

# NETWORK CAMERA

Installation and Programming Manual

SND-20XX0T Series



#### **Network Camera**

Installation and Programming Manual

### Disclaimer

Stortech Electronics does its best to ensure the integrity and accuracy of the contents in this document and cannot guarantee this. The outcome of using this document shall be entirely the user's own responsibility. Stortech Electronics reserves the right to change the contents of this document without prior notice.

- Design and specifications are subject to change without prior notice.
- The default login is Admin, there is no password set when logging in for the first time. It is important that a password is then created.
- It is the responsibility of the user to ensure the security and management of the password.

## **Important Safety Instructions**

- 1. Read, keep, and follow these instructions.
- 2. Only use the power supplies that are recommended in the manual, failure to do so could result in damaging the product.
- 3. When cleaning the product's surface use a soft, dry cloth or a damp cloth. Do not use detergent or products that contain alcohol, solvents or surfactants or oil constituents, they may damage the product. Especially the viewing bubble/window)
- 4. Do not use excessive force when installing the product, the camera may be damaged and fail to work. If the warranty seal is damaged, the warrantee will be void.
- 5. Install or uninstall the product as described in the manual, failure to do so may damage the product, affect the functions and performance that could invalidate the warrantee.
- 6. Install the product by referring to "Installation & connection" in the user manual.

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Installation

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# **Overview**

## **Product Features**

- Max. 2megapixel (1920 x 1080) resolution
- 2.1mm & 3.6mm lens options
- Max. 25ips/PAL all resolutions,4MP max20ips/PAL (H.265/H.264)
- H.265, H.264 Compression
- Day & Night (ICR) & Colour only options
- WDR, BLS, De-noise
- 24 x 850nm, 10m Illumination
- Privacy Zones
- Image Mirror
- PoE options
- Metal
- ONVIF Profile S
- For more information, refer to www.onvif.org.



# **Recommended PC Specifications**

- CPU: Intel(R) Core (TM) i7 3.4 GHz or higher
- RAM: 8G or higher
- Supported OS: Windows 7, 8.1, 10,
- plug-in free web viewer
- Supported web browsers: IE(Best) Google Chrome, MS Edge, Mozilla Firefox (Windows 64bit only),
- plug-in web viewer

## **Packaging List**

- Camera x 1
- Instruction manual x 1 (Via QR Code)
- Mounting screw x4
- Plastic Plug x4

# Installation

This camera is not waterproof, however the RJ45 socket on the Cat6 is not unless it is paired with the correct weatherproof plug.

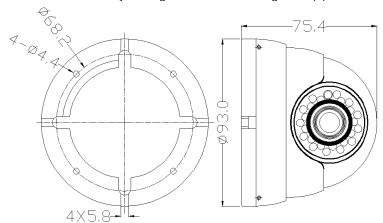
#### **Precaution**

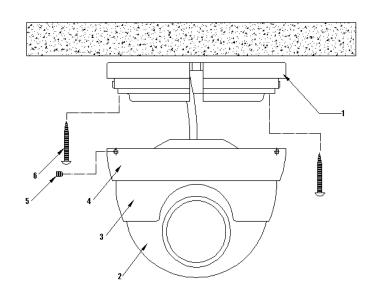
Before installing the camera ensure you read out the following instructions:

- The wall or ceiling that the camera is installed upon to withstand 5 x times the weight of the camera.
- Any excessive force used when installing the product may cause damage and/or malfunction.

## Installation

- 1. Loosen the locking screws (5) if required, remove the mounting base (1) by rotating clockwise the locking cover (4).
- 2. Attach the mounting base (1) to the wall or ceiling, wherever you want to install the camera. Locate a wall stud or ceiling joint and secure the base by the supplied screws (6).
- 3. Connect the 4 ways male din jack to the female jack on the cable, when picture shows up on the monitor, adjust the lens to obtain the best picture if require, make the ball. camera (2) to the suitable position by rotating ball (2) and middle cover (3).
- 4. Fix the ball camera by rotating anti-clockwise locking cover (4) then lock the screw (5).





