High Definition Intelligent IR
IP Auto-tracking Speed Dome Camera

User's Manual

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Chapter 1 Precautions

In order to avoid danger and operate the products correctly, please read this manual carefully before installation.

The precaution contains two parts “Warning” and “Note” as following:

Warnings alert the user to avoid the potential risk of death or serious injury	**Cautions** alert the user to avoid the potential risk of injury or property damage

Warning:

● Please use AC 24V power supply meeting SELV(Safety Extra Low Voltage) and in accordance with IEC60950-1 compliance with Limited Power Source

● Please contact nearest distributor or service center if the products don’t work properly, do not remove or modify the device in any way (unauthorized modification or repair problems caused by your own risk).

● Please don’t expose the indoor product to rain or moisture.

● The installation should be performed by professional staff, and comply with local regulations.

● Please mount easily using power protection device in the wire installation.

● Please make sure the connection can withstand at least 50 Newtons vertically downward pull.

Note:

● Please check if the power supply is correct.

● In transportation and storage process, please prevent stress, severe vibration and immersion to avoid any damage

● Please don’t touch the image sensor and housing directly, if necessary, please gently clean with alcohol dampened.

● Please don’t touch the cooling components directly, in order to avoid burns.

● Please don’t focus aligned glare (such as lighting, sunlight, etc.), otherwise it will easily lead to too bright or pull light phenomena, also affect the image sensor life.

● The laser beam may burn the image sensor, so when it is used, please don’t expose the image sensor in laser beam.

● Please don’t put it in the damp, dusty, extreme heat, extreme cold, strong electromagnetic radiation places.

● Please make sure the installation location keep enough distance from the electromagnetic

sensitive devices surrounding to avoid electromagnetic interference.

● Please prevent heat buildup and keeping the surrounding ventilation.

● Please prevent the speed dome from water or any liquid.

● The product must be carried by original package, either in delivery to users or in return delivery to the factory for repairing. Otherwise, damage caused in transportation will not be covered by warranty.

● The battery replaced incorrectly will lead to use of exceptions, and we don't recommend users to replace directly; If necessary, please use batteries recommended by the manufacturer (for devices with battery).

● Please don't dismantle internal parts, please turn to qualified maintenance professionals to carry out repairs

● Long-term high speed cruising may cause slip rings broken and belt aging, also affect speed dome life.

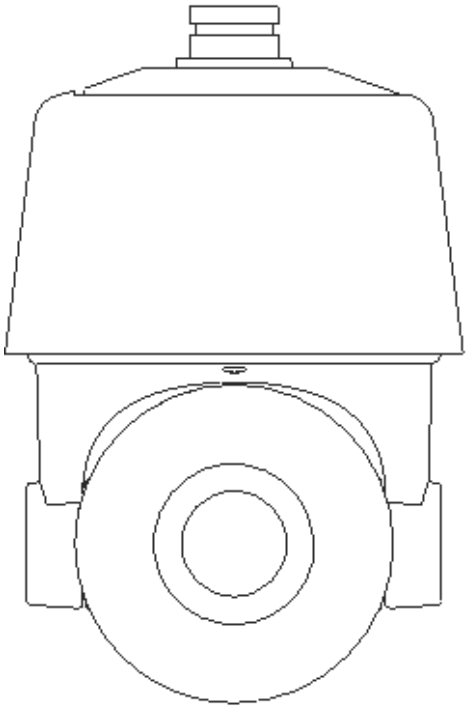
● **Working Environment**

	Speed Dome
Environmental temperature	-40℃～+65℃
Moisture	<95%（Non-condensing）
Atmospheric pressure	86～106KPa
Power	AC24V/2.0A

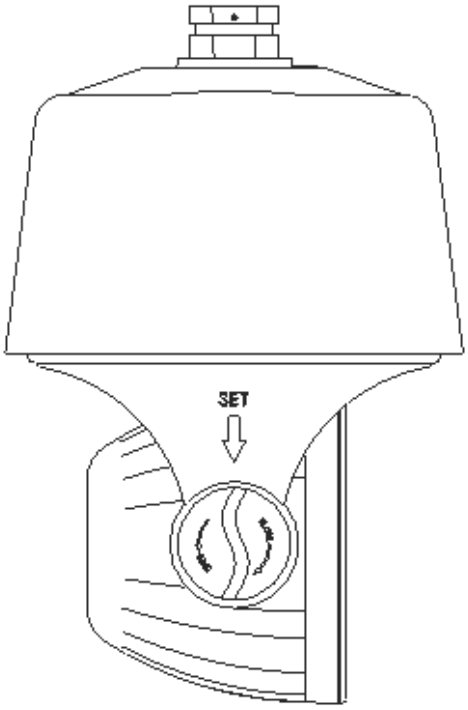
Note: make sure outdoor installation meets water-proof requirements.

Chapter 2 Structure

Front view



Side view



Chapter 3 Functions Description

3.1 Features

1. Built-in Decoder

● HD IP Speed Dome, support 720P 25/30fps or 1080P 25/30fps output.

● Support English menu

● Support standard Onvif

● Power-off protection, no data loss

● RJ-45 port network port

● Support PELCO_P,PELCO_D protocols.

● Support 3D location

● Support standby function

● 225 programmable presets

● 8 cruising tracks, each cruising track has 32 preset positions

● 8 auto scan tracks, the left and right boundaries and scan speed can be set

● Support OSD, date and time display

● Support 1 channel alarm input and 1 channel alarm output

● Support TF storage and local capture

2. Integrated Universal Speed Change Rotator

● Manual Speed:0.05°～160°/s, Max speed 240°/s

● 360° continuous pan rotation, tilt -11°~90° auto flip

● Stepless speed change, auto zoom/speed matching

● Classic double bearing structure, more stable operation

● Delicate stepping motor, stable, sensitive and accurate

3. All-weather Outdoor Design

● Sensor intelligent control

● Double housing structure

● IP66 water proof

● Support anti- lightning and anti-surge

4. Camera Module

● Support auto iris, auto focus and auto BLC

● Mini. Illumination 0.5Lux/F1.6(color),0.095Lux/F1.6(B/W)

● Support 3D noise reduction and WDR

5. Network

● Support Ethernet control

● Support remote view and control by browser and client software

● Support Micro SD card

● Support NFS

● Support remote view and control by browser and client software

● Support Micro SD card

● Support for NFS record

● Support four levels user authority

●Support for authorized users and passwords, support HTTPS encryption and IEEE 802.1x network access control

● Support dual-stream, support H.264/MJPEG, support multi-level video quality configuration, and support real-time video output resolution 1080p, 960p and 720p

● Support multiple network protocols, IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTP,

TCP / IP, DHCP, PPPoE

6. IR Function

● Mini. Illumination 0Lux

● Adopt array IR, low consumption, IR distance 150m

● IR LEDs and zoom auto match

● Support NFS

● Built-in heat treatment and defog systems

● Constant current circuit design, IR LED life >30,000 hours

3.2 Function Instruction

● Focus/Rotate Auto Match

Speed Dome can auto adjust pan and tilt rotation speed depending on the focus distance.

● Preset Position Setting and Calling

Preset function means the speed dome can memory current pan/tilt angel, focus, zoom, ect. When need, it can be called upon directly. Our speed dome support up to 255 preset positions.

● Auto Scan

Users can set the left and right boundaries by control keyboard. Then speed dome can scan between it. It can set up to 8 groups scan path.

● Auto Cruising

Users can program some preset positions into auto cruising sequence, then the speed dome can track as it. Each cruising tracks has 32 preset positions.

● Pattern Tour

Speed Dome can memory 180s running path. When start pattern tour, speed dome can track as recording path. It supports 4 groups pattern tour.

● Guard Location

The dome will rotate back to preset position after a period of vacant time.

● Power-off Protection

Speed dome can resume operation status before the power-off, no data loss.

3.3 Specification

Specification \ Model		HD IP IR Auto-tracking Speed Dome	
Camera	Sensor	1.3M:AR0130-1/3” CMOS	2M:IMX222-1/2.8” CMOS
	Pixel	1.3M	2.1
	Image Resolution	Color:0.5 Lux @ (F1.6,50 IRE,ICR close) B/W:0.095 Lux @ (F1.6,50 IRE,ICR open)	

	Resolution	≥720TVL	≥1000TVL
	White Balance	Auto / Manual/ATW	
	GC	Auto /Manual	
	S/N	>50dB	
	Noise Reduction	3D&2D	
	WDR	Support	
	Electronic Shutter	1/25 ---1/10000s	
	Day/Night	Auto ICR	
	Focus	Auto / Manual	
Lens	Focal Length	14.7～84.6mm,20X	4.7～94mm,20X
	Zoom	3S	
	Horizontal Angle	54.8°-3.4°	55.5°-3.0°
	Near Distance	20～1000mm	
	Iris	F1.6 ～F2.7	F1.6 ～F3.0
PTZ	Horizontal Rotation Range	360°continuous rotation	
	Horizontal Speed	0.05°～160°/s（stepless speed）	
	Vertical Rotation Range	11°~90°auto flip	
	Vertical Speed	0.05°-120°/s	
	Preset	255	
	Auto Cruise	8 group, each group can set 32 preset	
	Auto Scan	Support track, horizontal, vertical, frame, whole view and random scan	
	Guard Location	Link preset/scan/cruise/pattern	
	Power off Memory	Support	
	Position Information Display	On/Off	

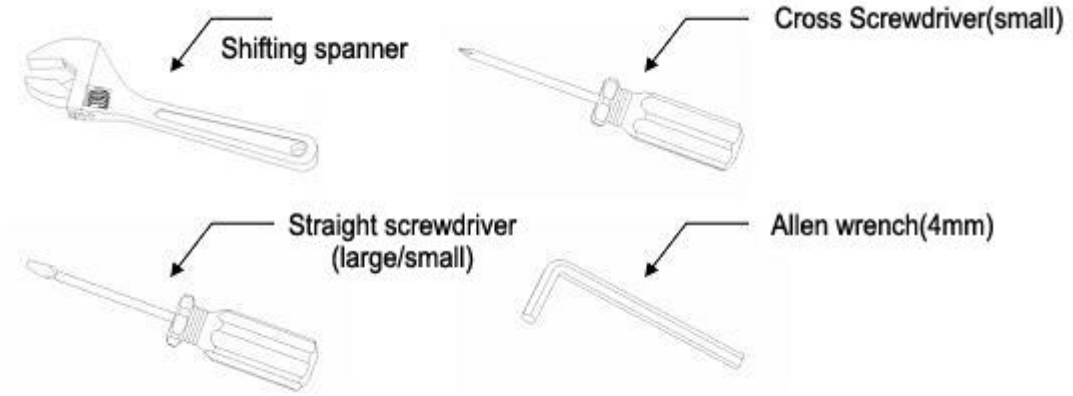
IR	IR Distance	150m	
	IR Angle	Zoom matching, far/middle/near	
Network	Image resolution	1280×960	1920×1080
	Frame rate	50Hz: 25 fps (1280×960) 25 fps (1280×720) 60Hz: 30 fps (1280×960) 30 fps (1280×720)	50Hz:25fps(1920×1080) 25fps(1280×960) 25fps(1280×720) 60Hz:30fps(1920×1080) 30fps(1280×960) 30fps(1280×720)
	Video Compression	H.264/MJPEG	
	Audio Compression	G711A/G711U/G726/ADPCM/AAC	
	Network Protocol	IPv4,HTTP,HTTPS,802.1x, FTP,SMTP,UPnP,SNMP DNS,DDNS,NTP,RTSP,RTP,TCP/IP,DHCP,PPPoE	
	Preview Channel	Max 6ch	
	Stream	Triple	
	Authority	32 users, 4 level: administrator, browse, browse+control, browse+control+setup	
	Safe Mode	Authorized user name and password, HTTPS encryption; IEEE 802.1x network access control, IP address filtering	
Interface	Audio Input	Support	
	Audio Output	Support	
	Network	10M/100M	
	TF Card	Support	
	Program	Support standard Onvif	
	Browser	IE8,IE9,IE10,Chrome8+,Firefox3.5+	
General	Power	AC24V 40W max	
	Working Temperature and Humidity	-40 ℃-65℃ Humidity<90%	
	Protection Level	IP66,TVS 4000V lightning protection	
	Dimensions	Φ230（mm）*350（mm）	
	Weight	4.8kg	

Chapter 4 Installation Guide

4.1 Preparation

1. Tools:

Please prepare the necessary tools according to specific situations



2. Check installation space and address

Check the space is enough to install the speed dome. The wall must be thick enough to install the expansion screws and can bear 4 times the weight of the dome camera itself.

3. Please well keep the whole package

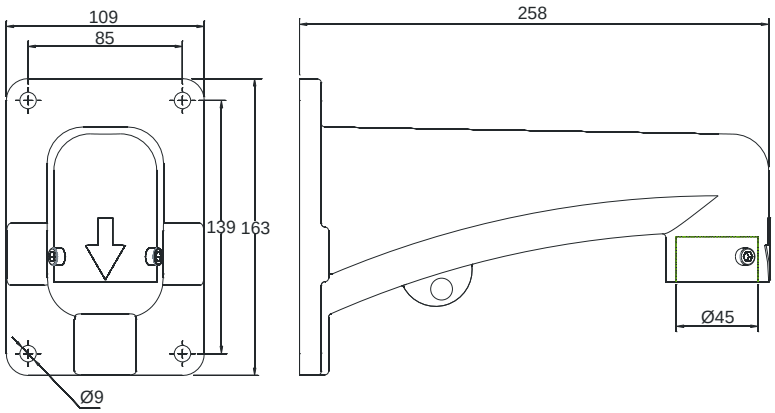
After open the package, please well keep them in case need to return to manufacturer if any problem.

★Note:The non-original package may lead to damage during the transportation.

4.2 Installation

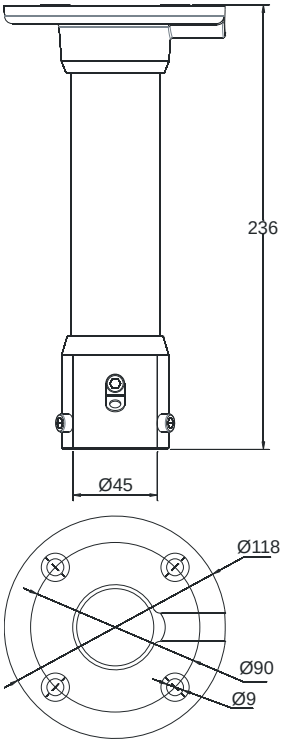
The speed dome supports four types installation as following:

1:Wall mount and dimension:



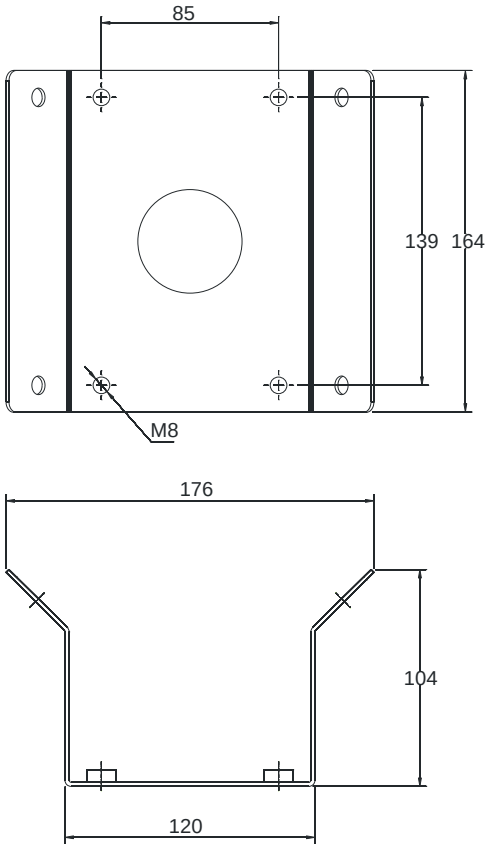
Wall Mount Bracket Dimension

2:Pedant mount and dimension:



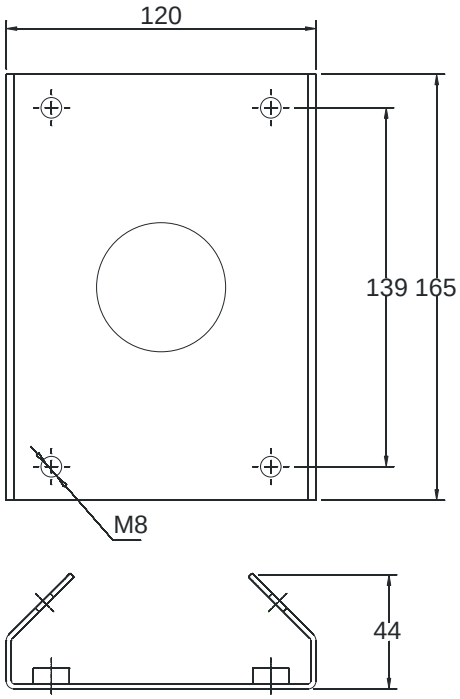
Pedant Mount Bracket Dimension

3:External corner and dimension



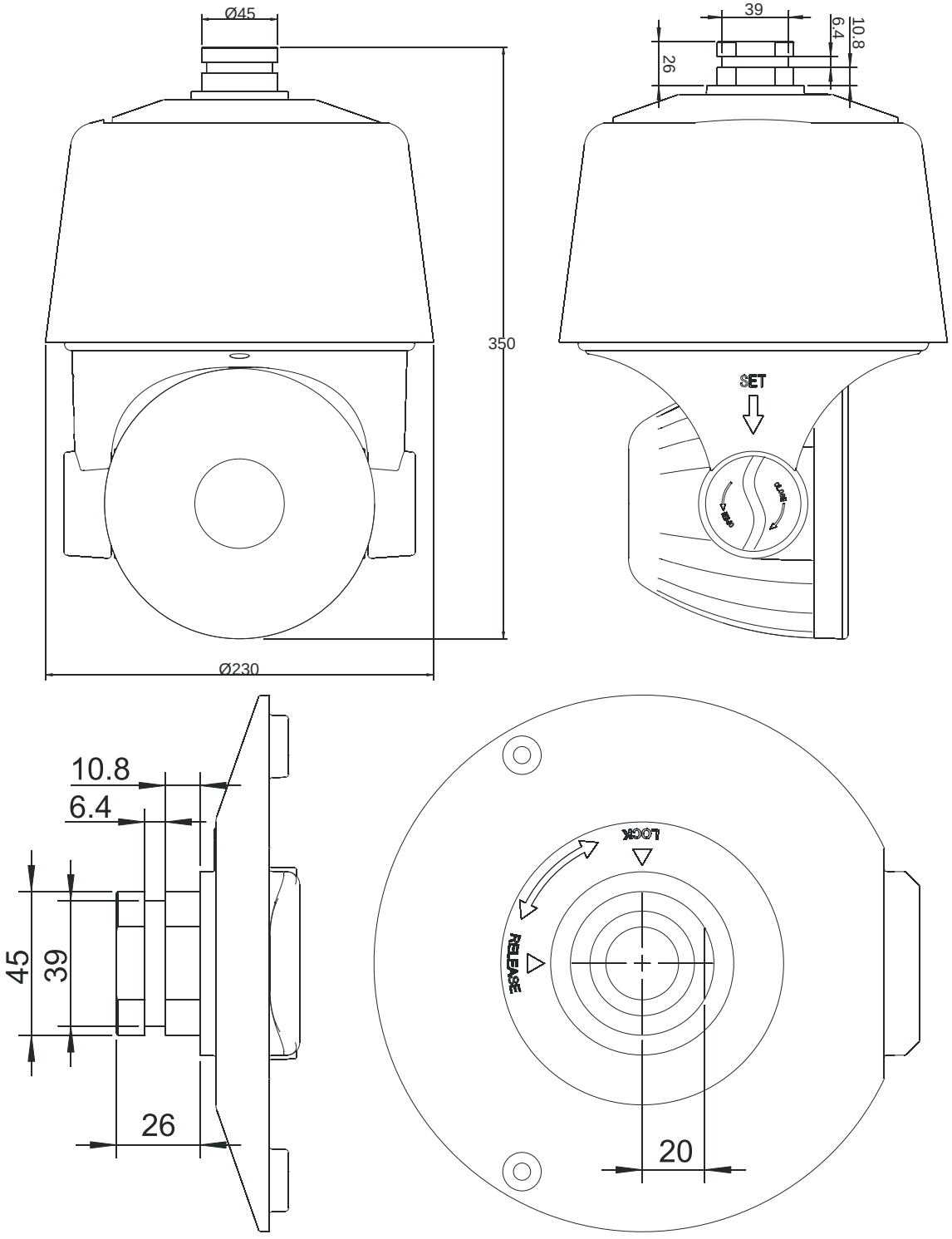
External Corner Bracket and Dimension

4:Pole mount and dimension:

