IP Camera
User Manual

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1. JNVR

1.1. Introduction

JNVR is a video surveillance system for Windows® PC, developed by Jovision. With stable CloudSEE® network transmission technology, efficient audio and video coding system and image display technology, JNVR can provide smooth HD camera picture. This software can work perfectly with Jovision IP cameras, it can also connect IP cameras from other company through ONVIF protocol.

1.2. Features

1. Device Management: Jovision IP cameras, ONVIF IP cameras supported;
2. Screen Layout: Channel sorting, channel pop-up, multiple monitors display;
3. Recording: Regular record, scheduled record, alarm record with mp4 standard;
4. Video Adjust: Stream, bitrate, fps, video bright, video contrast adjustment supported;
5. Alarm Function: Alarm record, alarm snapshot, alarm sound, alarm E-mail;
6. Playback: Time line, fast play, snapshot, video editing supported;
7. Remote Connection: Connect cameras with CloudSEE technology.

1.3. Requirements

Operating system: Windows XP/7/8/8.1/10

Recommended Requirements:

Channels	Intel CPU	AMD CPU	Graphic	RAM	HDD*
4	Pentium G620	A6-5400+	-	1G	1T
9	Pentium G620	A6-5400+	-	2G	2T
16	Pentium G620	A6-5400+	-	2G	4T
24	I3-2105	A6-3500	HD6570/GTX 250	4G	6T
30	I5-2405	A6-5600	HD6570/GTX 250	4G	8T
36	I7-2600	A6-5800	HD6570/GTX 250	4G	10T

*: The hard disk capacity is calculated for 10 days' record storage.

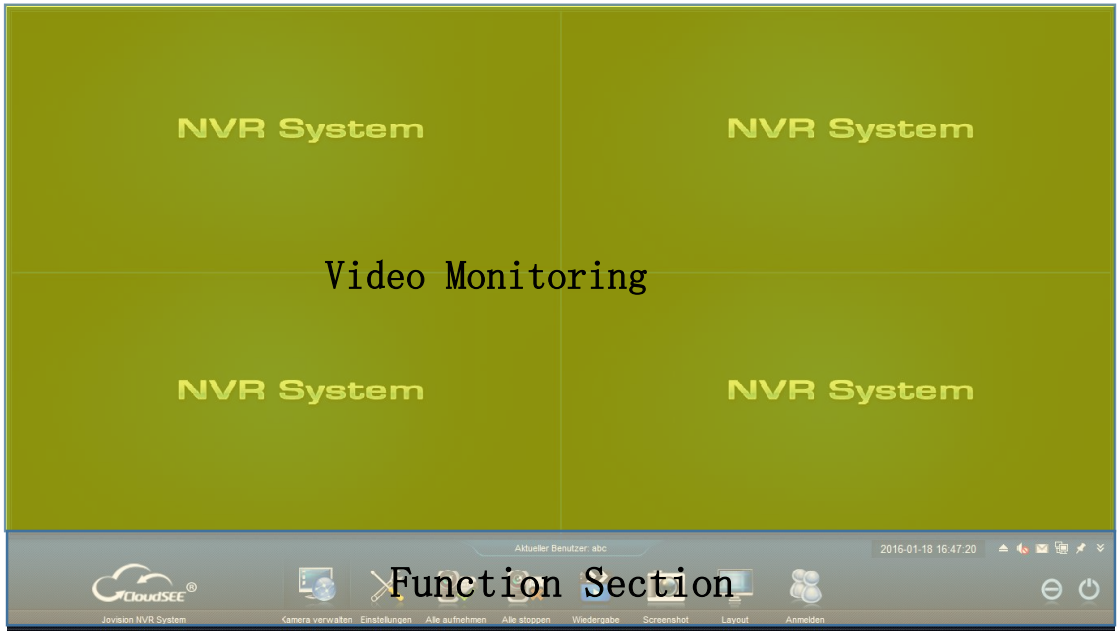
Minimum Requirements:

Channels	Intel CPU	AMD CPU
1	Celeron D series	Athlon 2800+
4	Celeron D series/E21xx	Athlon 5000+
9	Pentium E5x00	Athlon II X2 250
16	Pentium E6x00	Athlon II X4 640

2. JNVR System and Functions

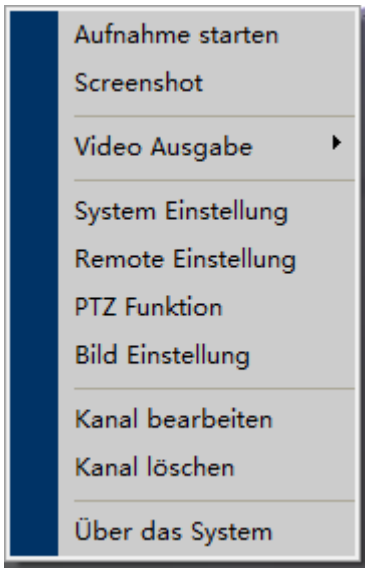
2.1. Interfaces and Menus

Main Interface:



Function Menu:

Right-Click Menu:

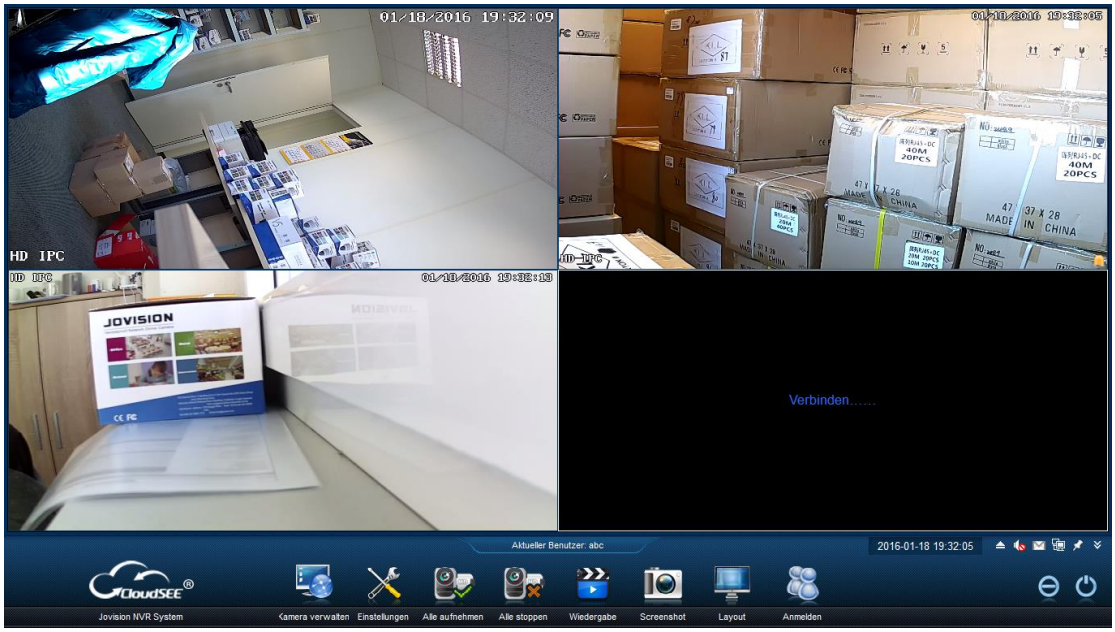


Start/Stop channel recording
Take a snapshot of this channel
Send this channel to second monitor if available
Open JNVR settings
Open camera remote settings
Use PTZ function (For PTZ camera only)
Adjust image parameters
Change channel parameters
Remove this channel and disconnect the camera
About JNVR

Icon	Description
	More functions
	Audio On/Off
	Set E-mail sender information
	Computer network information
	Hide/show function menus automatically
	Hide/show function menus manually
	Minimize JNVR
	Exit JNVR

2.2. Zero Touch IPC Connection

Make sure all the IP cameras are installed and connected properly, then run JNVR, JNVR will search and connect IP cameras automatically in LAN for the first-time-use or there is no camera added before. As shown below.

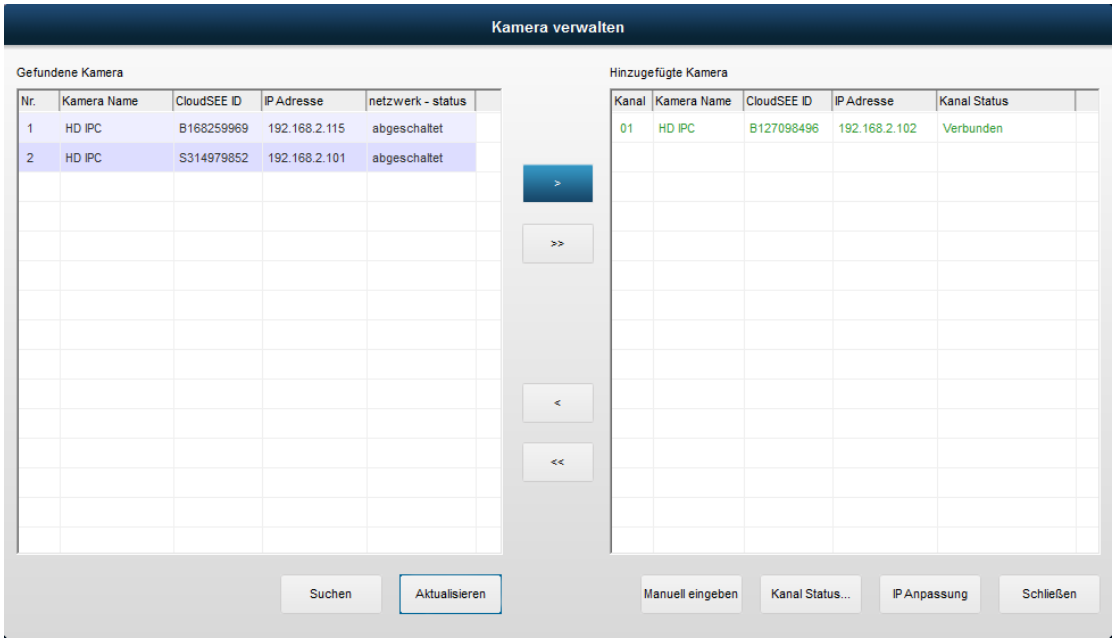


2.3. Device Management

All the IP cameras in LAN can be searched added, deleted or edited here.

2.3.1. Search and Add

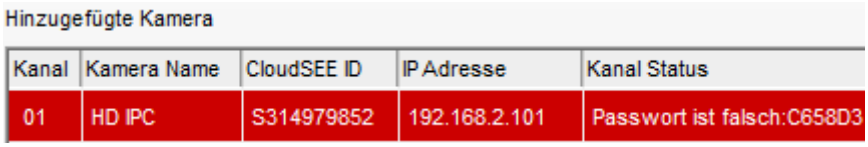
1. Run JNVR, click “Devices” icon to open IP camera management page.
2. Click “Search More” to search for all the cameras in LAN, and camera information including camera name, CloudSEE ID, IP address, Channel status are listed. As is shown below.



3. Select one camera and click > to add this camera into JNVR, you can also use >> to add all the cameras in the searching list.

Note:

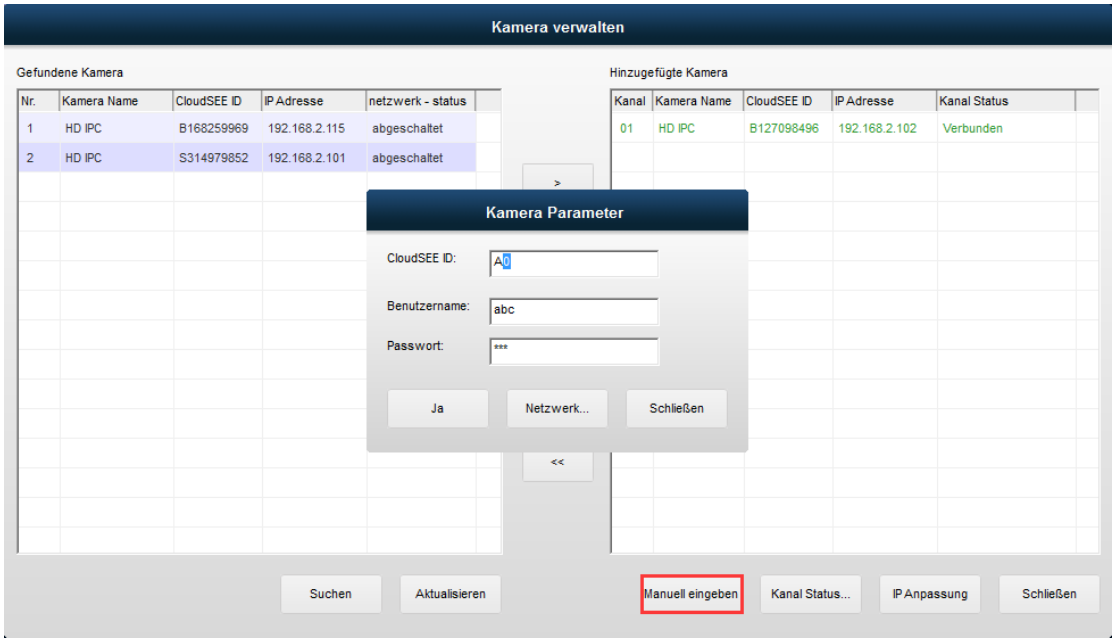
JNVR will automatically connect the added device with default network camera account (Username: abc Password: 123), if you have changed the camera access password, the device cannot be connect and show "*Wrong Password*" in ***Channel Status***. Double click the camera name, and input correct username and password, click OK, the camera will be connected automatically.



2.3.2. Add Camera Manually

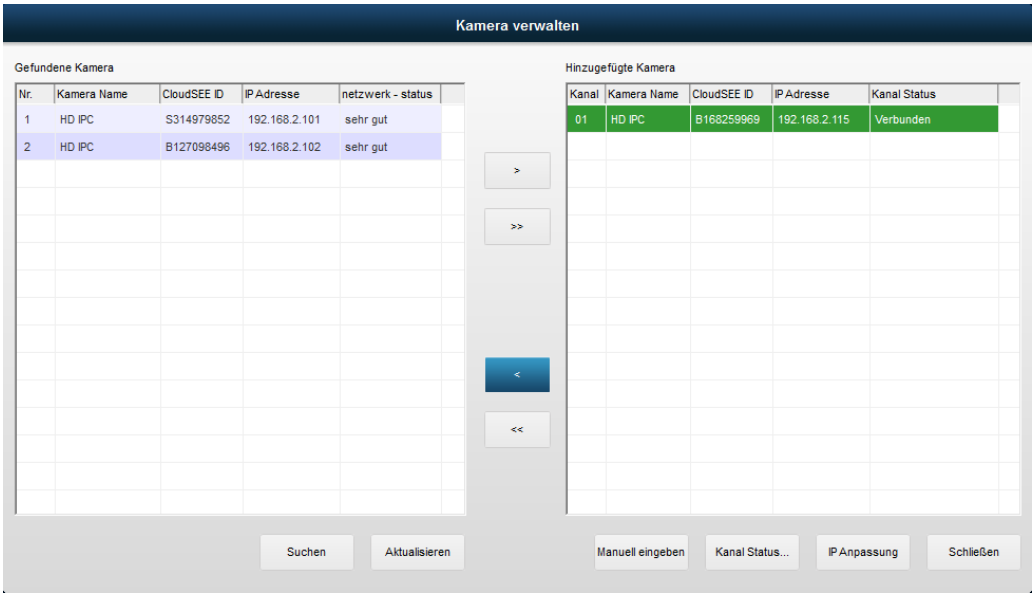
The previous part *2.3.1 Search and Add* described how to search and add cameras in the same LAN. If the camera is not in the same LAN with your PC and has been connected to Internet, you can manually add this camera with CloudSEE ID.

Click "Manually add", input the CloudSEE ID, username and password, click "OK", then the camera will be added.



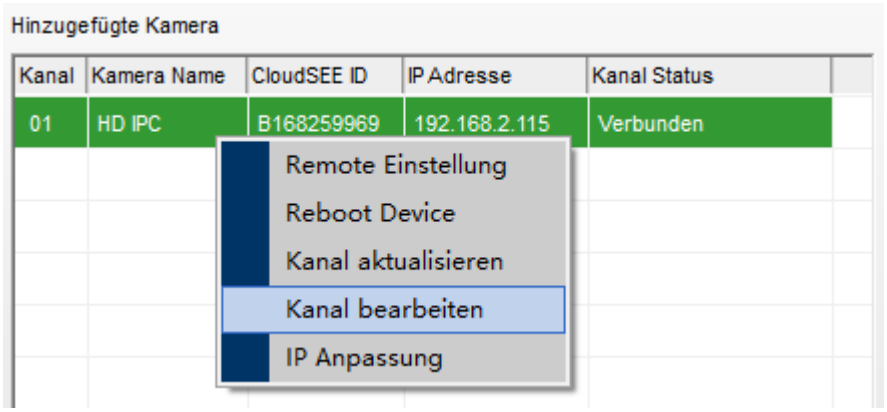
2.3.3. Remove Camera

Select one added camera and click < to remove the camera from the connected list. Click << to remove all the connected camera.