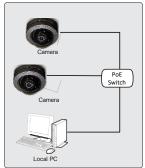
# Connecting the Camera directly to a Local Area Networking (LAN)

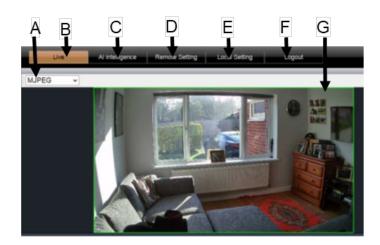
This camera can be connected to using Stortech VMS software, a Network Video Recorder (NVR) or a Web-Browser. This manual will show how to connect and set up via a Web-Browser. The set up via Stortech's VMS software, or an NVR, please refer to the separate manuals.

While it is not always necessary, it is good practice to disable the PC's Wi-Fi.

- 1. The camera's default IP address is 192.168.1.10. Set your PC to an appropriate IP address such as 192.168.1.1. with a subnet Mask of 255.255.255.0.
- Ensure that the camera is powered up, either via a PoE switch or separate power supply.
- Ensure your PC is connected to the same switch and green flashing lights are on both switch ports.
- 4. Launch an Internet Browser on the local PC.
- 5. Enter the camera's IP address in the address bar of the browser.
- 6. Once the login page appears, click "login". It will ask if you wish to set the P/W now or "next time". It is best practice to set the P/W now.







- A choice of MJPEG (Default), VCL or QuickTime via plugins. You can view your image in 4:3, 16:9 or Full Screen.
- B Live Viewing, to watch the life image
- C Al Intelligence
- <u>D</u> Remote Settings Camera configuration
- <u>E</u> Local Settings
- **F** Logging out of Camera
- **G** Viewing Window

# **Camera Config**

# **OSD Configuration**

10. The Flash strength

1. Name Choose the camera's name Additional information Such as resolution Channel Display Enable/Disable Enable/Disable Time Display **Image Control** 1. Default Returns this page to factory default Smart Night Prioritise, White light, Infra-Red light, or Intelligent Light (Camera decides best option). Image Mode Options include Standard, Faceless or Numberplate exposures. Reduces over exposure due to bright light Work Mode Manual (Check)Control the light on/off time. Onset brightness threshold The numerical valueless than the light will be on earlier and off later IR-Cut Reverse Manually removes the IR-Cut filter during the day. Brightness/ Contrast/ Adjusts the settings of each over a Saturation/Hue/Sharpness percentage of 0 - 100 Defog Auto engages frame integration technology to make foggy/rainy scenes clearer. Flicker Control Options of 50Hz or 60Hz, strobe light flickering compensation

An exposure setting for indoor fluorescent lights strobe timings.





## **Privacy Zones**

The ability to set up to 4 separate zones to hide sensitive areas from view.

# **Network Configuration**

1. IP Type Static, DHCP, Auto

**Dynamic Host Configuration** 

Protocol,

2. Auto IP IPv4, IPv6

3. IP Address Entering the Static IP Address

4. Subnet Mask If you have a Static IP Address, you

must set the Subnet Mask. Commonly set to 255.255.255.0

unless IT admin have allocated one

5. Gateway This is the local IP address of the

broadband router.

6. Primary DNS DNS (Domain Name Service) server

address.

7. Alternative DNS Secondary Address

8. MAC Address The unique name given to every IP

product, created in the factory.

## **Port Configuration**

1. HTTP Port HTTP port used to access the camera via the web browser.

The default is 80(TCP), setting for Safari and Google Chrome browsers to 65535 is not allowed by security

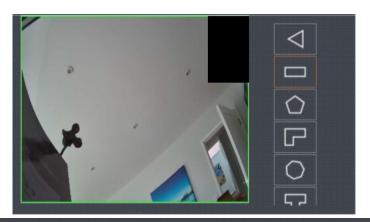
policy.

2. Command Port Used in FTP to communicate the

TCP port number to use for the data

transfer channel.

3. Media Port Passive Objects





Port Config	Save
HTTP Port	80
Command Port	6060
Media Port	6066

# **Third Party Trigger**

Not applicable in European and UK Markets

## **RTSP Streaming port**

1. RTSP

RTSP: Used to transfer videos in the RTSP mode; the default is 554.

# **P2P Configuration**

Not applicable in European and UK Markets







## **Code Parameters**

There are 10 video streams coming from the camera, the MainStream and 9 SubStream. The process of configuration is the same.

	•	
1.	Stream Type	Video or Video & Audio
2.	Video Codec	H.264 / H.265 Compression
3.	Resolution	2560 x 1440, 2304 x 1296, 1920 x 1080, 1280 x 720
4.	I frame interval	Between 1 – 200, the number of Partial frames (P-Frames) between each Full frame (I-Frame).
5	EDC	The number of frames per second

5.	FPS	The number of frames per second
		(FPS) max25, (except 2560*1440

20FPS).

