**.

Example:

None

See Also:

None

13.3.24 AppLibCard_SndCardInsertMsg

API Syntax:

int AppLibCard_SndCardInsertMsg (int cardId)

Function Description:

- This function is used to send message of card inserted.

Parameters:

Type	Parameter	Description
[in] int	cardId	Card ID

Table 13-45. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_SndCardInsertMsg()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-46. Returns for SDK6 ARD AppLib Storage API **AppLibCard_SndCardInsertMsg()**.

Example:

None

See Also:

None

13.3.25 AppLibCard_StatusCheckBlock

API Syntax:

```
int AppLibCard_StatusCheckBlock (int cardId)
```

Function Description:

- This function is used to check the card that could be blocked.

Parameters:

Type	Parameter	Description
[in] int	cardId	Card ID

Table 13-47. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_StatusCheckBlock()**.

Returns:

Return	Description
> = 0	Blocked
< 0	Not blocked

Table 13-48. Returns for SDK6 ARD AppLib Storage API **AppLibCard_StatusCheckBlock()**.

Example:

None

See Also:

None

13.3.26 AppLibCard_StatusCheckHighPriorityBlock

API Syntax:

int AppLibCard_StatusCheckHighPriorityBlock (void)

Function Description:

- This function is used to check the card that is blocked.

Parameters:

None

Returns:

Return	Description
> = 0	Card ID
< 0	Failure

Table 13-49. Returns for SDK6 ARD AppLib Storage API **AppLibCard_StatusCheckHighPriorityBlock()**.

Example:

None

See Also:

None

13.3.27 AppLibCard_StatusSetBlock

API Syntax:

int AppLibCard_StatusSetBlock (int cardId, int en)

Function Description:

- This function is used to set the flag to block card inserted flow.

Parameters:

Type	Parameter	Description
[in] int	cardId	Card ID
[in] int	en	Enable

Table 13-50. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_StatusSetBlock()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-51. Returns for SDK6 ARD AppLib Storage API **AppLibCard_StatusSetBlock()**.

Example:

None

See Also:

None

13.3.28 AppLibCard_StatusSetRefreshing

API Syntax:

int AppLibCard_StatusSetRefreshing (int slot, int refreshing)

Function Description:

- This function is used to set the flag about the card refreshing.

Parameters:

Type	Parameter	Description
[in] int	refreshing	Enable
[in] int	slot	Slot ID

Table 13-52. Parameters for SDK6 ARD AppLib Storage API **AppLibCard_StatusSetRefreshing()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-53. Returns for SDK6 ARD AppLib Storage API **AppLibCard_StatusSetRefreshing()**.

Example:

None

See Also:

None

13.4 Storage: Applibstorage_Dmf

This section introduces the storage DMF(Digital Media File System) APIs.

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13.4.1 AppLibStorageDmf_CreateFile

API Syntax:

```
int AppLibStorageDmf_CreateFile (APPLIB_DCF_MEDIA_TYPE_e mediaType, char * extName, char * filename)
```

Function Description:

- This function is used to create a file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] char *	extName	Extent name
[out] char *	filename	File name

Table 13-54. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_CreateFile()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-55. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_CreateFile()**.

Example:

None

See Also:

None

13.4.1.1 AppLibStorageDmf_CreateFile > enum APPLIB_DCF_MEDIA_TYPE_e

Enumerator	
APPLIB_DCF_MEDIA_AUDIO	APPLIB_DCF_MEDIA_IMAGE
APPLIB_DCF_MEDIA_VIDEO	APPLIB_DCF_MEDIA_AUDIO
APPLIB_DCF_MEDIA_DCIM	APPLIB_DCF_MEDIA_VIDEO
	APPLIB_DCF_MEDIA_DCIM

Table 13-56. enum APPLIB_DCF_MEDIA_TYPE_e.

13.4.2 AppLibStorageDmf_CreateFileByType

API Syntax:

int AppLibStorageDmf_CreateFileByType (APPLIB_DCF_MEDIA_TYPE_e mediaType, UINT32 Type, char * extName, char * filename)

Function Description:

- This function is used to create a file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] UINT32	Type	Root name ID
[in] char *	extName	Extent name
[out] char *	filename	File name

Table 13-57. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_CreateFileByType()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-58. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_CreateFileByType()**.

Example:

None

See Also:

None

13.4.3 AppLibStorageDmf_CreateFileExtended

API Syntax:

int AppLibStorageDmf_CreateFileExtended (APPLIB_DCF_MEDIA_TYPE_e mediaType, UINT32 objId, char * extName, UINT8 extType, UINT8 seqNum, char * filename)

Function Description:

- This function is used to create an extended file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] UINT32	objId	Object ID
[in] char *	extName	Extent name
[in] extType	extType	Extent type
[in] seqNum	seqNum	Sequential number
[out] char *	filename	File name

Table 13-59. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_CreateFileExtended()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-60. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_CreateFileExtended()**.

Example:

None

See Also:

None

13.4.4 AppLibStorageDmf_DeleteFile

API Syntax:

int AppLibStorageDmf_DeleteFile (APPLIB_DCF_MEDIA_TYPE_e mediaType, UINT32 objId)

Function Description:

- This function is used to delete file in the table.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] UINT32	objId	Object ID

Table 13-61. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_DeleteFile()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-62. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_DeleteFile()**.

Example:

None

See Also:

None

13.4.5 AppLibStorageDmf_DeleteHandler

API Syntax:

int AppLibStorageDmf_DeleteHandler (APPLIB_DCF_MEDIA_TYPE_e mediaType, UINT32 objId)

Function Description:

- This function is used to delete the DCF handler.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-63. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_DeleteHandler()**.

Example:

None

See Also:

None

13.4.6 AppLibStorageDmf_GetCurrFilePos

API Syntax:

int AppLibStorageDmf_GetCurrFilePos (APPLIB_DCF_MEDIA_TYPE_e mediaType)

Function Description:

- This function is used to get the position of the current file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-64. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetCurrFilePos()**.

Returns:

Return	Description
> 0	File position
others	Failure

Table 13-65. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetCurrFilePos()**.

Example:

None

See Also:

None

13.4.7 AppLibStorageDmf_GetDirList

API Syntax:

```
int AppLibStorageDmf_GetDirList (APPLIB_DCF_MEDIA_TYPE_e mediaType, AMP_DCF_DIR_LIST_s * list)
```

Function Description:

- This function is used to get the directory list.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
AMP_DCF_DIR_LIST_s *	list	Directory list

Table 13-66. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetDirList()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-67. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetDirList()**.

Example:

None

See Also:

None

13.4.8 AppLibStorageDmf_GetFileAmount

API Syntax:

int AppLibStorageDmf_GetFileAmount (APPLIB_DCF_MEDIA_TYPE_e mediaType)

Function Description:

- This function is used to get the file amount.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-68. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileAmount()**.

Returns:

Return	Description
#	File amount

Table 13-69. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileAmount()**.

Example:

None

See Also:

None

13.4.9 AppLibStorageDmf_GetFileList

API Syntax:

```
int AppLibStorageDmf_GetFileList (APPLIB_DCF_MEDIA_TYPE_e mediaType, AMP_DCF_FILE_LIST_s * list)
```

Function Description:

- This function is used to get the file list.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] AMP_DCF_FILE_LIST_s *	list	File list

Table 13-70. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileList()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-71. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileList()**.

Example:

None

See Also:

None

13.4.10 AppLibStorageDmf_GetFileName

API Syntax:

```
int AppLibStorageDmf_GetFileName (APPLIB_DCF_MEDIA_TYPE_e mediaType, char * extName,  
UINT8 extType, UINT32 Type, UINT32 Index, UINT32 objId, char * filename)
```

Function Description:

- This function is used to get the file name.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] char *	extName	Extend name
[in] UINT8	extType	Extend type
[in] UINT32	Type	Handler type
[in] UINT32	Index	file index
[in] UINT32	objId	Object ID
[out] char *	filename	File name

Table 13-72. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileName()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-73. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileName()**.

Example:

None

See Also:

None

13.4.11 AppLibStorageDmf_GetFileNameByType

API Syntax:

```
int AppLibStorageDmf_GetFileNameByType (APPLIB_DCF_MEDIA_TYPE_e mediaType, UINT32 Type,
UINT32 objId, char * filename)
```

Function Description:

- This function is used to get the file name by root name.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] UINT32	Type	Handler type
[in] UINT32	objId	Object ID
[out] char *	filename	File name

Table 13-74. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileNameByType()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-75. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFileNameByType()**.

Example:

None

See Also:

None

13.4.12 AppLibStorageDmf_GetFirstDirPos

API Syntax:

```
int AppLibStorageDmf_GetFirstDirPos (APPLIB_DCF_MEDIA_TYPE_e mediaType)
```

Function Description:

- This function is used to get the position of the first directory.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-76. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFirstDirPos()**.

Returns:

Return	Description
> 0	The position of the first directory, otherwise failure

Table 13-77. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFirstDirPos()**.

Example:

None

See Also:

None

13.4.13 AppLibStorageDmf_GetFirstFilePos

API Syntax:

```
int AppLibStorageDmf_GetFirstFilePos (APPLIB_DCF_MEDIA_TYPE_e mediaType)
```

Function Description:

- This function is used to get the position of the first file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-78. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFirstFilePos()**.

Returns:

Return	Description
> 0	File position
others	Failure

Table 13-79. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetFirstFilePos()**.

Example:

None

See Also:

None

13.4.14 AppLibStorageDmf_GetLastDirPos

API Syntax:

int AppLibStorageDmf_GetLastDirPos (APPLIB_DCF_MEDIA_TYPE_e mediaType)

Function Description:

- This function is used to get the position of the last directory.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-80. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetLastDirPos()**.

Returns:

Return	Description
> 0	The position of the last directory, otherwise failure

Table 13-81. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetLastDirPos()**.