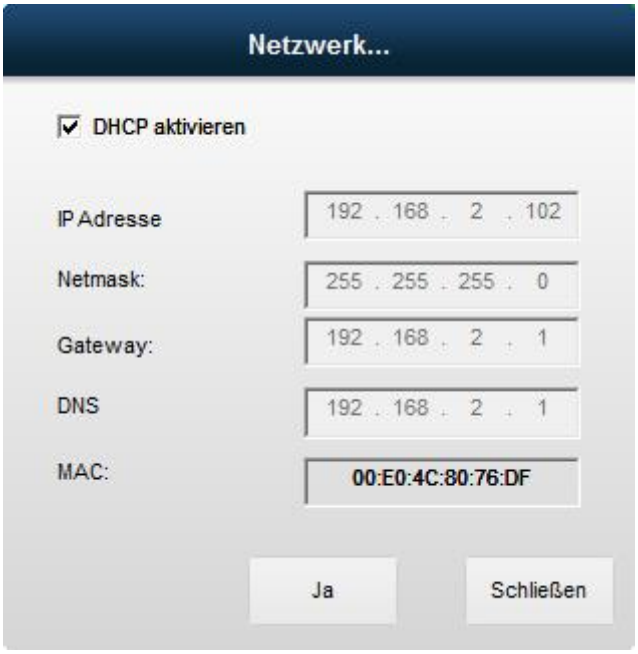
2.3.4. Modify Channel

1. Select one added camera and right click in the connected list, click “Modify Channel”.



2. The device parameters dialog box will appear, you can input camera access account here.

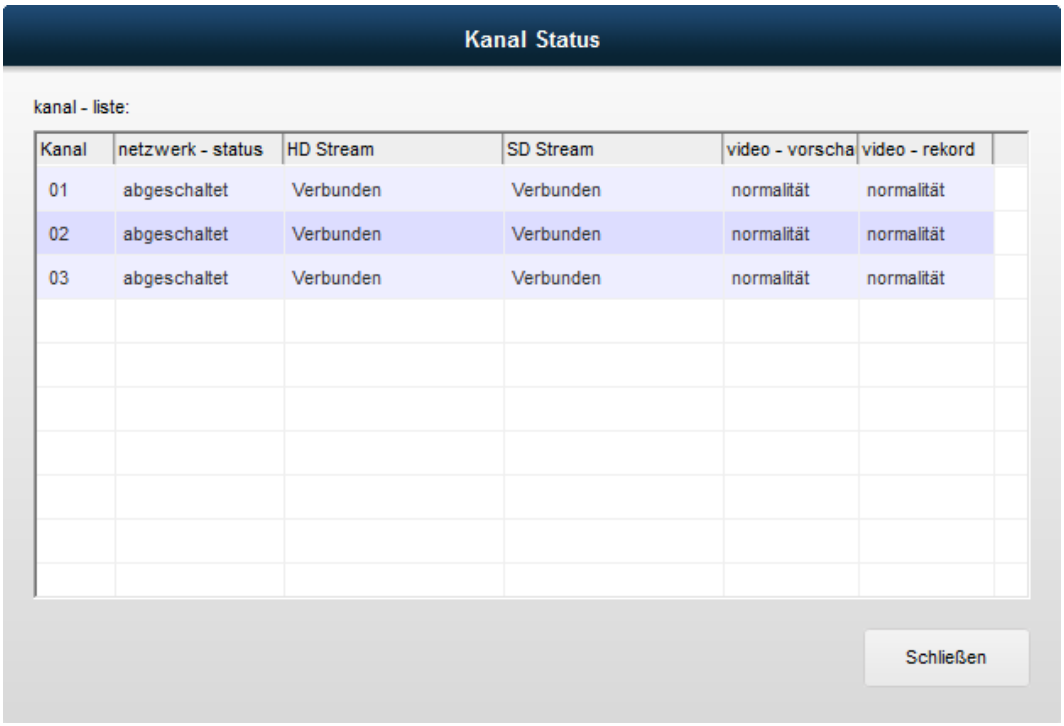
3. Click “Network” to open network settings dialog box. You cannot change network parameters if DHCP function is enabled, all the parameters are from router. If you disabled DHCP function, you can change camera’s IP, mask, gateway, or DNS according to your needs.



2.3.5. Channel Status

Camera information including network status, HD stream, SD stream, real-time video and record. The information can help you to locate the problem and troubleshoot the problem.

Click “Channel Status” in device management page to view the status.



Network Status

No.	Status	Description
1	Very Good	The camera connection is very good
2	Good	The camera connection is good
3	General	The camera connection is not bad
4	Bad	Bad connection, need to check network
5	Very Bad	Bad connection, need to check network
6	Disconnected	The camera has disconnected, need to check network error
7	Inspecting	JNVR is detecting the connection, please wait

Stream Status

No.	Status	Description
1	Connecting	JNVR is connecting the camera
2	Connected	The camera has been connected in JNVR
3	Wrong Password	The camera cannot be connected due to wrong password
4	Timeout	The camera cannot be connected, troubleshooting is needed
5	Rebooting	The camera is rebooting.
6	Service Broken	The camera cannot be displayed, troubleshooting is

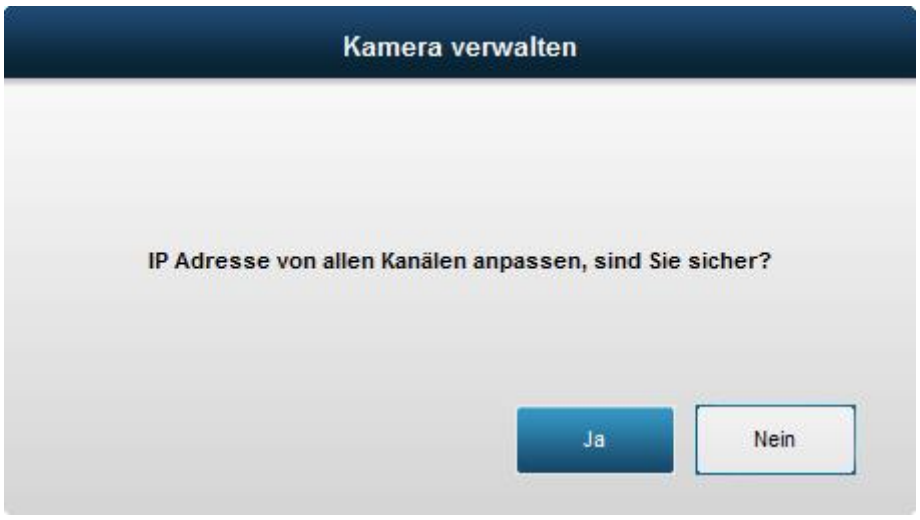
		needed
7	Connection Limited	Too many clients are connecting this camera, remote connection limitation is reached, please disconnect the camera on other clients.

Video Preview/Record

No.	Status	Description
1	Preview Normal	Real-time video is displaying in JNVR
2	Preview Abnormal	When encounter this information, please try the following instructions: ① Remove the camera and add it again ② Make sure the connection is good.
3	Record Normal	The video is recording and can be checked in playback
4	Record Abnormal	When encounter this problem, please try the following instructions: ① Enable record function manually ② Make sure the hard disk is well connected and can work.
5	Inspecting	JNVR is detecting the status, please wait

2.3.6. Set Auto IP

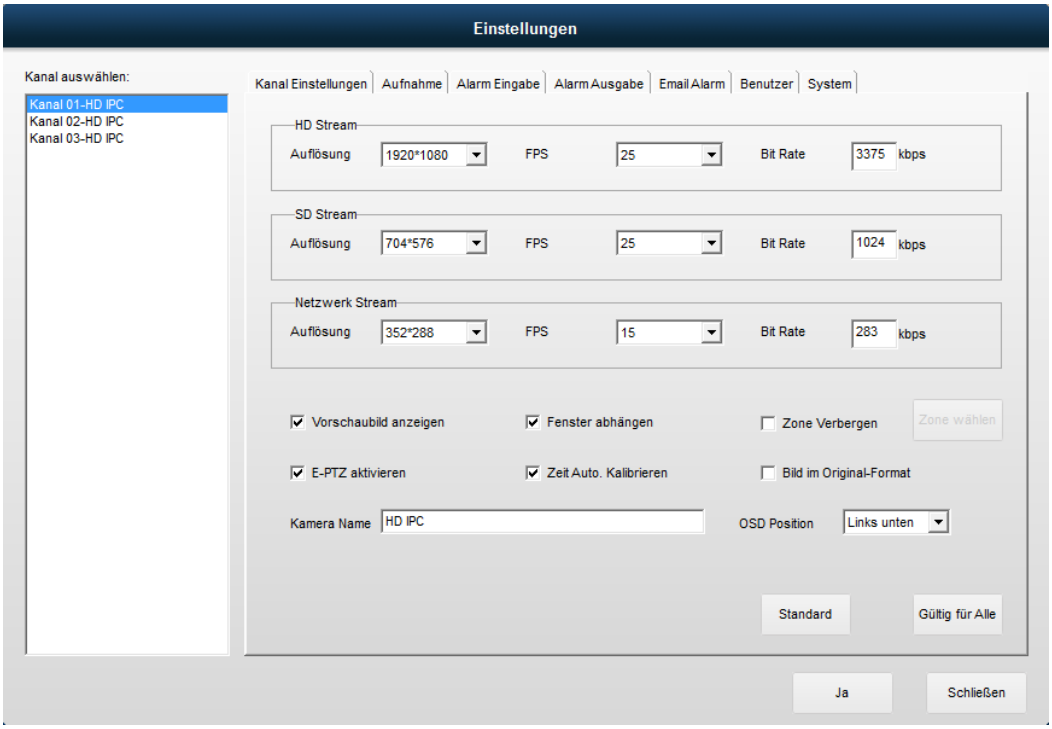
This function can solve IP conflict and IP error by re-assigning IP for all the cameras. If there is IP conflict or IP error problem, please click “Set AutoIP” in device management page, JNVR will prompt that “Are you sure to set AutoIP for all Channels?”, click OK to confirm.



2.4. JNVR Settings

2.4.1. Channel Setting

Click “Setting” icon in function menu and setting page will appear. Select “Channel Setting” tab. You can access video stream settings, OSD settings, privacy mask function, pop-up function, etc.
Please select a channel in channel list on the left first, and then set the parameters for the channel. You can use different settings for each channel.



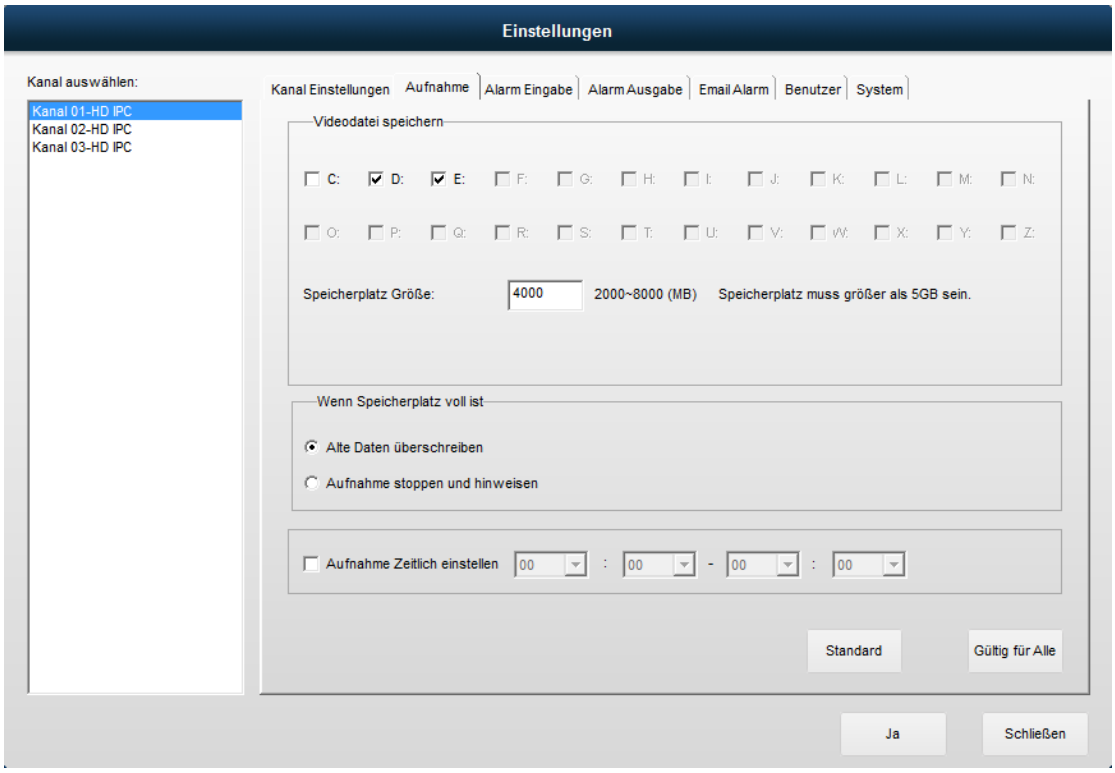
Item	Description	Note
HD Stream	Used for recording	
SD Stream	Used for remote connection	
Network Stream	Used for mobile phone app	
Resolution	Resolution is the width and height dimensions of the camera imaging in pixels. A higher display resolution in a display of the same size means that displayed content appears sharper.	Users can set the resolution for each stream and each channel.
FPS	Frame rate, also known as frame frequency, is the frequency (rate) at which an imaging device displays consecutive images called frames. The higher frame rate is, the more consecutive video becomes.	Users can set the FPS for each stream and each channel.
Bitrate	Bitrate is the average number of bits per	Users can set

	second passing between camera and JNVR. A higher bitrate means that the stream quality is better but which will use more bandwidth and storage space.	the FPS for each stream and each channel.
Previewing	Real-time video will be displayed in main interface when enabled. Otherwise, the channel will display "Connected" only.	The record and snapshot function can work normally whether preview is enabled or not.
Pop-Up	This channel won't pop-up in new window when using pop-up function if enabled.	
Masking	Privacy mask enables you to cover certain areas on the live video to prevent certain spots in the surveillance area from being live viewed and recorded.	
Area	Click and drag the mouse in the picture to draw the mask area. You are allowed to draw up to 4 areas on the same image. Release left mouse button to finish drawing and right-click to cancel the areas. Click Save to save the settings.	Check the checkbox of Enable Masking to enable this.
E-PTZ	If E-PTZ is enabled, you can select a real-time video channel and use mouse wheel to zoom in the video. Use left button to drag the picture to see other area.	
Time Checking	Camera time will be synchronized with JNVR time when connected in JNVR if this checkbox is enabled.	
Keep Scaling	Use original width to height ratio video for real-time display and recording.	
Channel Name	You can define a name for the camera which will be displayed on the video.	Max. 16 characters
OSD Location	Change the position of OSD displaying, there are five modes: up-left, up-right, down-left, down-right, and hide OSD.	
Default	Reset all the settings to default.	
Apply to All	Apply current channel settings to all channels	

2.4.2. Record Setting

Click “Setting” icon in function menu and setting page will appear. Select “Alarm in” tab. You can choose record partition, use scheduled recording mode, etc.

Please select a channel in channel list on the left first, and then set the parameters for the channel. You can use different settings for each channel.



Item	Description	Note
File Storage	Choose the partitions for this channel in which video files will be stored.	Partition C is unselected by default, and partitions with less than 5GB free space is not selectable.
Reserved Disk Space	JNVR will overwrite or stop recording when the free space of a partition is less than the value you set	The range is 2G~8G.
Packing Time	Recording files are packed every 30 minutes by default	You can choose 10~60 minutes as packing time
Overwrite Previous Records	When there is no available disk space, JNVR will overwrite	

	earliest records.	
Stop Recording and Remind user	When there is no available disk space, JNVR will stop recording and prompt.	
Enable Scheduled Recording	Set a time period during which the channel will record.	
Default	Reset all the settings to default.	
Apply to All	Apply current channel settings to all channels	

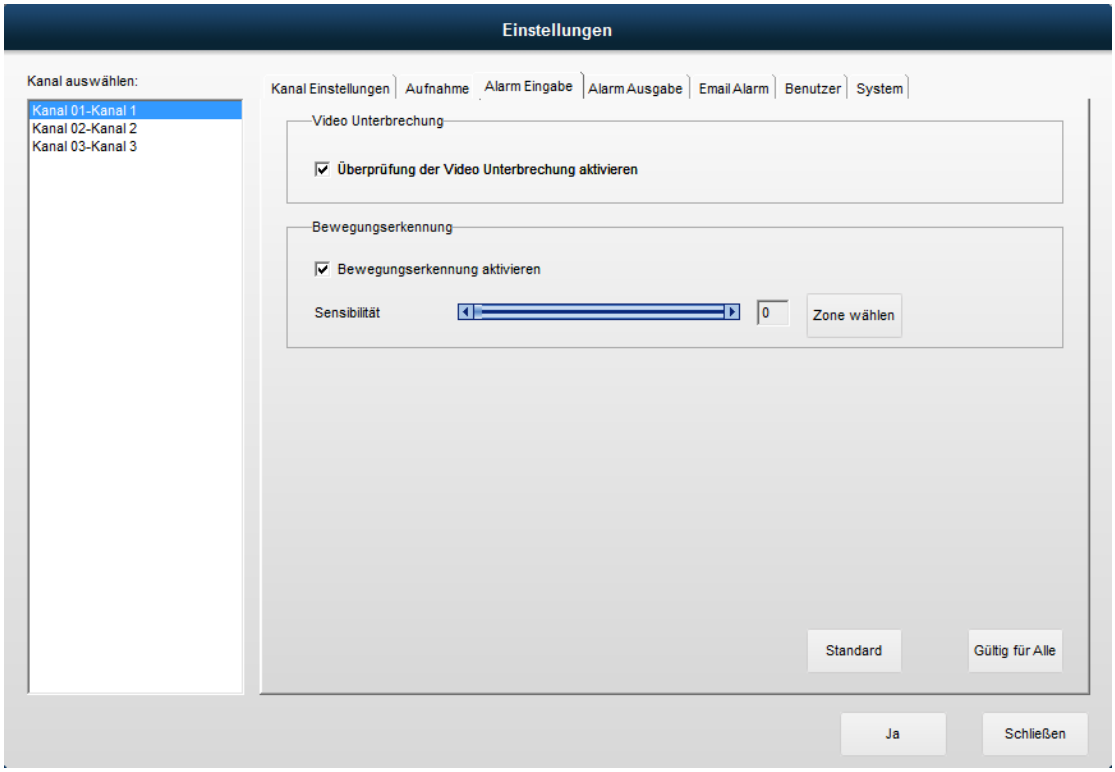
2.4.3. Alarm Input and Alarm Output

This section explains how to configure JNVR to respond to alarm events, including motion detection, video lost. These events can trigger the linkage methods, such as start record, sound alarm, etc.

