

Samsung Techwin Tools

2012.08, REV-02

Security Solution

Application Engineering Group

Overview

- Samsung Techwin provides various tools to help you choose and use network products with ease.

The image displays four software tools arranged in a 2x2 grid, each within a white rounded rectangle with a grey arrow pointing towards the center. The tools are:

- FoV Calculator:** A screenshot of the 'SAMSUNG TECHWIN 렌즈 가시 범위 계산기 v1.0' (SAMSUNG TECHWIN Lens Field of View Calculator v1.0). It features a 3D visualization of a camera's field of view and various input fields for camera specifications and target distance.
- Product Selector:** A screenshot of the 'SAMSUNG TECHWIN Product Selector v1.0'. It shows a grid of camera models with filters for 'Product Category' and 'Fundamental Colors'. A 'Product Compare' section is visible at the bottom.
- Bandwidth Calculator:** A screenshot of the 'SAMSUNG TECHWIN Bandwidth Calculator v1.0'. It includes a table with columns for Model, Quantity, Live, SEC, N/W transferring, Total bandwidth, and Storage. A summary section at the bottom shows 'Recordable time: 38 day 20 hour'.
- Device Manager:** A screenshot of the 'Device Manager' interface, which displays a detailed table of device information including IP addresses, MAC addresses, and device names.

Calculate the camera's visible scene

FOV CALCULATOR



- Field of View Calculator is a program for calculating the camera's visible scene.
- When you choose the lens format size or camera model name, input focal length of the lens and distance between lens and object, it will then work out the dimensions of the scene.

To calculate camera's visible scene

When choosing the model name, the sensor size and focal length will automatically be displayed

SAMSUNG TECHWIN FoV (Field of View) Calculator v1.0

English

Select the image sensor size or model.

■ Sensor Size

1/2" 1/2.8" 1/3" 1/4"

■ Model

- Camera : SNV-7080R

- Focal Length : 3 ~ 8.5mm

- Aspect Ratio : 4:3

- Max. Zoom Ratio : -

- Zoom Ratio : 1 X

Enter any two information.

F Lens focal length

D Distance between lens and subject

W Width Dimensions of scene

H Height Dimensions of scene

A-1 Width Angle field of view

A-2 Height Angle field of view

3 mm

100 m

170.67 m

128 m

80.95

65.24

Calculator Clear

Important notice : The Field of View calculator is provided for guidance only. In HDTV (16:9) capture mode, it will lessen the height of the subject by 12.5% for both top and bottom of 4:3 aspect ratio. The actual horizontal and vertical angular field of view may differ from the estimates calculated by the FoV calculator.

Disclaimer : This Software is Delivered free of charge and 'AS IS' without warranty of any kind. This utility is used at yours/The user own risk and as to the results and performance of the software is assumed by you/The user.

Enter any 2 out of 4 items and click [Calculate] then rest 2 will be automatically calculated.

Search & select products

PRODUCT SELECTOR



- Product Selector is a program that allows the user to search and select the products according to their requirements.
- When making their choice the program automatically creates a product list.
- You can then drag and drop the products onto a comparison chart and compare the detailed specifications.

Search products

The screenshot shows the SAMSUNG TECHWIN Product Selector v1.0 interface. On the left is a sidebar with 'Product Category' (Camera, Recorder, Encoder), 'Fundamental Options' (Camera Type, Max. Resolution, Video Compression, Day/Night, WDR, Outdoor Use, Vandal Housing, Audio Support), and 'Hardware Options', 'Lens/Imaging Options', and 'System Options'. The main area is titled 'ProductList' and shows 'Selected Option (Result : 6 Products)' with checkboxes for '[Camera Type] Box', '[Camera Type] PTZ', '[Camera Type] Bullet', '[Max. Resolution] 2 / 3 Mega...', and '[Camera Type] Dome'. Below this is a row of six camera images labeled SNB-7000, SND-7060, SND-7060F, SNC-7060R, SNV-7060, and SNV-7060R. At the bottom, there is a 'Product Compare Up to 5 Products' section with a 'Compare' button and a 'Reset' button. Annotations in orange text and boxes highlight the 'Options' sidebar, the 'User selected options' list, the camera images, and the 'Product comparison box'.

