Installation Manual for HD Network Intelligent Speed Dome

Statement:

　　Thanks for purchasing from us. Please feel free to contact our service whenever you need help.

　　This manual is applicable for Network speed dome products. Features and functions vary with different products, please refer to our physical commodity and the fast manual.

　　This manual is your reference for operations and encodings. Related functions, specific orders, detailed menu-tree as well as fast manual are included. Please read it before installation or use.

　　This manual might contain some technical or print errors. Any enhancement in product features shall be added into the manual consistently without further notice.

Safety Instruction

This manual is intended to ensure that user can use the product properly without danger or any property loss.Please read it carefully and take care of it for further reference.

Precaution measures are divided into "warnings" and "cautions" ,as below:

Warnings:Neglecting any of the warnings may cause death or serious injury.

Cautions:Neglecting any of the cautions may cause injury or equipment damage.

Warning	Follow these safeguards to avoid death or serious injury	Caution	Follow these precautions to prevent potential injury or property loss

Warnings

1.Electrical safety regulations of the nation and the region must be strictly followed during installation or use.

2.Please use the matched power adapter from standard company.(DC12V/4A standard or AC24V/2A optional)

3.Do not connect multiple DVRs with one single power adapter(Overload for adapter may lead to over-heat or fire hazard.

4.The device should be firmly fixed when installed onto the wall or beneath the ceiling.

5.Shut down the power while connecting or dismounting the speed dome.Do not operate with power on.

6.Shut down the power and unplug the power cable immediately when there is smoke,odor or noise rising from the DVR.Then contact the dealer or service center.

7.Please contact the local dealer or latest service center when DVR works abnormally.Do not attempt to disassemble or modify the device   yourself.(We shall shoulder no responsibility for problems caused by unauthorized repair or maintenance.

Cautions

1.Do not drop anything onto the dome,avoid it from physical strike. Keep it away from high electromagnetism radiation surroundings.Do not install it at vibration surface or places subjecting to strike.(Ignorance can cause equipment damage).

2.Do not aim the camera at ultra-bright objects,such as the sun,filament lamp.

3.Keep it away from rain and moisture

4.Avoid exposing to direct sunlight,poor-ventilation or heat source such as heater,radiator.(Ignorance can cause fire hazard)

5.To avoid physical damage,extreme environment such as lampblack,water vapour,too hot or dusty are not allowed.

6. Please use soft and dry choth to clean the shell.Use neutral cleaner instead of alkaline when the dirt is difficult to get rid of.

Catalog

Chapter 1 Brief Introduction

1.1 Descriptions

Introducing high definition integrated movement,HD network speed dome is featured with automatic focusing and auto white balance,combining PTZ with digital decoder inside.With précised motor drive,it works without jitter at any speed,sensitive and stable.Moreover,built-in web also allows customers to browse via IE.All in all,extraordinary performance and perfect features make it superior with high technology in security and surveillance field.

Divided into common speed dome and IR speed dome,it can be applied for areas where high-speed mat is needed or places with poor light,such as,river,forest,railway,airport,port,oil field,sentry,plaza,park,scenic spot,street,station,large venue,outside of the residential area,etc.

1. Infrared Function(Apply to IR speed dome)

➢ Quick cooling cast aluminum design

➢ CCVE and PWM design ensure IR LED work steadily for a long time

➢ IDS,IR brightness adjusted with magnification,distance and brightness.

➢ Individual MCU infrared control system,flexible and multiple IR modes

➢ 10 grade IR power and illumination

➢ Perfect IR vision via IR control and AIO optical filter switch

➢ CGS radiating system

➢ IP66，TVS4000V lightning and surge protection.

2.   System Functions

➢ Integrated design,highly reliable

➢ CGS radiating system

➢ IP66，TVS4000V lightning and surge protection.

➢ 3ch digital temperature control system,live monitoring over system,camera,IR panel,auto control over fan and module

➢ Multi-axis design

➢ Bulit-in heat balance,fog-proof

➢ Precise motor drive,accurancy less than 0.1,no shake of pic.

➢ Support online upgrade,convenient and cost-effective.

➢ Support 3D positioning

➢ Easy DIP,configured protocol

➢ Multi-language and friendly OSD menu

➢ Support preset/patrol/pattern/linear scan/frame etc.

➢ Support title display

➢ Support menu code protection

➢ Low consumption,environmental friendly.

3. PTZ

➢ Horizontal:0°~360° rotation;Vertical:-5°~92°,auto flip,no blind zone.

➢ 255 presets,power-off memory

➢ 4 preset cruise scanning,each can add another 32 presets.

➢ Support pattern scanning,record time is over 10 min or 1000 orders.

➢ Support proportional zoom,rotation speed adjust automatically with lens.

➢ Bulit-in RTC clock,16 timing task,individual cycle excution.

4. Built-in HD Integrated Camera

➢ Auto IRIS & BLC

➢ Auto/manual white balance

➢ Auto/manual focus

➢ Auto brightness control

1.2 Functions

In this chapter,most principles for the functions of the speed dome are descriped,Specific operations are not included.Different platform system operate in multiple ways.We recommend you to follow the operation manual.For special requirement and operations,please contact the dealer.

➢ Multi-lingual OSD Menu:With multiple languages,you can check the info and status,and also config the parameters.

➢ Self-adaptive to multiple protocols:Compatible with PELCO-D、PELCO-P、TA、HKV,DH and

other protocols.

➢ Control:Pan/tilt movement and lens zoom can be controlled via keyboard,DVR,matrix,etc.

➢ Limit stops:Enable this function,speed dome can only monitor within configured areas(left/right,up/down) via keyboard,DVR or client,areas out of the limit can not be monitored.

➢ Auto scan:Four scanning modes:preset scanning,horizontal scanning,auto scanning,pattern scanning.Speed can be set via OSD menu from level 1 to 40,the corresponding speed ranging from 1° to 40° per sec.

➢ Preset:Each contains the PTZ horizontal position,vertical position and lens zoom.Speed dome move to th defined position when preset is called.

➢ Auto flip:Under manual mode,when the targeted object goes beneath the speed dome,the camera flips 180 degrees automatically to track it.

➢ Privacy mask:User can define areas which can not be viewed,the masked area moves with the speed dome,horizontally and veitically.The shield area adjust with the lens(Note:Speed dome should support this function)

➢ Proportion zoom:Horizontal and vertical speed changes with the proportion of the zoom.When zoom increases,the camera moves slower;when zoom decreases,the camera moves faster.

➢ Auto focus:Under this mode,the camera will focus automatically to maintain clear images.When adjusted as "near" and "far" manually,focus distance can be changed.Control the camera to move horizontally,vertically,zoom the lens,then the integrated movement will restore auto focus.

➢ Day/night:3 modes:auto,day,night.Under auto mode,the integrated movement turns into color or black/white according to the surroundings.Under manual mode,you can choose color or black/white image via the day and night options from the menu.

➢ Low-illumination electronic shutter:Shutter speed goes down automatically and extend the exposure time to get clear and bright images under low-illumination environment.

➢ White balance:Compensate the color to get vivid images.

➢ Preset cruise scan:4 presets cruise scan,each can add another 32 presets,speed and time can be set alone.

➢ Pattern scan:To re-play the PTZ operations including horizontal and vertical movement,zoom,calling presets,Focusing and aperture are default auto.

- ➢ Power-off memory:Position info of the speeed dome is stored when the power is off.Reboot the camera,the dome goes back to previous status.The default power-off memory time is 3min.

- ➢ Patrol mode:When speed dome stays without operations,it starts patrol,supported mose:preset 1 to 8,pattern scanning 1 to 4,cruise scanning 1 to 8,horizontal scanning,two points scanning.You can also close this function.

Chapter 2 Speed Dome Installation

2.1 Install Preparation

1. Basic requirement

Please read the following info before installation :

1) Installation and maintenance should be carried out by professional staff and obey the local electrical regulations.All electric work should follow the latest electrical regulations.Check whether the accessories are complete and confirm whether the place and installation mode is in accordance with requirements.If not,please contact the local dealer and use the product according to the actual environment.

2) Indoor speed dome only applies for inside environment,installed or exposed in rainy or humid place is not allowed.

3) After re-installation or maintenance,resistence between the circuit and the shell need to be checked to make sure there is no short-circuit and the insulation is good.

4) Confirm there is enough space for the speed dome and structure components.Make sure that the total weight of the speed dome and its structure components are within the capability of the ceiling,wall and bracket.Materials should be capable of holding four times weight of the speed dome.