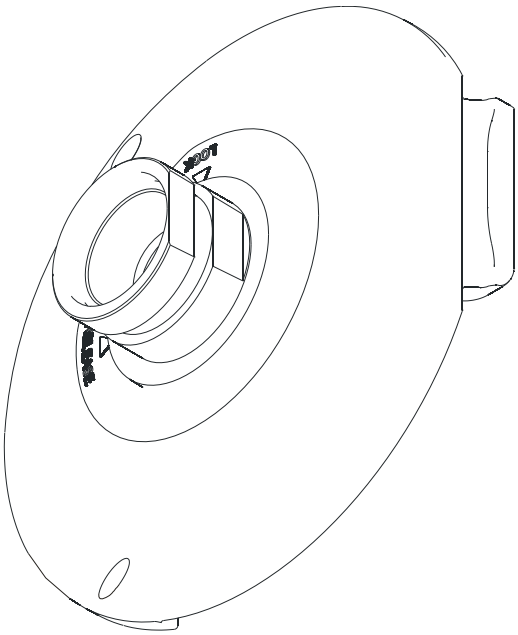


Pole Mount Bracket and Dimension

4.3 Interface Instruction



Speed Dome and Bracket Interface Dimension



Speed Dome and Bracket Interface Perspective Picture

4.4 Installation Procedures (Take Wall Mount as Example)

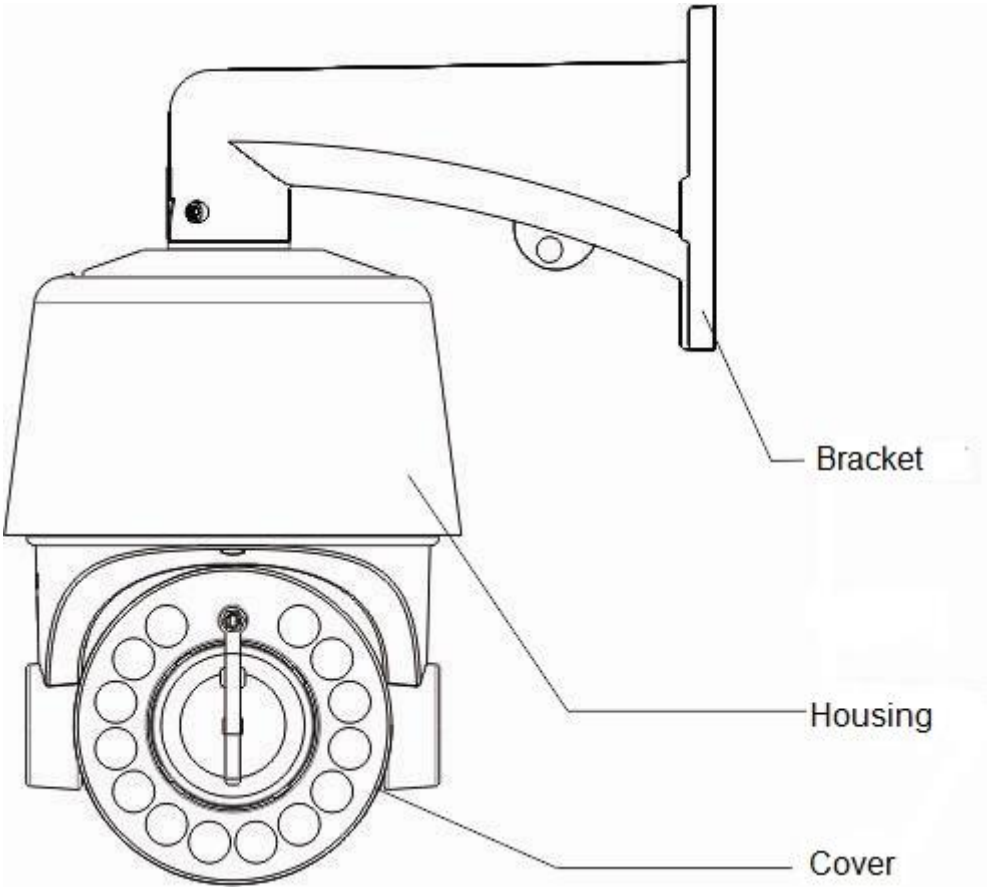


Figure 1

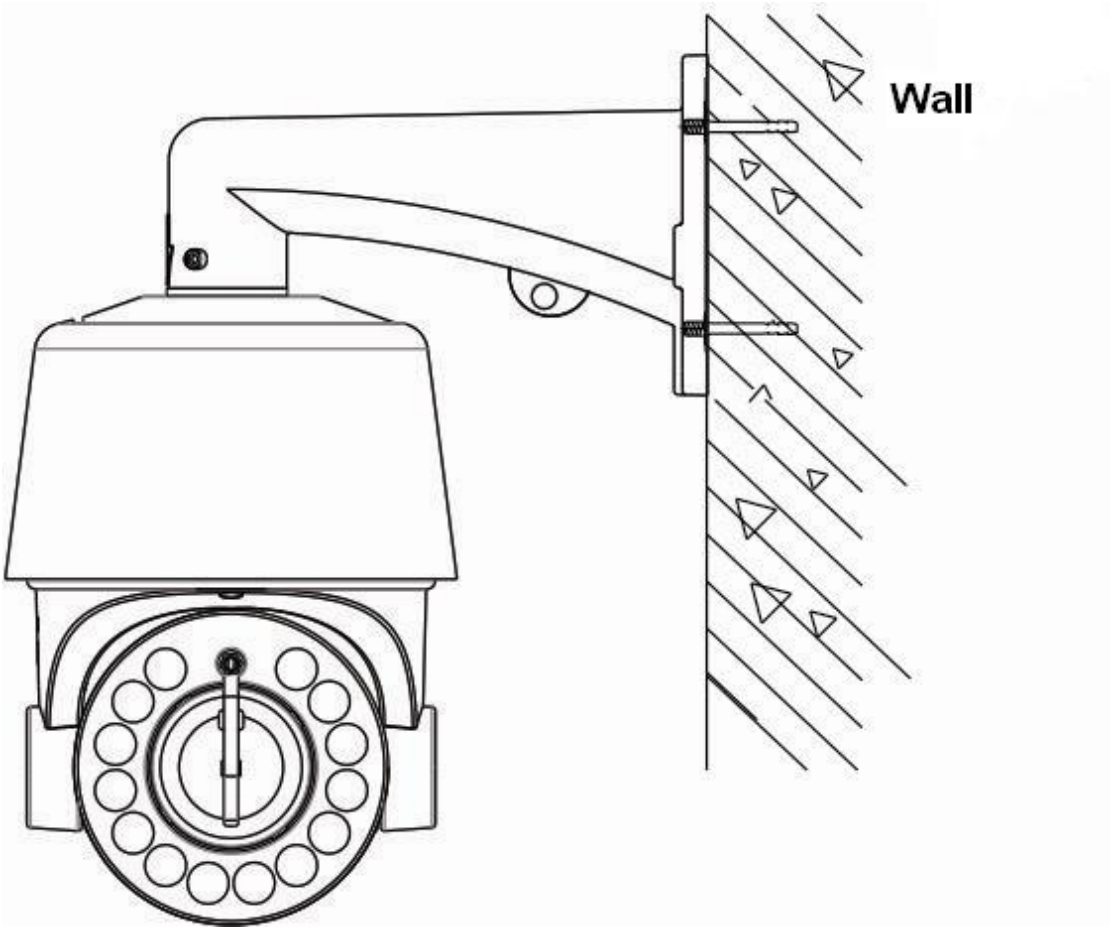


Figure 2

Steps:

Remove the wall mounting bracket and speed dome, and lead the cable through the bracket and set aside to the right position. Aligned the screw holes of speed dome to that of bracket, and use M6 screws to fix. (as Figure 1)

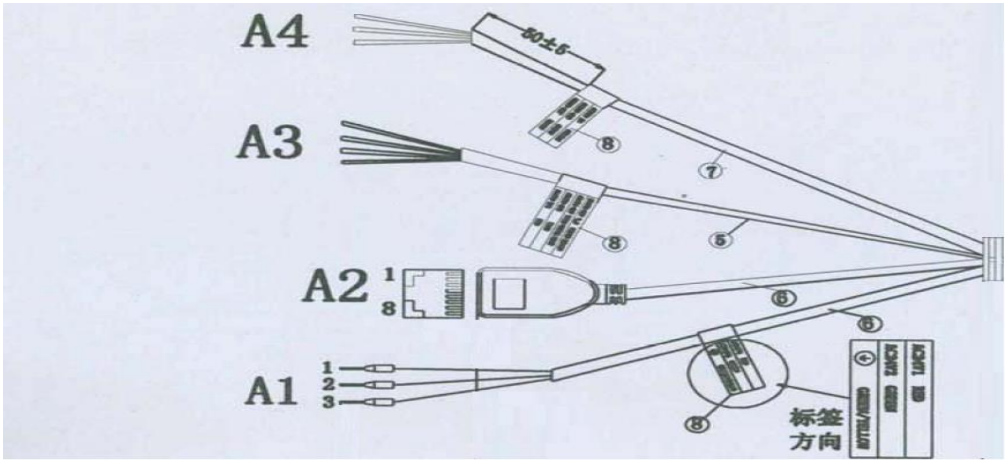
Mark the drill holes position on wall with ink pen for bracket installation, then drill holes and punch the expansion screws in, then fasten the bracket with M8 screws as Figure 2.

Description:

1) The wall must have sufficient load-bearing capacity.

2) Outdoor installation shall be completely sealed moisture; leads cable should closely along the bracket wiring as Figure 1.

4.5 External Cable Connection Instruction

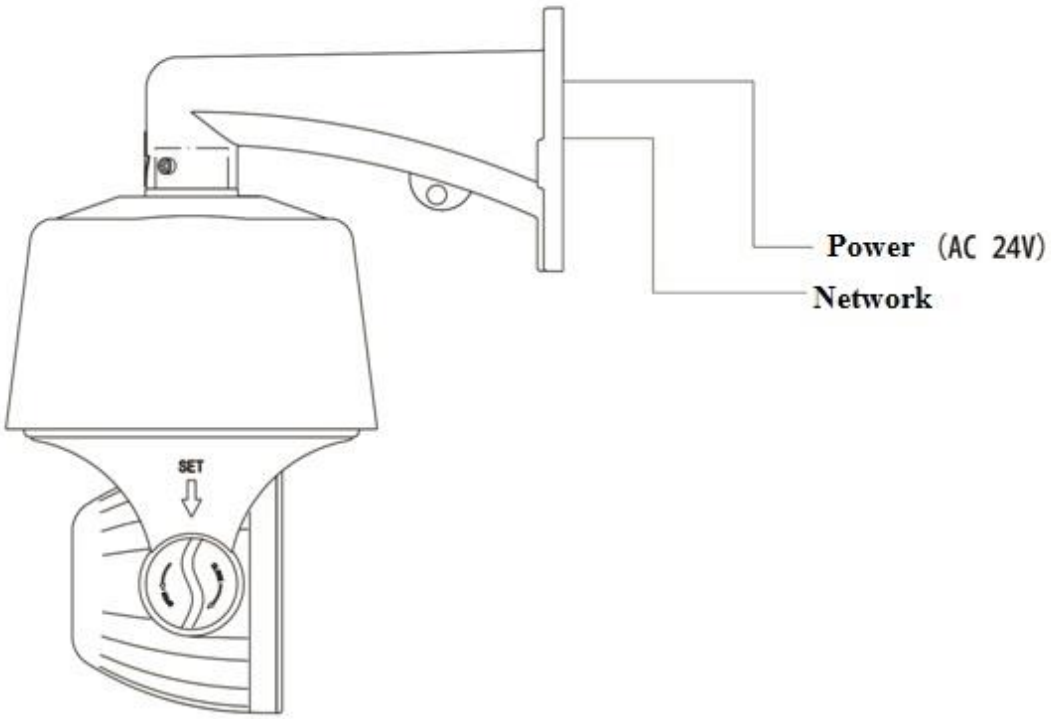


A1: Power Cable:AC/DC24V;

A2: Network: Connect computer or other devices

A3: Audio Cable: Audio input and output can connect mic and speaker

A4: Alarm Cable: Connect external alarm devices;



Note: Please refer to labels on the cables

Chapter 5 WEB Instruction

5.1 System Requirement

The IP speed dome web settings support Windows XP, Win7 system, please make sure right installation and setup of following items:
(1) Display resolution: 1024 * 768 or higher, color: High Color (32-bit).
(2) Please make sure the Windows system install the necessary character style.

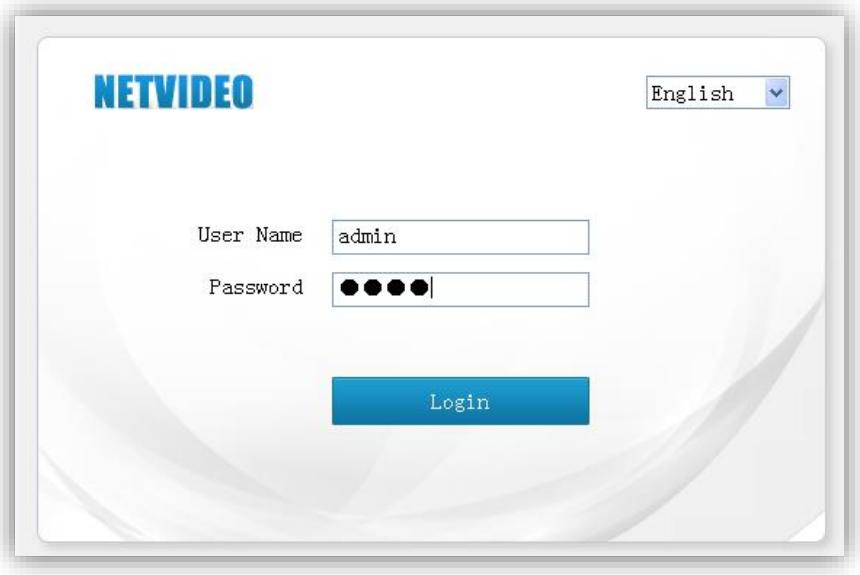
5.2 Built-in Web Instruction

When using the network video products for the first time, an ActiveX control is needed. Note: please use IE browser of windows and make sure the version above 6.0. Do not use any other browser except Firefox, Google.
(1) Login IP address and enter to ActiveX download interface.
(2)Download ActiveX and click 【Run】to install

5.3 Log in

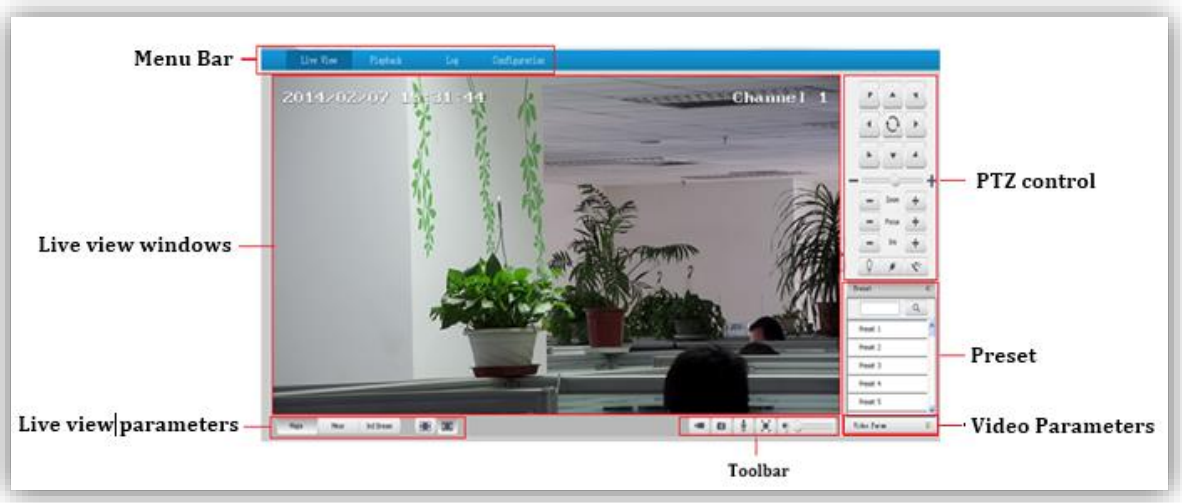
Camera default IP address is:192.168.1.2,please make sure computer and IP camera in the same IP address area.

You need to download Active X plug when first time to use.



