

User Manual

Network Speed Dome

Version: 1.01

Welcome

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact us.

This manual is applicable to Speed Dome.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual. We will readily improve or update the products or procedures described in the manual.

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into "Warnings" and "Cautions":

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

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



Warnings : Follow these safeguards to prevent serious injury or death.



Cautions : Follow these precautions to prevent potential injury or material



Warnings :

- 1.In the using of the product, you must be strict compliance with the electrical safety regulations of the nation and region.
- 2.Please use the power adapter, which is provided by normal company. The standard of the power adapter is DC12V/4A or AC24V/2A.
- 3.Do not connect several devices to one power adapter as adapter overload may cause over-heat or fire hazard.
- 4.Please make sure that the plug is firmly connected on the power socket.
- 5.When the product is installed on wall or ceiling, the device shall be firmly fixed.
- 6.If smoke, odors or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- 7.If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)



Cautions :

- 1.Do not drop the dome or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid the equipment installation on vibrations surface or places subject to shock (ignorance can cause equipment damage).
- 2.Do not place the dome in extremely hot, cold (the operating temperature shall be -30°C ~ +65°C), dusty or damp locations, or fire or electrical shock will occur otherwise.
- 3.The dome cover for indoor use shall be kept from rain and moisture.
- 4.Exposing the equipment to direct sun light, low ventilation or heat source such as heater or radiator is forbidden (ignorance can cause fire danger).
- 5.Do not aim the camera at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of CCD at the same time.
6. Please use the provided glove when open up the dome cover, avoid direct contact with the dome cover, because the acidic sweat of the fingers may erode the surface coating of the dome cover.
7. Please use a soft and dry cloth when clean inside and outside surfaces of the dome cover, not to use alkaline detergents.

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1 Brief Introduction

1.1 Description

Network Speed Dome with HD integration movement, with automatic focusing, automatic white balance function, internal set camera with digital decoder in one, using precision motor drive, sensitive response, stable operation, at any speed image without jitter. Network Speed Dome with built-in WEB page, can browse through IE browser. It has become a high technology field of security monitoring products for its excellent performance and complete function.

Network Speed Dome can be divided Speed Dome and IR Speed Dome. Our products can be widely used in a wide range of high-speed mat or a feeble light space.

For example: River, Forest, Road, Railway, Airport, port, Park, street, Station, Large Venues, Outside of the residential area, etc.

1. Infrared Function (Apply to IR Speed Dome)

- Quickly cooling cast aluminum design.
- CCVE and PWM design, IR LED can work steady in long time.
- IDS (Intelligent Dimmer System), The IR brightness can be fixed by distance, zoom and brightness of picture.
- Individual MCU infrared control system, The multi mode and remote upgrade system can be configured
- Multi-mode infrared settings, unique MCU IR control system, Remote upgrade system.
- 10 grade IR power and illumination can be set.
- Perfect IR vision via internal switch between IR control and camera module optical filter
- IP 66 Grade, TVS 4,000V lightning protection and voltage transient protection.

2. System Function

- Integrate Structure Design.
- CGS (Cooling GAS System).
- IP66 Grade, TVS 4,000V lightning protection and voltage transient protection.
- Precise motor device which sensitively and steady. The accuracy deviation >0.1, no picture shake.
- Support 3D Positioning Function
- Support Preset / Patrol / Pattern / Linear scan / Frame
- Low Consumption Design

3. Built-in HD camera module

- Auto IRIS and BLC
- Auto/Manual white balance
- Auto/Manual Focus

- Auto brightness control

1.2 Functions.

- Control: The pan/tilt movement and zoom actions of dome can be controlled by the control keyboard, DVR, matrix, etc.
- Auto Scan: The dome provides 5 scanning modes: pan scanning, tilt scanning, frame scanning, random scanning and panorama scanning. The scanning speed can be set by OSD menu from level 1 to 40, with the corresponding speed ranging from 1°/second to 40°/second.
- Presets: Each of the user-definable presets can be programmed to use pan, tilt, camera settings and other settings. When preset is called, the dome will automatically move to the defined position. User is allowed to add, modify, delete and call each preset.
- Auto Flip: In manual tracking mode, when a target object goes directly beneath the dome, the dome will automatically rotate 180 degrees in horizontal direction to maintain continuity of tracking. When the dome rotates (flips), the camera starts moving upward as long as you continue to hold the joystick in the down position. This function can be realized by image center flip depending on different camera models. The feature can be enabled/disabled through the menu.
- Proportional Pan/Tilt: Proportional pan/tilt automatically reduces or increases the pan and tilt speeds in proportion to the amount of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower for a given amount of joystick deflection than at wide zoom settings. This keeps the image from moving too fast on the monitor when there is a large amount of zoom.
- Auto Focus: The auto focus enables the camera to focus automatically to maintain clear video images. In manual mode, it can be controlled by "Near" and "Far". When the PTZ moving or lens zooming, the manual mode will back to Auto focus mode.
- IR Cut Filter: The IR cut filter can be set to Auto, Day and Night. In auto mode, the camera is capable of automatically switching Black & White mode (Night) and Color mode (Day) with regard to environment lightening conditions. In manual switch mode, user can increase sensitivity in low light conditions by switching to Black & White mode, while the Color mode is preferred in normal lighting conditions.
- Low Light Electronic Shutter: The shutter speed will automatically slow down in low illumination conditions to maintain clear video images by extending the exposure time. The feature can be enabled/disabled by the menu.
- White Balance (WB): This feature automatically processes the viewed image to retain color balance over a color temperature range. The default setting for white balance is AUTO.
- Pattern: A pattern is a memorized, repeating series of pan, tilt, zoom, and preset functions that can be recalled with a command from a controller or automatically by a configured function (alarm, park, time task, or power-up). By default the focus and iris are in auto status during the pattern is being memorized.
- Patrol: The high speed dome provides up to 8 patrols. In each patrol, user is allowed to specify the scanning track by a group of user-defined presets, with the scanning speed between two presets and the dwell time at the preset separately programmable.