5) Follow the below working environment :

Temperature	-30～65℃	atmospheric pressure	86～106KPa
humidity	< 90%RH no condensing	power	DC12V/5A(standard)

2. Wire preparation

The below chart is recommended max.distance for 12DC.(The max.voltage is about 10% for DC/AC device).For more information,please refer to appendix 3—Wire gauge & transmission distance

cable diameter	max distance(m/ft)
0.75mm²	6m(20ft)
1mm²	9m(30ft)
1.5mm²	12m(40ft)
2mm²	15m(50ft)

## 3. Please take care of the product package

Please keep the orginal package properly after unpacking the camera.Send us the package when there is any problem.
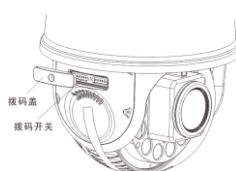
2.2 Installation

1. Speed dome installation

For various bracket installation,please refer to chapter 2 and 3 of this manual.Take wall bracket for example:

1) Take out the cable from the speed dome,connect the bracket and cover with 3pcs of screws,then fix it to the wall.(As pic.2.2.1).Note:Waterproof folder is needed.

2) Open dip switch with screw driver,configure the protocol,baud rate and speed dome address(as pic.2.2.2),fefer to chapter2.4—dip switch setting.

3) Remove the gummed tape(as pic.2.2.3),check whether the seal ring on top of the dome is well put.

4) Connect the safe rope of the speed dome to the bracket,then hook up the dome to the connected cover(as pic.2.2.4)Then plug the cable into the right pin according to the reference.(as pic.2.2.5)
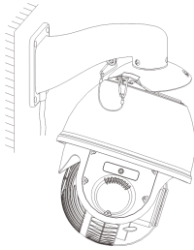
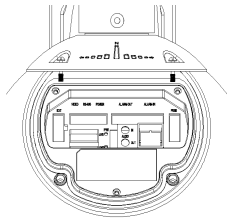5) Fix the speed dome with screws.(as pic.2.2.6)
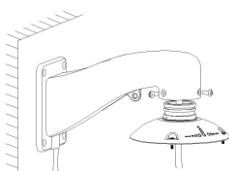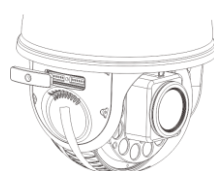
pic.2.2.1   pic.2.2.2   pic.2.2.3
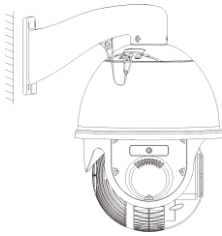
pic.2.2.4   pic.2.2.5   pic.2.2.6

2.3 Default Setting

protocol : auto match

address : NO.1

Baud rate : 2400-N-8-1

120Ω ohmic resistance : OFF

2.4 Dial Switch Setting

Configure the protocol,baud rate and address before installation.The dip switch is on side of the speed dome(as pic.2.4.7)
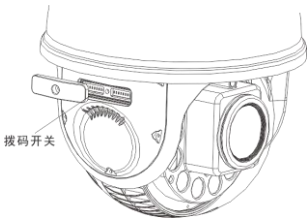
pic.2.4.7Speed dome dip switch

SW1-configure the protocol,baud rate and 120Ω ohmic resistance;SW2-configure the communication address.

SW1   protocol & baud rate switch   SW2   address switch

eg:part of dip switch(protocol & baud rate)
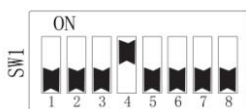
　　Auto match　　　　　　PELCO-D&2400BPS　　　PELCO-P&9600BPS
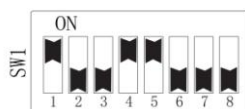
1) protocol rule

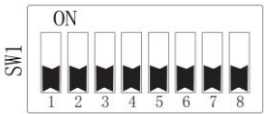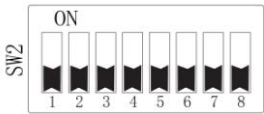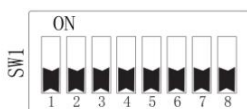| protocol	SW1-1	SW1-2	SW1-3
Auto match /PELCO-D	OFF	OFF	OFF
TA	OFF	OFF	ON
PELCO-P	ON	OFF	OFF
HKV	ON	ON	OFF
DH	ON	OFF	ON

2) baud rate rule

baud rate	SW1-4	SW1-5
Auto match /1200BPS	OFF	OFF
2400BPS	ON	OFF
4800BPS	OFF	ON
9600BPS	ON	ON

3) 120Ω ohmic resistance configuration

　　SW1-8 is the 120Ω ohmic resistance of RS485.Please config in accordance with <appendix 2 RS485BUS connection>.

4) communication address configuration

　　SW2 is for speed dome address configuration.With binary system,NO.8 is MSB,NO.1 is LSB.For PELCO-D / TA,please refer to appendix 6—table of address code>.

2.5 Alarm Wire

　　Speed dome support 4ch alarm input and 2ch alarm output.As follows:

Port name	description
COM1	alarm output channel ,1common port
NO1	alarm NO output channel 1
COM2	alarm output channel ,2common port
NO2	alarm NO output channel 2
GND	alarm output GND

IN 4	Alarm input channel 4
IN 3	Alarm input channel 3
IN 2	Alarm input channel 2
IN 1	Alarm input channel 1
GND	Alarm input GND

Chapter 3 Bracket Installation Instruction

This chapter is applied for common bracket installation ,just for reference,for more info,please read the fast manual.

3.1 Bracket Dimension
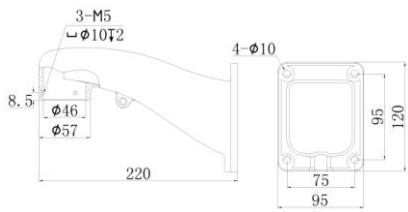
wall mount dimension   ceiling mount dimension
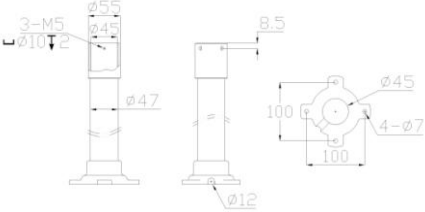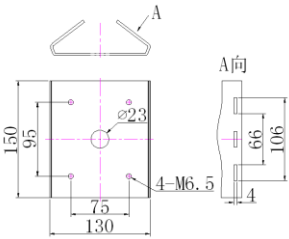
pole mount dimension   corner mount dimension
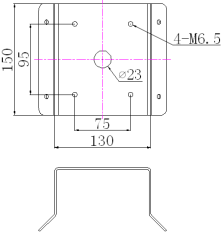
3.2 Wall Mount Installation

1) accessory installation
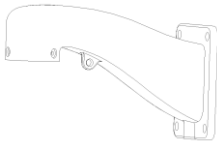
Wall mount bracket

washer&screw cap

2) mount step
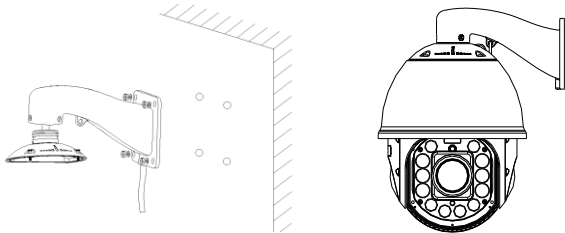
3.3 Ceiling Mount Bracket Installation

1) accessory installation
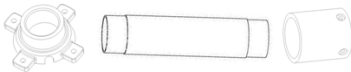
ceiling mount bracket(length optional)

washer&screw cap

2) mount step
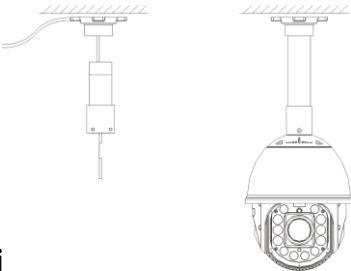
3.4 Pole Mount Bracket Installati on

1) accessory installation
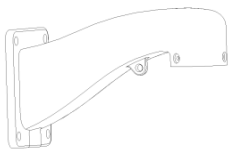
| wall mount bracket | pole mount bracket | fastener | washer,screw,screw cap |
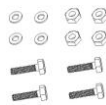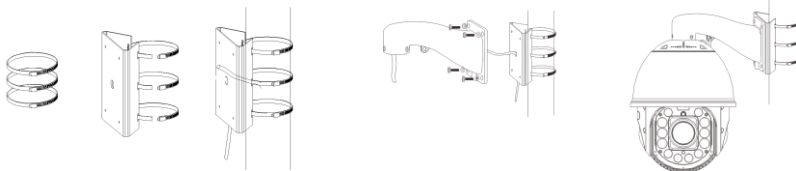
2）mount step

3.5 Corner Mount Bracket Installation

1）accessory installation
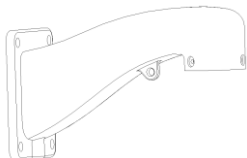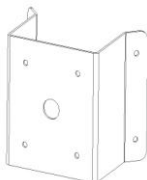
| wall mount bracket | corner mount bracket | washer,screw,screw cap |
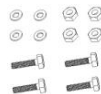
2）mount step
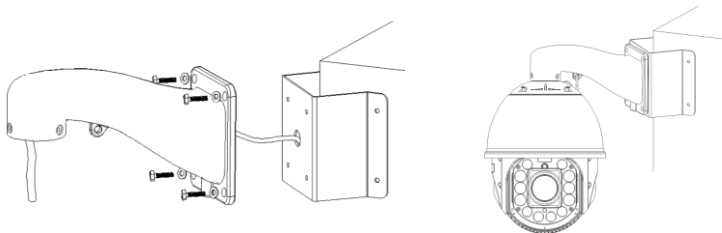
Chapter 4   Operation Instruction

4.1 Power on self test(POST)

Speed dome goes self test after power on.Sequential:system preheat(if necessary),camera test,horizontal test and tilt test.The whole process takes about 40 seconds.