5.4 Preview

Descriptions of live view page

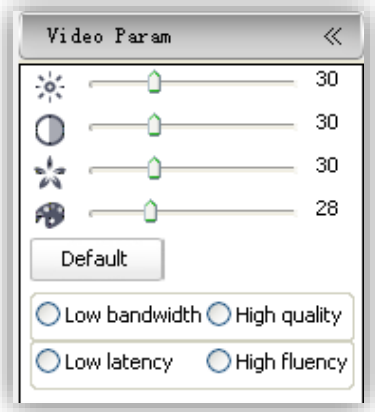


5.4.1 Live View

Descriptions of live view parameters and toolbar

Icon	Description	Icon	Description
	Major stream		Manual recording on / off, and default storage path is D\NetVideoBrowser\
	Minor stream		Manually capture, and default storage path is D\NetVideoBrowser\
	Third stream		Intercom on/off
	Screen lock		Full screen
	Screen adapt to current resolution		Audio on, volume adjustment and mute

Note When stream type is【Pure Video】,audio preview is invalid.



5.4.2 Video parameter

(1)**<Default>** to resume the default settings.
(2)According to network situation you can choose preview mode from **<Low bandwidth>, <Low latency> to <High quality>, <High fluency>**

5.4.3 PTZ control

(1)Select rotation direction of speed dome,

enable auto scan.

(2)**<Zoom>**Zoom in /Zoom out
(3)**<Focus>** Manual Focus.
(4)**<Iris>**Manually adjust iris.
(5) set PTZ speed

(6) Wipper
(7) Preserved for future functions
(8) Defog: , HLC: , WDR:

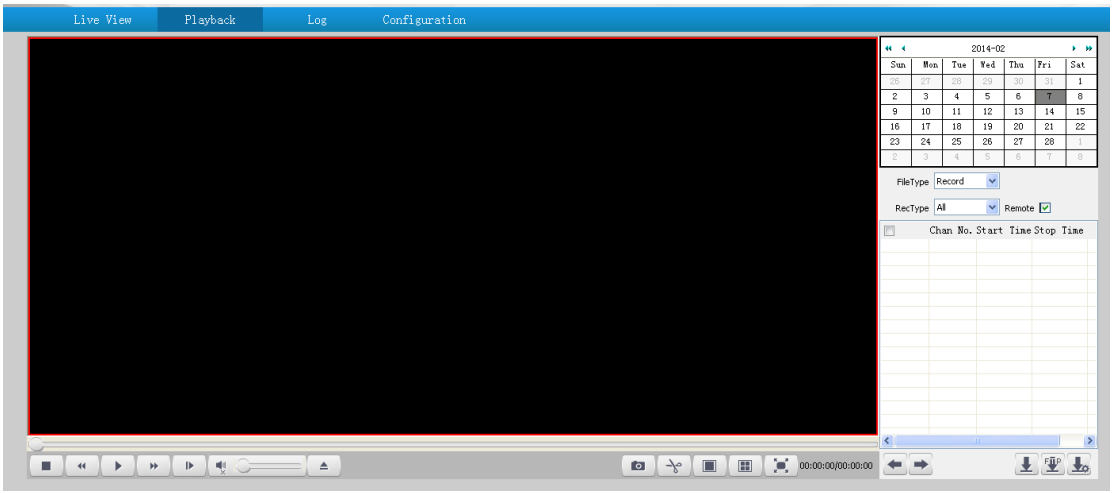
5.4.4 Preset position

Search the target preset number

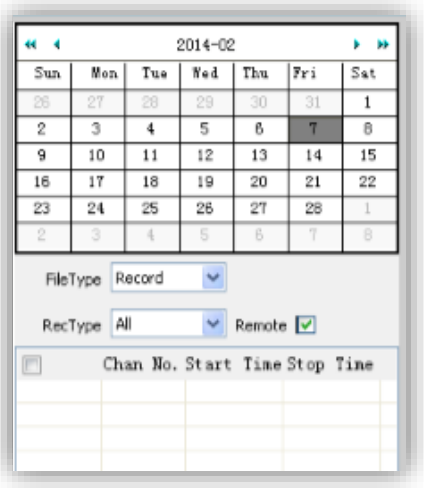
<Set> Setup preset position

<Call>Call the preset position

5.5 Playback



5.5.1 Search recording files

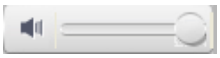


(1)Select date in the calendar

(2) **<File Type>** **select <Record>** or **<Picture>**

(3)**<Rec Type>** Select targeted file type video/picture.

5.5.2 Descriptions of playback toolbar

con	Description	Icon	Description
	Stop recording		Clip video files, and default storage path is D\NetVideoBrowser\
	Speed down in 1/2X,1/4X,1/6X and 1/8X		Single screen
	Play		Playback in 4 screen at the same time
	Speed up in 2X,4X,6X and 8X		Full Screen
	Playback by frame		Download recording files
	Audio on, volume adjustment and mute		Download files into FTP server
	Capture, and default storage path is D\NetVideoBrowser\		Preview download status

5.6 Log

(1)**<Channel No>** Select target channel

(2) **<Log type>**

All/system/warning/alarm/operation/user/others

(3) **<Start time>** Select start date and time.

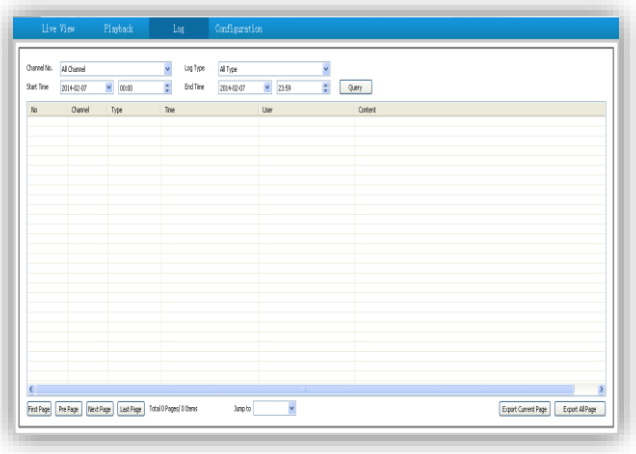
(4) **<End time>** Select end date and time.

(5) **<Query>** Get a log list.

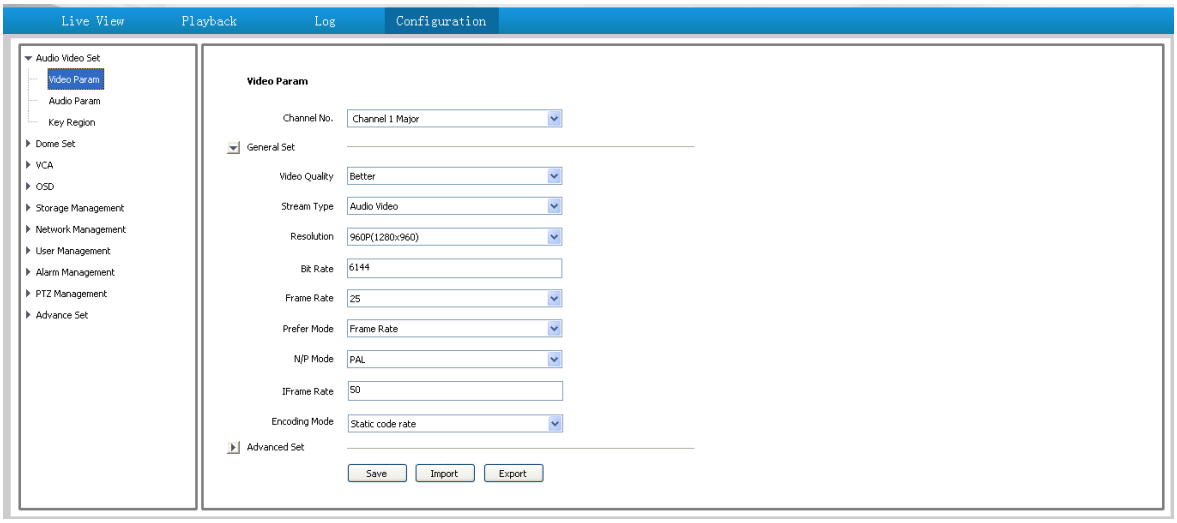
(6) Check logs by **<First page><Pre page><Next page><Last page>** and **<Jump to>**target page.

(7)**<Export current page>** to export logs, and default save path is D\NetVideoBrowser.

(8)**<Export all page>** to export all the pages query, and default save path is D\NetVideoBrowser.



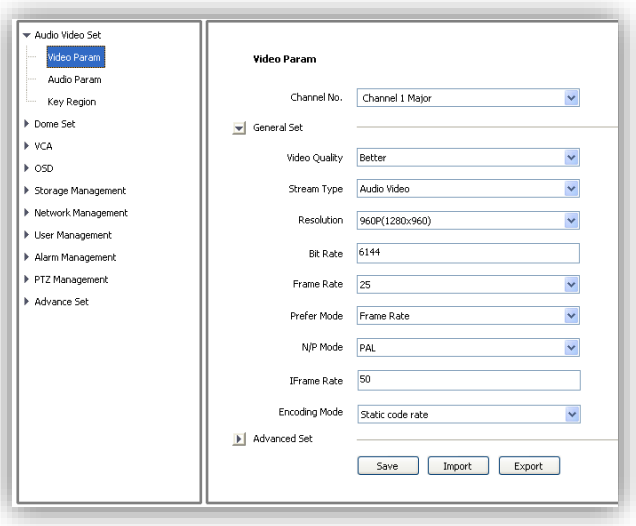
Chapter 6 Configuration



Attention: All settings will be enabled in 3 seconds after <save>.

6.1 Audio Video Set

6.1.1 Video Parameter



<Channel No.>Select the target channel

General Set

(1)**<Stream Type><Audio Video>/<Pure Video>**

(2)<**Encoding Mode>**

<Static code rate> Fix stream and bandwidth occupation.

<Dynamic code rate> Stream will be varied to the change of video, take up less bandwidth when there is no change on video.

(3)**<Video Quality>**only be activated when choose **<Dynamic code rate>** in <Encoding Mode>.

<Video Quality><Best>,<Better>,<Good>,<Fair>,<Poor>

The better quality the more stream and bandwidth occupation.

(4)**<Bit Rate>** show stream rate for the video, unit is Kbps. When choose**<Static code rate>**, **<Bit Rate>**stand for actual rate of the stream. When choose**<Dynamic code rate>**,**<Bit Rate>**show the max stream rate, range from 32 ~ 8000Kbps.

(5)**<Frame Rate>** 1/5/10/15/25/30fps optional.

(6)**<I Frame Rate>** To set the interval time for each two I frame. (I frame is the key frame in the video stream)

(7)**<Prefer Mode>**

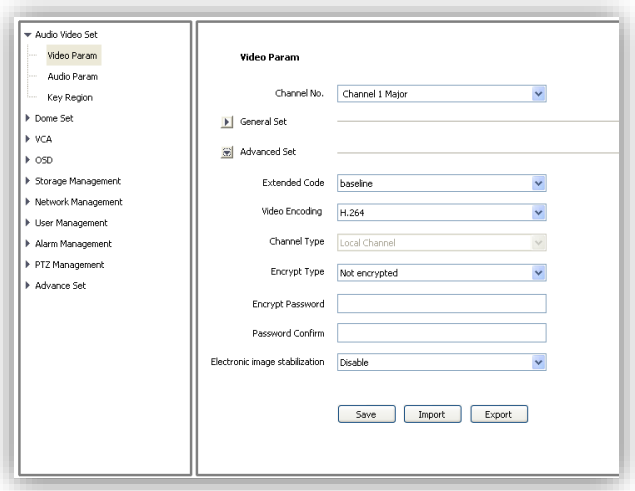
<Frame Rate> Fluency first

<Quality> Video quality first

(8)**<Resolution>** 4CIF/VGA/720P/960P/1080P.

(9)**<N/P Mode>** Select **<PAL>** or**<NTSC>.**

Advance Set



(1)**<Video Encoding>**

<H.264> and **<Motion JPEG>**

(2)**<Extended Code>**

Available when selected **<H.264>**, there are **<baseline>**, **<main profile>**, **<high profile>** for selection.

(3)**<Encrypt Type>** Add password for the channel.

<Encrypt Password> Enter password.

<Password Confirm> Confirm the password. Click**<Save>**to enable.

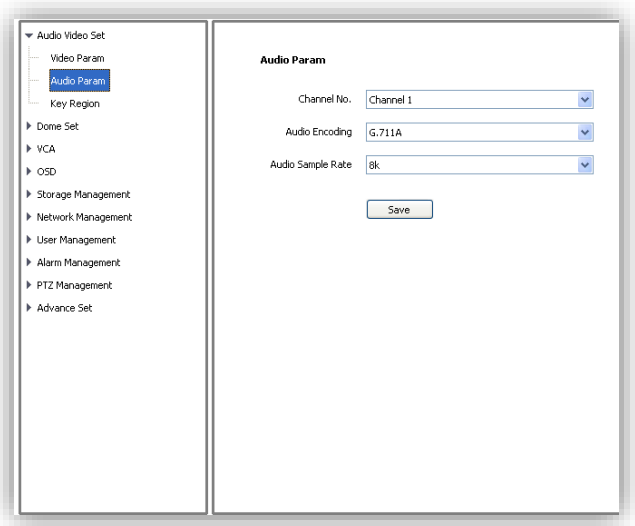
Video Parameter-Export

<Export> backup the configuration file, save to D\NetVideoBrowser\VideoParam.dat as default.

Video Parameter-Import

<Import> import the backup file for parameter configuration.

Audio Parameter



(1)**<Channel No.>**select target audio channel.

(2)**<Audio Encoding>** select audio compression type.

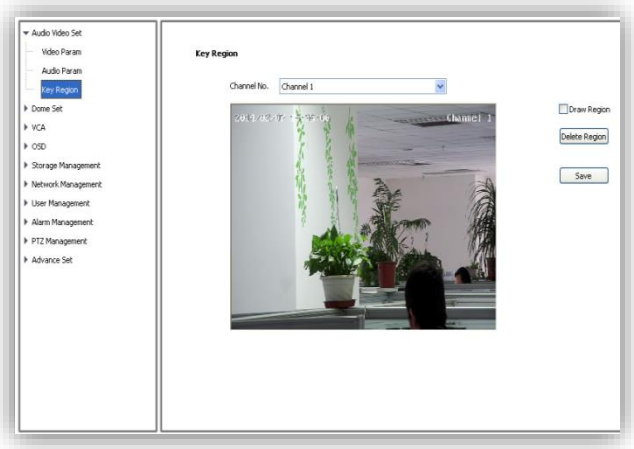
(3)**<Audio Sample Rate>**

<8k>,**<32k>**,**<64k>** optional.

(4)**<Save>** save and enable the setting.

Note: some models need reboot after saving the setting.

6.1.3 Key Region



<Key Region> To have better image quality for some regions on the video, there are 4 regions settable for each video.

(1) **<Draw Region>**

Use the mouse to draw the key region on the video.

(2)Click**<Save>** to enable.

(3) **<Delete Region>**

delete the drawn regions.

6.2 Dome Set

6.2.1 HD Parameter

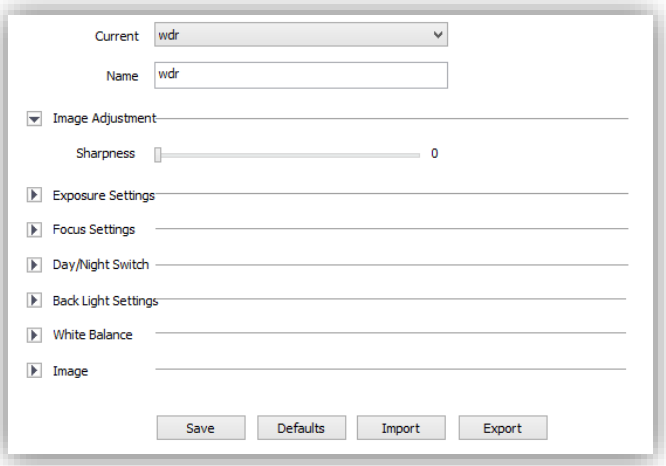
Set video image parameter in this page.

HD Param-Model

The system provides 8 video templates for different application, all the video parameter can only be revised and saved in the template.

(1) **<Current>** Select current template.

(2)**<Name>**show the name of the current template, it can be revised.



HD Param-Parameter

(1)**<Image Adjustment>**

Sharpness range from 0 to 255.

(2)**<Exposure Setting>** Auto/Manual.

(3)**<Focus Setting>** Auto/Manual.

(4)**<Day/Night Switch>**

<Smart IR> On/Off

<Day/Night> Auto/Night/Day

<Sensitivity> Low/Middle/High

(5)**<Backlight Settings>**

<Wide Dynamic> On/Off

<Level> Low/Middle/High

(6)**<White Balance ><Auto>**,**<Manual>**and**<ATW>**.When selected**<Manual>**,there will be 2 sliding blocks to set the white balance, R stand for red gain and B stand for blue gain.

(8)**<Image>**

<Light Suppression> On/Off

<Defog> On/Off

<Digital Denoise> Close/Ordinary Mode/Expert Mode

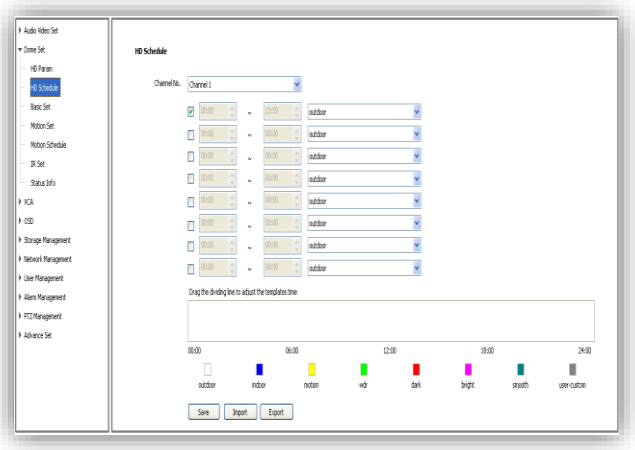
<Denoise Level> range from 1~255

HD Param- Defaults

Click button**< Default>**to recover the defaults setting for the target template.

Remark **<HD Param>** has Export and Import function, operation is the same as **<Video Param>.**

6.2.2 HD Schedule



To define different video template used for different time period.