Example:

None

See Also:

None

13.4.15 AppLibStorageDmf_GetLastFilePos

API Syntax:

int AppLibStorageDmf_GetLastFilePos (APPLIB_DCF_MEDIA_TYPE_e mediaType)

Function Description:

- This function is used to get the position of the last file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-82. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetLastFilePos()**.

Returns:

Return	Description
> 0	File position
others	Failure

Table 13-83. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetLastFilePos()**.

Example:

None

See Also:

None

13.4.16 AppLibStorageDmf_GetNextDirPos

API Syntax:

int AppLibStorageDmf_GetNextDirPos (APPLIB_DCF_MEDIA_TYPE_e mediaType)

Function Description:

- This function is used to get the position of the next directory.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-84. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetNextDirPos()**.

Returns:

Return	Description
> 0	The position of the next directory, otherwise failure

Table 13-85. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetNextDirPos()**.

Example:

None

See Also:

None

13.4.17 AppLibStorageDmf_GetNextFilePos

API Syntax:

```
int AppLibStorageDmf_GetNextFilePos (APPLIB_DCF_MEDIA_TYPE_e mediaType)
```

Function Description:

- This function is used to get the position of the next file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-86. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetNextFilePos()**.

Returns:

Return	Description
> 0	File position
others	Failure

Table 13-87. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetNextFilePos()**.

Example:

None

See Also:

None

13.4.18 AppLibStorageDmf_GetPrevDirPos

API Syntax:

int AppLibStorageDmf_GetPrevDirPos (APPLIB_DCF_MEDIA_TYPE_e mediaType)

Function Description:

- This function is used to get the position of the previous directory.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-88. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetPrevDirPos()**.

Returns:

Return	Description
> 0	The position of the previous directory, otherwise failure

Table 13-89. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetPrevDirPos()**.

Example:

None

See Also:

None

13.4.19 AppLibStorageDmf_GetPrevFilePos

API Syntax:

```
int AppLibStorageDmf_GetPrevFilePos (APPLIB_DCF_MEDIA_TYPE_e mediaType)
```

Function Description:

- This function is used to get the position of the previous file.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.

Table 13-90. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetPrevFilePos()**.

Returns:

Return	Description
> 0	File position
others	Failure

Table 13-91. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetPrevFilePos()**.

Example:

None

See Also:

None

13.4.20 AppLibStorageDmf_GetSetting

API Syntax:

```
int AppLibStorageDmf_GetSetting (APPLIB_STORAGE_DMF_s * setting)
```

Function Description:

- This function is used for the DMF module setting.

Parameters:

Type	Parameter	Description
[in] APPLIB_STORAGE_DMF_s *	setting	DMF module type (APPLIB_STORAGE_DMF_s is defined in <code>AppLibStorage_Dmf.h</code>) Please refer to Section 13.4.20.1 for more details.

Table 13-92. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetSetting()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-93. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetSetting()**.

Example:

None

See Also:

None

13.4.20.1 AppLibStorageDmf_GetSetting > APPLIB_STORAGE_DMF_s

Type	Field	Description
int	Mode	Storage DMF mode

Table 13-94. Definition of **APPLIB_STORAGE_DMF_s** for SDK6 ARD AppLib Storage API **AppLibStorageDmf_GetSetting()**.

13.4.21 AppLibStorageDmf_Init

API Syntax:

```
int AppLibStorageDmf_Init (int dcfType)
```

Function Description:

- This function is used for the DMF module initialization.

Parameters:

Type	Parameter	Description
[in] int	dcfType	DCF type

Table 13-95. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_Init()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-96. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_Init()**.

Example:

None

See Also:

None

13.4.22 AppLibStorageDmf_Refresh

API Syntax:

int AppLibStorageDmf_Refresh (char drive)

Function Description:

- This function is used to refresh DCF handler.

Parameters:

Type	Parameter	Description
[in] char	drive	Drive ID

Table 13-97. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_Refresh()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-98. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_Refresh()**.

Example:

None

See Also:

None

13.4.23 AppLibStorageDmf_SetFileNumberMode

API Syntax:

```
int AppLibStorageDmf_SetFileNumberMode (APPLIB_DCF_MEDIA_TYPE_e mediaType, APPLIB_DCF_NUMBER_MODE_e NumberMode)
```

Function Description:

- This function is used to set file number mode.

Parameters:

Type	Parameter	Description
[in] APPLIB_DCF_MEDIA_TYPE_e	mediaType	Media type. Please refer to Section 13.4.1.1 for more details.
[in] APPLIB_DCF_NUMBER_MODE_e	NumberMode	Number mode. Please refer to Section 13.4.23.1 for more details.

Table 13-99. Parameters for SDK6 ARD AppLib Storage API **AppLibStorageDmf_SetFileNumberMode()**.

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-100. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_SetFileNumberMode()**.

Example:

None

See Also:

None

13.4.23.1 AppLibStorageDmf_SetFileNumberMode > enum APPLIB_DCF_NUMBER_MODE_e

Enumerator	
APPLIB_DCF_NUMBER_SERIAL	APPLIB_DCF_NUMBER_RESET
	APPLIB_DCF_NUMBER_SERIAL

Table 13-101. enum APPLIB_DCF_NUMBER_MODE_e.

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13.4.24 AppLibStorageDmf_SetupMode

API Syntax:

int AppLibStorageDmf_SetupMode (void)

Function Description:

- This function is used to setup the DMF mode.

Parameters:

None

Returns:

Return	Description
> = 0	Success
< 0	Failure

Table 13-102. Returns for SDK6 ARD AppLib Storage API **AppLibStorageDmf_SetupMode()**.

Example:

None

See Also:

None

14 System

14.1 System: Overview

This chapter provides details on the interface of various utilities such as Gyro, LCD, Lens, Sensor, Vin, and Vout.

14.2 System: Modules of the System APIs

System APIs are categorized into the following modules:

- (Section 14.3) System: List of APIs for ApplibSys_Gyro
- (Section 14.4) System: List of APIs for ApplibSys_LCD
- (Section 14.5) System: List of APIs for ApplibSys_Lens
- (Section 14.6) System: List of APIs for ApplibSys_Sensor
- (Section 14.7) System: List of APIs for ApplibSys_Vin
- (Section 14.8) System: List of APIs for ApplibSys_Vout

14.3 System: List of APIs for ApplibSys_Gyro

The following section lists the interface of utility APIs for the Gyro interface.

14.3.1 AppLibSysGyro_Remove

API Syntax:

Int AppLibSysGyro_Remove (void)

Function Description:

- This function removes the gyro input device.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-1. Returns for SDK6 ARD AppLib System API AppLibSysGyro_Remove().

Example:

None

See Also:

None

14.3.2 AppLibSysGyro_Attach

API Syntax:

```
Int AppLibSysGyro_Attach ( APPLIB_GYRO_s * dev)
```

Function Description:

- This function attaches the gyro input device and enables the device control.

Parameters:

Type	Parameter	Description
APPLIB_GYRO_s *	dev	Device information. Please refer to Section 14.3.2.1 below for more details.

Table 14-2. Parameters for SDK6 ARD AppLib System API **AppLibSysGyro_Attach()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-3. Returns for SDK6 ARD AppLib System API **AppLibSysGyro_Attach()**.

Example:

None

See Also:

None

14.3.2.1 AppLibSysGyro_Attach> APPLIB_GYRO_s

Description:

- This data structure describes the interface of a gyro.

Type	Field	Description
UINT32	Id	Module ID
WCHAR	Name[32]	Module Name
INT	* Init (void)	Module Init Interface

Table 14-4. Definition of **APPLIB_GYRO_s** for SDK6 ARD AppLib System API **AppLibSysGyro_Attach()**.

14.3.3 AppLibSysGyro_PreInit

API Syntax:

Int AppLibSysGyro_PreInit (void)

Function Description:

- This function cleans the gyro configuration.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-5. Returns for SDK6 ARD AppLib System API AppLibSysGyro_PreInit().

Example:

None

See Also:

None

14.3.4 AppLibSysGyro_Init

API Syntax:

Int AppLibSysGyro_Init (void)

Function Description:

- This function initializes the gyro.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-6. Returns for SDK6 ARD AppLib System API AppLibSysGyro_Init().

Example:

None

See Also:

None

14.4 System: List of APIs for ApplibSys_LCD

This section lists the APIs for the LCD panel interface.

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14.4.1 AppLibSysLcd_Remove

API Syntax:

Int AppLibSysLcd_Remove (UINT32 lcdChanID)

Function Description:

- This function removes the LCD output device.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD Display Channel ID

Table 14-7. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_Remove().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-8. Returns for SDK6 ARD AppLib System API AppLibSysGyro_Attach().

Example:

None

See Also:

None

14.4.2 AppLibSysLcd_Attach

API Syntax:

```
Int AppLibSysLcd_Attach ( UINT32 lcdChanID, APPLIB_LCD_s * dev)
```

Function Description:

- This function attaches the LCD output device and enables the device control.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD Display Channel ID
APPLIB_LCD_s *	dev	Device Information.

Table 14-9. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_Attach()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-10. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_Attach()**.

Example:

None

See Also:

None

14.4.2.1 AppLibSysLcd_Attach> APPLIB_LCD_s

Description:

- This data structure describes the interface of a LCD panel.

Type	Field	Description
WCHAR	Name[32]	Module Name
UINT16	Enable:1	Enable
UINT16	ThreeDCapacity:1	3D Capacity
UINT16	FlipCapacity:1	Flip Capacity
UINT16	ColorbalanceCapacity:1	The capability to adjust color balance
UINT16	BacklightCapacity:1	The capability to control back light
UINT16	Reserved:11	Reserved
UINT16	Rotate	Rotate

Type	Field	Description
UINT16	Width	Width
UINT16	Height	Height
INT32	DefaultBrightness	Default brightness
float	DefaultContrast	Default contrast
AMBA_LCD_COLOR_BALANCE_s	DefaultColorBalance	Default color balance
UINT8	LcdDelayTime	LCD panel needs to delay few ms to avoid white flash
INT	* Init(void)	Module Init interface
INT	* GetDispMode (void)	Get Display Mode
INT	* GetDispAR (void)	Get Display Aspect Ratio
INT	* SetLCDMode (int mode)	Set LCD Mode
INT	* GetPipRectLineWidth (void)	Get Pipe Rect Line Width

Table 14-11. Definition of **APPLIB_LCD_s** for SDK6 ARD AppLib System API **AppLibSysLcd_Attach()**.

