GeoVision inc
The Vision of Security

PN401, PN400, PN300 & SQP133

User's Manual

PN-A

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Note: No memory card slot or local storage function for Argentina.

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Preface

Welcome to the *PN401, PN400, PN300 & SQP133 User's Manual*.

The PN401, PN400, PN300 & SQP133 are devices that play back slideshows edited or managed by GeoVision's software such as Content Designer, Content Schedule, CMS Lite, CMS Server, and Digital Signage Management Server. This Manual is designed for the following models and software.

Hardware

Model
PN401
PN400
PN300
SQP133

Software

Model
Content Designer
Content Schedule
CMS Lite
CMS Server
Digital Signage Management Server

Compatible Firmware and Software Versions

	PN401	PN400	PN300 / SQP133	SQP110 Series
Digital Signage Management Server	V1.00	N/A		N/A
CMS Server / CMS Lite V1.0.5	N/A	V1.00 ~ V1.01	V1.06	
Content Designer V1.0.8	V1.00	V1.00 ~ V1.01	V1.05	N/A
Content Schedule V1.0.5	V1.00	V1.00 ~ V1.01	V1.05 or later	N/A

Caution

- PN400 and PN401 are designed only for indoor usage.

Chapter 1 Introduction

The PN400 and PN401 are digital media players designed to deliver uninterrupted playback of Digital Signage presentations.

1.1 Features of PN400 and PN401

- Multimedia support
- Video resolution up to 4K2K
- Support for HDMI
- SD card and USB storage
- Content Schedule and Content Designer
- Content Management Server
- DC 12V / PoE (IEEE 802.3af) (PoE for PN401 only)
- IR remote control
- USB mouse control
- Wireless connectivity (PN400 only)

1.2 Packing List

1.2.1 PN401

1. PN401 Device x 1
2. IR Remote Control x 1
3. Download Guide x 1
4. Warranty Card x 1

Note: Power adapters can be purchased upon request.

1.2.2 PN400

1. PN400 Device x 1
2. IR Remote Control x 1
3. AC/DC Adapter x 1 (12 V, 3 A, 36 W)
4. Power Cord x 1
5. Software DVD x 1
6. Warranty Card x 1

1.2.3 PN300

1. PN300 Device x 1
2. IR Remote Control x 1
3. AC/DC Adapter x 1 (12 V, 3 A, 36 W)
4. Power Cord x 1
5. Software DVD x 1
6. Warranty Card x 1

1.2.4 SQP133

1. SQP133 Device × 1
2. IR Remote Control × 1
3. Magnetic Hinge x 1
4. Screw x 4
5. AC/DC Adapter × 1 (12 V, 3 A, 36 W)
6. Power Cord x 1
7. Software DVD x 1
8. Warranty Card x 1

1.3 Options

Optional devices can expand the capabilities and versatility of your device. Contact our sales representatives for more information.

Options	Details
Wall Mount Kit 	The Wall Mount Kit is used to mount the **PN400 / PN401** to the wall.
	● L-type brackets x 2 ● Small screws x 4
VESA Monitor-Mount Kit  	The VESA Monitor Mount Kit is used to mount the **PN400 / PN401** to the back of a VESA monitor.
	● VESA monitor mount bracket x 1 ● L-type brackets x 2 ● Large screws x 4 ● Small screws x 8
Internal GV-USB Dongle for CMS Lite and CMS Server 	The USB dongle can provide the Hardware Watchdog function to the system by restarting the computer when Windows crashes. You need to connect the dongle internally on the motherboard. Note: This option is not supported by **PN401**.
GV-WiFi Adapter V2 	The GV-WiFi Adaptor V2 is a plug-and-play device that provides wireless connectivity to GeoVision IP devices. This product supports 2.4 GHz and 5 GHz wireless connection. Note: This option is not supported by **PN401**. For PN400, the mini USB converter is not supported.
GV-PoE Adapter	GV-PoE Adapter is designed to provide power to the IP device through a single Ethernet cable. Adopting the PoE adapter enables you to mount an IP device anywhere in a building where power outlets are not available. (**PN401** only)
Power Adapter	For **PN401**, contact our sales representatives for the countries and areas supported.
SD card	The SD card is used for local storage and firmware upgrade. (Micro SD card for **PN401**)

1.4 Overview

This section identifies the components of the PN401, PN400, PN300 and SQP133.

1.4.1 PN401

Front View

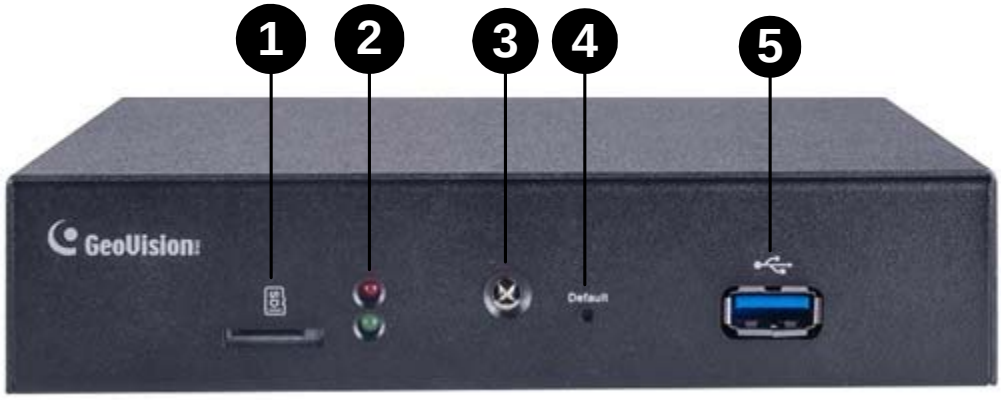


Figure 1-1

No.	Name	Function
1	Micro SD Card Slot	Connect to a Micro SD card for local storage of snapshots and firmware upgrade.
2	LED Indicators	The red LED indicates the power is supplied. The green LED indicates the system is ready for use.
3	IR sensor	Receive signal from GV-IR Remote Control for controlling the user interface at the maximum operation distance of 7 m (22.97 ft).
4	Default	Reset the device to the default factory settings. Use a pin to press the default button for about 10 seconds. The system will then reset and reboot itself shortly.
5	USB 3.0	Connect to a USB mouse or USB storage device

Rear View

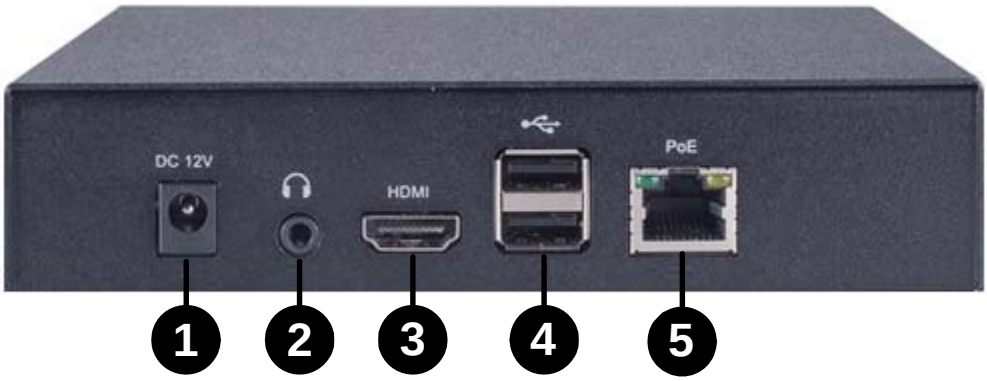


Figure 1-2

No.	Name	Function
1	DC 12V	Connect to power by using a power adapter.
2	Audio Out	Connect to a speaker.
3	HDMI	Connect to an HDMI-compliant display device.
4	USB 2.0	Connect to a USB mouse or USB storage device.
5	Network / PoE	Connect to the network or a GV-PoE Adapter.

1.4.2 PN400

Front View

Figure 1-3

No.	Name	Function
1	SD Card Slot	Connect to an SD card for local storage and firmware upgrade.
2	IR	Built-in IR receiver to receive the IR signals from the IR remote control.
3	Default	Reset the PN400 to the default factory settings. See *3.10 Restoring to Factory Default Settings* for details.
4	LED Indicators	The **green** LED indicates the system is ready. The **red** LED indicates the power is supplied. When the **green** LED is off and the **red** LED is on, the device is in sleep mode.

Rear View

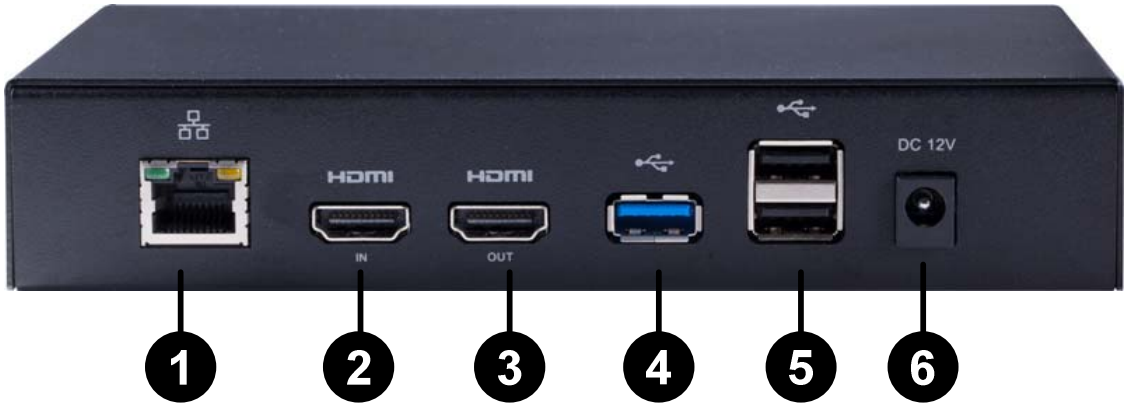


Figure 1-4

No.	Name	Function
1	Ethernet	Connect to an Ethernet.
2	HDMI in	Connect to a HDMI-compliant source device, such as a DVD player and digital TV box.
3	HDMI out	Connect to a HDMI-compliant display device.
4	USB 3.0	Connect to a USB device for local storage of content, firmware upgrade and a USB mouse.
5	USB 2.0	Connect to a USB device for local storage of content, firmware upgrade, a USB mouse, and GV-WiFi Adapter V2.
6	DC 12V	Connect to power by using the supplied power adapter.

1.4.3 PN300

Front View

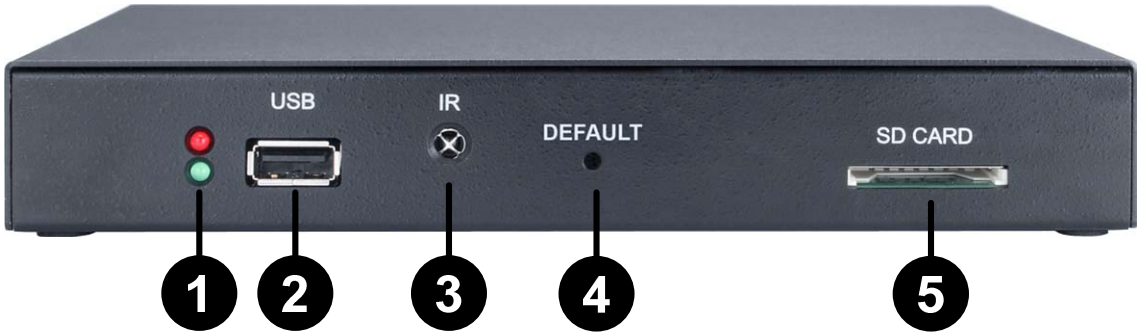


Figure 1-5

No.	Name	Function
1	LED Indicators	The **green** LED indicates the system is ready. The **red** LED indicates the power is supplied. When the **green** LED is off and the **red** LED is on, the device is in sleep mode.
2	USB	Connect to a USB device for local storage of content, firmware upgrade and GV-WiFi USB Adapter. Note the removal of the USB storage device will cause the PN300 to automatically reboot.
3	IR	Built-in IR receiver to receive the IR signals from the IR remote control.
4	Default	Reset the PN300 to the default factory settings. See *3.10 Restoring to Factory Default Settings*.
5	SD Card Slot	Connect to an SD card for local storage and firmware upgrade. Note the removal of the SD card will cause the PN300 to automatically reboot.

Rear View

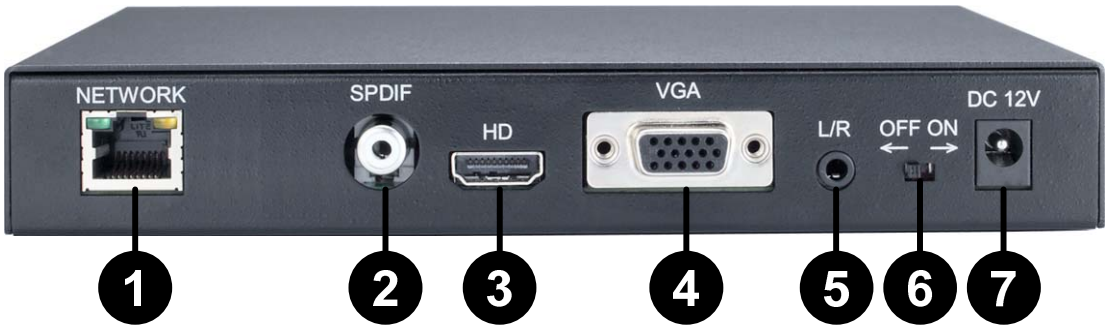


Figure 1-6

No.	Name	Function
1	Ethernet	Connect to an Ethernet.
2	SPDIF	Reserved (not enabled).
3	HDMI	Connect to an HDMI supported display device.
4	VGA	Connect to a VGA monitor.
5	L/R	Connect to a speaker.
6	Power OFF/ON	Switch the power on or off.
7	DC 12V	Connect to power by using the supplied power adapter.

1.4.4 SQP133

Right Panel View

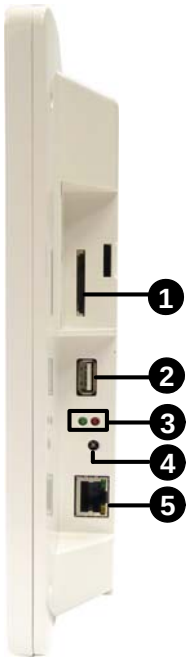


Figure 1-7

No.	Name	Function
1	SD Card Slot	Connect to an SD card for local storage of content and firmware upgrade.
2	USB	Connect to a USB device for local storage of content, firmware upgrade, and GV-WiFi USB Adapter. Note the removal of the USB storage device will cause the SQP133 to automatically reboot.
3	LED Indicators	The **green** LED indicates the system is ready. The **red** LED indicates the power is supplied. When the **green** LED is off and the **red** LED is on, the device is in sleep mode.
4	IR	Built-in IR receiver to receive the IR signals from the IR remote control.
5	Ethernet	Connect to an Ethernet.