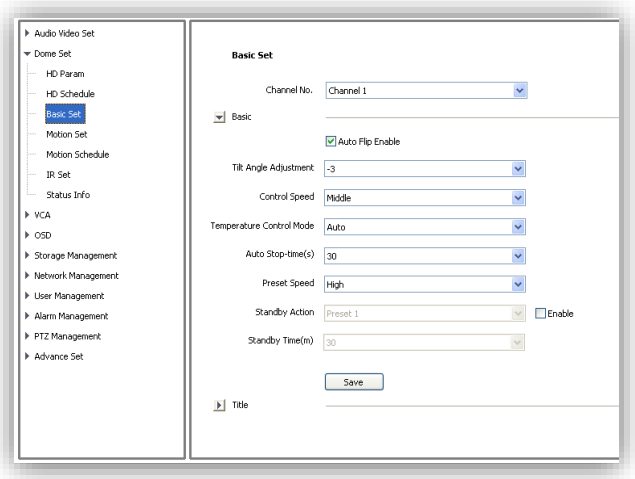
(1)It offers 8 different time periods, select the check box to enable it.

(2)Select template for each time period.

(3)Length of each time period is settable. Colors are different for different template.

(4) Click<Save>to save and enable.

6.2.3 Basic Set



6.2.3.1 Basic

<Auto Flip Enable> Enable for 0~180°, disable for 0~90°.

<Tilt Angle Adjustment> Set the tilt angle for speed dome camera, range from "0"to"-11" degree.

<Control Speed>

Set limit for the max operation speed, high/medium/low for selection, high=240°/s, medium=160°/s, low=80°/s.

<Auto Stop-time (s)> Set the time period for the speed dome camera to stop PTZ movement since the last operation. It can be set to be 5/15/30/60s.

<Preset Speed> Set the preset speed for speed dome camera, there are high/medium/low for selection.

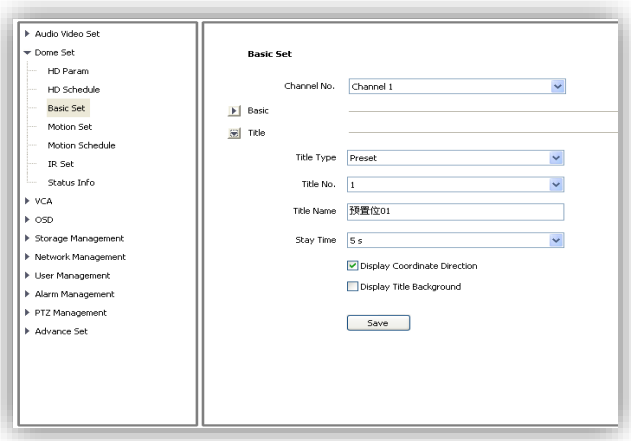
<Temperature Control Mode><Auto>and**<OFF>**

<Standby Action> It is to define the action of speed dome camera when it is idle. There are 4 options preset#1, scan#1, cruise#1 and pattern#1.

<Standby Time（s）> enable standby time setting. There are 30s,60s,300s,600s and 1800s for selection.

<save> save and enable all the setting.

6.2.3.2 Title



<Title Type> Preset, Scan, Cruise, Pattern and Zone No.

<Title No.> Preset number range from 1-32, Scan number range from 1-8, Cruise number range from 1-8, Pattern number range from 1-8, Zone Number range from 1-8.

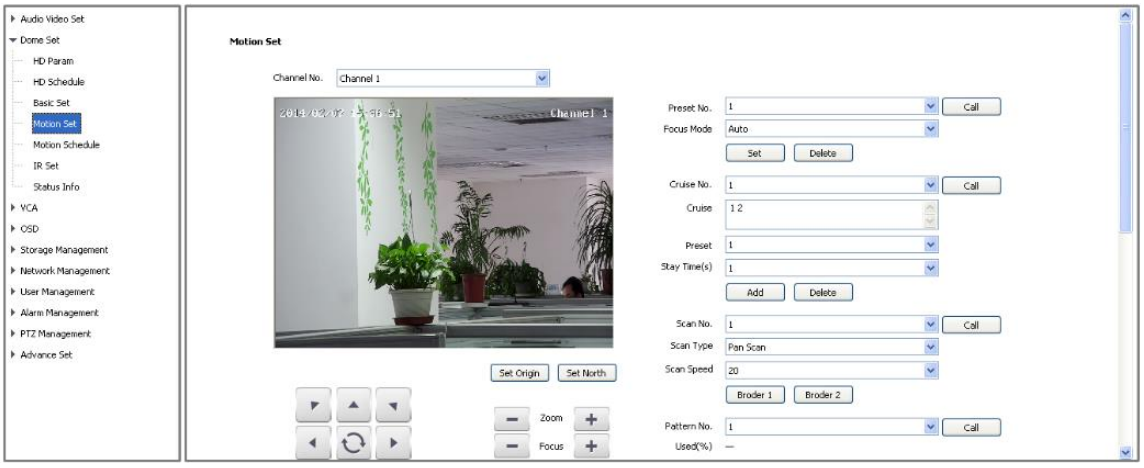
<Title Name>Set title name.

<Stay Time> Title display on the screen, options 2s,/5s/10s/disappear/keep.

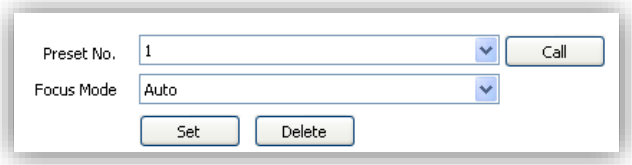
<Display Coordinate Direction> check to display the movement coordinates.

<Display Title Background> check to display title background.

6.2.4 Motion Set



6.2.4.1 Preset



<Preset No.> Speed dome camera supports 220 presets, number range from 1-64 and 100-255.

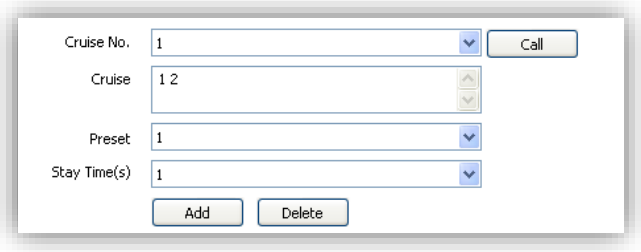
<Focus Mode> Focus mode for preset can be auto/manual.

<Set> Move to target position and press <Set> to save as preset position.

<Delete> Delete the target number of preset position.

<Call>Speed dome camera will move to the target preset position.

6.2.4.2 Cruise



<Cruise No.> Speed dome camera supports 8 cruises, number from 1-8

<Cruise> show how many presets in the cruise.

<Preset> Only preset number 1-64 and 100-255 are available, click **<Add>** to add the preset into cruise list.

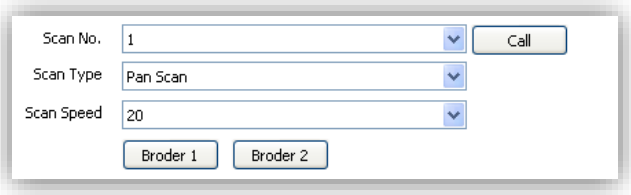
<Stay Time(S)>Set interval time between two presets, rang from 1-60 seconds.

<Add>Add presets into cruise list.

<Delete>Remove preset from the cruise list.

<Call>Activate the speed dome to move follow the presets in cruise list.

6.2.4.3 Scan



<Scan No.>The speed dome supports 8 Scans, number from 1-8

<Scan Type>Pan Scan, Auto Scan, Frame Scan, Random Scan, Tilt Scan and Panorama Scan.

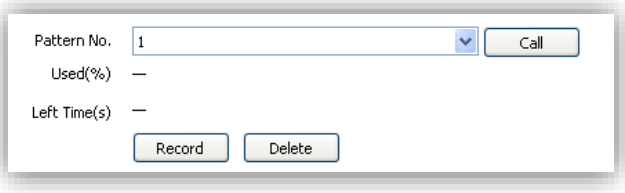
<Scan Speed>Set speed for Pan Scan, Auto Scan, Tilt Scan and Panorama Scan.

<Border 1>Left border of the Scan.

<Border 2>Right border of the Scan.

<Call>Activate scan movement of the speed dome.

6.2.4.4 Pattern



<Pattern No.>The speed dome camera supports 8 pattern tour, number range from 1-8.

<Used(%)> Show percentage used for operations in one pattern tour.

<Left Time(s)> Show the time remaining in the pattern record process. (The speed dome camera supports up to 180s)

<Record> Start pattern tour recording

<Delete> Delete the target pattern.

<Call> Activate the speed dome camera to move following the pattern tour.

6.2.4.5 Zone No.

<Zone No.>The speed dome camera supports 8 zones, range from 1-8.

<Left Border> Move the speed dome camera to the target position and set it as the left border of the zone.

<Right Border> Move the speed dome camera to the target position and set it as the right border of the zone.

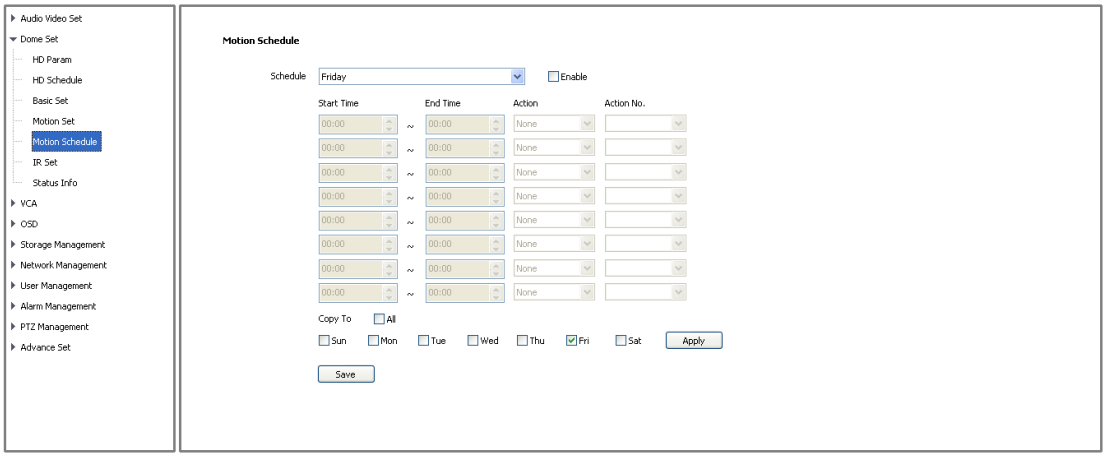
<Delete>Delete the target zone.

<Set Origin>Move the speed dome camera to the target position and set it as original point of the coordinate.

<Set North>Move the speed dome camera to the target position and set it as north direction of the coordinate.

6.2.5 Motion Schedule

Activate different motion (Presets, Scan, Cruise and Pattern) for different time period.



<Enable> Enable the setting.

<Start Time>Start time for the motion.

<End Time>End time for the motion.

<Action>Motion in this time period.

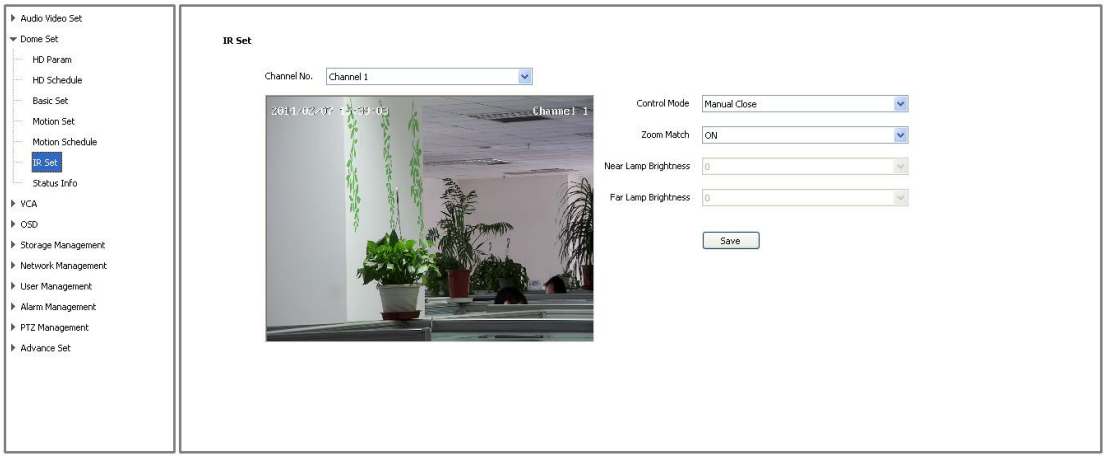
<Action No.>Motion number, Preset 1-8, Scan 1-4, Cruise 1-4, Pattern1-4.

<All>Enable every day in a week, including Saturday and Sunday.

<Apply>Click to copy the configuration to the selected day.

<Save>Save all the setting.

6.2.6 IR Set



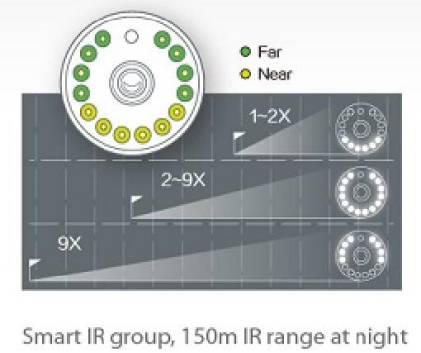
<Control Mode>Auto, Manual Open, Manual Close.

<Zoom Match>When it is ON, the brightness and power consumption of the IR LED will be matched with the camera zooming distance automatically.

<Near Lamp Brightness> Disable zoom match, set the Near lamp brightness level, range from 0 to 10.

<Far Lamp Brightness> Disable zoom match, set the far lamp brightness level, range from 0 to 10.

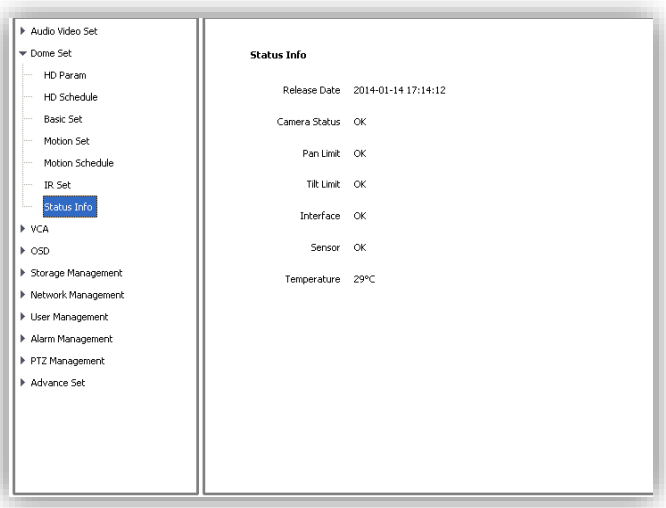
<Save> Save all the setting.



Smart IR group, 150m IR range at night

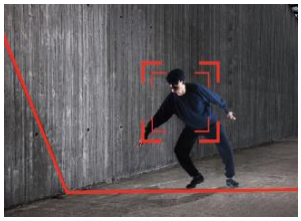
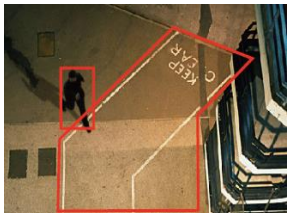
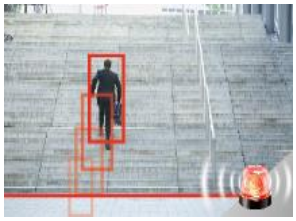
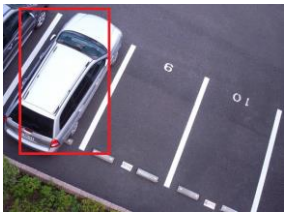
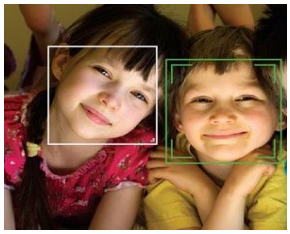
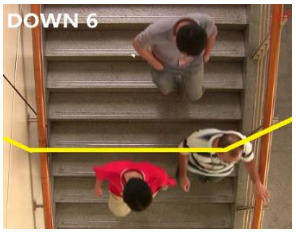
6.2.7 Status Info

It shows current status information of speed dome.



6.3 VCA

VCA(intelligent video analysis) includes 11 functions:

Tripwire	Perimeter	Items Abandon	Items Lost
			
Loiter	**Running**	**Crowd**	**Parking**
			
Panorama Tracking	**Face Recognition**	**Demographics**	
			

Notes: Tripwire and Perimeter are able to activate auto-tracking.

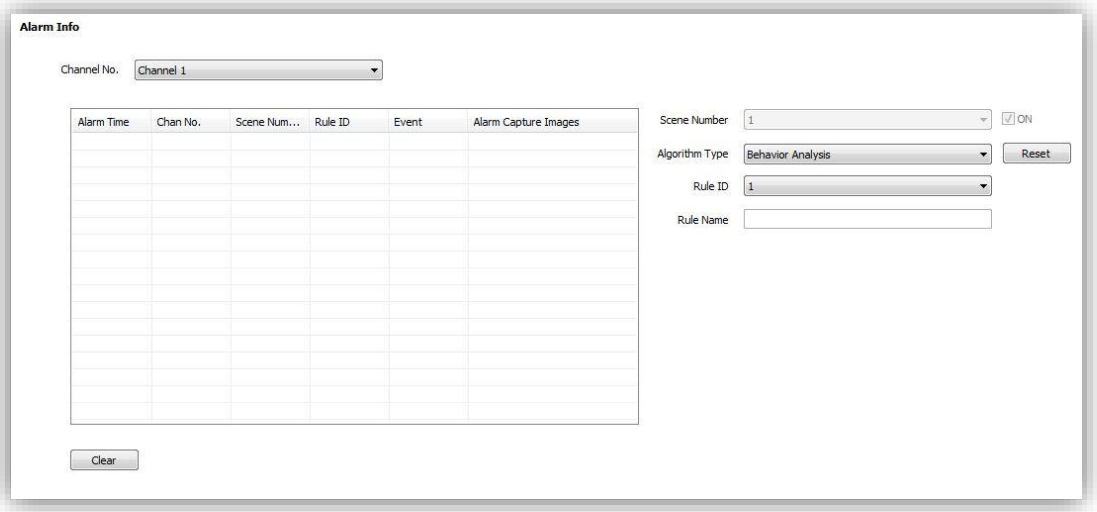
CAUTIONS: To enable the VCA functions, please DO follow the steps:
1.Scene Set—2.Alarm Set—3.Advance—4.Cruise Set.
Specify detail operation of VCA in <Scene Set>, then setup VCA alarm schedule in <Alarm Set>, enable <Advance>, finally setup activated time for each VCA rules in <Cruise Set>.
PLEASE DO NOT MISS ANY STEP ABOVE TO AVOID ANY FAILURE OF SETTING.