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14.4.3 AppLibSysLcd_PreInit

API Syntax:

Int AppLibSysLcd_PreInit (void)

Function Description:

- This function cleans the LCD configuration.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-12. Returns for SDK6 ARD AppLib System API AppLibSysLcd_PreInit().

Example:

None

See Also:

None

14.4.4 AppLibSysLcd_Init

API Syntax:

Int AppLibSysLcd_Init (UINT32 lcdChanID)

Function Description:

- This function controls the LCD initialization.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-13. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_Init().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-14. Returns for SDK6 ARD AppLib System API AppLibSysLcd_Init().

Example:

None

See Also:

None

14.4.5 AppLibSysLcd_CheckEnabled

API Syntax:

Int AppLibSysLcd_CheckEnabled (UINT32 lcdChanID)

Function Description:

- This function is used to check if the LCD is enabled.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-15. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_CheckEnabled().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-16. Returns for SDK6 ARD AppLib System API AppLibSysLcd_CheckEnabled().

Example:

None

See Also:

None

14.4.6 AppLibSysLcd_Check3DCap

API Syntax:

Int AppLibSysLcd_Check3DCap (UINT32 lcdChanID)

Function Description:

- This function is used to check the 3D capacity of the LCD.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-17. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_Check3DCap().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-18. Returns for SDK6 ARD AppLib System API AppLibSysLcd_Check3DCap().

Example:

None

See Also:

None

14.4.7 AppLibSysLcd_CheckFlipCap

API Syntax:

Int AppLibSysLcd_CheckFlipCap (UINT32 lcdChanID)

Function Description:

- This function is used to check the capacity of the LCD flip function capacity.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-19. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_CheckFlipCap().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-20. Returns for SDK6 ARD AppLib System API AppLibSysLcd_CheckFlipCap().

Example:

None

See Also:

None

14.4.8 AppLibSysLcd_CheckColorBalanceCap

API Syntax:

Int AppLibSysLcd_CheckColorBalanceCap (UINT32 lcdChanID)

Function Description:

- This function checks the capacity of the LCD color balance function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-21. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_CheckColorBalanceCap().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-22. Returns for SDK6 ARD AppLib System API AppLibSysLcd_CheckColorBalanceCap().

Example:

None

See Also:

None

14.4.9 AppLibSysLcd_CheckBacklightCap

API Syntax:

Int AppLibSysLcd_CheckBacklightCap (UINT32 lcdChanID)

Function Description:

- This function checks the capacity of the LCD rotate function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-23. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_CheckBacklightCap().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-24. Returns for SDK6 ARD AppLib System API AppLibSysLcd_CheckBacklightCap().

Example:

None

See Also:

None

14.4.10 AppLibSysLcd_CheckRotate

API Syntax:

Int AppLibSysLcd_Rotate (UINT32 lcdChanID)

Function Description:

- This function is used to check the capacity of the LCD rotate function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-25. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_CheckRotate().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-26. Returns for SDK6 ARD AppLib System API AppLibSysLcd_CheckRotate().

Example:

None

See Also:

None

14.4.11 AppLibSysLcd_GetDimensions

API Syntax:

Int **AppLibSysLcd_GetDimensions** (UINT32 lcdChanID, UINT16 * width, UINT16 * height)

Function Description:

- This function is used to get the width and height of LCD.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
UINT16 *	width	Width
UINT16 *	height	Height

Table 14-27. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_GetDimensions()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-28. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_GetDimensions()**.

Example:

None

See Also:

None

14.4.12 AppLibSysLcd_GetDispMode

API Syntax:

Int AppLibSysLcd_GetDispMode (UINT32 lcdChanID)

Function Description:

- This function is used to get the display mode of the LCD.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-29. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_GetDispMode().

Returns:

Return	Description
#	The display mode of LCD

Table 14-30. Returns for SDK6 ARD AppLib System API AppLibSysLcd_GetDispMode().

Example:

None

See Also:

None

14.4.13 AppLibSysLcd_GetDispAR

API Syntax:

Int AppLibSysLcd_GetDispAR (UINT32 lcdChanID)

Function Description:

- This function gets the display aspect ratio of LCD.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	Display Channel ID

Table 14-31. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_GetDispAR().

Returns:

Return	Description
#	The display aspect ratio of LCD

Table 14-32. Returns for SDK6 ARD AppLib System API AppLibSysLcd_GetDispAR().

Example:

None

See Also:

None

14.4.14 AppLibSysLcd_GetPipRectLineWidth

API Syntax:

Int AppLibSysLcd_GetPipRectLineWidth (UINT32 lcdChanID)

Function Description:

- This function is used to get the PIP rectangle line width of LCD.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-33. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_GetPipRectLineWidth().

Returns:

Return	Description
#	The PIP rectangle line width of LCD

Table 14-34. Returns for SDK6 ARD AppLib System API AppLibSysLcd_GetPipRectLineWidth().

Example:

None

See Also:

None

14.4.15 AppLibSysLcd_GetDefFlip

API Syntax:

UINT8 AppLibSysLcd_GetDefFlip (UINT32 lcdChanID)

Function Description:

- This function is used to get the default value of flip capacity.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-35. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_GetDefFlip().

Returns:

Return	Description
#	The default value of flip capacity

Table 14-36. Returns for SDK6 ARD AppLib System API AppLibSysLcd_GetDefFlip().

Example:

None

See Also:

None

14.4.16 AppLibSysLcd_GetDefBrightness

API Syntax:

INT32 AppLibSysLcd_GetDefBrightness (UINT32 lcdChanID)

Function Description:

- This function is used to get the default value of brightness.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-37. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_GetDefBrightness().

Returns:

Return	Description
#	The default value of brightness

Table 14-38. Returns for SDK6 ARD AppLib System API AppLibSysLcd_GetDefBrightness().

Example:

None

See Also:

None

14.4.17 AppLibSysLcd_GetDefContrast

API Syntax:

Float **AppLibSysLcd_GetDefContrast** (UINT32 lcdChanID)

Function Description:

- This function is used to get the default value of contrast.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-39. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_GetDefContrast()**.

Returns:

Return	Description
#	The default value of contrast

Table 14-40. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_GetDefContrast()**.

Example:

None

See Also:

None

14.4.18 AppLibSysLcd_GetDefColorBalance

API Syntax:

AMBA_LCD_COLOR_BALANCE_s AppLibSysLcd_GetDefColorBalance (UINT32 lcdChanID)

Function Description:

- This function is used to get the default value of color balance.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-41. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_GetDefColorBalance()**.

Returns:

Return	Description
Point	Color balance

Table 14-42. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_GetDefColorBalance()**.

Example:

None

See Also:

None

14.4.19 AppLibSysLcd_GetLcdDelayTime

API Syntax:

Int AppLibSysLcd_GetLcdDelayTime (UINT32 lcdChanID)

Function Description:

- This function is used to get the LCD delay time.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-43. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_GetLcdDelayTime().

Returns:

Return	Description
#	The LCD delay time

Table 14-44. Returns for SDK6 ARD AppLib System API AppLibSysLcd_GetLcdDelayTime().

Example:

None

See Also:

None

14.4.20 AppLibSysLcd_SetMode

API Syntax:

Int AppLibSysLcd_SetMode (UINT32 lcdChanID, int mode)

Function Description:

- This function is used to set the LCD mode.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
int	mode	Mode

Table 14-45. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_SetMode().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-46. Returns for SDK6 ARD AppLib System API AppLibSysLcd_SetMode().

Example:

None

See Also:

None

14.4.21 AppLibSysLcd_SetFlip

API Syntax:

Int **AppLibSysLcd_SetFlip** (UINT32 lcdChanID, UINT32 flip, UINT32 flag)

Function Description:

- This function sets the flip function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
UINT32	flip	Flip
UINT32	flag	Re-config flag

Table 14-47. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_SetFlip()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-48. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_SetFlip()**.

Example:

None

See Also:

None

14.4.22 AppLibSysLcd_SetBacklight

API Syntax:

Int **AppLibSysLcd_SetBacklight** (UINT32 lcdChanID, UINT32 param)

Function Description:

- This function sets the backlight function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
UINT32	param	Parameter

Table 14-49. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_SetBacklight()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-50. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_SetBacklight()**.

Example:

None

See Also:

None

14.4.23 AppLibSysLcd_SetBrightness

API Syntax:

Int **AppLibSysLcd_SetBrightness** (UINT32 lcdChanID, INT32 brightness, UINT32 flag)

Function Description:

- This function sets the brightness function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
INT32	brightness	Brightness
UINT32	flag	Re-config flag

Table 14-51. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_SetBrightness()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-52. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_SetBrightness()**.

Example:

None

See Also:

None

14.4.24 AppLibSysLcd_SetContrast

API Syntax:

Int **AppLibSysLcd_SetContrast** (UINT32 lcdChanID, float contrast, UINT32 flag)

Function Description:

- This function is used to set the contrast function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
float	contrast	Contrast
UINT32	flag	Re-config flag

Table 14-53. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_SetContrast()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-54. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_SetContrast()**.

Example:

None

See Also:

None

14.4.25 AppLibSysLcd_SetColorBalance

API Syntax:

Int **AppLibSysLcd_SetColorBalance** (UINT32 lcdChanID, AMBA_LCD_COLOR_BALANCE_s colorbalance, UINT32 flag)

Function Description:

- This function is used to set the color balance function.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID
AMBA_LCD_COLOR_BALANCE_s	colorbalance	Color balance
UINT32	flag	Re-config flag

Table 14-55. Parameters for SDK6 ARD AppLib System API **AppLibSysLcd_SetColorBalance()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-56. Returns for SDK6 ARD AppLib System API **AppLibSysLcd_SetColorBalance()**.