Detailed specification

SAMSUNG TECHWIN Product Selector v1.0

Product Category: Camera, Recorder, Encoder

ProductList: Selected Option (Res), [Camera Type] Box, [Camera Type] PTZ

Fundamental Options:

- Camera Type: All, Box, Bullet, Dome, PTZ
- Max. Resolution: 2/3 Megapixel / Full HD
- Video Compression:
- Day/Night:
- WDR:
- Outdoor Use:
- Vandal Housing:
- Audio Support:

Product Compare Up

Technical Specifications

SNV-7080R

Input Voltage: 12V DC, 24V AC

Power over Ethernet: Yes (IEEE802.3af)

MECHANICAL

Outdoor Use: IP66

Vandal Housing: Yes

ACC

Pendant Mount	<input type="checkbox"/> SBP-300HM3	<input type="checkbox"/> SBP-300CM	<input type="checkbox"/>
Wall Mount	<input type="checkbox"/> SBP-300HM3	<input type="checkbox"/> SBP-300WM1	<input type="checkbox"/>
Wall Mount(Curved neck)	<input type="checkbox"/> SBP-300HM3	<input type="checkbox"/> SBP-300WM	<input type="checkbox"/>

Save/Print a single spec sheet

Verify compatible accessories

Compare multiple products

Make up to 5 comparison chart

SAMSUNG TECHWIN Product Selector v1.0 한국어 English

ProductList 1_Camera **2_Camera**

Product Category

Camera Recorder Encoder

Network Camera
 Analogue Camera

Fundamental Options

Camera Type

- All
- Box
- Bullet
- Dome
- PTZ

Max. Resolution

- All
- 4CIF / VGA
- 1.3 Megapixel / HD
- 2 / 3 Megapixel / Full HD

Video Compression

Day/Night

WDR

Outdoor Use

Vandal Housing

Audio Support

Hardware Options

Lens/Imaging Options

System Options

	SNB-7000	SND-7080	SNV-7080
VIDEO			
Imaging Sensor Size	1/2.8"	1/2.8"	1/2.8"
Megapixel Sensor	Yes	Yes	Yes
Sensor size in Megapixel	3M	3M	3M
Min. Illumination (Color)	1Lux(F1.2, 50IRE), 0.017Lux(Sens-up 60x)	1Lux(F1.2, 50IRE), 0.017Lux(Sens-up 60x)	1Lux(F1.2, 50IRE), 0.017Lux(Sens-up 60x)
Min. Illumination (B/W)	0.08Lux(F1.2, 50IRE), 0.001Lux(Sens-up 60x)	0.08Lux(F1.2, 50IRE), 0.001Lux(Sens-up 60x)	0.08Lux(F1.2, 50IRE), 0.001Lux(Sens-up 60x)
Analog Video Output (For Installation)	Yes	Yes	Yes
LENS			
Built-in Lens	N/A	Yes	Yes
Lens Type	DC Auto Iris, Manual Iris	DC Auto Iris	DC Auto Iris
		Motorized Varifocal	Motorized Varifocal

Print/Save the Comparison chart

Compare multiple spec.

Estimate network bandwidth & storing capacity

BANDWIDTH CALCULATOR



- Bandwidth Calculator is a program that estimates the network bandwidth according to user defined video setting of network camera.
- By using a multiple set of network camera settings, it will calculate the whole Bandwidth and storage capacity for the Network Video Recorder (NVR).

Estimate network bandwidth

Create up to 4 projects

Recording duration

Detail profile setting

Edit/Delete profile

Bandwidth per each purpose

Total bandwidth Of the project

Total storage capacity Of the project

Model	Quantity	Live	REC	N/W transferring	Total bandwidth	Storage	Action
SNP-5200	10	100.00 Mbit/s	100.00 Mbit/s	100.00 Mbit/s	100.00 Mbit/s	7.21 TB	[Edit] [Delete]
SND-7080	15	150.00 Mbit/s	150.00 Mbit/s	150.00 Mbit/s	150.00 Mbit/s	10.81 TB	[Edit] [Delete]

Summary	Quantity	Bandwidth	REC	N/W transferring	Total bandwidth	Total storage capacity
	25	250.00 Mbit/s	250.00 Mbit/s	250.00 Mbit/s	250.00 Mbit/s	18.02 TB