6.3.1 Alarm Info

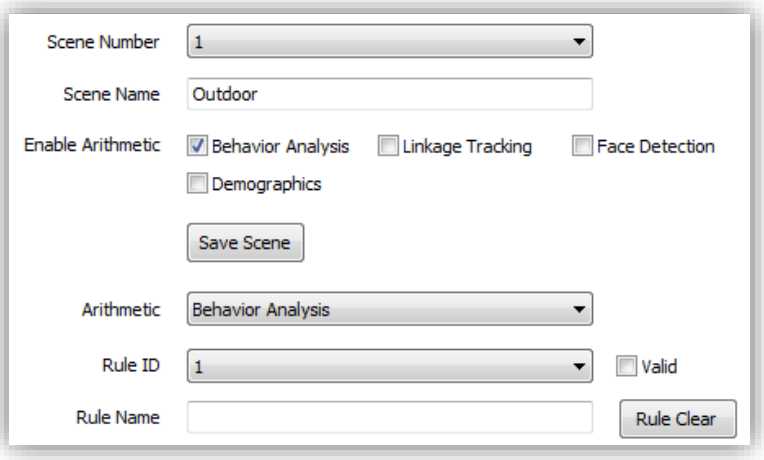
This page is just used to display alarm info when you success to configure.

<Reset>Clear alarm numbers of the VCA rule.

<Clear>Delete all the alarm information in list.



6.3.2 Scene Set



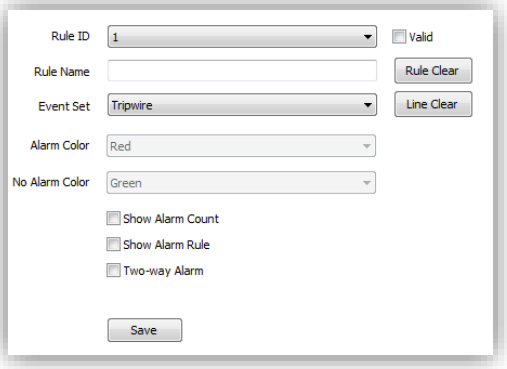
<Behavior Analysis> check to enable behavior analysis, including Tripwire, Perimeter, Items Abandon, Items Lost, Loiter, Running, Crowd, Parking.

Notes: If check <Linkage Tracking>, it will allows Tripwire/Perimeter to activate auto-tracking.

<Save Scene> click to activate settings.

<Rule ID> make the rule numbers for behavior analysis. Support up to 8 rules in the same scene at the same time.

<Valid> activate the rules and start setting.



<Rule Name>Give a rules name(max to 16 characters).

<Rule Clear>clear current rule.

6.3.2.1 Behavior Analysis

Below are setting operation for different type of analysis after Selected <Behavior Analysis>:

(1)Event Set --- Tripwire/Perimeter

<Detect Mode> For **<perimeter>** detection, include **<Intrusion>/<Enter>/<Leave>**.

<Intrusion> alarm when object come in/out.

<Enter> alarm when object come in.

<Leave> alarm when object go out.

<Show Alarm Count>show total alarm times.

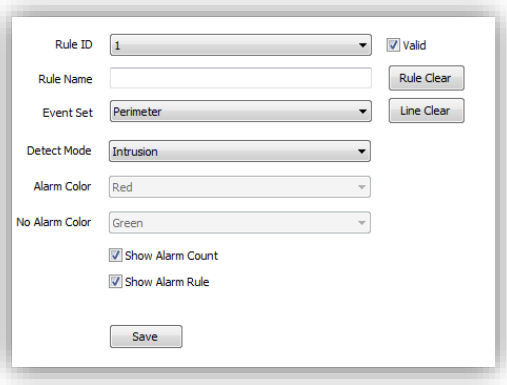
<Show Alarm Rule>show defined tripwire/perimeter on video.

<Two-way Alarm>when selected **<Tripwire>**, choose the"two-way alarm", then two directions cross will both trigger alarm.

<Line Clear>clear current lines drawn on video.

<Rule Clear>clear current rule.

<Save>Save and enable the VCA setting.



<Linkage Tracking> or <Panorama Tracking>

Tips: **<Linkage Tracking> option is** only **available** when you check **<Behavior Analysis>**

< **Arithmetic** > configure **<Intelligent Tracking>**

<The longest> Set time limitation (seconds) how long the PTZ follow the object. And then it will go back to standby position.

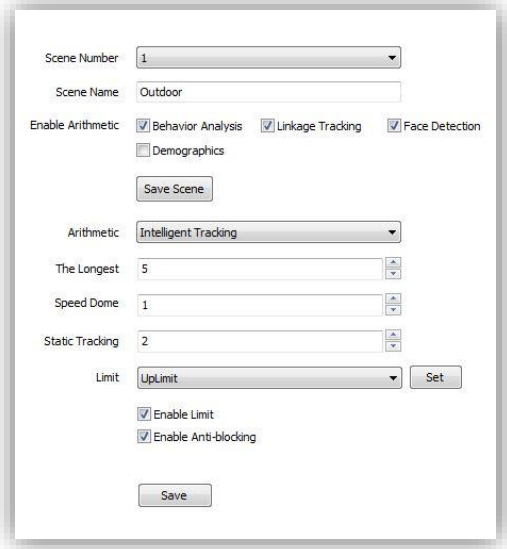
<Speed Dome> Enter the value how high (meters) you install the PTZ

<Static Tracking> Set time (seconds) when the object stay for a while, the PTZ will go back to standby position

<Limit> Setup boarder of traking area from 4 direction. When the object go beyond the area, PTZ will stop to follow it.

<Enable Limit>Check to activate traking area boarders

<Enable Anti-blocking>PTZ wil alarm when it is blocked



(2)Event Set ---Items Abandon

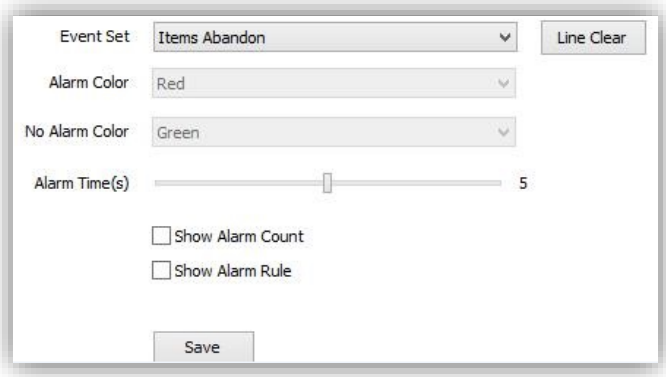
<Line Clear>remove the defined area on video.

<Alarm Time>time to activate alarm.

<Show Alarm Count>show total alarm times on screen.

<Show Alarm Rule>show the defined area on screen.

<Save> save to enable.



(3)Event Set ---Items Lost

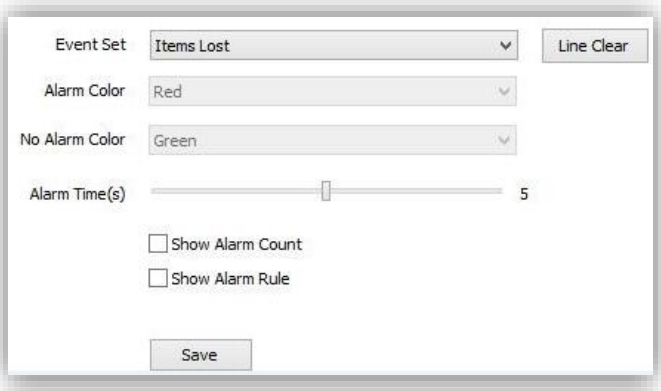
<Line Clear> remove the defined area on video.

<Alarm Time> time to activate alarm.

<Show Alarm Count> show total alarm times on screen.

<Show Alarm Rule> show the defined area on screen.

<Save> save to enable.



(4)Event Set ---Loiter

<Alarm Time> time to activate alarm.

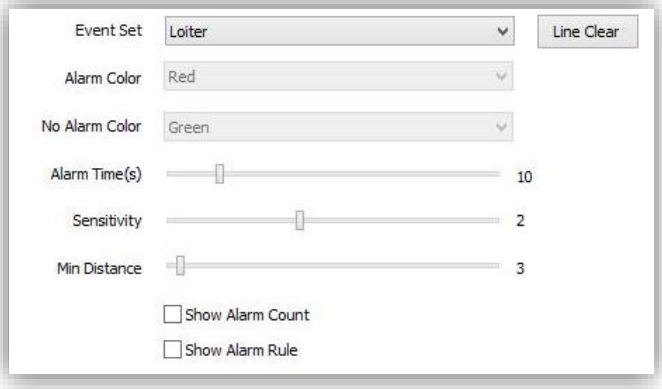
<Sensitivity> bigger value, higher sensitivity.

<Min Distance> smaller value,higher sensitivity.

<Show Alarm Count> show total alarm times on screen.

<Show Alarm Rule> show the defined area on screen.

<Save> save to enable.



(5)Event Set ---Running

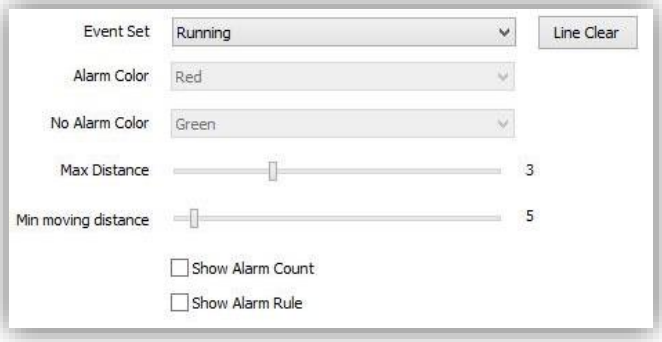
<Max Distance> <Min moving distance>

Set the max and min distance on screen to detect the target object speed.

<Show Alarm Count> show total alarm times.

<Show Alarm Rule> show the defined area on screen.

<Save> save to enable.



(6)Event Set---Crowd

<Line Clear> remove defined area.

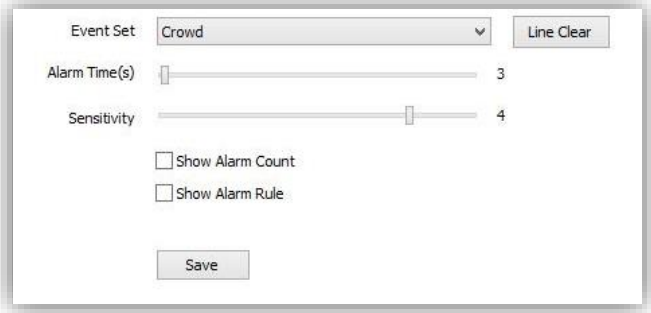
<Alarm Time(s)> time to activate alarm.

<Sensitivity> bigger value, higher sensitivity.

<Show Alarm Count> show total alarm times.

<Show Alarm Rule> show the defined area on screen.

<Save> save to enable.



(7)Event Set --- Parking

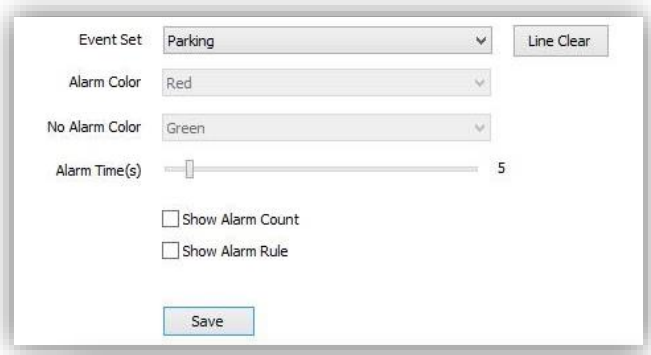
<Line Clear> remove defined area.

<**Alarm Time(s)>** time to activate alarm.

<Show Alarm Count> show total alarm times.

<Show Alarm Rule> show the defined area on screen.

<Save> save to enable.



6.3.2.2 Panorama Tracking

(1) Check to enable the target channel

(2) Select **<Panorama Tracking >**

(3) Click **<Save Scene>** to start setting.

(4) **<Arithmetic>** show current arithmetic.

<The longest > set the longest tracking time (S)

<Speed Dome >set the height of speed dome(this value should be the same as actually installation height) ,3m-9m is suggested .

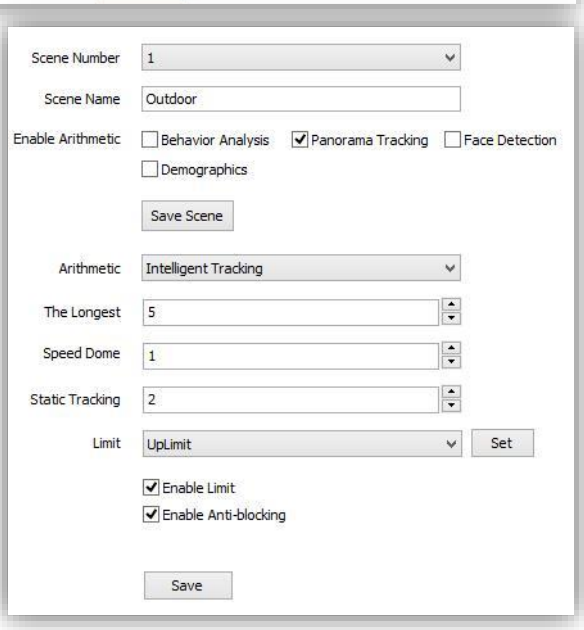
<Static Tracking > set the time for speed dome to wait when target object is not moving.

<Limit> set the tracking region limit on screen. (up/down/left /right)

(5) **<Enable Limit>** validate the limit set.

(6) **<Enable Anti-blocking>** enable to detect a wider area when target object is covered.

(7) **<Save>** save to enable.



6.3.2.3 Face Detection

This function will enable speed dome to recognize people's face and snapshot and save face picture automatically.

(1)Check **<Face Detection>**

(2)Click **<save scene>** to start setting

(3)**<Max Face Size> <Min Face Size>** setup target face size percent in target region.

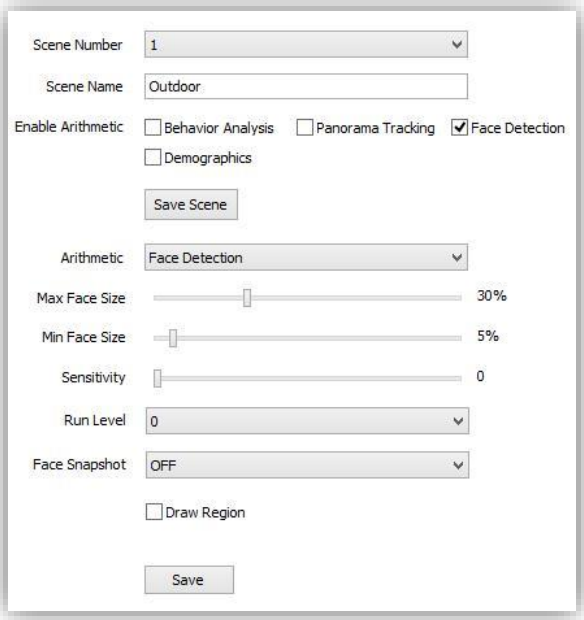
(4)**<Sensitivity>** setup detection sensitivity.

(5)**<Run level>** level 0-4, bulit-in programe level, please keep default.

(6)**<Face Snapshot>** ON/OFF, when ON it will capture the detected face picutre and save.

(7)**<Draw Region>** click to define a region on screen, speed dome will only detect people's face in this region.

(8)**<Save>** save to enable.



6.3.2.4 Demographics

This function will enable speed dome to count the number of how many people cross the defined line on screen.

(1)Check **<Demographics>**

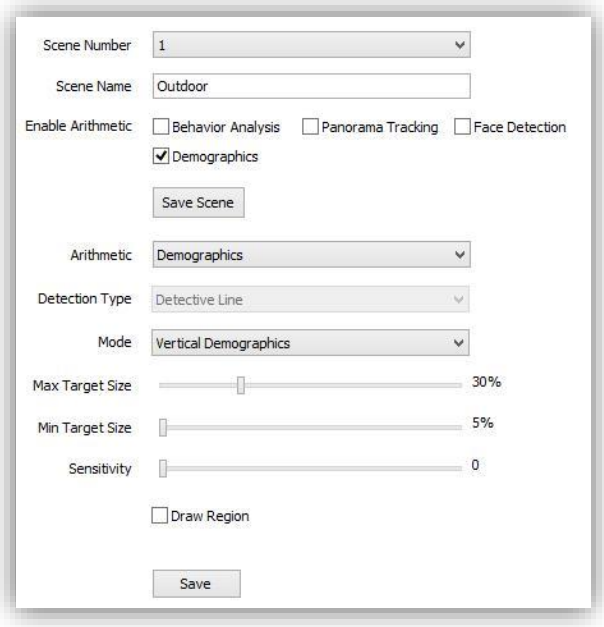
(2)**<Mode>** choose **<vertical demographics>** or **<bias demographics>**

(3)**<Max Target Size> <Min Target Size>** setup target people size percent in target region.

(4)**<Sensitivity>** setup detection sensitivity.

(5)**<Draw Region>** check to define a region on screen, speed dome will only count number in this region.

(6)**<Save>** save to enable.



6.3.3 Alarm Set

Setup VCA activation schedule.

(1)**<Channel No.>** select the target channel

<VCA Enable> Indicate the VCA status of the current channel.

(2)**<Rule ID>** Connected to the setup VCA rules in **<Event >** When select rule ID, it will bring out setup information of **<VCA Enable>**, **<Rule Name>** and **<Event>**.

<Enable> Enable the setting of **<Schedule>** to setup the day and time of the VCA activation.

(3)**<Schedule>** Schedule alarms. 4 time periods selectable in a day.

<Apply> enable the setting.

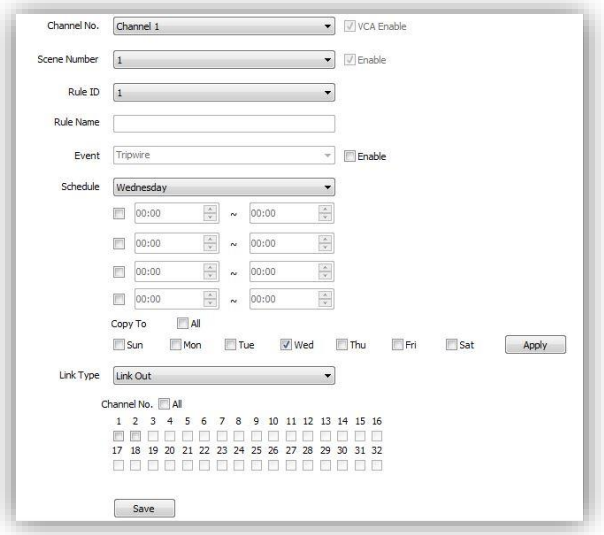
(4)**<Link Type>**

<Link Out> alarm output.

