NetSDK Programming Manual

Version 1.0.0.1 (Built in 20180223)

2018-02-23

Foreword

Thank you for using our devices. We are going to provide best services for you. This manual may contain spelling grammar and punctuation errors. We will update this manual regularly.

Catalogue

1. Brief introduction

1.1 Summary

Thank you for using the NetSDK Programming Manual from our company, as we known, the NetSDK is development kit used by software developers for exploiting online surveillance apps from our company's NVR (Network Video Recorder). This document describes the details of each functions, ports and invoking relationships as well as examples based on different functions in this SDK.

Files included in this SDK.

	NetSDK	Head file
Network Library	NetSDK.lib	Lib file
	NetSDK.dll	Interface library
Auxiliary Library	DllDeinterlace.dll	Decoding auxiliary library
	H264Play.dll	Decoding auxiliary library
	Hi_H264dec_w.dll	Decoding auxiliary library

1.2 Applicability

■ Support NVR surveillance, playback, alarming, remote configuration, log query etc.

■ Support TCP transport mode, and could connect 10 TCP simultaneously in front-end.

■ Develop server programs such as stream media transmission, playback, alarming, through SDK callback interface.

■ Preview images through multiple resolutions in client side, QCIF, CIF, 2CIF, HalfD1, D1, VGA (640*480) are the supported definitions.

■ When SDK is operating video playback or download, the same login ID cannot run playback as well as download in the same channel at the same time.

■ The performance of SDK is closely related with device running condition and CPU capability of computer. Theoretically, it can support 2000 registered users at the same time, internet preview as well as playback in the 2000

channels and upload alarm in 2000 channels. It can also support 300 channels in graphical presentation.

The principle of design

1.3 The instruction of programming

■ **Initialization and clearance**

1. When use Internet Client-side software packages, it should initialize system by calling H264 DVR Init(), and call H264 DVR Cleanup() to release resources been taken as quit.

2. The most functions invoked should be put after H264 DVR Init() and before H264 DVR Cleanup(), but the H264 DVR GetLastError could be called at any time.

■ **Login and logout**

Before visiting front-end devices, Users must invoke H264 DVR Login() function to login devices. This handle just like a conversation channel, and then users can visit front-end equipment by the handle. If you want to quit this conversation, the handle can be ended in front-end devices with H264 DVR Logout() function to expire this conversation channel. Finally, connection and login are synchronous.

■ **Heartbeat function**

This SDK provides auto heartbeat function(20 second per heartbeat), when device was cutoff, it could callback client-side in time.

■ **Synchronization and asynchronization**

Asynchronization is achieved by setting callback functions, and network data could be conveyed to application programs with callback functions. Some asynchronization returns to the required handle after setting, when requests finished, it will provide required handle to SDK to logout corresponding resources.

■ **Callback functions**

Generally, it has *dwUser* parameter on its own, users can define what data they need. Usually, this parameter could be used to introduce class object pointer to callback

achieved conveniently in class, and both callback applications could adapt this method.

1.4 Typical calling sequence

1.4.1 Basic flow chart of calling SDK
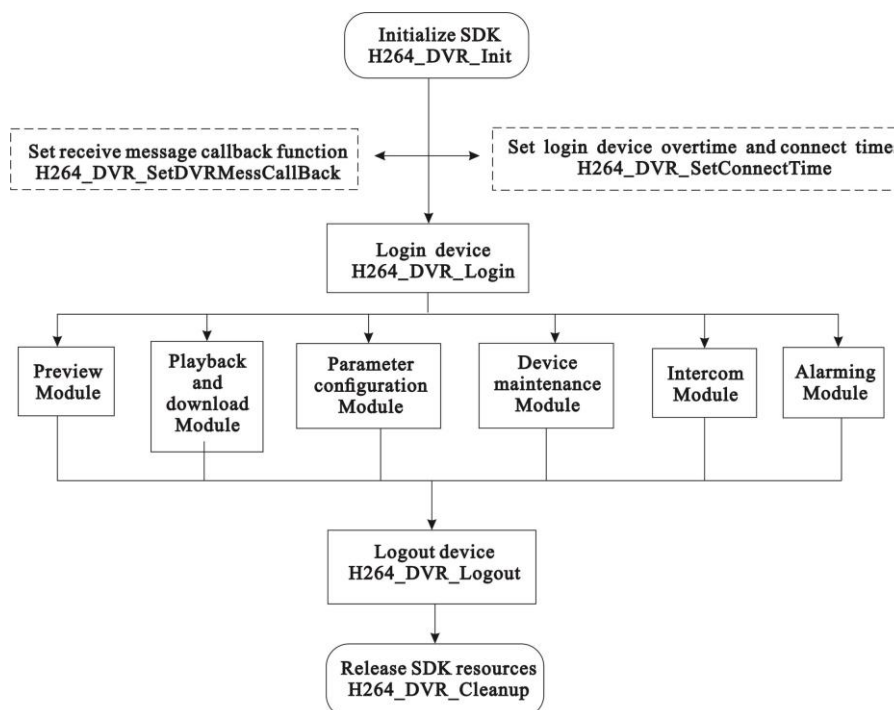
The flow charts in dashed boxes are optional, and they will not influence the functions of other charts and modules. According to difference of function achievement, it can be divided into 10 modules. If wanted to achieve each module's function, it must have four steps: initialized SDK, registered devices, logout devices and release SDK resources.

- Initialize SDK (H264 DVR Init()): Initialize the whole NetSDK system, pre-allocate the memory and so on.

- Set connection timeout (H264 DVR SetConnectTime): This part is optional, and is used to set network connection timeout of SDK, users can set values according to their needs. System will adopt the default value if not calling this function.

- Set callback function of receiving abnormal message (H264 DVR SetDVRMess CallBack): this port is used to receive abnormal message from alarming module. Users could set the callback function after initializing the SDK.

- User login devices (H264 DVR Login): Used to achieve login function, after login success, backward users' ID act as unique identification for other functional operations.

- Preview module: Pick up real time code stream from front-end devices, decode and display, play control and other functions. At the same time, support soft decoding as well as with decoding card to decode. Detailed process is shown in Real-time preview module.

- Playback and download module: Remote playback or download video files by time and filename, decode or storage could enable in the future. Specific flowchart can be seen from Playback and download module.

- Parameter configuration module: Set and obtain parameters from front-end devices, including parameters of devices, network, channels, ports, alarming, abnormal and users configuration. Detailed information can be seen from Parameter configuration module.

- Remote device maintenance module: Shut down, reboot and remote upgrade and so on maintenance work can be fulfilled. See the detailed process from Device maintenance module.

- Voice intercom transmit module: Voice data intercom and acquisition with front-end devices, audio coding format can be customized. Details refer to Voice intercom module.

- Alarming module: Deal with several alarming signals uploaded from devices. Alarming can be divided into two patterns, disarming and monitoring. In the condition of adopting the pattern of monitoring as well as no need of users' ID, alarming module can skip "user login" step. Details refer to Alarming module.

- Transparent channel module: The transparent channel is the technology of sending IP data to serial port after analyzing. SDK provides 485 and 232 serial port types separately. Details refer to Transparent serial port channel module.

1.4.2 Related interface function of every module

A. Initialization

SDK initialization	H264_DVR_Init ()

B. SDK functional information acquisition

Set message callback	H264_DVR_SetDVRMessCallBack ()

C. Login devices

Login devices	H264_DVR_Login ()
Push channel of alarming message	H264_DVR_SetupAlarmChan ()

D. Real-time preview

Turn on the monitoring channel	H264_DVR_RealPlay ()
	H264_DVR_StopRealPlay ()
Callback and save of monitoring data	H264_DVR_SetRealDataCallBack ()

E. Device parameter configuration and control

Parameter configuration	H264_DVR_GetDevConfig ()
	H264_DVR_SetDevConfig ()
Find log	H264_DVR_FindDVRLog ()
PTZ control	H264_DVR_PTZControl ()
Transparent serial port control	H264_DVR_OpenTransComChannel ()
	H264_DVR_CloseTransComChannel ()

F. Playback/download channel

Find video	H264_DVR_FindFile ()
	H264_DVR_FindFileByTime()
Playback and control	H264_DVR_PlayBackByName()
	H264_DVR_PlayBackByTime()
	H264_DVR_PlayBackControl()
	H264_DVR_StopPlayBack()
Download	H264_DVR_GetFileByName ()
	H264_DVR_GetFileByTime()

H264_DVR_GetDownloadPos()
H264_DVR_StopGetFile ()

G. Remote control

Remote upgrade	H264_DVR_Upgrade()
	H264_DVR_GetUpgradeState()
	H264_DVR_CloseUpgradeHandle()
Reboot/Clear log	H264_DVR_ControlDVR ()

H. Logout device

Stop pushing alarming message	H264_DVR_CloseAlarmChan ()
Logout device	H264_DVR_Logout ()

I. Release SDK resources

Quit SDK	H264_DVR_Cleanup ()

1.4.3 Flow chart of real-time preview module
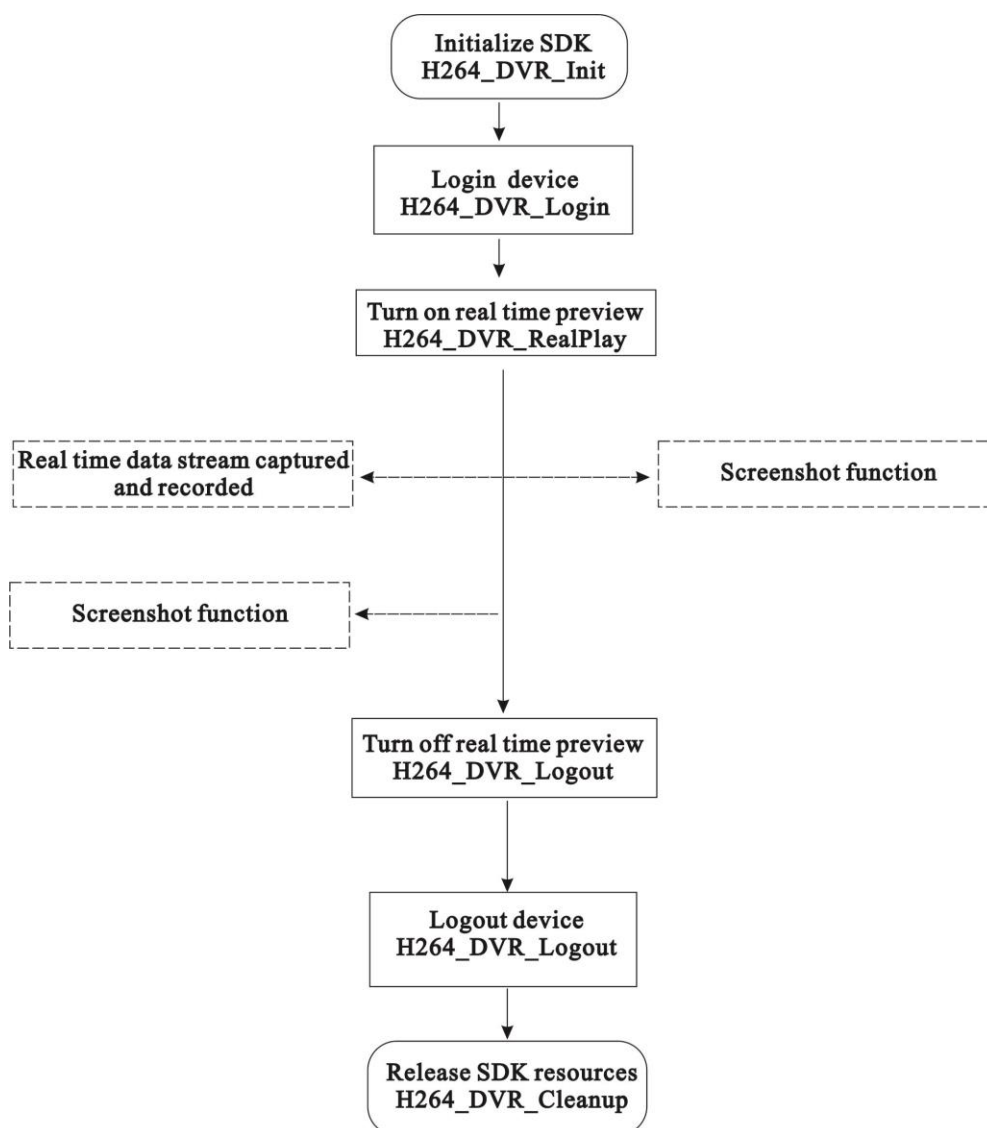
Modules shown in above picture in dashed boxes are related with preview module, and can be invoked after initiating preview. These modules are parallel to each other to complete the corresponding functions.

Corresponding functions:

- Real-time data capturing mainly enable real-time callback and local video functions. Related ports include: H264_DVR_SetRealDataCallBack, H264_DVR_DelRealDataCallBack, H264_DVR_ StartDVRRecord, H264_DVR_StopDVRRecord and so on。

- Screenshot function mainly enables capture current decoded pictures. Corrected ports include: H264_DVR_CatchPic (Caution: this screenshot port is not able to

conduct screenshot until the video configuration of device supports this function.) or call H264_Play_ CatchPic on screenshot port from PlaySDK（Note：only apply to preview）.

● PTZ control module mainly put control function on PTZ control, on the condition of turning on preview. Related ports include: H264_DVR_PTZControl etc.

1.4.4 Playback and download module
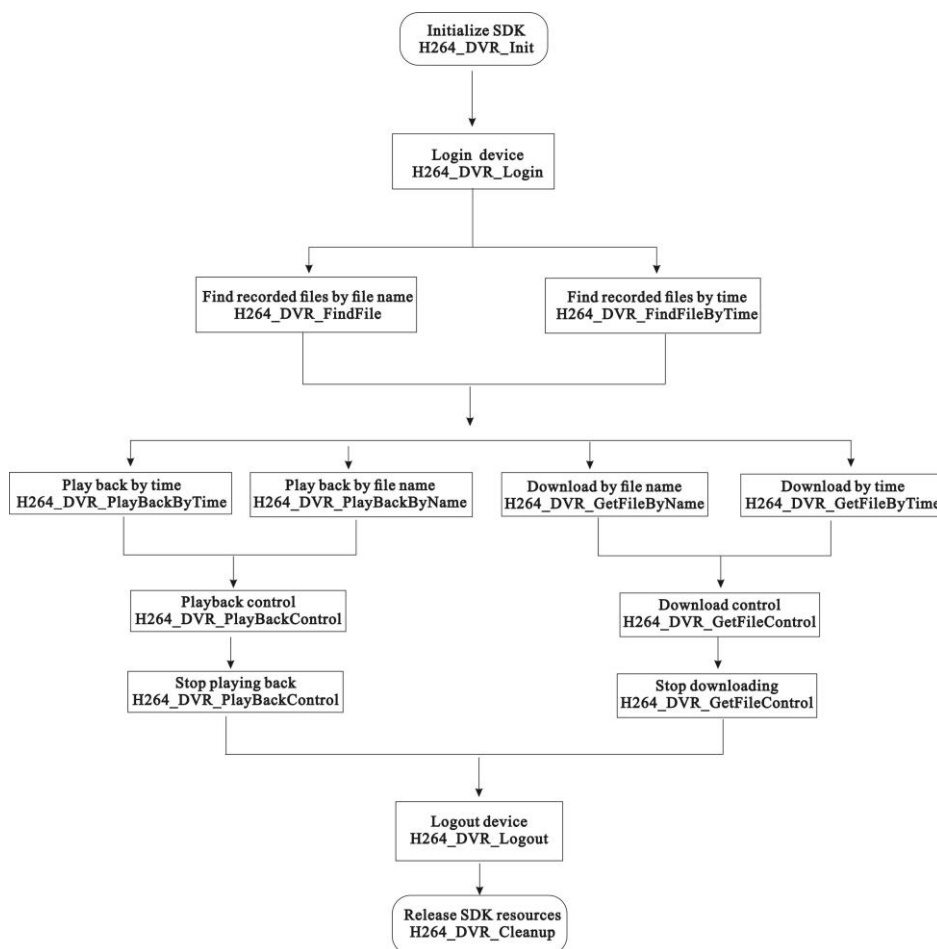
● Playback or download according to files need to acquire file information by function of searching video files (related ports include H264_DVR_FindFile、 H264_DVR_ FindFileByTime), and then start playback or download refers to obtained file names (related ports include H264_DVR_PlayBackByName、 H264_DVR_GetFileBy Name). After calling playback or download port, it needs to call control port (H264_DVR_PlayBackControl、H264_DVR_GetFileControl).