Note: 1,Confirm the power is matched,turn on the power switch when cable is well connected.

2,External power requirement: 220V±10%/50Hz.

3,We recommend stable power with less interference.UPS protection is needed when allowed.

4.2 Reboot

There is soft-reboot and hard-reboot.Go to<device config>-<management tool>,choose reboot-hard-reboot,plug the power,recharge it to reboot the device.

Instruction :

Power failure recovery:When the power goes off abnormally,reboot the device,previous record info will be saved automatically and recovered after reboot.

4.3 Basic Operations

The following operations needed to be done with terminal equipment such as NVR,client software etc.Common operations are listed below(suppose the device can support the following functions).For more info,refer to the control system manual.

➢ **Horizontal/tilt movement**:Move the keyboard or press up/down/left/right button.

➢ **Zoom operation :** Press down" zoom+tele" to zoom in,press down" zoom+wide" to zoom out.

➢ **Focus operation :** Press down" focus+far" ,the remote object gets clearer,nearby object gets more obscure. Press down" focus+near" ,nearby object gets clearer while the remote object gets more obscure.Speed dome audto adjust the focus to get clear image under auto focus mode.Meanwhile manual focus is still effective. The speed dome will auto adjust focus after other operations.

➢ **Iris operation :** Press down "iris+open" ,the iris goes wider,the image turns brighter.Press down" iris+close" ,the iris goes narrower,the image gets darker.Under auto iris mode,both iris+open" and " iris+close" are effective.The speed dome will auto adjust iris after other operations.

➢ **Preset operation :**Speed dome support 255 presets,some preset numbers are preserved for special functions.

4.4 Login

Login after the device bootup.Corresponding functions are provided according to user authority.Default IP: 192.168.1.10,Sub-mask: 255.255.255.0,Gateway: 192.168.1.1.Reserved one user "admin" ,default no password.Admin is super user,can change the password but not the authority.
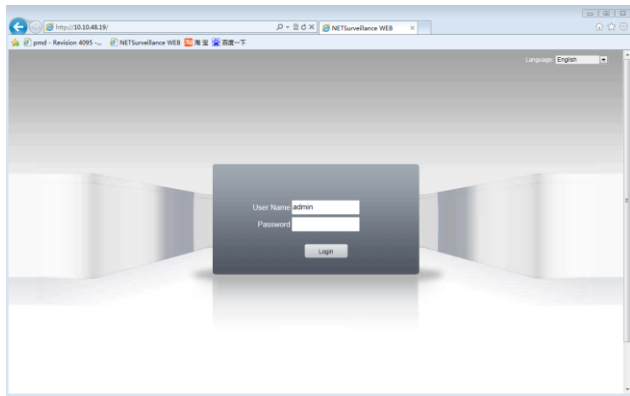
pic.4.1 login

For safety,go to user management to change user name and psssword when you first login.(refer to chapter 5.5.2 user management).

4.5 Preview
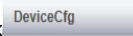
After login,pic.4.2 pops up,you may choose main stream or sub-stream with the left to preview the recordings.
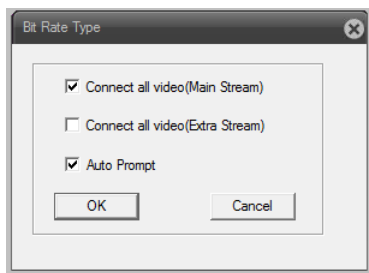
Pic.4.2 Stream selection

Date,time and channel info will be displayed at preview interface.

Chapter 5 Network Camera Config

Click DeviceCfg , as follows:

5-1

5.1.Record

Click , as follows:

5.1.1. Record settings

Click , as follows:

5-2

　　This function allows you to config the time length and pre-record time for each record.We have three settings: Configuration, manual or stop.

Configuration:Record according to the set video type (common, detection and alarm).

Max.four different time interval can be set per day.

Manual: Enable this function,network camera starts record consistently.

Stop: Network camera stops recording.

Note：1. Detect and alarm recording should match with recordings.

　　　　2.Record end time should be longer than start time,

　　　　3. Record files are stored into TF card,make sure TF card is plugged in and confirm it.

　　　　4. TF card should have enough space for cycle overwrite.

　　　　 5.Default open,plug TF card,boot up,then record starts.

5.1.2. Snapshot Storage

　　　　Click , as follows:

5-3

Configure the number of snapshot pictures.We have three snapshot modes:configuration,continuous,close.

1. configuration : Configure timing capture among different dates.Timing capture include common snapshot,detect snapshot and alarm snapshot.User can configure four different time interval snapshot at most.

2. continuous : Network camera captures pictures non-stop.

3. close : Network camera stops capturing pictures.

Note : 1. Detect and alarm snapshot should match with capture functions.

2.Snapshot end time should be longer than start time,

3. Snapshot files are stored into TF card,make sure TF card is plugged in and define it as snapshot disk.

4. TF card should have enough space for cycle overwrite.

5.Default closed,enable it first.

5.2. Alarm Function

Click , as follows:

Alarm functions include: motion detect,video blind, video loss, abnormal handle.

5-4

5.2.1. Motion Detect

Click , as follows:

5-5

【Channel】Choose the set motion detect channels,default is one channel.

【Enable】■ means that the motion detect function is on.

【 Sensitivity 】 Choose in the six options according to the sensitivity:lowest/lower/medium/high/higher/highest.

【Region】Config the trigger region. Max.396 regions can be set.

【Period】You can set four periods each day per week.Motion detect alarm won't be triggered when time is beyond the period.

【Interval】: Shortest time interval between two alarming.The range is 0~600seconds.

【Alarm output】: Enable to link alarm output.

【Delay】Delay a few moments and stop when the alarm state is turned off. The range is 10~300 seconds.

【Record channel】: Local recording starts when triggered.Record detect whould be enabled.

【Tour】: Not supported now.

【Snapshot】: Local capture starts when triggered. Snapshot detect whould be enabled.

【PTZ linkage】: Links to PTZ or presets or cruise when alarm is on.

【Delay】When alarm is over,recording will last some seconds(10~300sec),then stop.

【 Send EMAIL 】 : Alarm emails will be sent to configured email address when triggered.Email address config refer to network service.

【FTP】: Snapshot pictures and record files will be sent to configured FTP server when triggered. FTP config refer to network service.

5.2.2 . Video Blind

Click , as follows:

5-6

Set method: refer to chapter5.2.1.. Motion detect

5.2.3 . Video Loss

Click , as follows:

5-7

Set method: refer to chapter5.2.1. video loss.

.5.2.4 . Abnormal handle

Device respond to abnormal events.
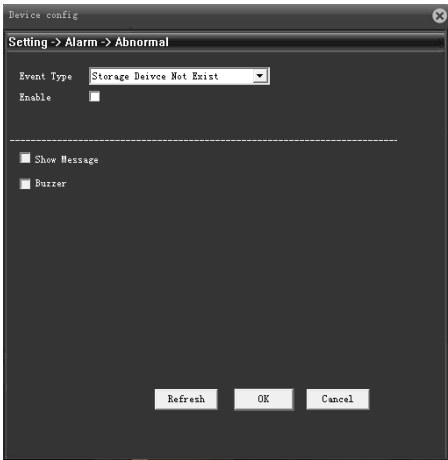
5-8

【Event Type】　　　　selecting abnormity you want to inspect

【Enable】　　　　　　Select it to make sure abnormal function workable

5.3. System Setting

Click [icon] , as follows.Configurations include general settings,encoding settings,networksettings,network service,output mode,PTZ config,serial port config and camera operations.