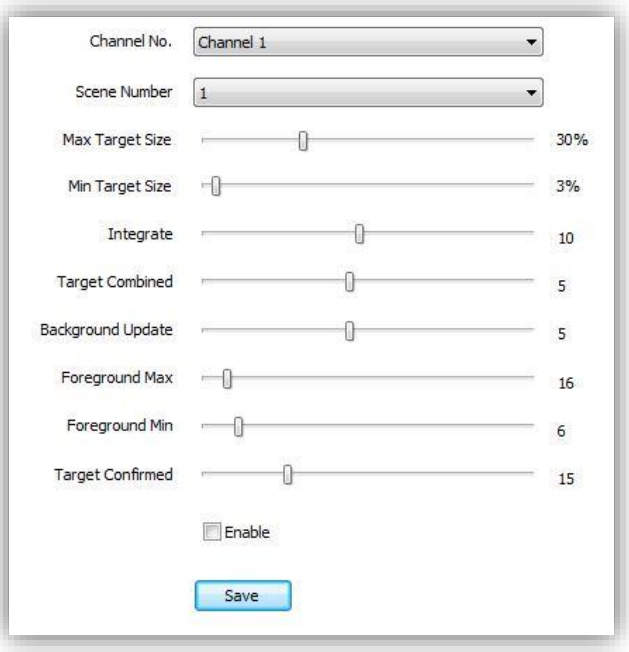
<Link Rec> activate recording.

<Link Snap> activate snapshot.

<Save> Save to enable setting.



6.3.4 Advanced



(1)**<Channel No.>** Select target channel

(2)**<Scene Number>** Select target Scene No.

(3)**<Max Target Size>** Set upper limit how much proportion the Object occupy on the screen for recognition

(4)**<Min Target Size>** Set lower limit

Note: PLEASE KEEP THE FOLLOWING ITEMS AS DEFAULT VALUE TO AVOID ANY ERROR. PLEASE ASK FOR HELP OF SPECIALIST IF REVISING NEEDED.

<Integrate>

<Target combined>

<Background Update>

<Foreground Max>

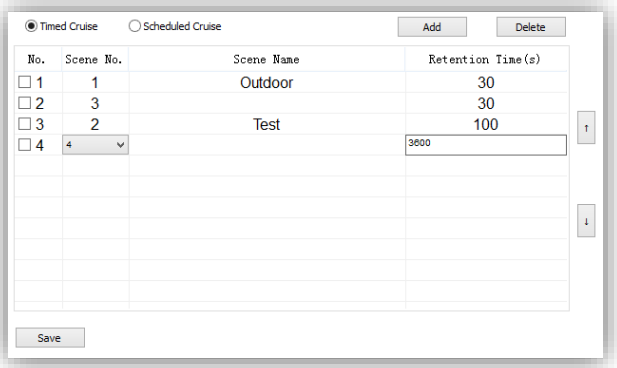
< Foreground Min>

<Target Confirmed>

(5)**<Enable>**

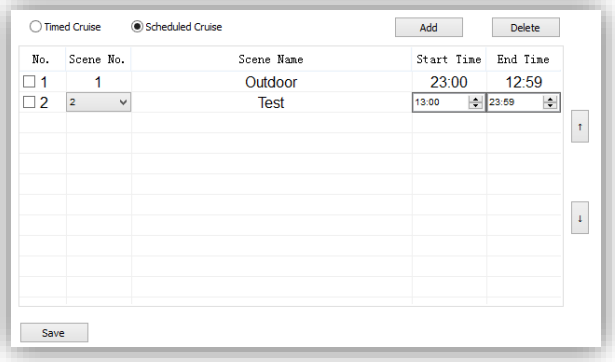
(6)**<Save>** save to enable.

6.3.5 Cruise Set



(1)Timed Cruise

Enable the speed dome to switch between different defined VCA functions, time interval range from 30~3600 seconds.



(2)Scheduled Cruise

Set valid time period for each defined VCA functions.

6.4 OSD

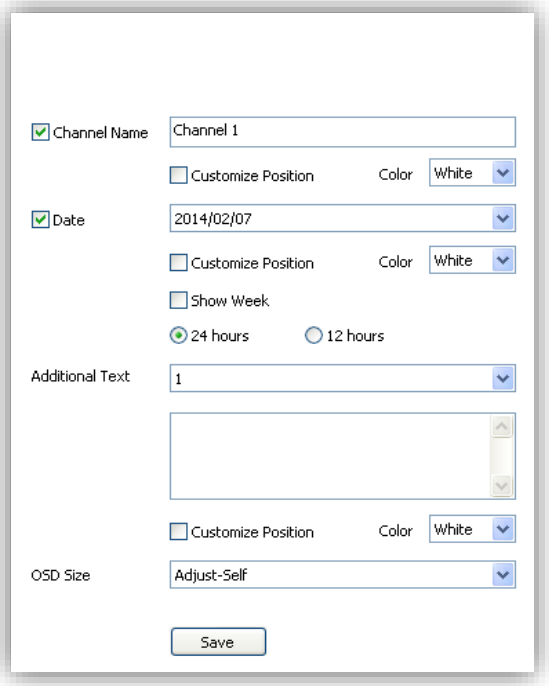
6.4.1 OSD

Channel Name

(1)**<Channel Name>** Input channel name, then it will show on screen.

(2) **<Customize Position**> drag **<Channel Name>** to the target position on screen.

(3)**<Color>** Choose your favorite color.



Date

(1) **<Date>** Display date on screen.

(2) **<Show Week>** Display week on screen.

(3) **<Customize Position**> drag **<Date>** to the target position on screen.

(4)**<Color>** Choose your favorite color.

Additional Text

(1)**<Additional Text>** 5 areas available to put additional text on the screen.

(2) **<Customize Position**> drag **<Date>** to the target position on screen.

(3)**<Color>** Choose your favorite color.

OSD Size

<Adjust-Self> Edit OSD size.

<Save> Save all settings.

6.4.2 LOGO

Add LOGO picture on screen.

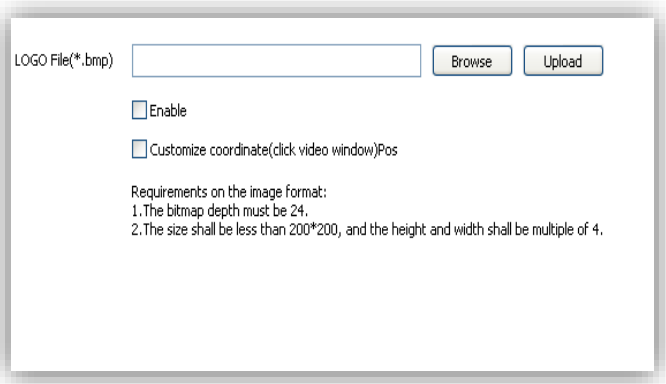
Notes logo picture format must be .bmp, and must be follow the size.

<LOGO File>,**<Browse>** to select logo picture, and**<Upload>**

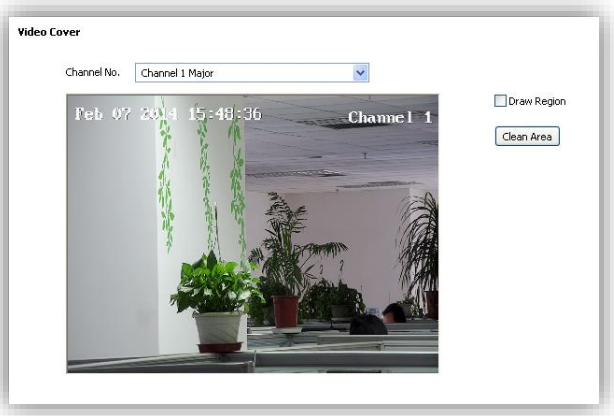
Notice Device will restart after upload

(1)After restart, select**<Enable>** to show the logo on screen.

(2)Enable**<Customize coordinate Pos>** to put the logo on the target position on screen where you click.



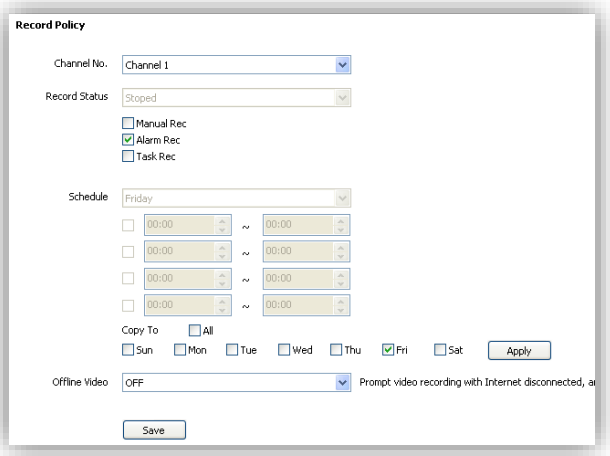
6.4.3 Video Cover



Add up to 4 cover areas on the screen.
(1)<Channel No.> Choose target channel.
(2)<Draw Region> Check to enable.
(3)Draw cover area on screen
(4)<Clean Area> Delete all cover areas.

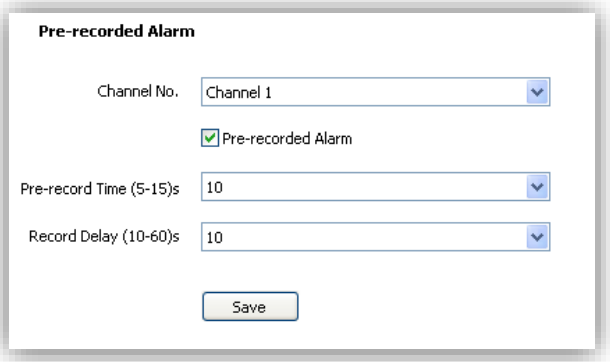
6.5 Storage Management

6.5.1 Record Policy



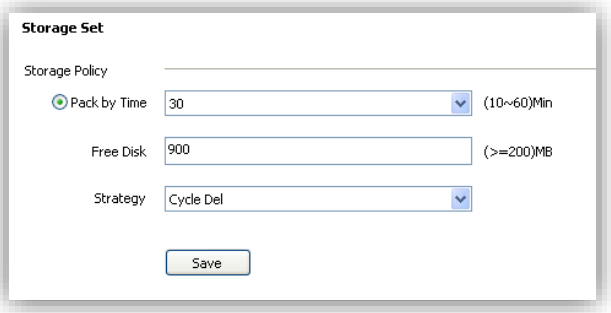
Setup recording schedule.
(1)<Channel No.> Choose target channel.
(2)<Record Status> Display current record status.
(3) Select recording type(multiple-choice)
<Manual Rec> Check to start recording.
<Alarm Rec> Recording will be activated by alarm.
<Task Rec> Timing recording, 4 time periods settable for one day.
(4)<Offline Video> When it is ON, the device will follow the schedule of <Task Rec> when offline.
(5)<Save> Save.

6.5.2 Pre-recorded Alarm



<**Pre-recorded Alarm**> record before alarm, or continue to record after alarm.
(1)**<Channel No.>** Target channel.
(2)**<Pre-recorded Alarm>** Check to enable.
(3)**<Pre-record Time>** Record before alarm.
(4)**<Record Delay>** Continues to record after alarm.
(5)**<Save>** Save.

6.5.3 Storage Set



<Pack by time> Pack the record files by time.
<Free Disk> Pack the record files by size.
<Strategy> Select how to handle the record files when the disk is full.
<Stop Rec> Stop record new files.
<Cycle Del> Delete the earliest record files.
<Cycle Del (Except Alarm)>
Delete the earliest record files except event record files.

<Save>

6.5.4 Snapshot Set

(1) **<Channel No.>** Select target channel.

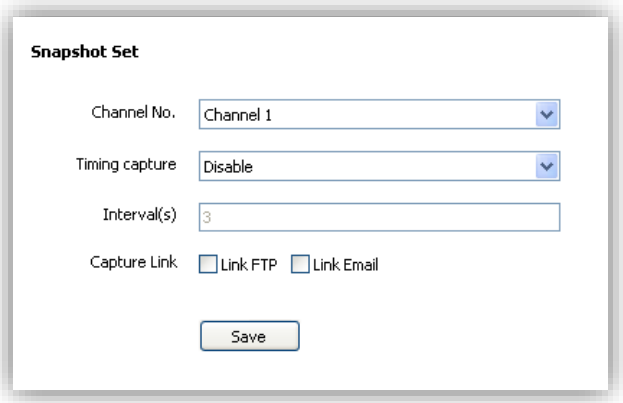
(2)**<Timing capture>** Enable timing capture

(3)**<Interval(s)>** Set how much internval times between two snapshots.

(4)**<Link FTP>**snapshot and upload to FTP server.

(5)**<Link Email>**snapshot and send to target email.

(4)**<Save>**



6.5.5 Disk Information

<Initialize Disk> format the disk

6.5.6 Network Storage

(1)**<Device No.>** Select disk.

(2)**<Status>** Show current disk status information

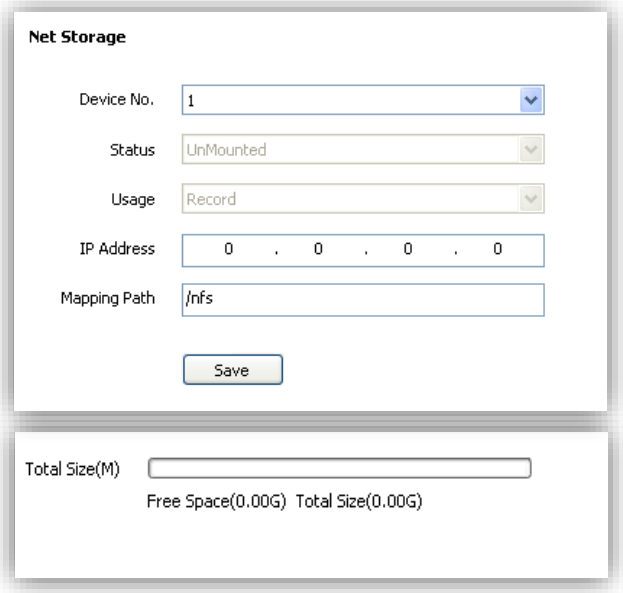
(3)**<Usage>** Shows purpose of disk.

(4)**<IP Address>** Setup IP address of <Network Storage>.

(5)**<Mapping Path>** Setup disk path of mapping.

(6)**<Total Size(M)>** Shows used and total capacity of the disk.

(7)**<Save>**



6.6 Network Management

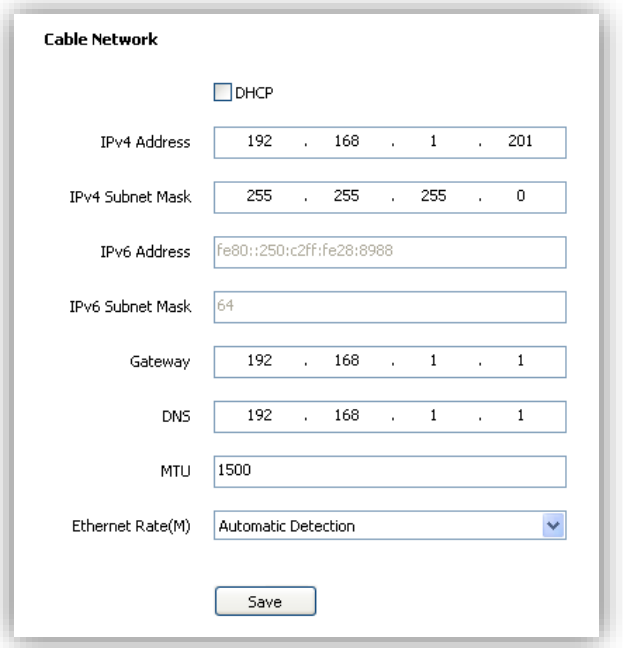
6.6.1 Cable Network

<DHCP> check to enable DHCP server will automatically allocate IP address for devices.

<IPv6> Display IPV6 address and subnet mask.

<MTU> Maximum Transmission Unit, range from 500~1500, default value is 1500.

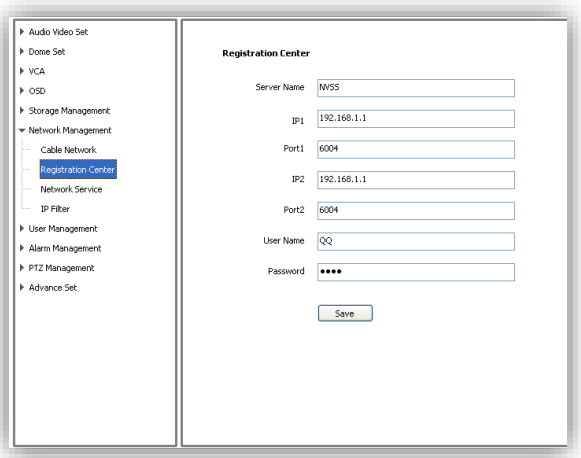
<Ethernet Rate> Select mode and rate of Ethernet card, default mode is <Automatic Detection>, speed unit is MB.



Notes: Devices will restart after change <Ethernet Rate>.

6.6.2 Registration Center

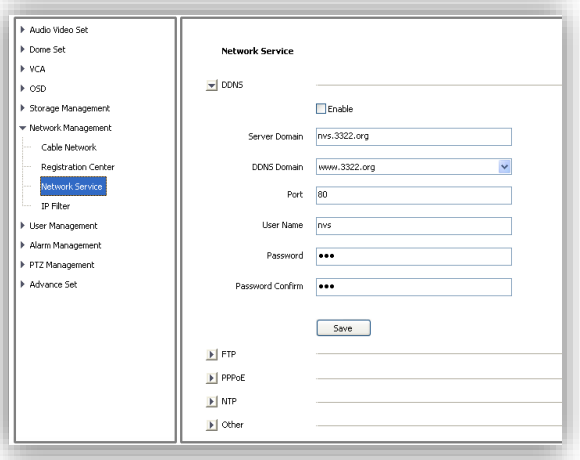
Keep same settings as what you register in DDNS website (www.myvideo.com).