Left Panel

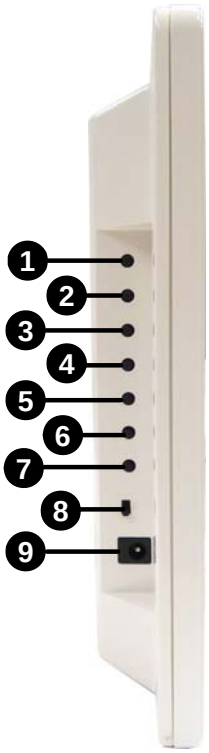


Figure 1-8

No.	Name	Function
1.	MENU	Switch to the setup menu.
2	ENTER	Enter the setup options or save the settings in the Setup Menu.
3	UP	Move the cursor up.
4	DOWN	Move the cursor down.
5	LEFT	Move the cursor left.
6	RIGHT	Move the cursor right.
7	STAND BY	Press to enter the Standby/Sleep mode. In the standby mode, the screen turns off to minimize power consumption. Press the key again to enter the ON mode.
8	Power OFF/ON	Switch the power on or off.
9	DC 12V	Connect to power using the supplied power adapter.

1.5 The IR Remote Control

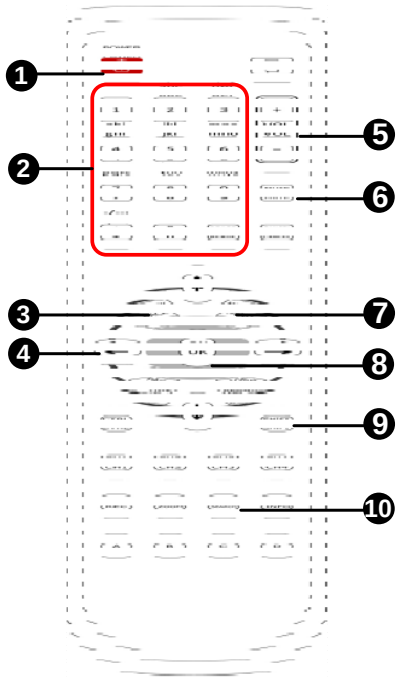


Figure 1-9

No.	Name	Function
1	Power	Press to enter the Standby/Sleep mode. In the standby mode, the screen turns off to minimize power consumption. Press the key again to enter the ON mode.
2	Numeric / Alphabetical / Punctuation Marks Buttons	Enter the numbers, alphabets or punctuation marks.
3	Back	● Back to the previous page in the Setup Menu. ● Play the media files.
4	Menu Control	Move up, down, right and left in the Setup Menu.
5	Volume Control	Increase or decrease the volume.
6	Mute	Mute the volume.
7	Menu	Switch to the setup menu.

No.	Name	Function
8	OK	Enter the setup options or save the settings in the Setup Menu.
9	Shift	Switch among different resolutions for PN300 / PN400 / PN401. Once the button is pressed, the Green LED on the front panel of the device will flash. Press No. 0 ~ 7 for the desired resolution within 30 seconds. **For PN300:** Shift + 0 : VGA_640 x 480 Shift + 4 : HDMI_480p Shift + 1 : VGA_1024 x 768 Shift + 5 : HDMI_720p Shift + 2 : VGA_1280 x 768 Shift + 6 : HDMI_1080i Shift + 3 : VGA_1366 x 768 Shift + 7 : HDMI_1080p **For PN400 / PN401:** Shift + 1 : 1080p at 30 Hz Shift + 2 : 1080p at 60 Hz Shift + 3 : 2160p at 24 Hz Shift + 4 : 2160p at 30 Hz Note the resolution switch will cause the PN300 / PN400 / PN401 to automatically reboot.
10	Search	Scan for available Access Points or wireless stations when wireless network is selected.

Chapter 2 Getting Started

2.1 Connecting the Device

2.1.1 Connecting the PN401

Figure 2-1

1. Connect to a standard network cable for network or connect to a PoE adapter for power and network supplied together.
2. Connect to a USB mouse, and an USB device for local storage of content.
3. Connect a display device to HDMI connector for video and audio combined outputs.
4. Optionally connect to power using the purchased power adapter if PoE is not applied.

Note:

1. The default video output is set to 1080p at 60 Hz. To change the default setting, see *4.2 Configuring the General Settings*.
2. Optional GV-PoE Adapter is required for applying PoE function.

2.1.2 Connecting the PN400

Figure 2-2

1. Connect to a standard network cable.
2. Optionally, connect a HDMI-compliant source device, such as a DVD player and a digital TV box.
3. Connect a display device to HDMI connector for video and audio combined outputs.
4. Connect to a USB mouse, an USB device for local storage of content or firmware upgrade, or GV-WiFi Adapter V2 (for USB 2.0 port).
5. Connect to power using the supplied power adapter.

Note:

1. The default video output is set to 1080p at 30 Hz. To change the default setting, see *4.2 Configuring the General Settings*.
2. The HDMI input (for HDMI-compliant source devices) only supports the resolution of up to 1920 x 1080 at 30 Hz.

2.1.3 Connecting the PN300

Figure 2-3

1. Connect a monitor to the VGA connector, or the HDMI connector for video and audio combined outputs.
2. Connect to a standard network cable.
3. If you use a VGA monitor, connect a speaker to L/R port for audio output.
4. Connect to power using the supplied power adapter.
5. Switch the Power button to ON.

Note:

1. You can only connect the PN300 / SQP133 to one display device through the HDMI or VGA connector. The video signal will be unstable if more than one display devices are connected.
2. The default video resolution is set to VGA with 1024 x 768. To change the default setting, see *3.2 Setting Video Output and Resolution*.

2.1.4 Connecting the SQP133

Follow the steps below to connect the SQP133:

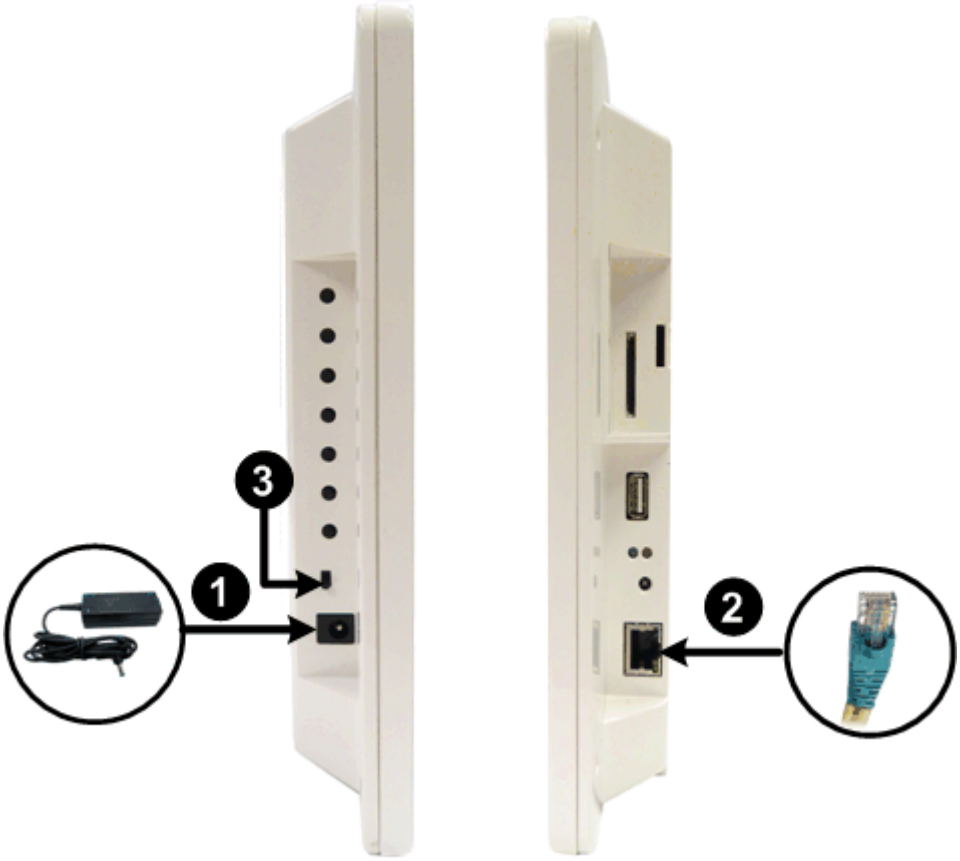


Figure 2-4

1. Connect to power using the supplied power adapter.
2. Connect to a standard network cable.
3. Turn the Power switch to ON.

2.2 Installing Wall Mount

Optionally, you can purchase the mounting plates to mount PN300, PN400, or PN401 on a wall.

1. Unscrew the 4 screws on the back panel of the device.

Figure 2-5

2. Use the 4 screws in the package to tighten the L-type brackets on the device.

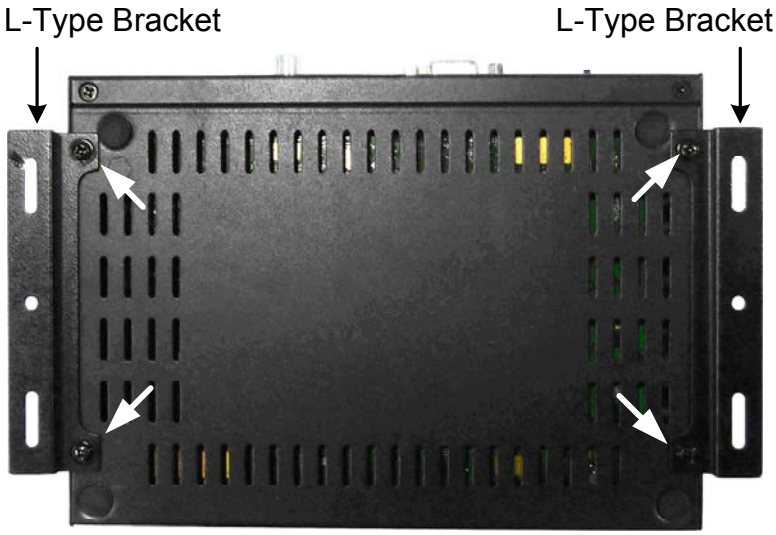


Figure 2-6

2.3 Installing VESA Monitor Mount

Optionally, you can purchase VESA Monitor mount for installing PN300, PN400, or PN401.

1. Follow steps 1 and 2 in *2.2 Installing Wall Mount* to tighten the L-type brackets on the back panel of the device.
2. Using the 4 large screws, tighten the VESA monitor mount bracket on the back of the computer monitor.

Figure 2-7

3. Use the 4 small screws to tighten the device and the VESA monitor mount bracket together.

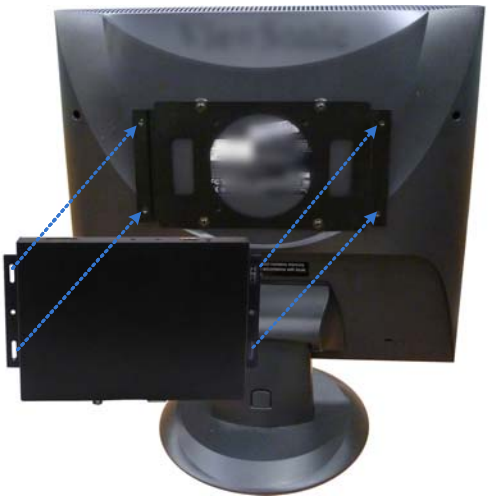


Figure 2-8

2.4 Playing the Slideshow

Without any further settings, you can now play the slideshow made of video or image files.

1. Create a folder named **Loop_Video** in a USB storage device or an SD card.
2. Copy image or video files to the **Loop_Video** folder.
3. Connect the USB storage device or the SD card to the device.
4. Turn on the digital signage device.
5. For PN300 / SQP133:
   - The local storage is set to the SD card by default. If you are using an SD card, the device will repeatedly play the files at this step.
   - If you are using a USB storage device, select **Play Source**  and select **USB** to be the storage.
6. For PN400 / PN401:

   The local storage is disabled by default. To select a storage device, select **General** and select **SD** or **USB**.
7. Press **Back** on the IR remote control to return the menu, and press **Back** again to start playing.

Note:

1. For the folder names workable on the device, see *Definitions of Folder Names*, *Appendix*.
2. By default, the image and video files are sorted by name, first in numerical and then alphabetical order. Only for PN300 / SQP133, you can change the sorting rule to by size or by random; see the Loop Mode option, *3.3 Setting Slideshow Display Effect*.

Chapter 3 System Setup for PN300 / SQP133

You can customize the system settings of the PN300 / SQP133.

3.1 The Setup Menu

Turn on the PN300 / SQP133 and the connected display device. The setup menu with six setup options appears.

Figure 3-1

Name	Description
Service	Set up the video output and resolution. See *3.2 Setting Video Output and Resolution*.
Play Source	Select the local storage and set up the slideshow display effect. See *3.3 Setting Slideshow Display Effect.*
Information	Display the network information, storage information and the device firmware version. See *3.4 Looking Up Device Information.*
Time Adjustment	Set up the system time. See *3.5 Setting the System Time.*
Network	Set up the network. See *3.6 Setting the Network*.
Factory	Upgrade firmware or to copy files from the USB storage device to the SD card. Select Language and Time Zone settings. See *3.5.2 Setting the Time Zone*, *3.8 Copying Files from the USB Storage Device* and *3.9 Upgrading the Firmware*.

3.2 Setting Video Output and Resolution

To set up the video output and resolution for PN300, select **Service** 

. The following window appears.

Figure 3-2

- **Output:** Select a video output from **VGA** or **HDMI** which is supported by the display monitor.
- **Resolution:** Select a screen resolution from the following options:

HDMI at 60 Hz	480p	720p	1080i	1080p
VGA at 60 Hz	640 x 480	1024 x 768	1280 x 768	1366 x 768

By default, the video output is set to VGA with the resolution of 1024 x 768.

Note:

1. The video output and resolution for SQP133 cannot be changed.
2. The resolution change will cause the PN300 to automatically reboot.

3.3 Setting Slideshow Display Effect

To set up slideshow display effect, select **Play Source** 

. The following window appears.