Example:

None

See Also:

None

14.4.26 AppLibSysLcd_ParamReconfig

API Syntax:

Int AppLibSysLcd_ParamReconfig (UINT32 lcdChanID)

Function Description:

- This function is used to reset the paramters of the LCD.

Parameters:

Type	Parameter	Description
UINT32	lcdChanID	LCD display channel ID

Table 14-57. Parameters for SDK6 ARD AppLib System API AppLibSysLcd_ParamReconfig().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-58. Returns for SDK6 ARD AppLib System API AppLibSysLcd_ParamReconfig().

Example:

None

See Also:

None

14.5 System: List of APIs for ApplibSys_Lens

This section lists the APIs for the Lens interface.

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14.5.1 AppLibSysLens_Remove

API Syntax:

Int AppLibSysGyro_Remove (void)

Function Description:

- This function removes the Lens input device.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-59. Returns for SDK6 ARD AppLib System API AppLibSysLens_Remove().

Example:

None

See Also:

None

14.5.2 AppLibSysLens_Attach

API Syntax:

Int AppLibSysLens_Attach (APPLIB_LENS_s * dev)

Function Description:

- This function attaches the Lens input device and enables the device control.

Parameters:

Type	Parameter	Description
APPLIB_LENS_s *	dev	Device information. Please refer to Section 14.5.2.1 below for more details.

Table 14-60. Parameters for SDK6 ARD AppLib System API **AppLibSysLens_Attach()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-61. Returns for SDK6 ARD AppLib System API **AppLibSysLens_Attach()**.

Example:

None

See Also:

None

14.5.2.1 AppLibSysLens_Attach> APPLIB_LENS_s

Description:

- This data structure describes the interface of a lens.

Type	Field	Description
UINT32	Id	Module Id
UINT32	MeCapability	Me Capability
WCHAR	Name[80]	Module name
UINT32	ZoomCap	Zoom Capacity
INT	* Init(void)	Module Init interface

Table 14-62. Definition of **APPLIB_LENS_s** for SDK6 ARD AppLib System API **AppLibSysLens_Attach()**.

14.5.3 AppLibSysLens_PreInit

API Syntax:

Int AppLibSysLens_PreInit (void)

Function Description:

- This function cleans the Lens configuration.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-63. Returns for SDK6 ARD AppLib System API AppLibSysLens_PreInit().

Example:

None

See Also:

None

14.5.4 AppLibSysLens_Init

API Syntax:

Int AppLibSysLens_Init (void)

Function Description:

- This function initializes the lens.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-64. Returns for SDK6 ARD AppLib System API AppLibSysLens_Init().

Example:

None

See Also:

None

14.5.5 AppLibSysLens_CheckZoomCap

API Syntax:

Int AppLibSysLens_CheckZoomCap (void)

Function Description:

- This function checks the capacity of the zoom.

Returns:

Return	Description
> 1	Supported
0	Not Supported

Table 14-65. Returns for SDK6 ARD AppLib System API AppLibSysLens_CheckZoomCap().

Example:

None

See Also:

None

14.5.6 AppLibSysLens_GetType

API Syntax:

Int AppLibSysLens_GetType (void)

Function Description:

- This function gets the lens' type.

Returns:

Return	Description
#	Lens' type

Table 14-66. Returns for SDK6 ARD AppLib System API AppLibSysLens_GetType().

Example:

None

See Also:

None

14.6 System: List of APIs for ApplibSys_Sensor

This section lists the APIs for the Sensor interface.

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14.6.1 AppLibSysSensor_Remove

API Syntax:

Int AppLibSysSensor_Remove (void)

Function Description:

- This function removes the sensor input device.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-67. Returns for SDK6 ARD AppLib System API AppLibSysSensor_Remove().

Example:

None

See Also:

None

14.6.2 AppLibSysSensor_Attach

API Syntax:

Int AppLibSysSensor_Attach (APPLIB_SENSOR_s * dev)

Function Description:

- This function attaches the Sensor input device and enables the device control.

Parameters:

Type	Parameter	Description
APPLIB_SENSOR_s *	dev	Device information. Please refer to Section 14.6.2.1 below for more details.

Table 14-68. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_Attach().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-69. Returns for SDK6 ARD AppLib System API AppLibSysSensor_Attach().

Example:

None

See Also:

None

14.6.2.1 AppLibSysSensor_Attach> APPLIB_SENSOR_s

Description:

- This data structure describes the interface of a sensor.

Type	Field	Description
UINT32	ID	Module ID
char	Name	Module name
UINT8	SysCapacity	Module capability
UINT8	DzoomCapacity	Dzoom capacity
UINT8	ThreeDCapacity	3D Capacity
UINT8	Rotate	Rotate
UINT8	Reserved	Reserved
UINT8	VideoResNum	Module supported video resolution number
UINT8	PjpegConfigNormalNum	Photo JPEG configuration normal num

Type	Field	Description
UINT8	PjpegConfigCollageNum	Photo JPEG configuration collage num
UINT8	PjpegConfigBurstNum	Photo JPEG configuration burst num
UINT16	Reserved1	Reserved
UINT16	PhotoMaxVcapWidth	Configure maximum information for Photo max Vcap Width
UINT16	PhotoMaxVcapHeight	Photo max Vcap height
UINT16	PhotoMaxEncWeight	Photo max encode weight
UINT16	PhotoMaxEncHeight	Photo max encode height
UINT16	PhotoMaxPrevWidth	Phot max prev width
UINT16	PhotoMaxPrevHeight	Photo max prev height
INT	* Init	Module Init Interface
INT	* GetVideoResID	Module parameter get interface get video resolution ID
INT	* GetPhotoLiveviewModelID	Get Photo Liveview mode ID
INT	* GetPhotoHfrModelID	Get Photo Hfr mode ID
INT	* GetPhotoPreflashHfrModelID	Get Photo Pre-flash HFR mode ID
INT	* GetStillCaptureModelID	Get Still capture mode ID
INT	* GetStillCaptureObModelID	Get Still capture object mode ID
UINT16	* GetVideoResString	Get video resolution string
UINT16	* GetPhotoSizeString	Get Photo size string
INT	* GetVinMode	Get VIN Mode. Please refer to Section 14.6.2.1.1 below for more details.
INT	* GetCaptureModeAR	Get Capture mode AR
INT	* GetPreviewWindow	Get Preview window
INT	* GetPhotoQualityConfig	Get Photo Quality Config
APPLIB_SENSOR_STILL- PREV- CONFIG_s	* GetPhotoLiveviewConfig	Get Photo Liveview configuration
APPLIB_SENSOR_STILL- CAP_CONFIG_s	* GetPjpegConfig	Get Photo JPEG configuration
APPLIB_SENSOR_VIDEO- ENC_CONFIG_s	* GetVideoConfig	Get Video Configuration
APPLIB_VID- EOENC- BITRATE_s	* GetVideoBiteRate	Get Video Bite Rate
APPLIB_VIDEO- ENC_GOP_s	* GetVideoGOP	Get Video GOP
INT	* CheckVideoRes	Check Video Resolution
APPLIB_SENSOR_PIV- CONFIG_s	* GetPIVConfig	Get PIV configuration
INT	* GetPIVSize	Get PIV size
UINT32	* GetShutterMode	Get Shutter mode
INT	* GetMaxShutterTime	Get Max shutter time
UINT32	* Get3dDzoomTable	Get 3D Dzoom table
UINT32	* Get3dDzoomMaxRatio	Get 3D Dzoom max ratio
INT	* Get3dDzoomTotalStep	Get 3D Dxoom total step

Table 14-70. Definition of **APPLIB_SENSOR_s** for SDK6 ARD AppLib System API **AppLibSysSensor_Attach()**.

14.6.2.1.1 APPLIB_SENSOR_s> APPLIB_SENSOR_VIN_CONFIG_s

Description:

- This data structure describes the AppLib sensor VIN configuration.

Type	Field	Description
INT	ResID	Resolution ID
UINT16	CapMode	Photo capture mode
UINT16	PjpegConfigID	Tile dimensions

Table 14-71. Definition of **APPLIB_SENSOR_VIN_CONFIG_s** for SDK6 ARD AppLib System API **AppLibSysSensor_Attach()**.

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14.6.3 AppLibSysSensor_PreInit

API Syntax:

Int AppLibSysSensor_PreInit (void)

Function Description:

- This function cleans the sensor configuration.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-72. Returns for SDK6 ARD AppLib System API AppLibSysSensor_PreInit().

Example:

None

See Also:

None

14.6.4 AppLibSysSensor_Init

API Syntax:

Int AppLibSysSensor_Init (void)

Function Description:

- This function initializes the sensor.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-73. Returns for SDK6 ARD AppLib System API AppLibSysSensor_Init().

Example:

None

See Also:

None

14.6.5 AppLibSysSensor_CheckSysCap

API Syntax:

Int AppLibSysSensor_CheckSysCap (UINT32 cap)

Function Description:

- This function check the system capacity if it is NTSC or PAL.

Parameters:

Type	Parameter	Description
UINT32	cap	The system mode

Table 14-74. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_CheckSysCap().

Returns:

Return	Description
1	Supported
0	Not supported

Table 14-75. Returns for SDK6 ARD AppLib System API AppLibSysSensor_CheckSysCap().

Example:

None

See Also:

None

14.6.6 AppLibSysSensor_CheckDzoomCap

API Syntax:

Int AppLibSysSensor_CheckDzoomCap (void)

Function Description:

- This function checks the capacity of the Dzoom function.

Returns:

Return	Description
1	Supported
0	Not Supported

Table 14-76. Returns for SDK6 ARD AppLib System API AppLibSysSensor_CheckDzoomCap().

Example:

None

See Also:

None

14.6.7 AppLibSysSensor_Check3dCap

API Syntax:

Int AppLibSysSensor_Check3dCap (void)

Function Description:

- This function checks the capacity of the 3D function.