● Playback or download files according to time, users do not need to call related ports for finding video files, and only need to set the time of start and finish in the

port, and call playback or download port (related ports include H264_DVR_PlayBackByTime、 H264_DVR_GetFileByTime). Control port can be called if other operations needed to be done (H264_DVR_PlayBackControl、 H264_DVR_GetFileControl).

1.4.5 Parameter configuration module
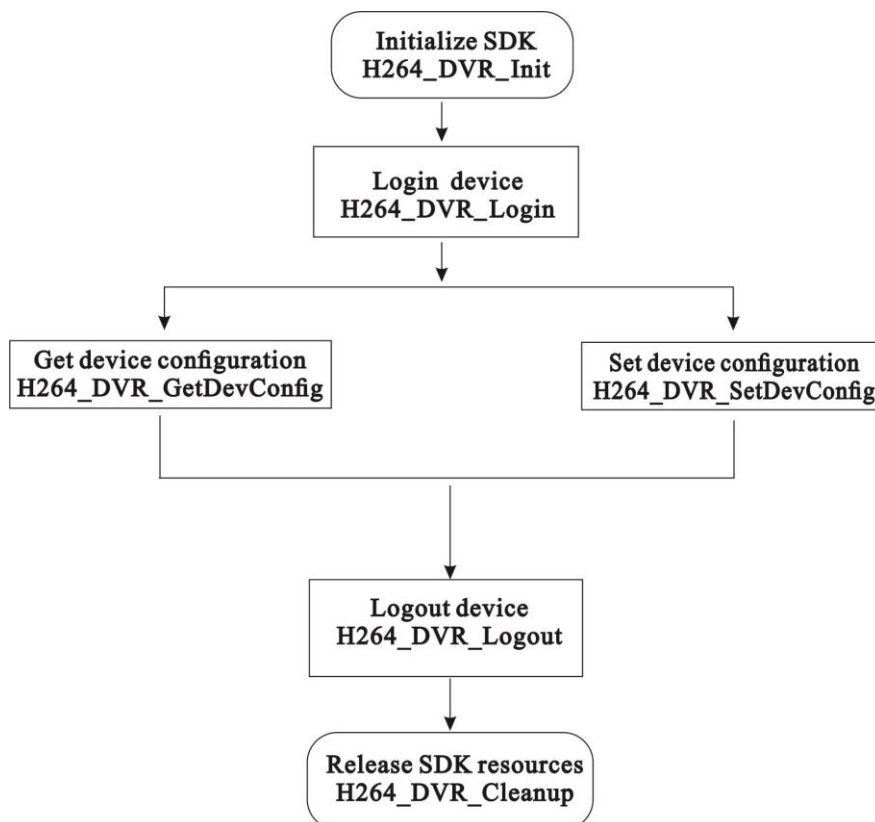
● In order to fulfill parameter configuration, SDK initialization and user registration must be done, and set the ID returned by the user registration interface as the first parameter of configuration interface. It is advised that users should call the port to get parameters each time before setting some kinds of parameters (H264_DVR_ GetDevConfig) to obtain whole parameter structure. Modify parameters need to be altered, and choose them as the input parameters of setting parameter interface. Finally, call the settings parameter interface (H264_DVR_SetDevConfig) , and if it is returned success, then sets successfully.

1.4.6 Device maintenance module
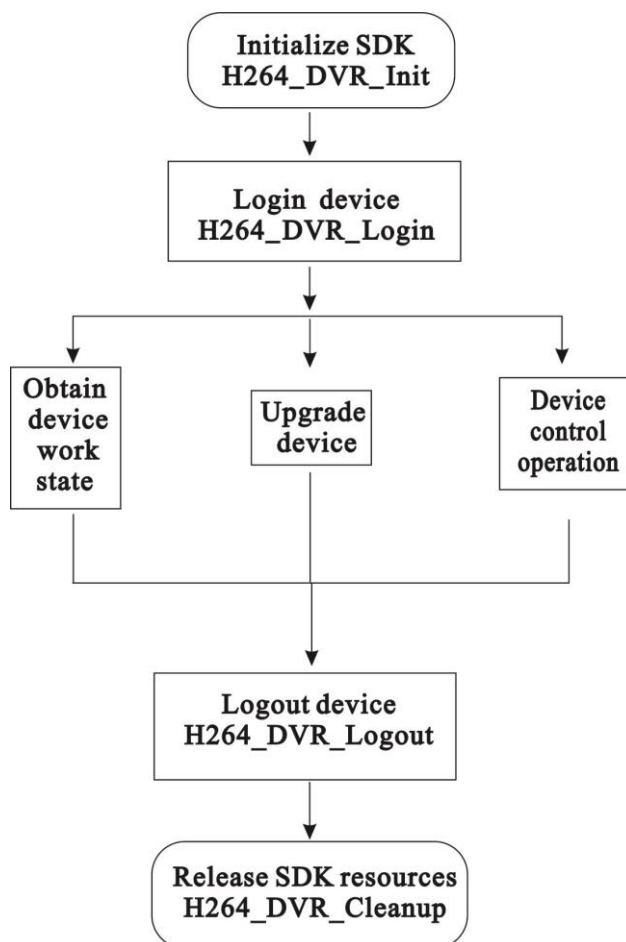
Some functions such as obtain device working condition, remote and local upgrades, reboot devices are included in remote device module.

● Acquire device operation condition: acquire device current channel condition, alarming input and output condition and so on. Related ports include H264_DVR_Get DVRWorkState etc.

● Device local and remote upgrades: upgrade devices, obtain current upgrade schedule and conditions. Related ports include H264_DVR_Upgrade 、 H264_DVR_Upgrade_ Cloud etc.

● Device control operation: reboot device, cleanup logs and logout functions etc. Related ports include H264_DVR_ControlDVR etc.

1.4.7 Voice intercom module
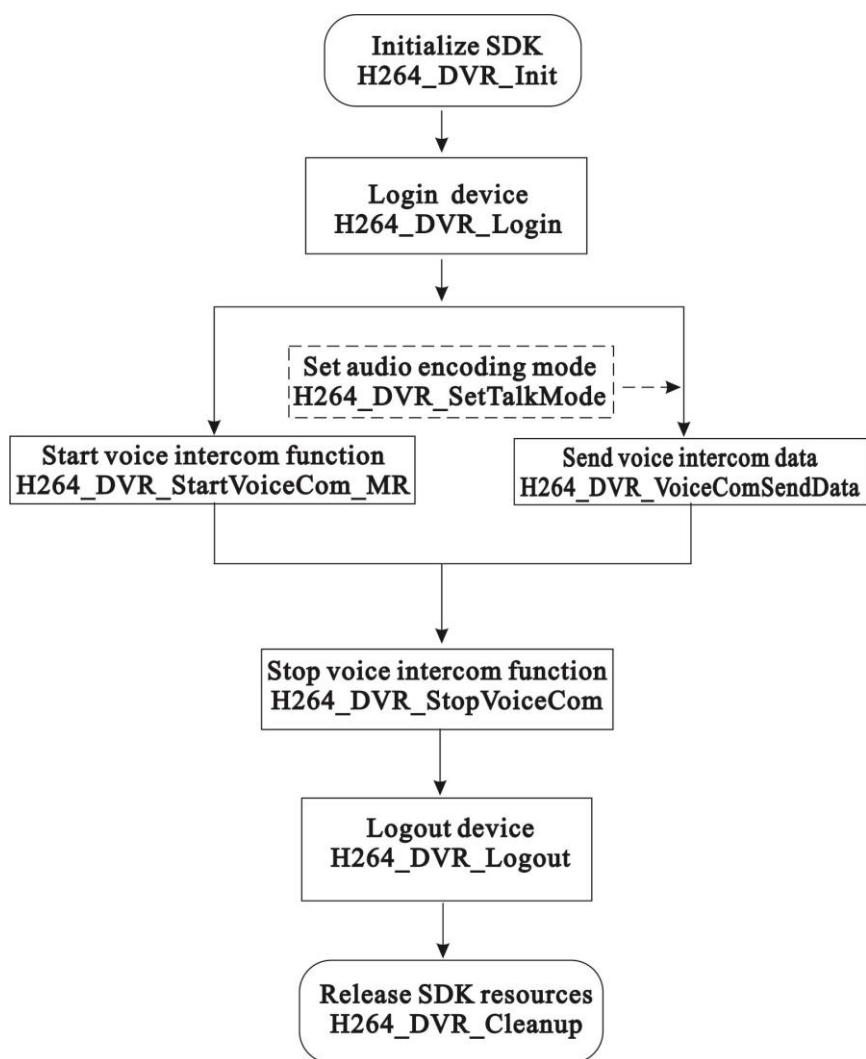
- Enable audio sending and receiving between PC and devices through voice intercom functions. After login device successfully, call H264_DVR_StartVoice Com_MR and complete interface, while users can acquire data from current devices through set callback function in this port (select the post-callback data as needed).

- Sending intercom data to devices, the encoding format can be set, the default is G711A. Related ports include H264_DVR_SetTalkMode、H264_DVR_Voice ComSendData.

1.4.8 Alarming module

1.4.8.1 Protective alarm mode
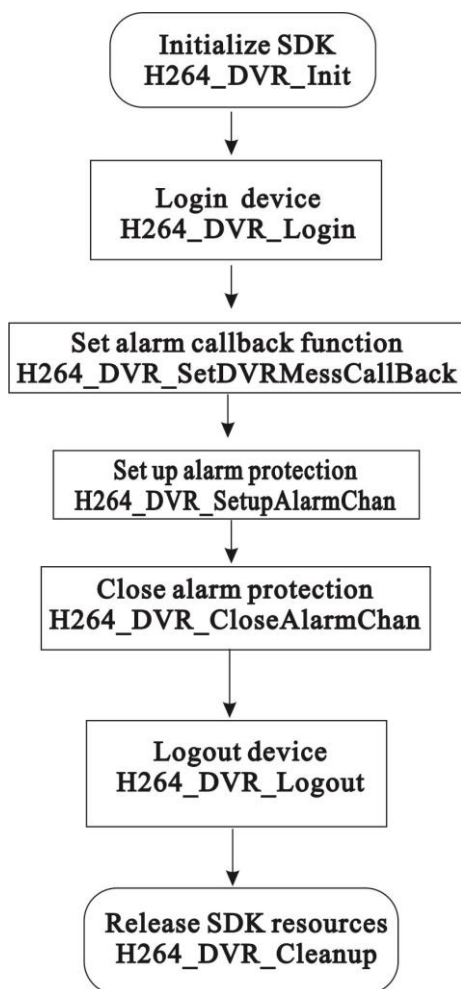
- Type of alarming: SDK initiatively connects to the device and initiates the alarm uploading command, which will be sent to SDK immediately when the device alarms.

- From above flow chart of alarming (protection) module, we can see that protection method needs users to register firstly (H264_DVR_Login). And then, set alarm callback function (H264_DVR_SetDVRMessCallBack), and also needs to set protection after calling successfully (H264_DVR_SetupAlarmChan). After the whole alarming processes uploaded successfully, it is necessary to call the disarming interface and other operations.

1.4.8.2 Monitoring alarm mode
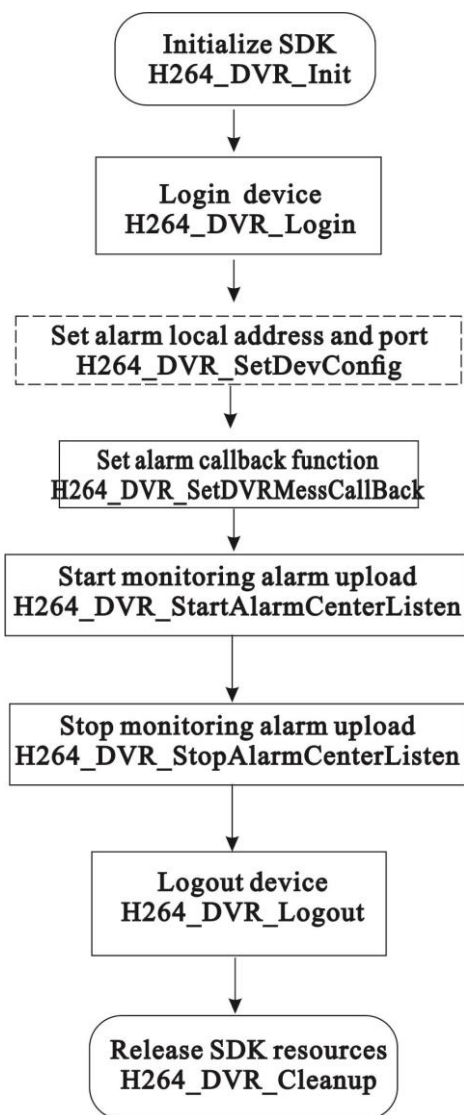
- Alarming mode: the SDK does not connect devices automatically, but only monitor the alarming message uploaded by the receiving devices on the set port.

- This process needs to configure alarming local address (PC address) connected with devices and alarming host port (PC monitoring port) in remote, and the alarming host is monitoring in this port on alarming message auto-uploaded by receiving devices. If the configuration of alarming host address and port has been finished, then the user registration as well as alarming host address and port configuration in dashed boxes in the flow chart of monitoring module can be omitted, but if no configuration in advance, we must call parameters configuration interface (H264_DVR_SetDevConfig) to deploy the device network parameters. After all the above parameters needed to be configured are set, the H264_DVR_StartAlarmCenterListen function is called to open the SDK

listening port and prepare to receive the alarming message uploaded by the devices.