5-9

5.3.1 . General

Click [icon] , as follows:
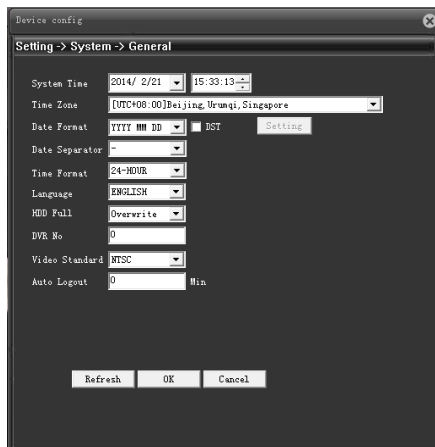
5-10

【System time】Set the system data and time.

【Date format】Choose the data format: YMD, MDY, DMY.

【Daylight Saving Time】: Open and effective time and effective model(effective by week and by date)

【Date Separator】Choose list separator of the data format. Three modes: "—" "/" "."

【Time Format】Choose time format: 24-hour or 12-hour.

【Language】: Config system language:Simplified Chinese, Traditional Chinese, English and other 20 languages.

【HDD full】: Measures taken by the camera when the HDD is full.

overwrite : TF card file overwrites the oldest file when video or capture is full and continue recording and capture.

stop recording : Recording and capture stops when TF card recording and capture is full.

【Video Standard】: Video system switch between PAL and NTSC.

Device NO. and standby time are not supported now.

5.3.2 . Encode setup

Click , as follows: main stream is on the left,sub-stream is on the right.
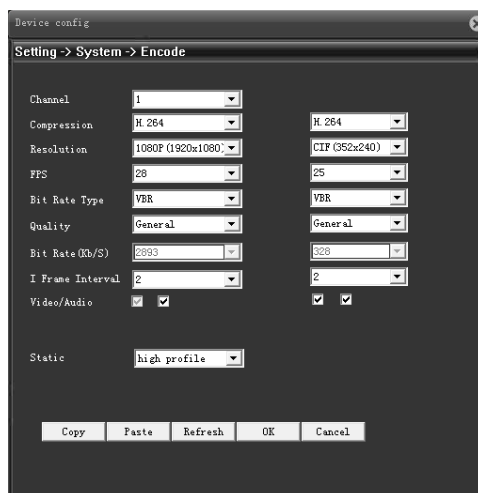
5-11

【Resolution】Config for different device.

Note：Max.sub-stream resolution can't exceed the main stream.

【Frame Rate】P:1 frame/s~25 frame/s; N: 1 frame/s~30 frame/s

Note：Low frame rate will lead to caton,reducing stream transmission.

【Bit Rate Type】You can choose limited code stream or variable code stream.

　【image quality】Effective when it is variable code stream.Switch between

worse/bad/general/good/better/best.The larger code stream value the better image quality.

【I frame interval】 : Camera capture key frame time interval,can be set between 2-12S.

Note：When I frame interval is too large, the preview screen will Caton.

【video/audio】:When main stream is open,it is default not to be modified.Sub-stream needs
to be enabled manually.Audio for both the streams needs to be enabled manually.

Note：①Sub stream should be enabled when used for mobile monitoring.

【Encoder static configuration】: Set the camera coding level，switch between baseline/main
profile/high profile，The higher the level,the larger the stream,the better the preview quality.

5.3.3 . Network setup

Click , as follows: Configure the camera's IP address, gateway, DNS, etc..
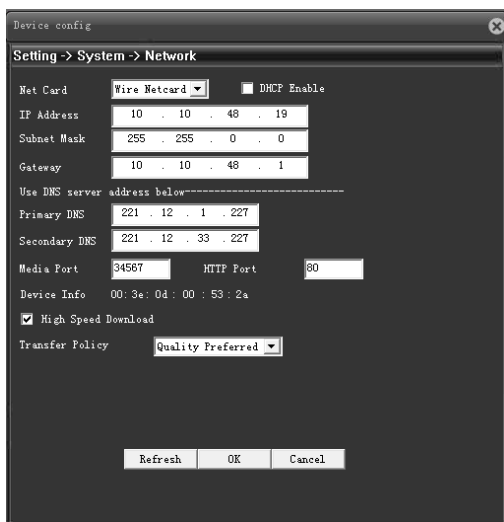
5-12

【Automatically obtain an IP address】: Camera connect to the router(DHCP shold be enabled),then IP address will be obtained automatically.

【IP address】Set the IP address. Default: 192.168.1.10.

【Subnet mask】Set the subnet mask code. Default: 255.255.255.0.should match with the PC.

【Gateway】Set the default gateway. should match with the PC.

【DNS server】:Config the DNS server,should match with the PC,wrong DNS will get the cloud service out of work.

【TCP port】Default: 34567.

【HTTP port】Default: 80.

Note: When camera is connected to public network via PPPOE, 3G or port mapping, HTTP port required to change the non-80 ports.

【MAC】: Show the physical address of the camera, MAC address for ARSP and other functions.

【Transfer Policy】There are four strategies: Adaptive / Quality Priority / Smooth priority /Network transmission Priority.

Adaptive: when network bandwidth is small, the preview screen automatically jump to sub-stream to ensure smooth preview

Quality Priority: Whether the network bandwidth is large enough, the preview screen is always displayed in the main stream, when the bandwidth is not large enough ,screen will

Caton.

　　Smooth priority: Change encoder settings and lower the stream without reducing frame rate to ensure the smooth screen.

　　Network transmission priority: When multiple users login the same camera,limit the user with the smallest bandwidth.

5.3.4 . NetService

Click , as follows:to config the email,wifi and other functions.


```
Device config                                    ⊗
Setting -> System -> NetService

IP FILTER
DDNS
EMAIL
NTP
PPPoE
ARSP
Wireless
Mobile Monitor
UPNP
FTP
Wifi
AlarmServer
RTSP
DAS
Cloud

                                    OK        Cancel
```
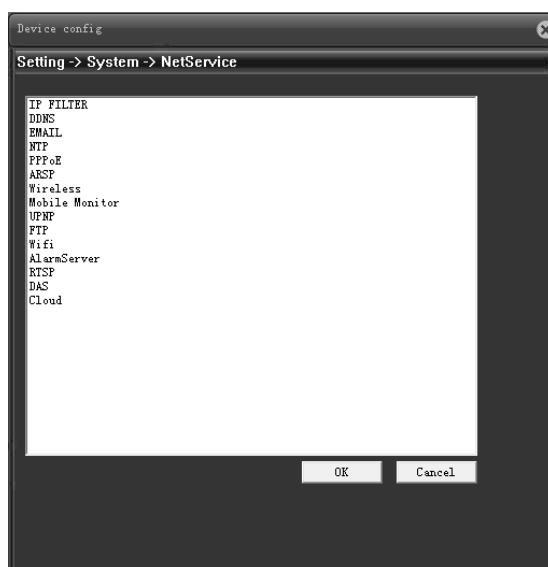
5-13

　【IP permission】: Config the blacklist and whitelist.

blacklist : Address under blacklist cannot access to the camera,max.64 addresses can be added.

whitelist : Address under whitelist can access to the camera,those haven't been added have no access, max.64 addresses can be added.
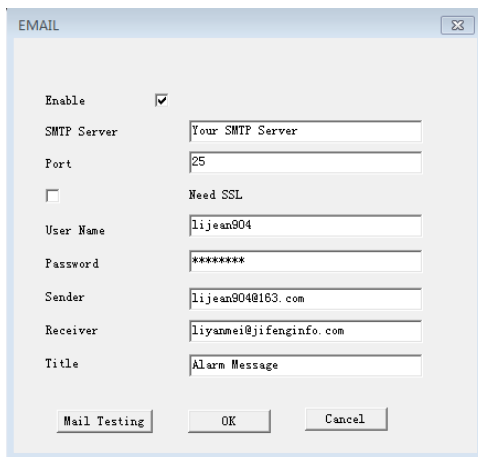
Note : The same IP address can not be added into blacklist and white list at the same time.

　【DDNS】: Set DDNS, support CN99, Oray and other mainstream free domain names.

Note : Got to domain website, register CN99 and obtain domain name,account and password before use.

　【 Email 】 : Config email address for alarm messages sending and receiving,support

QQ,sina,Gmail,mobile email,netease mailbox.Confirm SMTP is enabled before use.

5-14 Email settings

[SMTP server]：Login mailbox to search for how to fill in SMTP server.

Note：NetEase mailbox registered before November, 2006 can support SMTP.

[Port ,SSL] :Consistent with mailbox configuration, you can log in to view the mailbox settings.

[User name]：Just fill in the e-mail address before the @ part.

[Addressee]：You can config 3 email addresses, separated by a semicolon, can be the same with outbox.

[Theme]：Config email theme,can be modified.

[Mail Test]：After configuration,click mail test to config whether the email is valid.