Returns:

Return	Description
1	Supported
0	Not supported

Table 14-77. Returns for SDK6 ARD AppLib System API AppLibSysSensor_Check3dCap().

Example:

None

See Also:

None

14.6.8 AppLibSysSensor_CheckRotate

API Syntax:

Int AppLibSysSensor_CheckRotate (void)

Function Description:

- This function checks the rotation of the sensor.

Returns:

Return	Description
#	The rotation of the sensor

Table 14-78. Returns for SDK6 ARD AppLib System API AppLibSysSensor_CheckRotate().

Example:

None

See Also:

None

14.6.9 AppLibSysSensor_GetVideoResNum

API Syntax:

Int AppLibSysSensor_GetVideoResNum (void)

Function Description:

- This function gets the number of the video resolution.

Returns:

Return	Description
#	The number of the video resolution

Table 14-79. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetVideoResNum().

Example:

None

See Also:

None

14.6.10 AppLibSysSensor_GetPjpegConfigNum

API Syntax:

Int AppLibSysSensor_GetPjpegConfigNum (int capMode)

Function Description:

- This function gets the number of the photo size.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode

Table 14-80. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPjpegConfigNum().

Returns:

Return	Description
#	The number of photo size

Table 14-81. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPjpegConfigNum().

Example:

None

See Also:

None

14.6.11 AppLibSysSensor_GetVideoResID

API Syntax:

Int AppLibSysSensor_GetVideoResID (int resRef)

Function Description:

- This function gets the video resolution ID by index.

Parameters:

Type	Parameter	Description
int	resRef	Reference index

Table 14-82. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetVideoResID().

Returns:

Return	Description
#	The video resolution ID

Table 14-83. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetVideoResID().

Example:

None

See Also:

None

14.6.12 AppLibSysSensor_GetPhotoLiveViewModelID

API Syntax:

Int **AppLibSysSensor_GetPhotoLiveViewModelID** (int capMode, int pjpegConfigID)

Function Description:

- This function gets the sensor mode of the photo live view.

Parameters:

Type	Parameter	Description
int	capMode	Capture Mode
int	pjpegConfigID	Photo size index

Table 14-84. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoLiveViewModelID()**.

Returns:

Return	Description
#	The sensor mode

Table 14-85. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoLiveViewModelID()**.

Example:

None

See Also:

None

14.6.13 AppLibSysSensor_GetPhotoHfrModelID

API Syntax:

Int AppLibSysSensor_GetPhotoHfrModelID (int capMode, int pjpegConfigID)

Function Description:

- This function gets the sensor mode of the photo HFR mode.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-86. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoHfrModelID().

Returns:

Return	Description
#	The sensor mode

Table 14-87. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoHfrModelID().

Example:

None

See Also:

None

14.6.14 AppLibSysSensor_GetPhotoPreflashHfrModelID

API Syntax:

Int **AppLibSysSensor_GetPhotoPreflashHfrModelID** (int capMode, int pjpegConfigID)

Function Description:

- This function gets the sensor mode of the photo HFR pre-flash mode.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-88. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoPreflashHfrModelID()**.

Returns:

Return	Description
#	The sensor mode

Table 14-89. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoPreflashHfrModelID()**.

Example:

None

See Also:

None

14.6.15 AppLibSysSensor_GetStillCaptureModelID

API Syntax:

Int AppLibSysSensor_GetStillCaptureModelID (int capMode, int pjpegConfigID)

Function Description:

- This function gets the sensor mode of the photo capture mode.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-90. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetStillCaptureModelID().

Returns:

Return	Description
#	The sensor mode

Table 14-91. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetStillCaptureModelID().

Example:

None

See Also:

None

14.6.16 AppLibSysSensor_GetStillCaptureObModelID

API Syntax:

Int AppLibSysSensor_GetStillCaptureObModelID (int capMode, int pjpegConfigID)

Function Description:

- This function gets the sensor mode of the photo OB mode.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-92. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetStillCaptureObModelID().

Returns:

Return	Description
#	The sensor mode

Table 14-93. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetStillCaptureObModelID().

Example:

None

See Also:

None

14.6.17 AppLibSysSensor_GetVideoResStr

API Syntax:

UINT16* **AppLibSysSensor_GetVideoResStr** (int videoResID)

Function Description:

- This function gets the strings of the video resolution.

Parameters:

Type	Parameter	Description
int	videoResID	The strings of video resolution

Table 14-94. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoResStr()**.

Returns:

Return	Description
Point	The strings of video resolution

Table 14-95. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoResStr()**.

Example:

None

See Also:

None

14.6.18 AppLibSysSensor_GetPhotoSizeStr

API Syntax:

UINT16* **AppLibSysSensor_GetPhotoSizeStr** (int capMode, int pjpegConfigID)

Function Description:

- This function gets the strings of the photo size.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode.
int	pjpegConfigID	Photo size index

Table 14-96. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoSizeStr()**.

Returns:

Return	Description
Point	The strings of photo size

Table 14-97. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoSizeStr()**.

Example:

None

See Also:

None

14.6.19 AppLibSysSensor_GetVinMode

API Syntax:

```
Int AppLibSysSensor_GetVinMode (APPLIB_SENSOR_VIN_CONFIG_s * vinConfig)
```

Function Description:

- This function gets the Vin mode.

Parameters:

Type	Parameter	Description
APPLIB_SENSOR_VIN_CONFIG_s *	vinConfig	The VIN configuration. Please refer to Section 14.6.2.1.1 for more details.

Table 14-98. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetVinMode().

Returns:

Return	Description
#	The VIN mode

Table 14-99. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetVinMode().

Example:

None

See Also:

None

14.6.20 AppLibSysSensor_GetCaptureModeAR

API Syntax:

Int AppLibSysSensor_GetCaptureModeAR (int capMode, int pjpegConfigID)

Function Description:

- This function gets the aspect ratio of the capture mode.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-100. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetCaptureModeAR().

Returns:

Return	Description
#	The aspect ratio of the capture mode

Table 14-101. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetCaptureModeAR().

Example:

None

See Also:

None

14.6.21 AppLibSysSensor_GetPreviewWindow

API Syntax:

Int **AppLibSysSensor_GetPreviewWindow** (int capMode, int pjpegConfigID, int * width, int * height)

Function Description:

- This function gets the size of the preview window.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index
int *	width	Width
int *	height	Height

Table 14-102. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPreviewWindow()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-103. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPreviewWindow()**.

Example:

None

See Also:

None

14.6.22 AppLibSysSensor_GetPhotoQualityConfig

API Syntax:

Int AppLibSysSensor_GetPhotoQualityConfig (int qualityMode)

Function Description:

- This function gets the quality value of the photo.

Parameters:

Type	Parameter	Description
int	qualityMode	Quality mode index

Table 14-104. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoQualityConfig().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-105. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoQualityConfig().

Example:

None

See Also:

None

14.6.23 AppLibSysSensor_GetPhotoLiveviewConfig

API Syntax:

APPLIB_SENSOR_STILLPREV_CONFIG_s* AppLibSysSensor_GetPhotoLiveviewConfig (int cap-Mode, int pjpegConfigID)

Function Description:

- This function gets the photo live view configuration.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-106. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoLiveviewConfig()**.

Returns:

Return	Description
Point	The photo live view configuration

Table 14-107. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPhotoLiveviewConfig()**.

Example:

None

See Also:

None

14.6.24 AppLibSysSensor_GetPjpegConfig

API Syntax:

APPLIB_SENSOR_STILLCAP_CONFIG_s* AppLibSysSensor_GetPjpegConfig (int capMode, int pjpegConfigID)

Function Description:

- This function gets the photo capture configuration.

Parameters:

Type	Parameter	Description
int	capMode	Capture mode
int	pjpegConfigID	Photo size index

Table 14-108. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPjpegConfig()**.

Returns:

Return	Description
Point	The photo capture configuration

Table 14-109. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPjpegConfig()**.

Example:

None

See Also:

None

14.6.25 AppLibSysSensor_GetVideoConfig

API Syntax:

APPLIB_SENSOR_VIDEO_ENC_CONFIG_s* AppLibSysSensor_GetVideoConfig (int videoResID)

Function Description:

- This function gets the video configuration.

Parameters:

Type	Parameter	Description
int	videoResID	Video resolution index

Table 14-110. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoConfig()**.

Returns:

Return	Description
Point	The video configuration

Table 14-111. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoConfig()**.

Example:

None

See Also:

None

14.6.26 AppLibSysSensor_GetVideoBitRate

API Syntax:

APPLIB_VIDEOENC_BITRATE_s* AppLibSysSensor_GetVideoBitRate (int videoResID, int videoQuality)

Function Description:

- This function gets the video bit rate.

Parameters:

Type	Parameter	Description
int	videoResID	Video resolution index
int	videoQuality	Video quality index

Table 14-112. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoBitRate()**.

Returns:

Return	Description
Point	The video bit rate

Table 14-113. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoBitRate()**.

Example:

None

See Also:

None

14.6.27 AppLibSysSensor_GetVideoGOP

API Syntax:

APPLIB_VIDEOENC_GOP_s* AppLibSysLens_Sensor (int videoResID)

Function Description:

- This function gets the GOP of the video.

Parameters:

Type	Parameter	Description
int	videoResID	Video resolution index

Table 14-114. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoGOP()**.

Returns:

Return	Description
Point	The GOP of video

Table 14-115. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetVideoGOP()**.

Example:

None

See Also:

None

14.6.28 AppLibSysSensor_GetPhotoMaxVcapSize

API Syntax:

Int AppLibSysSensor_GetPhotoMaxVcapSize (int * width, int* height)

Function Description:

- This function gets the maximum size of video capture.

Parameters:

Type	Parameter	Description
int*	width	Width
int*	Height	Height

Table 14-116. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoMaxVcapSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-117. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoMaxVcapSize().

Example:

None

See Also:

None

14.6.29 AppLibSysSensor_GetPhotoMaxEncSize

API Syntax:

Int AppLibSysSensor_GetPhotMaxEncSize (int* width, int* height)

Function Description:

- This function gets the maximum size of photo encoding size.