1.4.9 Transparent serial channel module
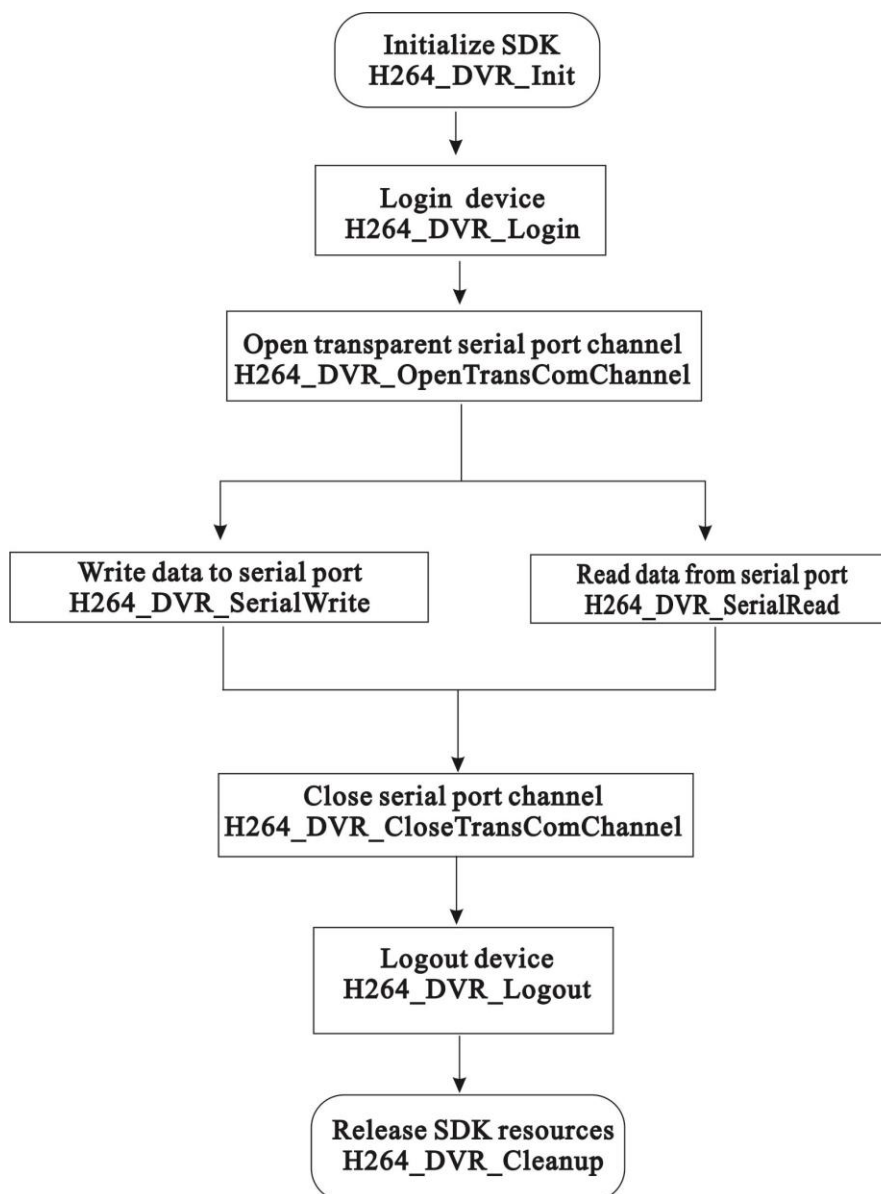
- SDK provides serial port types, such as 485 and 232. Call the H264_DVR_OpenTrans ComChannel to build transparent channels, write data to the serial port based on H264_DVR_SerialWrite function and read data from the serial port through H264_DVR_SerialRead function. After finishing all of these processes, you also need to disconnect transparent channels and so on (H264_DVR_CloseTransComChannel).

2 Definition of data structure

2.1 System time structure　　SDK_SYSTEM_TIME

typedef struct SDK_SYSTEM_TIME

{

 int　year;　　　　///< Year。

 int　month;　　　///< Month，January = 1, February = 2, and so on.

 int　day;　　　　///< Day。

 int　wday;　　　///< Weekday，Sunday = 0, Monday = 1, and so on

 int　hour;　　///< Hour。

 int　minute;　　///< Minute。

 int　second;　　///< Second。

 int　isdst;　　　///< Summer time identifer。

 }SDK_SYSTEM_TIME;

2.2 Related structures of video files

2.2.1 Query condition structures　　H264_DVR_FINDINFO

typedef struct

{

 int nChannelN0;　　　　//Channel number

 int nFileType;　　　　　//File type, see SDK_File_Type

 H264_DVR_TIME startTime;　//Start time

 H264_DVR_TIME endTime;　//End time

 char szCard[32];　　　　//Card number

 void *hWnd;　　　　　//Output window handle（If it was NULL, Network

data is processed separately from decoding player.）

}H264_DVR_FINDINFO;

2.2.2 Returned video information structures　　H264_DVR_FILE_DATA

typedef struct

{

 int ch;　　　　　　　　　//Channel No.

```
        int size;                        //Size of file
        char sFileName[108];            ///< File name
        SDK_SYSTEM_TIME stBeginTime;  ///< File start time
        SDK_SYSTEM_TIME stEndTime;        ///< File end time
        void *hWnd;                    // Output window handle（If it was NULL, Network
                                    data is processed separately from decoding player.）
    }H264_DVR_FILE_DATA;
```

2.2.3 Query the structures by the time period   SDK_SearchByTime

```
typedef struct SDK_SearchByTime
{
    int nHighChannel;            ///< 33~64 video channel masked code

    int nLowChannel;                ///< 1~32 video channel masked code
    int nFileType;                ///< File type, see SDK_File_Type
    SDK_SYSTEM_TIME stBeginTime;///< Query begin time
    SDK_SYSTEM_TIME stEndTime;    ///< Query end time
    int     iSync;                    ///< Whether needs to be synchronized
unsigned int nHighStreamType;///< 33~64 video code stream type, the binary bit
represents main code stream and auxiliary code stream
    unsigned int nLowStreamType;///< 1~32video code stream type, the binary bit
represents main code stream and auxiliary code stream
    }SDK_SearchByTime;
```

2.2.4 Related structures of the query results   SDK_SearchByTimeResult

```
//Video information for each channel
typedef struct SDK_SearchByTimeInfo
{
    int iChannel;                ///< Video channel number
        ///< Using bytes represent minutes of the day in video recording
    ///< 0000: no video 0001:F_COMMON 0002:F_ALERT 0003:F_DYNAMIC
0004:F_CARD 0005:F_HAND
    unsigned char cRecordBitMap[720];
}SDK_SearchByTimeInfo;
```

typedef struct SDK_SearchByTimeResult

{

    int nInfoNum;   ///< Video in channel records the number of information

SDK_SearchByTimeInfo ByTimeInfo[NET_MAX_CHANNUM];   ///< The information of recorded video in channel

}SDK_SearchByTimeResult;

2.3 Structure of configuration information   SDK_CONFIG _TYPE

Definition of the order of H264_DVR_GetDevConfig、H264_DVR_SetDevConfig

Definition of dwCommand	Functions	Related structures
E_SDK_CONFIG_USER	User information, includes permission list, users list and group list	USER_MANAGE_INFO
E_SDK_CONFIG_ADD_USER	Add user	USER_INFO
E_SDK_CONFIG_MODIFY_USER	Modify user	CONF_MODIFYUSER
E_SDK_CONFIG_DELETE_USER	Delete user	USER_INFO
E_SDK_CONFIG_ADD_GROUP	Add group	USER_GROUP_INFO
E_SDK_CONFIG_MODIFY_GROUP	Modify group	CONF_MODIFYGROUP
E_SDK_COFIG_DELETE_GROUP	Delete group	USER_GROUP_INFO
E_SDK_CONFIG_MODIFY_PSW	Modify password	CONF_MODIFY_PSW
E_SDK_CONFIG_ABILITY_SYSFUNC	Network capabilities	SDK_SystemFunction
E_SDK_CONFIG_ABILTY_ENCODE	First encode ability	CONFIG_EncodeAbility
E_SDK_CONFIG_ABILITY_PTZPRO	PTX protocol	SDK_PTZPROTOCOLFUNC
E_SDK_COMFIG_ABILITY_COMMPRO	Serial port protocol	SDK_COMMFUNC

E_SDK_CONFIG_ABIL ITY_MOTION_FUNC	Fast dynamic detection	SDK_MotionDetectFunct ion
E_SDK_CONFIG_ABIL ITY_BLIND_FUNC	Fast video block	SDK_BlindDetectFunctio n
E_SDK_CONFIG_ABIL ITY_DDNS_SERVER	DDNS service function	SDK_DDNSServiceFunc tion
E_SDK_CONFIG_ABIL ITY_TALK	Intercom decode type	SDK_DDNSServiceFunc tion
E_SDK_CONFIG_SYSI NFO	System information	H264_DVR_DEVICEIN FO
E_SDK_CONFIG_SYSN ORMAL	General configuration	SDK_CONFIG_NORMA L
E_SDK_CONFIG_SYSE NCODE	Encode configuration	SDK_EncodeConfigAll
E_SDK_CONFIG_SYSN ET	Network configuration	SDK_CONFIG_NET_C OMMON
E_SDK_CONFIG_PTZ	PTZ page	SDK_STR_PTZCONFIG _ALL
E_SDK_CONFIG_COM M	Serial port page	SDK_CommConfigAll
E_SDK_CONFIG_REC ORD	Video set interface	SDK_RECORDCONFIG
E_SDK_CONFIG_MOTI ON	Dynamic detection page	SDK_MOTIONCONFIG
E_SDK_CONFIG_SHEL TER	Video blocked	SDK_BLINDDETECTC ONFIG
E_SDK_CONFIG_VIDE O_LOSS	Video lost	SDK_VIDEOLOSSCON FIG
E_SDK_CONFIG_ALA RM_IN	Alarm input	SDK_ALARM_INPUTC ONFIG
E_SDK_CONFIG_ALA RM_OUT	Alarm output	SDK_AlarmOutConfigAl l
E_SDK_CONFIG_DISK _MANAGER	Disk management interface	SDK_StorageDeviceCont rol
E_SDK_CONFIG_OUT_ MODE	Out mode interface	SDK_VideoWidgetConfi gAll
E_SDK_CONFIG_CHA NNEL_NAME	Channel name	SDK_ChannelNameConf igAll
E_SDK_CONFIG_AUT O	Auto maintain configuration	SDK_AutoMaintainConfi g

E_SDK_CONFIG_DEFAULT	Renew default interface configuration	SDK_SetDefaultConfigTypes
E_SDK_CONFIG_DISK_INFO	Disk information	SDK_StorageDeviceInformationAll
E_SDK_CONFIG_LOG_INFO	Query log	SDK_LogList
E_SDK_CONFIG_NET_IPFILTER	Blacklist and whitelist configuration	SDK_NetIPFilterConfig
E_SDK_CONFIG_NET_DHCP	DHCP configuration	SDK_NetDHCPConfigAll
E_SDK_CONFIG_NET_DDNS	DDNS information	SDK_NetDDNSConfigALL
E_SDK_CONFIG_NET_EMAIL	EMAIL	SDK_NetEmailConfig
E_SDK_CONFIG_NET_MULTICAST	Multicast	SDK_NetMultiCastConfig
E_SDK_CONFIG_NET_NTP	NTP	SDK_NetNTPConfig
E_SDK_CONFIG_NET_PPPOE	PPOE	SDK_NetPPPoEConfig
E_SDK_CONFIG_NET_DNS	DNS	SDK_NetDNSConfig
E_SDK_CONFIG_NET_FTPSERVER	FTP	SDK_FtpServerConfig
E_SDK_CONFIG_SYS_TIME	System time	SDK_SYSTEM_TIME
E_SDK_CONFIG_ABILITY_LANG	Support languages	SDK_MultiLangFunction
E_SDK_CONFIG_COMBINEENCODE	Combined encode	SDK_CombineEncodeConfigAll
E_SDK_CONFIG_COMBINEENCODEMODE	Combined encode mode	SDK_CombEncodeModeAll
E_SDK_WORK_STATE	Workstate	SDK_DVR_WORKSTATE
E_SDK_ABILITY_LANGLIST	Actual supported language set	SDK_MultiLangFunction
E_SDK_CONFIG_NET_ARSP	ARSP	SDK_NetARSPConfigAll
E_SDK_CONFIG_SNAP_STORAGE	Snapshot set	SDK_SnapshotConfig

E_SDK_CONFIG_NET_3G	3G dial	SDK_Net3GConfig
E_SDK_CONFIG_NET_MOBILE	Mobile monitoring	SDK_NetMoblieConfig
E_SDK_CONFIG_UPGRADEINFO	Obtain upgrade information	SDK_UpgradeInfo
E_SDK_ABILITY_VSTD	Actual supported video standard	SDK_MultiVstd
E_SDK_CONFIG_NET_UPNP	UPUN set	SDK_NetUPNPConfig
E_SDK_CONFIG_NET_WIFI	WIFI	SDK_NetWifiConfig
E_SDK_CONFIG_NET_WIFI_AP_LIST	Searched WIFI list	SDK_NetWifiDeviceAll
E_SDK_CONFIG_SYSENCODE_SIMPLIIFY	Simplified encoding configuration	SDK_EncodeConfigAll_SIMPLIIFY
E_SDK_CONFIG_ALARM_CENTER	Alarming center	SDK_NetAlarmServerConfigAll
E_SDK_CONFIG_NET_ALARM	Network alarming	SDK_NETALARMCONFIG_ALL
E_SDK_CONFIG_NET_PHONEMSG	Short Message	SDK_NetShortMsgCfg
E_SDK_CONFIG_NET_PHONEMEDIAMSG	Multimedia message	SDK_NetMultimediaMsgCfg
E_SDK_CONFIG_NET_RTSP	RTSP	SDK_NetRTSPConfig
E_SDK_CONFIG_COMM485	Serial port 485 protocol configuration	SDK_STR_RS485CONFIG_ALL
E_SDK_COMFIG_ABILITY_COMMPRO485	Serial port 485 protocol	SDK_COMMFUNC
E_SDK_CONFIG_SYS_TIME_NORTC	Set system time noRTC	SDK_SYSTEM_TIME
E_SDK_CONFIG_CHANNELTILE_DOT	The dot matrix information to modify IPC channel name	SDK_TitleDot
E_SDK_CONFIG_CAMERA	Camera parameter	SDK_CameraParam
E_SDK_CONFIG_ABILITY_CAMERA	Camera capability level	SDK_CameraAbility
E_SDK_CONFIG_STOR	Hard disk not found	SDK_VIDEOLOSSCON

AGENOTEXIST		FIG
E_SDK_CONFIG_STORAGELOWSPACE	Hard disk storage low space	SDK_StorageLowSpaceConfig
E_SDK_CONFIG_STORAGEFAILURE	Hard disk failed	SDK_StorageFailConfig
E_SDK_CFG_NETIPCONFLICT	IP Conflict	SDK_VIDEOLOSSCONFIG
E_SDK_CFG_NETABORT	Network abnormal	SDK_VIDEOLOSSCONFIG
E_SDK_CONFIG_CHNSTATUS	Channel status	SDK_NetDecorderChnStatusAll
E_SDK_CONFIG_CHNMODE	Channel mode	SDK_NetDecorderChnModeConfig
E_SDK_CONFIG_NET_DAS	Active registration	SDK_DASSerInfo
E_SDK_CONFIG_CAR_INPUT_EXCHANGE	Correspondence relationship between external information input and vehicle status	SDK_CarStatusExchangeAll
E_SDK_CONFIG_DELAY_TIME	On-board system delay configuration	SDK_CarDelayTimeConfig
E_SDK_CONFIG_NET_ORDER	Network priority	SDK_NetOrderConfig
E_SDK_CONFIG_ABILITY_NETORDER	Ability to set network priority	SDK_NetOrderFunction
E_SDK_CONFIG_GPS_TIMING	GPS timing configuration	SDK_GPSTimingConfig
E_SDK_CONFIG_VIDEO_ANALYZE	Video analysis	SDK_ANALYSECONFIG
E_SDK_CONFIG_NAT_STATUS_INFO	Nat status information	SDK_NatStatusInfo
E_SDK_CONFIG_MEDIA_WATERMARK	Watermark configuration	SDK_WaterMarkConfigAll
E_SDK_CONFIG_ENCODE_STATICPARAM	Encode static parameter	SDK_EncodeStaticParamAll
E_SDK_CONFIG_DIGMANAGER_SHOW	Channel management display configuration	SDK_DigManagerShowStatus
E_SDK_CONFIG_ABILITY_ANALYZEABILITY	Intelligent analysis ability	SDK_ANALYZEABILITY