　【NTP settings】：Camera system time synchronize with the designated PC,enable the NTP service before use.

[Server address]：PC and the camera should be within the same LAN and same IP subnet.

　【PPPOE】：Camera connect to the public network via PPOE dial-up,contact the network operator for the user name and password.After successful dialing,public IP address will be displayed.

Note：Some 80 ports are sealed by the operator,pls change the http port as non-80 port.

　【ARSP】：We provide domain name service,user can setup their own DNS server or use our free DNS server.

Server address：http://xmsecu.com:8080

Register at website to get user name and password。

　【Phone monitoring】：Login camera via monile , support Android、iOS、Windows Phone ,

For details, see Appendix I.

Note：Confirm the phone is connected with network,sub-stream is enabled.

【UPNP】：Router goes port mapping and fixed port automatically towards the camera.

Note：Make sure UPNP is enabled,camera and router share the same network.

【FTP】：Upload the alarm recording or capture to designated FTP server.

[Server address]：Designated FTP server address,can be local network or public FTP server.

[Port, username, password, etc.]： Pls contact FTP server administrator.

【Alarm Center】：Upload alarm info to alarm center of the designated IP address.

【RTSP】：Support cross browsr,VLC preview screen.

Note：Support Apple, Google, Firefox browser, PTZ control, main and sub stream switching, install QUICKTIME plug-in before use.

【DAS】：Enable it,then dock to MYEYE monitoring platform,refer to Appendix II MYEYE monitoring platform instruction.

【Cloud Services】：Cloud service instructions,refer to Appendix III cloud instructions.

【PMS】：Alarm information push, enabled it,then speed dome can deliver alarm info to mobile with EyeCloud.

[Server address]：input server address for push.umeye.cn.

[Port]：input server port for push.umeye.cn.

Note：Add the serial number to EeyeCloud mobile client.

5.3.5. GUI Display

Click , as follows:to config channel name.

5-15
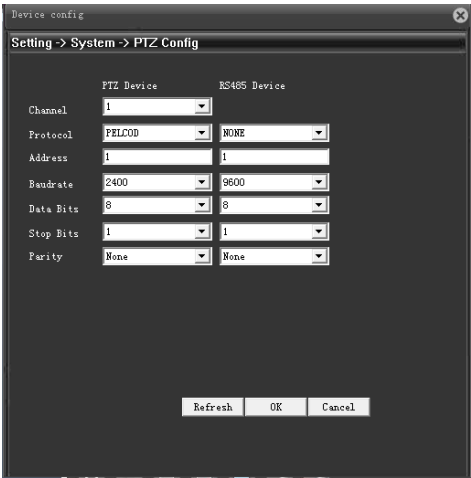
【Channel Name】: Set the camera channel name, up to 26 characters, special characters are not supported.

【Regional coverage】: Set the camera coverage area number, location and size, can set up four coverage area.

【Time title, channel title】: Config whether the time title and channel title are displayed and the display area.

5.3.6. PTZ setting

Click , as follows:

5-16

Check PTZ protocol, address, baud rate and save the configuration information.

Note : PTZ might break down when any of the following dismatch with the PTZ:protocol, address, baud rate.

5.3.7. Serial port settings

Click , as follows:

Serial port will be disabled when baud rate,data bits, protocol configuration are not consistent with PC.
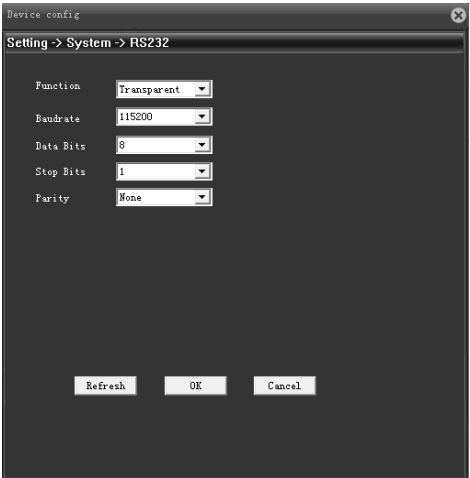
5-17

5.3.7. Camera parameters

Click , as follows:
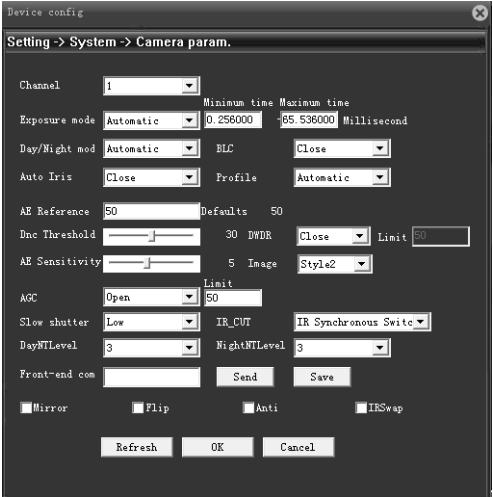
5-18

【Exposure Mode】: Config the exposure time,can be switched between auto/manual,1/50 to 1/10000S .the shorter the exposure time, the darker the preview screen.

[Day/Night Mode]: Modify day/night mode manually.

Auto: The camera automatically control color of the preview screen according to the actual

ambient light.

Color: The camera remains color preview screen instead of turning black and white when there is insufficient ambient light.

Black/white:Camera preview turns black/white when there is sufficient ambient light.

[BLC]: Turn off or turn on the backlight compensation.With BLC on,main scenery of the center can be seen under bright environment.

[Auto Iris]: Turn off or turn on auto-iris

[Profiles]: automatic, indoor and outdoor.

[Auto Exposure Reference]: Set the camera's exposure, selectable between 0 and100, the larger the reference value, the brighter the preview screen, whereas darker.

[Day & Night Threshold] : associated with IR_CUT switching modes.

IR_CUT automatic switching mode: automatic day and night mode is the critical point, the threshold greater the higher the brightness, whereas lower.

IR_CUT IR synchronous switching mode: 10-20 to close the switching threshold stabilizer,21-30 Debounce time 3s ,31-40 Debounce time 4s ,41-50 Debounce time 5s.

[WDR]: Set the WDR closed or open.When WDR is on,adjust the cap under bright background to see the main scenery clearly.

[AE Sensitivity]: When ambient light dramatically changes, the length of time the camera takes to adapt to the light changes.the higher the sensitivity, the shorter to adapt.

[AGC]: Set AGC turned off or turned on.Auto adjust the sensitivity of the camera according to the ambient light changes to change the screen brightness.

[E Slow Shutter] : Set the electronic shutter off, weak, medium and strong to increase the brightness by accumulation, to prolong the exposure time to enhance the image sensor under low light illumination.

[IR_CUT]: can be set as automatically switch or infrared synchronous switch.
Automatic switch: ICUT switch according to the brightness level of the actual environment
Infrared Salvos: ICUT switch is determined by the state of infrared light.

[Day Noise level] : Eliminate the screen lit when the light is sufficient,the higher the level,the better the reduction.

[Evening Noise level] : Eliminate the preview screen noise level when there is insufficient light, the higher the noise level, the better.

【Front-end command】: Send orders to front-end to adjust camera parameters

[Mirror]: When you enable it,the preview screen flip around 90 °.

[Flip]: When you enable it,the preview screen turn upside down 90 °.

[Fluorescent anti-flash]:To get rid of the horizontal fluorescent stripes of preview screen with fluorescent lamp.

[IR lens reverse order]: IR_CUT reverse order.

5.4. Management Tool

Click, as follows. You can config HDD management,user management,automatic maintenance, restore default, import and export,restart, system upgrades and other functions.

5-19

5.4.1. HDD management

Click, as follows:
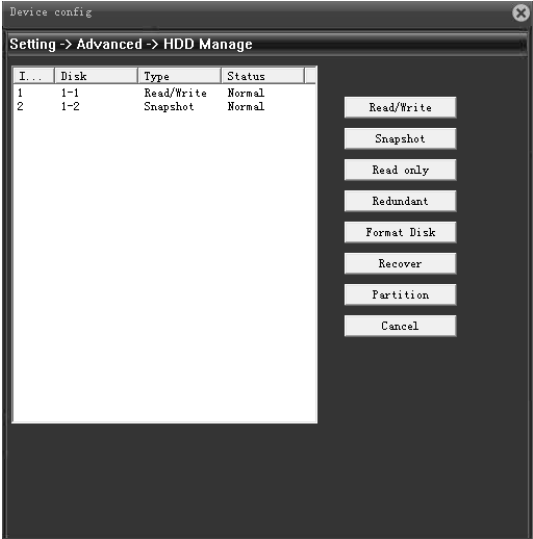
5-20

[Driveis set to read-write] : The partition or TF card can be used for recording only.

【Driveis set to snapshot】: The partition or TF card can be used for capture only.