Parameters:

Type	Parameter	Description
int*	width	Width
int*	height	Height

Table 14-118. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoMaxEncSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-119. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoMaxEncSize().

Example:

None

See Also:

None

14.6.30 AppLibSysSensor_CheckVideoRes

API Syntax:

Int AppLibSysSensor_CheckVideoRes (int videoResID)

Function Description:

- This function checks the video resolution that is valid in this sensor setting.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution index

Table 14-120. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_CheckVideoRes().

Returns:

Return	Description
>=0	Valid
<0	Failure

Table 14-121. Returns for SDK6 ARD AppLib System API AppLibSysSensor_CheckVideoRes().

Example:

None

See Also:

None

14.6.31 AppLibSysSensor_GetPhotoMaxPreviewSize

API Syntax:

Int AppLibSysSensor_GetPhotoMaxPreviewSize (int* width, int* height)

Function Description:

- This function gets the maximum size of the photo preview.

Parameters:

Type	Parameter	Description
int*	width	Width
int*	height	Height

Table 14-122. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoMaxPreviewSize().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-123. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoMaxPreviewSize().

Example:

None

See Also:

None

14.6.32 AppLibSysSensor_GetPIVConfig

API Syntax:

APPLIB_SENSOR_PIV_CONFIG_s* AppLibSysSensor_GetPIVConfig (int videoResID)

Function Description:

- This function gets the PIV configuration of a specific video resolution.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution ID

Table 14-124. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetPIVConfig()**.

Returns:

Return	Description
APPLIB_SENSOR_PIV_CONFIG_s*	Address of the requested PIV configuration

Table 14-125. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetPIVConfig()**.

Example:

None

See Also:

None

14.6.33 AppLibSysSensor_Get3dDzoomTable

API Syntax:

UINT32* **AppLibSysSensor_Get3dDzoomTable** (int videoResID, int var)

Function Description:

- This function gets the 3D dzoom table.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution ID
INT	var	Parameter

Table 14-126. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_Get3dDzoomTable()**.

Returns:

Return	Description
Point	3D dzoom table

Table 14-127. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_Get3dDzoomTable()**.

Example:

None

See Also:

None

14.6.34 AppLibSysSensor_Get3dDzoomMaxRatio

API Syntax:

UINT32 AppLibSysSensor_Get3dDzoomMaxRatio (int videoResID, int var)

Function Description:

- This function gets the maximum ratio of 3D dzoom.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution ID
INT	var	Parameter

Table 14-128. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_Get3dDzoomMaxRatio().

Returns:

Return	Description
#	The maximum ratio of 3D dzoom

Table 14-129. Returns for SDK6 ARD AppLib System API AppLibSysSensor_Get3dDzoomMaxRatio().

Example:

None

See Also:

None

14.6.35 AppLibSysSensor_Get3dDzoomTotalStep

API Syntax:

Int AppLibSysSensor_Get3dDzoomTotalStep (int videoResID, int var)

Function Description:

- This function gets the total step of 3D dzoom.

Parameters:

Type	Parameter	Description
INT	videoResID	Video resolution ID
INT	var	Parameter

Table 14-130. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_Get3dDzoomTotalStep().

Returns:

Return	Description
#	The total step of 3D dzoom

Table 14-131. Returns for SDK6 ARD AppLib System API AppLibSysSensor_Get3dDzoomTotalStep().

Example:

None

See Also:

None

14.6.36 AppLibSysSensor_GetShutterMode

API Syntax:

UINT32 **AppLibSysSensor_GetShutterMode** (int capMode, intpjpegConfigID)

Function Description:

- This function gets the shutter mode under the photo capture mode.

Parameters:

Type	Parameter	Description
INT	capMode	Capture Mode
INT	pjpegConfigID	Photo size index

Table 14-132. Parameters for SDK6 ARD AppLib System API **AppLibSysSensor_GetShutterMode()**.

Returns:

Return	Description
#	The Shutter mode

Table 14-133. Returns for SDK6 ARD AppLib System API **AppLibSysSensor_GetShutterMode()**.

Example:

None

See Also:

None

14.6.37 AppLibSysSensor_GetMaxShutterTime

API Syntax:

Int AppLibSysSensor_GetMaxShutterTime (int capMode, int pjpegConfigID)

Function Description:

- This function gets the maximum shutter time.

Parameters:

Type	Parameter	Description
INT	capMode	Capture Mode
INT	pjpegConfigID	Photo size index

Table 14-134. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetMaxShutterTime().

Returns:

Return	Description
#	The Maximum shutter time

Table 14-135. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetMaxShutterTime().

Example:

None

See Also:

None

14.6.38 AppLibSysSensor_GetVideoResIdx

API Syntax:

Int AppLibSysSensor_GetVideoResIdx (UINT16 * resRef)

Function Description:

- This function gets the video resolution index.

Parameters:

Type	Parameter	Description
UINT16*	resRef	Reference video resolution index

Table 14-136. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetVideoResIdx().

Returns:

Return	Description
>=0	The video resolution index
<0	Execution failed

Table 14-137. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetVideoResIdx().

Example:

None

See Also:

None

14.6.39 AppLibSysSensor_GetPhotoSizeID

API Syntax:

Int AppLibSysSensor_GetPhotoSizeID (int capMode, UINT16 * photoSize)

Function Description:

- This function gets the index of the photo size.

Parameters:

Type	Parameter	Description
INT	capMode	Capture Mode
UINT16*	photoSize	Reference photo size index

Table 14-138. Parameters for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoSizeID().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-139. Returns for SDK6 ARD AppLib System API AppLibSysSensor_GetPhotoSizeID().

Example:

None

See Also:

None

14.7 System: List of APIs for ApplibSys_Vin

This section lists the APIs for the Vin utility interface.

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14.7.1 AppLibSysVin_Init

API Syntax:

Int AppLibSysVin_Init (void)

Function Description:

- This function initializes the VIN module.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-140. Returns for SDK6 ARD AppLib System API AppLibSysVin_Init().

Example:

None

See Also:

None

14.7.2 AppLibSysVin_Config

API Syntax:

Int AppLibSysVin_Config (AMP_VIN_CFG_s * vinCfg)

Function Description:

- This function configures the VIN module.

Parameters:

Type	Parameter	Description
AMP_VIN_CFG_s *	vinCfg	The Vin setting.

Table 14-141. Parameters for SDK6 ARD AppLib System API AppLibSysVin_Config().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-142. Returns for SDK6 ARD AppLib System API AppLibSysVin_Config().

Example:

None

See Also:

None

14.7.3 AppLibSysVin_SetSystemType

API Syntax:

Int AppLibSysVin_SetSystemType (int vinSys)

Function Description:

- This function sets the VOUT system type NTSC/PAL.

Parameters:

Type	Parameter	Description
int	vinSys	System type

Table 14-143. Parameters for SDK6 ARD AppLib System API AppLibSysVin_SetSystemType().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-144. Returns for SDK6 ARD AppLib System API AppLibSysVin_SetSystemType().

Example:

None

See Also:

None

14.7.4 AppLibSysVin_GetSystemType

API Syntax:

```
Int AppLibSysVin_GetSystemType (void)
```

Function Description:

- This function gets the VIN system type.

Returns:

Return	Description
#	The Vin System type

Table 14-145. Returns for SDK6 ARD AppLib System API AppLibSysVin_GetSystemType().

Example:

None

See Also:

None

14.7.5 AppLibSysVin_SetDimension

API Syntax:

Int **AppLibSysVin_SetDimension** (int vinDimension)

Function Description:

- This function sets the Vin dimension.

Parameters:

Type	Parameter	Description
int	vinDimension	Vin Dimension

Table 14-146. Parameters for SDK6 ARD AppLib System API **AppLibSysVin_SetDimension()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-147. Returns for SDK6 ARD AppLib System API **AppLibSysVin_SetDimension()**.

Example:

None

See Also:

None

14.7.6 AppLibSysVin_GetDimension

API Syntax:

Int AppLibSysVin_GetDimension (void)

Function Description:

- This function gets the Vin dimension.

Returns:

Return	Description
#	The Vin dimension

Table 14-148. Returns for SDK6 ARD AppLib System API AppLibSysVin_GetDimension().

Example:

None

See Also:

None

14.7.7 AppLibSysVin_SetSourceType

API Syntax:

Int **AppLibSysVin_SetSourceType** (int vinSrc)

Function Description:

- This function sets the Vin source type.

Parameters:

Type	Parameter	Description
int	vinSrc	The vin source type

Table 14-149. Parameters for SDK6 ARD AppLib System API **AppLibSysVin_SetSourceType()**.

Returns:

Return	Description
≥ 0	Execution Successful
< 0	Execution failed

Table 14-150. Returns for SDK6 ARD AppLib System API **AppLibSysVin_SetSourceType()**.

Example:

None

See Also:

None

14.7.8 AppLibSysVin_GetSourceType

API Syntax:

Int AppLibSysVin_GetSourceType (void)

Function Description:

- This function gets the Vin source type.

Returns:

Return	Description
#	The vin source type

Table 14-151. Returns for SDK6 ARD AppLib System API AppLibSysVin_GetSourceType().

Example:

None

See Also:

None

14.7.9 AppLibSysVin_GetSetting

API Syntax:

Int AppLibSysVin_GetSetting (APPLIB_VIN_SETTING_s * setting)

Function Description:

- This function gets the total setting of Vin.

Parameters:

Type	Parameter	Description
APPLIB_VIN_SETTING_s*	setting	The vin setting. Please refer to Section 14.7.9.1 for more details

Table 14-152. Parameters for SDK6 ARD AppLib System API AppLibSysVin_GetSetting().

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-153. Returns for SDK6 ARD AppLib System API AppLibSysVin_GetSetting().

Example:

None

See Also:

None

14.7.9.1 AppLibSysVin_GetSetting> APPLIB_VIN_SETTING_s

Description:

- This data structure describes the AppLib VIN setting.