2 Speed Dome Installation

2.1 Install Preparation

1. Basic Requirement

Before the installation, please read following caution information:

- 1) Installation and maintenance should be carried out by professional personnel as per relative regulations. All electrical work must obey the latest electrical regulations, fire regulations and relevant regulations. Check whether the accessories of the unit are complete according to packing list and confirm whether the place and method of installation is in accord with required, if not, please contact your supplier. Please use this product in required environment.
- 2) Indoor IR intelligent high-speed dome only designs for house supply. It can't be installed exposed to rain or in very humid place.
- 3) After re-installation or repair, you need to measure the resistance between the circuit and shell to check whether the insulation is good, and ensure there is no short-circuit between the circuit and shell.
- 4) Confirm there is enough place to contain the product and its structure components. Confirm the ceiling, wall and bracket for installation can take the total weight of the product and its structure components, and materials used to support the weight can sustain four times the weight of the product.
- 5) Please refer to following table of work environment:

Temperature	-30 ~ 65°C	Atmospheric Pressure	86 ~ 106KPa
Humidity	< 90%RH	Power	DC12V/5A

2. Preparation of wire

Following is recommend Max distance for 12VDC. Please refer the Appendix 3 Wire Gauge&Transmission Distance.

Cable Diameter	Max Distance(M/ft)
0.75mm ²	6m(20ft)
1mm ²	9m(30ft)
1.5mm ²	12m(40ft)
2mm ²	15m(50ft)

3. Please keep the product package well

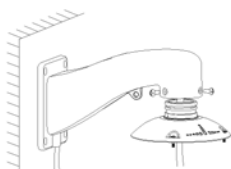
Please keep the product package well, You can send the speed dome to factory with that package if there is any problem need to service.

2.2 Installation

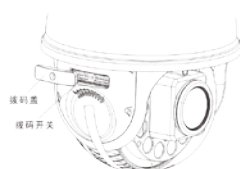
1. Speed Dome Installation

Different Bracket install way please refer to chapter 2 and chapter 3

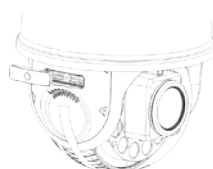
- 1) Take out the cable from the speed dome. Remove the connected cover from speed dome, and put the wire through the bracket. Connect the bracket and cover with 3 pcs screws, and fix it to wall. (As Dig. 2.2.1) (Caution: The bracket must be with waterproof fodder together)
- 2) Open the Dip Switch Cap with screw driver. Configure the protocol, Baud rate, and Speed Dome address. (As Dig. 2.2.2). Please refer the chapter 2.4" Dip Switch Setting"
- 3) Remove the protect gummed tape (As Dig. 2.2.3), check the situation of seal ring on top of speed dome.
- 4) Connect the safe rope of speed dome to the bracket, then hook up speed dome to the connected cover (As Dig. 2.2.4). You should plugged the cable into right pin by reference by cable mark (As Dig. 2.2.5).
- 5) Fix the speed dome with the screws.



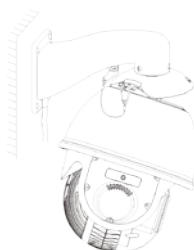
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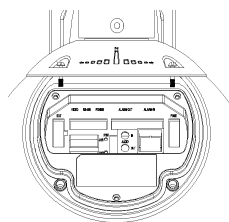
2.2.2