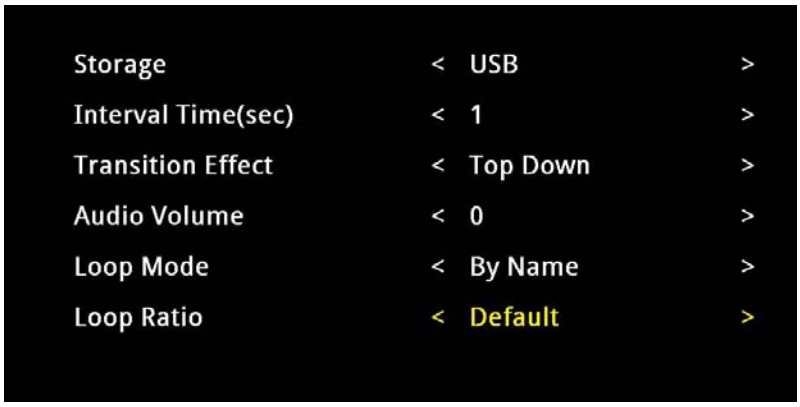


Figure 3-3

- **Storage:** Select a local storage from **USB** or **SD**. By default, SD card is set as local storage.
- **Interval Time:** Select the interval time to play the slideshow. The options include **1**, **3**, **5**, **10**, and **30** seconds.
- **Transition Effect:** Select the transition effect for the slideshow from the nine options: **Bevel**, **Shutters**, **Blind Top Down**, **Circle**, **None**, **Top Down**, **Bottom Up**, **Left to Right** or **Right to Left**.
- **Audio Volume:** Select an audio volume value. The larger the value, the louder the volume.
- **Loop Mode:** Select a playback mode for the slideshow from the three options: **By Size**, **Random** or **By Name**.
- **Loop Ratio:** Select **Full** to set the slideshow to full screen or select **Default** to use the setting of the slideshow.

Note: The display effect will not apply to the project created using the Content Designer.

3.4 Looking Up Device Information

To see the network information, storage information, current time and firmware version, select **Information**  . The following window appears.

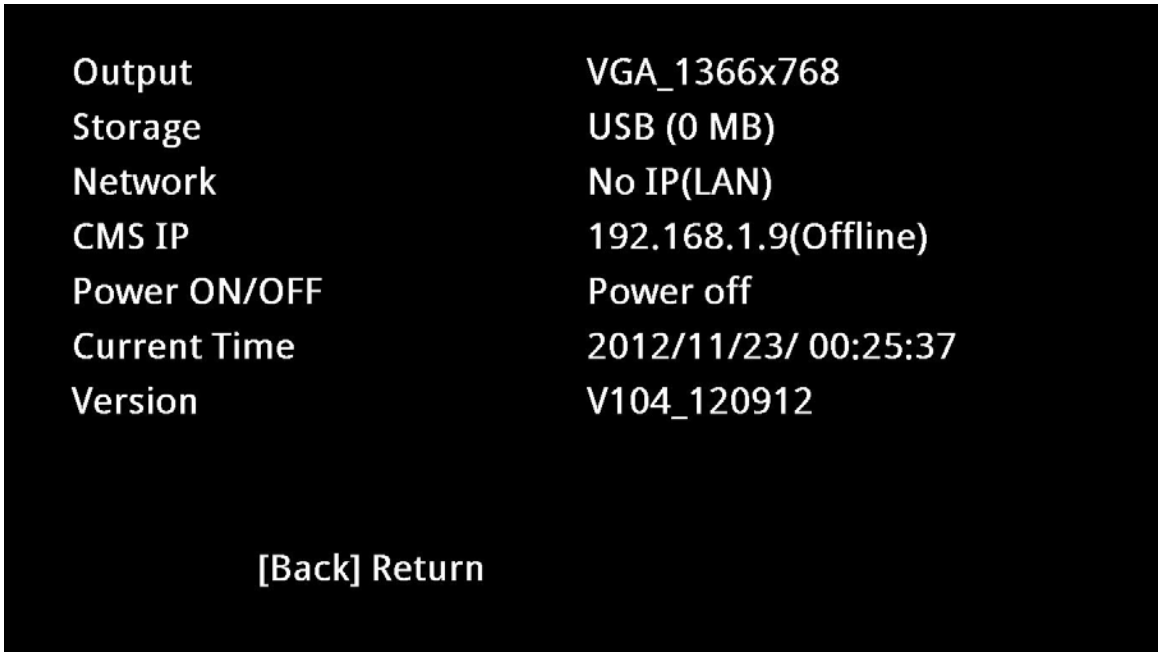


Figure 3-4

- **Output:** Shows the video output and resolution.
- **Storage:** Shows whether the local storage is set to SD or USB. The remaining storage space is shown in parenthesis.
- **Network:** Shows the IP address of the device.
- **CMS IP:** Shows the IP address of CMS Lite or CMS Server.
- **Power ON/OFF:** Shows whether the Power ON/OFF function is enabled or not.
- **Current Time:** Shows the current date and time.
- **Version:** Shows the firmware version of the device.

3.5 Setting the Time

3.5.1 Setting the System Time

To set up the system time, select **Time Adjustment**  . The following window appears.

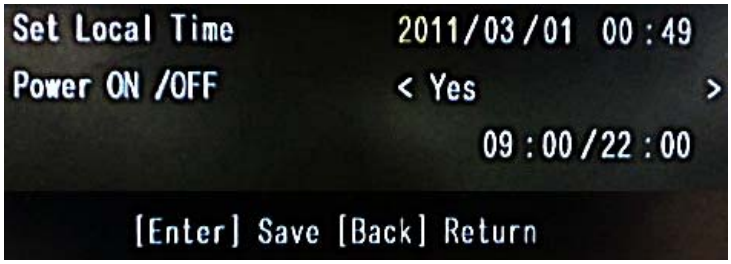


Figure 3-5

- **Set Local Time:** Set up the date and time.
- **Power ON/OFF:** Select **Yes** and set up the power on and off time. For example, if you set the power on/off to 09:00/22:00, the device will automatically turn on at 9 am and turn off at 10 pm daily.

3.5.2 Setting the Time Zone

To set up the time zone, select **Factory**  and use the arrow button from the remote control to define the time.

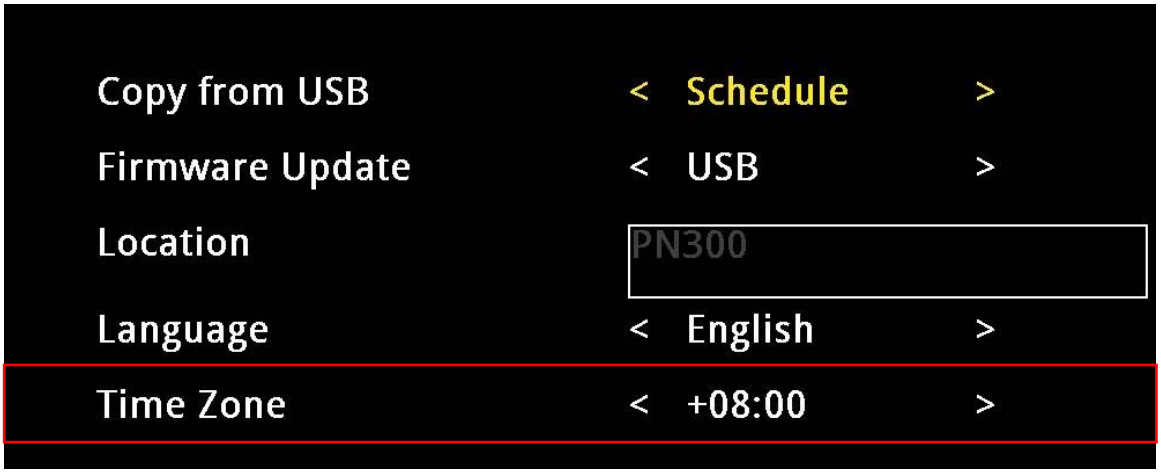


Figure 3-6

3.6 Setting the Network

You can configure the network settings of the device to establish a wired or a wireless network connection. The network connection allows you to manage the media files from a remote Content Management System (CMS). For details on CMS Lite or CMS Server, see *Chapter 7 CMS Lite* or *Chapter 8 CMS Server.*

By default, the device will be assigned an unused IP address automatically by the DHCP server when connected to the network.

3.6.1 Wired Network Connection

By default, the device will be assigned an unused IP address automatically by the DHCP server when connected to the network. If the device is installed in a LAN without the DHCP server, assign a fixed IP address for network access.

Figure 3-7

1. Select **Network**  and select **LAN Setting**.
2. To specify a static IP address for the device, select **NO** in the DHCP section and enter a fixed IP address, subnet mask and DNS and gateway.
3. Press **OK** to save the settings and connect to the network.

3.6.2 Wireless Network Connection

A GV-WiFi USB Dongle is required to connect the device to the wireless network.

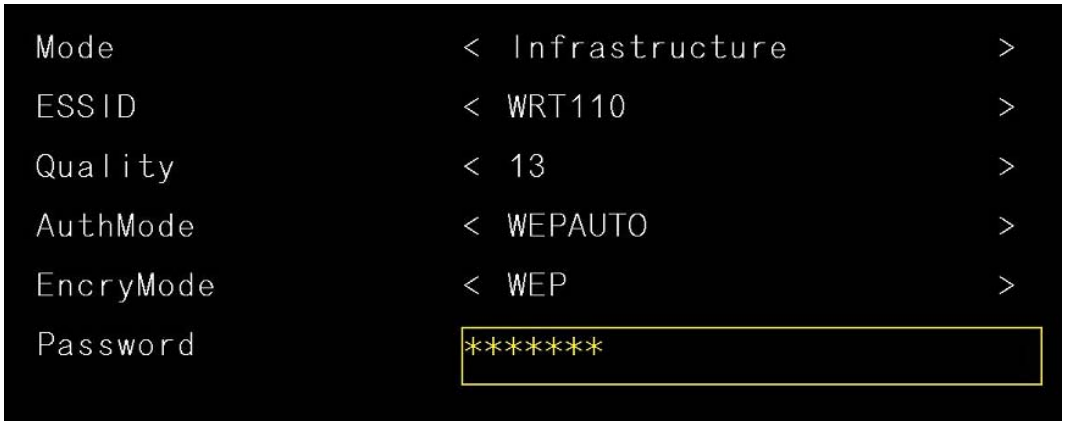


Figure 3-8

1. To establish a wireless network connection, select **Network**  and select **WLAN Setting**.
2. Press the **Search** button to scan for available Access Points / wireless stations.
3. Select an Access Point / wireless station in the **ESSID** field and complete the settings below.
   - **ESSID:** Shows the name of the Access Point. Press the left and right button to select an Access Point.
   - **Quality:** Shows the connection quality on a scale of 1 to 100 with 100 being the highest quality.
   - **AuthMode:** Select **WEP Auto** or **WPAPSK** according to the encryption setting of the Access Point.
   - **EncryMode:** Select the Encryption Mode according to the encryption setting of the Access Point.
   - **Password:** Type a password to match the Access Point. You can type up to 26 characters.
4. Press **OK** to save the settings and connect to wireless LAN.

3.7 Setting the Device Name

You can name the device by selecting **Factory**  , and entering a name in the **Location** field.

Figure 3-9

3.8 Copying Files from the USB Storage Device

You can always insert the SD card on the PN300 / SQP133 and use a USB storage device to transfer media files to the SD card.

1. Copy the **Schedule**, **Loop_Video** or **Scenario** folders to the USB storage device.
2. Connect the USB storage device to the device.
3. On the setup menu, select **Factory**  .
4. In the **Copy from USB** field, select the folder you want to replace: **Schedule**, **Loop_Video** or **Scenario**.

Figure 3-10

5. Press **OK**. The files will be replaced after the file transfer is complete.

Note: For details on the **Schedule**, **Loop_Video** and **Scenario** folders, see *Definitions of Folder Names, Appendix.*

3.9 Upgrading the Firmware

The latest firmware can be downloaded from the GeoVision Website. Follow the steps below to upgrade the device firmware.

1. Download the latest firmware from the GeoVision Website
2. Copy the firmware file to the root folder of a USB storage device or an SD card.
3. Connect the local storage.
4. On the setup menu, select **Factory**  .
5. In the **Firmware Update** field, select **USB** or **SD** storage that stores the firmware file.

Figure 3-11

6. Press **OK**. The firmware upgrade runs automatically, and the device will restart after the firmware upgrade is complete.

Note:

1. To upgrade the firmware through CMS Lite or CMS Server, see *7.9 Uploading the Firmware* or *8.15 Upgrading the Firmware*.
2. You need to allocate at least 100 MB in the device storage before upgrading the firmware.

3.10 Restoring to Factory Default Settings

To restore to default settings, follow the steps below.

Note: The power should always be on during the process of loading default value.

For **PN300 / PN400 / PN401**, use the default button on the device to restore default settings.

1. Press and hold the **Default** button on the front panel. The green LED will turn off after 8 seconds. Then you can release the **Default** button.
2. Wait until the green LED turns on. This may take about 10 seconds.
3. The process of loading default values is complete.

For **SQP133**, use the setup menu to restore default settings.

1. On the setup menu, select **Factory**  .
2. In the Load Default field, select **Yes** and select **OK** to confirm.

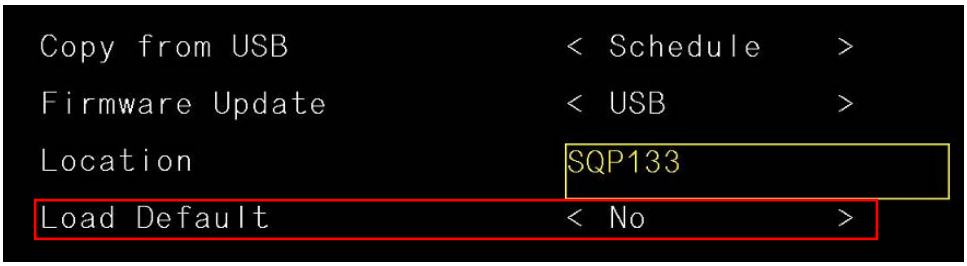


Figure 3-12

Chapter 4 System Setup for PN400 / PN401

You can customize the system settings of the PN400 / PN401.

4.1 The Setup Menu

Turn on the PN400 / PN401 and the connected monitor. The setup menu with seven setup options appears.

Figure 4-1

Name	Icon	Description
General		Configure general settings such as device name, language, resolution, storage device, audio volume or the size of the on-screen image.
Factory		Display the firmware version, upgrade the firmware or load the factory default settings.

Name	Icon	Description
Network		Set up the network.
Time		Set up the system time.
CMS (PN400)		For PN400, set up the CMS settings to connect the device to CMS Lite or CMS Server.
Service (PN401)		For PN401, set up the DSS settings to connect to the Digital Signage Management Server.
Power		Turn off the power, or set up a local schedule to turn on or off the power.
Information		Display the network information, storage information and the device firmware version.