E_SDK_CONFIG_NAT	NAT function，MTU value configuration	SDK_NatConfig
E_SDK_CONFIG_CPCI NFO	Intelligent CPC enumeration data information	SDK_CPCDataAll
E_SDK_CONFIG_STOR AGE_POSITION	Device type of video storage	SDK_RecordStorageType
E_SDK_CONFIG_ABIL ITY_CARSTATUSNUM	Car status number	SDK_CarStatusNum
E_SDK_CFG_VPN	VPN	SDK_VPNConfig
E_SDK_CFG_VIDEOO UT	VGA video resolution	SDK_VGAresolution
E_SDK_CFG_ABILITY _VGARESOLUTION	Supported VGA video resolution list	SDK_VGAResolutionAb ility
E_SDK_CFG_NET_LO CALSEARCH	Search device, LAN devices on the device side	SDK_NetDevList
E_SDK_CFG_ENCODE _STATICPARAM_V2	Static parameters of DVR encoder	SDK_EncodeStaticParam V2
E_SDK_ABILITY_ENC _STATICPARAM	Static encoding capability set	SDK_EncStaticParamAbi lity
E_SDK_CFG_MAIL_TE ST	Email test	SDK_NetEmailConfig
E_SDK_CFG_SPVMN_ PLATFORM	28181 protocol configuration	SDK_ASB_NET_VSP_C ONFIG
E_SDK_CFG_PMS	Mobile phone service	SDK_PMSConfig
E_SDK_CFG_OSD_INF O	Screen prompt message	SDK_OSDInfoConfigAll
E_SDK_CFG_DIGITAL _REAL	Actually supported channel modes	SDK_VideoChannelMana ge
E_SDK_ABILITY_PTZ CONTROL	PTZ control level	SDK_PTZControlAbility
E_SDK_CFG_PARAM_ EX	Camera extended parameters	SDK_CameraParamEx
E_SDK_GPS_STATUS	GPS linkage information	SDK_GPSStatusInfo
E_SDK_WIFI_STATUS	WIFI linkage information	SDK_WifiStatusInfo
E_SDK_3G_STATUS	3G linkage information	SDK_WirelessStatusInfo
E_SDK_DAS_STATUS	Active registration status	SDK_DASStatusInfo
E_SDK_ABILITY_DEC ODE_DELEY	Capability of decoding strategy	SDK_DecodeDeleyTime Prame

E_SDK_CFG_DECODE _PARAM	Decoding maximum delay	SDK_DecodeParam
E_SDK_ABILITY_ONV IF_SUB_PROTOCOL	Onvif sub-protocol	SDK_AbilityMask
E_SDK_CFG_CAR_BO OT_TYPE	On-board siwtch mode	SDK_CarBootTypeConfi g
E_SDK_CFG_IPC_ALA RM	IPC network alarming	SDK_IPCAlarmConfigAl l
E_SDK_CFG_TIME_ZO NE	Time zone configuration	SDK_TimeZone
E_SDK_ABILITY_MA X_PRE_RECORD	Maximum pre-recording time can be set to 30	SDK_AbilityMask
E_SDK_CFG_DIG_TIM E_SYN	Digital channel time synchronization configuration	SDK_TimeSynParam
E_SDK_CFG_DIGITAL _ENCODE	Digital channel compact coding configuration	SDK_EncodeConfigAll_ SIMPLIIFY
E_SDK_CFG_DIGITAL _ABILITY	Coding ability of digital channels	SDK_DigitDevInfo
E_SDK_CFG_ENCODE CH_DISPLAY	The IE side encoding configuration shows the front-end channel number	SDK_EncodeChDisplay
E_SDK_CFG_RESUME _PTZ_STATE	Turn on the platform status	SDK_ResumePtzState
E_SDK_ABILITY_AHD _ENCODE_L	AHDL capability set	SDK_AHDEncodeLMas k
E_SDK_CFG_SPEEDA LARM	Speed alarm	SDK_SpeedAlarmConfig All
E_SDK_CFG_CORRES PONDENT_INFO	Customized configuration	SDK_CorrespondentOwn Info
E_SDK_SET_OSDINFO	OSD message settings (this function only supports analogue channels)	SDK_OSDInfo
E_SDK_SET_OSDINFO _V2	OSD information overlays, unsave configuration (no superposition effect after power off and reboot) Note: The IPC devices transmit characters in a lattice.	SDK_OSDInfoConfigAll

E_SDK_ABILITY_SUP PORT_EXTSTREAM	Support auxiliary code stream video recording	SDK_AbilityMask
E_SDK_CFG_EXT_RE CORD	Auxiliary code flow configuration	SDK_RECORDCONFIG _ALL/ SDK_RECORDCONFIG
E_SDK_CFG_UPGRAD E_VERSION_LIST	List of cloud upgrade files	SDK_CloudUpgradeList
E_SDK_OPERATION_S ET_LOGO	Video is superimposed with the manufacturer's LOGO	SDK_SetLogo
E_SDK_OPEARTION_S PLIT_CONTROL	Image split mode	SDK_SplitControl
E_SDK_OPERATION_U TC_TIME_SETTING	Set UTC time	SDK_SYSTEM_TIME
E_SDK_CFG_ENCODE _SmartH264	SmartH264+ configuration	SDK_SmartH264ParamA ll
E_SDK_CFG_WIFI_INF O	Wireless WIFI information	SDK_WifiInfo
E_SDK_CFG_NET_RT MP	RTMP protocol	SDK_NetRTMPConfig
E_SDK_CFG_SNAP_SC HEDULE	Timed screensnap configuration	SDK_SnapConfigAll
E_SDK_CFG_PTZPRES ET	Preset point configuration	SDK_PtzPreset
E_SDK_CFG_PTZTOU R	Tour configuration	SDK_PtzTour
E_SDK_CFG_PWD_SA FETY	Configuration of security issue (used to reset password)	SDK_PasswordSafety
E_SDK_ABILITY_QUE STION_DELIVERY	Obtain retrieval problem of password	SDK_QuestionDelivery

2.4 Related structures of hard disk storage control

2.4.1 Storage device control types   SDK_StorageDeviceControlTypes

enum SDK_StorageDeviceControlTypes

{

    SDK_STORAGE_DEVICE_CONTROL_SETTYPE,   ///< Set type

    SDK_STORAGE_DEVICE_CONTROL_RECOVER,   ///< Recover error

    SDK_STORAGE_DEVICE_CONTROL_PARTITIONS,   ///< Partitions
    SDK_STORAGE_DEVICE_CONTROL_CLEAR,   ///< Clear

    SDK_STORAGE_DEVICE_CONTROL_ADDNAS,   ///<Add NAS
    SDK_STORAGE_DEVICE_CONTROL_CHANGENAS,   ///Change NAS
    SDK_STORAGE_DEVICE_CONTROL_DELNAS,   ///<Delete NAS
    SDK_STORAGE_DEVICE_CONTROL_NR,
};

2.4.2 Storage device control   SDK_StorageDeviceControl

typedef struct SDK_StorageDeviceControl
{
    int iAction;   ///< Refer to enum SDK_StorageDeviceControlTypes
    int iSerialNo;   ///< Disk series number
    int iPartNo;   ///< Partition number
    int iType;   ///< enum SDK_StorageDeviceClearTypes or
                             SDK_FileSystemDriverTypes
    int iPartSize[4/*MAX_DRIVER_PER_DISK*/];   ///< Size of each part
}SDK_StorageDeviceControl;

2.5 Related structures of frame information

enum MEDIA_PACK_TYPE
{
FILE_HEAD =   0,   // File head
VIDEO_I_FRAME = 1,   // Video I frame
VIDEO_B_FRAME =   2,   // Video B frame
VIDEO_P_FRAME = 3,   // Video P frame
VIDEO_BP_FRAME = 4,   // Video BP frame
VIDEO_BBP_FRAME   = 5,   // Video B and BP frames
VIDEO_J_FRAME = 6,   // Picture frame
AUDIO_PACKET = 10,   // Audio packet
};

```
enum SDK_ENCODE_TYPE
{
SDK_StreamTypeEmpty = 0,
SDK_StreamTypeH264 = 2,
SDK_StreamTypeJpeg = 3,
SDK_StreamTypeGeneral = 4,
SDK_StreamTypeH265 = 5,
SDK_StreamTypePCM8 = 7,
SDK_StreamTypeStd = 8
};


typedef struct
{
int            nPacketType;       //Packet type, refer to MEDIA_PACK_TYPE
char*          pPacketBuffer;      //Buffer address
unsigned int   dwPacketSize;       //Packet size


unsigned int   nEncodeType;          //Data format type refers to SDK_ENCODE
_TYPE


// Absolute timestamp
int            nYear;                //Timestamp: year
int            nMonth;          //Timestamp: month
int            nDay;                 //Timestamp: day
int            nHour;                //Timestamp: hour
int            nMinute;              //Timestamp: minute
int            nSecond;              //Timestamp: second
unsigned int   dwTimeStamp;           //Relative timestamp low level, unit in
millisecond
unsigned int   dwTimeStampHigh;      //Relative timestamp high level, unit in
millisecond
unsigned int   dwFrameNum;            //Frame number
unsigned int   dwFrameRate;          //Frame rate
```

```
unsigned short uWidth;              //Width of picture
unsigned short uHeight;             //Height of picture
unsigned int     Reserved[6];       //Reserved

} PACKET_INFO_EX;
```

2.6 Local playaction control   SDK_LoalPlayAction

```
//Local playaction control
enum SDK_LoalPlayAction
{
    SDK_Local_PLAY_PAUSE,       /*<! Pause playing*/
    SDK_Local_PLAY_CONTINUE,     /*<! Continue playing*/
    SDK_Local_PLAY_FAST,          /*<! Play fast*/
    SDK_Local_PLAY_SLOW,          /*<! Play slow*/
};
```

2.7 Subconnection type   SubConnType

```
typedef enum SubConnType
{
    conn_realTimePlay=1,
    conn_talk,
    conn_playback,
    conn_push

}SubConnType;
```

2.8 Socket style   SocketStyle

```
enum SocketStyle
{
    TCPSOCKET=0,
    UDPSOCKET,
    PLUGLANSOCKET=4,            //Socket LAN login
    PLUGOUTERSOCKET,            //Socket out network login
    P2P_TUTKSOCKET,            //TUTK P2P
```

    SOCKETNR

};

2.9 Related structures of cloud upgrade SDK_CloudUpgradeVersion

typedef struct SDK_CloudUpgradeVersion

{

    char name[128];   // Version name

    char date[12];   //Date of version, format: "2014-08-26"

    unsigned int length;   // Length of upgrade file

}SDK_CloudUpgradeVersion;

2.10 Related information of serial port

2.10.1 Serial port type SERIAL_TYPE

typedef enum SERIAL_TYPE

{

    RS232 = 0,

    RS485 = 1,

}SERIAL_TYPE;

2.10.2 Related information of serial port　　　TransComChannel

typedef struct __TransComChannel   //Transparent serial port

{

    SERIAL_TYPE TransComType; //SERIAL_TYPE

    unsigned int baudrate;

    unsigned int databits;

    unsigned int stopbits;

    unsigned int parity;

} TransComChannel;

2.11 Related information of playback action

// Playback action

enum SDK_PlayBackAction

{

SDK_PLAY_BACK_PAUSE,   /*<! Playback pause*/

SDK_PLAY_BACK_CONTINUE,   /*<! Playback continue*/

SDK_PLAY_BACK_SEEK,   /*<! Playback positioning, time unit in s*/

SDK_PLAY_BACK_FAST,   /*<! Playback fast*/

SDK_PLAY_BACK_SLOW,   /*<! Playback slow*/

SDK_PLAY_BACK_SEEK_PERCENT, /*<! Playback positioning percent*/

 SDK_PLAY_SET_TYPE,   /*<! Playback intelligent positioning*/

};

2.12 Related structures of callback data in active service

2.12.1 Device information   H264_DVR_DEVICEINFO

typedef struct _H264_DVR_DEVICEINFO

{

char sSoftWareVersion[64]; ///< Software version information

char sHardWareVersion[64]; ///< Hardware version information

char sEncryptVersion[64];   ///< Encrypt version information

SDK_SYSTEM_TIME tmBuildTime;///<Software built time

char sSerialNumber[64];   ///< Device serial number

int byChanNum;   ///< Channel number of video in

int iVideoOutChannel;   ///< Channel number of video out

int byAlarmInPortNum;   ///< Channel number of alarm in

int byAlarmOutPortNum;   ///< Channel number of alarm out

int iTalkInChannel;   ///< Channel number of intercom in

int iTalkOutChannel;   ///< Channel number of intercom out

int iExtraChannel;   ///< Extended channel number

int iAudioInChannel;   ///< Channel number of audio in

int iCombineSwitch;   ///< Whether partition mode of the combined

encoding channel supports switching

int iDigChannel;   ///<Channnle number of digital

unsigned int uiDeviceRunTime;   ///< System run time

SDK_DeviceType deviceTye;   /// Device type

char sHardWare[64];   ///< Device type

char uUpdataTime[20];   ///< Updata time, such as 2013-09-03 14:15:13

unsigned int uUpdataType;   ///< Updata content

char sDeviceModel[16];   // Device model (underlying library obtained from encryption, sHardWare is indistinguishable from using the same program for multiple devices)

int nLanguage;   // Language ID of country, 0 refers to English, 1 refers to Simplified Chinese, 2 refers to traditional Chinese, 3 refers to Korean, 4 refers to German, 5 refers to Portuguese, 6 refers to Russian

char sCloudErrCode[NET_MAX_PATH_LENGTH];   // Specific error content of cloud login

int status[32];   //Judge the new coming connection is whether transmited by agent, if it was ,then limite it according to the restrictions returned by the server

//status[0] Channel number limited:0 refers to no limit, n refers to limiting n channel

//status[1] Code stream limitation. : no limits. Watch the main code stream limited

//status[2] Limited time. : no limits. n: limit n minutes。

//status[3] Limited code rate, there are four levels at present. :no limits. :limited to CIF 6 frame 100K, the follow-up needs to be determined

//status[4] Reserved bits, subsequent expansion

// Among them, status[0] and status[1] reflected here; Status[2] and status[3] reflected in the process of transmiting code stream

}H264_DVR_DEVICEINFO,*LPH264_DVR_DEVICEINFO;

2.12.2 Active service of callback data   H264_DVR_ACTIVEREG _INFO

typedef struct H264_DVR_ACTIVEREG_INFO

{

char deviceSarialID[64];   //Device serial ID, assigne a value if it is greater than a bit

H264_DVR_DEVICEINFO deviceInfo;   //Device information

char IP[IP_SIZE];   //Outer network IP

}H264_DVR_ACTIVEREG_INFO;

2.12.3 Related structures of active registration configuration   SDK_DASSerInfo

```
typedef struct SDK_DASSerInfo
{
    bool enable;
    char serAddr[NET_NAME_PASSWORD_LEN];
    int   port;
    char userName[NET_NAME_PASSWORD_LEN];
    char passwd[NET_NAME_PASSWORD_LEN];
    char devID[NET_NAME_PASSWORD_LEN];

}SDK_DASSerInfo;
```

2.13 Related structures of alarming center

2.13.1 Related configuration of alarming center SDK_NetAlarmServerConfigAll

```
//IP addr
typedef union
 {
    unsigned char       c[4];
    unsigned short    s[2];
    unsigned int         l;

}CONFIG_IPAddress;

///< Definition of server structure
 typedef struct SDK_RemoteServerConfig
{
    char ServerName[NET_NAME_PASSWORD_LEN];       ///< Server name
    CONFIG_IPAddress ip;                    ///< IP address
    int Port;                               ///< Port number
    char UserName[NET_NAME_PASSWORD_LEN];         ///< User name
    char Password[NET_NAME_PASSWORD_LEN];      ///< Password
    bool Anonymity;                    ///< Whether login in anonymity

}SDK_RemoteServerConfig;

//< Alarming center setting
typedef struct SDK_NetAlarmCenterConfig
{
    bool bEnable;                               ///< Wheter enabled
```

```
    char sAlarmServerKey[NET_NAME_PASSWORD_LEN]; ///< The name of
protocol type in alarming center
    SDK_RemoteServerConfig Server;          ///< Alarming center server
    bool bAlarm;
    bool bLog;
}SDK_NetAlarmCenterConfig;


typedef struct SDK_NetAlarmServerConfigAll
{
    SDK_NetAlarmCenterConfig
vAlarmServerConfigAll[NET_MAX_ALARMSERVER_TYPE];

}SDK_NetAlarmServerConfigAll;
```