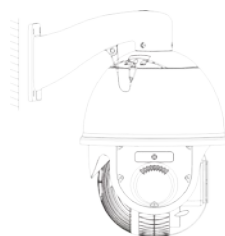
2.2.3



2.2.4



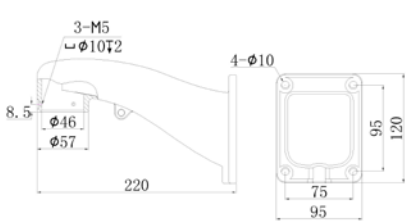
2.2.5



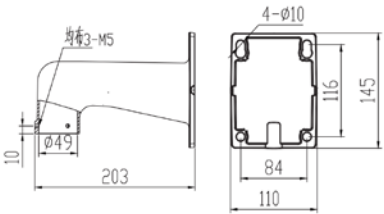
2.2.6

3 Installation Description

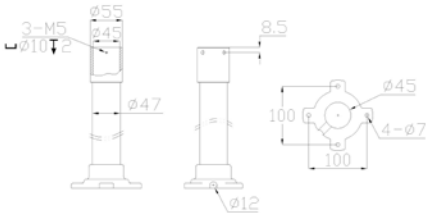
3.1 Bracket Dimension



Wall Mount Dimension

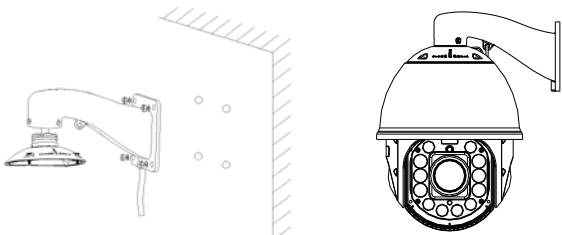


Wall Mount Dimension

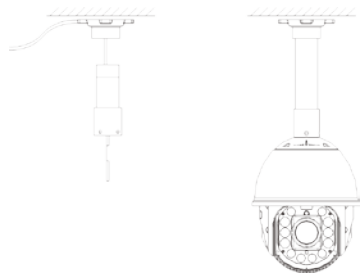


Hoisting Mount Dimension

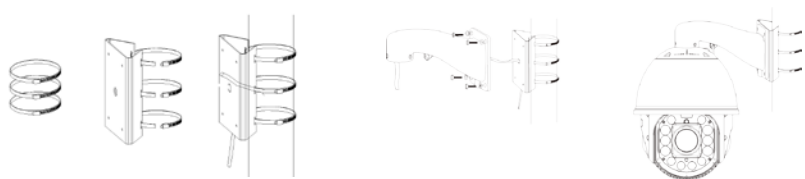
3.2 Wall Mount



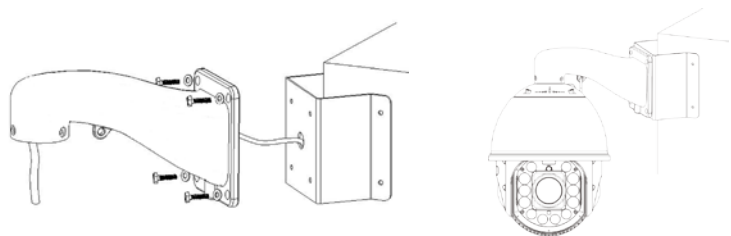
3.3 Hoisting Mount bracket Installation



3.4 Pole Mount



3.5 Corner Mount



4 Operation

4.1 POST(Power On Self Test)

Speed dome will self test after power on. sequential execution: System preheat(if necessary), camera test, horizontal test, and tilt test. It is about 40s to take self test.

Label :

1. Please confirm to the consistency of input power. Turn on switcher after make sure by connection of cable is OK.
2. Please stable voltage and less interference power supply. If it is necessary, please UPS to protect;

4.2 Reboot

Reboot device including software reboot and hardware reboot. Software reboot: Enter【device setting】>【Setting Tool】>【Reboot】:

Hardware reboot : Power off and Power on.

Instruction :

Power Failure Recovery : If the speed dome power off unusual when it is working, the previously video will be recorded and the speed dome will be recovered as before after reboot.

4.3 Basically Operation

Following is operation which is combined with terminal equipment such as (NVR, client software, etc.) It is usually operation, More detail please refer to the manual of control system.

- Pan/Tilt: Move the joystick of keyboard to the expected direction; or press the direction key as UP, DOWN ,LEFT, RIGHT.
- ZOOM: Press Key of (TELE) from keyboard or DVR can zoom in; Press“(WIDE)” can zoom out.
- Focus: Press key of (Far) can make the nearby object clear and make defocus forane object, Press (NEAR) can make forane object clear and defocus nearby object. In the auto fucous mode, the camera will focus automatically, And the manual fucous is available, after the manual focus the camera will return to auto focus.
- Iris: Press Key of (OPEN) from keyboard and DVR can enlarge the iris, the Dig.ture will become to bright. The manual operation is available in the auto IRIS mode, When the manual operation finish, the camera will return to auto IRSI mode. Press key (CLOSE) can reduce the IRIS, the picture will become to dark.
- Preset: Speed dome support 255 presets, and some of presets are used for some special function.

4.4 Login

The system will give user to relevant function according to different authority. The default IP address : 192.168.1.10. MAC address : 255.255.255.0. Gateway : 192.168.1.1. There are two user admin and guest. No password. The user admin is super user authority. The user guest's default authority is preview and playback. User admin and guest can edit password, but can not edit the authority.

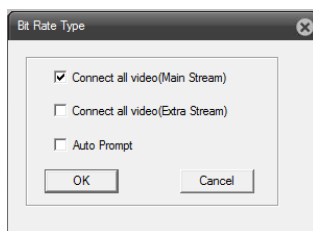


Dig. 4.1 Login

On the safe side, it is better to change the password from "User management " after you first login.

4.5 Preview

When you successful login, the dialog box of stream control will pop-up as Dig.4.2. In the dialog box you can choose Main stream or Extra stream.



Dig. 4.2 Choose Stream

4.6 Menu Setting

In the preview mode, click the "DeviceCfg"button , will pop-up the picture as Dig.4.3.

The function of menu setting including: Alarm, system setting, management tool, system information. Click the button



into the next menu.



Dig. 4.3 Context menu

4.7 Special preset function

Following is some special function from preset (It is including first grade special function preset and second grade special preset function;)

Call Preset	Function	Call Preset	Function
33	Auto Flip	44	Pattern Scanning 4
34	Back to Zero Point	79	Factory Reset
35	Preset Scanning 1	94	Remote Reboot
36	Preset Scanning 2	96	Stop Preset Scanning
37	Preset Scanning 3	98	Two Scanning
38	Preset Scanning 4	99	Panoramic Scanning 1
39	Day Mode	100	Panoramic Scanning 2
40	Night Mode	101	Panoramic Scanning 3
41	Pattern Scanning 1	102	Preset Scanning 1
42	Pattern Scanning 2	103	Preset Scanning 2
43	Pattern Scanning 3	104	Preset Scanning 3

4.8.1 Grade 1 Special Function Preset

Call following preset can enable relevant function. E.g. Call Preset 99 can enable Pan Scanning.

Grade 1	Grade 2	Specification of Special Preset Function
49	1	Grade 1 of IR Sensitivity (Highest)
	2	Grade 2 of IR Sensitivity
	3	Grade 3 of IR Sensitivity

	4	Grade 4 of IR Sensitivity
	5	Grade 5 of IR Sensitivity
	6	Grade 6 of IR Sensitivity (Lowest)
	7	IR LED ON
	8	IR LED OFF
	9	Auto IR Led On/Off
	50	Auto switch high and low IR beam
	56	INITIALIZE IR SYSTEM
	57	LOW IR BEAM MODE
	58	ALL IR LED ON
	59	HIGH IR BEAM MODE
	131	INITIALIZE WHOLE SPEED DOME
	40	SPEED LIMIT IN 40 DEGREE/SEC
	70	SPEED LIMIT IN 70 DEGREE/SEC
	150	SPEED LIMIT IN 150 DEGREE/SEC
	250	SPEED LIMIT IN 250 DEGREE/SEC

Table 4.8.2 second grade special preset function

Second grade special preset function need combine call two preset. E.g. To set the sensitivity of IR led to max need call preset 49 and preset 1.