Alarm input

Click "Setting" icon in function menu and setting page will appear. Select "Alarm in" tab. You can set even that can trigger the alarm.

Please select a channel in channel list on the left first, and then set the parameters for the channel. You can use different settings for each channel.



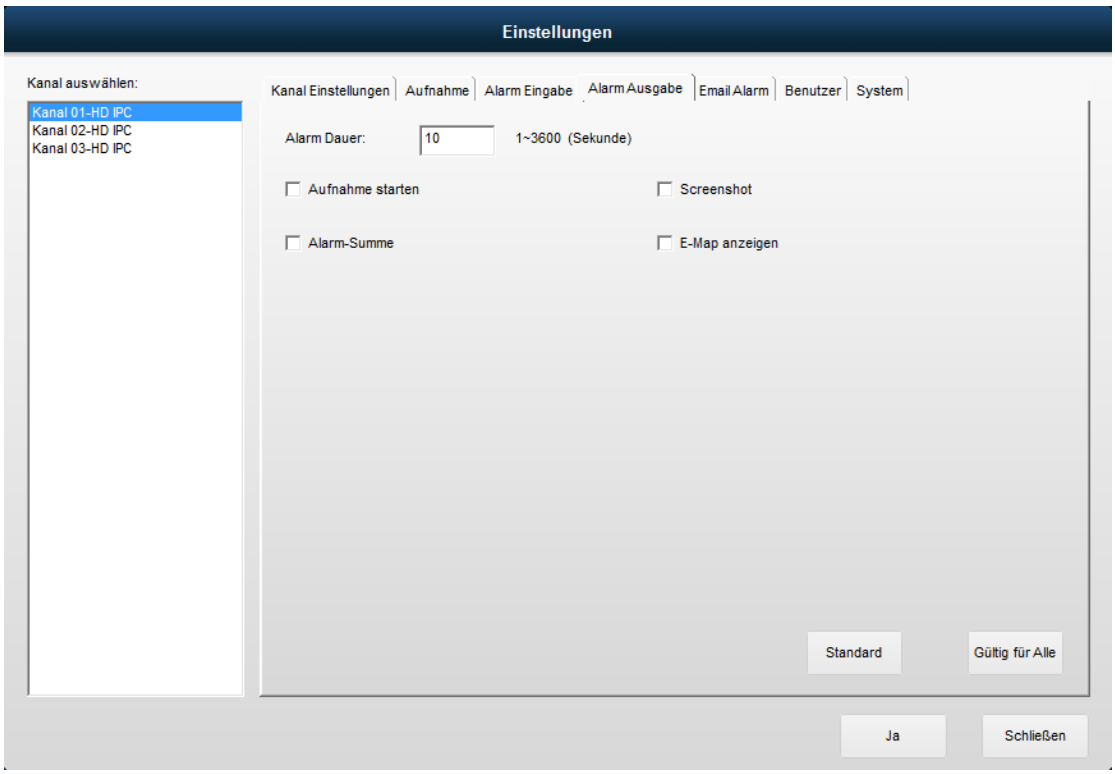
Item	Description	Note
Video Lost Detecting	When enabled, if the real time video lost or disconnected, alarm will be triggered. And JNVR will response as alarm output	

	settings	
Motion Detecting	Motion detection detects the moving objects in the configured surveillance area, and a series of actions can be taken when the alarm is triggered.	In order to detect the moving objects accurately and reduce the false alarm rate, please select detection area and sensitivity.
Sensitivity	Set the sensitivity of motion detection, drag the slider to set proper value, the higher number is, the more sensitive detection is.	
Area	Click and drag the mouse in the picture to draw the detection area. You are allowed to draw up to 4 areas on the same image. Release left mouse button to finish drawing and right-click to cancel the areas. Click Save to save the settings.	Check the checkbox of Enable Motion Detecting to enable this button.
Default	Reset all the settings to default.	
Apply to All	Apply current channel settings to all channels	

Alarm output

Click “Setting” icon in function menu and setting page will appear. Select “Alarm out” tab. Check the checkbox to select the linkage method taken for the channel alarm.

Please select a channel in channel list on the left first, and then set the parameters for the channel. You can use different settings for each channel.



Item	Description
Alarm Lasting Time	Set a time the alarm will last for when alarm is triggered, new alarm will not be triggered until previous alarm is finished.
Start Recording	JNVR will start recording when alarm is triggered.
Snapshot When Alarm Detected	JNVR will snapshot when alarm is triggered.
Alarming When Alarm Detected	JNVR will play alarm sound when alarm is triggered.
E-Map Pop-up When Alarm Detected	JNVR will pop up e-map when alarm is triggered.
Default	Reset all the settings to default.
Apply to All	Apply current channel settings to all channels

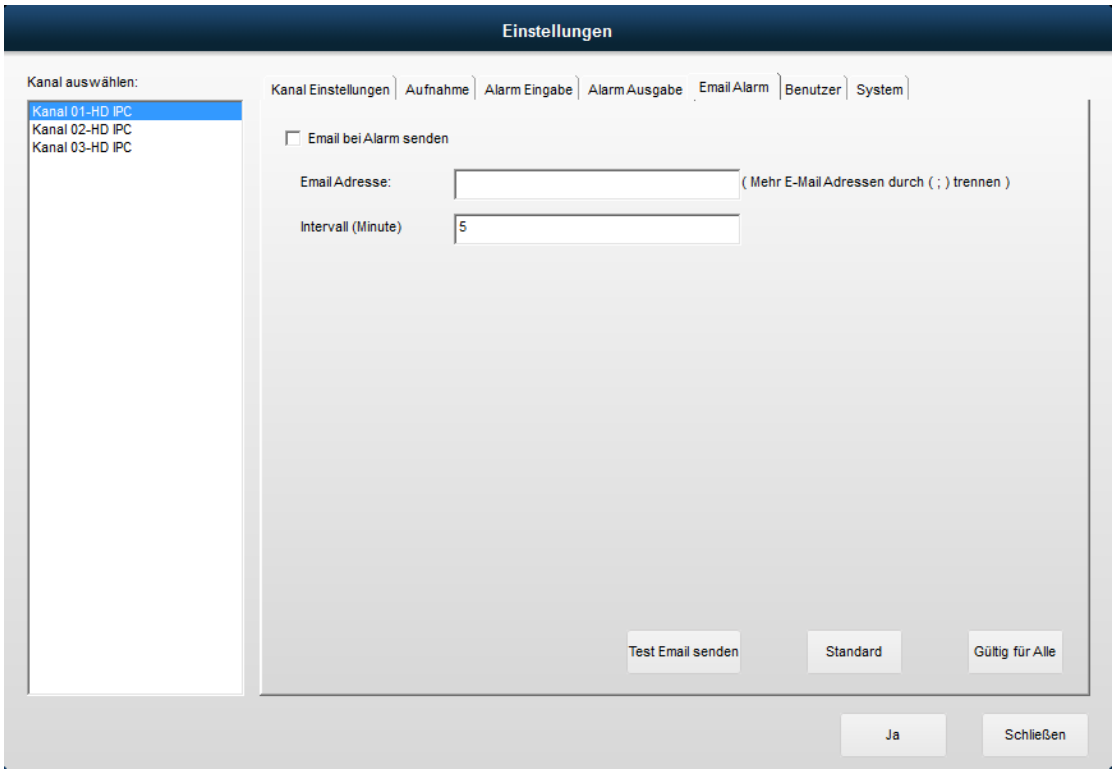
2.4.4. Alarm E-mail

There are two methods to send an alarm E-mail, JNVR alarm E-mail and IP camera alarm E-mail. JNVR alarm E-mail function is based on the JNVR software, when received alarm signal from IP camera, JNVR can send an alarm E-mail to the receiver to be notified. IP camera alarm E-mail is based on the embedded Linux system in the camera, the camera can send alarm E-mail if alarm is triggered. This section describes how to set JNVR alarm E-mail, you can refer to ***3.3.3. Alarm Parameters*** for IP camera alarm E-mail settings.

JNVR can be configured to send an Email notification to all designated receivers

if an alarm event is detected, e.g., motion detection event, video loss, etc. Click “Setting” icon in function menu and setting page will appear. Select “E-mail Alert Setting” tab.

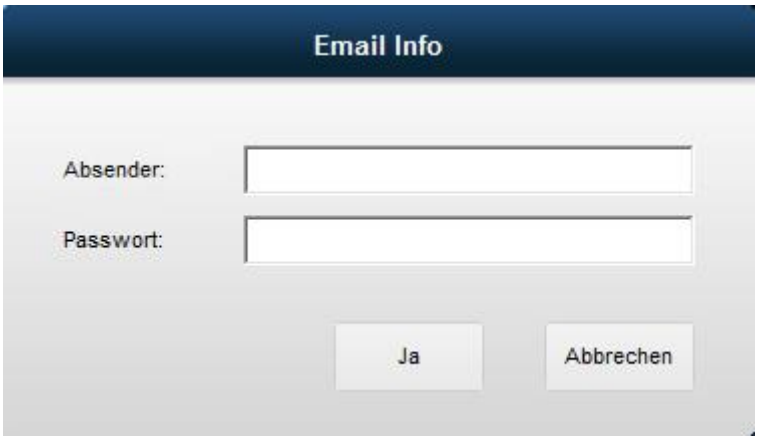
Please select a channel in channel list on the left first, and then set the parameters for the channel. You can use different settings for each channel.



Item	Description
Sending Email When Alarm Detected	Enable alarm e-mail function
Receiver Email ID	The email address of user to be notified.
Intervals(Minute)	The interval refers to the time between two actions of sending e-mails
Send Test E-Mail	Click this button to test if the e-mail parameters work well, JNVR will send a test e-mail to the email address of user to be notified.
Default	Reset all the settings to default.
Apply to All	Apply current channel settings to all channels

Note:

E-mail sender parameters must be set before using JNVR alarm E-mail function. Click E-mail icon in the bottom right corner, E-mail information dialog box will appear. Please input the E-mail address and password of the sender.

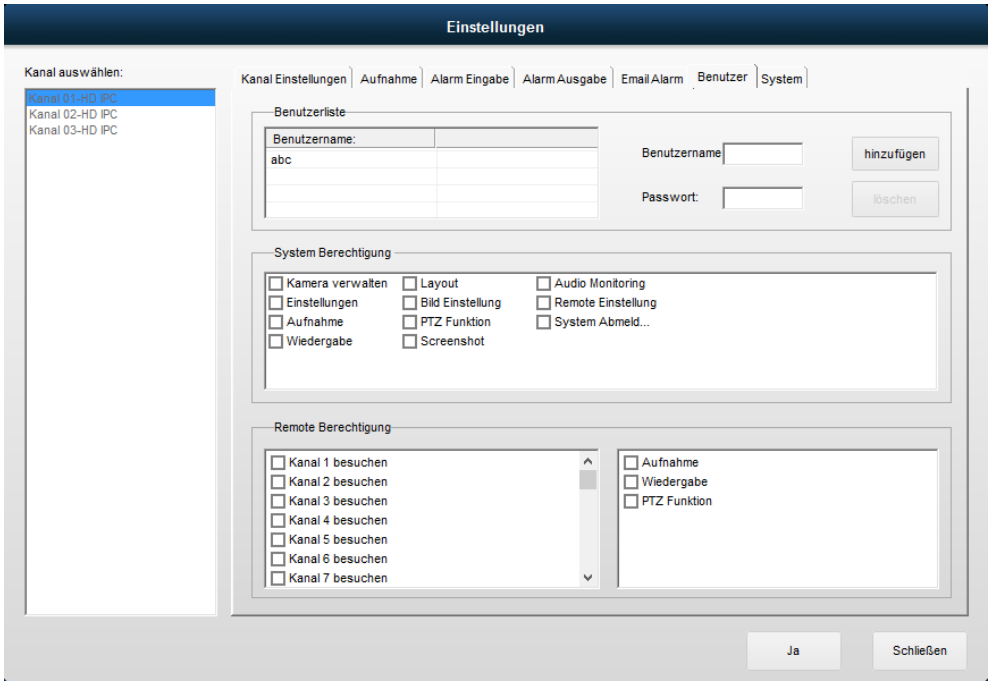


2.4.5. User Management

Click “Setting” icon in function menu and setting page will appear. Select “User Management” tab. You can create new user, edit current user, control user permissions for JNVR, etc.

Note:

This user management is for JNVR users only, if you want to manage IP camara users, please refer to *3.1.3. User Setting*



Item	Description

User List	All the JNVR users are listed here, choose one user to edit.
Username	Input new username to be created
Password	Input password for the new user; Or you can select an existing user and then input new password, click OK to change password.
Add	After input new username and password, click “Add” to create new user
Delete	Select an existing user and click “Delete” to delete this account

System Privilege

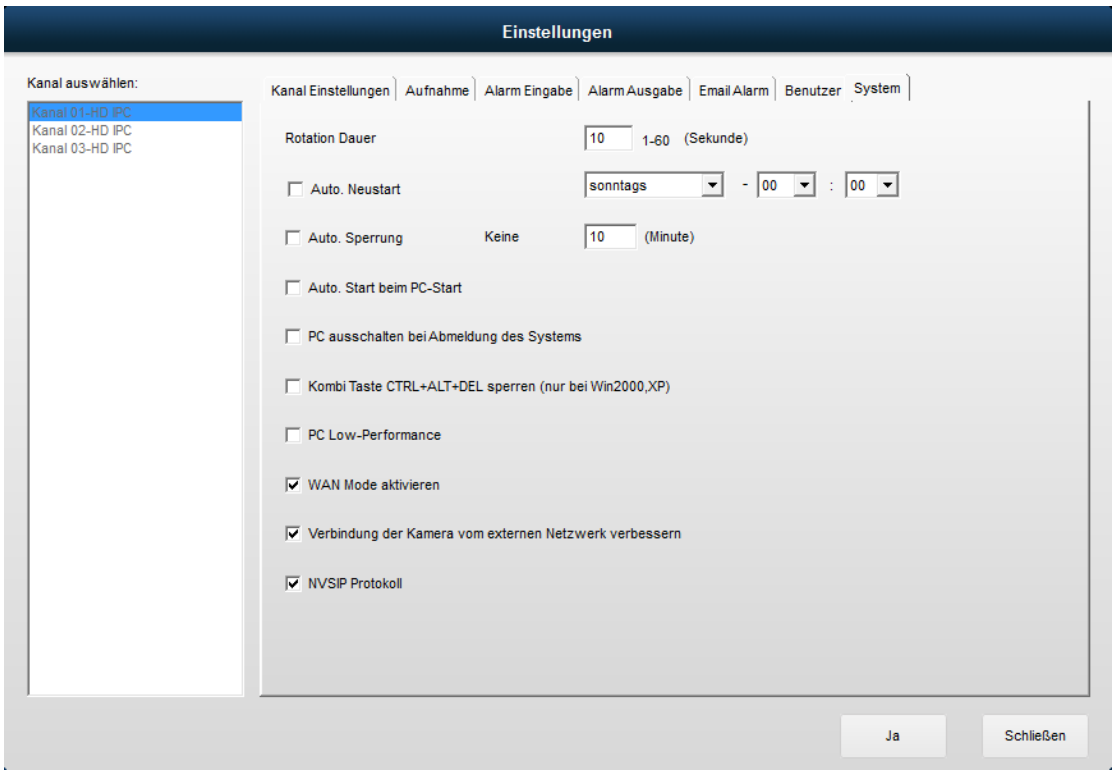
Item	Description
Devices	Users with this permission can access device management function, such as adding, deleting or editing cameras.
Settings	Users with this permission can access JNVR settings, such as channel setting, record setting, alarm in/out, user management, etc.
Record	Users with this permission can enable/disable record.
Playback	Users with this permission can access playback functions and controls
Layout	Users with this permission can change screen layout.
Image Control	Users with this permission can change image settings.
PTZ Control	Users with this permission can access PTZ function.
Snapshot Management	Users with this permission can manage snapshots.
Audio Monitoring	Users with this permission can enable audio monitoring.
Remote setting	Users with this permission can access IP camera remote settings.
Exit System	Users with this permission can exit the JNVR software.