Detail profile setting

Model SND-7080 **Quantity** 15 **ADD** **Streaming setting** ▲

Name : **Event frequency(%)** 100%(Continuous recording) **Scene activity** HIGH

	Streaming purpose	Video codec	Resolution	Bitrate control	Framerate	Compression	Maximum bitrate (64-30720)kpbs
Streaming01	<input checked="" type="checkbox"/> Live <input checked="" type="checkbox"/> REC <input checked="" type="checkbox"/> N/W	H.264	2048x1536	<input checked="" type="checkbox"/> VBR <input type="checkbox"/> CBR	20	Best	10240
Streaming02	<input type="checkbox"/> Live <input type="checkbox"/> REC <input type="checkbox"/> N/W	H.264	2048x1536	<input checked="" type="checkbox"/> VBR <input type="checkbox"/> CBR	20	Best	10240
Streaming03	<input type="checkbox"/> Live <input type="checkbox"/> REC <input type="checkbox"/> N/W	H.264	2048x1536	<input checked="" type="checkbox"/> VBR <input type="checkbox"/> CBR	20	Best	10240

Recording duration 7 Day

Model	Quantity	Live	REC	N/W transferring	Total bandwidth	Storage	Action
SNP-5200	10	100.00 Mbit/s	100.00 Mbit/s	100.00 Mbit/s	100.00 Mbit/s	7.21 TB	

Name : **Event frequency(%)** 100%(Continuous recording) **Scene activity** HIGH

	Streaming purpose	Video codec	Resolution	Bitrate control	Framerate	Compression	Maximum bitrate (64-30720)kpbs
Streaming01	<input checked="" type="checkbox"/> Live <input checked="" type="checkbox"/> REC <input checked="" type="checkbox"/> N/W	H.264	1280x1024	<input checked="" type="checkbox"/> VBR <input type="checkbox"/> CBR	30	Best	10240
Streaming02	<input type="checkbox"/> Live <input type="checkbox"/> REC <input type="checkbox"/> N/W	H.264	1280x1024	<input type="checkbox"/> VBR <input type="checkbox"/> CBR	30	Best	10240
Streaming03	<input type="checkbox"/> Live <input type="checkbox"/> REC <input type="checkbox"/> N/W	H.264	1280x1024	<input type="checkbox"/> VBR <input type="checkbox"/> CBR	30	Best	10240

SND-7080	15	150.00 Mbit/s	150.00 Mbit/s	150.00 Mbit/s	150.00 Mbit/s	10.81 TB	
Summary	25	250.00 Mbit/s	250.00 Mbit/s	250.00 Mbit/s	250.00 Mbit/s	18.02 TB	

Recordable time **NVR calculation**

Detail profile setting

Edit profile setting

Calculate recordable time

- How many days the NVR will record for when comparing the total sum of the Recording bandwidth of the project and the selected HDD size.

Total sum of recording bandwidth of this project

The screenshot shows a software interface for calculating recordable time. At the top, a summary bar displays: Summary | 25 | 250.00 Mbit/s | 250.00 Mbit/s | 250.00 Mbit/s | 250.00 Mbit/s | 18.02 TB. Below this, there are two tabs: 'Recordable time' and 'NVR calculation'. Under 'Recordable time', there is a dropdown menu for 'HDD size' set to '13 TB' and a blue 'Calculate' button. Below the 'Calculate' button, a box labeled 'Recordable duration' displays the result '5 day 1 hour'. Orange circles highlight the '250.00 Mbit/s' value in the summary bar, the '13 TB' value in the HDD size dropdown, and the '5 day 1 hour' result in the duration box.

Ex) 250Mbps recording data
can be recorded on 13TB HDD
for a period of 5 days and 1 hour.

NVR calculation

- How many NVRs and HDDs you need according to total sum of the Recording bandwidth of the project and the Recording duration.

Recording duration Day

Summary | 25 | 250.00 Mbit/s | 250.00 Mbit/s | 250.00 Mbit/s | 250.00 Mbit/s | 18.02 TB

Recordable time | NVR calculation

NVR model | HDD size | [Calculate](#)

NVR Model	REC	NVR Quantity	HDD Quantity	Total storage
SRN-1670D	250.00 Mbit/s	4	40	18.02 TB

[View detail report](#)
[PC Recommendation](#)

Ex) In order to record 250Mbps recording data for a period of 7 days, You will need 4 set of SRN-1670D with 40 pieces of 2TB HDDs.