5 Main Menu

5.1 Main Menu guide

Main Menu	Sub Menu	Function instruction
Record	Record	Setting record mode, time,etc.
	SnapShot	Setting capture mode, time,etc.
Alarm	Video motion	Setting video motion channel,region,PTZ action,etc.
	Video blind	Setting video blind channel,region,PTZ action,etc.
	Video loss	Setting video loss alarm channel,PTZ action,etc.
	Alarm input	Setting alarm input channel, PTZ action,etc.
	Abnormal	Setting abnormal event type,enable,etc.
System	General	Setting system time,date format,date separator,language,HDD full operation, Device code, video output format, etc.
	Encode	Setting video compression,resolution,FPS,Bit rate type,Quality,Bit Rate,I Frame interval,Video/Audio,etc.
	Network	Setting DHCP,DNS,IP address,Subnet mask,Gateway,etc.
	Netservice	IP Filter,DDNS,EMAIL,UPNP,FTP,WiFi,3G,RTSP,PPPOE,NTP,etc.
	GUI Display	CAM name,Channel title,Video status,Alarm status,Privacy region,etc.
	PTZ Config	Setting channel,Protocol,Address, Baud rate,Data bits,Stop bits and Parity
	RS232	Setting Serial port function,Baud rate,Data bits,Stop bits and Parity
	Camera Param.	Exposure mode,Day/night,IRIS,AGC,Slow shutter,IR_CUT,image flip,etc.
Advanced	HDD Manage	Refers TF card to read&write,Snapshot,Read only,Recover,etc.
	Account	Setting User,Group>Password,Add user,Add group,Delete user,etc.
	AutoMaintain	Setting reboot system, auto delete document files.
	Default	Setting relevant parameter to default status.
	Import/export	Config import and export,Log export.
	Reboot	Device reboot
	System upgrade	Update system file.
System information	HDD info.	Display SATA HDD capacity, type, left capacity,status.
	LOG	recording information,clear log information.

	Version	Display Record channel, System version, Serial ID, Nat status, etc.
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5.2 Record function

5.2.1 Record setting

Setting record channel,time,period,Set it in **【Setting】 > 【Record】 > 【record】** .

Label: It is only to set the TF card to read&write disk, the record can working normally(detail please refer to chapter 5.5.2 HDD manage).



Dig. 5.1 record setting

【length】 To set the length of time in 1- 120 min, default time is 60 min.

【pre-record】 It will record before the 1-30 sec record action(time is depends on stream value.)

【record control】 set record status, there are three mode: setting, consistent and close

Setting: depends on record type(normal, check and alarm)

Consistent : choose the "consistent"button, it will record to all channel

Close: choose the "close"button , the relevant record will close.

【time】 set the record time, the record only work at this time

【record type】 common, check, and alarm

Common: The record in the setting time, the record type is "R"

Check: In the setting time, enable "video privacy ", "video lose", the alarm and check will start. Type of document is "M"

Alarm : start record in the setting time, the alarm enable, the record check will start, and the document type is "A"

Label : The detail of "alarm function" please refer from 5.3 alarm function

5.2.2 Picture record

Set the picture capture parameter. First start, system will set the time to 24 hours

It can be set in 【main menu】> 【record function】> 【picture record】.

Label: Make the TF to partition, When the storage of capture picture is near to 1G, the system begin to capture picture.



Dig. 5.2 picture capture

【pre-play】 quantities of pre-play is 1-30 pcs, default is 5 pcs

【record mode】 set the record mode.

Setting: depends on type of record and record time to capture picture.

Consistent: Choose “consistent” button, the relevant channel will start to capture picture.

Close: Choose “close” button, the relevant channel will stop to capture

【time】 set the record time, the record only work at this time

【record type】 common, check, and alarm

Common: It is only start to capture at the setting time

Check: At the setting time, the alarm enable by “video privacy” and “video lose”, it is begin to capture picture .

Alarm: At the setting time, the external alarm enable and that capture function is open, it can capture picture.

Label: more detail please refer to 5.3 “ alarm function”

5.3 Alarm function

Alarm including : video privacy, video lose, alarm input, alarm output, error fix.



Dig. 5.3 Alarm function

5.3.1 Privacy zone

When the video images acquired by outside influence, dark, to set the sensitivity parameters, namely start the video occlusion alarm, and start the linkage function.



Dig.5.4 Privacy zone

5.3.2 Video lose

When the device is unable to obtain the channel video signal, video loss alarm is started, and start the linkage function.



Dig.5.5 Video lose

5.3.3 Abnormal Handle

Analyze and detect some software and hardware of this device, when detect some abnormal events device will respond accordingly.



Dig.5.6 Abnormal Handle

【Event Type】 : select detected abnormal in drop-down box;

【Enable】 : reverse display indicates selected, open abnormal handling function, select Enable and set to take effect.

5.4 System Setting

Set Various functions and parameters of the device, setting items include: general settings, encoding settings, network settings, network services, GUI Display, PTZ / RS485 device, serial port settings, camera parameters.

5.4.1 Common setting



Dig. 5.7 Common setting

【System Time】 : Set the DVR current system date and time;

【Date Format】 : Select the date display format, including: date, month, day year, month, and year;

【Date】 Select the date format delimiter;

【Time Format】 : Select the time format, into 24-hour and 12-hour clock;

【Language Selection】 : Currently it support 29 languages: Simplified Chinese, Traditional Chinese, English, Persian / Iranian, Finland, France, Greece, Hungary, Italy, Japanese, German, Polish, Portuguese, Russian, Spanish, Thai, Turkish, Vietnamese , Romania, Brazil, Indonesian, Swedish, Arabic, Bulgarian, Czech, Hebrew, etc.;

【HD Full】 : Select stop: HD will stop recordings when the storage disk is full,

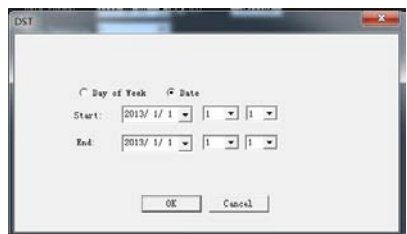
Select cover: when the disk is full, it will make recordings continuing and overwrites the oldest video file.

【Video System】 : support PAL, NTSC format;

【DST】 : tick the checkbox in front of DST, and then click the Settings button into Dig. 5.8 and Dig. 5.9, then set start and end time of DST through week and date settings.