Remote Privilege (For some models only) refer to

Item	Description
Visit Channel	User can only view and access specified channel remotely
Record	Users with this permission can enable/disable record.
Playback	Users with this permission can access playback functions and controls
PTZ	Users with this permission can access PTZ function.

2.4.6. System Setting

Click “Setting” icon in function menu and setting page will appear. Select “System” tab. You can access advances JNVR settings.

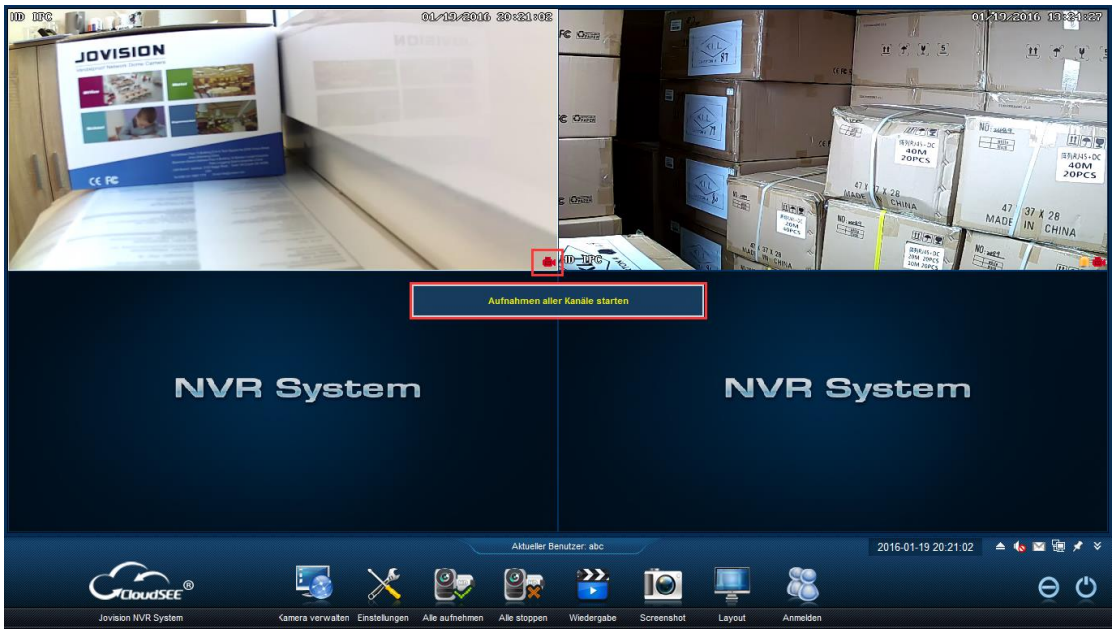


Item	Description
Sequence Interval	The interval refers to the time between two channels when enable sequence display (Channels display in turn).
Scheduled Restart	You can set a time for the camera to reboot automatically.
Auto Lock System	JNVR will be locked if there is no operation for a certain time, Users need to unlick JNVR with correct password.
Auto-Run	Start JNVR with Windows
Shutdown the PC When Exiting System	Windows will power off after exiting JNVR.
Disable CTRL+ALT+DEL	Disable CTRL+ALT+DEL command. Support Windows 2000/XP only.
Low-Performance PC Mode	Improve video fluency on some old PC.
Enable WAN Mode	You can add and connect cameras out of the LAN by CloudSEE ID.
Smooth mode on the Internet	JNVR will adjust the stream of cameras according to the network condition. This may lower video quality.
NVSIP Protocol	Enable NVSIP protocol to improve the compatibility with cameras from other company.

2.5. Recording

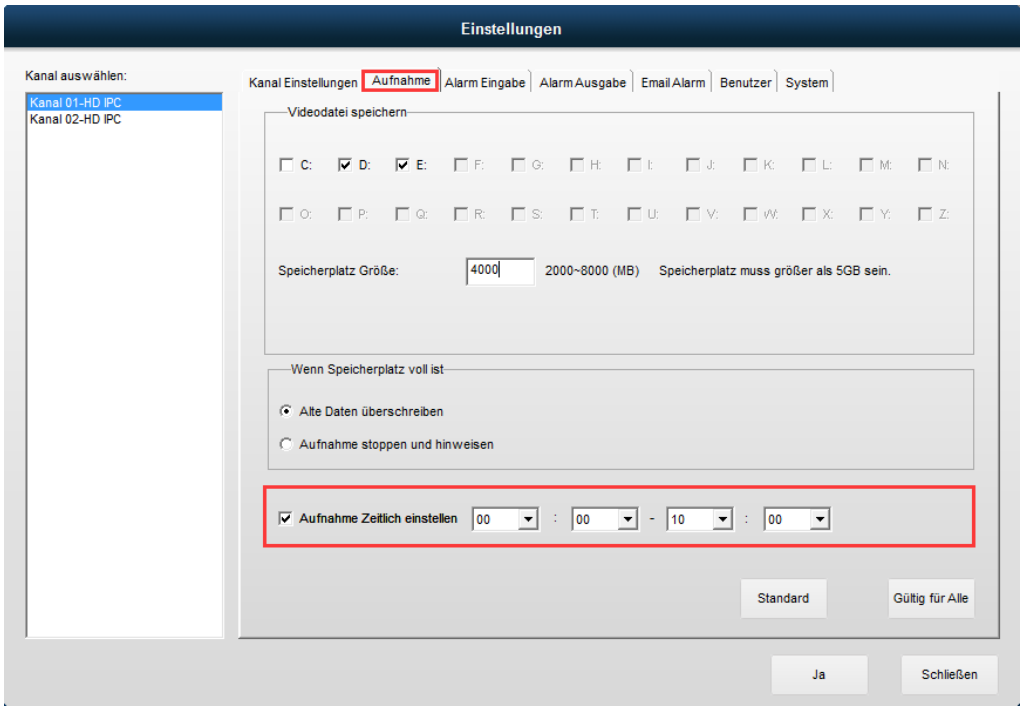
2.5.1. Manual Recording

Right click on the real time video, select “Start Recording” to start recording for this channel; Click “Record All” icon to start record for all the channels. If the channel is recording, there will be a recording icon showing in the channel window. You can use “Stop Recording” in right click menu or “Stop All Recording” in function menu to stop current record task.



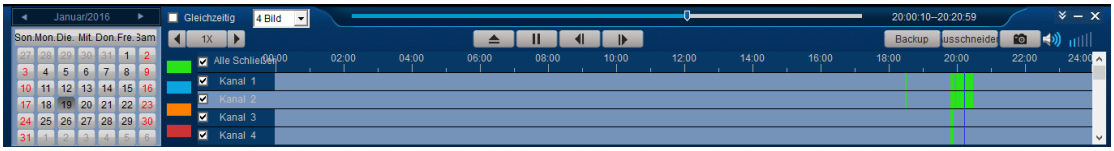
2.5.2. Scheduled Recording

Click “Setting” icon - Record Setting - Enable Scheduled Recording, check the checkbox and set a period to start channel recording.



2.5.3. Playback

1. Click “Playback” icon to open playback interface.
2. Choose record date and check the channel number to start playback.

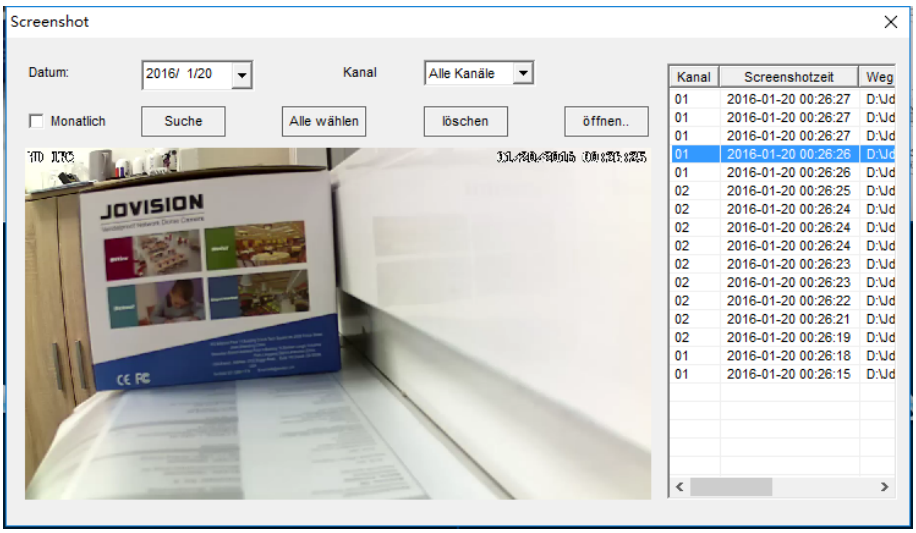


Button	Description	Button	Description
Gleichzeitig	Apply operations to all channels	4 Bild	4/9/16 CH playback screen layout supported.
	Hide Panel/ Minimize/ Close	1X	1/16X, 1/8X, 1/4X, 1/2X, 1X, 2X, 4X, 8X, 16X Play speed.
	Open video file		Play
	Pause		Backward
	Forward	Backup	Backup video files
usschneider	Edit video file		Snapshot
	Enable audio/volume		Disable audio

2.6. More Functions

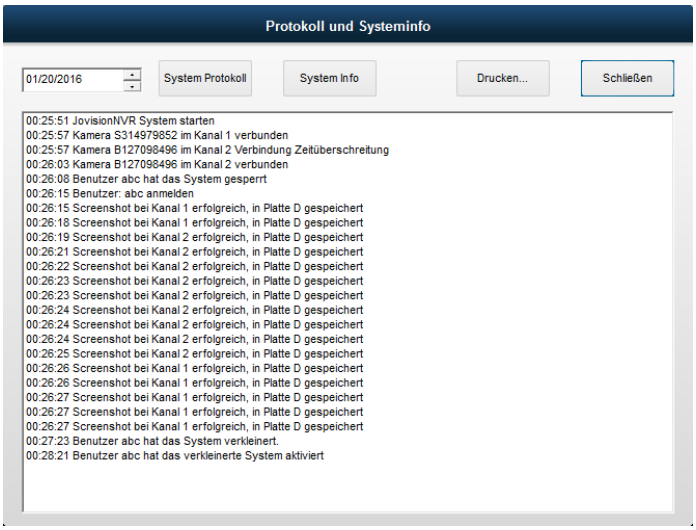
2.6.1. Snapshot

Select a real time video channel and right click, select “Snapshot” or click the “Snapshot” icon in function menu to save current frame as picture.
You can check the snapshots by clicking [More function icon – Snapshot Viewer], the snapshot viewer window will appear.
Choose the date and channel you want to check and click “Search”, snapshots will be listed on the right. Double click to open the image.



2.6.2. System logs

JNVR logs or software information can be found in [More Function- System logs]. Event logs record events taking place in the execution of JNVR in order to provide an audit trail that can be used to understand the activity of the system and to diagnose problems.



2.6.3. Alert-Map

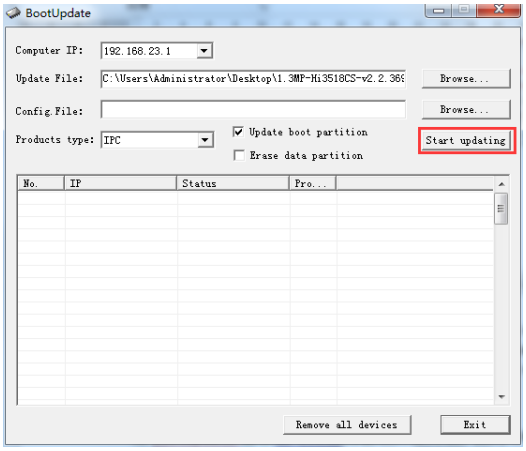
You can upload .jpeg or .bmp image as Alert-map, set camera position and show camera video in [More Function- Alert-Map].

1. In alert-map page, right click and select “Load E-map” to select an image as map, it can be a traditional map or a floor plan.
2. There will be several eye icons if you have cameras connected, an eye icon indicates a camera. Right click on the icon and select “Show Video” to play live video on the map.
3. You can drag the icon and video window according to the real position of the camera on the map.

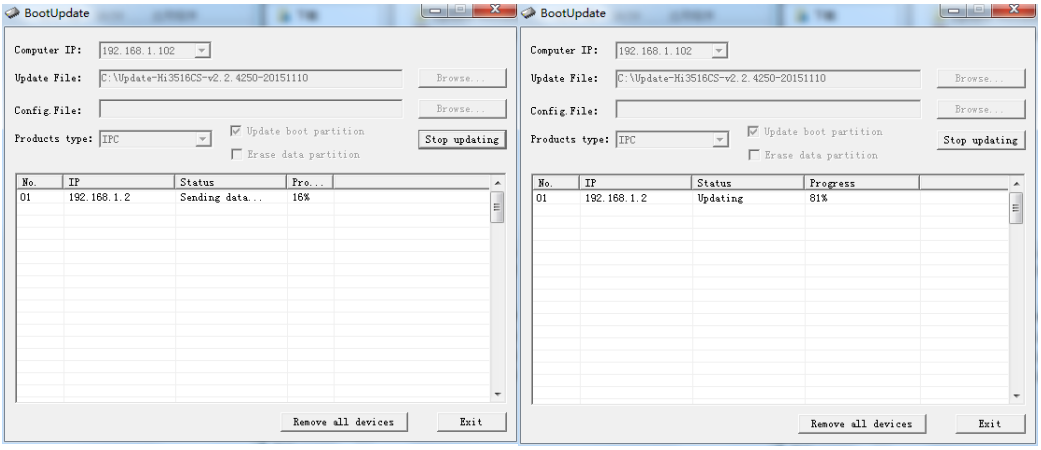
2.6.4. Bootupdate Tool

Bootupdate is a tool to flash camera software, users can use this tool to reset/recover a camera.

[More Function- Bootupdate tool], Select the folder containing update files for IPC by clicking “browse”.

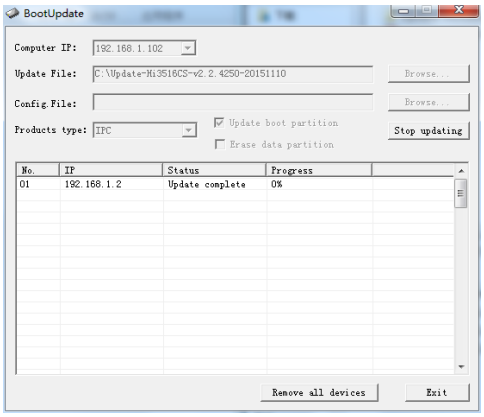


Power on the IPC and make sure the LAN network connection is fine, never mind even if the IPC has not been listed. *Click “Start Updating” first, and then, power off the IPC and power on again.* The tool will search and list the camera and start transmitting and updating. You can see the progress in the program.



Sending data **Updating**

When the program shows that update finished, please disconnect the network of IPC or close the tool, otherwise, the IPC may update again after reboot


BootUpdate
Computer IP:
192.168.1.102
Update File:
C:\Update-Hi3516CS-v2.2.4250-20151110
Browse...
Config.File:
Browse...
Products type:
IPC
Update boot partition
Erase data partition
Stop updating
No.
IP
Status
Progress
01
192.168.1.2
Update complete
0%
Remove all devices
Exit

Completed

3. Camera Remote Settings

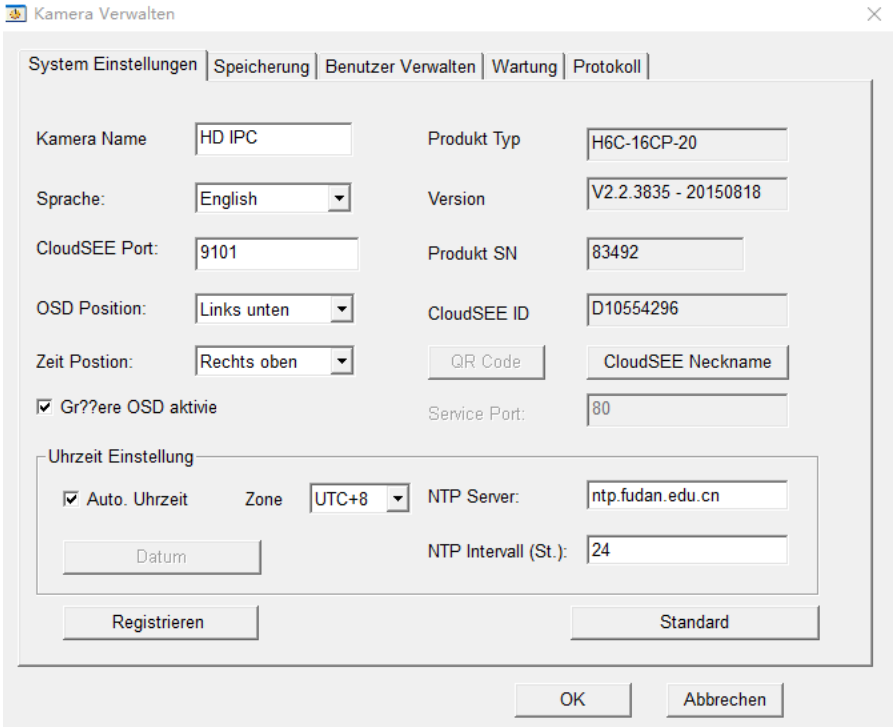
As an independent device with embedded Linux, a network camera can be accessed and configured by JNVR. “Remote Setting” function can only configure one selected network camera at a time, including System, Stream, Alarm, Network, PTZ, IVA management, as shown below.