【Driveis set to read-only】: New recordings or capture files can not be written in the partition or TF card cannot,can playback only.

【Format the disk】: Format the partition or TF card and delete all.

【Partition】: TF card for partition.

Note : ①We recommend Genuine Kingston TF card,capacity greater than or equal 4G.

②Make sure that each partition is larger than 1024M.

③Format TF card before partition,data will be lost.

5.4.2. User Management

Click , as follows:

5-21

[Modify User]: Modify the added user name, whether reuse, notes, group, class, and permissions.

[Modify Group]: modify the added group name, notes and permissions.

Note:Reserved group and user name can not be modified.

【Change Password】: Change the password.

【Add user】: Set new user name, password, notes, owning group, permissions and other information, can add up to 64 user names.

【Add Group】: Config the added group name,notes,permissions and other information.

【delete user】: Delete the selected user,can not delete the registry.

【delete group】: Delete the selected user group, when the group contains the user,it can not be deleted.

Note:Reserved user and combined user can not be deleted.

5.4.3. Auto Maintenance

Click , as follows:

5-22

[Automatic restart]: Set the camera automatically restart at some point during the day, the default restart 1:00 Tuesday.

[Automatically delete old files]: System will automatically delete videos and drawings within 1-255 days, the default is never deleted.

5.4.4. Restore Default

Click , as follows:

5-23

Available for general configuration, encoding settings, video settings, alarm settings,

network settings, etc. Single, multiple or all the settings can be restored factory settings.

5.4.5. Import and Export

Click , as follows:

5-24

[Configuration Export, Import]: Export current config file,the CFG file format can be imported into another camera with same configuration.

Note:Import one config file into multiple cameras,the IP address are the same,user need to modify the IP address manually.

[Export Log] : Export camera log information.

5.4.6. Restart

Click , as follows , click restart,camera soft-reboot via client.

5.4.7. System Upgrade

Click , as follows , Select the correct upgrade file via browsing, click Upgrade to begin the upgrade, the upgrade process will be displayed, pop-up dialog box when upgrade is successful, the camera automatically soft reboot when the upgrade is complete.
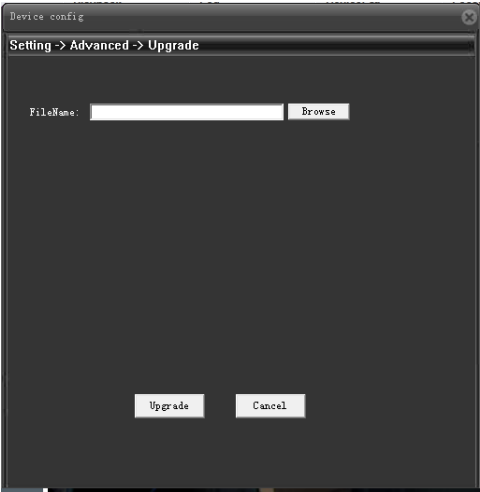
5-25

5.5.System Info

Click 📋 as follows，HDD info,log info,version info can be searched.

5-26

5.5.1. HDD info

Click 📷 as follows，total capacity, remaining capacity, begin and end recording time

and other information can be searched.
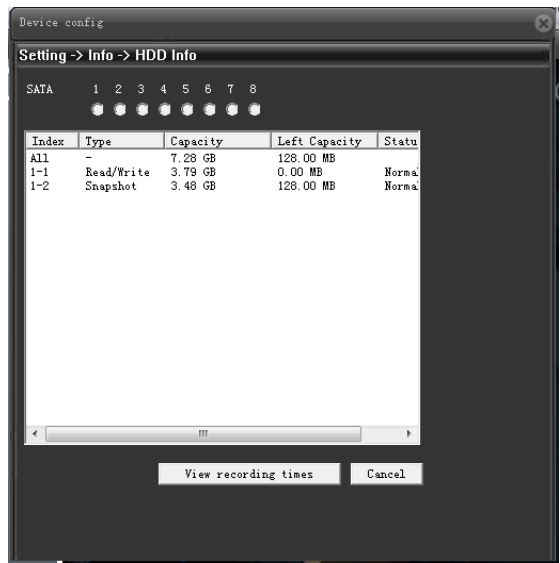
5-27

[drive type and capacity]: check the partition type, total capacity, remaining capacity, and status information.

[DVR time]: check start time and end time of the recordings and cature.

5.5.2. Log info

Click ![log icon] as follows , all info or parted info can be searched.
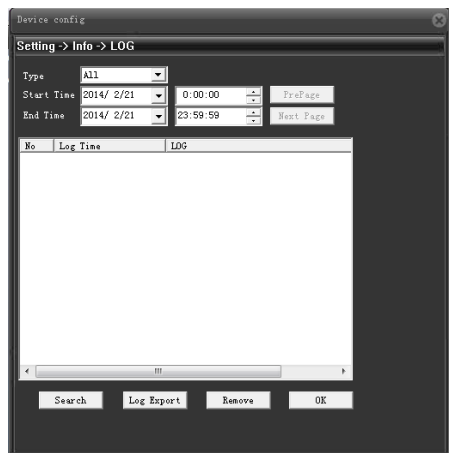
5-28

[Type]: Check the log info,including all, system operation, configuration operations, data management, alarm events, recording operation, user management, file operations

[Start, end time]: Check the start time and end time of the log. Results show only the log information within time period.

[Query]: Query all logs.

[Export Log] : Export log information.

[Empty]: Clear all log information.

5.5.3. Version Info

Click as follows，HDD info,program version and serial number can be searched.
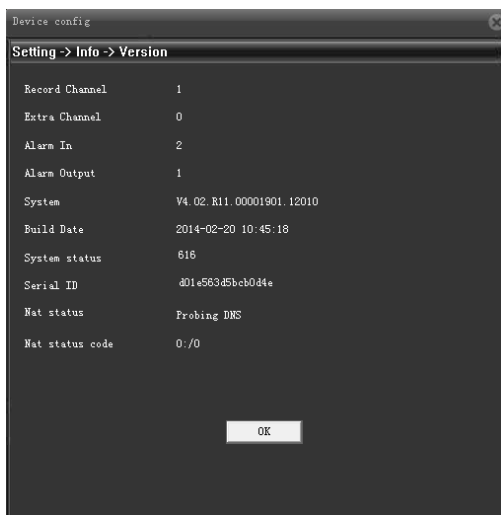
5-29

[Video channel, extended channel, alarm input, alarm output]: Display the current camera hardware, support alarm input and output.

[System Version]: Display the camera model and other information.

[Release Date]: The current program release time.

Note: Contact company's technical staff, provide system version and release dates for technical support.

[System uptime]: Cumulative running time after the powering on.

Note:After reset,the system uptime is cleared.

[Serial number]: 16-bit serial number, for cloud services.

[NAT state] : When the camera is connected to cloud server, the connection is successful, otherwise remarkable is probing DNS.

[NAT status code] : Camera connect to cloud services,displays IP address of the server.

Appendix 1 Search Tools

1. Double-click General_DeviceManage file, follow the prompts to complete the installation search tool

2.Double-click to open the search tool.
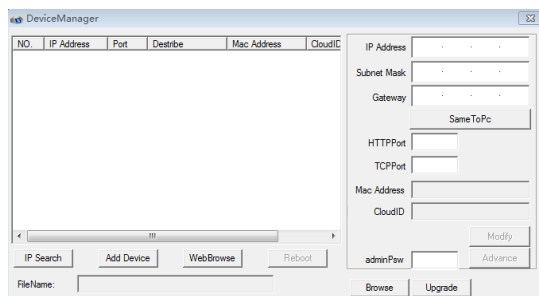
[Search] Search within the same LAN equipment online ball machine, the search results display the IP dome, HTTP and TCP port, Mac address, cloud serial numbers and other information.

[Web access] selected search out the IP, click the web access button to automatically jump to the corresponding ball machine login screen.

[Add Device] Add You need to upgrade ball machine ip address, port number, user name and password. Figure：
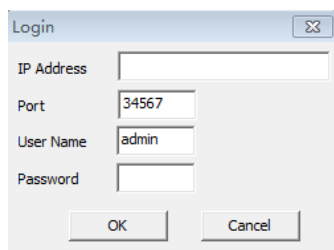
[Reboot] to select the device you want to restart the ip, click [Reboot] restart ball machine.

[Filename] displays the path and name of the upgrade file.

[Browse] on the local pc Browse to select the file you want to upgrade.

[Upgrade] to select the correct file click on the button, the ball starts the upgrade process.

Note: The upgrade process can not disconnect the power and network cables

Through the right side of the interface function tool, you can modify the IP address of the ball machine.