Type	Field	Description
UINT8	Source	VIN source config ID
UINT8	System	VIN system config ID
UINT8	Dimension	VIN Dimension config ID
UINT8	Reserved	Reserved

Table 14-154. Definition of APPLIB_VIN_SETTING_s for SDK6 ARD AppLib System API AppLibSysVin_GetSetting().

14.8 System: List of APIs for ApplibSys_Vout

This section lists the APIs for the Vout utility interface.

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14.8.1 AppLibSysVout_SetSystemType

API Syntax:

Int AppLibSysVout_SetSystemType (int voutSys)

Function Description:

- This function sets the vout system type.

Parameters:

Type	Parameter	Description
int	voutSys	Vout system type

Table 14-155. Parameters for SDK6 ARD AppLib System API **AppLibSysVout_SetSystemType()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-156. Returns for SDK6 ARD AppLib System API **AppLibSysVout_SetSystemType()**.

Example:

None

See Also:

None

14.8.2 AppLibSysVout_GetSystemType

API Syntax:

Int AppLibSysVout_GetSystemType (void)

Function Description:

- This function gets the system type of vout.

Returns:

Return	Description
#	The system type

Table 14-157. Returns for SDK6 ARD AppLib System API AppLibSysVout_GetSystemType().

Example:

None

See Also:

None

14.8.3 AppLibSysVout_SetJackHDMI

API Syntax:

Int **AppLibSysVout_SetJackHDMI** (int jackState)

Function Description:

- This function sets the flag of the HDMI jack.

Parameters:

Type	Parameter	Description
int	jackState	HDMI jack status

Table 14-158. Parameters for SDK6 ARD AppLib System API **AppLibSysVout_SetJackHDMI()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-159. Returns for SDK6 ARD AppLib System API **AppLibSysVout_SetJackHDMI()**.

Example:

None

See Also:

None

14.8.4 AppLibSysVout_CheckJackHDMI

API Syntax:

Int AppLibSysVout_CheckJackHDMI (void)

Function Description:

- This function gets the status of the HDMI jack.

Returns:

Return	Description
#	The status of the HDMI jack

Table 14-160. Returns for SDK6 ARD AppLib System API AppLibSysVout_CheckJackHDMI().

Example:

None

See Also:

None

14.8.5 AppLibSysVout_SetJackCs

API Syntax:

Int AppLibSysVout_SetJackCs (int jackState)

Function Description:

- This function sets the status of the composite jack.

Parameters:

Type	Parameter	Description
int	jackState	Composite jack status

Table 14-161. Parameters for SDK6 ARD AppLib System API **AppLibSysVout_SetJackCs()**.

Returns:

Return	Description
>=0	Execution Successful
<0	Execution failed

Table 14-162. Returns for SDK6 ARD AppLib System API **AppLibSysVout_SetJackCs()**.

Example:

None

See Also:

None

14.8.6 AppLibSysVout_CheckJackCs

API Syntax:

Int AppLibSysVout_CheckJackCs (void)

Function Description:

- This function gets the status of the composite jack.

Returns:

Return	Description
#	The status of the composite jack

Table 14-163. Returns for SDK6 ARD AppLib System API AppLibSysVout_CheckJackCs().

Example:

None

See Also:

None

14.8.7 AppLibSysVout_GetVoutMode

API Syntax:

```
Int AppLibSysVout_GetVoutMode (VOUT_DISP_MODE_ID_e voutDispModeID)
```

Function Description:

- This function gets the vout mode.

Parameters:

Type	Parameter	Description
VOUT_DISP_MODE_ID_e	voutDispModeID	Application vout mode ID. Please see Section 14.8.7.1 for more details.

Table 14-164. Parameters for SDK6 ARD AppLib System API **AppLibSysVout_GetVoutMode()**.

Returns:

Return	Description
#	Vout mode

Table 14-165. Returns for SDK6 ARD AppLib System API **AppLibSysVout_GetVoutMode()**.

Example:

None

See Also:

None

14.8.7.1 AppLibSysVout_GetVoutMode> VOUT_DISP_MODE_ID_e

Description:

- This provides the Vout display mode config ID.

14.8.8 AppLibSysVout_GetHDMIFrameRate

API Syntax:

Int **AppLibSysVout_GetHDMIFrameRate** (AMP_DISP_HDMI_MODE_e voutDispMode)

Function Description:

- This function gets the HDMI frame rate.

Parameters:

Type	Parameter	Description
AMP_DISP_HDMI_MODE_e	voutDispMode	Vout mode

Table 14-166. Parameters for SDK6 ARD AppLib System API **AppLibSysVout_GetHDMIFrameRate()**.

Returns:

Return	Description
#	Frame rate

Table 14-167. Returns for SDK6 ARD AppLib System API **AppLibSysVout_GetHDMIFrameRate()**.

Example:

None

See Also:

None

15 USB

15.1 USB: Overview

This chapter provides information regarding the Ambarella AppLib USB utility.

15.2 USB: List of Functions

- (Section 15.2.1) [ApplibUSB_Custom_SetDevInfo](#)
- (Section 15.2.2) [ApplibUSB_Init](#)
- (Section 15.2.3) [ApplibUSB_InitJack](#)
- (Section 15.2.4) [ApplibUsbAmage_Start](#)
- (Section 15.2.5) [ApplibUsbMsc_DoMount](#)
- (Section 15.2.6) [ApplibUsbMsc_DoMountInit](#)
- (Section 15.2.7) [ApplibUsbMsc_DoUnMount](#)
- (Section 15.2.8) [ApplibUsbMsc_MountInit](#)
- (Section 15.2.9) [ApplibUsbMsc_Start](#)

15.2.1 ApplibUSB_Custom_SetDevInfo

API Syntax:

UINT32 ApplibUSB_Custom_SetDevInfo (AMBA_USB_CLASS_e class)

Function Description:

- This function is used to initialize the USB custom device information.

Parameters:

Type	Parameter	Description
AMBA_USB_CLASS_e	class	USB class AMBA_USB_CLASS_NONE: NONE AMBA_USB_CLASS_MSC: Mass storage class AMBA_USB_CLASS_MTP: MTP class AMBA_USB_CLASS_PICT: Pictbridge class AMBA_USB_CLASS_CUSTOM: Customer class AMBA_USB_CLASS_STREAM: Stream class

Table 15-1. Parameters for SDK6 ARD AppLib USB API **ApplibUSB_Custom_SetDevInfo()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-2. Returns for SDK6 ARD AppLib USB API **ApplibUSB_Custom_SetDevInfo()**.

Example:

Please refer to Unit Test document.

See Also:

15.2.2 ApplibUSB_Init

API Syntax:

INT32 ApplibUSB_Init (void)

Function Description:

- This function is used to initialize the USB module.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-3. Returns for SDK6 ARD AppLib USB API **ApplibUSB_Init** ().

Example:

Please refer to Unit Test document.

See Also:

15.2.3 ApplibUSB_InitJack

API Syntax:

Int ApplibUSB_InitJack (void)

Function Description:

- This function is used to initialize the USB jack.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-4. Returns for SDK6 ARD AppLib USB API **ApplibUSB_InitJack** ().

Example:

Please refer to Unit Test document.

See Also:

15.2.4 ApplibUsbAmaGe_Start

API Syntax:

INT32 ApplibUsbAmaGe_Start (void)

Function Description:

- This function is used to initialize the USB AmaGe module.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-5. Returns for SDK6 ARD AppLib USB API **ApplibUsbAmaGe_Start** ().

Example:

Please refer to Unit Test document.

See Also:

15.2.5 ApplibUsbMsc_DoMount

API Syntax:

INT32 ApplibUsbMsc_DoMount (UINT32 slot)

Function Description:

- USB MSC mount drive.

Parameters:

Type	Parameter	Description
UINT32	slot	Slot

Table 15-6. Parameters for SDK6 ARD AppLib USB API **ApplibUsbMsc_DoMount()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-7. Returns for SDK6 ARD AppLib USB API **ApplibUsbMsc_DoMount()**.

Example:

Please refer to Unit Test document.

See Also:

15.2.6 ApplibUsbMsc_DoMountInit

API Syntax:

Int ApplibUsbMsc_DoMountInit (void)

Function Description:

- This function is used to initialize the USB MSC DoMount.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-8. Returns for SDK6 ARD AppLib USB API **ApplibUsbMsc_DoMountInit ()**.

Example:

Please refer to Unit Test document.

See Also:

15.2.7 ApplibUsbMsc_DoUnMount

API Syntax:

INT32 ApplibUsbMsc_DoUnMount (UINT32 slot)

Function Description:

- USB MSC un-mount drive.

Parameters:

Type	Parameter	Description
UINT32	slot	Slot

Table 15-9. Parameters for SDK6 ARD AppLib USB API **ApplibUsbMsc_DoUnMount()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-10. Returns for SDK6 ARD AppLib USB API **ApplibUsbMsc_DoUnMount()**.

Example:

Please refer to Unit Test document.

See Also:

15.2.8 ApplibUsbMsc_MountInit

API Syntax:

INT32 ApplibUsbMsc_MountInit (void)

Function Description:

- This function is used to initialize the USB MSC mount.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-11. Returns for SDK6 ARD AppLib USB API **ApplibUsbMsc_MountInit** ().

Example:

Please refer to Unit Test document.

See Also:

15.2.9 ApplibUsbMsc_Start

API Syntax:

INT32 ApplibUsbMsc_Start (void)

Function Description:

- This function is used to start the USB MSC.

Parameters:

None

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 15-12. Returns for SDK6 ARD AppLib USB API **ApplibUsbMsc_Start** ().

Example:

Please refer to Unit Test document.

See Also:

16 Utility

16.1 Utility: Overview

This chapter provides information regarding the Ambarella software scalar utility.