Remote Setting Function Panel

3.1. System

3.1.1. System Setting

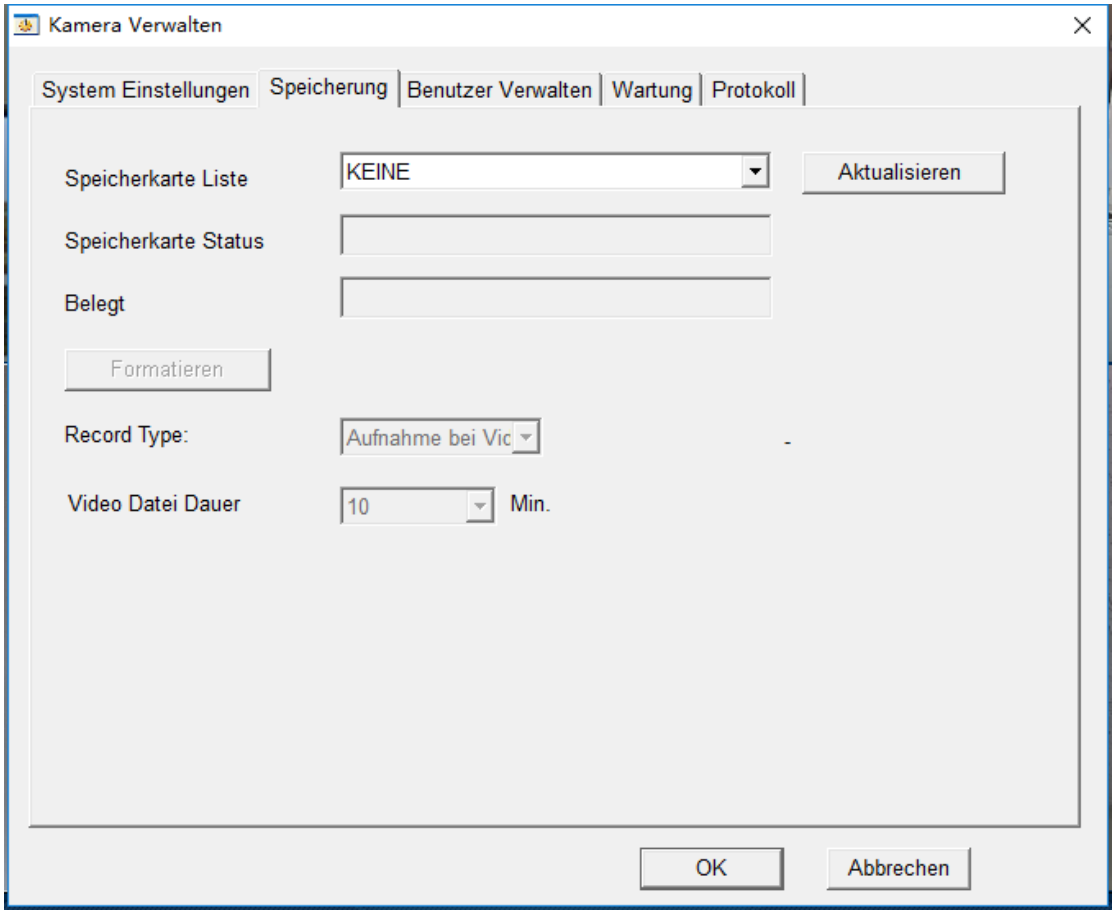
[Remote Settings- System- System Settings]. Camera name, OSD settings, language, time and date can be set here.



Items	Description
Device Name	The name of the device can be changed here, which will display on live video window.
Product Type	The factory model of the camera.
Language	Log language can be changed here. The camera menu language is depending on the JNVR language.
Version	Camera firmware version.
CloudSEE Port	Port number for CloudSEE service, DO NOT change unless there is port conflict with other device.
Product SN	Product serial number.
OSD Position	Change the position of OSD information: left-top, left-bottom, right-top, right-bottom or hide.
Time Position	Change the position of OSD time: left-top, left-bottom, right-top, right-bottom or hide.
CloudSEE ID	Device ID is used for remote connection if the device is online.
QR Code	Generate CloudSEE QR code, which can be used to add this camera by scanning QR code in CloudSEE app. (For some model only)
CloudSEE Nickname	You can input a nickname for the camera.
Enable Large OSD	Use large OSD if the camera is in high resolution.
Service Port	Port number for camera connection service, cannot be changed.
Time Automatic	Camera will synchronize time with NTP server automatically.
Time Zone	Change time zone.
NTP Server	The default NTP server is almost always a good choice, but if you prefer to use another NTP server, you can enter it here.
NTP Interval	The period between two time-synchronization events.
Date…	Set the format of date and time.
Register	Register product on server, if the camera is connected but not online.
Default Setting	Restore default system settings.

3.1.2. Storage

[Remote Settings- System- Storage]. This function is for cameras with storage card, users can manage storage here.



Item	Description
Device List	You can select the storage card installed in the camera.
Refresh Lists	Refresh the device list
Device Status	You can check the status of the storage card.
Used Space	The storage information is shown here.
Format	Format the storage card
Record Type	You can choose record mode for the camera.
Record File Time	Recording files are packed every 10 minutes by default

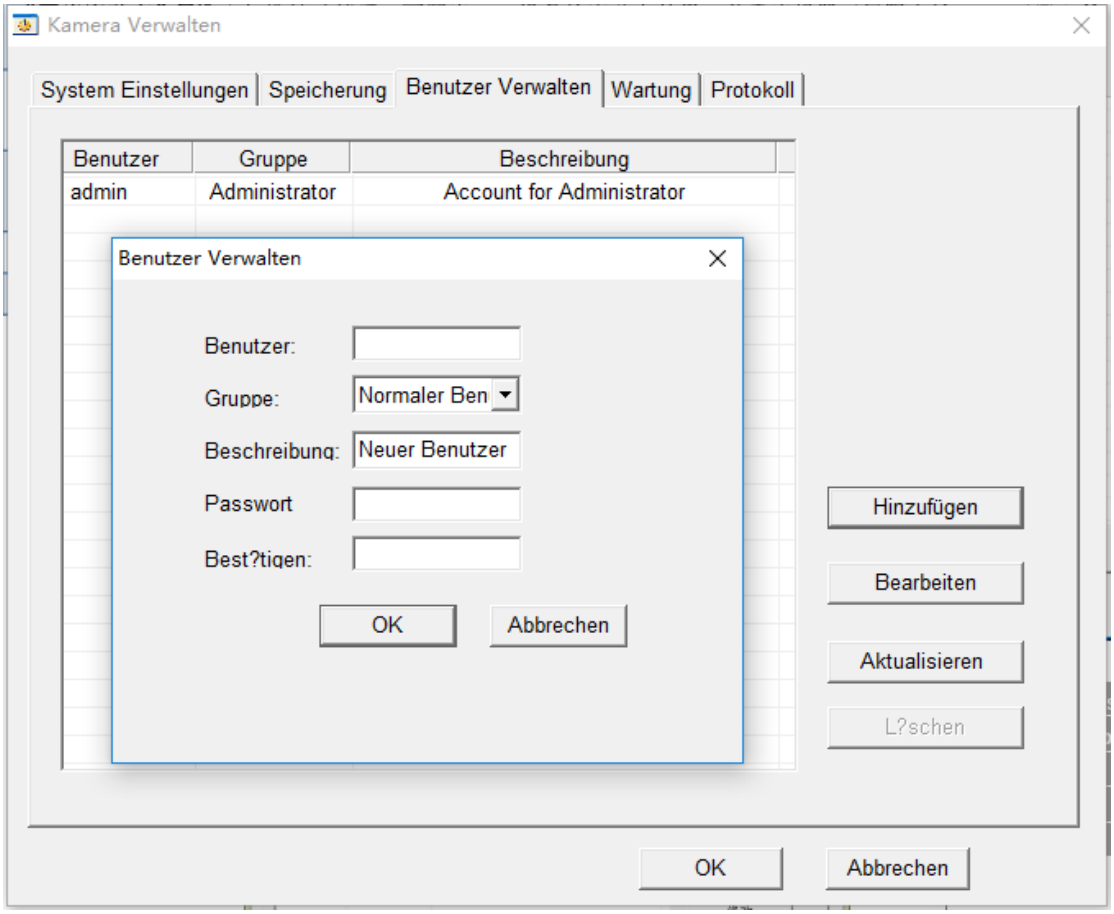
3.1.3. User Setting

As an independent Linux system embedded in it, a camera can be only accessed by correct account. You can manage users for the camera in [Remote Settings- System- User Setting].

Note:

- The build-in account ***admin*** cannot be deleted. If the build-in account ***admin*** has not been modified, you can login with any username and password.
- The maximum number of users is 13.
- You should change this default password to better protect against security risks, such as the unauthorized access by others to the product that may

prevent the product from functioning properly and/or lead to other undesirable consequences.



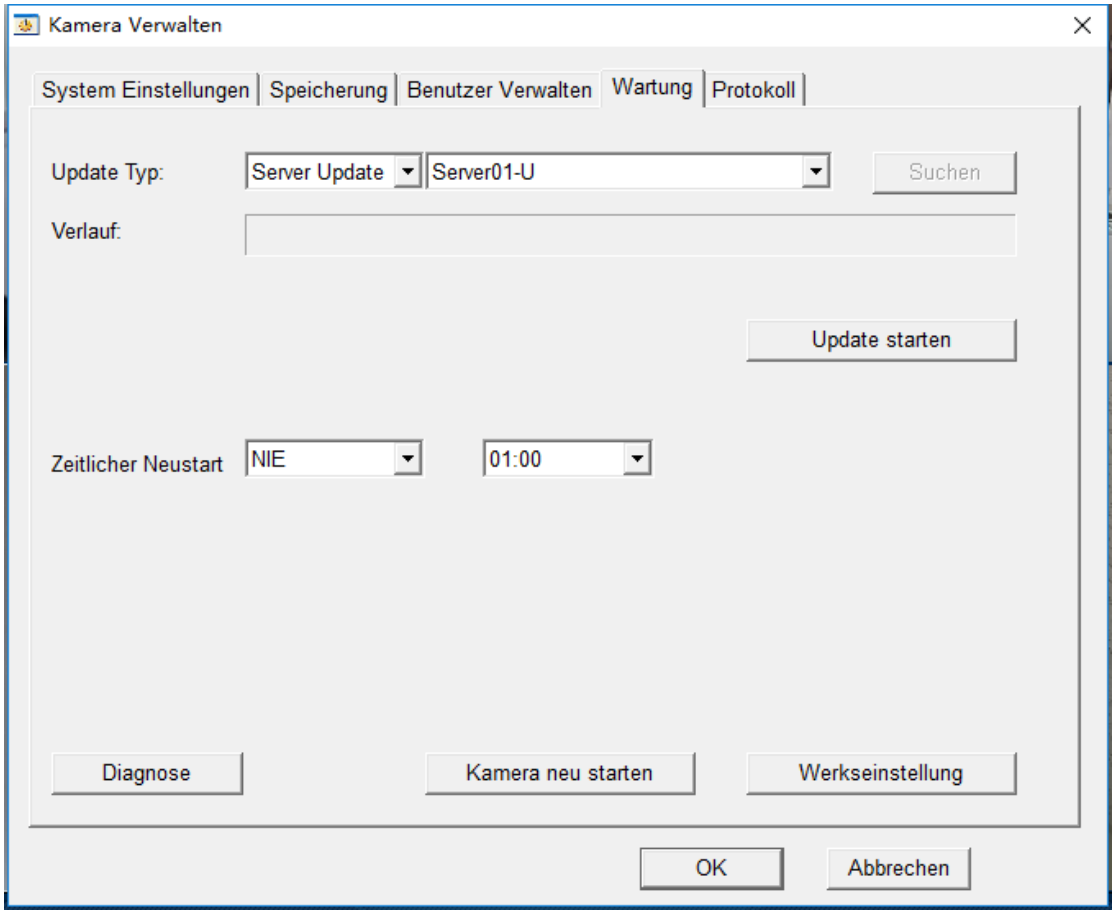
Items	Description
Add Account	Click “Add”, input username and password, select user group and click OK to create new user.
Modify	Select a user in the list, click modify to change password.
Group	There are three groups built in the system, to which you can assign users. ***Administrator***: Administrators have permissions to access all the functions and operations. ***Common User***: Common users can access parts of the functions, system level operations such as rebooting, performing system recovery, setting network, etc. are not permitted. ***Guest***: Guests can only watch the live video without any other permissions.
Refresh	Refresh user list.
Delete	Select a user, click this button to delete.

3.1.4. Maintenance

You can update or reset the camera in [Remote Settings- System- Maintenance].

Note:

Inappropriate maintenance operations would do damage to the camera or cause camera system fault, please contact with your local dealer for more information.



Items	Description
Web Update	The device will check for available software updates on update server via Internet.
File Update	The device will update with the update files on the computer in the same local network. (Strongly recommended)
Select…	When “File Update” is selected, use this button to browse and select the directory containing update files.
Update Begin	Start the selected update procedure.
Reboot on Time	Set a time to reboot the device.
Progress	Indicates the progress of updating.
Diagnosis	Detect the network connections to help to locate connection problem
Restart	Reboot the camera
Recovery	Erase all settings and data, restore the device to its

	factory settings.

Web Update

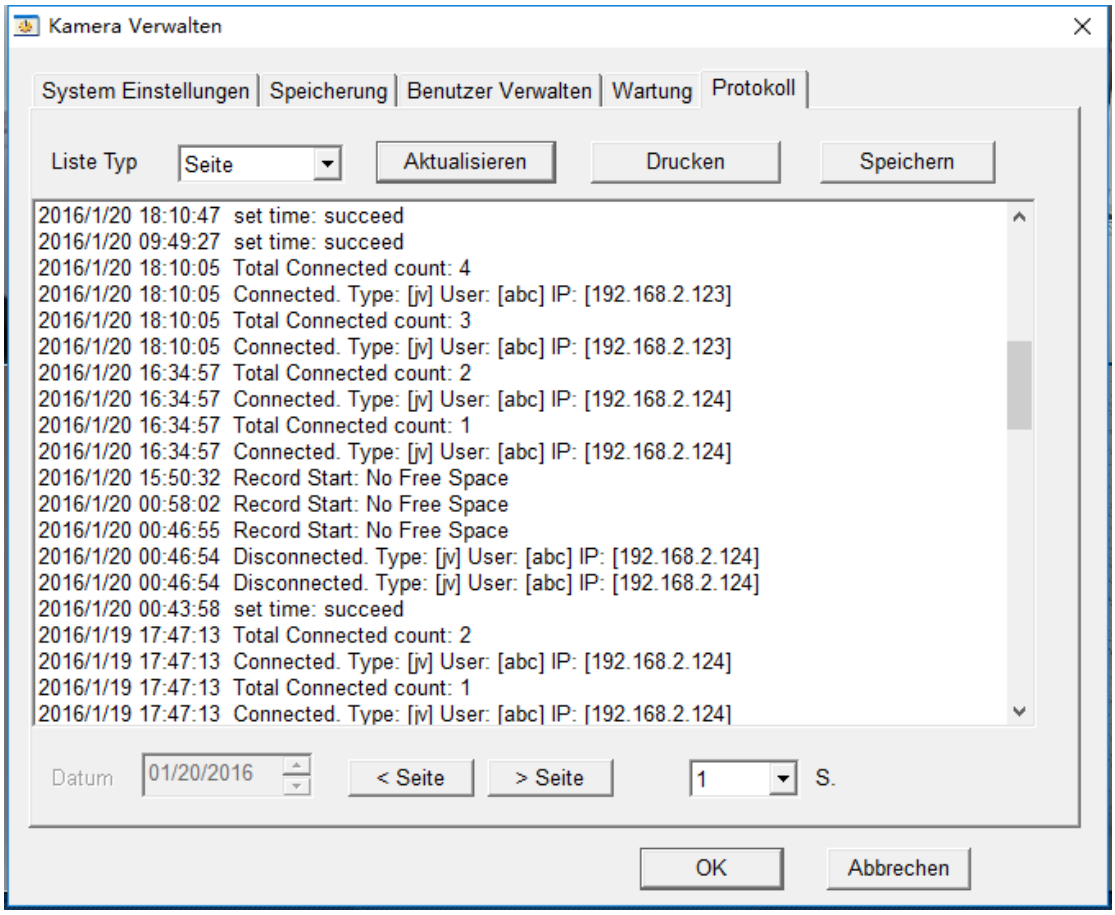
1. Connect the camera with our remote client software, select the channel of the camera you want to update, right click on the live video, and select ***Remote Settings- System-Maintenance***, the maintenance dialog appears.
2. The default update mode is “Web Update”, select update server from the second drop-down menu.
3. Click “Update begin”, System asks for confirmation of update, click “Yes”.
4. Update begins, the progress bar will run twice, one indicates downloading progress and another indicates burning progress.
5. After downloading and burning, the update completes, System will ask for confirmation of restarting, click Yes to confirm.
6. The device will restart and connect automatically.