Select a ball machine's IP address, the function column on the right shows the current ball machine's IP address, subnet mask, gateway and other information; may be modified by directly entering the IP address, gateway, etc. in the display column.

[consistent with the local pc] After IP address modification is completed, click on the function keys to make the subnet mask and default gateway and local pc consistent.

[HTTP port] to display the current default HTTP port ball machine, ball machine can be entered directly modify the HTTP port.

[TCP port] to display the current default TCP port ball machine, ball machine can be entered directly modify the TCP port.

Note: Modify the port need to restart to take effect.

[Modify Network Parameters for the modified IP addresses, ports, etc. save.

[Senior] Click [Advanced] to enter the advanced configuration page.

[DNS1] equipment preferred DNS server.

[DNS2] equipment alternate DNS server.

[Consistent with local pc] Consistent with the local pc's DNS server.

[Monitor] After checking the phone handset can be monitored.

[DDNS] can be registered ddns choose ddns registration of a registered type. After successful registration, fill in your registered domain name of the domain name, password, and then check the [Enable]. Domain name so that you can visit.

[Wifi] Click [Settings] to enter the wifi configuration page. (First make sure your devices are installed wifi modules can be wifi access)
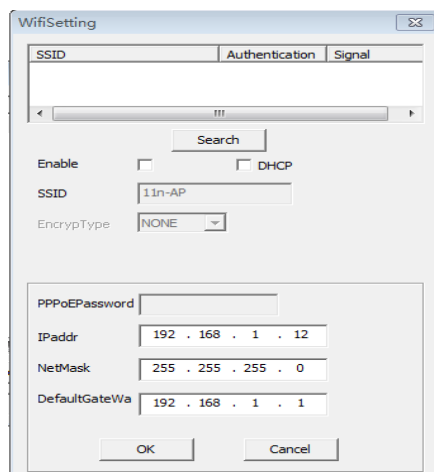
[Search] SSID wireless routing search. Displays SSID, signal strength and other information after the search was successful.

Note: Make sure your router has a wireless routing and turned SSID broadcast function.

[Enable] to enable WIFI function, you can set enabled wireless router to connect, connection password, dome IP address.

[DHCP] automatically get the ball machine WIFI ip address, without manual configuration.

[Encryption] to display the connected wireless router encryption.

【password】The password of the wireless router.

Note: Make sure the password is correct, or can not connect successfully.

[IP address] to manually set the ball machine WIFI IP addresses.

[Subnet Mask] to manually set the ball machine WIFI subnet mask.

[Default Gateway] to manually set the ball machine WIFI gateway.

Appendix 2 IE Active X Download

Installation preparations

After the ball with a user's computer network to ensure that all hardware connections are complete and the device is powered properly, turn on the computer, run the ball ping network IP address (Note: The network of the ball in the LAN IP address must be unique), such as network IP for the ball 192.168.1.10, run ping 192.168.1.10, if the network has shown the following responses ball, which means that the network connection is normal, you can download the plug-in.

Start downloading plug-ins

Open IE browser, enter the IP address of the network the ball in the address bar (default is 192.168.1.10) the system will prompt whether to install this plug-in, click Install, the browser will automatically load the IE plugin.

Note: If the user's computer related controls to intercept such software, they will load the plug-in to intercept, then this software settings to allow the installation.

After the exclusion of the above reasons, plug-in installation still fails, then please change the security level of IE browser and allows to start some control. Specific methods are as follows：

1．Do the following to install in the default level

①In the address bar enter IP, the system displays the following message：

②□   单击上图中的"允许"，出现如下图标注所示提示：

③Click "Install" pop-up dialog box as shown below：

Plug-in installation fails, you need to modify the IE security level, so that the plug has permission to install, modify the permissions as follows.

2. In IE interface to select Tools-Internet Options - Security - Custom Level conduct shown IE security level custom settings, as shown below.
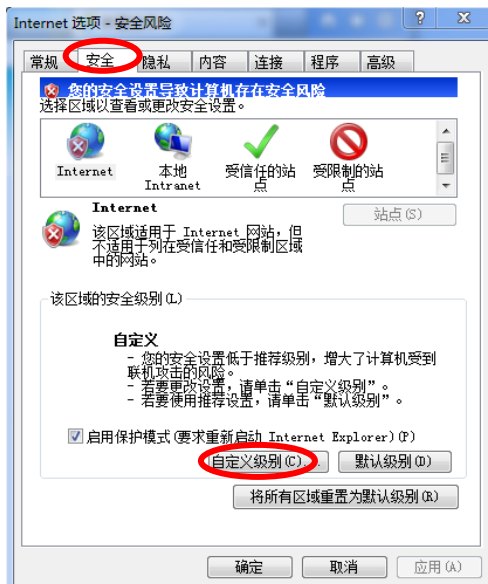
　　Enable permission to download and install Activex controls and plug-ins, as shown in the following figure. After confirming the application, refresh the IE browser to begin downloading and installing IE controls.
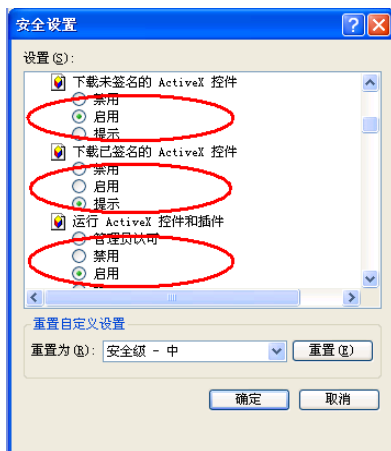
Appendix 3 Client Application

1.Double-click"General_CMS_Chn.exe"to install client.

2.When it is installed, Shortcuts will be at the desk.Double-click it to open the software.

3.CMS operate interface
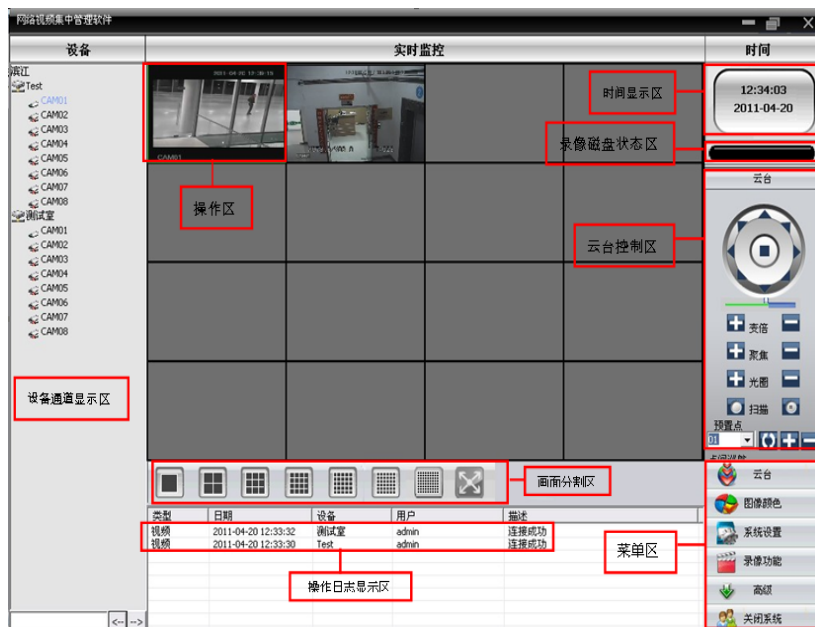
【Device display area】In this area,you can preview live screens by device and super account administrator setting,click device name or channel group to change channes.You can also drag the device name or channel to operation areas.

【Operation area】You can preview live screens ,and setup parameters when system configuration and video searching in this area.

Close: Close the current channel live screen.

Close all windows: Close the current live screen all channels.

Audio: Select this to hear the sound of live preview

Client recording,client recording,saved in the corresponding disk.

Local amplification: the current channel partial enlarged

Snapshot:Capture the pic of current time and channel,then save in the corresponding disk.

Bidrectional talk:Select it to talk to the device.

Device configuration: enter the device configuration interface

Image Color:config the color of current channel.

Full screen: full screen display of the current channel

[Time Display] To display the local computer system time.

【PTZ】PTZ control and operations

[screen-split area] select   the monitoring channel numbers, there are 1-64 optional.

【Operation log】It will display any operation informations when setup and operating.

【Menu Area】Users could set single menu and sub-menu in this area,select relevant menus to operate video surveillance system in the control center.

Appendix 4 HD Speed Dome Network Port

The default network port :

	80	Web
TCP	34567	Communication audio*video data transmission bidrectional talk data transmission
	8899	Onvif
RTSP	554	streaming media

Appendix 5 Lightning & Surge Protection

Introducing TVS lightning protection technology,our product is capable of preventing instaneous lightning under 4000V,avoiding equipment damage caused by electric surge.To install the speed dome outside,the following protection measures are necessary on premise of electric safety:

➢ Signal transmission line must be kept at least 50 meters form high voltage equipment and cables.