Dig. 5.8 DST (Week) setting



Dig. 5.9 DST (Date) setting

5.4.2 Encoding settings

Set the video / audio encoding parameters including video files, remote monitoring and other image parameters. The left part set each independent channel coding parameters, the right part set Extra Stream parameters, dual-stream use one way high rate stream for local HD storage, support D1/HD1/CIF/QCIF coding, one way low bit rate streams (QCIF coding) for network transmission, taking into account the local storage and remote network. Dual-stream network take Dig.ture quality and transmission quality into account under the existing bottlenecks, can break through network bottlenecks, choose the stream format according to network bandwidth flexibility, reach to local HD storage and back-end low stream network transmission as well.

Note: Main application of Extra Stream: real-time multi-channel monitoring in the poor network, cell phone monitoring.



Fig. 5.10 encoding settings

Encoding settings

【coding mode】 Standard H.264MP;

【Resolution】 Resolution type in D1/HD1/CIF/QCIF;

【Frame Rate】 can be adjusted in real time standard: P system, 25 frames / sec N system, 30 frames / sec;

【Code stream contro】 Optional for limit stream and variable stream. Under the variable code stream, six stalls for image quality, under limit stream, you can select the desired stream values manually;

【Picture】 Set code stream changing the quality of picture, under permitting of facilities, the stream bigger the image quality better.

Stream value reference range: D1 (512 ~ 2560kbps) HD1 (384 ~ 2048kbps) CIF (64 ~ 1024kbps), QCIF (64 ~ 512kbps)

【interval frame】 Optional range is 2 ~ 12s;

【Audio / video】 if icon is displayed in totally reverse, the video file is audio and video streaming.

Extra Stream settings

Extra Stream is mainly used for client-side monitoring, phone monitoring.

Parameter settings of Resolution, frame rate, stream control, stream values and other parameters are the same with the independent channel.

5.4.3 Network settings



Dig. 5.11 network settings

【Network Card】 can choose wired type;

【Automatically obtain an IP address】 automatically obtain IP functionality (not recommended);

Note: The DHCP server is preinstalled.

【IP address】 Set the IP address of the default IP address: 192.168.1.10;

【Subnet mask】 Set the subnet mask, default subnet mask is: 255.255.255.0;

【Default Gateway】 Set the default gateway, the default default gateway: 192.168.1.1;

【DNS Settings】DNS server for the domain name resolves to an IP address, which is governed by your network provider, set the address need to restart to take effect;

【TCP port】 default is 34567;

【HTTP port】 The default HTTP port is 80;

【High speed download】 High speed download

【Network transmission strategy】There are three strategies: adaptation, quality priority, fluency priority, network transmission will adjust the code stream according to the settings automatically, adaptation will compromise between image quality and fluency, take fluency into account on conditions of not causing great influence to picture. Fluency precedence and adaptive need to enable the Extra Stream is valid, if Extra Stream is not enabled, then the image quality precedence be adjusted according to the network conditions.

5.4.4 Network Services

To configure for advanced networking features, select the network service option and double-click to configure the parameters.



Fig. 5.12 network services

【PPPoE setting】



Fig. 5.13 PPPOE

Enabled: reverse display indicates selected, select Enable, set to take effect.

Enter the ISP (Internet Service Provider) to provide the PPPoE username and password, save and restart the system. The network camera will automatically start at PPPoE mode and establish network connection, after success, [IP address] on the IP will be automatically modified to obtain a dynamic WAN IP address.

Operation: After PPPoE dial-up is successful, check IP on the [IP address], and obtain the current IP address, then the client uses this IP address to access the device.

【NTP Settings】



Fig. 5.14 NTP Settings

Required to install the NTP service on the PC.

Enabled: ☒ Reverse display indicates selected, select Enable, set to take effect

Server Address: Enter the NTP server installed PC-IP;

Port: The default NTP port 123, can set according to the actual NTP server port;

Time Zone: GMT +0 London, Berlin, Cairo GMT +2 GMT +1 GMT +3 Moscow, New Delhi GMT +5 GMT +7 Bangkok Hong Kong Beijing

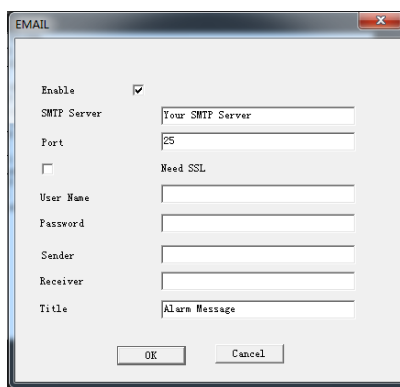
GMT +8 Tokyo GMT +9 Sydney GMT +10 Hawaii GMT-10 Alaska GMT-9 Pacific Time GMT -8 U.S. Mountain Time GMT-7 U.S. Central Time

GMT-6 U.S. Eastern Time GMT-5 Atlantic Time GMT-4 Brazil GMT-3 Atlantic - central GMT-2;

Update cycle: with the NTP server time interval between the 1-65535min, the default is 10 minutes.

【Email Setting】

Email is used when there is an alarm or the alarm linkage photos can be sent to the specified e-mail address specific alarm information and pictures.



Dig. 5.15 Email settings

SMTP Server: Mail server address can be an IP address and domain name (if it is asked to confirm the DNS domain name setting correctly, the domain name can be resolved correctly);

Port: The port number of the mail server;

SSL: The server requires whether to use Secure Sockets Layer protocol layer (Secure Socket Layer) login;

User: Apply the email server user name;

Password: password for the username on the application;

Sender: Sets the message sender EMAIL address;

Attention: When an alarm is generated, it will be emailed to specified recipients, can be set up three recipients;

Subject: Subject of the message, you can set your own.

【IP permission settings】

When choosing the white list, which means that only the listed IP address can connect network cameras. List supports 64 IP settings;

When choosing the black, which means that the list of IP can not connect the network camera. List supports 64 IP settings;

You can tick check, delete the set IP.