File Update

1. Connect the camera with our remote client software, select the channel of the camera you want to update, right click on the live video, and select ***Remote Settings- System-Maintenance***, the maintenance dialog appears.
2. The default update mode is “Web Update”, select “File Update” from the drop-down menu, and click ***Select*** to browse and select the **directory** containing update files.
3. Then click “Update begin”, system will start burning progress. If you choose wrong update file directory, System will prompt that “Open update file failed, please check if the update file exists”, you need to check the update files and select correct files. System asks for confirmation of update, click “Yes”.
4. Update begins, the progress bar will run twice, one indicates downloading progress and another indicates burning progress.
5. After downloading and burning, the update completes, System will ask for confirmation of restarting, click Yes to confirm.
6. The device will restart and connect automatically.

3.1.5. Logs

Event logs record events taking place in the execution of the system in order to provide an audit trail that can be used to understand the activity of the system and to diagnose problems.



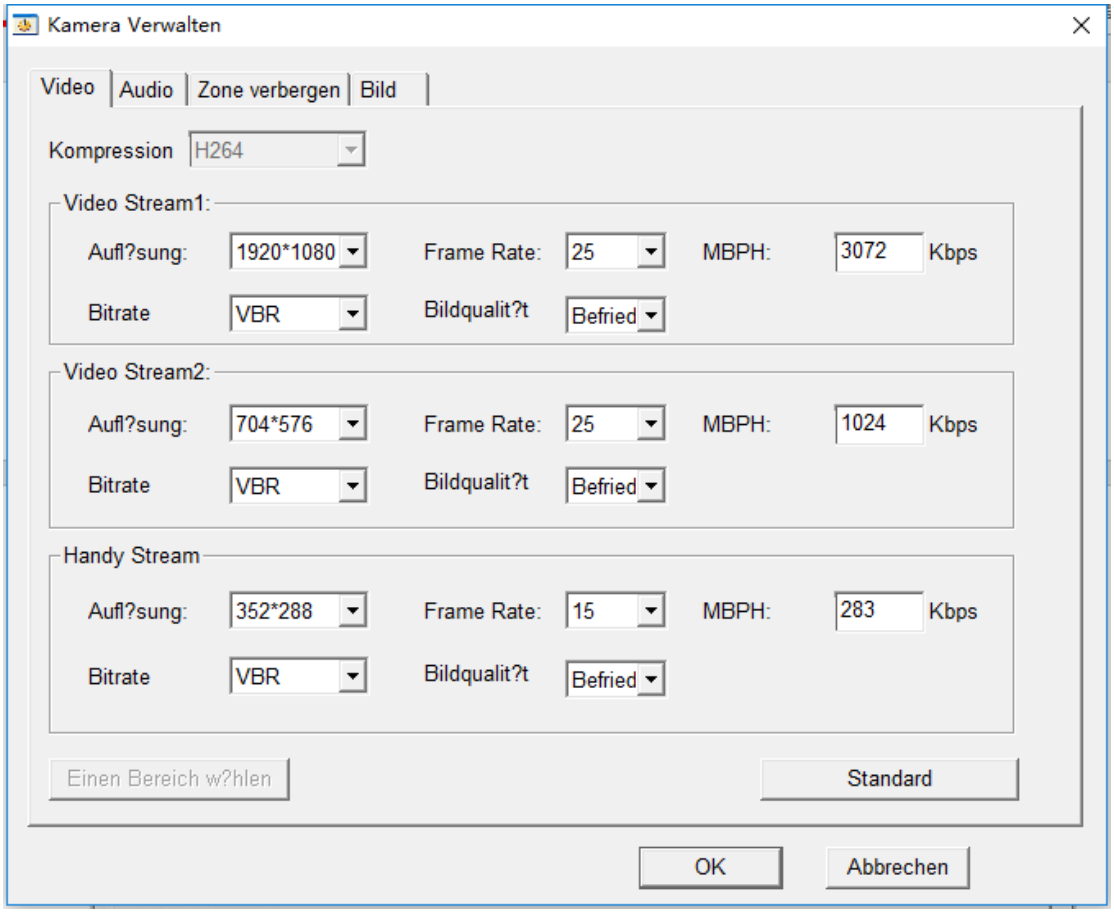
Items	Description
List Type	List the logs by page or date.
Refresh	Refresh the logs
Print	Print the logs
Save	Save the Logs as txt file on the computer.

3.2. Stream

Our network camera supports duel stream or triple stream for different usage:
Video Stream 1: Also called *main stream* or *recording stream*, used for recording, and if there is no more than 4 channels displaying on JNVR, this stream will be displayed.
Video Stream 2: Also called *sub-stream*, used for live view if more than 4 channels displaying on JNVR.

Mobile Phone Stream: Also called *Internet-stream*, used for displaying on mobile phones which costs the least network bandwidth. Phone app can choose proper steamer according to the network status on latest CloudSEE app,

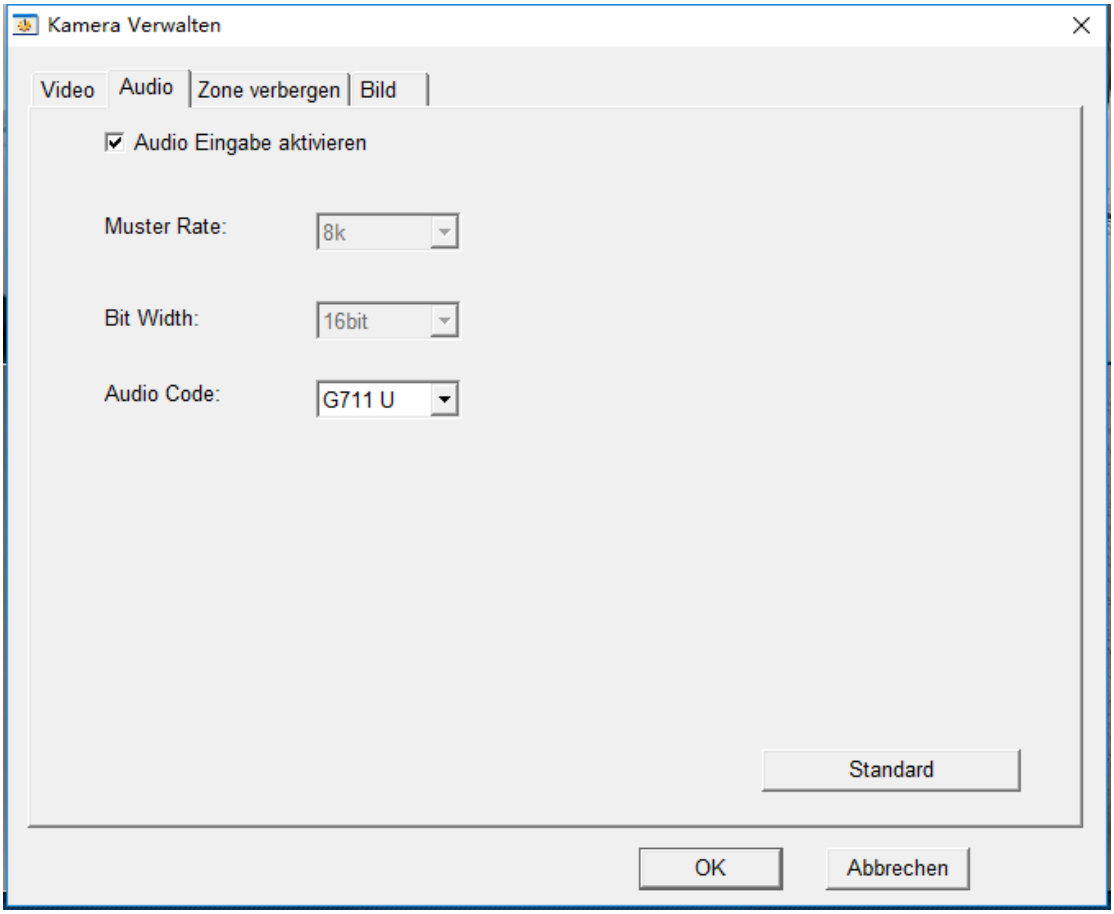
3.2.1. Video



Items	Description
Resolution	Resolution is the width and height dimensions of the camera imaging in pixels. A higher display resolution in a display of the same size means that displayed content appears sharper.
Frame Rate	Frame rate, also known as frame frequency, is the frequency (rate) at which an imaging device displays consecutive images called frames. The higher frame rate is, the more consecutive video becomes.
MBPH(Kbps) Bitrate	Bitrate is the average number of bits per second passing between camera and JNVR or NVR. A higher bitrate means that the stream quality is better but which will use more bandwidth and storage space.
QP Level	The quality of the video.
Bitrate Control	**VBR**: Variable Bit Rate, VBR files vary the amount of output data per time segment. VBR allows a higher bitrate (and therefore requires more storage space) to be allocated to the more complex segments of video files while less space is allocated to less complex segments. **CBR**: Constant Bit Rate, CBR means that the rate at which a codec's output data should be consumed is constant. Lower bitrate is useful for streaming multimedia content on limited capacity channels since it is the maximum bit rate that matters, but it cannot allocate enough data for complex sections. Higher bitrate will provide enough bits for the entire coding process, though the size of the file at the end would be proportionally larger.
Select An Area (ROI)	Regions of interest, select an area to focus on the scene, which may lower the quality of the unselected area.
Default Settings	Restore default system settings.

3.2.2. Audio

1. Connect the pickups or microphone to the camera, and power on all the devices.
2. Connect the camera with JNVR, and on the channel click: ***Right click menu- Remote setting- Stream- Audio***, the audio setting dialog appears.
3. Select "***Audio-In Enable***" to enable audio encoding function. If the check-box is not selected, there will no sound even if audio-in device is connected.



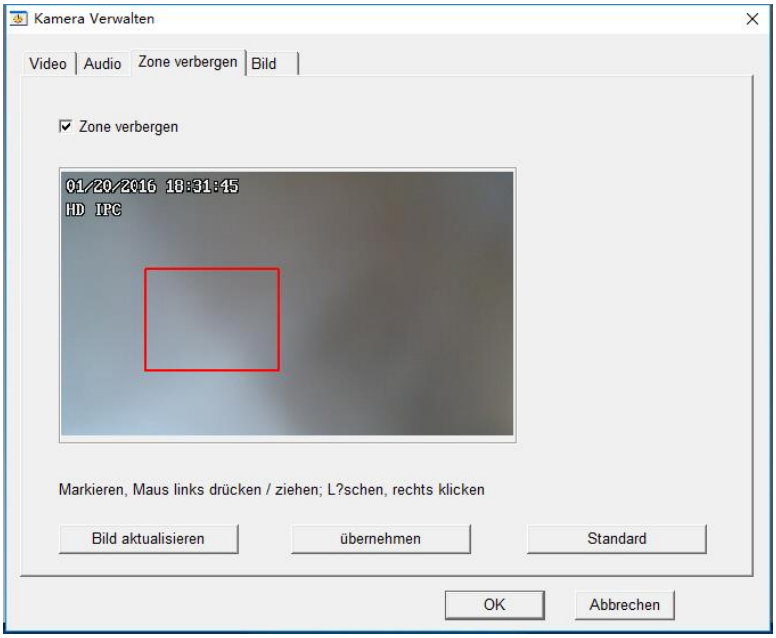
4. Select proper ***Audio Encode Type*** from the drop-down menu, which should be the same as connected NVR if you use NVR.

There are five audio encode types: PCM, G117A, G117U, G726 40K, ADPCM.

5. In JNVR, right click on the live view channel, click audio icon to monitor the audio from microphone; On NVR, select the live window to monitor the audio.

3.2.3. Region Cover (Privacy Mask)

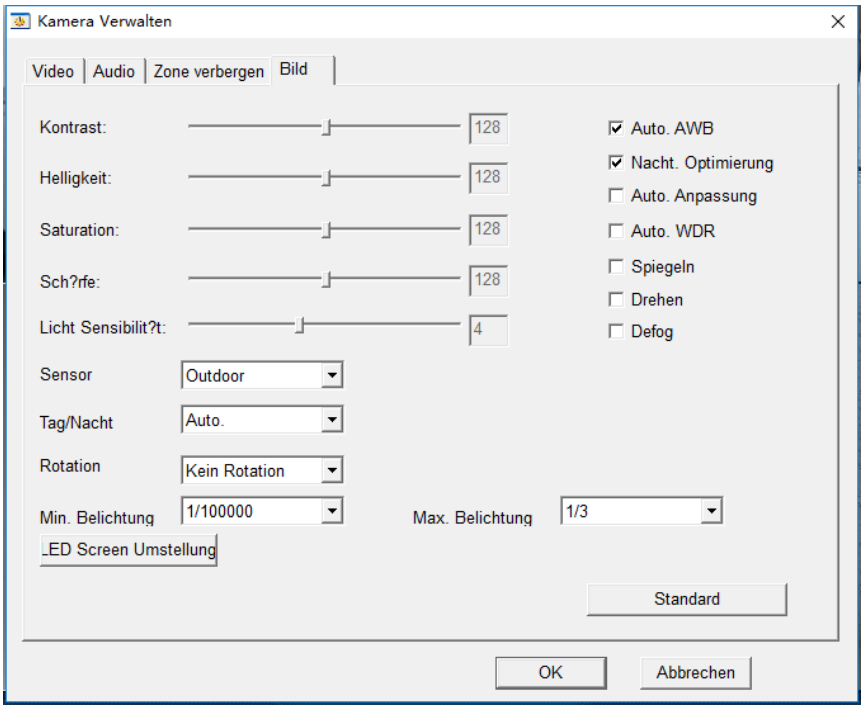
This function allows you to cover an area with a black block, both in live view and recording. Supports up to 4 private areas. Drag the mouse and draw a rectangle covering on the area you want. Right click on the rectangle to cancel the area.



Items	Description
Enable Private Area	Enable private Area function.
Refresh	Get the latest view picture
Save	Save the settings.
Default Settings	Restore default system settings.

3.2.4. Image

Brightness, contrast, saturation, sharpness and other settings about image can adjusted and configured here.



Items	Description
Contrast	Set the difference in luminance or color that makes display distinguishable.
Brightness	Set the brightness of the video.
Saturation	Saturation is the colorfulness of a color relative to its own brightness. A highly saturation is vivid and intense, while a less saturation appears more muted, closer to gray.
Sharpness	Set the subjective perception of sharpness that is related to the edge contrast of the image.
Light Intensity (sensitivity)	Set the sensitivity of the photo resistance. (For some models only)
Scene	Support Indoor, Outdoor, Default, Soft.
Day Night Mode	Select the mode of day-night switching, support Auto, Always Color, Always Black/White, Time Color.
Rotate	Support rotate 0°, 90°, 180°, 270°.
Exposure	Set the period of exposure, the camera will adjust automatically in the range. If the is power frequency interference, you can adjust exposure time to avoid it.
AWB	AWB can compensate for the slight color differences in different types of light, or make the colors warmer or cooler to match the intended mood of your video.
Low-light Operation	Enable this function to improve the night vision effect.
Night Self-adaption	With night self-adaption, camera can adjust night vision effect according to the object.

WDR	Wide Dynamic Range: With WDR, a camera can record greater scene details, from shadows to highlights than normal.
Mirror	Show the mirror image of the video, in which the right side of the original object appears on the left and the left side appears on the right
Turn	Make the picture upside down.
Defog	Select the function in fog weather to improve the clarity.
Default Settings	Restore default system settings.

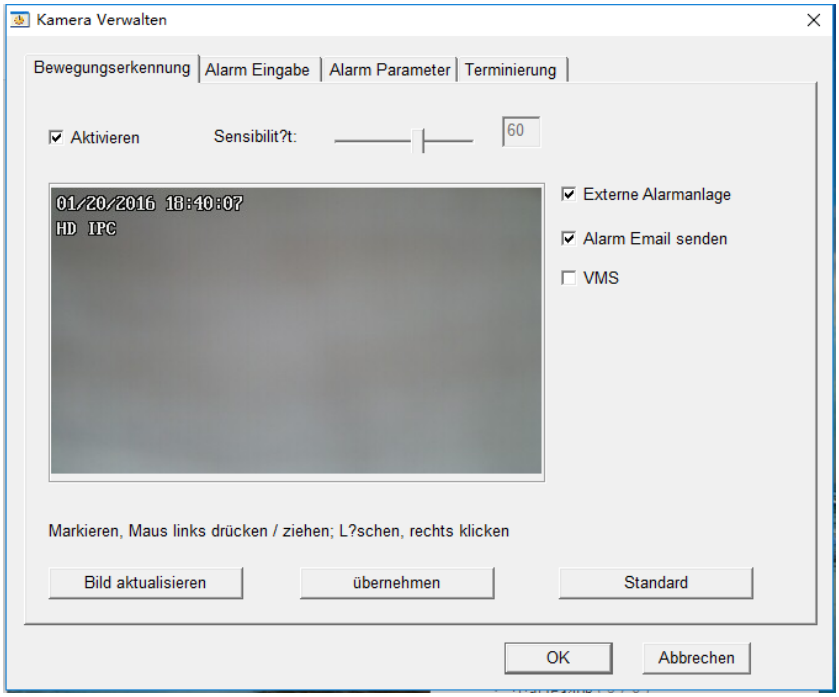
3.3. Alarm

3.3.1. Motion Detect

Motion detection detects the moving objects in the configured surveillance area, and a series of actions can be taken when the alarm is triggered.