6. Rate Control CBR (Constant Bit Rate) default /

VBR (Variable Bit rate)

7. Quality 5 settings between Highest, High,

Medium, Low, Lowest)

## **Audio Parameters**

Audio Stream
 Audio or Video & Audio
 Audio-in Codex
 G711U/ G.711A Formats

3. Input volume Adjusts the settings of each over a

percentage of 0 - 100

4. Output volume Adjusts the settings of each over a

percentage of 0 - 100

## **Capture Config**

1. Image Resolution 640 x 360

2. Image Quality High, Middle, Low







# **Alarm Config**

1. Alarm Out 1 Out Put

2. AlamOut Name Selectable Name

3. AlamOut Delay Custom/Keep 1 – 600

# **System Config**

1. Date Format DD-MM-YY, YY-MM-DD etc.

2. Time Format 12-Hour / 24-Hour Clock

3. Device date time Synchronic with local PC date/time

4. NTP Timing Network Time Protocol Open/Closed

. Time zone Select the time zones the cameras

are in.

6. Sync Interval How often the cameras sync with the

NTP server

7. Server Address The network address of the NTP

Server

# **Daylight Saving**

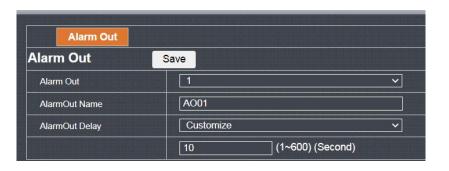
1. Enable DST Open / Closed

Daylight Saving Time Mode | Week/ Month

3. Time Offset Between -1& 2 Hours

4. Start Time Date & Time clocks go forward

5. End Time Date & Time clocks go backwards







# **Local Setting**

# **User Management**

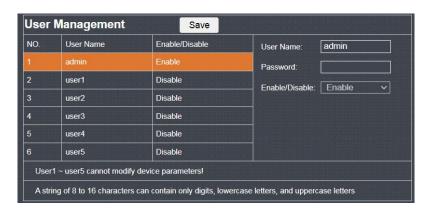
There are 6 Admin (x 1) and 5 user accesses to the camera, only Admin has the ability tole to change any parameters.

#### **Device Info**

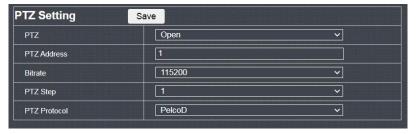
This is for information only, showing Firmware, software, Device Serial Number and other important pieces of information.

## **PTZ Setting**

1.	PTZ	Open / Closed
2.	PTZ Address	Based on RS485 addressing
3.	Bitrate	PTZ Bit rate i.e.,115200 (Pelco)
4.	PTZ Step	1
5.	PTZ Protocol	Pelco D







## Specifications

#### **Auto Reboot**

1.	Maintenance Mode	Select the Reboot frequency
2.	Week Plan	Select the day for the Reboot
3.	Maintenance Time	Select the Reboot time
4.	Next Maintenance Time	The time the next Reboot is planned

## Firmware (F/W) Upgrade

When new F/W is released, it can be loaded into the camera from here. It will ask you to brows your PC to the folder holding the F/W update.

## **Restore Default**

1.	Simple Recovery	To factory setting (not delete user data)
2.	Full Recovery	To factory settings (all data delete)
3.	Reboot	Restart the camera

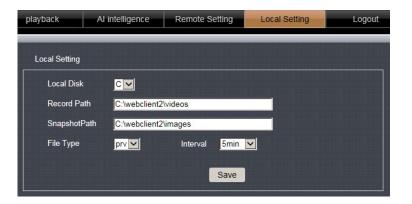


# Firmware Update



# **Local Setting**

Local Disk
 Record Path
 Snapshot Path
 File Type
 Save
 Choose the recording disk
 Video recording position
 Image recording position
 Recording format Interval: video recording time (1/5/15/30/60min)
 Saving the changes