6.6.3 Network Service

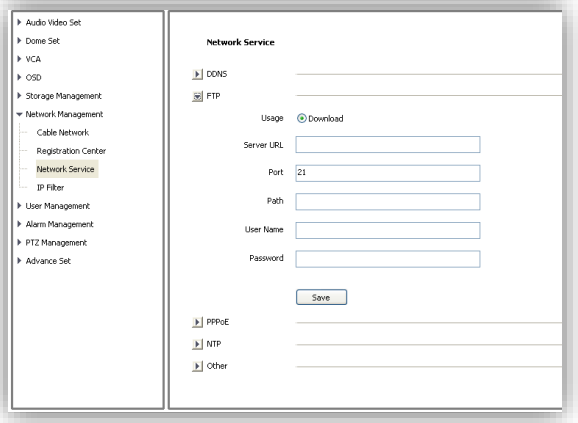
DDNS

Keep same settings as what you register in DDNS website(suggested: www.myvideo.com).



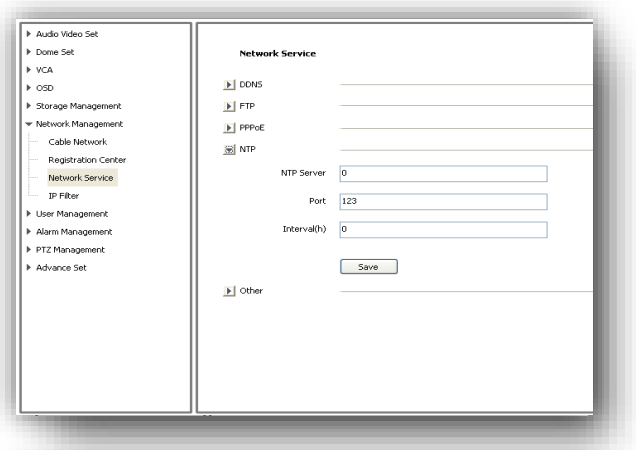
FTP

Make sure to insert the memory card.



PPPoE

Check to enable PPPoE function, enter User name and confirm password.

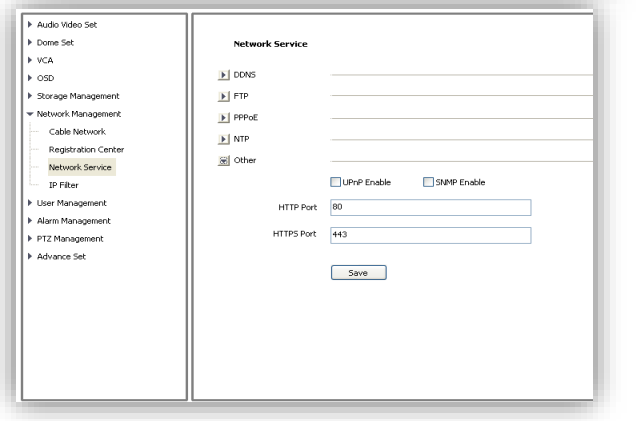


NTP

<NTP Server> enter server address.

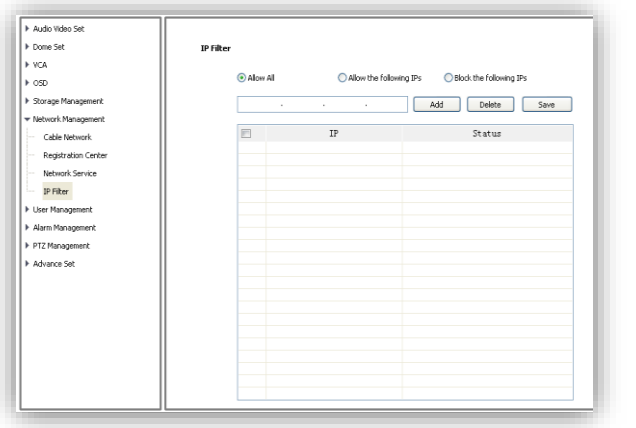
<Port> enter NTP server port.

<Interval> update interval.



Others

Set Http and Https port, Enable UPnP and SNMP functions.



6.6.4 IP Filter

Blacklist

User want to block some IP address, select<Block the Following IPs>, input the block IP address and<Add>,<Save>.Max to add 16 blacklist IP address.

Caution: Please don't add your own IP address in blacklist, otherwise you will not be able to login.

Whitelist

User want to allow only some IP address, select <Allow the Following IP>, input trusted IP address, <Add> and <Save>. Max to 16 whitelist IP address.

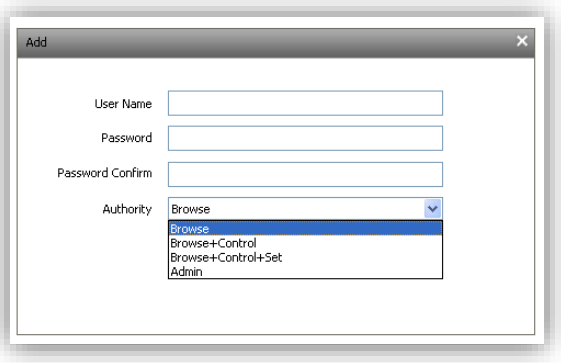
Caution: Once enable the whitelist function, please make sure to add your own IP address in whitelist, otherwise you will not be able to login the device.

Cancel blacklist or whitelist

Anytime click<Allow All> and <Save> to cancel all the blacklist and whitelist.

Note: Please restart device after setup blacklist or whitelist.

6.7 User management



6.7.1 Add User

<User name> add user, only English letter and figure are available.

<Password> only English letter and figure are available.

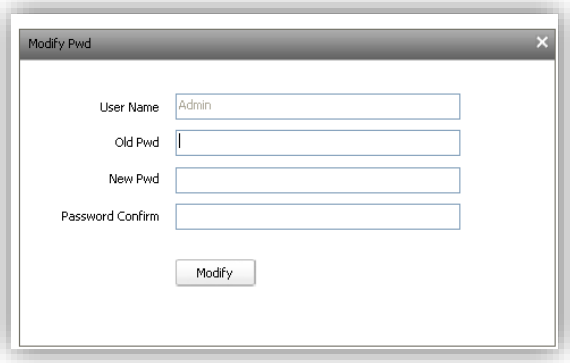
<Authority>:

Browse: Can only watch the videos.

browse+ control: Watch video and control PTZ.

browse+ control+ set: Allow all operation except user management.

Administrator: All operations available.



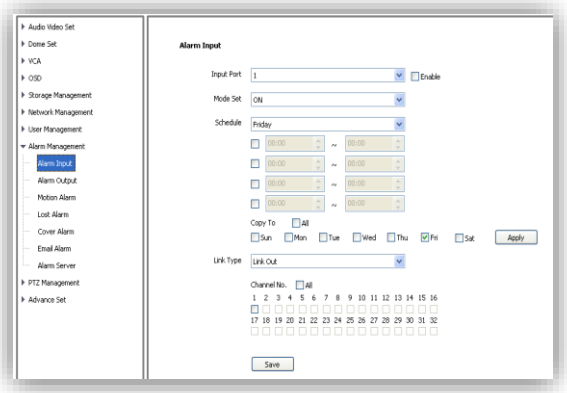
6.7.2 Modify password

Select the user you want to modify in the user list, click <Modify Pwd>,input the old password, new password, password confirmation, then click<Modify>.

6.7.3 Delete User

Select targeted user in user list and click【Delete】to delete.

6.8 Alarm Management



6.8.1 Alarm Input

IP Camera alarm input has port1~8, alarm mode include closed circuit alarm and open circuit alarm.

<ON>is closed circuit alarm.

<OFF>is open circuit alarm.

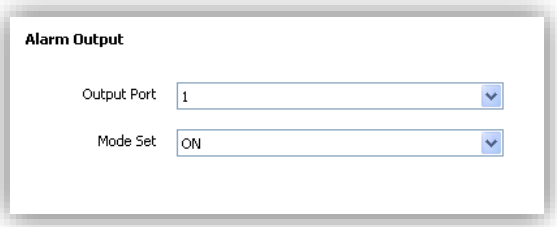
<Link Out>/<Link PTZ> activate alarm device or PTZ.

6.8.2 Alarm Output

Alarm output has port 1~2.

<ON>is closed circuit alarm.

<OFF>is open circuit alarm.



6.8.3 Motion Alarm

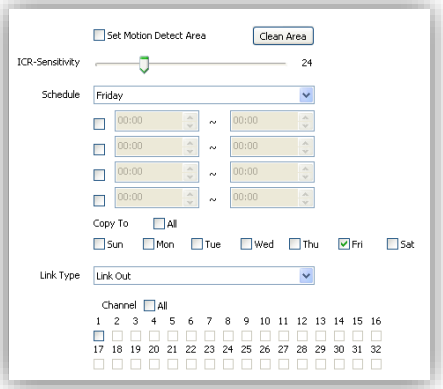
(1)<Set Motion Detection Area> Check to draw area on screen.

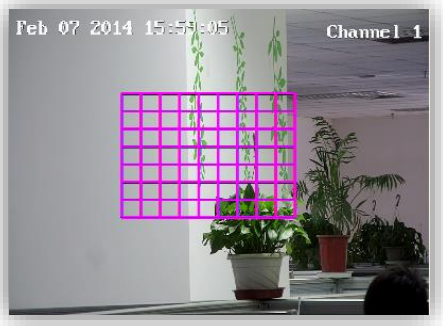
(2)<Clean Area> Clean drawn area.

(3)<ICR-Sensitivity> set detection sensitivity, range from 0-100, 100 means the highest sensitivity.

(4)<Schedule> setup alarm arm schedule.

(5)<Link Out> set alarm activation.





6.8.4 Lost alarm

Alarm when video lost.

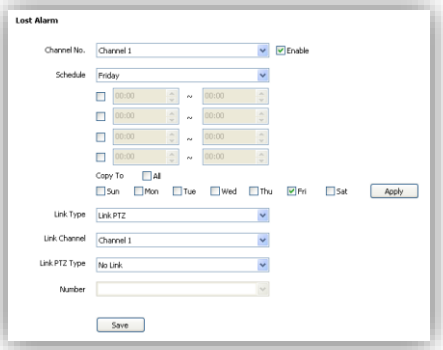
(1) Check to enable lost alarm for target channel.

(2) <Schedule> Setup alarm arm schedule.

(3) <Link Type> Link PTZ/no link.

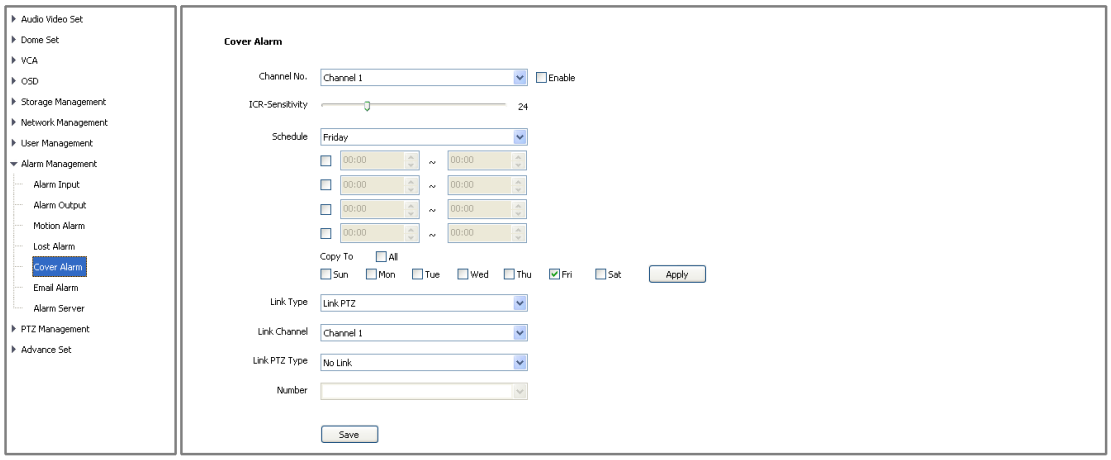
(4) <Link Channel>

(5) <Link PTZ Type> no link/preset position/pattern/auto tour.



6.8.5 Cover Alarm

Alarm when camera lens is covered.



6.8.6 Email Alarm

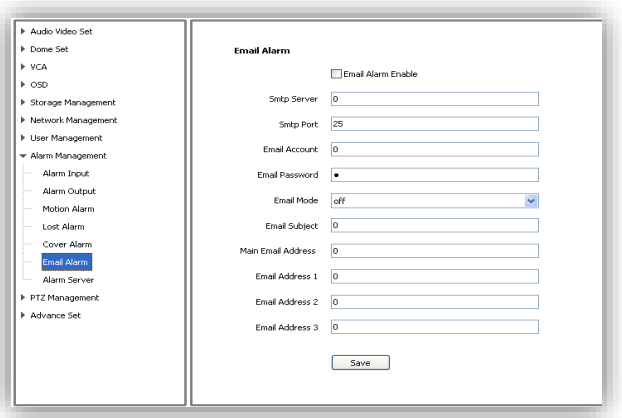
(1)<Email Alarm Enable> check to enable sending email after alarm.

(2)Set sending email information:

<SMTP server> <SMTP port><Email Account><Email Password>

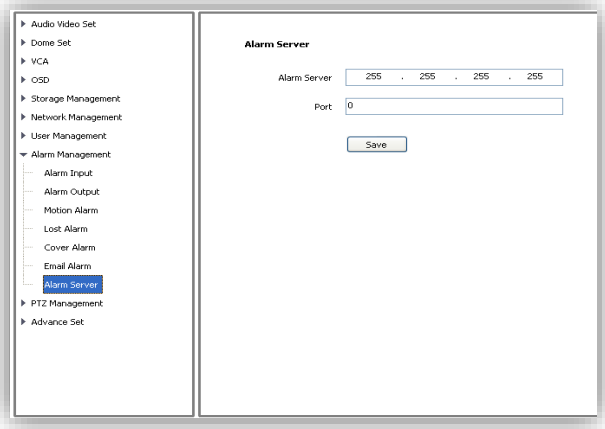
(3)<Email Mode>

(4)Input receive email address, support up to 4 email address.

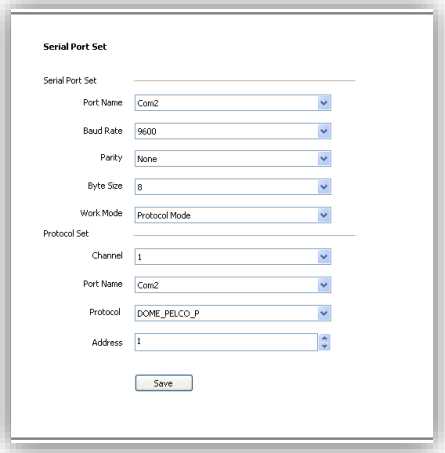


6.8.7 Alarm Server

Set alarm server's IP address and port number,



6.9 PTZ Management and Control



PTZ management mode: **<**Serial Port Set**>**and**<**Protocol Set**>**

<Serial Port Set**>:**

<Port Name>,<Baud Rate>,<Parity>,<Byte Size>,<Work Mode>

<Protocol Set**>:**

<Channel>,<Port Name>,<Protocol>,<Address>

6.10 Advance

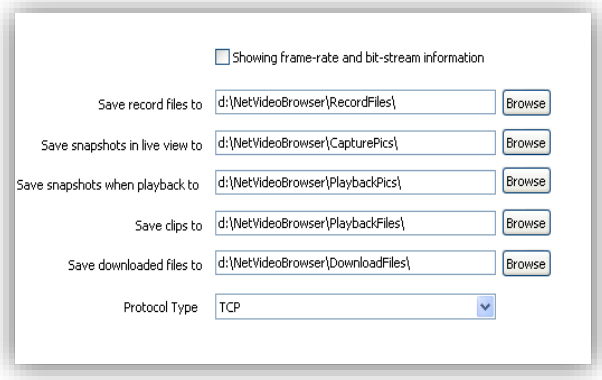
6.10.1 Local set

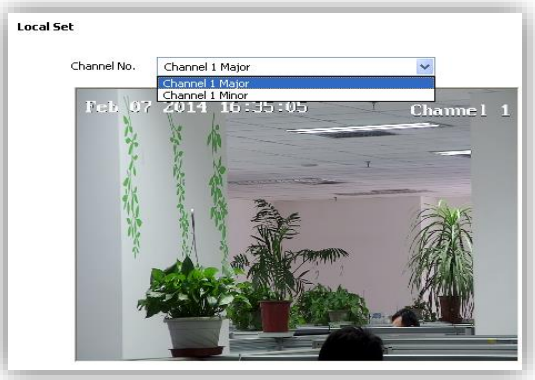
(1)**<**Showing frame-rate and bit-stream information**>** check to display frame rate and bit stream on video.

(2)Set the save path of record files, snapshot, clips and download files.

(3)**<**Protocol Type**>** TCP, UDP or multicast.

(4)IP camera has only one channel, user can choose major stream or minor stream.



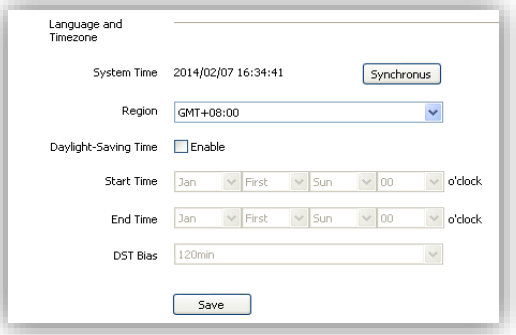


6.10.2 System setting

(1)<System Time> Set time zone and time synchronous.

(2)<SystemInformation>Display information of CPU,Memory and FLASH.

(3)< Version Information >Display <SDK Version>, <Kernel Version>, <Web Version> and<Factory ID>.



6.10.3 System Maintenance

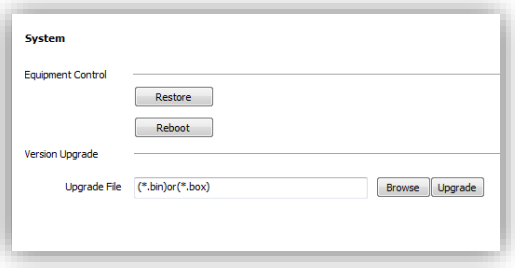
System maintenance includes <Equipment Control>and <Version Upgrade>.

(1)<Equipment Control>

<Restore> Reset to factory default.

<Reboot> Reboot the device.

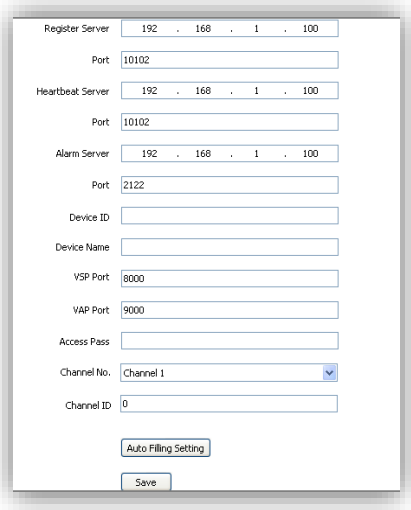
(2)<Version Upgrade> upgrade new firmware. (firmware format: .box/.bin) Upgrade process normally needs a few minutes until indication for completion.