4.2 Connectivity Status

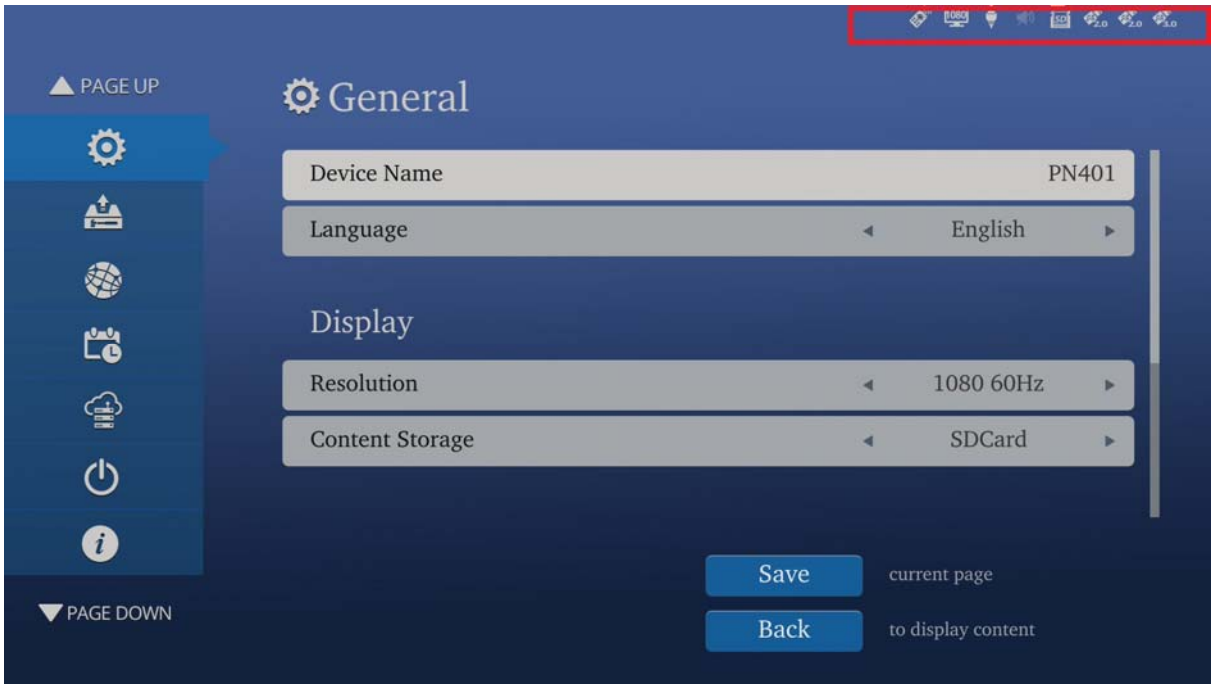


Figure 4-2

The connectivity statuses of the PN400 / PN401 are listed below.

Icon	Description
/	Network / PoE port is connected / disconnected.
	A mouse is connected.
	Content package is playing in 4K2K.
	Content package is playing in 1080p.
	The device is controlled by an IR remote.
/	An SD card is inserted / removed.
/	The audio is on / off.
/ /	USB 2.0 is connected / USB 3.0 is connected / USB ports are not connected.

4.3 Configuring the General Settings

To set up the general settings, select **General** . The following window appears.

Figure 4-3

- **Device Name:** Click to change the name of the device.
- **Language:** Select a language including English, French, German, Italian, Japanese, Portuguese, Russian, Spanish, Traditional Chinese (and Polski for PN401 only).
- **Resolution:** Select a screen resolution including 1080p at 30 Hz, 1080p at 60 Hz, 2160p at 24 Hz and 2160p at 30 Hz. The default is 1080p at 30 Hz for PN400 and 1080p at 60 Hz for PN401. The resolution change will cause the device to automatically reboot.
- **Content Storage:** Select a local storage to be **Disable**, **SD**, or **USB**.

The selections for configuring audio and video quality appears once the storage device is connected.

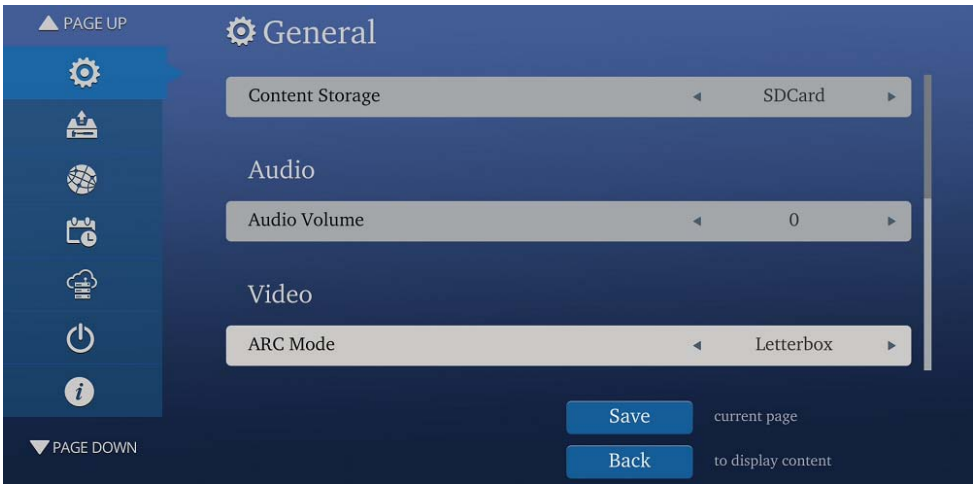


Figure 4-4

- **Audio:** Set the volume of audio.
- **Video:** Set the aspect ratio of the video. You can choose from **Letter Box**, **Scan and Pan**, and **Ignore**.

Note: For details on **Letter Box**, **Scan and Pan**, and **Ignore**, see *Definitions of Aspect Ratio Mode, Appendix.*

4.4 Upgrading the Firmware

The latest firmware can be downloaded from the GeoVision Website. Follow the steps below to upgrade the device firmware.

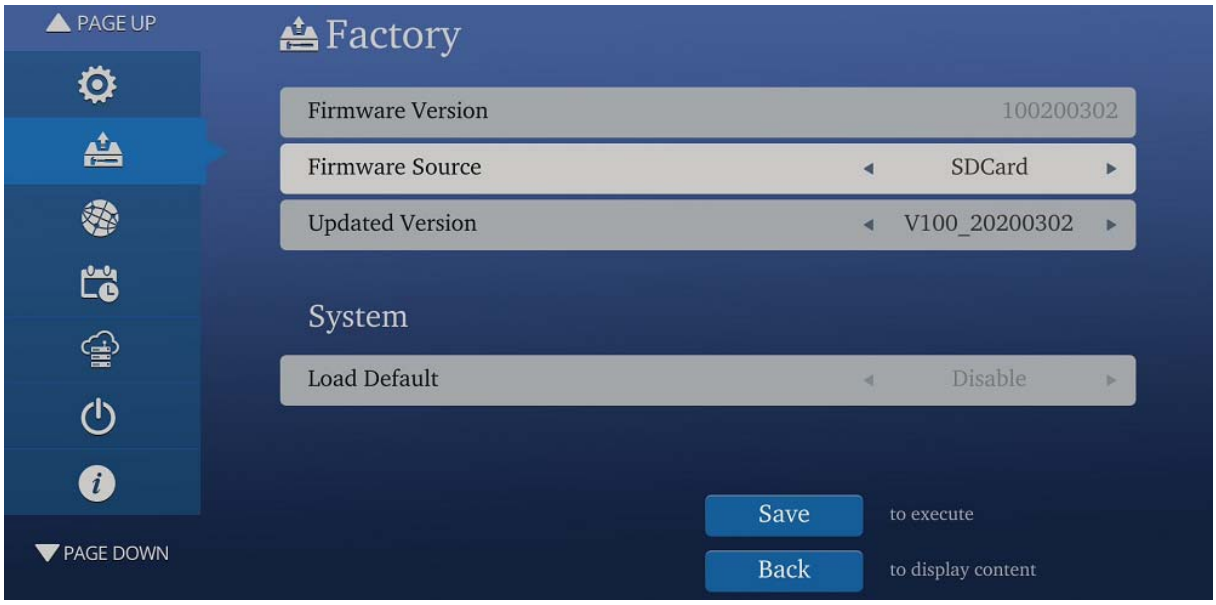


Figure 4-5

1. Download the latest firmware for PN400 or PN401 from the GeoVision website.
2. Copy the firmware file to the root folder of a USB storage device or an SD card.
3. Connect the local storage.
4. On the setup menu, select **Factory** .
5. In the **Firmware Storage** field, select **USB** or **SD** storage that stores the firmware file.
6. For PN400, select the firmware file in the **Firmware Image** field.

   For PN401, select the firmware file in the **Updated Version** field.
7. Press **Save**. The firmware upgrade runs automatically, and the device will restart after the firmware upgrade is complete.

8. The Firmware version shows the version number of the current Firmware.
9. To load default, select **Enable** and click **Save**.

Note:

1. To upgrade the firmware through CMS Server or CMS Lite, see *7.9 Uploading the Firmware* or *8.15 Upgrading the Firmware*.
2. You need to allocate at least 100 MB in the device storage before upgrading the firmware.

4.5 Setting the Network

You can configure the network settings of the device to establish a wired or a wireless network connection.

Note: For PN400 and PN401, the network connection allows you to manage media contents from a remote content management server. For PN400, see *Chapter 6 CMS Lite* or *Chapter 7 CMS Server*. For PN401, see *Chapter 10 Digital Signage Management Server*.

4.5.1 Wired Network Connection

By default, the device will be assigned an unused IP address automatically by the DHCP server when connected to the network. If the device is installed in a LAN without the DHCP server, assign a fixed IP address for network access.

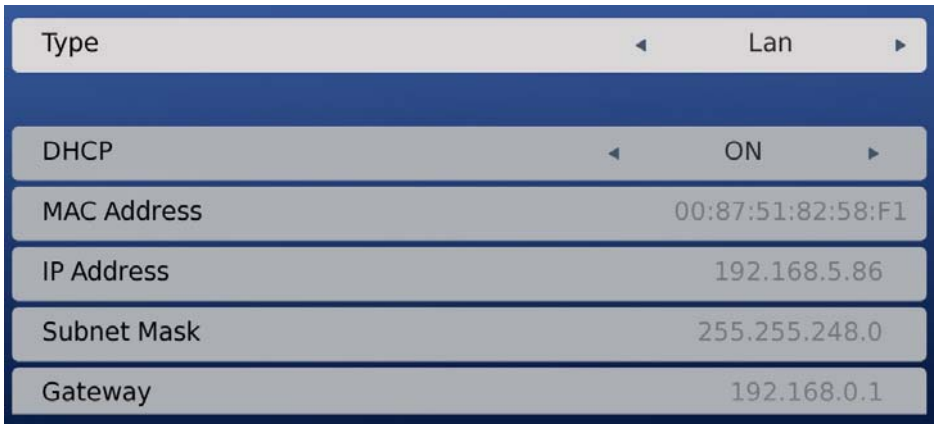


Figure 4-6

1. Select **Network** . Select **Lan** in the **Type** field.

   To specify a static IP address for the device, select **OFF** in the **DHCP** field and enter a fixed IP address, subnet mask and gateway.

2. Press **Save** to save the settings and connect to the network.

Note: If you disable DHCP, the device is assigned with the default IP address of **192.168.0.100**.

4.5.2 Wireless Network Connection

Note: Wireless Network is not supported by PN401.

A GV-WiFi Adapter V2 is required to connect PN400 to the wireless network.

Figure 4-7

1. Select **Network** . Select **Wi-Fi** in the **Type** field.
2. Select an Access Point / wireless station in the **ESSID** field, and type a password in the **Password** field to match the Access Point. You can type up to 26 characters.
3. The following status of the WiFi settings appears.

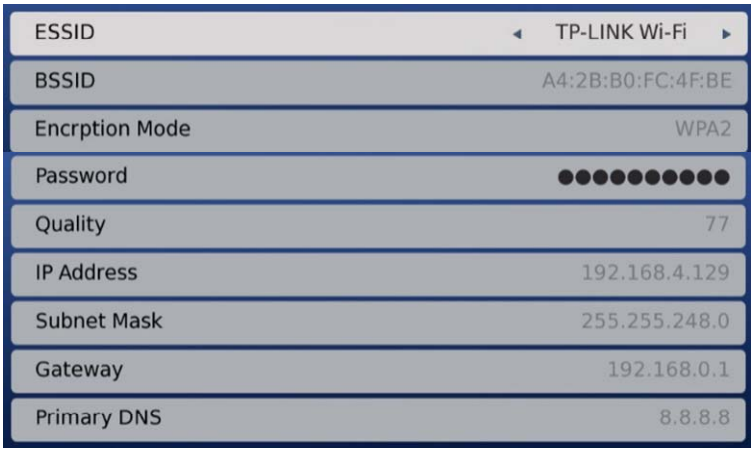


Figure 4-8

- **BSSID**: Shows the MAC Address of the Access Point device.
- **EncryMode:** Shows the encryption setting of the Access Point.
- **Quality:** Shows the connection quality on a scale of 1 to 100 with 100 being the highest quality.
- **IP Address** / **Subnet Mask** / **Gateway** / **Primary DNS:** Shows the IP Address / Subnet Mask / Gateway / Primary DNS that the Access Point assigns to your PN400.

4. Press **Save** to save the settings and connect to the network.

4.6 Setting the Time

To set up the system time, select **Time** . The following window appears.

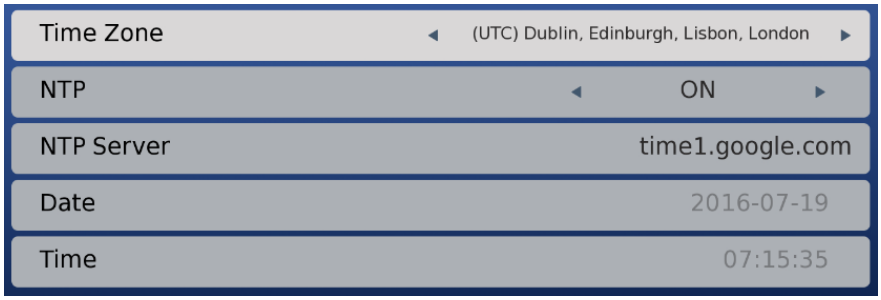


Figure 4-9

- **Time Zone:** Select a time zone.
- **NTP:** Select **ON** to synchronize the clock of the device over network.
- **NTP Server:** Enter the URL of a network time server.
- **Date:** Set up the date.
- **Time:** Set up the time.

4.7 Connecting to CMS

Note: CMS Lite and CMS Server are not supported by PN401. For details on the **Service** function on PN401, see *10.2 Connecting PN401 to Digital Signage Management Server*.

To set up CMS settings for connection to CMS Lite or CMS Server, select **CMS**. The following window appears.

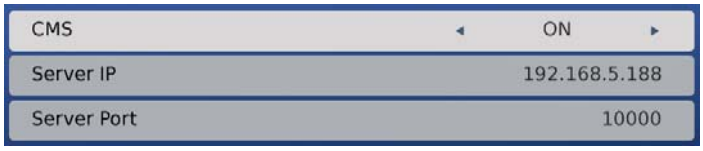


Figure 4-10

- **CMS:** Select **ON** to connect the device to CMS Lite or CMS Server.
- **Server IP:** Enter the IP address of CMS Lite or CMS server.
- **Server Port:** The default port for connecting to CMS lite or CMS Server is 10000. Modify it if necessary, to match the port on the server.