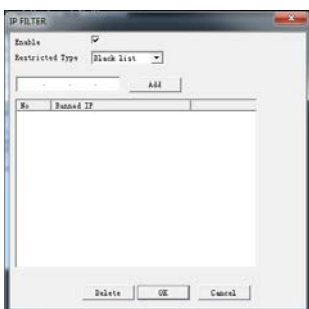


Fig. 5.16 IP permissions settings (black list)

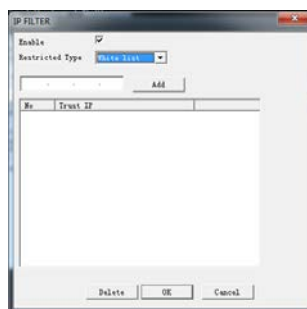


Fig. 5.17 IP permissions settings (white list)

【DDNS】

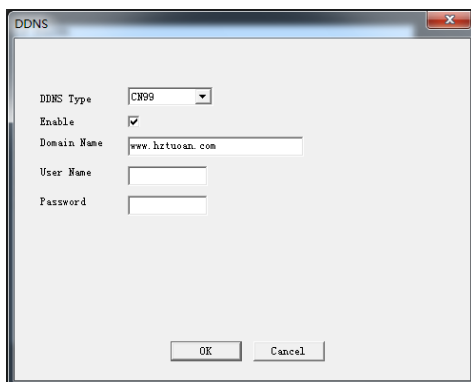


Fig. 5.18 DDNS settings

Select DDNS type through dynamic DNS server,.

The machine name: register the domain names from resolution service providers.

Server domain name: DNS server domain name;

User Name: register account from name resolution service provide;

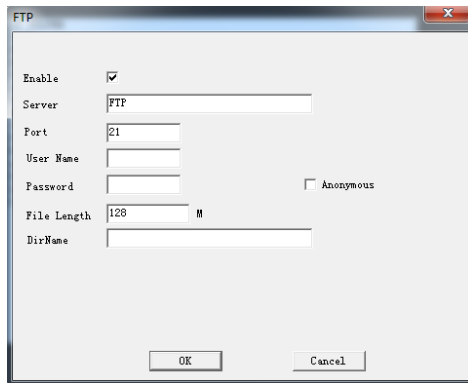
Password: register password from name resolution service providers;

When DDNS is successfully configured and enabled, customer can access the device directly by entering the domain name of application in the IE address bar.

【FTP settings】

FTP is used when there is an alarm generated, or the alarm linkage recording, capture a picture can be made to the designated

FTP server uploads specific video and capture pictures.



Dig. 5.19 FTP settings

【Enable】: Tick reverse display ☒ indicates selected, select Enable, set to take effect;

【Host IP】: FTP server's IP address;

【Port】: FTP build the domain port number, the default port is 21;

【User name】: user name which have permission to log into the FTP;

【Password】: The user's password;

【Anonymous】: Reverse display indicates selected, if choosing anonymous no need to set the user name and password;

【Maximum file length】: each packed maximum length of uploaded file, the default is 128M;

【Remote directory】: upload files directory. Note: The user name is allowed to upload files to the server.

【ARSP】

By setting, you can start DDNS Sever add a device to the DDNS server for device



Dig. 5.20 ARSP settings

【Type】: Select the DNS

【Enable】: Reverse display ☒ indicates selected, select Enable, set to take effect;

【Server Address】: DDNS server IP address;

【Port】: Device port number corresponding to the DDNS server "service listening port";

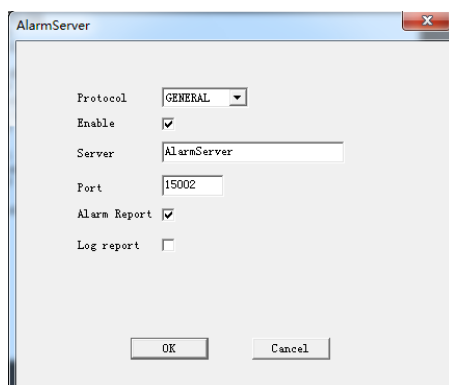
【User Name】: The device login DDNS server user name;

【Password】: The password corresponding to the user name;

【Update cycle】 : Equipment and DDNS synchronization interval

Note: Before using customer need to build DDNS Server

【Alarm Center】 : when alarm is generated, alarm information will be reported to the alarm server.



Dig. 5.21 Alarm Center Settings

【Protocol】 Protocol type is GENERAL;

【[Enable]】 Reverse display ☒ indicates selected, select Enable, set to take effect;

【Server Address】 Alarms

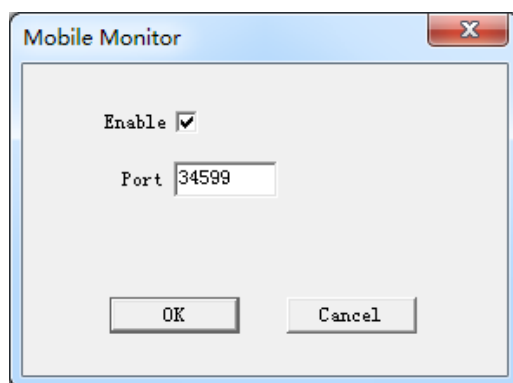
【Address】 Alarm Server server's IP address;

【Port number】 Device port number;

【Alarm report】 Reverse display indicates selected, report alarm information to the server;

【Log report】 Reverse display indicates selected, report log information to the server.

【Mobile Monitor Settings】 Pay a visit to device via mobile phone, map the port on the router. Monitor and operate the device from client by protocol.