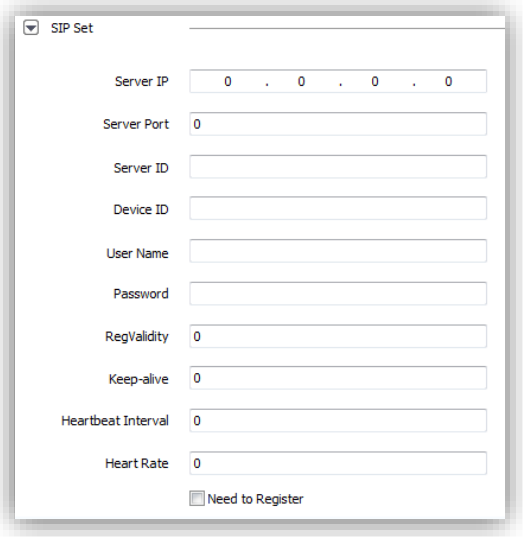
Caution: Please strictly follow the instruction by technical specialist for firmware upgrade.

6.10.4 Access Platform

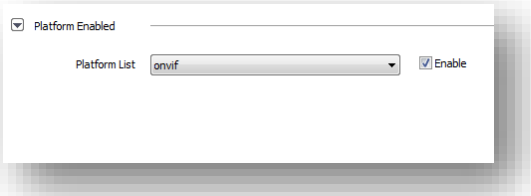
PU set user can set the IP address and port number of<Register Server>,<Heartbeat Server>,<Alarm Server>and VSP's port number and VAP's port number. <Channel No. >support<Auto Filling Setting>function.



PU set support 【SIP】protocol setting.



IP cameras support onvif V10, user can choose "enable".



Chapter 7 Simple Problem-solving Methods

symptom	Possible causes	Solutions
Power on no action,	Power supply is damaged or not enough power	Replace the power supply
No images,	Power cable fault	Corrected
Machine is not self checking	Line problems	Troubleshoot line, measure IP speed dome's voltage
Self action properly, but can't ping	Network line or switch damaged	Test by IP speed dome connect to PC directly
	IP speed dome's IP address and PC's IP address aren't in same network segment	Change IP address to insure they are in the same network segment and aren't conflict.
Ping is working normally, but can't login	User name or password error	Check user name or password
	Port number error	Check port number
	Login account more than limit	Disconnect other client host
No video after login	Login account more than limit	Connect video by proxy server
	Camera is damaged	Check log record
	Parameter setting error	Restore the default parameters
Image is not stable	IP address conflict; MAC address conflict; broadcast storm	Check network setting
	Network line problem	Check network line
Image is not stable, delay,	PC performance isn't enough	Check CPU utilization, reduce code stream or resolution
	Frame rate is low	Change frame rate in more than 20
	The network bandwidth shortage	Replace the gigabit switches
	Decoder's performance isn't enough	Change decoder

IP Speed dome can't be controlled	Serial port Settings error	Check and change serial port number to "COM2"
	Protocol, Baud rate, address error	Check IP speed dome's protocol, baud rate and address
IP Speed dome restart again and again	Power supply isn't enough, voltage isn't stable	Measure IP speed dome's voltage to insure stability
	PPPOE dialing failed	Check and change dialing parameter
	Camera is damaged	Replace the camera
	Parameter setting error	Restore the default parameters

Chapter 8 After-sales Service

The HD Network IR speed dome products, the company offers one-year warranty. Product warranty, the company provides a free service, but if any of the following circumstances, is charged fee for material costs work:

- Do not operate in accordance with the provisions of the manual
- The speed dome damage caused by a case of the lightning strikes, fires and irresistible natural disasters;
- Matching problems arising from poor design to other manufacturers products cause damage;

Company statement

- As we continue to introduce new technologies and product specifications are subject to change without prior notice.

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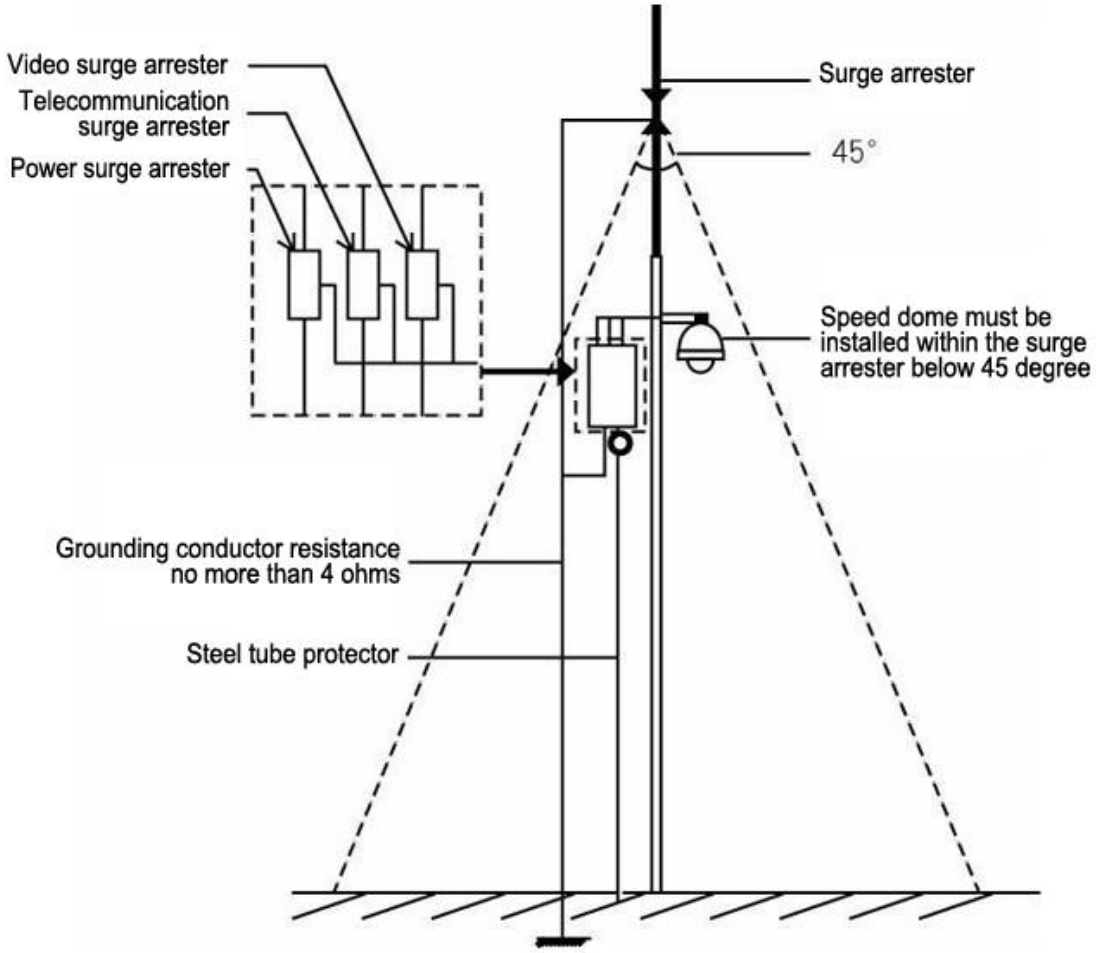
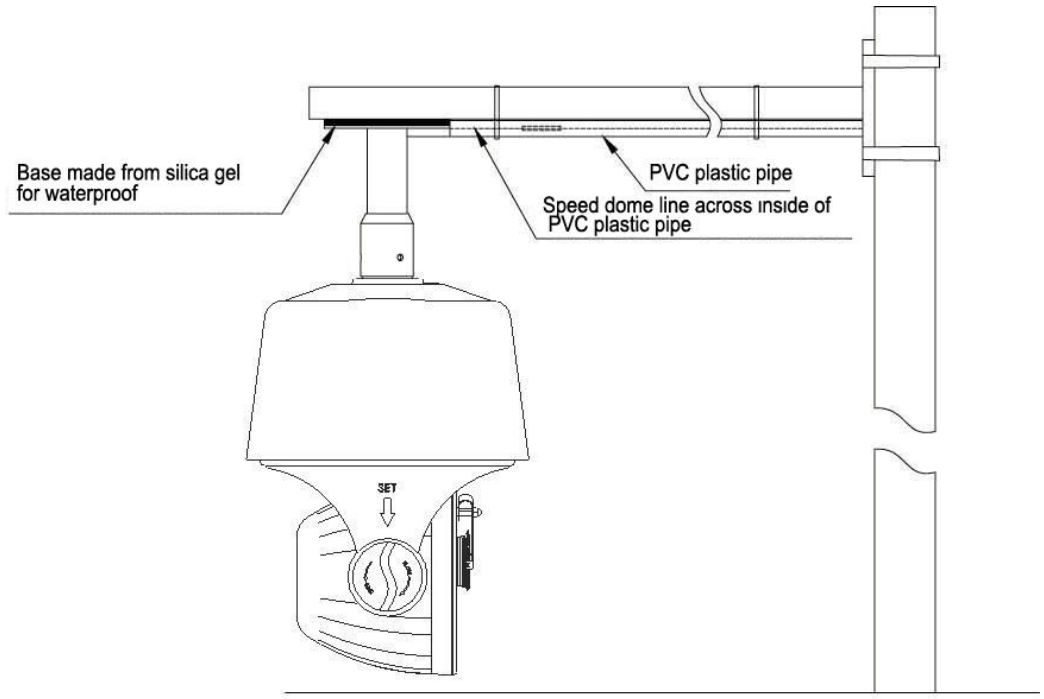
Appendix I Lightning and Surge

Outdoor Dome Camera need to consider lightening, anti-surge, on the premise of ensuring electrical safety, may take the following measures:

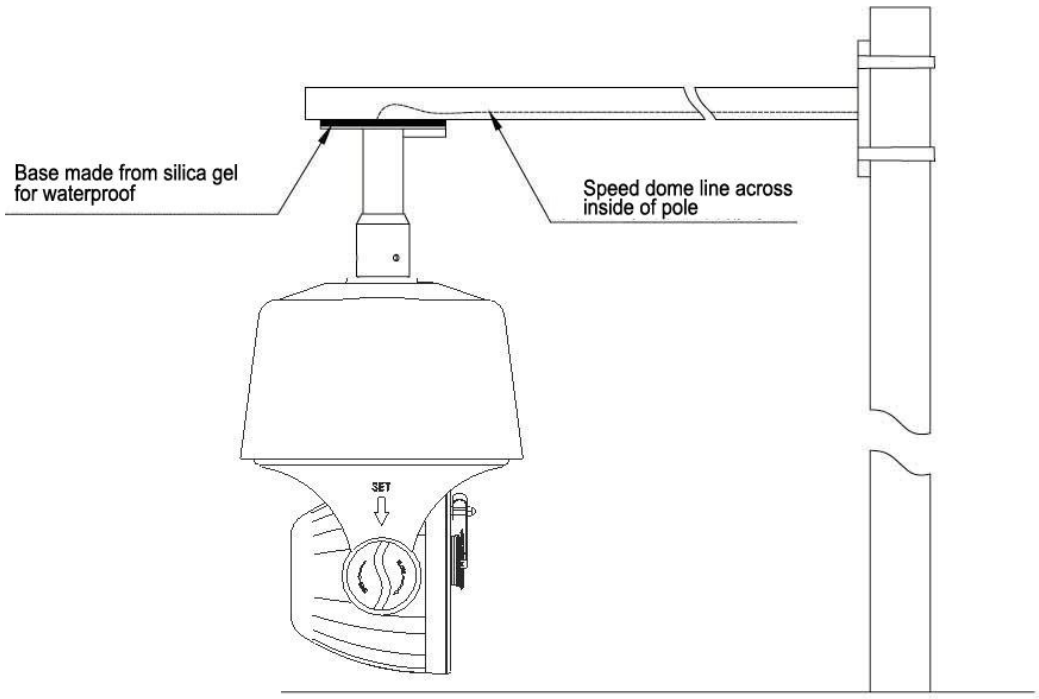
- Signal transmission lines and high voltage equipment or high voltage cables must be at least 50 meters distance between；
- Try to choose outdoor wiring along the eaves line；
- For open field must be sealed steel tubes buried cabling, grounding and steel pipe, the absolute prohibition of the use of overhead wiring；
- In areas of severe thunderstorm or high-voltage area (such as high-voltage substations), lightning protection equipment, as well as for additional installed power must be taken measures such as installing lightning rods
- Outdoor lightning protection and grounding design of devices and circuits must be combined with building mine requires unified consideration and in accordance with the requirements of the relevant national standards, industry standards；
- System must be equipotential earthing. Earthing system anti-interference must be met and the dual requirements of electrical safety, and shall not be mixed with strong power network neutral wire shorted or separately when grounding, grounding impedance less than 4 ohms, ground wire cut-area must be not greater than 25mm2 lines shorted


Video surge arrester
Telecommunication surge arrester
Power surge arrester
Surge arrester
45°
Speed dome must be installed within the surge arrester below 45 degree
Grounding conductor resistance no more than 4 ohms
Steel tube protector

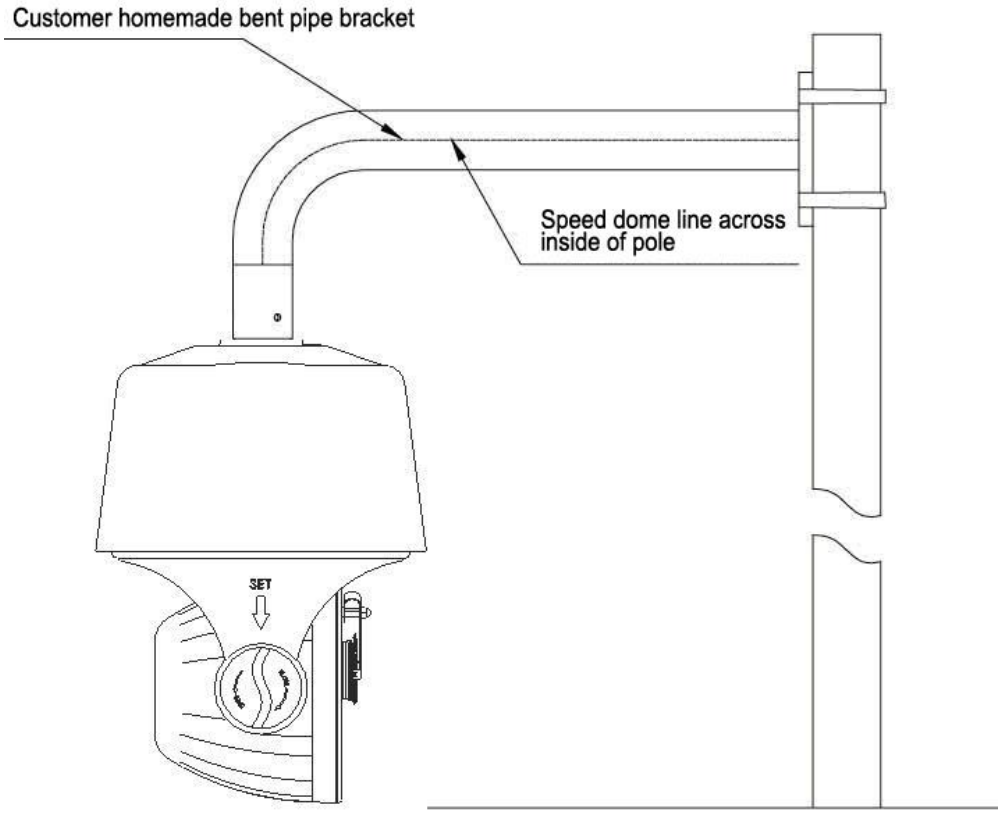
Appendix II::Hoisting construction Guide



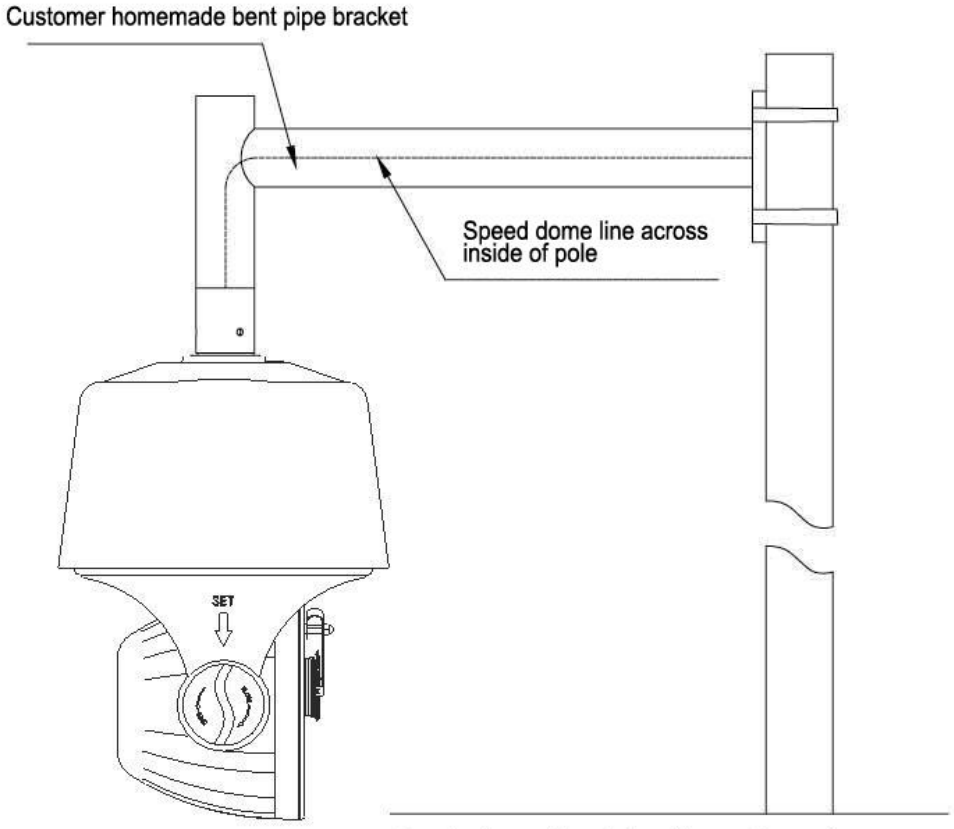
Pendent mount bracket outdoor waterproof
construction scheme I



Pendent mount bracket outdoor waterproof
construction scheme II



Pendent mount bracket outdoor waterproof construction scheme III



Pendent mount bracket outdoor waterproof construction scheme IV