## **Intelligent Detection**

Human shape detection

1. Enable Enable/ Disable

2. Sensitivity High, Medium, Low

3. Type Sound output, Light alarm,

Trigger Alarm out

Motion

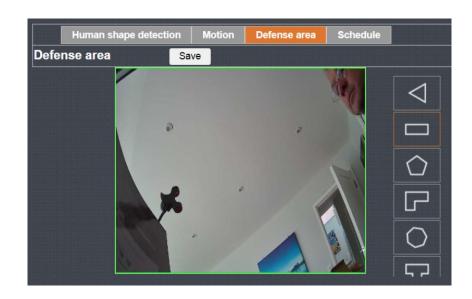
1. Enable Enable/ Disable

#### **Defence Area**

The area of interest split into up to 4 zones. There are 6 shape options to maximise your coverage. Triangle, Rectangle, Pentagon, "L" shape, Heptagon, and "T" shape







#### Voice alarm / Audible alarm

1. Audible alarm

2. Humanoid/man-made sound type

3. Delay Time

4. Schedule

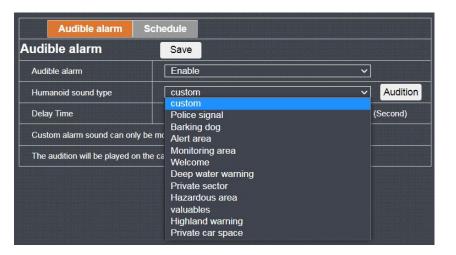
Enable / Disable

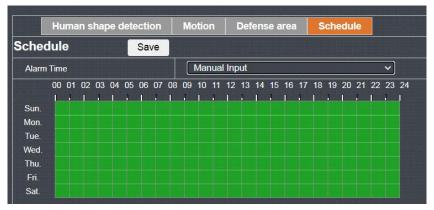
Custom, Police signal, Dog barking, Alert area, Monitoring area, Welcome, Deep-water warning, Private sector, Hazardous area, Valuable – Test & Check

(Not available for this camera, need to contact with external speakers)

Select between 1 - 600s

1 hourly increments by day &time





## **Light Alarm**

Lighting mode
 Delay record
 Always Open / Twinkle (Flashing)
 (1-60 secs)

N.B. This function is only triggered by human movement and will only work during the daylight hours

(Not available in this camera, need to connect with different IR LED board)

# Overlay settings.

This function gives the option of having a visual alert of a frame surounding the object of interest, on either the Main or Subcode streams or both.

1.	MainStream	Options of a visual frame around a human of object.
2.	Subcode Stream	Options of a visual frame around a human of object.





	SND-20XX0T
VIDEO	1
Imaging Device	1/3" 4MP GC4653
Total Pixels	2,560(H) X 1,440(V) approx. 4M pixels
Effective Pixels	1,920(H) X 1,080(V) approx. 2.M pixels default
Min. Illumination	Colour: 0.01 Lux / B/W: 0 Lux (IR LED) TD/N option (Colour 0.01Lux)
IR LEDs	24 x 850nm, 10m Illumination
LENS	1
Focal Length	2.1mm & 3.6mm Options
Angular Field of View	3.6mm: 76°(H) ~ 41°(W) / 2.1mm: 104°(H) ~ 56°(W)
Lens / Mount Type	Fixed iris / Board-in type
Image Settings	. Med his / Bodi d in type
Overlay Information	Name, Resolution, Bitrate, Channel Inf, Time, Position
Privacy Zones	Up to 4
Smart Night	Intelligent Mode, Infrared Light, White light
Image Mode	Standard, Faceless exposure, License plate mode
IR-Cut Sensitivity	High, Medium, Low  10 ~ 600s
Delay Interval IR-Cut Reverse	
	On/Off
Image Mirror	Close, Flip Horizontal, Flip Vertical, Flip Centre
Image adjustment	Brightness, Contrast, Saturation, Chromaticity, Sharpness
Anti Flash Mode	50HZ, 60HZ, Close
Aperture Type	Auto, Manual
Exposure Time	Auto, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/150, 1/180, 1/480, 1/960, 1/1,000, 1/2,000, 1/4,000, 1/8,000, 1/10,000
Gain	Auto, 6db, 12db, 18db, 24db, 30db, 36db, 42db
White Balance	Incandescent, Warm, Fluorescent, Natural, Manual, Auto, Locked
Denoise 3D	Auto, Weak, Normal, Strong
BLC	Open, Close
WDR	Auto, Weak, Normal, Strong
Alarm Settings	
Audible alarm	Sound types, Custom, Dog, Alert, Warning, Monitoring, Hazardous area, Welcome, Private sector, Valuables, Private parking spaces.
Calcadulas	Delay time, before next alarm, 5, 10, 20 30 s
Schedules	All Day, Manual (by day/hour), Night, Day
Alarm Output	1 x Name, Delay, Custom/keep, 1 ~ 600 s
Light Mode	Light mode: Always open, Twinkle, Delay 1 ~ 60 s (daytime only)
Defence area	Human &Motion, (High. Med, Low) Audible, Light, Selectable zones (shape/size). Overlay for Human, Area by Main & Sub streams
System Settings	
Date/Time	Format, 12/24hr, Sync to PC, Sync to Network Time, Daylight Saving
System Log	All, System, Configuration, Record, User Management, Alarm Event, Exception Event, Storage Management,
NETWORK	
IP Type	Manual, DHCP, Auto
Ethernet	RJ-45 (10/100 BASE-T)
Video Compression	Main & Sub streams: Video & Audio/ Video, H265+ (H.264/H.265), KFI
	, , , , , , , , , , , , , , , , , , , ,