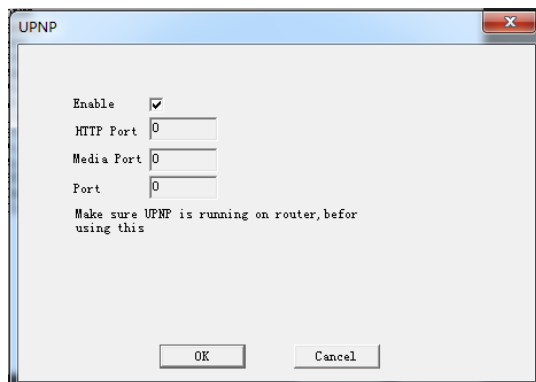
Dig. 5.22 Mobile Monitor settings

【Enable】 Tick reverse display ☒ indicates selected, open the phone monitoring function, select the Enable, set to take effect;

【Port】 Phone monitor port number for access via mobile phone devices to the port number on the router mapping.

【UPNP】

UPNP protocol port forward automatically on the router, when using this function, please make sure UPNP is enabled on the router



Dig. 5.23 UPNP settings

【Enable】 Tick reverse display ☒ indicates selected, open the UPNP feature, select the Enable, set to take effect;

【HTTP】 : Router assign port number for the device automatically, for IE browser, customer need to add the port number to access;

【TCP】 : Router assign port number for the device automatically, when monitoring from the client software, customer need to pass through the port number;

【Phone monitoring port number】 :router automatically assigns for the device port number, cell phone monitoring needs through the port number.

5.4.5 GUI Display

Local preview mode include: channel name, time, title, channel title, regional coverage.



Fig. 5.24 GUI Display

【Channel name】Click the channel Setting button, enter the channel name menu, you can modify the name of the channel (maximum support 16 characters, 25 English characters);

【Time Title】Tick reverse display ☒ means selected, the monitor screen displays the system date and time;

【Channel Title】Tick reverse display ☒ means selected, the monitor screen display system channel number;

【Recording status】Tick reverse display ☒ means selected, the monitor screen video display system status;

【Alarm status】Tick reverse display ☒ means selected, the monitor screen display system alarm status;

【Transparency】 Choose the background image transparency range of 128 to 255;

【Resolution】 setting display resolution;

【Channel】 Choose the set code output channel number;

【Area Cover】 Tick reverse display ☒ means selected, select the number of coverage areas button, click the Settings



button

Access Into the corresponding channel screen, the user can select any size area covered mouse (the area covered, the output of the video as a black box);

【Time Title】 and 【Channel time】 set the time channel and title title whether to display the channel title and display position.



Fig. 5.25 Setting regional coverage



Fig. 5.26 Channel and time of title setting

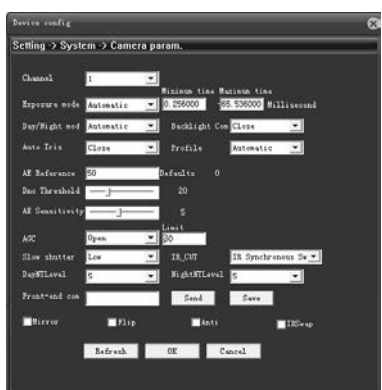
5.4.6 Serial Port Setting



Dig. 5.27 Serial Port Setting

- 【Serial Port Function】: Normal serial port,It is used in Debugging and program upgrade,Also could be used to special serial port setting
- 【Baud Rate】 : Chosen the length of the baud rate
- 【Date Bite】 : including 5-8 optional
- 【Stop bite】 :Including 1,2 of two optional
- 【Calibration】 : it has odd parity,even parity,Blank parity.The default is no.

5.4.7 The specification of Camera



Dig. 5.28 specification of Camera

- 【Exposure mode 】: Chosen automatic (0.1millisecond-80millisecond)and Manual (1/25 ,1/50 ,1/120 ,1/250 ,1/500 ,1/1000 ,1/2000 ,1/4000 , 1/10000).The default is automatic.

【Day & Night 】 : Chosen Automatic/Color/Black,The default is Automatic.

【BLC】 : You could choose open or closed :

【IRIS】 : You could choose open or closed


【Scene mode】 :You could choose outdoor,indoor or automatic,The default is Automatic.


【Automatic exposure reference】 : You could choose the integer during the NO.of 0-100.The default is 50.

【Automatic gain】 : You could choose open or closed.The max. To during 0-100.

【Digital shutter】 : you could choose no,weak,moderate and strength.The default is no.

【IR_CUT】 : You could choose auto switch or IR switch.The default is auto-switch.

【Mirror】 : Invert selection  .It could start to use the image of monitor which can change image's position left and right

【Filp】 :Invert selection  .It could start to use the image of monitor which can change image's position left and right.

【Fluorescent lamp Anti-flash 】 :Invert selection  ,Shows start to use Fluorescent lamp Anti-flash

【Preceding command】 : Write and send the command .Camera will do the command

5.5 Management Tools

Management tools OSD including : HDD management,User management,

Auto maintenance,Restore default,Importing and exporting,System upgrade,Restart.

5.5.1 HDD management

It will managed TF card of device.OSD will display the info. Of current TF Card,Including TF Card's type,status,Total capacity.It will operate the TF Card,Including Setting read and write disk,setting read disk,format HDD,Restore mistake,Partition,,etc.When you operate it,please select the operation of TF card,and Press the left function of button for operating.

Remarks:Read and Write Disk : It can read the data,also could write the data

Read-only disk:The device only can read the data of the HDD,the data can not be writen.

5.5.2 User management

Manage local user rights.

Remarks:

1. Below user name and user group name.The max.bite can be met to 8 bit in each bites and length,Bites serial's blank is invalid.Middle can have blank.Legal bites:letters,numbers,hyphens,points.Not allowed other bites.
2. Without limiting the quantity of user and group ,You could add and delete:Factory setting including user/admin two level,User could set the group.

3. Management will use user and group these two way,group name and user name can not be repeated,Each user must be belong to one group,One user name only for one group.



Dig.5.30 User management

【Revised the User】:You could revised the property of current user.