View a detailed report

Project Detail Report

New_Project01

Selected NVR SRN-1670D

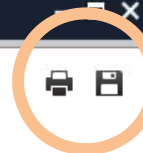
- Total Quantity **18**
- Total Storage **11.33 TB**
- Total Bandwidth **249.30 Mbit/s**
- REC duration **7 days**

	Qty	Live	Recording	N/W transferring	Total bandwidth	Storage	Event		Scene Activity
	SNP-52 00(1F Lobby)	10	102.40 Mbit/s	102.40 Mbit/s	102.40 Mbit/s	102.40 Mbit/s	7.74TB	100%(Continuous recording)	
		Streaming purpose		Codec	Resolution	Bitrate	Frame	Compression	Max Bitrate
Streaming 1		Live Recording N/W		H.264	1280x1024	VBR	30	Best	10240
Streaming 2		-		-	-	-	-	-	-
Streaming 3	-		-	-	-	-	-	-	

	Qty	Live	Recording	N/W transferring	Total bandwidth	Storage	Event		Scene Activity
	SND-70 80(2F Room)	5	51.20 Mbit/s	76.80 Mbit/s	2.56 Mbit/s	130.56 Mbit/s	2.90TB	50%	
		Streaming purpose		Codec	Resolution	Bitrate	Frame	Compression	Max Bitrate
Streaming 1		Live		H.264	2048x1536	VBR	20	Best	10240
Streaming 2		Recording		H.264	2048x1536	CBR	20	Best	15360
Streaming 3	N/W		H.264	320x180	CBR	30	Best	512	

	Qty	Live	Recording	N/W transferring	Total bandwidth	Storage	Event		Scene Activity
	SNO-10 80R (Outdoor)	3	6.14 Mbit/s	10.20 Mbit/s	6.14 Mbit/s	16.34 Mbit/s	694.01GB	90%	
		Streaming purpose		Codec	Resolution	Bitrate	Frame	Compression	Max Bitrate
Streaming 1		Live N/W		H.264	640x480	CBR	30	Best	2048
Streaming 2		Recording		MJPEG	320x240	VBR	30	Best	10240
Streaming 3	-		-	-	-	-	-	-	

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Print / Save a detailed report

Easy installation tool

DEVICE MANAGER



- iPOLiS Device Manager is a program that helps the user to configure and manage multiple network devices.
- It searches and lists Samsung Techwin network devices installed on the same network.
- You can choose multiple devices and assign IP address, firmware upgrade, date/time setting, video setting at the same time.

Search devices

Sort by Device status

Search for network devices and list device model names, device statuses, IP addresses, MAC addresses, firmware versions, ISP versions, serial Numbers and status refreshed times

Device	Status	IP mo...	IP Address	MAC Address	F/W version	ISP	Motion B/D	S/N	IP Version	Last refreshed
SNB-7002	Login OK	Static	192.168.100.151	00:09:18:30:17:91	0.51_120710	0.36	None	C6H56V3C700016F	IPv4	2012-08-20 오전 10:02...
SNO-7080R	Login Fail	Static	192.168.100.15	00:09:18:FF:3F:0A	None	None	None	IPv4	2012-08-20 오전 10:02...	
SND-7080	Login Fail	Static	192.168.100.120	00:16:6C:47:B7:66	None	None	None	IPv4	2012-08-20 오전 10:02...	
SNP-6200	Login OK	Static	192.168.100.102	00:09:18:71:E3:A5	1.20_111227	1.33	None	C6H86V3C101034L	IPv4	2012-08-20 오전 10:02...
SNP-5200	Login OK	Static	192.168.1.200	00:09:18:30:15:DE	1.00_120302	1.02	0.89	7000	IPv4	2012-08-20 오전 10:02...
SND-5080	Login OK	Static	192.168.100.207	00:09:18:70:D1:89	2.00_120704	0.00	0.00	0	IPv4	2012-08-20 오전 10:02...
SNZ-5200	Login OK	Static	192.168.100.121	00:09:18:70:A0:BF	2.10_111227	2.66	None	0	IPv4	2012-08-20 오전 10:02...
SND-3080	Login OK	Static	192.168.100.114	00:16:6C:47:C0:74	1.05_120427	0.0	None	C68U6V2B301008P	IPv4	2012-08-20 오전 10:02...
SND-3080	Login OK	Static	192.168.100.133	00:09:18:FF:AC:18	None	None	None	None	IPv4	2012-08-20 오전 10:02...