2.13.2 Alarming center message content   SDK_NetAlarmCenterMsg

```
//IP addr
typedef union
 {
    unsigned char      c[4];
    unsigned short   s[2];
    unsigned int          l;

}CONFIG_IPAddress;

// Alarming center message content
typedef struct SDK_NetAlarmCenterMsg
{
    CONFIG_IPAddress HostIP;        ///< Device IP
    int   nChannel;                 ///< Channel
    int   nType;                    ///< Types in larmCenterMsgType
    int   nStatus;                  ///< Status in AlarmCenterStatus
    SDK_SYSTEM_TIME Time;                ///< Time happen
    char sEvent[NET_MAX_INFO_LEN];     ///< Event
    char sSerialID[NET_MAX_MAC_LEN]; ///< Device serial number
    char sDescrip[NET_MAX_INFO_LEN];       ///< Description
```

}SDK_NetAlarmCenterMsg;

2.14 Related structures of work state   SDK_DVR_WORKSTATE

// Alarm state

typedef struct SDK_DVR_ALARMSTATE

{

  char iVideoMotion[NET_MAX_MSK_SIZE];   ///< Video motion state, use mask to represent channel number, byte0 refers to channel one, and so on. 1 means alarm, 0 refers to no alarm

    char iVideoBlind[NET_MAX_MSK_SIZE];   ///< Video blind state, use to represent channel number, byte0 represent channel one, and so on. 1 refers to alarm, 0 refers to no alarm

    char iVideoLoss[NET_MAX_MSK_SIZE];   ///< Video loss state, use to represent channel number, byte0 represent channel one, and so on. 1 refers to alarm, 0 refers to no alarm

    char iAlarmIn[NET_MAX_MSK_SIZE];   ///< Alarm in state, use to represent channel number, byte0 represent channel one, and so on. 1 refers to alarm, 0 refers to no alarm

    char iAlarmOut[NET_MAX_MSK_SIZE];   ///< Alarm out state, use to represent channel number, byte0 represent channel one, and so on. 1 refers to alarm, 0 refers to no alarm

}SDK_DVR_ALARMSTATE;

// Channel state

typedef struct SDK_DVR_CHANNELSTATE

{

    bool bRecord; ///< Whether normally recorded

    int iBitrate; ///< Current code rate

}SDK_DVR_CHANNELSTATE;

// DVR working state

typedef struct SDK_DVR_WORKSTATE

{

SDK_DVR_CHANNELSTATE vChnState[NET_MAX_CHANNUM];

SDK_DVR_ALARMSTATE vAlarmState;

}SDK_DVR_WORKSTATE;

2.15 Realted structures of network alarm　　SDK_NetAlarmInfo

/// Network alarm

typedef struct SDK_NetAlarmInfo

{

    int iEvent;　　//Currently not used

    int iState;　　//Each bit means a channel, bit0: the first channel, 0-no alarm, 1-alarm, and so on

}SDK_NetAlarmInfo;

3 Interface definition

3.1 SDK initialization

3.1.1 Initialization　　　　　SDK H264_DVR_Init

Function:　　H264_DVR_API long H264_DVR_Init(

      fDisConnect cbDisConnect,

      unsigned long dwUser

      );

Parameter:　[in]cbDisConnect　　　　　　Off line callback function, callback current off line devices, and not callback devices active switch off for calling SDK H264_DVR_Logout function, and forbid calling back when set as NULL

    [in]dwUser　　　　　　Users data

    typedef void (CALL_METHOD *fDisConnect)(

    long lLoginID,

    char *pchDVRIP,

long nDVRPort,

unsigned long dwUser

);

    [out]lLoginID   H264_DVR_Login returned value

    [out]pchDVRIP   Device IP

    [out]nDVRPort   Device port number

    [out]dwUser   Users data

Returned value: TRUE refers to be successful, FALSE refers to be disabled

Declaration: Initialized SDK, before every SDK function has been called back

3.1.2 Release SDK resources   H264_DVR_Cleanup

Function: H264_DVR_API bool CALL_METHOD H264_DVR_Cleanup();

Parameter: None

Returned value: TRUE refers to success, FALSE refers to failure

Declaration: Empty SDK, release occupied resources, before every SDK function has been called back. If return failed, please call H264_DVR_GetLastError function to get error code, and find reason of error by code.

3.2 SDK local function

3.2.1 Set wait time and try times   H264_DVR_SetConnectTime

Function: H264_DVR_API bool CALL_METHOD H264_DVR_SetConnectTime(

long nWaitTime,

long nTryTimes

);

Parameter: [in]nWaitTime   Wait time (unit in ms, and default value is 5000ms)

    [in]nTryTimes   Try times (unit in times, and default value is three times)

Returned value: True refers to success.

Declaration: SDK's default wait time is 5000ms, try times is three times.

3.2.2 Bind local IP   H264_DVR_SetLocalBindAddress

Function: H264_DVR_API bool CALL_METHOD H264_DVR_SetLocalBind
Address(

       char* szIP

       );

Parameter: [in]szIP   Need bounded IP address

Returned value: TRUE refers to success,   FALSE refers to failure

Declaration: Set bounded IP address (In multi-NIC, users can set boudned IP address)

3.2.3 Return to error code of the final operation   H264_DVR_GetLastError

Function: H264_DVR_API long CALL_METHOD H264_DVR_GetLastError();
Parameter: None.
Returned value: Return to error code of the final operation. Details refer to Error Code Enumeration.
Declaration: The returned value is the error code of device returned.

3.3 User registration

3.3.1 User login device   H264_DVR_Login

Function: H264_DVR_API long H264_DVR_Login (

       char *sDVRIP,

       unsigned short wDVRPort,

       char *sUserName,

       char *sPassword,

       LPH264_DVR_DEVICEINFO lpDeviceInfo,

       int *error，

       int socketType DEF_PARAM(0)

       );

Parameter: [in]sDVRIP   Device IP address

[in]wDVRPort   Device port

[in]sUserName   User name

[in]sPassword   User password

[out]lpDeviceInfo   Device information, belong to output parameter

[out]error   Return to login error code

[in]socketTyle   Login style refers to <u>SocketStyle</u> (Default is TCPSOCKET, and could be set NULL)

Returned value: Returned failure 0, return device ID successfully. After login, users can operate device through the value (device handle) referring to related devices. Obtain specific error code by calling <u>H264_DVR_ GetLastError of port</u>.

Declaration: Register user to device, when set user as reuse through authenticator system (The default device user, such as admin, and reuse cannot be set), user can register device several times with this account.

3.3.2 User logout device   H264_DVR_Logout

Function: H264_DVR_API long CALL_METHOD H264_DVR_Logout(

         long lLoginID

         );

Parameter: [in]lLoginID   Login handle

Returned value: 1refers to success, 0 refers to failure.

Declaration:

3.3.3 Active registration   H264_DVR_StartActiveRigister

Function: H264_DVR_API bool CALL_METHOD

         H264_DVR_StartActiveRigister(

         int nPort,

         fMessCallBack cbFunc,

         unsigned long dwDataUser

         );

Parameter: [in]nPort   Monitor port number, 0<=nPort<=65535

         [out]cbFunc[out]   Register online callback function

         [in]dwDataUser[in]   Callback function parameter

         typedef bool (CALL_METHOD *fMessCallBack)(

long lLoginID,

char *pBuf,

unsigned long dwBufLen,

long dwUser,

int nType

);

[out]lLoginID   Login handle

[out]pBuf   Callback data-- H264_DVR_ACTIVEREG_INFO

[out]dwBufLen   Callback data length

[out]dwUser   User parameter

[out]nType   Data type-- ALARM_TYPE

Returned value: true means success, false means failure

Declaration: Need to call parameter configuration port (H264_DVR_SetDevConfig)

to configure network parameter of device, corresponding to

configuration command is E_SDK_CONFIG_NET_DAS, and structure set

is SDK_DASSerInfo.

3.4 Real-time monitoring

3.4.1 Real-time preview   H264_DVR_RealPlay

Function: H264_DVR_API long H264_DVR_RealPlay(

long lLoginID,

LPH264_DVR_CLIENTINFO lpClientInfo

);

Parameter: [in]lLoginID   Returned value of H264_DVR_Login

[in]lpClientInfo   Play handle

Returned value: Return failure less than or equal to 0, when less than 0,

H264_DVR_GetLastError function can be used to acquire error type. If

returned successfully, real-time monitor ID (real-time handle) will be

taken as parameters of related function.

Analysis of some error code:

(1)H264_DVR_SUB_CONNECT_ERROR = -11202: Failed to

establish video sub-connection, device may not be online or in rebooting. Handling method: login after receiving disconnected callback.

(2)H264_DVR_SUB_CONNECT_SEND_ERROR = -11203:

a. LAN access: Sub-connection communication failed, that is the sub-connection was established successfully, but the communication failed, and the device was disconnected after sub-connection was established successfully. Handling method: the return value of (1) will appear when H264_DVR_RealPlay is called again.

b. Active registeration access: Main connection communication failed, the device was disconnected, and interior SDK has received disconnected callback. Handling method: Logout after receiving the disconnected callback.

(3)H264_DVR_NOTVALID=-11206: Illegal error, main connection disconnected, the device has been disconnected, and the reboot succeed, but no disconnected callback has been received, and the previous login handle is still in use. How to deal with it: logout after receiving the wire break callback.

Declaration: Call this interface, according to the obtained device information when login, and then you can turn on any effective real-time monitoring in one channel, and obtain raw data by H264_DVR_SetRealDataCallBack of device callback (note: if playing can be completed by assigning value to hWnd in lpClientInfo, assignment can be completed, without the need for decoding broadcast to the callback data). Successfully return to real-time monitoring ID, in order to monitor the following video channels.

3.4.2 Stop preview   H264_DVR_StopRealPlay

Function: H264_DVR_API bool CALL_METHOD H264_DVR_StopRealPlay(

long lRealHandle,

void*hWnd DEF_PARAM(0)

);

Parameter: [in]lRealHandle   Returned value of H264_DVR_RealPlay

[in]hWnd   Used to stop corresponding window decoding play; In

adopting default value NULL, stop every
windows decoding play.

Returned value: 1 refers to success, 0 refers to failure

Declaration:

3.4.3 Set data callback   **H264_DVR_SetRealDataCallBack**

Function: H264_DVR_API bool CALL_METHOD

H264_DVR_SetRealDataCallBack(

long lRealHandle,

fRealDataCallBack cbRealData,

long dwUser

);

Parameters: [in]lRealHandle   Preview play handle

[out]cbRealData   Real data callback

[in]dwUser   Callback function parameters

typedef int(CALL_METHOD *fRealDataCallBack) (

long lRealHandle,

long dwDataType,

unsigned char *pBuffer,

long lbufsize,

long dwUser

);

[out]lRealHandle   Play handle

[out]dwDataType   Data type – temperary no need to judge

[out]pBuffer   Callback data

[out]lbufsize   Callback data length

[out]dwUser   User callback parameter

Returned value: TRUE refers to success, FALSE refers to failure. Detailed error code
can be obtained from H264_DVR_GetLastError.

Declaration: Set real-time monitoring data callback, provide users data from device.

Note: Besides the general port, there is extended port H264_DVR_SetRealData CallBack_V2, which can obtain frame information. Details can be referred to instruction of netsdk.h and utilization of Clientdemo.

3.4.4 Cleanup callback function   H264_DVR_DelRealDataCallBack

Function: H264_DVR_API bool CALL_METHOD

H264_DVR_DelRealDataCallBack(

long lRealHandle,

fRealDataCallBack cbRealData,

long dwUser

);

Parameters: [in]lRealHandle   Play handle

[out]cbRealData   Real data callback

[in]dwUser   Users parameters

typedef int(CALL_METHOD *fRealDataCallBack) (

long lRealHandle,

long dwDataType,

unsigned char *pBuffer,

long lbufsize,

long dwUser

);

[out]lRealHandle   Play handle

[out]dwDataType   Data type – temporary no need to judge

[out]pBuffer   Callback data

[out]lbufsize   Callback data length

[out]dwUser   Users callback parameter

Returned value: TRUE refers to success, FALSE refers to failure. Detailed error code
can be obtain from H264_DVR_GetLastError.

Declarartion: Cleanup callback function, and this function should be ahead of
H264_DVR_StopRealPlay.

Note: H264_DVR_DelRealDataCallBack_V2 corresponds to H264_DVR_

SetRealDataCallBack_V2.

3.5 Forced I frame   H264_DVR_MakeKeyFrame

Function: H264_DVR_API bool CALL_METHOD H264_DVR_MakeKeyFrame(

long lLoginID,

int nChannel,

int nStream

);

Parameters: [in]lLoginID   Login handle

[in]nChannel   Channel number

[in]nStream   Type of code stream – 0 refers to main code stream,

refers to sub-code stream

Returned value: TRUE refers to success, FALSE refers to failure. Detailed error code

can be obtained from H264_DVR_GetLastError.

Declaration: Support forced I frame

3.6 Playback and download

Video files finding

3.6.1 Find video by file name   H264_DVR_FindFile

Function: H264_DVR_API long CALL_METHOD H264_DVR_FindFile(

long lLoginID,

H264_DVR_FINDINFO* lpFindInfo,

H264_DVR_FILE_DATA *lpFileData,

int lMaxCount,

int *findcount,

int waittime DEF_PARAM(5000)

);

Parameters: [in]lLoginID   Login handle

[in]lpFindInfo   Find information -- H264_DVR_FINDINFO

[out]lpFileData   Find result-- H264_DVR_FILE_DATA

[in]lMaxCount	Maximum video number for searching
[out]findcount	Video number of searching
[in]waittime	Wait time

Returned value: 1 refers to success, 0 refers to failure. Detailed error code can be obtained from H264_DVR_GetLastError.

Declaration: Before playback, you should call the interface to search video record on ahead, when finded video record information according to the period of inputing is larger than the defined buffer size, it only return video record buffer can stored, and further search can be done according to needs.

3.6.2 Search video files by time   H264_DVR_FindFileByTime

Function: H264_DVR_API long CALL_METHOD H264_DVR_FindFileByTime(
            long lLoginID,
            SDK_SearchByTime* lpFindInfo,
            SDK_SearchByTimeResult *lpFileData,
            int waittime DEF_PARAM(10000)
            );

Parameters: [in]lLoginID   Login handle
            [in]lpFindInfo   Find information-- SDK_SearchByTime
            [out]lpFileData   Find result-- SDK_SearchByTimeResult
            [in] waittime   Wait time

Returned value: 1 refers to success, 0 refers to failure. Detailed error code can be obtained by H264_DVR_GetLastError.

Declaration: Search video files by time.

Playback video files

3.6.3 Playback video by name

Function:H264_DVR_API long CALL_METHOD H264_DVR_PlayBackByName(
            long lLoginID,
            H264_DVR_FILE_DATA *sPlayBackFile,
            fDownLoadPosCallBack cbDownLoadPos,
            fRealDataCallBack fDownLoadDataCallBack,

long dwDataUser

);

Parameters: [in]lLoginID   Login handle

[in]sPlayBackFile   Playback file parameters-- H264_DVR_FILE_DATA

[out]cbDownLoadPos   Schdule callback, User notifies device

used that whether data has been sent, and

lDownLoadSize=-1 in the callback

indicates that the data has been sent. If

want to display real-time progress, you

should acquire time from code flow to

calculate the network part without

analyzing code flow. It is not accurate to

calculate the schedule according to the

ratio between current data size and total

size. It should choose the start time and

end time to calculate the schedule.