【Revised Group】:You could revised the property of current group

【Revised Password】:You could revised the password of user account,Password could set 1-6 bits,The password of start and ending's blank is invalid.Middle could have blank;

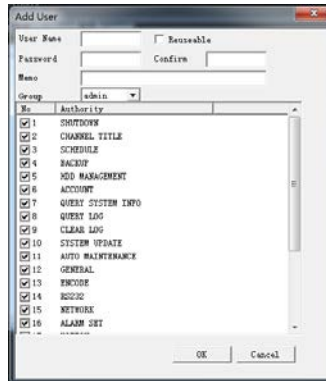


Dig.5.31 Revised Password

【Increased User】 Increased group user,and setting the rights of the user,Shown in Dig.4.36.Enter the OSD interface of increased user,Input the user and password,then selected group and selected whether multiplexing the user or not.Multiplexing means multiple user could use this account at same time.

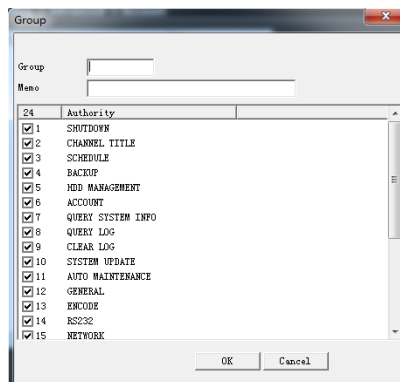
Once you chose the group,then the right of user only be for the subset of this group.

In order to convenient for management user,We advise you setting the right of normal less than advanced user.



Dig.5.32 Increased User

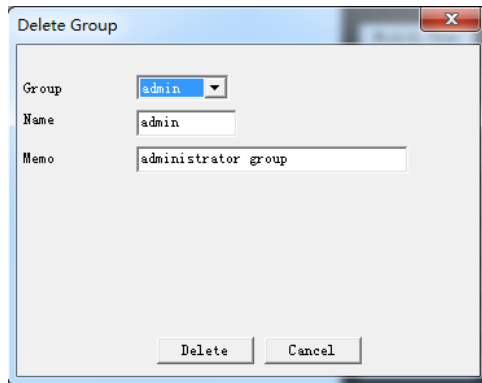
【Increased Group】 Increased an new group and setting the rights of this group,Shown in Dig.5.33.We provide 33 kinds of rights for optional,Including closed device,Real-time monitor,playback,setting recording,record file,,etc.



Dig.5.33 Increased Group

【Deleted User】 Deleted current user,selected the user you want to deleted,Press the delete button.

【Deleted Group】 Deleted current group(Must be no user in this group).Press the delete button,Shown in Dig 5.34,selected the group you need to deleting,then Press the delete button.



Dig.5.34 Deleted Group

5.5.3 Auto maintenance

User could set the device's time of system for auto restart and the time of auto deleted file.



Dig.5.35 Auto maintenance

5.5.4 Restore Default

The system will restore to the setting status when the goods had been done in our factory (You could restore the optional according to the optional of the OSD)



Dig.5.36 Restore Default



Dig.5.37 System Upgrade

5.5.5 System Upgrade

System Upgrade : You could upgrade the file via IE or Client software

5.5.6 Restart

Completed the camera soft reboot

5.6 System Information

Displayed the information of device,Including Info. Of HDD,info. Of journal,info. Of Version.

5.6.1 HDD Information

Displayed the status of HDD,Including all of HDD's the type,total capacity,remaining capacity,status,time of record,,etc.



Dig.5.38 HDD Information

Remarks:○ for OKX for problem,- for not be installed.If user want to replace bad disk,you need to closed the device,then take out all the bad disk from the device.Then you could install the new disk.

"" for current disk (Like 1*),If the corresponding disk was bad,then it will display"?".

5.6.2 Log information

According to the inquire method,check the system system Log.Log information have system operating,configuration operating,Data management,Alarm,record operating,user management,document management,etc.Setting the time of query Log,Press search button.The system will record Log and displayed as tabular form (one page will display 128 information),Press the next page to turn to next page.



Dig.5.39 Log information

5.6.3 Version Information

Displayed the current information of device,Including info.of hardware,version of software,time and serial No.,etc.



Appendix 1 HD high speed dome takes the following network ports

HD high speed dome default takes the following network ports

TCP	80	Web port
	34567	Communication port,audio and video data port,intercom data transfer port
	8899	Onvif port

Appendix 2 The factory default IP specification

The factory default IP specification

IP ADD : 192.168.1.10	Data port : 5000
Subnet Mask : 255.255.255.0	Web Port : 80
Gateway : 192.168.1.1	DHCP : OFF
User Name : admin	Password : No

Appendix 3 Lightning and Surge Protection

This product adopts Ceramic Gas Discharge Tube and TVS-class lightning protection technology to effectively prevent such pulse signal damage caused by instantaneous lightning under 4000W or electric surge. But, for outdoor installing, on the premise of ensuring electric safety, necessary protective measures should be taken according to practical situation:

- Signal transmission lines must be kept at least 50 meters from high voltage equipment and high voltage.
- For outside, please select the place under eaves to layout the routing
- For open field, you must use underground sealed steel tube, and the steel tube must be adopted one point grounding mode, and absolutely forbid adopted overhead wiring.
- In intense thunderstorms or high induced voltage areas (such as high voltage substations), must use extra high-power lightning protection equipment and install lightning rod and others measures.
- The lightning protection and grounded design for outdoor installation and wiring must be combined with requirements of building's lightning prevention, and comply with the relevant national standards and industry standards.



The system must be equipotential grounding. Grounded device must meet double requirements of system anti-jamming and electrical safety, and can't be short-circuited or hybrid-circuited with neutral leg of forceful electric power. When system grounded alone, the impedance of grounded conductor can't more than 4 ohm, and sectional area of grounded wire can't more than 25mm² wire shorted.

Appendix 4 The relationship between Wire and Distance

When the Wire diameter size is same and the 24VAC power loss below 10%,Recommended Max.transmission distance.(For AC powered equipment,Max. Power loss is 10% is allowed.For example,One deceive rated power is 80W,Installed 35 feet from the transformer <10M> distance,it will need the Min.wire size is 0.80mm).

Wire Dia. mm		0.80	1.00	1.25	2.00
Power W	Distance(m)				
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 5 AWG sheet at Home and Abroad

Metric bare wire dia.	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

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