100 ~ 200, FPS (1 ~ 20), VBR/CBR.

Format

Resolution	Main code stream: 2560 x 1440, 2304 x 1296, 1920 x 1080, 1280 x 720
Resolution	Sub code stream: 800 x 448, 704 x 576, 640 x 360, 352 x 288
Port Configuration	HTTP (80), Command Port (6060), Data Port (6066) (Defaults)
RTSP	Port default 554, Mainstream: rtsp://192.168.1.10:554/live/0/MAIN
KISF	Sub stream: rtsp://192.168.1.10:554/live/0/SUB
Max. Framerate	H.265 / H.264: Max. 25fps at all resolutions 2560*1440 (20fps)
Bitrate Control	H.265 / H.264: CBR or VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Image latency	Ave. 200ms
Audio In	Selectable (Mic in / Line in)
Audio Compression	G.711U G.711AFormats
Audio Communication	Input & Output volume Adjust.
IP	IPv4, IPv6
Protocol	ONVIF, P2P, CGI, HTTP, TCP/IP, IPv4, RTSP, UDP, NTP, DHCP, DNS
Snapshot Config	Image Resolution: 640 x 360, Quality (High, Med, Low)
Streaming Method	Unicast / Multicast
User Access	1 x Admin, 5 x User
Interface	ONVIF profile S, Proprietor API
Viewing/Setup S/W	Stortech VMS
ENVIRONMENTAL	
Operating Temp /Hum	-20°C ~ +55°C /10-95% RH
Ingress Protection /	N/A / IK10
Vandal Resistance	N/T/ IN20
ELECTRICAL	
Power	48V PoE (IEEE802.3af, Class3) or RJ45+12V DC
MECHANICAL	
Colour / Material	Black
Dimensions (WxH)	D96 x 65mm
Weight	305g

PROBLEM	SOLUTION
When a Windows 10 user accesses the webviewer through Chrome or Firefox, the sound volume of the microphone changes periodically.	This is what happens when the microphone driver has been set to the Realtek driver.     Install the High-Definition Audio device (Windows Default Driver) or a third-party driver as the microphone driver.
No video is displayed when accessing the plug-in free webviewer on Safari via HTTPS.	<ul> <li>On the authentication popup window prompted when initially accessing https, click     "View Authentication Certificate" and select the "Always trust when connecting to the     designated webviewer IP" checkbox.</li> <li>If the webviewer continues failing to display a video after you select "Next" on the     message window below, press the command key+Q to exit the Safari browser, access     again and follow the procedures stated above.</li> </ul>
I can't access the camera from a web browser.	Check to make sure that the camera's Network settings are appropriate. Check to make sure that all network cables have been connected properly. If connected using DHCP, verify that the camera is able to acquire dynamic IP addresses without any problem. If the camera is connected to a Broadband Router, verify that port forwarding is properly configured
Viewer got disconnected during monitoring.	Connected Viewers become disconnected up on any change to camera or network configurations. Check all network connections. If the camera is connected over an PPPoE network, it is possible for the Viewer to disconnect under poor network conditions.
The camera connected to the network is not detected in the Stortech VMS software program.	<ul> <li>Turn off the fire wall settings on your PC and then search for the camera again.</li> <li>Some cameras are powered via POE, ensure the POE camera is connected to a POE switch</li> </ul>
No image appears.	If the transmission method is set to multicast, check whether the router the camera is connected to supports multicast on the LAN.     Pls check if the IP camera address is the same as other devices on the LAN.



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