4.8 Scheduling the Power On and Off

To set up a period of time to automatically turn on and off the device, select **Power**. The following window appears.

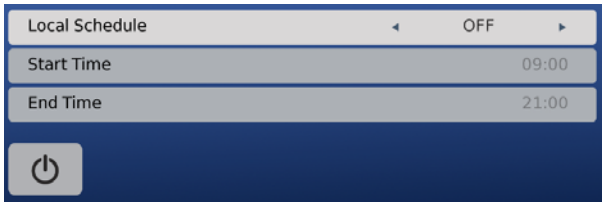


Figure 4-11

- **Local Schedule:** Select **ON** to automatically turn on and off for a time period.
- **Start Time:** Set the time to turn on the power.
- **End Time:** Set the time to turn off the power.

Note: When you click the button on the window (Figure 4-11), the power will be turned off. When you move the mouse or press any button on the IR remote control, the power will be turned on again.

4.9 Looking Up Device Information

To see the information of the device, select **Information** . The following window appears.

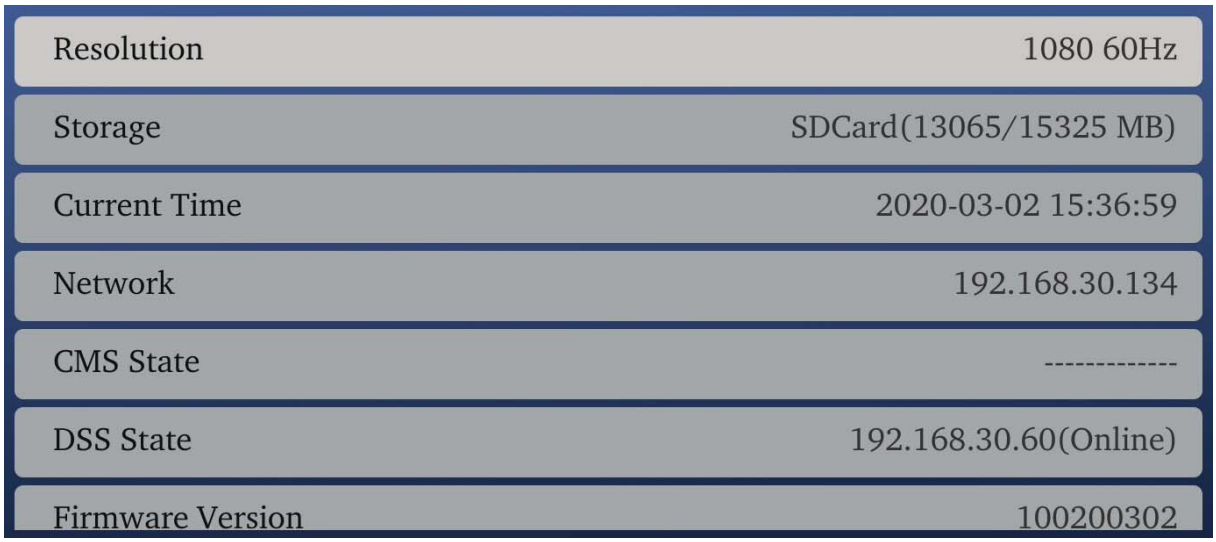


Figure 4-12

- **Resolution:** Shows the video resolution.
- **Storage (Available/Total):** Shows whether the local storage is set to SD or USB. The available and total storage space is shown in parenthesis.
- **Current Time:** Shows the current date and time.
- **Network:** Shows the IP address of the device.
- **WiFi Quality:** Shows the WiFi connection quality on a scale of 1 to 100 with 100 being the highest quality. (PN400 only)
- **CMS State:** Shows the IP address of CMS Lite or CMS Server. Its connection status is shown in parenthesis.
- **DSS State:** Shows the IP address of the Digital Signage Management Server. (PN401 only)
- **Firmware Version:** Shows the firmware version of the device.

Chapter 5 Content Designer

Using the Content Designer, you can design your own digital content package. You can create a project contained with images, videos, scrolling tickers, RSS feeds or QR code for digital signage presentations.

5.1 Minimum System Requirements

The minimum system requirements to install and run the Content Designer:

OS Supported	**32-bit**	Windows 7 / 8 / 8.1 / 10 / Server 2008
	64-bit	Windows 7 / 8 / 8.1 / 10 / Server 2008 R2 / Server 2012 R2
CPU		4th generation Core i3-4130, 3.4 GHz
RAM		4 GB
HDD		80 GB
Graphic Card		AGP or PCI-Express, 1024 x 768 (1280 x 1024 recommended), 32-bit color
DirectX		9.0c
.NET Framework		4.0

5.2 Installing the Content Designer

To download and install the Content Designer, follow the steps below.

1. Download and install the DirectX9.0c and .Net Framework 4.0:
   - DirectX 9.0c:
     http://www.microsoft.com/en-us/download/details.aspx?id=34429
   - Microsoft .Net Framework 4.0
     http://www.microsoft.com/en-us/download/details.aspx?id=17851
2. Go to GeoVision's website and select **Content Designer**.
3. Unzip the downloaded file and click **ContentDesigner.zip**.
4. Follow the procedures until the installation is complete.

5.3 The Menu Bar

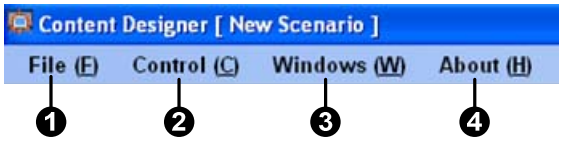


Figure 5-3

No.	Name	Function
1	File	Create, open or export a scenario or a project.
2	Control	Select a transition mode for the displayed for the displayed images or set up the foreground effect.
3	Windows	Add gridlines and select the color of the grid line on the canvas to help edit the project, or change the language setting.
4	About	Display the version properties of the Content Designer.

Note: The Control tab is not available for PN400 / PN401.

5.4 Creating a Project

Follow the instructions below to create a project.

5.4.1 Create a Screen Layout

1. To create a project, click **File** on the menu bar and select **New Scenario**.
2. Select **PN300**, **SQP133**, **GV-3D People Counter**, **PN400, or PN401** and a screen resolution. Rotation is available only for PN300 and SQP133.

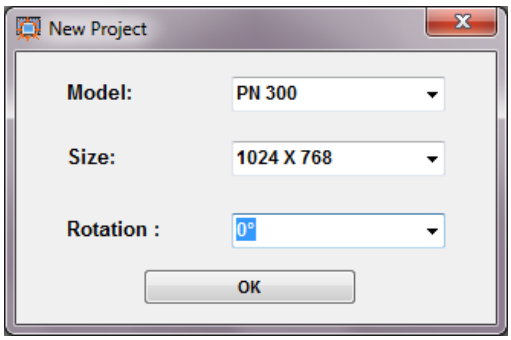


Figure 5-4

Note: The Content Designer supports the following resolutions:

PN300

HDMI at 60 Hz	720 x 480 (480p)	1280 x 720 (720p)	1920 x 1080 (1080i)	1920 x 1080 (1080p)
VGA at 60 Hz	640 x 480	1024 x 768	1280 x 768	1366 x 768

PN400 / PN401

HDMI	1080p at 30 / 60 Hz	4K2K (2160p) at 24 / 30 Hz

---

3. Click the **Rotation** drop-down list to select **0°** for the landscape display or **90°** for the portrait display. Here we choose the landscape display to show you the following instructions.

Note: The Rotation function is not supported by PN400 / PN401.

---

4. Select a desired template or select **Null** to create your own layout.

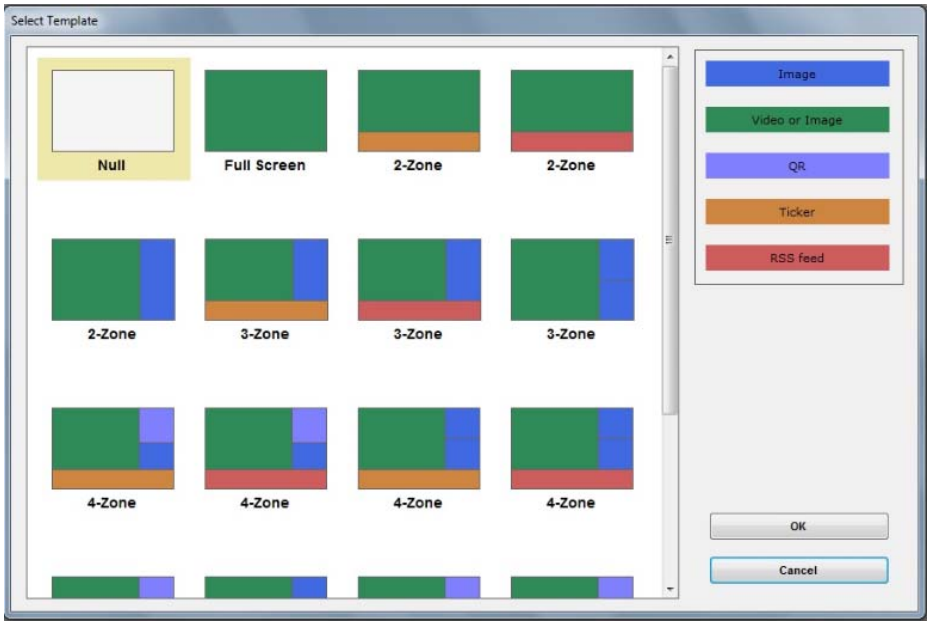


Figure 5-5

5.4.2 The Main Screen

After the screen layout is selected, the main screen appears.

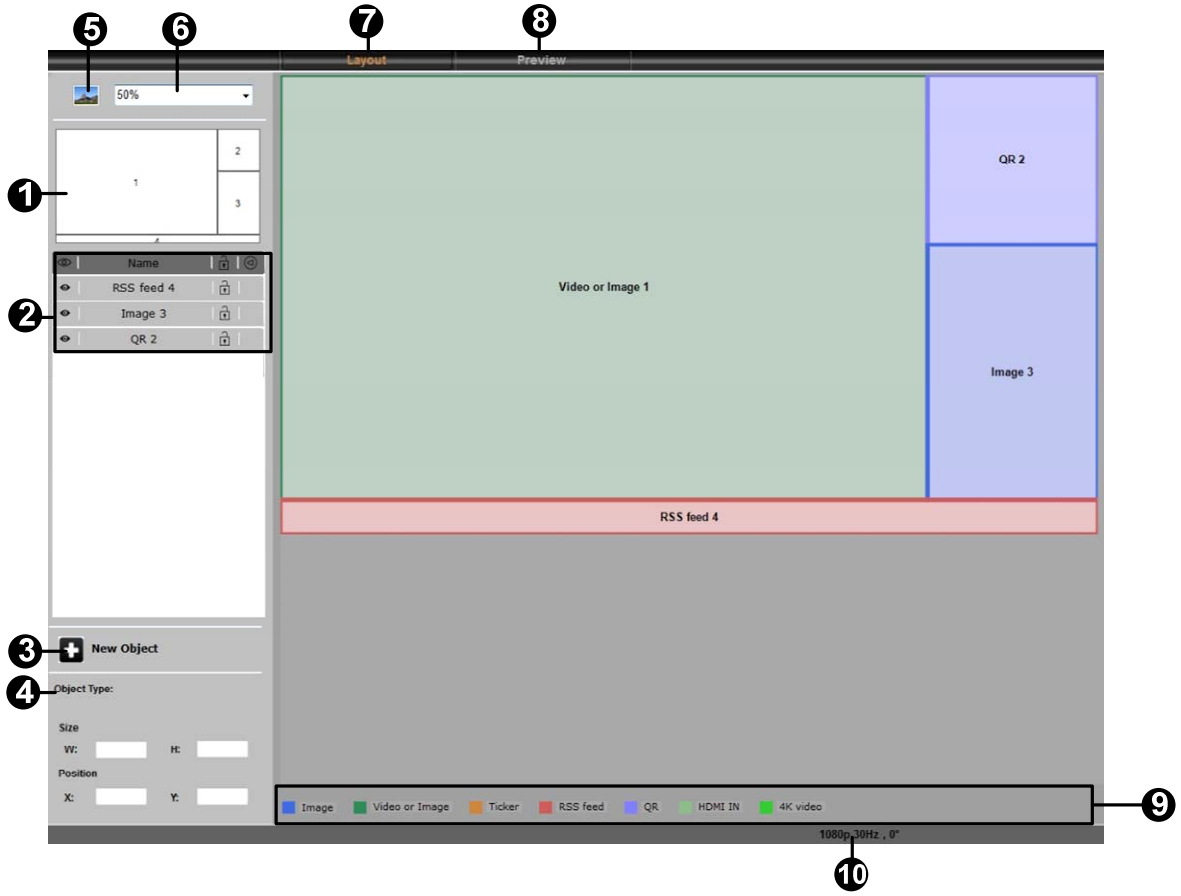


Figure 5-6

No.	Name	Function
1	Overview	Display the location of an object (or a zone) on the layout.
2	Object Menu	■ **Eye** : Hide or show the layer of the selected object/zone. ■ **Lock** : Lock or unlock the object from being edited in the layout. ■ **Audio** : Disable or enable the audio of an object.

No.	Name	Function
3	New Object	■ **QR:** Add an object (or a zone) to include QR code. ■ **Ticker:** Add an object (or a zone) to include a scrolling ticker. You can only add up to 32 scrolling tickers to a project. ■ **Image:** Add an object (or a zone) to include an image. ■ **Video:** Add an object (or a zone) to include a video file. You can add up to two videos to a project. ■ **RSS feed:** Add an object (or a zone) to include a RSS. You can only add one RSS to a project. ■ **HDMI In:** Receives signals from a HDMI-compatible source device, e.g. a DVD player or digital TV box. ■ **4K Video:** Add a video with 4K resolution or H.265 codec. Note that it is an either-or option between the Ticker and the RSS feeds.
4	Object Type	Type figures in the Size and Position boxes to modify the size and the location of an object (or a zone).
5	Background Image	Add a background image in PNG, BMP or JPEG format by clicking **Browse**.
6	Size	Enlarge or minimize the layout.
7	Layout	Select **Layout** to edit a project.
8	Preview	Select **Preview** to view the created project.

No.	Name	Function
9	Object Colors	■ **Blue:** Image files ■ **Green:** Video or image files ■ **Orange:** Scrolling Ticker ■ **Red:** RSS feeds ■ **Purple:** QR code ■ **Light green:** HDMI signal input ■ **Bright green:** 4K or H.265 video files
10	Resolution	Display the screen resolution and rotation degree of the project.