[out]fDownLoadDataCallBack   Playback data callback

[in]dwDataUser   Data callback parameter

typedef void(CALL_METHOD *fDownLoadPosCallBack) (

long lPlayHandle,

long lTotalSize,

long lDownLoadSize,

long dwUser

);

[out]lPlayHandle   Playback handle

[out]lTotalSize   Total length of data

[out]lDownLoadSize   Downloaded data length

[out]dwUser   User callback parameters

typedef int(CALL_METHOD *fRealDataCallBack) (

long lRealHandle,

long dwDataType,

unsigned char *pBuffer,

long lbufsize,

long dwUser);

[out]lRealHandle   Play handle

[out]dwDataType   Data type - temporarily do not need to judge

[out]pBuffer   Callback data

[out]lbufsize   Callback data length

[out]dwUser   User callback parameters

Return value：Non-zero indicates success, 0 indicates failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions: For network playback, it should be noted that after a user logs in to a device, only one video can be played at the same time in each channel, and multiple records in the same channel cannot be played at the same time.

3.6.4 Playback video by time   H264_DVR_PlayBackByTime

Function：   H264_DVR_API long CALL_METHOD

H264_DVR_PlayBackByTime(

        long lLoginID,

        H264_DVR_FINDINFO* lpFindInfo,

        fDownLoadPosCallBack cbDownLoadPos,

        fRealDataCallBack fDownLoadDataCallBack,

        long dwDataUser);

Parameter：[in]lLoginID   Login handle

[in]lpFindInfo   Query recording conditions --

H264_DVR_FINDINFO

[out]cbDownLoadPos   Progress callback, the user informs the user device whether the data has been sent, lDownLoadSize = -1 in the callback indicates that the data is sent.

[out]fDownLoadDataCallBack   Playback data callback

[in]dwDataUser   Data callback parameters

typedef void(CALL_METHOD *fDownLoadPosCallBack) (

long lPlayHandle,

long lTotalSize,

long lDownLoadSize,

long dwUser);

[out]lPlayHandle   Playback handle

[out]lTotalSize   Total data length

[out]lDownLoadSize   Downloaded data length

[out]dwUser   User callback parameters

typedef int(CALL_METHOD *fRealDataCallBack) (

long lRealHandle,

long dwDataType,

unsigned char *pBuffer,

long lbufsize,

long dwUser);

[out]lRealHandle   Play handle

[out]dwDataType   Data type - temporarily do not need to judge

[out]pBuffer   Callback data

[out]lbufsize   Callback data length

[out]dwUser   User callback parameters

Return value：Non-zero indicates success, 0 indicates failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions: Playback video files by time.

3.6.5 Stop playback video   H264_DVR_StopPlayBack

Function：H264_DVR_API bool CALL_METHOD H264_DVR_StopPlayBack(

long lPlayHandle);

Parameter：[in]lPlayHandle   Playback handle

Return value: true for success, false for failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions: Enter the playback ID returned by the previous interface. Call this interface to stop the control.

3.6.6 Playback Control   H264_DVR_PlayBackControl

Function：   H264_DVR_API bool CALL_METHOD

H264_DVR_PlayBackControl(

          long lPlayHandle,

          long lControlCode,

          long lCtrlValue,

          int itype DEF_PARAM(0));

Parameter：[in]lPlayHandle   Login handle

          [in]lControlCode   Control commands, see enum

SDK_PlayBackAction

          [in]lCtrlValue   Control value

          [in]itype   Type，see enum

SDK_PLAY_BACK_SETTYPE

Return value: true for success, false for failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions: Playback control is only valid for smart playback positioning.

Download video files

3.6.7 Downloading Video Files by File Name H264_DVR_GetFileByName

Function：   H264_DVR_API long CALL_METHOD H264_DVR_GetFileByName(

          long lLoginID,

          H264_DVR_FILE_DATA *sPlayBackFile,

char *sSavedFileName,

fDownLoadPosCallBack cbDownLoadPos DEF_0_PARAM,

long dwDataUser DEF_0_PARAM,

fRealDataCallBack fDownLoadDataCallBack DEF_0_PARAM);

Parameter：[in]lLoginID   Login handle

[in]sPlayBackFile   Downloaded   video   information-
H264_DVR_FILE_DATA

[out]sSavedFileName   Saved file path

[out]cbDownLoadPos Download progress callback (can be empty, download
progress via H264_DVR_GetDownloadPos)

[in]dwDataUser   Callback function parameters

[out]fDownLoadDataCallBack   Data callback

typedef void(CALL_METHOD *fDownLoadPosCallBack) (

long lPlayHandle,

long lTotalSize,

long lDownLoadSize,

long dwUser);

[out]lPlayHandle   Playback handle

[out]lTotalSize   Total data length

[out]lDownLoadSize   Downloaded data length

[out]dwUser   User callback parameters

typedef int(CALL_METHOD *fRealDataCallBack) (

long lRealHandle,

long dwDataType,

unsigned char *pBuffer,

long lbufsize,

long dwUser);

[out]lRealHandle   Play handle

[out]dwDataType   Data type - temporarily do not need to

judge

      [out]pBuffer   Callback data

      [out]lbufsize   Callback data length

      [out]dwUser   User callback parameters

Return value：Non-zero indicates success, 0 indicates failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions: Download the video file according to the file and download the file information through the query. According to the above query records, you can save the video to the specified file. The download progress callback is similar to the playback progress.

3.6.8 Downloading Video Files by Time   H264_DVR_GetFileByTime

Function：   H264_DVR_API long CALL_METHOD H264_DVR_GetFileByTime(

    long lLoginID,

    H264_DVR_FINDINFO* lpFindInfo,

    char *sSavedFileDIR,

    bool bMerge DEF_PARAM(0),

    fDownLoadPosCallBack cbDownLoadPos DEF_0_PARAM,

    long dwDataUser DEF_0_PARAM,

    fRealDataCallBack fDownLoadDataCallBack DEF_0_PARAM);

Parameter：[in]lLoginID   Login handle

    [in]lpFindInfo   Video   search   conditions   --
H264_DVR_FINDINFO

    [in]sSavedFileDIR   Video file save path

    [in]bMerge   Does the file merge

    [out]cbDownLoadPos   Download progress callback

    [in]dwDataUser   Callback function parameters

    [in]fDownLoadDataCallBack   Data callback

    typedef void(CALL_METHOD *fDownLoadPosCallBack) (

long lPlayHandle,

long lTotalSize,

long lDownLoadSize,

long dwUser);

[out]lPlayHandle   Playback handle

[out]lTotalSize   Total data length

[out]lDownLoadSize   Downloaded data length

[out]dwUser   User callback parameters

typedef int(CALL_METHOD *fRealDataCallBack) (

long lRealHandle,

long dwDataType,

unsigned char *pBuffer,

long lbufsize,

long dwUser

);

[out]lRealHandle   Play handle

[out]dwDataType   Data type - temporarily do not need to judge

[out]pBuffer   Callback data

[out]lbufsize   Callback data length

[out]dwUser   User callback parameters

Return value：Non-zero indicates success, 0 indicates failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions: Downloads video files by time and downloads them by querying the file information.

3.6.9 Stop Downloading Video Files   H264_DVR_StopGetFile

Function： H264_DVR_API bool CALL_METHOD H264_DVR_StopGetFile(

long lFileHandle);

Parameter：[in]lFileHandle   Download file handle

Return value: true for success, false for failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：According to need, you can wait for the files to be downloaded and closed, or you can download them to stop downloading.

3.6.10 Download Control   H264_DVR_GetFileControl

Function：   H264_DVR_API bool CALL_METHOD H264_DVR_GetFileControl(

long lPlayHandle,

long lControlCode,

bool bDown DEF_PARAM(1));

Parameter：[in]lPlayHandle   Login handle

[in]lControlCode   Control   commands,see   enum   SDK_PlayBack Action

[in]bDown   Is bit download, the default is 1

Return value: true for success, false for failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：Pause and resume control of already opened playback.

3.6.11 Getting Download Progress   H264_DVR_GetDownloadPos

Fuction：   H264_DVR_API int CALL_METHOD H264_DVR_GetDownloadPos(

long lFileHandle);

Parameter：[in]lFileHandle   Download handle

Renturn value：Greater than or equal to 0 for download progress, less than 0 for failure.The   specific   error   code   can   be   obtained   by H264_DVR_GetLastError.

Instructions：Obtaining the current position of the downloaded video can be used for an interface that does not need to display download progress in real time,

similar to the function of downloading a callback function. It is not

intended to calculate progress through callbacks. It can be called

periodically to obtain the current progress.

3.7 PTZ Control   H264_DVR_PTZControl

Function：H264_DVR_API bool CALL_METHOD H264_DVR_PTZControl(

long lLoginID,

int nChannelNo,

long lPTZCommand,

bool bStop   DEF_PARAM(0),

long lSpeed DEF_PARAM(4));

Parameter:[in]lLoginID   Login handle

[in]nChannelNo   Controlled device channel number

[out]lPTZCommand   Control type :PTZ_ControlType

[in]bStop   Is it stop

[out]lSpeed   Speed, default 4

Return value :Return TRUE on success and FALSE on failure. The specific error code

is obtained by H264_DVR_GetLastError.

Instructions：Controls the PTZ, but it must be used with the current channel open.

3.8 Parameter Configuration

3.8.1 Get Device Configuration   H264_DVR_GetDevConfig

Function：   H264_DVR_API long   CALL_METHOD H264_DVR_GetDevConfig(

long lLoginID,

unsigned long dwCommand,

> int nChannelNO,
>
> char * lpOutBuffer,
>
> unsigned long dwOutBufferSize,
>
> unsigned long* lpBytesReturned,
>
> int waittime DEF_PARAM(1000));

Parameter:

[in]lLoginID	Login handle
[in]dwCommand	The configuration type is specifically defined in the SDK_CONFIG_TYPE in the data structure definition
[in]nChannelNO	Configure the channel number, -1 means all channels
[out]lpOutBuffer	Store buffers for output parameters. According to different types, output different configuration structures. For details, see the configuration structure in the data structure definition.
[in]dwOutBufferSize	The size of the input buffer, in bytes.
[out]lpBytesReturned	The actual returned buffer size corresponds to the size of the configuration structure (in bytes)
[in]waittime	Waiting time

Return value: Greater than 0 success, less than 0 failure (can be found based on the type of error). The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：Different acquisition functions correspond to different structures and command numbers. Specific commands in the configuration information structure _SDK_CONFIG_TYPE。

3.8.2 Setting Device Configuration   H264_DVR_SetDevConfig

Function： H264_DVR_API long   CALL_METHOD H264_DVR_SetDevConfig(

long lLoginID,

unsigned long dwCommand,

int nChannelNO,

char * lpInBuffer,

unsigned long dwInBufferSize,

int waittime DEF_PARAM(1000));

Parameter: [in]lLoginID   Login handle

[in]dwCommand   Configuration type, as defined in the SDK_CONFIG_TYPE in the data structure definition

[in]nChannelNO Configure the channel number, -1 means all channels

[in]lpInBuffer   Store buffers for input parameters, input different configuration structures according to different types. For details, see the configuration structures in the data structure definition.

[in]dwInBufferSize   The size of the input buffer (in bytes).

[in]waittime   Waiting time

Return value: Greater than 0 success, less than 0 failure (can be found based on the type of error). The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：Different setup functions correspond to different structures and command numbers. Specific commands in the configuration information structure _SDK_CONFIG_TYPE。

3.8.3 Setting Device Configurations Across Network Segments H264_DVR_Set

ConfigOverNet

Function： H264_DVR_API long CALL_METHOD

H264_DVR_SetConfigOverNet(

unsigned long dwCommand,

int nChannelNO,

char * lpInBuffer,

unsigned long dwInBufferSize,

int waittime DEF_PARAM(1000)

);

Parameter： [in]dwCommand   Configuration   type,
E_SDK_CONFIG_SYSNET

[in]nChannelNO   Configure the channel number, 1 temporarily

save, other for permanent preservation

[in]lpInBuffer   Buffer, structure pointer or address for input

parameters—SDK_CONFIG_NET_COM

MON_V3

[in]dwInBufferSize   The size of the input buffer (in bytes).

[in]waittime   Waiting time

Return value： Equal to 0 indicates success, less than 0 indicates failure. The specific

error code can be obtained by H264_DVR_GetLastError.

Instructions： Set the device configuration across network segments. Only network

configuration settings are currently supported.

3.9 Log Management   H264_DVR_FindDVRLog

Function： H264_DVR_API bool CALL_METHOD H264_DVR_FindDVRLog(

long lLoginID,

SDK_LogSearchCondition *pFindParam,

SDK_LogList *pRetBuffer,

long lBufSize,

int waittime DEF_PARAM(2000));

Parameter：[in]lLoginID　　　　　　　Login handle

[in]pFindParam　　　　　　Log query conditions

[in]pRetBuffer　　　　　　Return log information

[in]lBufSize　　　　　　　Log return length

[in]waittime　　　　　　　Waiting time

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Query log.

3.10 Equipment Control　　　H264_DVR_ControlDVR

Function：　　H264_DVR_API bool CALL_METHOD H264_DVR_ControlDVR(

long lLoginID,

int type,

int waittime DEF_PARAM(2000));

Parameter：[in]lLoginID　　　　　　　Login handle

[in]type　　　　　　　　　0 means restart the device, 1 means clear log, 2 means shutdown, 3 means log recovery, 4 means stop logging, and 5 means temporarily opened audio before handset intercom restore

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Restart/Clear Log/Shutdown/Resume Log/Stop Log/Intercom Off State Restore.

3.11 Upgrading Device Programs

3.11.1 Local Upgrade　　　H264_DVR_Upgrade

Function： H264_DVR_API long CALL_METHOD H264_DVR_Upgrade(

long lLoginID,

char *sFileName,

int nType DEF_0_PARAM,

fUpgradeCallBack cbUpgrade DEF_0_PARAM,

long dwUser DEF_0_PARAM);

Parameter： [in]lLoginID   Login handle

[in]sFileName   File name to upgrade

[in]nType   File type to upgrade

[in]cbUpgrade   Callback upgrade progress

[in]dwUser   User data

typedef void(CALL_METHOD *fUpgradeCallBack) (

long lLoginID,

long lUpgradechannel,

int nTotalSize,

int nSendSize,

long dwUser);

[out]lLoginID   Login handle

[out]lUpgradechannel   Upgrade channel

[out]nTotalSize   Total data length, description：

When nTotalSize = -1,

nSendSize:1-99 returns the

upgrade progress

nTotalSize = 0, nSendSize =

H264_DVR_NOENOUGH_ME

MORY-

H264_DVR_INVALID_WIFI_D

RIVE upgrade error code, the

other is the progress of sending

[out]nSendSize   Send data length, description：

nSendSize = -1 Description Upgrade

completed

nSendSize = -2 Description upgrade error

[out]dwUser   User ddata

Return value：Non-zero indicates success, 0 indicates failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：Set up a front-end device network upgrade program. Set up the upgrade of the remote program and return the program upgrade handle.

3.11.2 Obtaining Upgrade Status   H264_DVR_GetUpgradeState

Function： H264_DVR_API int CALL_METHOD H264_DVR_GetUpgradeState(

long lUpgradeHandle);

Parameter：[in]lUpgradeHandle   Upgrade handle, return value: 1 successful, 2 failing to upgrade 3

Return value：1 means success, 0 means failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：null

3.11.3 Close Upgrade Handle   H264_DVR_CloseUpgradeHandle

Function： H264_DVR_API long CALL_METHOD

H264_DVR_CloseUpgradeHandle(

long lUpgradeHandle);

Parameter：[in]lUpgradeHandle   Upgrade handle

Return value：1 means success, 0 means failure. The specific error code can be obtained by H264_DVR_GetLastError.

Instructions：Stop the upgrade.