9 devices searched, 0 device selected

Assign an IP address

Obtain an IP address automatically (DHCP)

Assign the following IP address

IP Address : ~

Subnet mask :

Gateway :

HTTP Port :

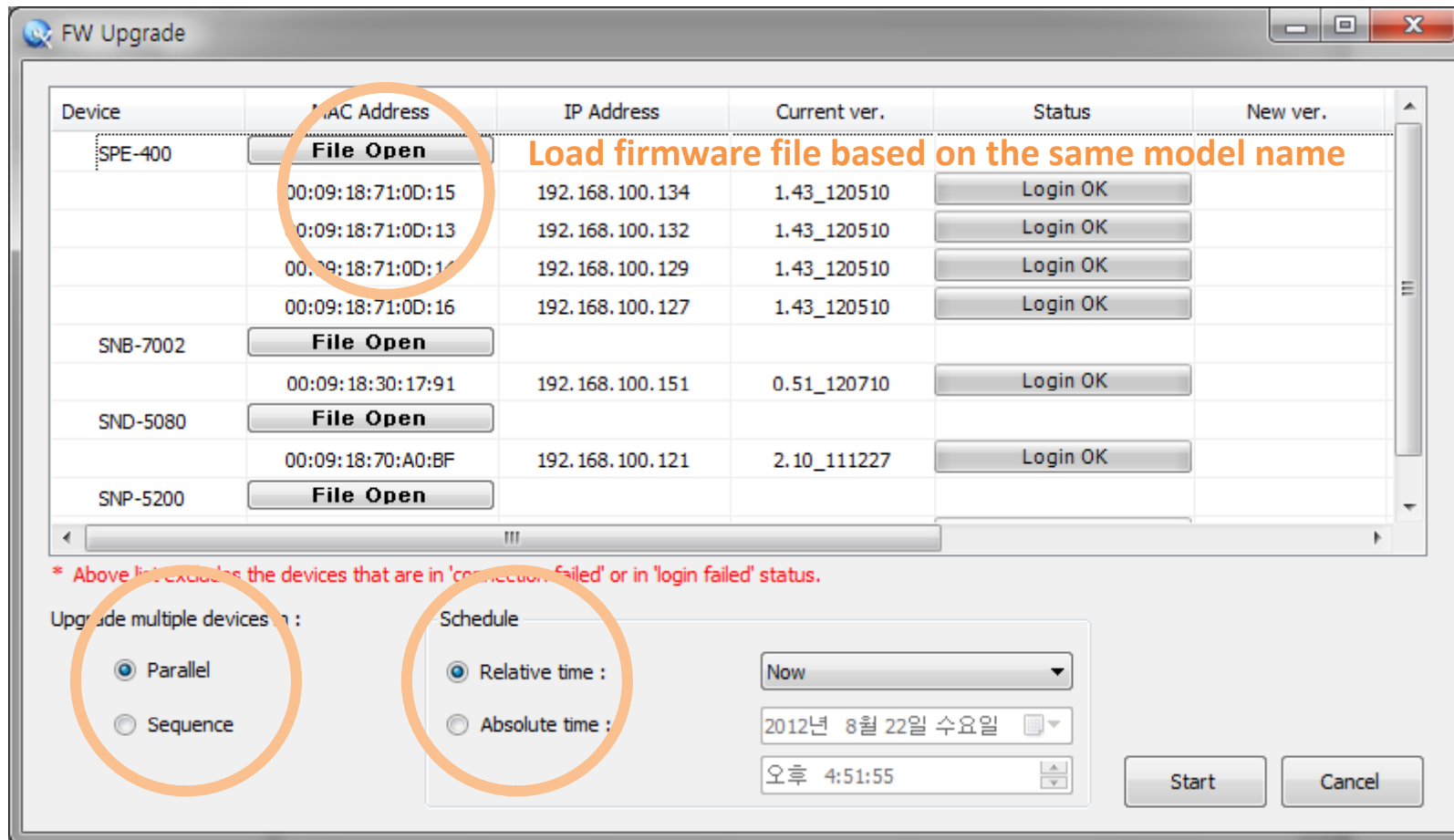
VNP Port :

RTSP Port :

