

NETWORKCAMERA

Installation and Programming Manual

SNO-20XX1 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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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
- 10x 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)
- Self-tapping screw x 4
- Mounting plug x 4

Installation

This camera is waterproof IP67, however the RJ45 socket on the Cat6 is not unless it is paired with the correct weatherproof plug.

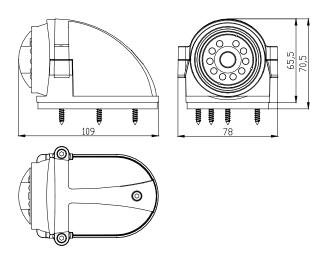
Precaution

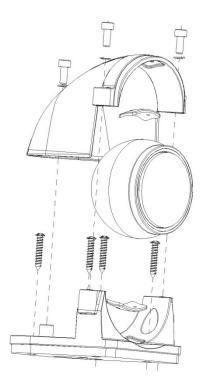
Before installing the camera ensure you read out the following instructions:

- 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 lock screws.
- 2. Attach the mounting base 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 mounting screws.
- 3. Make the ball camera to the suitable position.
- 4. Fix the ball camera, then lock the screw.





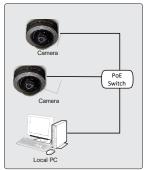
Connecting the Camera directly to a Local Area Networking (LAN)

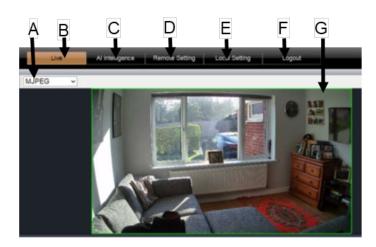
This camera can be connected to using Stortech VMS software, a Network Video Recorder (NVR) or a Web-Browser. This manual will show how to connect and set up via a Web-Browser. The set up via Stortech's VMS software, or an NVR, please refer to the separate manuals.

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

Name
 Choose the camera's name
 Overlay information
 Channel Display
 Time Display
 Enable/Disable
 Enable/Disable

Image Control

Default
 Smart Night
 Prioritise, White light, Infra-Red light, or Intelligent Light (Camera decides best option).

3. Image Mode Options include Standard, Faceless or Numberplate exposures. Reduces over exposure due to bright light

4. Work Mode Manual

5. Onset brightness threshold (Check)Control the light on/off time.

The numerical valueless than the light will be on earlier and off later

6. IR-Cut Reverse Manually removes the IR-Cut filter during the day.

7. Brightness/ Contrast/ Adjusts t Saturation/Hue/Sharpness percenta

Adjusts the settings of each over a percentage of 0 - 100

8. Defog Auto engages frame integration technology to make foggy/rainy

scenes clearer.

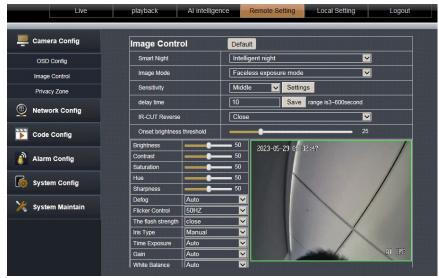
9. Flicker Control Options of 50Hz or 60Hz, strobe light

flickering compensation

10. The Flash strength

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

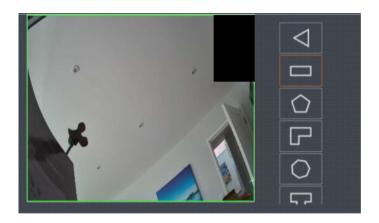
policy.

2. Command Port Used in FTP to communicate the

TCP port number to use for the data

transfer channel.