16.2 Utility: List of Functions

- [\(Section 16.2.1\) AppLibUtilityScalar_16Bit_Normal](#)
- [\(Section 16.2.2\) AppLibUtilityScalar_16Bit_Rotate](#)
- [\(Section 16.2.3\) AppLibUtilityScalar_32Bit_Normal](#)
- [\(Section 16.2.4\) AppLibUtilityScalar_32Bit_Rotate](#)
- [\(Section 16.2.5\) AppLibUtilityScalar_8Bit_Normal](#)
- [\(Section 16.2.6\) AppLibUtilityScalar_8Bit_Rotate](#)
- [\(Section 16.2.7\) AppLibUtilitySWScalar_ExeScalar](#)
- [\(Section 16.2.8\) AppLibUtilitySWScalar_Flow_IndexSelector](#)
- [\(Section 16.2.9\) AppLibUtilitySWScalar_Flow_SetMappingInfo](#)

16.2.1 AppLibUtilityScalar_16Bit_Normal

API Syntax:

Int AppLibUtilityScalar_16Bit_Normal (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info)

Function Description:

- Software scalar for the normal use case.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2

Table 16-1. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_16Bit_Normal()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-2. Returns for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_16Bit_Normal()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.1.1 AppLibUtilityScalar_16Bit_Normal > APPLIB_SW_SCALAR_s

Type	Field	Description
UINT32	SrcBufferAddress	Source buffer address
int	SrcBufferPitch	Source buffer pitch
int	SrcBufferWidth	Source buffer width
int	SrcBufferHeight	Source buffer height
int	SrcPositionX	Source x-position
int	SrcPositionY	Source y-position
int	SrcWidth	Source width
int	SrcHeight	Source height
UINT32	DstBufferAddress	Destination buffer address
int	DstBufferPitch	Destination buffer pitch
int	DstBufferWidth	Destination buffer width
int	DstBufferHeight	Destination buffer height
int	DstPositionX	Destination x-position
int	DstPositionY	Destination y-position
int	DstWidth	Destination width
int	DstHeight	Destination height
int	Type	Type
int	TransColorEn	Trans color enable
UINT32	TransColor	Trans color
int	RegardDstValue	Regard destination value

Table 16-3. Definition of **APPLIB_SW_SCALAR_s** for Utility API **AppLibUtilityScalar_16Bit_Normal()**.

16.2.1.2 AppLibUtilityScalar_16Bit_Normal > APPLIB_SW_SCALAR_MAP_s

Type	Field	Description
UINT32	MappingX	Mapping X
UINT32	ToX	To X
UINT32	MappingY	Mapping Y
UINT32	ToY	To Y
UINT8	MappingWidth [MAX_SCALAR_WIDTH]	Mapping width
UINT8	MappingHeight [MAX_SCALAR_HEIGHT]	Mapping height
int	TransColorEn	Trans color enable
int	TransColor	Trans color

Table 16-4. Definition of **APPLIB_SW_SCALAR_MAP_s** for Utility API **AppLibUtilityScalar_16Bit_Normal()**.

16.2.2 AppLibUtilityScalar_16Bit_Rotate

API Syntax:

Int AppLibUtilityScalar_16Bit_Rotate (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info, int angle)

Function Description:

- Software scalar for the normal use case with rotation.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2
int	angle	Angle

Table 16-5. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_16Bit_Rotate()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-6. Returns for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_16Bit_Rotate()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.3 AppLibUtilityScalar_32Bit_Normal

API Syntax:

Int AppLibUtilityScalar_32Bit_Normal (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info)

Function Description:

- Software scalar for the normal use case.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2

Table 16-7. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_32Bit_Normal()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-8. Returns for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_32Bit_Normal()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.4 AppLibUtilityScalar_32Bit_Rotate

API Syntax:

Int AppLibUtilityScalar_32Bit_Rotate (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info, int angle)

Function Description:

- Software scalar for the normal use case with rotation.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2
int	angle	Angle

Table 16-9. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_32Bit_Rotate()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-10. Returns for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_32Bit_Rotate()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.5 AppLibUtilityScalar_8Bit_Normal

API Syntax:

Int AppLibUtilityScalar_8Bit_Normal (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info)

Function Description:

- Software scalar for the normal use case.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2

Table 16-11. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_8Bit_Normal()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-12. Returns for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_8Bit_Normal()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.6 AppLibUtilityScalar_8Bit_Rotate

API Syntax:

Int AppLibUtilityScalar_8Bit_Rotate (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info, int angle)

Function Description:

- Software scalar for the normal use case with rotation.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2
int	angle	Angle

Table 16-13. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_8Bit_Rotate()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-14. Returns for SDK6 ARD AppLib Utility API **AppLibUtilityScalar_8Bit_Rotate()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.7 AppLibUtilitySWScalar_ExeScalar

API Syntax:

Int AppLibUtilitySWScalar_ExeScalar (APPLIB_SW_SCALAR_s * param)

Function Description:

- Software scalar entry point.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	param	Section 16.2.1.1

Table 16-15. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilitySWScalar_ExeScalar()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-16. Returns for SDK6 ARD AppLib Utility API **AppLibUtilitySWScalar_ExeScalar()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.8 AppLibUtilitySWScalar_Flow_IndexSelector

API Syntax:

Int AppLibUtilitySWScalar_Flow_IndexSelector (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info, UINT8 exchange)

Function Description:

- Software scalar index selector.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2
UINT8	exchange	Exchange

Table 16-17. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilitySWScalar_Flow_IndexSelector()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-18. Returns for SDK6 ARD AppLib Utility API **AppLibUtilitySWScalar_Flow_IndexSelector()**.

Example:

Please refer to Unit Test document.

See Also:

16.2.9 AppLibUtilitySWScalar_Flow_SetMappingInfo

API Syntax:

Int AppLibUtilitySWScalar_Flow_SetMappingInfo (APPLIB_SW_SCALAR_s * info, p_APPLIB_SW_SCALAR_MAP_s map_info)

Function Description:

- Software scalar set mapping information.

Parameters:

Type	Parameter	Description
APPLIB_SW_SCALAR_s *	info	Section 16.2.1.1
p_APPLIB_SW_SCALAR_MAP_s	map_info	Section 16.2.1.2

Table 16-19. Parameters for SDK6 ARD AppLib Utility API **AppLibUtilitySWScalar_Flow_SetMappingInfo()**.

Returns:

Return	Description
0	Success
All other	Refer to errors defined in Chapter 17 .

Table 16-20. Returns for SDK6 ARD AppLib Utility API **AppLibUtilitySWScalar_Flow_SetMappingInfo()**.

Example:

Please refer to Unit Test document.

See Also:

17 System Errors

17.1 System Errors: Overview

This chapter lists the possible return values (**AMP**) when errors are encountered.

17.2 System Errors: Error Code List

- AMP_ERROR_GENERAL_ERROR
- AMP_ERROR_INCORRECT_PARAM_STRUCTURE
- AMP_INCORRECT_PARAM_VALUE_RANGE
- AMP_ERROR_OUT_OF_MEMORY
- AMP_ERROR_RESOURCE_INVALID
- AMP_ERROR_FIFO_TYPE_MISMATCH
- AMP_ERROR_FIFO_LOCKED
- AMP_ERROR_FIFO_EMPTY
- AMP_ERROR_FIFO_FULL
- AMP_ERROR_ILLEGAL_OPERATION
- AMP_ERROR_ILLEGAL_CONTAIN_SOURCE
- AMP_ERROR_IO_ERROR

17.2.1 AMP_ERROR_GENERAL_ERROR

Error Value:

AMP_ERROE_GENERAL_ERROR

Error Description:

- General error.

17.2.2 AMP_ERROR_INCORRECT_PARAM_STRUCTURE

Error Value:

AMP_ERROR_INCORRECT_PARAM_STRUCTURE

Error Description:

- Incorrect structure used.

17.2.3 AMP_INCORRECT_PARAM_VALUE_RANGE

Error Value:

AMP_INCORRECT_PARAM_VALUE_RANGE

Error Description:

- Incorrect value range.

17.2.4 AMP_ERROR_OUT_OF_MEMORY

Error Value:

AMP_ERROR_OUT_OF_MEMORY

Error Description:

- Out of memory.

17.2.5 AMP_ERROR_RESOURCE_INVALID

Error Value:

AMP_ERROR_RESOURCE_INVALID

Error Description:

- Resource for the operation.

17.2.6 AMP_ERROR_FIFO_TYPE_MISMATCH

Error Value:

AMP_ERROR_FIFO_TYPE_MISMATCH

Error Description:

- Incorrect FIFO type.

17.2.7 AMP_ERROR_FIFO_LOCKED

Error Value:

AMP_ERROR_FIFO_LOCKED

Error Description:

- Try to read/write a locked FIFO.

17.2.8 AMP_ERROR_FIFO_EMPTY

Error Value:

AMP_ERROR_FIFO_EMPTY

Error Description:

- No entry in the FIFO.

17.2.9 AMP_ERROR_FIFO_FULL

Error Value:

AMP_ERROR_FULL

Error Description:

- FIFO full.

17.2.10 AMP_ERROR_ILLEGAL_OPERATION

Error Value:

AMP_ERROR_ILLEGAL_OPERATION

Error Description:

- Illegal operation.

17.2.11 AMP_ERROR_ILLEGAL_CONTAINER_SOURCE

Error Value:

AMP_ERROR_ILLEGAL_CONTAINER_SOURCE

Error Description:

- Illegal container source.

17.2.12 AMP_ERROR_IO_ERROR

Error Value:

AMP_ERROR_IO_ERROR

Error Description:

- Stream IO error.

Appendix 1 Additional Resources

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Appendix 3 Revision History

NOTE: Page numbers for previous drafts may differ from page numbers in the current version.

Version	Date	Comments
1.0	20 November 2014	Preliminary release
1.1	10 December 2014	Updated Chapters 8 and 11
1.2	12 December 2014	Updated Chapters 8, 12, 13, and 14
1.3	16 December 2014	Updated Chapters 2, 3, 4, 5, 6, 7, and 8
1.4	18 December 2014	Updated Chapters 15 and 16

Table A3-1. Revision History.