Device	MAC Address	IP(Old)	IP(New)	Subnet(New)	Gateway(New)	HTTP	VNP	RTSP	Result
SNB-7002	00:09:18:30:17:91	192.168.100.151	192.168.100.151	255.255.255.0	192.168.100.1	80	4520	554	
SND-7080	00:09:18:71:E3:A5	192.168.100.102	192.168.100.152	255.255.255.0	192.168.100.1	80	4520	554	
SNP-6200	00:09:18:30:15:DE	192.168.1.200	192.168.100.153	255.255.255.0	192.168.100.1	80	4520	554	
SNP-5200	00:09:18:70:D1:89	192.168.100.207	192.168.100.154	255.255.255.0	192.168.100.1	80	4520	554	
SND-5080	00:09:18:70:A0:BF	192.168.100.121	192.168.100.155	255.255.255.0	192.168.100.1	80	4520	554	
SNZ-5200	00:16:6C:47:C0:74	192.168.100.114	192.168.100.156	255.255.255.0	192.168.100.1	80	4520	554	
SND-3080	00:09:18:FF:AC:18	192.168.100.133	192.168.100.157	255.255.255.0	192.168.100.1	80	4520	554	

Before applying IP addresses, first
Verifying the new addresses to be assigned

Firmware upgrade

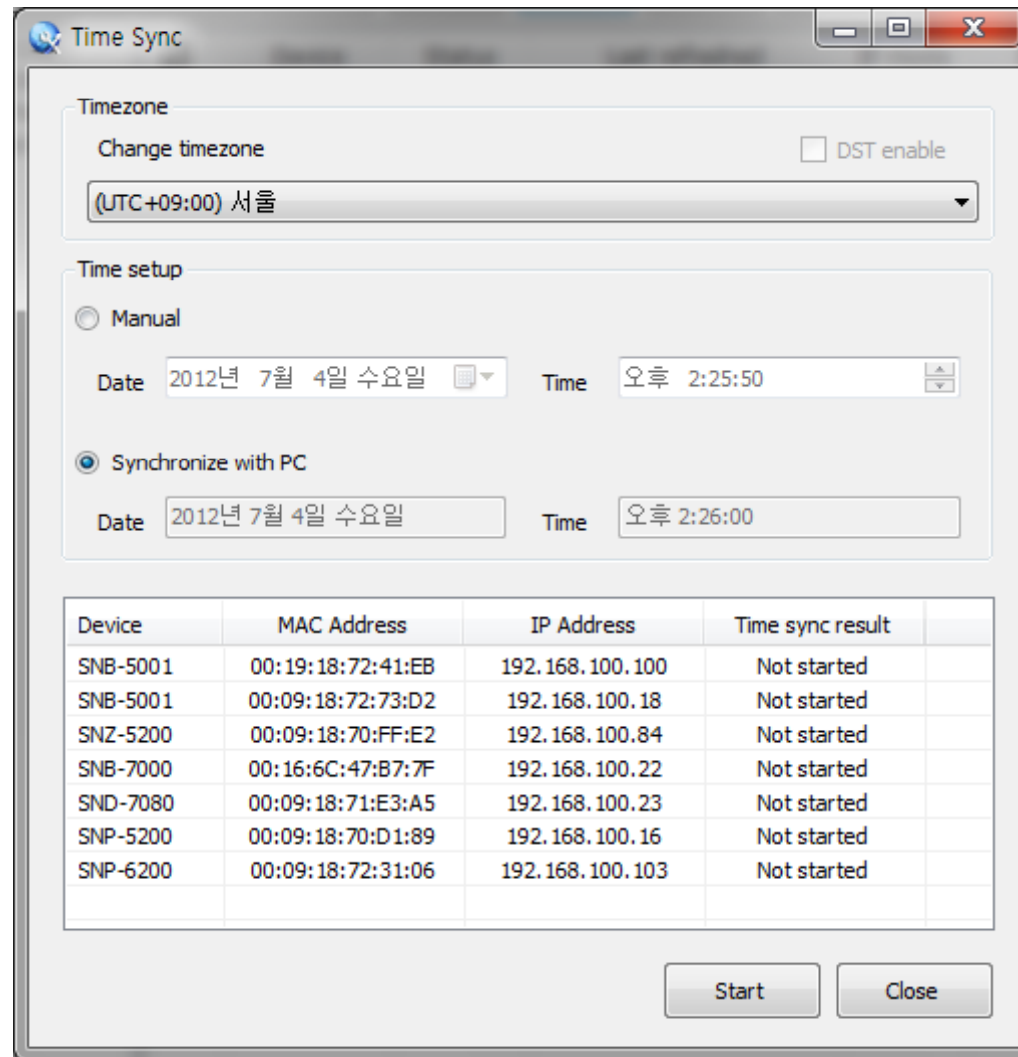


Upgrade multiple devices in parallel or sequence

Create an upgrade schedule

Device time synchronization

Synchronize with
User defined time
Or PC time



Video profile setup

Select Model Name **Megapixel Mode** **Select Video Profile**

SNB-7002 3 Mega mode H.264

<input checked="" type="checkbox"/>	MAC Address	IP Address	Result
<input checked="" type="checkbox"/>	00:09:18:30:17:91	192.168.100.151	Success
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