5.4.3 Assign Content to Zones

You can add new objects (zones) to the layout by clicking the **New Object** button 

and then selecting **Image**, **Video**, **Ticker, RSS feed**, **QR**, **HDMI in** or **4K video**. Up to seven objects (zones) can be included in a layout, with two video objects and one scrolling ticker/RSS feeds allowed. Dragging the sides of the object (or zone) can change the position or size of objects (zones).

1. To add videos:

Note:

1. The object **HDMI in** is only available for PN400.
2. **4K video** refers to a video with 4K resolution or H.265 video codec.
3. Up to 2 videos are allowed in a layout, including a combination of one **HDMI in** and one **video**, or one **4K video** only.
4. For **H.264** video, the max data rate supported is 10 Mbit/s. For **H.265** video, that is 5 Mbit/s.

A. Double-click the Video or Image object (zone).

B. Click the **Browse** button  to browse the folder containing video files.

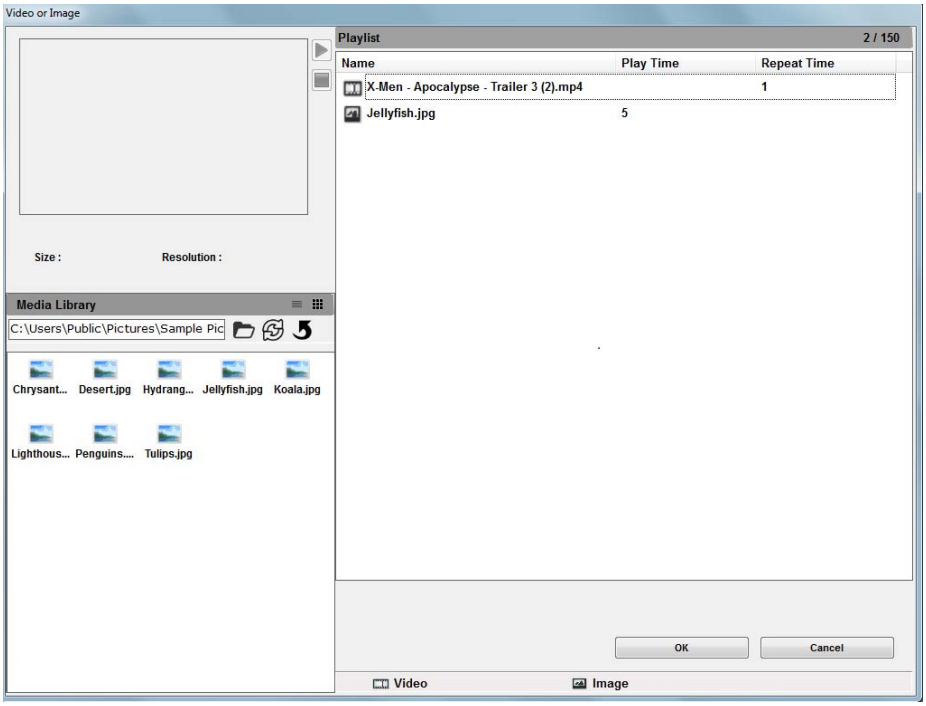


Figure 5-7

C. Drag the desired videos to the playlist. Up to 50 video and image files, with 2 videos at the maximum, can be added. To change the order of files on the playlist, right-click the file and select **Top, Up, Down** or **Bottom**.

D. To define the repetition of a video:

- Only for PN400 and PN401, right-click a file on the playlist, select **Properties** and specify the number of times to repeat the video **(Repeat Time)**.

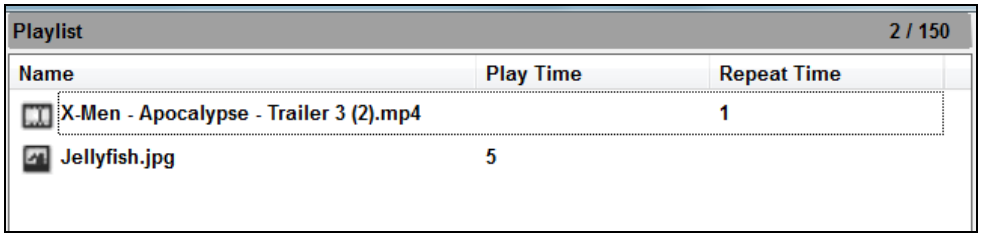


Figure 5-8

Note: The default of repeat shows “1” which means no repeat.

2. To add images:

Note:

1. The image formats supported are .PNG, .BMP and .JPEG.
2. For PN400 and PN401, if you select the image of 1080p (1920 x 1080), the maximum file size supported is 2 MB and if you select 2160p (3480 x 2160), that is 4 MB.

A. Double-click the **Image** object (zone).

B. Click the **Browse** button  to browse the folder containing image files.

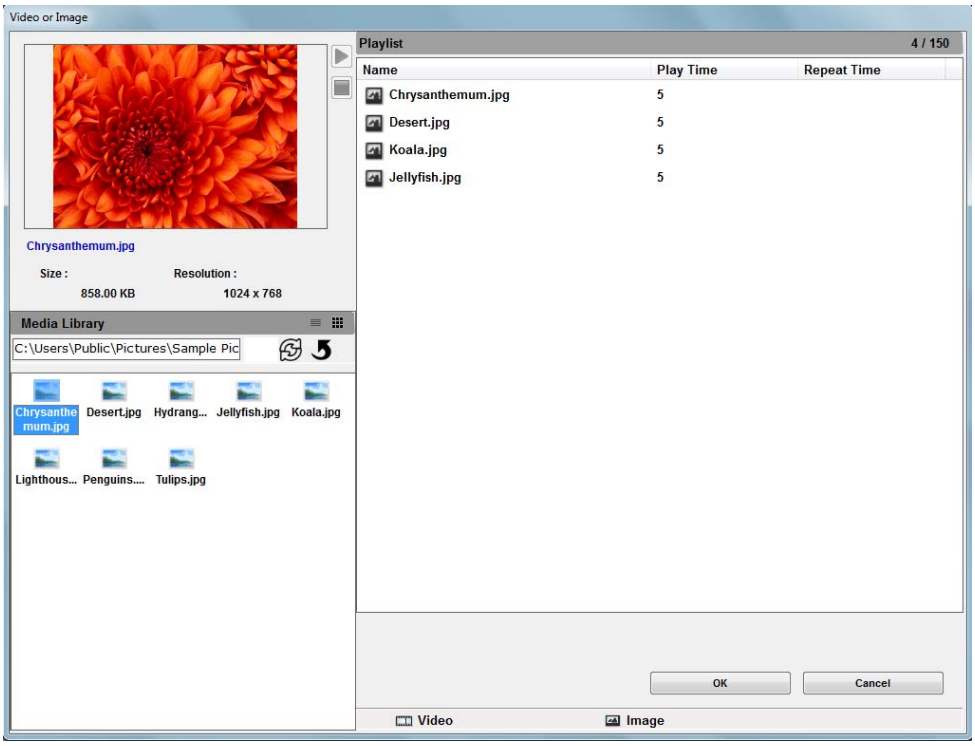


Figure 5-9

C. Drag the desired images to the playlist. Up to 50 images can be added. To change the order of images on the playlist, right-click the image and select **Top, Up, Down** or **Bottom**.

D. To define the duration of an image:

- For PN300, specify the duration of an image in seconds **(Interval)** at the bottom of the dialog box.
- For PN400 and PN401, right-click an image on the playlist, select **Properties** and specify the duration of the image in seconds **(Play Time)**.

E. Only for PN300, to overlap the image on a video in semi-transparent form, select **Transparent**.

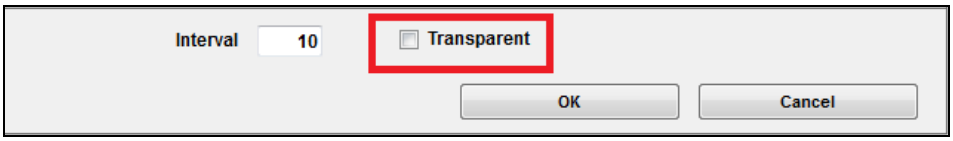


Figure 5-10

F. Click **OK**.

3. To add a scrolling ticker:

A. Double-click the **Ticker** object (zone). This dialog box appears.

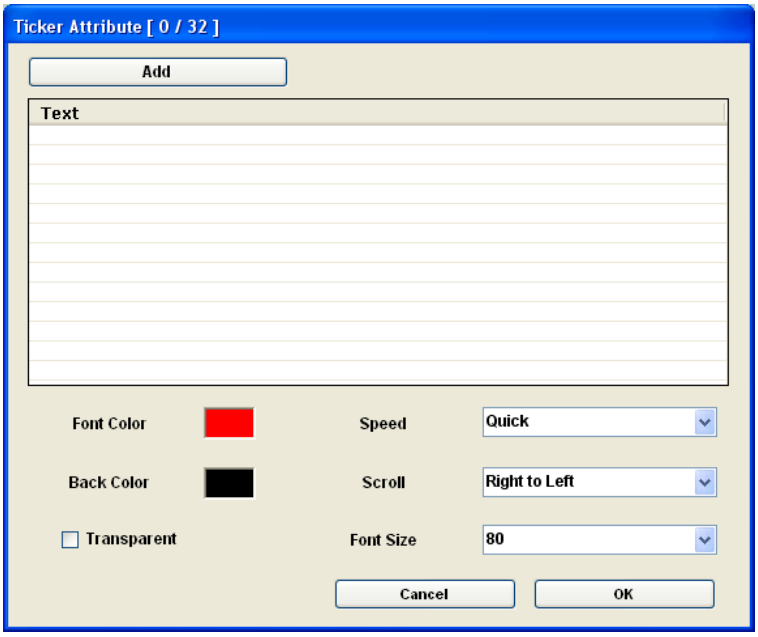


Figure 5-11

B. Click **Add** to add the text to the text list. This dialog box appears.

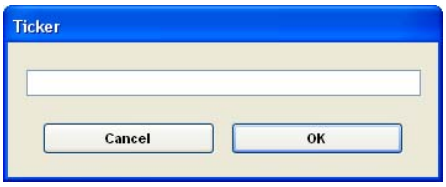


Figure 5-12

C. Type the text you want to display for the ticker. Up to 32 tickers can be added. To edit, delete or change the display order, right-click a ticker to access these options.

D. Optionally, you can change the font, background color and font size of the text. You can also select the speed and scrolling direction to display the text.

E. Only for PN300, to overlap the tickers on a video in semi-transparent form, select **Transparent**.

F. Click **OK**.

Note: In the portrait mode, the ticker can solely be displayed on the bottom.

---

4. To add a QR code:

A. Double-click the **QR** object (zone).

B. In the Text section, type the desired content you want to display in the QR code.

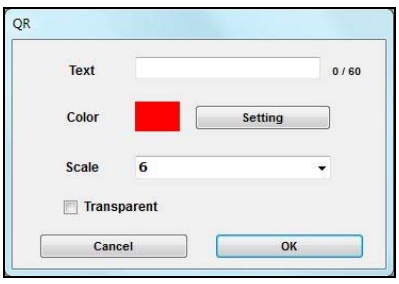


Figure 5-13

C. Optionally, you can change the QR code color by clicking the **Setting** button or the QR object size by clicking the **Scale** drop-down list.

D. Only for PN300, to overlap the QR codes on a video in semi-transparent form, select **Transparent**.

E. Click **OK**.

5. To add the RSS feeds:

A. Double-click the **RSS feed** object (zone).

B. In the Feed URL section, click the ... button and select a source of news headlines from the list.

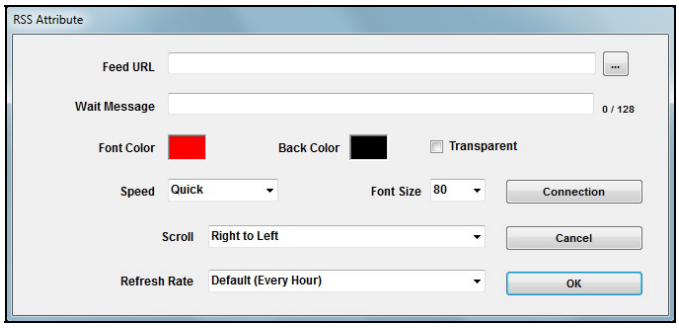


Figure 5-14

C. Click the **Connection** button to test the selected Feed URL to find out if the news link is available.

D. In the **Wait Message** field, type the text message to display on the device before it receives the RSS feeds. This Wait Message solely appears at the first time this function being applied.

E. Optionally, you can change the font, background color and font size of the text. You can also select the speed and scrolling direction to display the text.

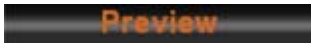
F. Only for PN300, to overlap the RSS feeds on a video in semi-transparent form, select **Transparent**.

G. In the **Refresh Rate** drop-down list, define how often you want to refresh the news headlines.

H. Click **OK**.

Note: It is an either-or option for the Ticker and the RSS feeds.

5.4.4 Preview and Save Screen Layout

1. To preview the created project, click **Preview** 

on the main screen.
2. To save the project, click **File** and select **Output Scenario**.
3. Name the project in the **Scenario Name** field, and choose its size. Click 

to browse the location to save the project.

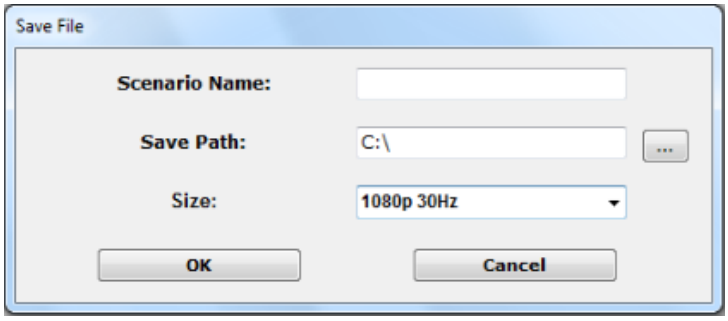


Figure 5-15

Tip: You can create multiple Scenario projects and play them repeatedly with each Scenario project for 5 minutes. See *Loop Scenario* in *Appendix A. Definition of Folder Names*.

Note:

1. Do not use space in the Scenario Name if you want to include the scenario in a content schedule.
2. Windows Media Player is required to preview the project you created.

5.5 Playing the Project

To play the project, created using the Content Designer, on the PN300 / PN400 / PN401 / SQP133, follow the steps below:

To create a folder:

1. Create a folder named **Scenario** in a USB storage device or an SD card. If you like to play multiple projects repeatedly, create a folder named **Loop_Scenario**.
2. Copy the project files to the **Scenario** folder. Or copy multiple Scenario folders to the **Loop_Scenario** folder.

To turn on the device:

3. Connect the USB storage device or the SD card to the device.
4. Turn on the monitor and the device.
5. For PN300 / SQP133:
   - The local storage is set to the SD card by default. If you are using an SD card, the device will repeatedly play the files at this step.
   - If you are using a USB storage device, select **Play Source**  and select **USB** to be the storage.
6. For PN400 / PN401:

   The local storage is disabled by default. To select a storage device, select **General** and select **SD** or **USB**.
7. Press **Back** on the IR remote control to return the menu, and press **Back** again to start playing.