3.11.4 Close Upgrade   H264_DVR_Upgrade_Cloud

Function: H264_DVR_API long CALL_METHOD H264_DVR_Upgrade_Cloud(

long lLoginID,

SDK_CloudUpgradeVersion *sUpgradeVer,

int nType DEF_0_PARAM,

fUpgradeCallBack cbUpgrade DEF_0_PARAM,

long dwUser DEF_0_PARAM);

Parameter：[in]lLoginID   Login handle

[in]sUpgradeVer   Upgraded file information

[in]nType   Type

[out]cbUpgrade   Callback upgrade information

[in]dwUser   User parameters

typedef void(CALL_METHOD *fUpgradeCallBack) (

long lLoginID,

long lUpgradechannel,

 int nTotalSize,

 int nSendSize,

long dwUser);

[out]lLoginID   Login handle

[out]lUpgradechannel   Upgrade channel

[out]nTotalSize   Total data length, description：

nTotalSize = -1时,

nSendSize:1-99 return upgrade

progress

nTotalSize =0时,nSendSize =

H264_DVR_NOENOUGH_ME

MORY-

H264_DVR_INVALID_WIFI_D

RIVE Upgrade the error code, the

other is the sending progress.

When the cloud upgrade

increases nTotalSize=-2,

nSendSize:0 - 100=download

progress, no progress is sent

[out]nSendSize   Send data length, description：

nSendSize = -1 Description Upgrade

completed

nSendSize = -2 Description upgrade

error

[out]dwUser   User data

Return value：Equal to 0 indicates success, less than 0 indicates failure. The specific
error code can be obtained by H264_DVR_GetLastError.

Instructions：Perform an online upgrade.

3.11.5 Stopping Cloud Upgrade   H264_DVR_StopUpgrade_Cloud

Function： H264_DVR_API long CALL_METHOD

H264_DVR_StopUpgrade_Cloud(

long lHandle);

Parameter：[in]lHandle   Cloud upgrade handle

Return value：Equal to 0 indicates success, less than 0 indicates failure. The specific
error code can be obtained by H264_DVR_GetLastError.

Instructions：Stop the cloud upgrade.

3.12 Voice Intercom

3.12.1 Start Intercom   H264_DVR_StartVoiceCom_MR

Function： H264_DVR_API long CALL_METHOD

H264_DVR_StartVoiceCom_MR(

long lLoginID,

pfAudioDataCallBack pVcb,

long dwDataUser);

Parameter： [in]lLoginID   Login handle

[out]pVcb   Speech callback data received from the device

[in]dwDataUser   Callback function parameters

typedef void (CALL_METHOD *pfAudioDataCallBack)(

long lVoiceHandle,

char *pDataBuf,

 long dwBufSize,

char byAudioFlag,

long dwUser);

[out]lVoiceHandle   Intercom handle

[out]pDataBuf   Callback data

[out]dwBufSize   Data size

[out]byAudioFlag   Flag

[out]dwUser   User parameters

Return value： Non-zero indicates success, 0 indicates failure. The specific error code

can be obtained by H264_DVR_GetLastError.

Instructions： Start the intercom process.

3.12.2 Send Talkback Data   H264_DVR_VoiceComSendData

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_VoiceComSendData(

long lVoiceHandle,

char *pSendBuf,

long lBufSize);

Parameter：[in]lVoiceHandle   Intercom handle

            [in]pSendBuf   Transmitted voice data

            [in]lBufSize   The size of the data sent

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Send talkback data.

3.12.3 Stop Intercom   H264_DVR_StopVoiceCom

Function：H264_DVR_API bool CALL_METHOD H264_DVR_StopVoiceCom(

        long lVoiceHandle);

Parameter：[in]lVoiceHandle   Intercom handle

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Stop the intercom.

3.12.4 Setting Intercom Audio Coding Mode   H264_DVR_SetTalkMode

Function：   H264_DVR_API bool CALL_METHOD H264_DVR_SetTalkMode(

        long lLoginID,

        SDK_AudioInFormatConfig* pTalkMode);

Parameter：[in]lLoginID   Login handle

            [in]pTalkMode   Talkback mode structure

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Set intercom audio encoding mode, users can not set, the default is G711A encoding.

3.13 Recording Mode Settings

3.13.1 Manual Recording   H264_DVR_StartDVRRecord

Function：   H264_DVR_API bool CALL_METHOD

H264_DVR_StartDVRRecord(

       long lLoginID,

       int nChannelNo,

       long lRecordType);

Parameter：[in]lLoginID   Login handle

       [in]nChannelNo   Channel number, -1 for full

                     channel, 0-n for single

                     channel

       [in]lRecordType   Video type See：

                     SDK_RecordModeTypes

Return value：Returns TRUE on success and FALSE on failure. The specific error

       code is obtained by H264_DVR_GetLastError.

Instructions：This interface is added to facilitate manual recording. You can also set

       recording to manual mode through the system configuration setting

       interface (H264_DVR_SetDevConfig).

3.13.2 Close Recording   H264_DVR_StopDVRRecord

Function：   H264_DVR_API bool CALL_METHOD

H264_DVR_StopDVRRecord(

       long lLoginID,

       int nChannelNo);

Parameter：[in]lLoginID   Login handle

       [in]nChannelNo   Channel number, -1 for full

                     channel, 0-n for single

                     channel

Return value：Returns TRUE on success and FALSE on failure. The specific error

       code is obtained by H264_DVR_GetLastError.

Instructions：This interface is added for the convenience of manually closing the video, and it can also be set to the shutdown mode through the system configuration setting interface (H264_DVR_SetDevConfig).

3.14 Setting System　Time　H264_DVR_SetSystemDateTime

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_SetSystemDateTime(

long lLoginID,

SDK_SYSTEM_TIME *pSysTime,

bool nType DEF_0_PARAM);

Parameter： [in]lLoginID　　　　　　　　Login handle

[in]pSysTime　　　　　　　　System tme ,See：

SDK_SYSTEM_TIME

[in]nType　　　　　　System time type (true - new system time)

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Set the device system time.

3.15 Armed Alarm

3.15.1 Alarm Status Acquisition　　H264_DVR_SetDVRMessCallBack

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_SetDVRMessCallBack(

fMessCallBack cbAlarmcallback,

unsigned long lUser);

Parameter： [out]cbAlarmcallback　　　　The message callback function can call back the status of the device. For example, the alarm status can be obtained

through this callback; when

set to 0, the callback is

prohibited.

    [in]lUser   User data

    typedef bool (CALL_METHOD *fMessCallBack)(

    long lLoginID,

    char *pBuf,

    unsigned long dwBufLen,

    long dwUser,

    int nType);

    [out]lLoginID   Login handle

    [out]pBuf   Callback data--

        SDK_AlarmInfo

    [out]dwBufLen   Callback data length

    [out]dwUser   Callback function parameters

    [out]nType   Type-- ALARM_TYPE

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Set the device message callback function, used to get the current status

information of the device. Regardless of the calling sequence, the SDK

does not callback by default. This callback function must first call the

alarm callback upload channel interface H264_DVR_SetupAlarmChan

to be effective, and it needs to explain the current defined alarm. Is the

callback device's current alarm message per second.

3.15.2 Setting Alarm Callback Upload Channe H264_DVR_SetupAlarmChan

Function：   H264_DVR_API long CALL_METHOD

H264_DVR_SetupAlarmChan(

    long lLoginID);

Parameter：[in]lLoginID   Login handle

Return value：1 means success, 0 means failure. The specific error code is obtained by

H264_DVR_GetLastError.

Instructions：Begin to subscribe to a device message, used to set whether the device

message callback, the message obtained from the

H264_DVR_SetDVRMessCallBack set callback.

3.15.3 Turning Off the Alarm Callback Upload Path H264_DVR_CloseAlarm Chan

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_CloseAlarmChan(

long lLoginID);

Parameter：[in]lLoginID   Login handle

Return value ：1 indicates success, less than or equal to 0 indicates failure. The specific

error code is obtained by H264_DVR_GetLastError .

Instructions：Stop listening for messages on a device.

3.16 Monitor alarm

3.16.1 Starting Alarm Center Monitoring H264_DVR_StartAlarmCenterListen

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_StartAlarmCenterListen(

int nPort,

fMessCallBack cbAlarmCenter,

unsigned long dwDataUser);

Parameter：[in]nPort   Listening port number

[out]cbAlarmCenter   Data callback

[in]dwDataUser   Callback parameters

typedef bool (CALL_METHOD *fMessCallBack)(

long lLoginID,

char *pBuf,

unsigned long dwBufLen,

long dwUser,

int nType

);

[out]lLoginID	Login handle
[out]pBuf	Callback data - SDK_AlarmInfo
[out]dwBufLen	Callback data length
[out]dwUser	Callback function parameters
[out]nType	Type-- ALARM_TYPE

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions ： Before opening the alarm center, you need to call the interface (H264_DVR_SetDevConfig) to set the computer address for monitoring the device alarm. Corresponding configuration command E_SDK_CONFIG_ALARM_CENTER, structure SDK_NetAlarmServerConfigAll.

3.16.2 Turning off Alarm Center Monitoring H264_DVR_StopAlarmCenterListen

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_StopAlarmCenterListen();

Parameter：null

Return value：null

Instructions：Turn off alarm center monitoring.

3.17 Get device operating status information H264_DVR_GetDVRWorkState

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_GetDVRWorkState(

long lLoginID,

SDK_DVR_WORKSTATE *pWorkState);

Parameter：[in]lLoginID   Login handle

[out]pWorkState   The   working   status   of   the
equipment-SDK_DVR_WORKSTATE

Return value：Returns TRUE on success and FALSE on failure. The specific error
code is obtained by H264_DVR_GetLastError.

Instructions：Get device working status information.

3.18 Network alarm   H264_DVR_SendNetAlarmMsg

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_SendNetAlarmMsg(

long lLoginID,

SDK_NetAlarmInfo *pAlarmInfo);

Parameter：[in]lLoginID   Login handle

[in]pAlarmInfo   Network alarm parameters -- SDK_NetAlarmInfo

Return value：Returns TRUE on success and FALSE on failure. The specific error
code is obtained by H264_DVR_GetLastError.

Instructions：Send network alarm information.

3.19 Disk Management   H264_DVR_StorageManage

Function： H264_DVR_API int CALL_METHOD H264_DVR_StorageManage(

long lLoginID,

SDK_StorageDeviceControl *pStorageCtl);

Parameter：[in]lLoginID   Login handle

[in]pStorageCtl   Operating parameters- SDK_StorageDeviceControl

Return value：1 indicates success, less than or equal to 0 indicates failure. The
specific error code is obtained by H264_DVR_GetLastError .

Instructions：Disk management.

3.20 Device capture　　　　　H264_DVR_CatchPic

Function： H264_DVR_API bool CALL_METHOD H264_DVR_CatchPic(

long lLoginID,

int nChannel,

char *sFileName,

int nType DEF_0_PARAM);

Parameter：[in] lLoginID　　　　　　Login handle

　　　　[in]nChannel　　　　　　　Controlled device channel

number

　　　　[in] sFileName　　　　　The name of the picture to be saved, full

path

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions： 1. The device configuration is required to have a screenshot

configuration option for this interface to be effective;

2. If it satisfies 1, the default resolution is D1. If you need to capture

the same resolution as the video resolution, you need to modify

the resolution in the encoding settings. If the encoding setting

does not have a resolution option, you need custom support. The

program of this item.

3.21 Transparent serial port

3.21.1 Creating a Transparent Serial Port Channel H264_DVR_OpenTrans
ComChannel

Function：H264_DVR_API bool CALL_METHOD

H264_DVR_OpenTransComChannel(

long lLoginID,

TransComChannel *TransInfo,

fTransComCallBack cbTransCom,

unsigned long lUser);

Parameter：[in]lLoginID   Login handle

[in]TransInfo   Serial port parameters, refer to TransComChannel

[in]cbTransCom   Callback

typedef void (CALL_METHOD *fTransComCallBack) (

long lLoginID,

long lTransComType,

char *pBuffer,

unsigned long dwBufSize,

unsigned long dwUser

);

[out]lLoginID   Login handle

[out]lTransComType   Serial port type, see SERIAL_TYPE

[out]pBuffer   Callback data buffer

[out]dwBufSize   Callback data length

[out]dwUser   User data

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions ：   Create a transparent serial channel.

3.21.2 Writing Data to the Device Through the Serial Port   H264_DVR_ SerialWrite

Function：   H264_DVR_API bool CALL_METHOD H264_DVR_SerialWrite(

long lLoginID,

SERIAL_TYPE nType,

char *pBuffer,

int nBufLen);

Parameter：[in] lLoginID   Login handle

[in] nType   See SERIAL_TYPE for details

[int] pBuffer   Data buffer

[in] nBufLen   The length of the data buffer

Return value： Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Write data to the device through the serial port.

3.21.3 Reading Data from the Device Through the Serial Port H264_DVR_Serial Read

Function： H264_DVR_API bool CALL_METHOD H264_DVR_SerialRead(

long lLoginID,

SERIAL_TYPE nType,

char *pBuffer,

int nBufLen,

int *pReadLen);

Parameter：[in] lLoginID   Login handle

[in] nType   See SERIAL_TYPE for details

[out] pBuffer   Read data after the buffer

[in] nBufLen   Data length in the buffer

[out] pReadLen   Actual received length

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Reading Data from the Device Through the Serial Port.

3.21.4 Disabling Transparent Serial Port Channels H264_DVR_CloseTransCom Channel

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_CloseTransComChannel(

long lLoginID,

SERIAL_TYPE nType);

Parameter： [in]lLoginID   Login handle

[in]nType   See SERIAL_TYPE for details

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：Close the transparent serial port channel.

3.22 Client recording

3.22.1 Starting Local Recording   H264_DVR_StartLocalRecord

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_StartLocalRecord(

long lRealHandle,

char* szSaveFileName,

long type=0);

Parameter： [in]lRealHandle   Play handle（H264_DVR_RealPlay return value）

[in]szSaveFileName   Save route

[in]type   Recording type: (0: file name suffix is .h264; 2: file name suffix .avi), the default is 0;

Return value：Returns TRUE on success and FALSE on failure. The specific error code is obtained by H264_DVR_GetLastError.

Instructions：PC end video for preview.

3.22.2 Turning Off Local Recording　　　H264_DVR_StopLocalPlay

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_StopLocalRecord(

　　　　long lRealHandle);

Parameter：[in]lRealHandle　　　　　Play handle（H264_DVR_RealPlay return

value）

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Stop the PC video.

3.23 Client audio

3.23.1 Turning on Audio on the Video Channel　H264_DVR_OpenSound

Function： H264_DVR_API bool CALL_METHOD H264_DVR_OpenSound(

long lHandle);

Parameter：[in]lHandle　　　　　　　　H264_DVR_RealPlay　　or

H264_DVR_StartLocalPlay　or

H264_DVR_PlayBackByName

or

H264_DVR_PlayBackByTimeE

x return value

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Turn on the audio of the video channel.

3.23.2 Turning Off Audio on the Video Channel H264_DVR_CloseSound

Function： H264_DVR_API bool CALL_METHOD H264_DVR_CloseSound(

long lHandle);

Parameter：[in]lHandle   H264_DVR_RealPlay   or

H264_DVR_StartLocalPlay   or

H264_DVR_PlayBackByName

or

H264_DVR_PlayBackByTimeE

x return value

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instruction：Turn off the audio of the video channel.

3.24 Play positioning

3.24.1 Get Playback Position (Percentage)   H264_DVR_GetPlayPos

Function：   H264_DVR_API float CALL_METHOD H264_DVR_GetPlayPos(

long lPlayHandle);

Parameter：[in] lPlayHandle   H264_DVR_StartLocalPlay   or

H264_DVR_PlayBackByName

or

H264_DVR_PlayBackByTimeE

x return value

Return value：Play percentage.

Instructions：Get the playback progress of playback or local playback. The interface
handle is valid when playback.