Select Video Profile

Menu	Setting Opti...	Result	Current
<input type="checkbox"/> Default profile	Disable		Enable
<input type="checkbox"/> Record profile	Disable		Enable
<input checked="" type="checkbox"/> Resolution	1920x1080		1920x1080
<input checked="" type="checkbox"/> Framerate	15		15
<input checked="" type="checkbox"/> Compression	10		10
<input type="checkbox"/> Bitrate(2048-15...			6144
<input type="checkbox"/> Bitrate control	CBR		VBR
<input type="checkbox"/> Encoding priority	Framerate		FRAMERATE
<input type="checkbox"/> GOP size	1		8

Multiple setups can be done based on the same model name

Verify the current setting status

Apply Cancel

Device setup

Analog video output, Device restart, and Factory reset

The screenshot shows a 'Device Setup' window with a blue title bar. On the left, there is a 'Select Model Name' dropdown menu with 'SND-5080' selected. Below it is a table with columns for checkboxes, MAC Address, IP Address, and Result. The first row is checked and contains the MAC address '00:09:18:70:A0:BF' and IP address '192.168.100.121'. On the right, a 'BNC Setting' panel is highlighted with an orange border, containing buttons for 'BNC On', 'BNC Off', 'Get BNC Value', 'Device Restart', 'Delete Profile 10', 'Factory Reset Except Network', and 'Factory Reset All'. A 'Cancel' button is located at the bottom right of the window.

<input type="checkbox"/>	MAC Address	IP Address	Result
<input checked="" type="checkbox"/>	00:09:18:70:A0:BF	192.168.100.121	
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

Multiple setups can be done based on the same model name

Advanced setup

The screenshot shows a window titled "Advance Setup" with a blue title bar. On the left, under "Select Model Name", a dropdown menu is set to "SNB-7002" and is circled in orange. Below it is a table with columns for checkboxes, MAC Address, IP Address, and Result. The first row is checked and shows "00:09:18:30:17:91", "192.168.100.151", and "Success". An orange text overlay reads "Multiple setups can be done based on the same model name". On the right, the "SEND CGI code." section contains a text box with the URL "cgi-bin/about.cgi?msubmenu=about&action=view3" and an orange text overlay "Manually enter CGI command". The "RECEIVE CGI code." section shows a scrollable text area with the response: "[192,168,100,151 : 00:09:18:30:17:91] description:SNB-7002-V0.51_120710 model:SNB-7002 broadcasting:NTSC version:0.51_120710 build:2012.07.10 serial:C6H56V3C700016F isp:0.36". An orange text overlay "Verify CGI response" is positioned below the response. At the bottom right are "Apply" and "Cancel" buttons.

<input type="checkbox"/>	MAC Address	IP Address	Result
<input checked="" type="checkbox"/>	00:09:18:30:17:91	192.168.100.151	Success
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

Configuration backup / restore

Project Help

Search Save Password Status Update IP Assign FW Update Time Sync **1** Config Backup **2** Config Restore Video Setup Device Setup Advance Setup