➢ Layout the routing under eaves for outside cabling.

➢ For open field,lay the sealed steel tube underground,adopt one-point grounding mode.Overhead wiring is forbidden.

➢ For surroundings with intense thunderstorms or high induced voltage(such as high-voltage substation),extra high power lightning protection equipment and lightning rod must be used.

➢ Outdoor installation and wiring must conform to the requirements of buildings'lighting

prevention,and comply with related national and industry standards.

➢ Equipotential grounding.Grounded device must meet double requirements,anti-jamming and electric safety,and it mustn't be short-circuited or hybrid-circuited with neutral leg of forceful electric power.When system grounded alone,the impedance can't be over 4Ω,sectional area of grounded wire must be more than 25 mm².For speed dome camera,please refer to installation manual.
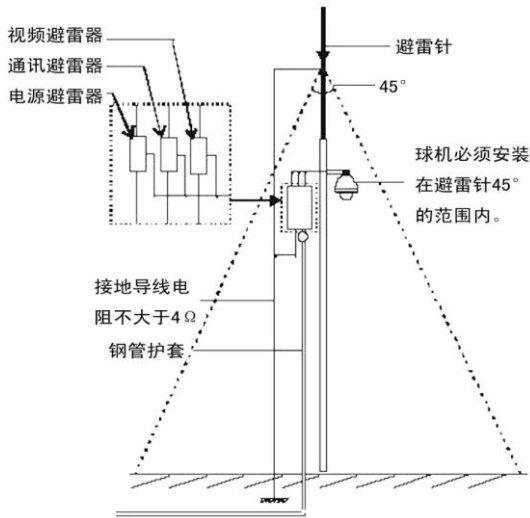
Appendix 6 Wire Path & Distance

Recommended max.transmission distance when wire diameter is given and 24AC power loss is less than 10%.(For AC-powered device,max.power loss is 10%.For instance,the rated power for the device is 80w,35 feet(10meters) away form the transformer,then the min.wire diameter is 0.8mm)

	0.80	1.00	1.25	2.00
10	283 (86)	451 (137)	716 (218)	1811 (551)
20	141 (42)	225 (68)	358 (109)	905 (275)
30	94 (28)	150 (45)	238 (72)	603 (183)

40	70 (21)	112 (34)	179 (54)	452 (137)
50	56 (17)	90 (27)	143 (43)	362 (110)
60	47 (14)	75 (22)	119 (36)	301 (91)
70	40 (12)	64 (19)	102 (31)	258 (78)
80	35 (10)	56 (17)	89 (27)	226 (68)
90	31 (9)	50 (15)	79 (24)	201 (61)
100	28 (8)	45 (13)	71 (21)	181 (55)
110	25 (7)	41 (12)	65 (19)	164 (49)
120	23 (7)	37 (11)	59 (17)	150 (45)
130	21 (6)	34 (10)	55 (16)	139 (42)
140	20 (6)	32 (9)	51 (15)	129 (39)
150	18 (5)	30 (9)	47 (14)	120 (36)
160	17 (5)	28 (8)	44 (13)	113 (34)
170	16 (4)	26 (7)	42 (12)	106 (32)
180	15 (4)	25 (7)	39 (11)	100 (30)
190	14 (4)	23 (7)	37 (11)	95 (28)
200	14 (4)	22 (6)	35 (10)	90 (27)

Appendix 7 AWG Home and Abroad

Metric bare wire dia. (mm)	USA Wire Gauge	British Wire AWG SWG	Cross-sectional area mm^2
0.050	43	47	0.00196
0.060	42	46	0.00283
0.070	41	45	0.00385
0.080	40	44	0.00503
0.090	39	43	0.00636
0.100	38	42	0.00785
0.110	37	41	0.00950
0.130	36	39	0.01327
0.140	35		0.01539
0.160	34	37	0.02011
0.180	33		0.02545
0.200	32	35	0.03142

0. 230	31		0. 04115
0. 250	30	33	0. 04909
0. 290	29	31	0. 06605
0. 330	28	30	0. 08553
0. 350	27	29	0. 09621
0. 400	26	28	0. 1257
0. 450	25		0. 1602
0. 560	24	24	0. 2463
0. 600	23	23	0. 2827
0. 710	22	22	0. 3958
0. 750	21		0. 4417
0. 800	20	21	0. 5027
0. 900	19	20	0. 6362
1. 000	18	19	0. 7854
1. 250	16	18	1. 2266
1. 500	15		1. 7663
2. 000	12	14	3. 1420
2. 500			4. 9080
3. 000			7. 0683

Appendix 8 Address Coding Table

SW2 Address Setting

Add.	1	2	3	4	5	6	7	8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF

Add	1	2	3	4	5	6	7	8
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF

SW2 Address Setting(continued)

Add.	1	2	3	4	5	6	7	8
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF

Add	1	2	3	4	5	6	7	8
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

SW2 Address Setting(continued)

Add.	1	2	3	4	5	6	7	8
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON

Add	1	2	3	4	5	6	7	8
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

SW2 Address Setting(continued)

Add.	1	2	3	4	5	6	7	8	Add	1	2	3	4	5	6	7	8
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON	226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON	227	ON	ON	OFF	OFF	OFF	ON	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON	229	ON	OFF	ON	OFF	OFF	ON	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON	230	OFF	ON	ON	OFF	OFF	ON	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON	231	ON	ON	ON	OFF	OFF	ON	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON	233	ON	OFF	OFF	ON	OFF	ON	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON	234	OFF	ON	OFF	ON	OFF	ON	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON	235	ON	ON	OFF	ON	OFF	ON	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON	236	OFF	OFF	ON	ON	OFF	ON	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON	237	ON	OFF	ON	ON	OFF	ON	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON	238	OFF	ON	ON	ON	OFF	ON	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON	239	ON	ON	ON	ON	OFF	ON	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON	241	ON	OFF	OFF	OFF	ON	ON	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON	242	OFF	ON	OFF	OFF	ON	ON	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON	243	ON	ON	OFF	OFF	ON	ON	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON	244	OFF	OFF	ON	OFF	ON	ON	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON	245	ON	OFF	ON	OFF	ON	ON	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON	246	OFF	ON	ON	OFF	ON	ON	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON	247	ON	ON	ON	OFF	ON	ON	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON	248	OFF	OFF	OFF	ON	ON	ON	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON	249	ON	OFF	OFF	ON	ON	ON	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON	250	OFF	ON	OFF	ON	ON	ON	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON	251	ON	ON	OFF	ON	ON	ON	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON	252	OFF	OFF	ON	ON	ON	ON	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON	253	ON	OFF	ON	ON	ON	ON	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON	254	OFF	ON	ON	ON	ON	ON	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON	255	ON	ON	ON	ON	ON	ON	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Appendix 9 After-sale Service & Maintenance

1. Installation and service

　　Contact our maintenance department when you have questions during installation. Barcode should be well kept for fast and convenient service.

2. Product Repair

　　Please return the product in accordance with the relevant provisions of the transport of the product,ensure that the product suffers no damage during the way back,avoiding unnecessary disputes. Remember not to try to dismantle the cover and repair yourself to avoid electric shock or other risks.We recommend that all maintenance services done by professionals.

3. Warranty Information

　　 Warranty period :one year. The warranty card work for the products you bought from us.

　　1. Within warranty period,when there is breakdown under normal conditions, we will provide free repair service with the warranty card and purchase bills you have;

　　2. The following situations need extra pay during the warranty period：

　　（1）Physical damage；

　　（2）Beyond the warranty expiration date or free maintenance period;

　　（3）Any failure or damage caused during use, maintenance or custody against the
　　　　　manual book；

　　（4）Abnormal situations caused by illegal copy,non-standard,self-written or third-party
　　　　　software.

　　（5）Abnormal situations caused by falling,squeezing,high temperature, corrosion,foreign objects
　　　　　entering,poor electrical environment or other non-normal reasons.

　　（6）Breakdown or damage caused by natural disasters, war and other force majeure factors.

　　（7）Breakdown caused by unauthorized service agencies or disassemble, repair, installation
　　　　　confirmed by their personnel.

　　（8）Without company name, company address, production date, serial number, warranty
　　　　　card, or serial number and stickers blurred, damaged,unknown.

warranty card

Product name		Model	
Purchase Date		Dealer	

Purchase Market			
Customer name		Profession	
Telephone number		Zip code	
Work units			
Current Address			

1. Please send the device back with the warranty card and bill if you need Warranty and Maintenance,transportation costs are on the user.

2. Pls take care of the card for better service.