3. Media Port Passive Objects



etwork Config	Save	
IP Type	Static	~
Auto IP	Enable	~
IP Address	192.168.1.10	
Subnet Mask	255.255.255.0	
Gateway	192.168.1.1	
Primary DNS	114.114.114.114	
Alternative DNS	8.8.8.8	
MAC Address	5a:5a:00:25:22:ad	n in its



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	EDS	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

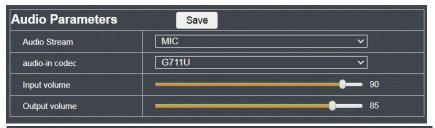
percentage of 0 - 100

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

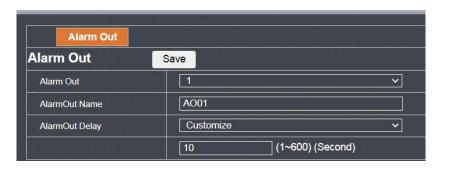
1. Enable DST Open / Closed

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

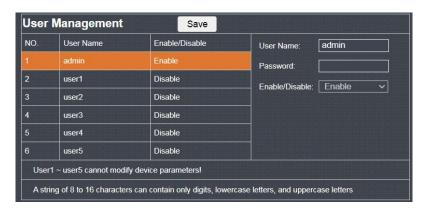
There are 6 Admin (x 1) and 5 user accesses to the camera, only Admin has the ability tole to change any parameters.

Device Info

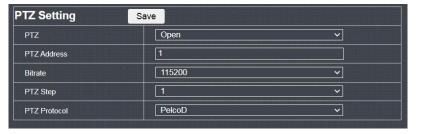
This is for information only, showing Firmware, software, Device Serial Number and other important pieces of information.

PTZ Setting

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







Local Settings

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

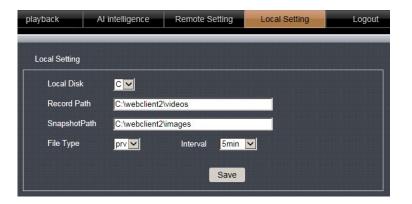


Firmware Update



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

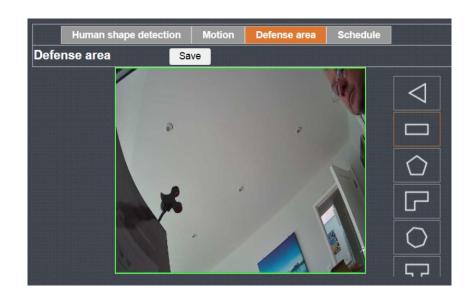
1. Enable Enable/ Disable

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.







Specifications

Voice alarm / Audible alarm

1. Audible alarm

2. Humanoid/man-made sound type

3. Delay Time

4. Schedule

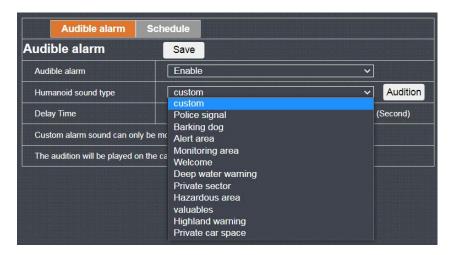
Enable / Disable

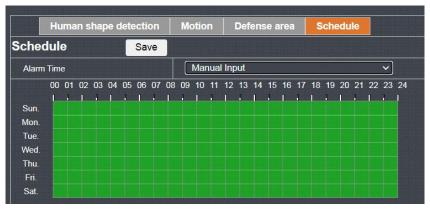
Custom, Police signal, Dog barking, Alert area, Monitoring area, Welcome, Deep-water warning, Private sector, Hazardous area, Valuable – Test & Check

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

Select between 1 - 600s

1 hourly increments by day &time





Light Alarm

1. Lighting mode Always Open / Twinkle (Flashing)

2. Delay record (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.





Specifications

	SNO-20XX1
VIDEO	•
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	10x 850nm, 10m Illumination
LENS	·
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	•
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
Delay Interval	10 ~ 600s
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. 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	Transpersion of the framework of the first o
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 Format	Main & Sub streams: Video & Audio/ Video, H265+ (H.264/H.265), KF 100 ~ 200, FPS (1 ~ 20), VBR/CBR.

Resolution	Main code stream: 2560 x 1440, 2304 x 1296, 1920 x 1080, 1280 x 720 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 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 / Vandal Resistance	IP67 / IK10
ELECTRICAL	
Power	48V PoE (IEEE802.3af, Class3) or RJ45+12V DC
MECHANICAL	
Colour / Material	Black
Dimensions (WxH)	109 x78x 70.5mm
Weight	282g

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.	 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. 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.
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.	Turn off the fire wall settings on your PC and then search for the camera again. Some cameras are powered via POE, ensure the POE camera is connected to a POE switch.
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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