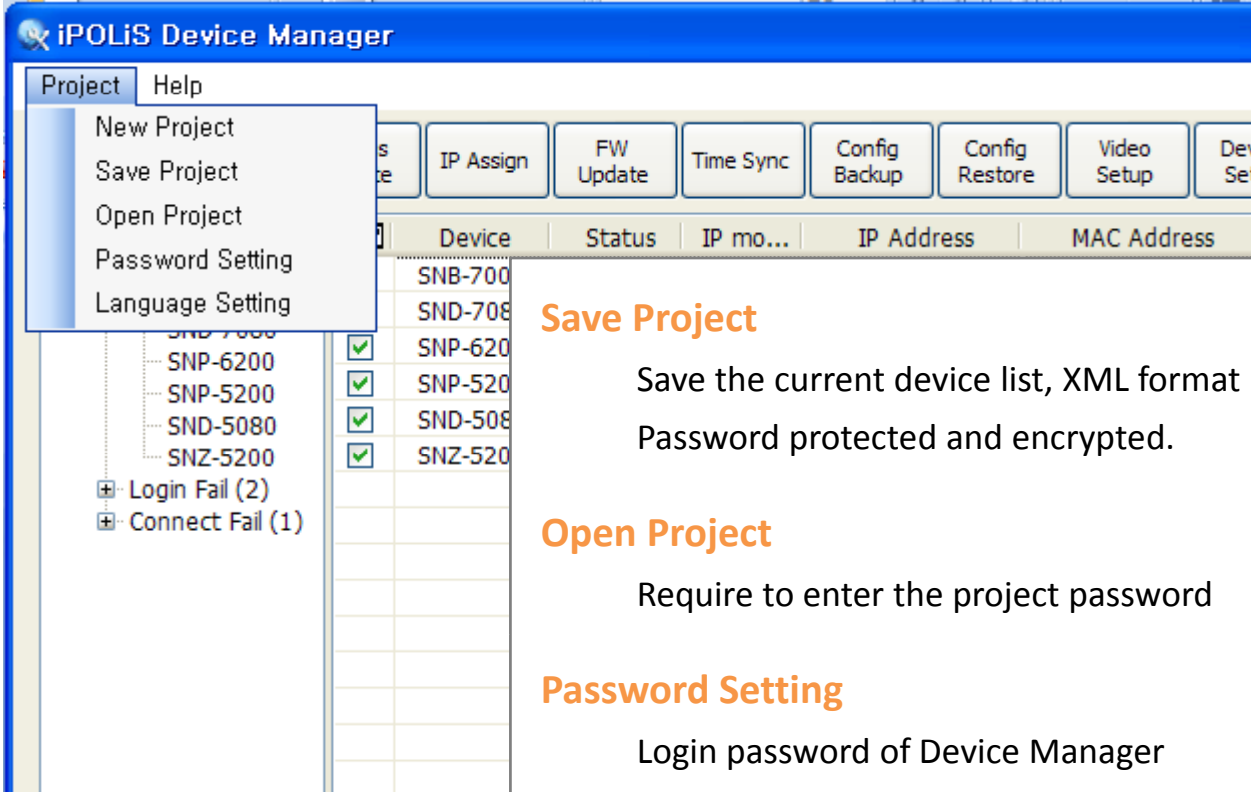
<input checked="" type="checkbox"/>	Device	Status	IP mo...	IP Address	MAC Address	F/W version	ISP	Motion B/D
<input checked="" type="checkbox"/>	SNB-7002	Login OK	Static	192.168.100.151	00:09:18:30:17:91	0.51_120710	0.36	None
<input checked="" type="checkbox"/>	SND-7080	Login OK	Static	192.168.100.102	00:09:18:71:E3:A5	1.20_111227	1.33	None
<input checked="" type="checkbox"/>	SNP-6200	Login OK	Static	192.168.1.200	00:09:18:30:15:DE	1.00_120302	1.02	0.89
<input checked="" type="checkbox"/>	SNP-5200	Login OK	Static	192.168.100.207	00:09:18:70:D1:89	2.00_120704	0.00	0.00
<input checked="" type="checkbox"/>	SND-5080	Login OK	Static	192.168.100.121	00:09:18:70:A0:BF	2.10_111227	2.66	None
<input checked="" type="checkbox"/>	SNZ-5200	Login OK	Static	192.168.100.114	00:16:6C:47:C0:74	1.05_120427	0.0	None

① Backup configuration file from a single device

② Overwrite the configuration onto multiple devices

6 devices searched, 6 devices selected

Project management



The screenshot shows the iPOLiS Device Manager application window. The 'Project' menu is open, displaying options: New Project, Save Project, Open Project, Password Setting, and Language Setting. The main window contains a toolbar with buttons for IP Assign, FW Update, Time Sync, Config Backup, Config Restore, Video Setup, and Device Setup. Below the toolbar is a table with columns: Device, Status, IP mo..., IP Address, and MAC Address. The table lists several devices with checkmarks in the Status column.

Device	Status	IP mo...	IP Address	MAC Address
SNB-700				
SND-708				
SNP-620	✓			
SNP-520	✓			
SND-508	✓			
SNZ-520	✓			

Save Project
Save the current device list, XML format
Password protected and encrypted.

Open Project
Require to enter the project password

Password Setting
Login password of Device Manager

Language Setting
Korean, English, Chinese, and Japanese