3.24.2 Setting Playback Position (Percentage) H264_DVR_SetPlayPos

Function：   H264_DVR_API bool CALL_METHOD H264_DVR_SetPlayPos(

long lPlayHandle,

float fRelativPos);

Parameter：[in] lPlayHandle   H264_DVR_StartLocalPlay   or

H264_DVR_PlayBackByName

or

H264_DVR_PlayBackByTimeE

x return value

[in]fRelativPos   Play percentage

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Sets the playback progress of playback or local playback. This interface

is valid only when transmitting the window handle during playback.

3.25 Setting Info Frame Callbacks H264_DVR_SetInfoFrameCall

Back

Function：   H264_DVR_API bool CALL_METHOD

H264_DVR_SetInfoFrameCallBack(

long lPlayHandle,

InfoFramCallBack callback,

long user);

Parameter：[in] lPlayHandle   H264_DVR_RealPlay   or

H264_DVR_StartLocalPlay   or

H264_DVR_PlayBackByName

or

H264_DVR_PlayBackByTimeE

x return value

[in]callback   Callback

[in] user   User-defined data

typedef void (CALL_METHOD   *InfoFramCallBack)(

long lPlayHand,

long nType,

LPCSTR pBuf,

long nSize,

long nUser);

[out]lPlayHand   Play handle

[out]nType   Data type - temporarily do not need to judge

[out]pBuf   Callback data

[out]nSize   Callback data length

[out]nUser   User callback parameters

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by <u>H264_DVR_GetLastError</u>.

Instructions：Set information frame callbacks.

3.26 Client video color

3.26.1 Get Play Color Information   H264_DVR_LocalGetColor

Function：   H264_DVR_API bool CALL_METHOD H264_DVR_LocalGetColor(

long lHandle,

DWORD nRegionNum,

LONG *pBrightness,

LONG *pContrast,

LONG *pSaturation,

LONG *pHue);

Parameter：[in] lHandle   H264_DVR_RealPlay   or

H264_DVR_StartLocalPlay   or

H264_DVR_PlayBackByName

or

H264_DVR_PlayBackByTimeE

x return value

[in]nRegionNum	Area (temporary: can be set to 0)
[out]pBrightness	Brightness
[out]pContrast	Contrast
[out]pSaturation	Saturation
[out]pHue	Chroma

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Get playback video color information.

3.26.2 Setting Play Color Information   H264_DVR_LocalSetColor

Function：   H264_DVR_API bool CALL_METHOD H264_DVR_LocalSetColor(

long lHandle,

DWORD nRegionNum,

LONG nBrightness,

LONG nContrast,

LONG nSaturation,

LONG nHue);

Parameter：	[in] lHandle	H264_DVR_RealPlay or H264_DVR_StartLocalPlay or H264_DVR_PlayBackByName or H264_DVR_PlayBackByTimeEx return value
	[in]nRegionNum	Area (temporary: can be set to 0)
	[in]nBrightness	Brightness
	[in]nContrast	Contrast
	[in]nSaturation	Saturation
	[in]nHue	Chroma

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Set playback video color information.

3.27 Playing Client Local Files

3.27.1 Playing Local Files   H264_DVR_StartLocalPlay

Function： H264_DVR_API long CALL_METHOD H264_DVR_StartLocalPlay(

char*pFileName,

void* hWnd,

fPlayDrawCallBack drawCallBack=0,

long user=0);

Parameter：[in]pFileName   Play file name

[in]hWnd   Play window handle

[in]drawCallBack   Callback function (can not be set to

NULL)

[in]user   User-defined data

typedef void (CALL_METHOD * fPlayDrawCallBack)(

long lPlayHand,

HDC hDc,

long nUser);

[out]lPlayHand   Play handle

[out]hDc

[out]nUser   Callback parameters

Return value：Failed to return 0, successfully returned to the playback ID (local
playback handle), will be used as a parameter of the relevant
function.

Instructions：Play the local .h264 video file.

3.27.2 Turning off Local Playback   H264_DVR_StopLocalPlay

Function： H264_DVR_API bool CALL_METHOD H264_DVR_StopLocalPlay(

long lPlayHandle

);

Parameter：[in] lPlayHandle   H264_DVR_StartLocalPlay return value

Return value：Returns TRUE on success and FALSE on failure. The specific error

    code is obtained by H264_DVR_GetLastError.

Instructions：Turn off local playback.

3.27.3 Local File Playback Callback   H264_DVR_SetFileEndCallBack

Function： H264_DVR_API bool CALL_METHOD

H264_DVR_SetFileEndCallBack(

   long lPlayHandle,

   fLocalPlayFileCallBack callBack,

   long user);

Parameter：[in]lPlayHandle   H264_DVR_StartLocalPlay return value

    [in]callBack   End callback

    [in]user   User-defined data

    typedef void (CALL_METHOD * fLocalPlayFileCallBack)(

    long lPlayHand,

    long nUser);

    [out]lPlayHand   Play handle

    [out]nUser   Callback parameters

Return value：Returns TRUE on success and FALSE on failure. The specific error

    code is obtained by H264_DVR_GetLastError.

Instructions：The end of the local file playback callback.

3.27.4 Local File Playback Control   H264_DVR_LocalPlayCtrl

Function： H264_DVR_API bool CALL_METHOD H264_DVR_LocalPlayCtrl(

   long lPlayHandle,

   SDK_LoalPlayAction action,

long lCtrlValue);

Parameter：[in]lPlayHandle　　　　　　H264_DVR_StartLocalPlay return value

[in]action　　　　　　　　See the reference：SDK_LoalPlayAction

[in]lCtrlValue　　　　　　Quick release (1, 2, 3, 4 levels), and slow

playback (1, 2, 3, 4 levels)

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Play control (play, stop, resume, fast send, slow release).

3.28 Disconnection of Detector Connection H264_DVR_SetSub DisconnectCallBack

Function： H264_DVR_API long CALL_METHOD

H264_DVR_SetSubDisconnectCallBack(

fSubDisConnectCallBack callBack,

DWORD userData);

Parameter：[in]callBack　　　Subconnection disconnect callback (see SubConnType)

[in]userData　　　　　　　　User data

typedef void (CALL_METHOD *fSubDisConnectCallBack)(

long lLoginID,

SubConnType type,

long nChannel,

long dwUser);

[out]lLoginID　　　　　　　　Login handle

[out]type　　　　　　　　Type of data --
SubConnType [out]nChannel　　　　　　Channel number

[out]dwUser　　　　　　　User parameter

Return value：1 means success, 0 means failure.

Instructions：The detector connection is abnormally disconnected.

3.29 Set keep-alive time and break detection time H264_DVR_

SetKeepLifeTime

Function： H264_DVR_API long CALL_METHOD

H264_DVR_SetKeepLifeTime(

long lLoginID,

unsigned int perKeeplifeTime,

unsigned int detectDisconTime

);

Parameter： [in]lLoginID   Login handle

[in]perKeeplifeTime   Heartbeat packet interval (in seconds)

[in]detectDisconTime   Device disconnection time (in seconds)

Return value： 1 means success, 0 means failure.

Instructions： Set keep-alive time, perKeeplifeTime: Default 1 second,

detectDisconTime (break detection time): Default 60 seconds.

3.30 Searching for Local Area Network Settings H264_DVR_Search

Device

Function： H264_DVR_API bool CALL_METHOD H264_DVR_SearchDevice(

char* szBuf,

int nBufLen,

int* pRetLen,

int nSearchTime);

Parameter： [out]szBuf   Receive buffer

[in]nBufLen   Receive buffer size

sizeof(SDK_CONFIG_NET_CO
MMON_V2)*n

[in]pRetLen   Return size

[in]nSearchTime   Waiting time

Return value：Returns TRUE on success and FALSE on failure. The specific error

code is obtained by H264_DVR_GetLastError.

Instructions：Search for devices in the LAN.

4 Error code enumeration

Error code name	Error return value	Instructions
H264_DVR_NOERROR	0	No error
H264_DVR_SUCCESS	1	Return success
H264_DVR_SDK_NOTVALID	-10000	Illegal request
H264_DVR_NO_INIT	-10001	SDK is not initialized
H264_DVR_ILLEGAL_PARAM	-10002	User parameters are invalid
H264_DVR_INVALID_HANDLE	-10003	Invalid handle
H264_DVR_SDK_UNINIT_ERROR	-10004	SDK cleanup error
H264_DVR_SDK_TIMEOUT	-10005	Waiting for timeout
H264_DVR_SDK_MEMORY_ERROR	-10006	Memory error, creating memory failed
H264_DVR_SDK_NET_ERROR	-10007	Network Error
H264_DVR_SDK_OPEN_FILE_ERROR	-10008	fail to open the file
H264_DVR_SDK_UNKNOWNERROR	-10009	unknown mistake
H264_DVR_DEV_VER_NOMATCH	-11000	Incorrect data received, possible version mismatch
H264_DVR_SDK_NOTSUPPORT	-11001	Version does not support

H264_DVR_ANAS_EXIST	-11130	NAS address already exists
H264_DVR_ANAS_ALIVE	-11131	Path is used and cannot be operated
H264_DVR_ANAS_FULL	-11132	NAS has reached the maximum supported
H264_DVR_OPEN_CHANNEL_ERROR	-11200	Failed to open the channel, it may be detected that the device is no longer online
H264_DVR_CLOSE_CHANNEL_ERROR	-11201	Failed to close the channel
H264_DVR_SUB_CONNECT_ERROR	-11202	Failed to establish media subconnection, network error or device may not be online
H264_DVR_SUB_CONNECT_SEND_ERROR	-11203	Media sub-connection communication failed, may detect that the device is no longer online
H264_DVR_NATCONNET_REACHED_MAX	-11204	Nat video link reaches maximum, no new Nat video link allowed
H264_DVR_NOTSUPPORT	-11205	Version does not support
H264_DVR_NOTVALID	-11206	The request was illegal and the primary connection may have been disconnected
H264_DVR_TCPCONNET_REACHED_MAX	-11207	Tcp video link reaches maximum, new Tcp video link is not allowed
H264_DVR_OPENEDPREVIEW	-11208	The channel has opened the preview (opening and closing of the channel needs one to one

		correspondence, and opening several times requires closing several times; the inconsistency will open the prompt for this error; prevent the client from developing the logically unreasonable design to increase the error value)
H264_DVR_NOPOWER	-11300	No permission
H264_DVR_PASSWORD_NOT_VA LID	-11301	Account password is wrong
H264_DVR_LOGIN_USER_NOEXI ST	-11302	User does not exist
H264_DVR_USER_LOCKED	-11303	The user is locked
H264_DVR_USER_IN_BLACK LIST	-11304	This user is not allowed to access (in the blacklist)
H264_DVR_USER_HAS_USED	-11305	This user is logged in
H264_DVR_USER_NOT_LOGIN	-11306	The user is not logged in
H264_DVR_CONNECT_DEVICE_E RROR	-11307	Possible device does not exist
H264_DVR_ACCOUNT_INPUT_N OT_VALID	-11308	User management input is illegal
H264_DVR_ACCOUNT_OVERLAP	-11309	Duplicate index
H264_DVR_ACCOUNT_OBJECT_ NONE	-11310	No object exists for query
H264_DVR_ACCOUNT_OBJECT_ NOT_VALID	-11311	There is no object
H264_DVR_ACCOUNT_OBJECT_I	-11312	The object is in use

N_USE		
H264_DVR_ACCOUNT_SUBSET_ OVERLAP	-11313	Subset over range (eg, group permissions exceed permission tables, user permissions exceed group permissions, etc.)
H264_DVR_ACCOUNT_PWD_NO T_VALID	-11314	Incorrect password
H264_DVR_ACCOUNT_PWD_NO T_MATCH	-11315	Passwords do not match
H264_DVR_ACCOUNT_RESERVE D	-11316	Reserved account
H264_DVR_ACCOUNT_SYS_MAI NTAIN	-11317	System maintenance cannot be logged in
H264_DVR_EE_DVR_PASSWORD _NOT_VALID2	-11318	Account password is wrong
H264_DVR_OPT_RESTART	-11400	Need to restart the application after saving the configuration
H264_DVR_OPT_REBOOT	-11401	Need to restart the system
H264_DVR_OPT_FILE_ERROR	-11402	Error writing file
H264_DVR_OPT_CAPS_ERROR	-11403	Configuration features are not supported
H264_DVR_OPT_VALIDATE_ERR OR	-11404	Configuration check failed
H264_DVR_OPT_CONFIG_NOT_E XIST	-11405	The configuration requested or set does not exist
H264_DVR_CTRL_PAUSE_ERROR	-11500	Pause failed
H264_DVR_SDK_NOTFOUND	-11501	Failed to find the

		corresponding file
H264_DVR_CFG_NOT_ENABLE	-11502	Configuration is not enabled
H264_DVR_DECORD_FAIL	-11503	Failed to decode
H264_DVR_SOCKET_ERROR	-11600	Failed to create socket
H264_DVR_SOCKET_CONNECT	-11601	Failed to connect socket
H264_DVR_SOCKET_DOMAIN	-11602	Domain name resolution failed
H264_DVR_SOCKET_SEND	-11603	Failed to send data
H264_DVR_ARSP_NO_DEVICE	-11604	Failed to get device information, device should not be online
H264_DVR_ARSP_BUSING	-11605	ARSP service is busy
H264_DVR_ARSP_BUSING_SELECT	-11606	ARSP service is busy and select fails
H264_DVR_ARSP_BUSING_RECVICE	-11607	ARSP service is busy and receive fails
H264_DVR_CONNECTSERVER_ERROR	-11608	Connection failure
H264_DVR_CONNECT_AGNET	-11609	Proxy
H264_DVR_CONNECT_NAT	-11610	Penetrate
H264_DVR_CONNECT_FAILED	-11611	Connection failed
H264_DVR_CONNECT_FULL	-11612	The server connection is full
H264_DVR_CLOUD_LOGIN_ERR	-11613	Cloud login specific error code, indicating: When login interface error=-11613, get error code through

		H264_DVR_DEVICEINFO member sCloudErrCode
H264_DVR_NO_CONNECT_FRONT	-11614	The front-end device is not connected or the resolution of the connected front-end device is unknown
H264_DVR_LOGIN_FULL	-11615	The login handle has reached its maximum value and can no longer log in
H264_DVR_ARSP_USER_NOEXIST	-11619	User does not exist
H264_DVR_ARSP_PASSWORD_ERROR	-11620	Account password is wrong
H264_DVR_ARSP_QUERY_ERROR	-11621	Query failed
H264_DVR_PIRATESOFTWARE	-11700	Equipment piracy
H264_DVR_AUTH_TIMEOUT	-11800	Authentication timeout
H264_DVR_AUTH_FILE_FAILED	-11801	Authentication file failed
H264_DVR_GAIN_LIST_TIMEOUT	-11802	Get server list timeout
H264_DVR_AUTH_CODE_ERR	-11803	Authentication code error
H264_DVR_NOENOUGH_MEMORY	-11804	Not enough storage
H264_DVR_INVALID_FORMAT	-11805	The upgrade file format is incorrect
H264_DVR_UPDATE_PART_FAIL	-11806	A partition failed to upgrade
H264_DVR_INVALID_HARDWAR	-11807	Hardware model does not

E		match
H264_DVR_INVALID_VENDOR	-11808	Customer information does not match
H264_DVR_INVALID_COMPALIBLE	-11809	The upgrade program's compatible version number is smaller than the device's existing one and does not allow the device to be upgraded back to the old program
H264_DVR_INVALID_VERSION	-11810	Illegal version
H264_DVR_INVALID_WIFI_DRIVE	-11811	The Wi-Fi driver that the Wi-Fi driver and device is currently using in the upgrade program does not match
H264_DVR_INVALID_CUR_FLASH	-11812	Upgrade program does not support Flash used by device
H264_DVR_NAT_INIT_TIMEOUT	-12000	Cloud login initialization timeout is used to distinguish general timeout conditions

5 Sample function implementation

Please see the ClientDemo program and DEMO instructions.doc.