Note:

1. You can only store one project in the **Scenario** folder. If multiple projects are saved in the **Scenario** folder, the device will only play the last project. To play multiple projects, you can create a **Loop Scenario** folder or set up a schedule by using the Content Schedule software. See *Chapter 6 Content Schedule.*
2. The device will only play the files stored in the **Scenario** folder if both the **Scenario** and **Loop_Video** folders are in the storage device.

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3. You can also upload projects to the device using a central management system. See *Chapter 7 CMS Lite* or *Chapter 8 CMS Server* for more details.

Chapter 6 Content Schedule

The Content Schedule software allows you to create a weekly schedule to automatically start up the device and present content package at a specific date and time.

6.1 Minimum System Requirements

The minimum system requirements to install and run the Content Schedule:

OS Supported	**32-bit**	Windows 7 / 8 / 8.1 / 10 / Server 2008
	64-bit	Windows 7 / 8 / 8.1 / 10 / Server 2008 R2 / Server 2012 R2
CPU		4th generation Core i3-4130, 3.4 GHz
RAM		4 GB
HDD		80 GB
Graphic Card		AGP or PCI-Express, 1024 x 768 (1280 x 1024 recommended), 32-bit color
.NET Framework		4.0

6.2 Installing the Content Schedule

To download and install the Content Schedule, follow the steps below.

1. Download and install the DirectX9.0c and .Net Framework 4.0:
   - DirectX 9.0c
     http://www.microsoft.com/en-us/download/details.aspx?id=34429
   - Microsoft .Net Framework 4.0
     http://www.microsoft.com/en-us/download/details.aspx?id=17851
2. Go to GeoVision's website and select **Content Schedule**.
3. Unzip the downloaded file and click **ContentSchedule.zip**.
4. Follow the procedures until the installation is complete.

6.3 Setting the Content Schedule

1. Start the Content Schedule software, and this dialog box appears. You can create up to 3 content schedules by using three sets of **Power On** and **Power Off** settings.

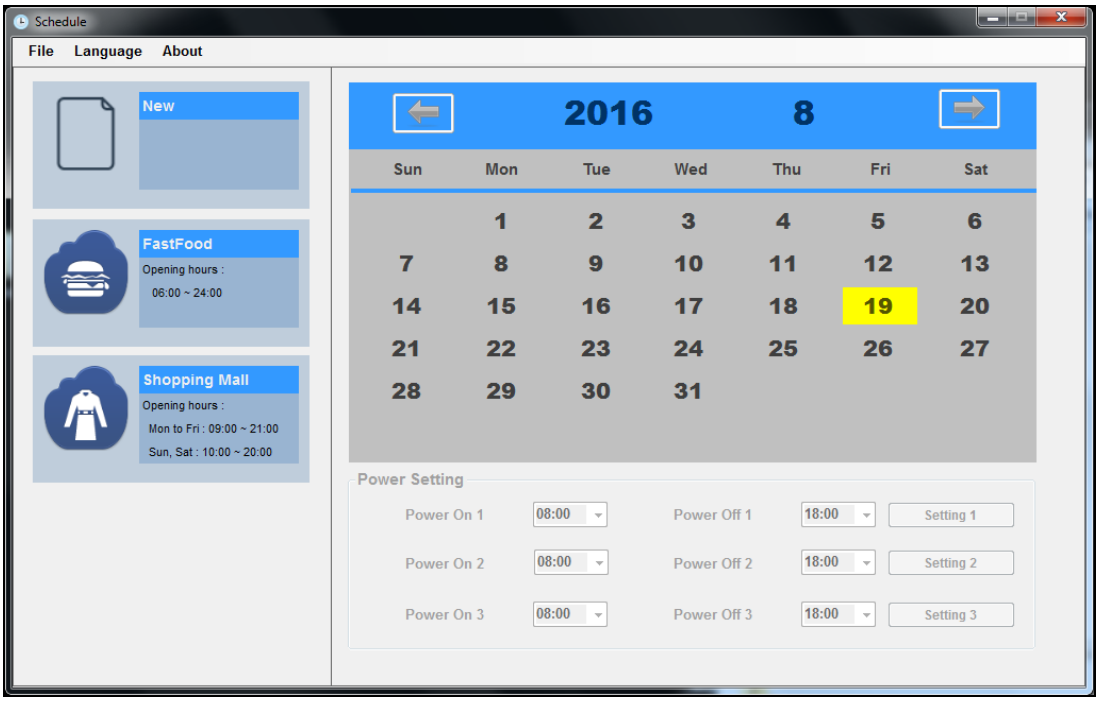


Figure 6-1

2. To create the first content schedule, click the **New** box on the template list, or click on the **Fast Food** or **Shopping Mall** box to use the readymade templates. Select the model from this dialog box.

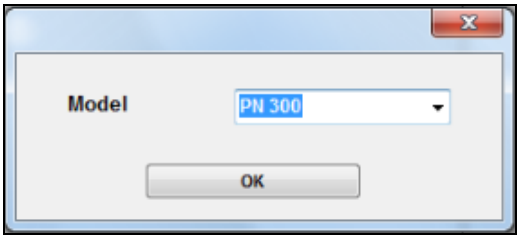


Figure 6-2

3. Specify the time for the device to automatically turn on and turn off in the **Power On** and **Power Off** drop-down lists.

Figure 6-3

4. Click the **Setting 1** button to set up the first schedule. This dialog box appears.

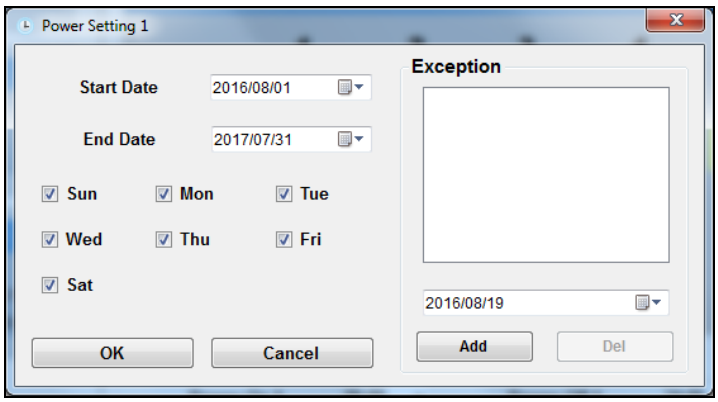


Figure 6-4

5. Specify the date and day(s) to play the media files.
6. To exclude certain dates from the schedule, select the dates from the drop-down list, and click **Add**.

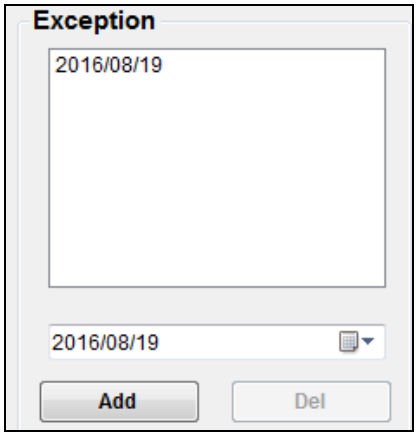


Figure 6-5

7. Click **OK**. This calendar appears. The scheduled dates are displayed in black color.

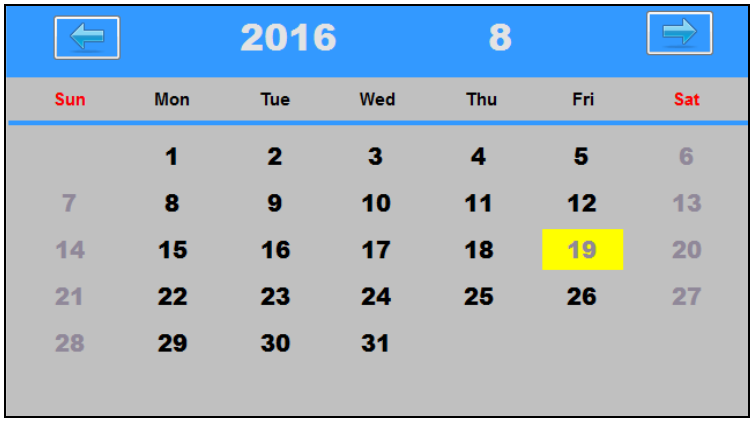


Figure 6-6

8. Double-click any of the scheduled dates in black. This setup box appears. You can further specify a period of time in a day to play the media files.

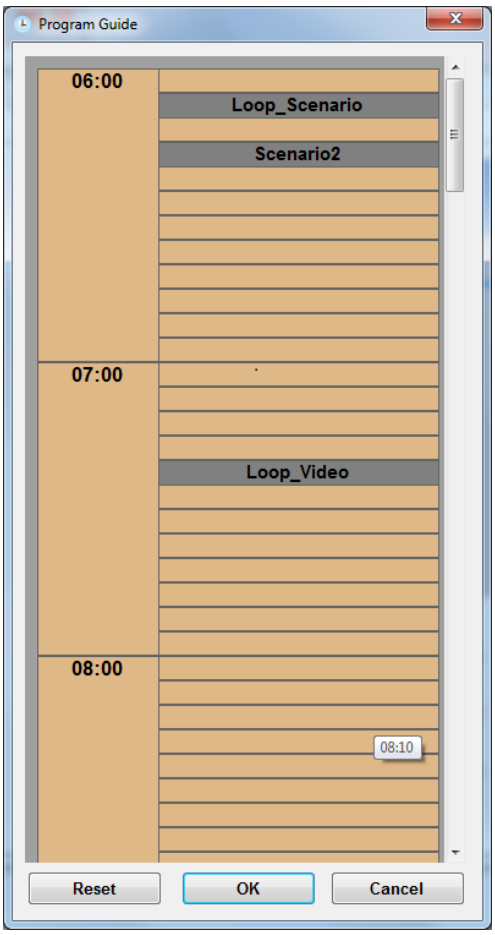


Figure 6-7

9. Click any time column. This dialog box appears. You can specify the type of media file and time to play.

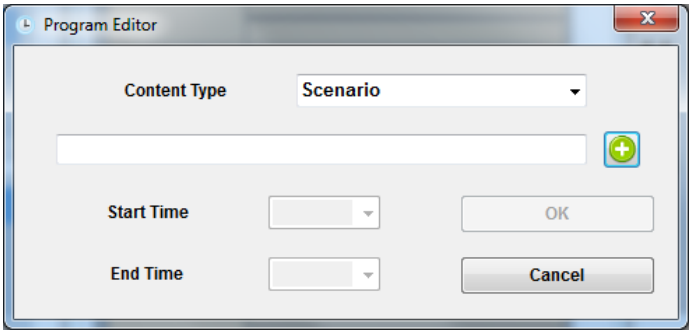


Figure 6-8

10. Select **Scenario** and **Loop Scenario** to play the project created using the Content Designer, or **Loop Video** to play some video and/or image files. If you select **Scenario** or **Loop Scenario**:

    A. Click the button to locate the Scenario folder, select **PN401.CONF**, **PN300.XML, PN400.CONF** or **SQP133.XML**, and click **Open**.

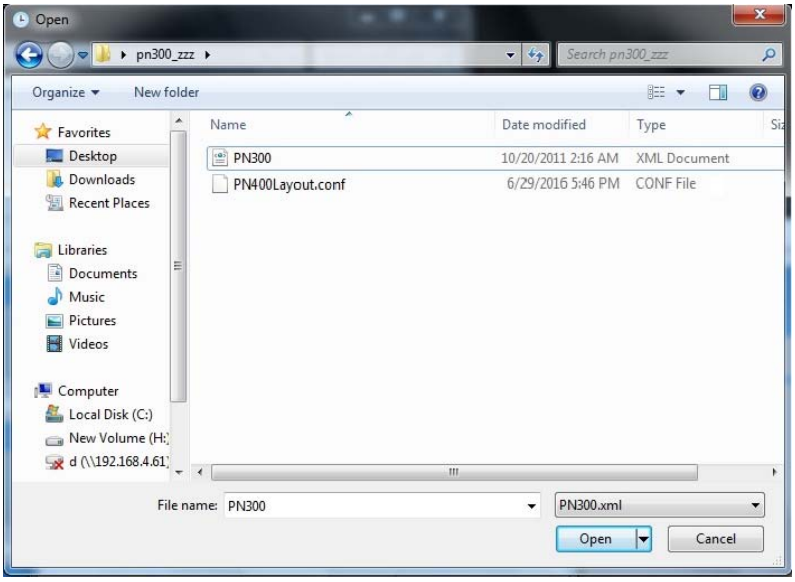


Figure 6-9

    B. Specify a period of time to play the Scenario files in the **Start Time** and **End Time** drop-down lists. Click **OK**.

11. You can create different periods of time to play different types of media files in a day by repeating steps 8 to 11.
12. Click **OK** in the Program Guide dialog box to apply the time settings to the selected date.
13. Repeat above steps to set up the second and the third content schedules, if necessary.
14. To save the schedule, click **File** and select **Export** on the main screen, name the schedule and click **File Transfer Completes** when this message box appears.

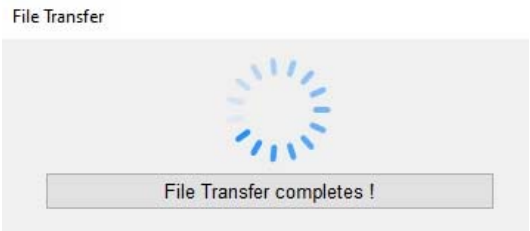


Figure 6-10

15. The schedule settings are exported to a folder. After opening the folder, you can find subfolders: **Scenario, Schedule, Loop_Video** and/or **Loop_Scenario**.

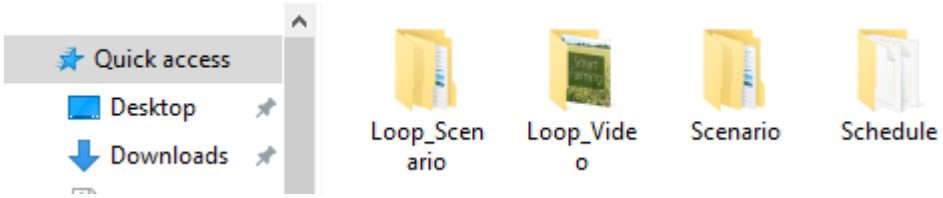


Figure 6-11

16. Store these subfolders folders in the storage device.
17. Connect the storage device to the digital signage device. It will automatically play the media files according to the schedule.

Note: Don't copy the exported folder directly to the local storage of the device. You need to copy the subfolders, such as **Schedule**, **Scenario**, **Loop Scenario** and/or **Loop Video** folders to it.