Steps

1. Highlight Enable check-box to enable full-screen motion detect.
2. Click and drag the mouse on the live video to draw a motion detection area, you can choose 4 areas at most for one channel. Sensitivity can also be set here.
3. Click OK to save the settings.

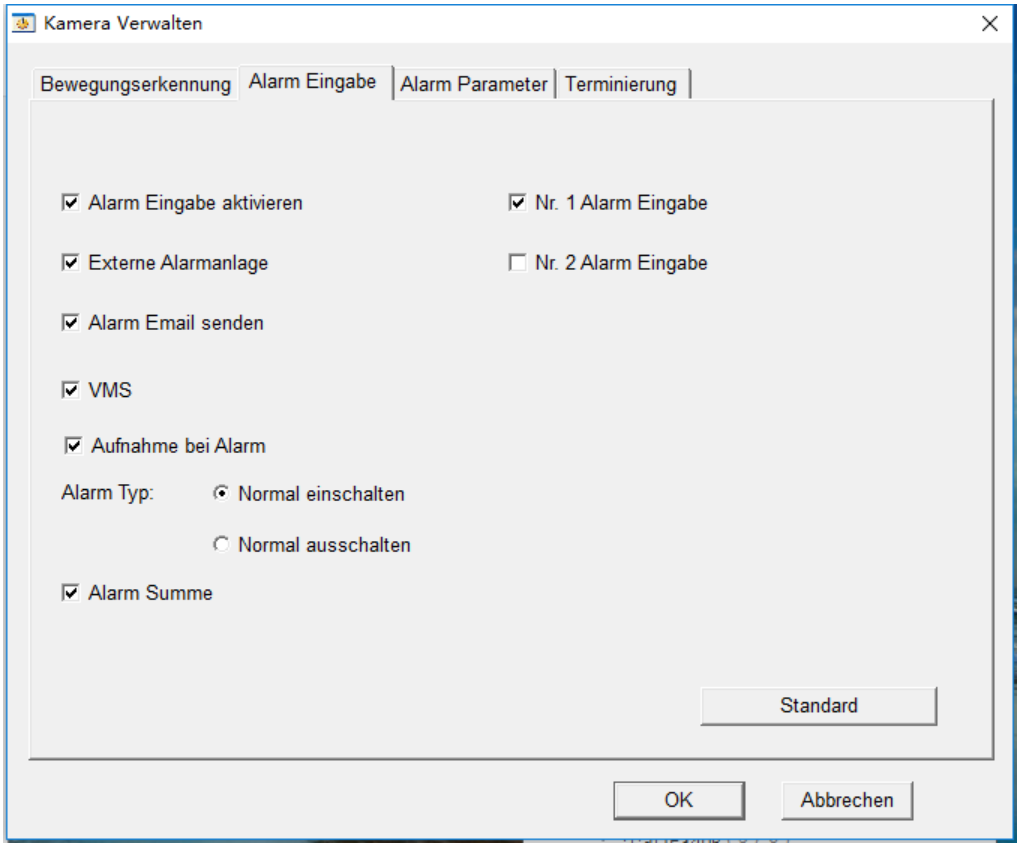


Items	Description
Enable	Enable motion detect function.
Sensitivity	Set the sensitivity of motion detect, the higher the number is, the higher sensitive the detection is
Send Alarm to Client	Send alarm to JNVR client software connecting the camera.
Send Alarm E-Mail	Send an email with alarm information to a user or users when an event occurs.
Send Alarm to VMS	Send alarm to VMS server. (CMS is a product of Jovion)
Refresh	Get the latest view picture
Save	Save the settings.

Default Setting	Restore default system settings.

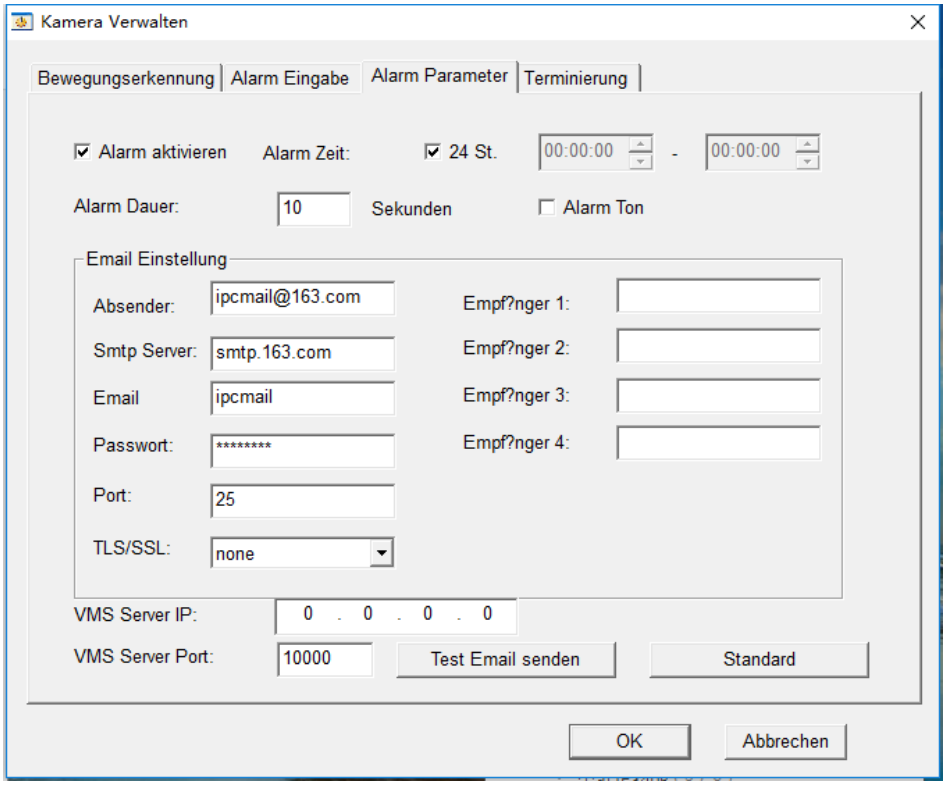
3.3.2. Alarm-In

If the camera supports alarm-in function, the function can be configured here.



Items	Description
Alarm-In Enable	Enable Alarm-In function.
Alarm to Client	Send alarm to client software connecting the camera.
Alarm to Mail	Send an email with alarm information to a user or users when an event occurs.
Alarm to VMS	Send alarm to VMS server.
Alarm-In Record	Start recording when alarm-in device is triggered
Alarm Model	Set alarm mode of the alarm-in device, Normally Open or Normally Closed.
Alarm Buzzing Open	If selected, the buzzer inside the NVR will buzz when alarming.
Alarm-In Open	Enable/Disable connected alarm-in device(s).
Default Setting	Restore default system settings.

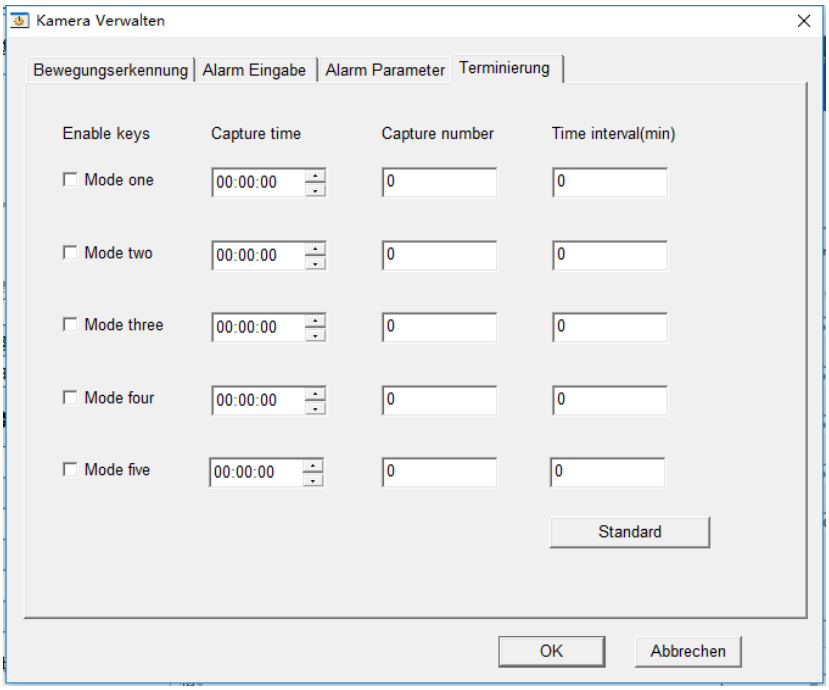
3.3.3. Alarm Parameters



Items	Description
Alarm Enable	Enable alarm function to receive alarm information.
Alarm Time	Set the period of sending alarm messages.
Alarm Duration	Set the duration that one alarm lasts.
Alarm Sound	Enable alarming sound
Sender	Input E-mail address of the sender.
Server	Input the SMTP server of sending e-mail.
User ID	Username of sender
Password	Password of sender
Port	Input the port for SMTP
Encrypt	Choose the security protocols for SMTP
Interval	Set the interval of sending E-mails
Receiver	E-mail(s) to receive alarm e-mail
VMS Server IP	Set the IP of VMS server.
VMS Server Port	Set the port of VMS server.
Delete	Remove added E-mail
Mail Test	Send test e-mail to check whether these settings work fine
Default Setting	Restore default system settings.

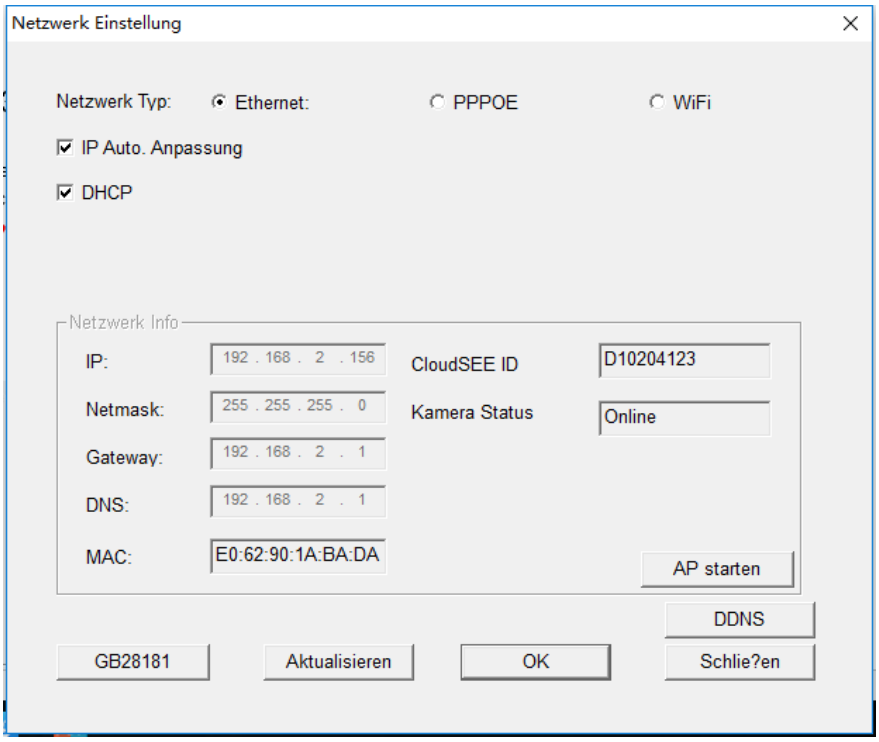
3.3.4. Scheduled Capture

Camera can capture video picture and send to specified Email with this function.



3.4. Network

There are three network connection type: Ethernet, PPPOE and WIFI. You can choose according to your demand.



Note:

- Not all models support these three connection types, the steps are for reference only.
- You can see network information in any connection type configuration page.
- Start AP. For wireless camera only. After configuring the network camera with wireless connection, and the camera are connected with Wi-Fi, the AP signal will be disabled. Use “Start AP” to enable AP again.

3.4.1. Ethernet

Select “Self-adapting IP” and “DHCP”, if your network uses dynamic IP. Unselect “Self-adapting IP” and “DHCP”, and input the network information, if your network uses static IP.

3.4.2. PPPOE

If you use PPPOE, you can input ID and password provided by ISP, click OK to connect.

3.4.3. WIFI

Some models support Wi-Fi connection, click “Search” to scan wireless network,

choose the SSID from the drop-down menu, input the password, and select authority and security type, click OK to connect.

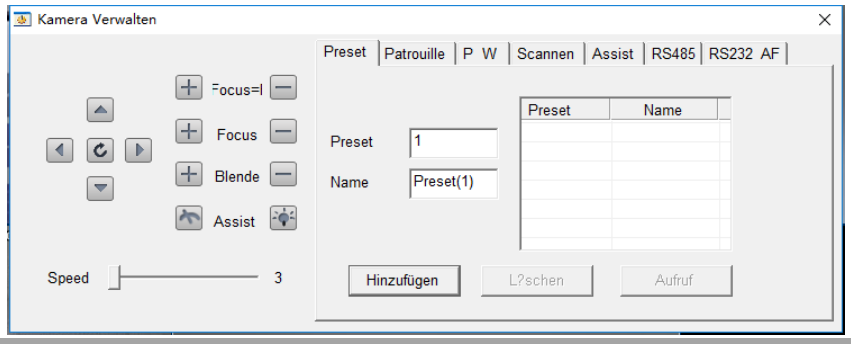
3.5. PTZ

In the live view interface, you can use the PTZ control buttons to realize pan/tilt/zoom control of the camera.

Note:

- To realize PTZ control, the camera connected to the network must support the PTZ function or a pan/tilt unit has been installed to the camera. Please properly set the PTZ parameters on RS-485 settings page.

3.5.1. Preset

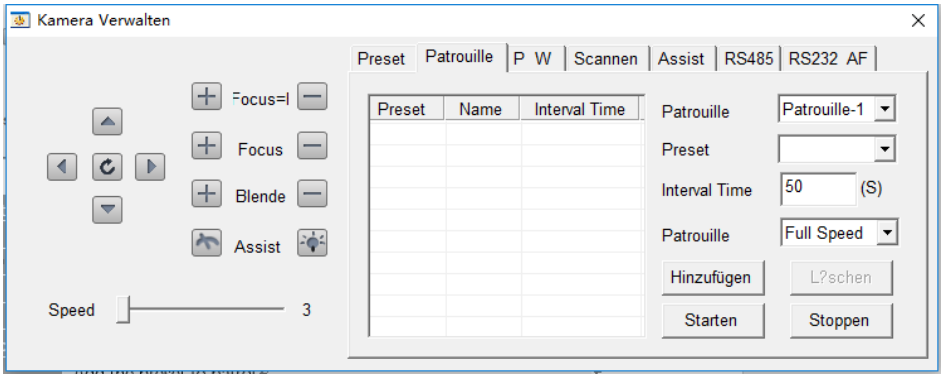


Items	Description
Navigation Keys	There are for direction arrows, Use to control the view of PTZ camera; Use to start rotating horizontally.
Iris	Adjust the iris of the camera.
Focus	Adjust the focus of the camera.
Zoom	Zoom in and zoom out
Assist	Click to clean water on the lens with wipers. Click to turn on lights when it is dark.
Speed	Adjust the speed of pan/tilt movements.
Preset	Preset number, 1 to 255, support 256 presets in total.
Name	Preset name, which can be modified to be recognized easier.
Add	Adjust the position of the camera view, click this button to add current view position as a preset.
Delete	Select a preset, and remove it with this button.
Call	This feature enables the camera to point to a specified preset scene manually or when an event takes place. For the defined preset, you can call it at any time to the desired preset scene.

3.5.2. Patrol

Note:

No less than 2 presets have to be configured before you set a patrol.



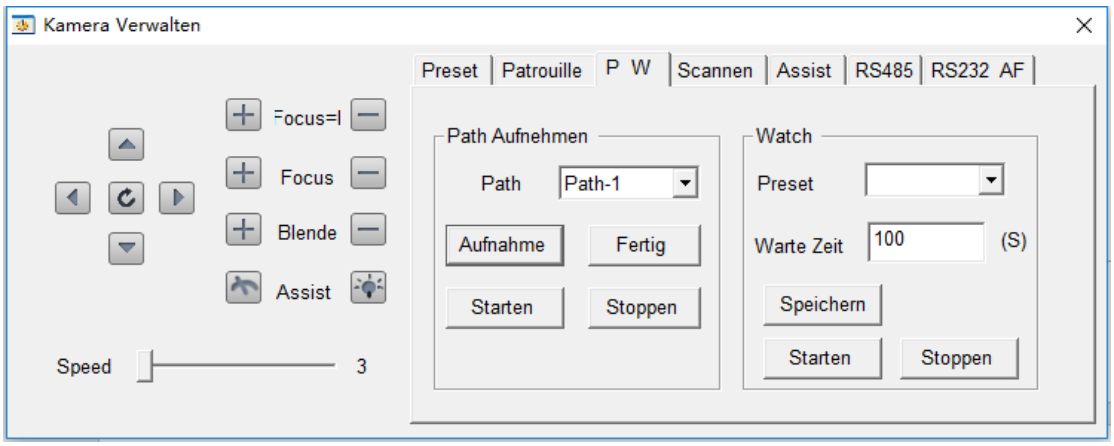
Items	Description
Patrol List	All the presets involved in patrol are listed.
Patrol Path	Choose the different paths of patrol.
Preset	Select the preset(s).
Stay Time	Patrol duration of the preset.
Patrol Speed	The speed of patrol.
Add	Add the preset to patrol.
Delete	Delete the preset to patrol.
Start	Start patrol.
Stop	Stop Patrol.

3.5.3. Path and Watch

Function Introduction:

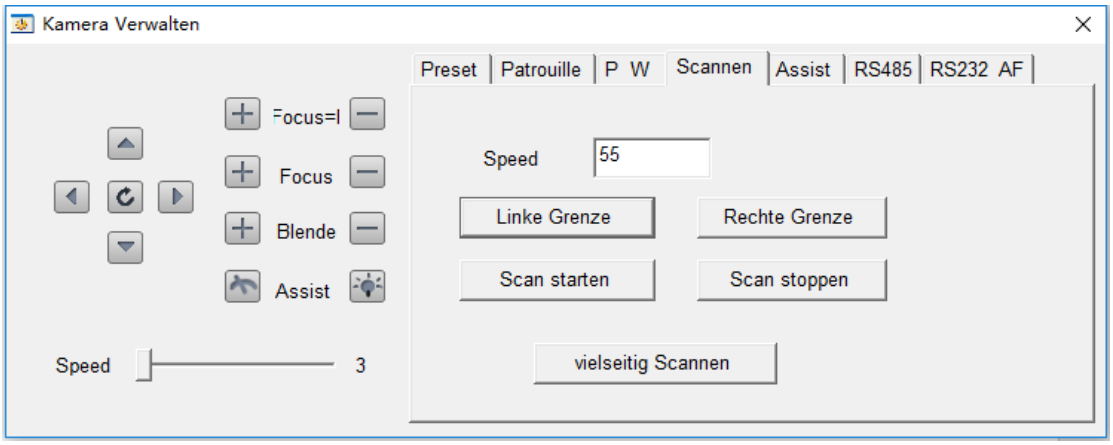
Path: Set a patrol path manually by using direction arrows instead of presets, system will remember the path and save it.

Watch: Set a view position and duration to watch the point.



Items	Description
Path	Choose the path you want to edit or use.
Record	Click Record and set a patrol path manually by using direction arrows, the path will be stored.
Finish	Click Finish to stop path recording and save it.
Start	Start selected path patrol.
Stop	Stop the path patrol.
Watch	Add the preset to patrol.
Preset	Select the preset used for watching.
Wait Time	Set the duration of watching.
Start	Start watching.
Stop	Stop watching.

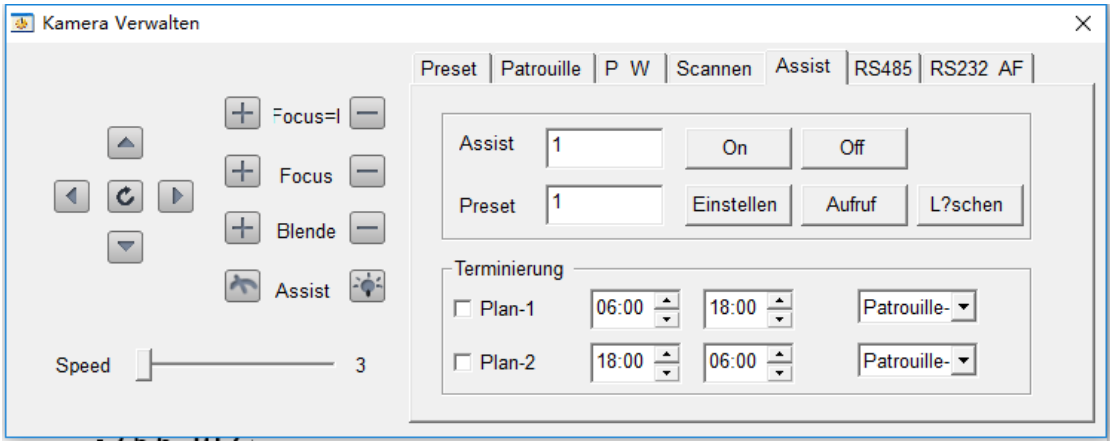
3.5.4. Scan



Items	Description
Speed	Set the speed of scanning
Left Limit	Set left limit manually with direction arrows,
Right Limit	Set right limit manually with direction arrows,
Start Scan	Start scanning.
Stop Scan	Stop scanning
Various Scan	Use preseted various scanning style.

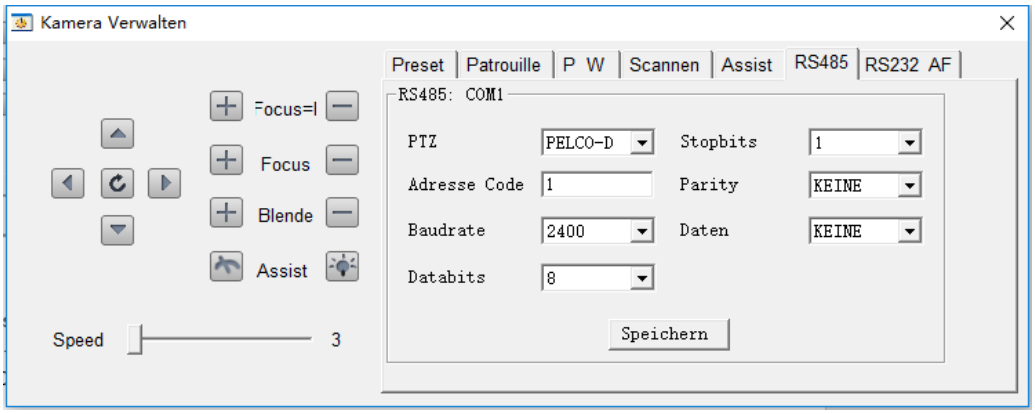
3.5.5. Assist

You can set assist on/off and set/call/clear a preset in this page.
You can also set scheduled patrol here.



3.5.6. RS-485

The RS-485 serial port is used to control the PTZ of the camera. The configuring of the PTZ parameters should be done before you control the PTZ unit.



Steps:

1. Enter PTZ setting interface.
2. Set the RS-485 parameters and click **Save** to save the settings. By default, the Baud Rate is set as 2400 bps, the Data Bit is 8, the stop bit is 1 and the Parity and Flow Control is None.

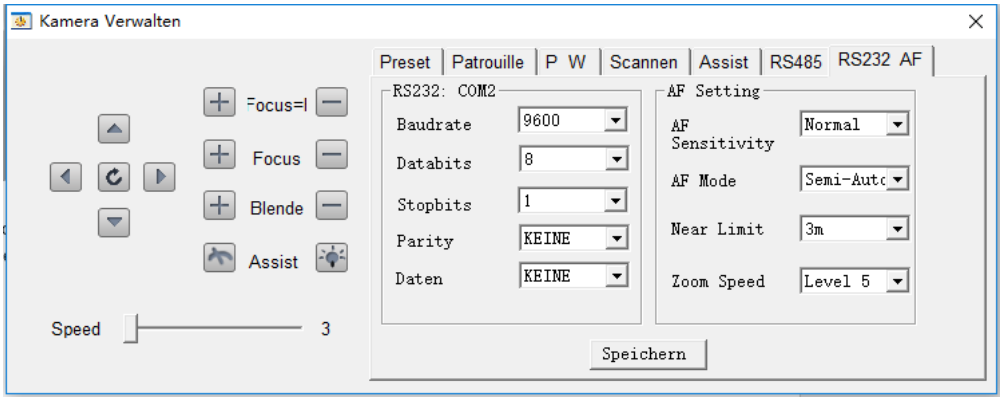
Note:

The Baud Rate, PTZ Protocol and PTZ Address parameters should be exactly the same as the PTZ camera parameters.

3.5.7. RS232

Steps:

1. Enter RS-232 Port Setting interface.
2. Click **Save** to save the settings.



Note:

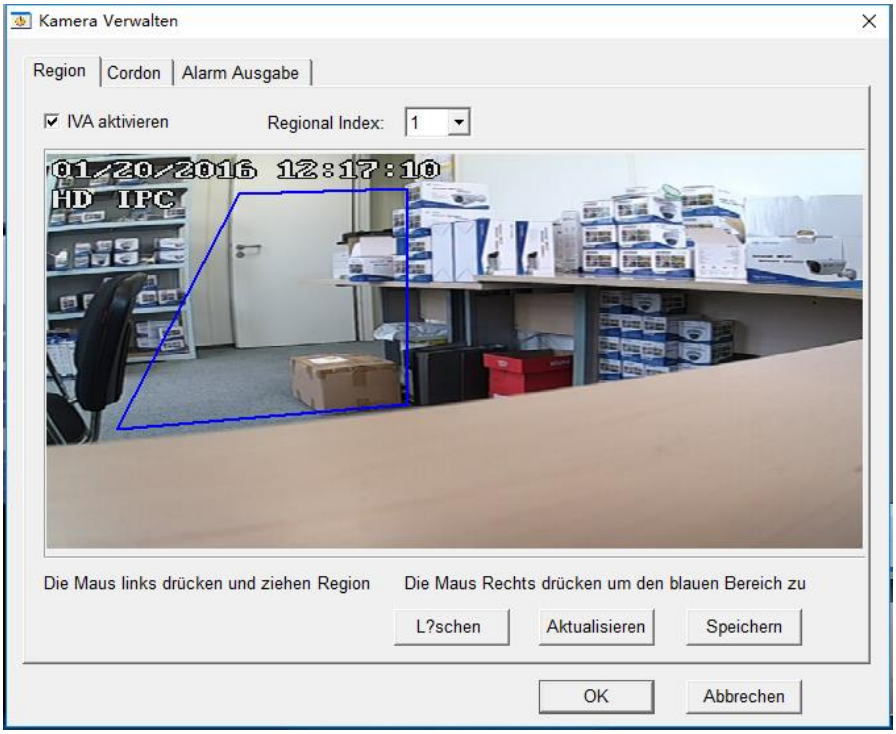
If you want to connect the camera by the RS-232 port, the parameters of the RS-232 should be exactly the same with the parameters you configured here.

3.6. IVA

3.6.1. Regional

Regional, or intrusion detection function detects people, vehicle or other objects which enter and loiter in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Note: Intrusion detection function varies according to different camera models.



Steps:

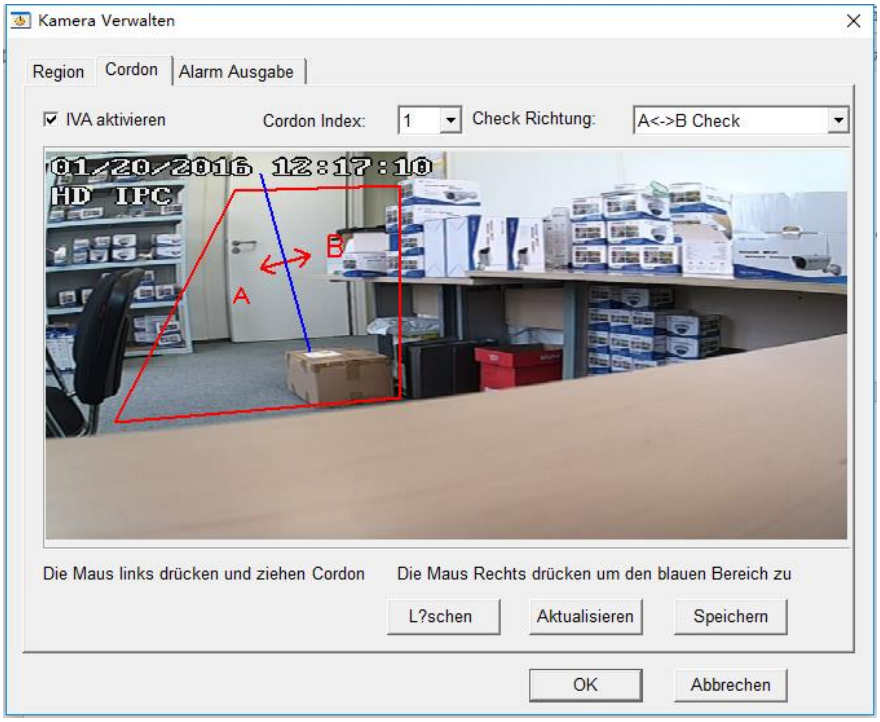
1. Enter the Regional Detection settings interface
2. Check the checkbox of **Enable IVA** to enable the function.
3. Select the region from the drop-down list for detection settings.
4. Click on the live video to specify the four vertexes of the detection region, and double-click to complete drawing.
5. Repeat the above steps to configure other regions. Up to 4 regions can be set. You can click the **Clear** button to clear all pre-defined regions.
6. Click **Save** to save the settings.

3.6.2. Cordon

Cordon, or line crossing detection function detects people, vehicle or other

objects which cross a pre-defined virtual line, and some certain actions can be taken when the alarm is triggered.

Note: Line crossing detection function varies according to different camera models.



Steps:

1. Enter the Cordon settings interface.
2. Check the checkbox of **Enable IVA** to enable the function.
3. Click-and-drag the line, and you can locate it on the live video as desired.
4. Select the direction for line crossing detection. And you can select the directions as A<->B, A ->B, and B->A.

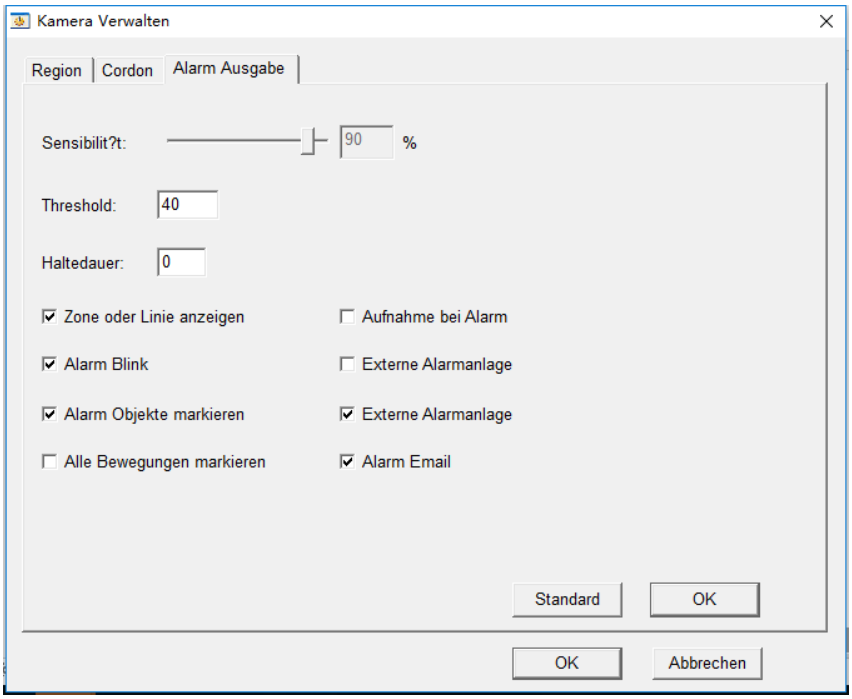
A<->B: Only the arrow on the B side shows; when an object going across the plane with both directions can be detected and alarms are triggered.

A->B: Only the object crossing the configured line from the A side to the B side can be detected.

B->A: Only the object crossing the configured line from the B side to the A side can be detected.

5. Repeat the above steps to configure other lines. Up to 4 lines can be set. You can click the **Clear** button to clear all pre-defined lines.
6. Click **Save** to save the settings.

3.6.3. Alarm out



Items	Description
Sensitivity	Set the sensitivity of detecting moving objects. The higher the value is, the more easily the movement can be detected.
Threshold	The value of the threshold defines the grey-scale of the object which can trigger the alarm. When the threshold is high, the object can trigger the alarm easier.
Stay Time	The time of the object stay in the region, after which can trigger the alarm. If you set the value as 0, alarm is triggered immediately after the object entering the region.
Draw Area or Line	Display the cordon, or line crossing detection line on live video.
Alarm Twinkle the Area	Flicker the intrusion detection area on live video when alarm is triggered.
Mark Warning Object	Make the object that triggered the alarm.
Mark All Moving Object	Make all moving object in the video.
Alarm Record	Start recording when IVA alarm is triggered
Alarm Out	Send alarm to connected alarm device.
Alarm to Client	Send alarm to client software connecting the camera.
Alarm to E-Mail	Send an email with alarm information to a user or users when an event occurs.

Save	Save the settings
Default Setting	Restore default system settings.