Chapter 7 CMS Lite

The CMS Lite is Content Management System, allowing you to remotely upload media files, scrolling tickers or firmware to multiple digital signage devices.

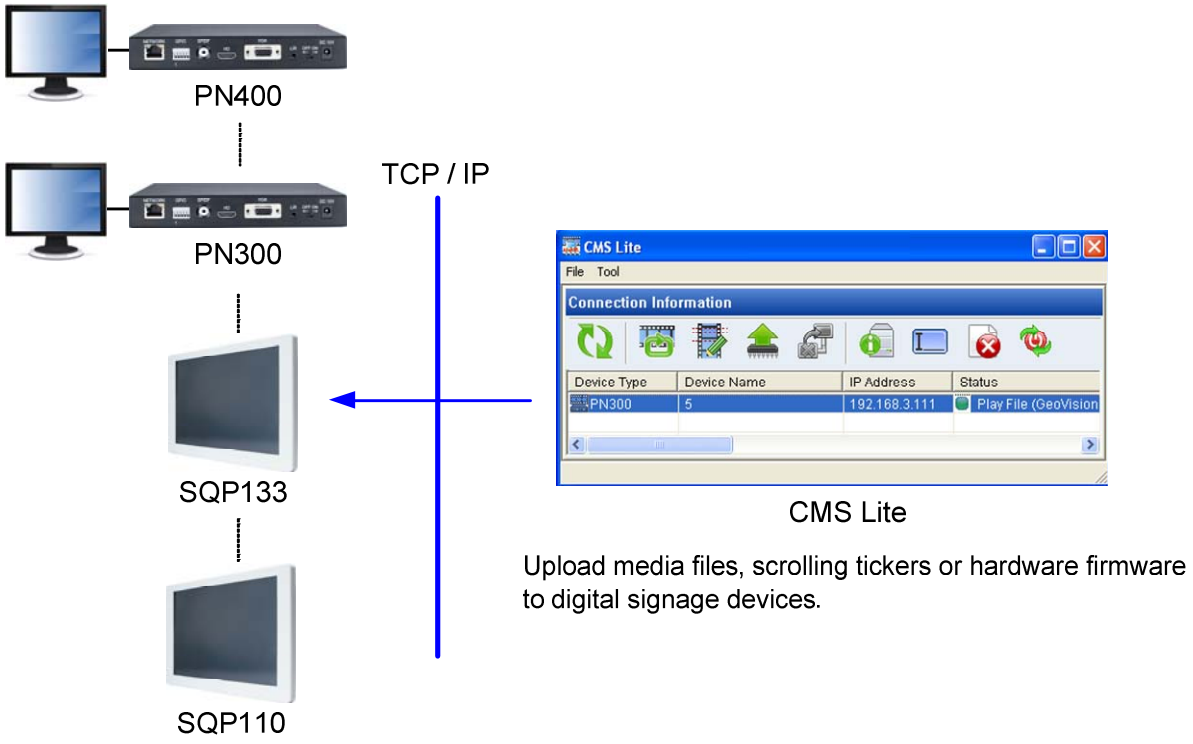


Figure 7-1

Note:

1. CMS Lite is not supported by PN401.
2. For details on SQP110, refer to *SQP110 Series User's Manual*.

7.1 Minimum System Requirements

The minimum system requirements to install and run the CMS Lite:

OS Supported	32-bit	Windows 7 / 8 / 8.1 / 10 / Server 2008
	64-bit	Windows 7 / 8 / 8.1 / 10 / Server 2008 R2 / Server 2012 R2
CPU		4th generation Core i3-4130, 3.4 GHz
RAM		4 GB
HDD		80 GB
Graphic Card		AGP or PCI-Express, 1024 x 768 (1280 x 1024 recommended), 32-bit color

7.2 Software License

The CMS Lite supports 50 units of digital signage devices for free. If you want to connect more devices to the CMS Lite, an additional dongle is required. Different number of connections is available for purchase, with 10 connections for every increment and up to 500 connections in maximum.

Free License	50 clients
Maximum License	500 clients
Increment for Each License	10 clients
Optional Combinations	N/A
Dongle Type	Internal or external

7.3 Installing the CMS Lite

To install the CMS Lite, follow the steps below.

Note: Before starting the CMS Lite, make sure you have inserted the dongle to the computer and installed the USB drivers for dongle; otherwise the additional number of connections will not be applied.

Installing from Software DVD

1. Insert the Software DVD to your computer. It runs automatically and a window pops up.
2. If you use a USB dongle, select **Install GeoVision USB Devices Driver** and follow the on-screen instructions.
3. Select **Install Content Management System** and then select **Install CMS Lite**, and follow the on-screen instructions.

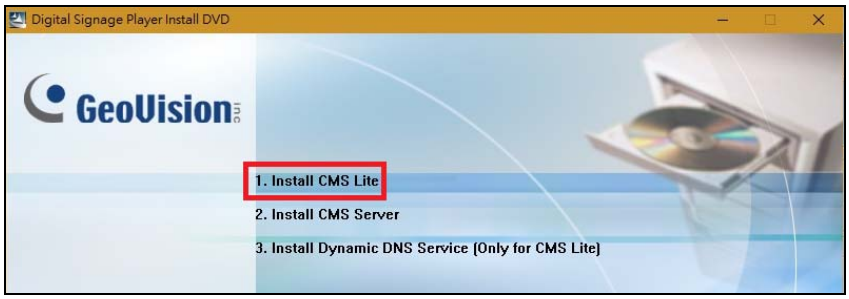


Figure 7-2

Downloading from GeoVision Website

1. Go to the Software Download and Upgrading page of GeoVision Website
2. Select the **Digital Signage** tab and click the **Download** icon DOWNLOAD of **CMS Lite (for PN400, PN300, SQP133 & SQP110)**.

Figure 7-3

7.4 Connecting the Devices to CMS Lite

To connect the device to CMS Lite, you have to set up the CMS settings. Make sure the device is already connected to the network. See *3.6 Setting the Network* (for PN300 / SQP133) and see *4.4 Setting the Network* (for PN400) for details.

1. To set up CMS settings:

   - For PN300 / SQP133: On the setup menu, select **Network** and select **CMS Setting**. This window appears

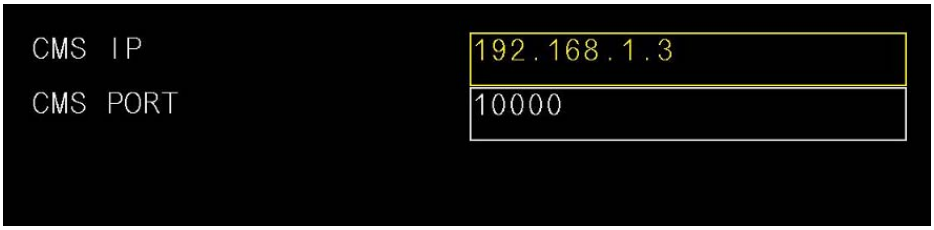


Figure 7-4

   - For PN400: Select **CMS**. This window appears.

Figure 7-5

2. In the **IP** field, specify the IP address of CMS Lite.
3. Keep the **Port** value as 10000 or modify it to match the port on the CMS Lite.
4. Press **OK** to save the settings. For PN400, it will restart.

When the CMS Lite is started, the devices will be connected to the CMS Lite automatically, the connection information will be listed.

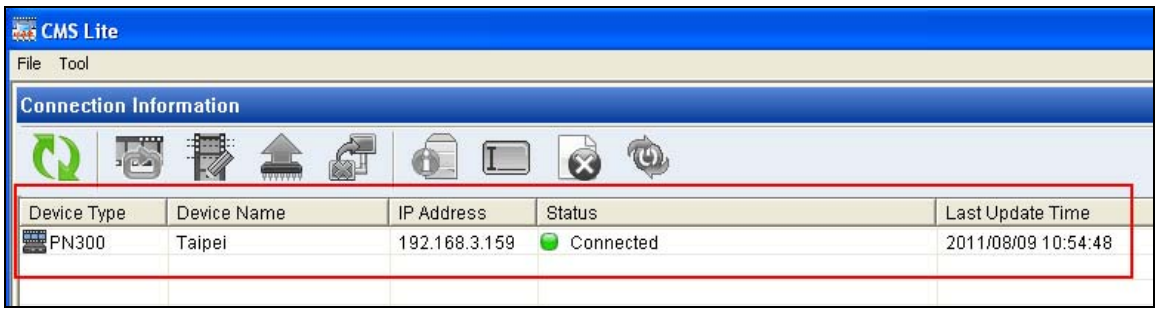


Figure 7-6

7.5 The Main Screen

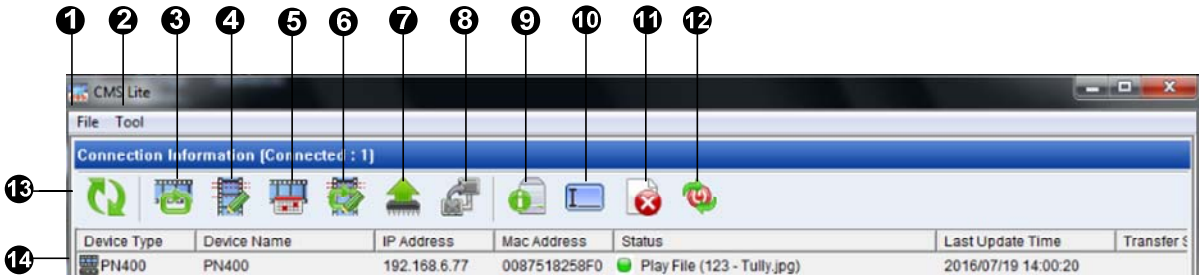


Figure 7-7

No.	Name	Function
1	File	Exit the CMS Lite.
2	Tool	**Configure:** Configure the communication port between the CMS Lite and the devices. The available port number is between 1 and 65534. The default value is 10000. **Version:** Display the version of the CMS Lite.
3	Upload Loop Video	Upload the video or image files to the device. See *7.6 Uploading Video and Image Files.*
4	Upload Scenario	Upload the Scenario project created using the Content Designer to the device. See *7.7 Uploading the Scenario or Loop Scenario.*
5	Schedule	Upload the content schedule to the device. See *7.8 Uploading the Schedule*.
6	Upload Loop Scenario	Upload the Loop Scenario files to the device. See *7.7 Uploading the Scenario or Loop Scenario.*
7	Upload Firmware	Upload firmware to the device. See 7.*9 Uploading the Firmware.*
8	Cancel Uploading	Cancel the process of uploading.
9	Edit Device Information	Change the device name. See 7.*11 Changing the Device Name*.

No.	Name	Function
10	Ticker	Upload the scrolling ticker to the device. See 7.*10 Uploading Scrolling Ticker.*
11	Remove Content	Remove the files saved on the local storage of the device.
12	Reboot	Reboot the device.
13	Reload	Refresh the information.
14	Information	Display the information of connected devices, including device type, device name, IP address, MAC address, status, last update time, transfer status, file name, transfer speed, free space, resolution and firmware version.

7.6 Uploading Video and Image Files

You can upload some video and/or image files to the device. To upload the desired video and/or images files, you must save these files to a **Loop_Video** folder first.

1. On the CMS Lite, select the desired device(s) and click the **Upload Loop Video** button  .

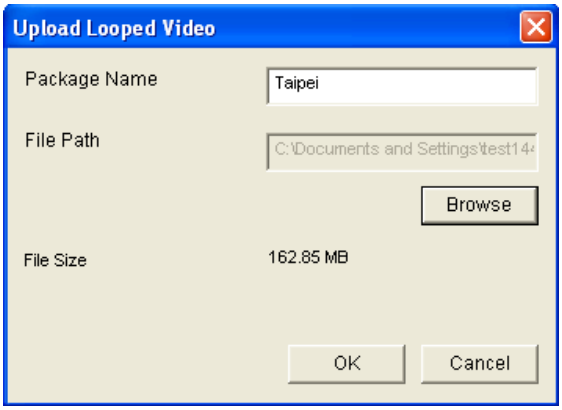


Figure 7-8

2. Type a name in the **Package Name** field for the uploading folder.
3. Click **Browse** to locate the **Loop_Video** folder.
4. Click **OK**. The percentage of uploading process will be displayed in the Transfer Status column.

After the uploading process is complete, the CMS Lite will disconnect with the device and the previous folder (Loop_Video, Scenario, Loop_Scenario or Schedule) will be removed from the local storage of the device. After that, the CMS Lite will reconnect to the device again, and the device will automatically play the uploaded media files.

IMPORTANT: The upload action will remove previous **Loop_Video**, **Scenario**, **Loop_Scenario** or **Schedule** folder from the local storage of the device.

Note: For PN400, the CMS Lite will keep connected even after the uploading process is complete.

7.7 Uploading the Scenario or Loop Scenario

To upload the project created using the Content Designer to the device, follow the steps below.

1. On the CMS Lite, select the desired device(s) and click the **Upload Scenario** button  .

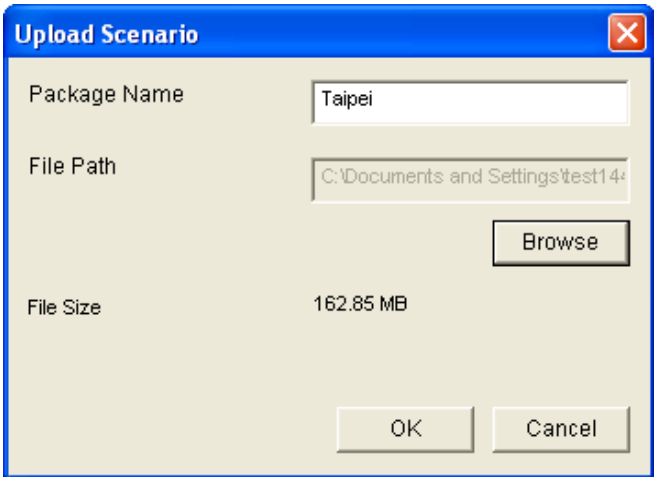


Figure 7-9

2. Type a name in the **Package Name** field for the uploading folder.
3. Click **Browse** to locate the **Scenario** or **Loop_Scenario** folder.
4. Click **OK**. The percentage of uploading process will be displayed in the Transfer Status column.

After the uploading process is complete, the CMS Lite will disconnect with the device, and the previous folder (Loop_Video, Scenario, Loop_Scenario or Schedule) will be removed from the local storage of the device. After that, the CMS Lite will reconnect to the device again, and the device will automatically play the uploaded media files.

IMPORTANT: The upload action will remove previous **Loop_Video**, **Scenario**, **Loop_Scenario** or **Schedule** folder from the local storage of the device.

Note: For PN400, the CMS Lite will keep connected even after the uploading process is complete.

7.8 Uploading the Schedule

To upload the content schedule, created using the Content Schedule software, to the device, follow the steps below.

1. On the CMS Lite, select the desired device(s) and click the **Upload Schedule** button  .

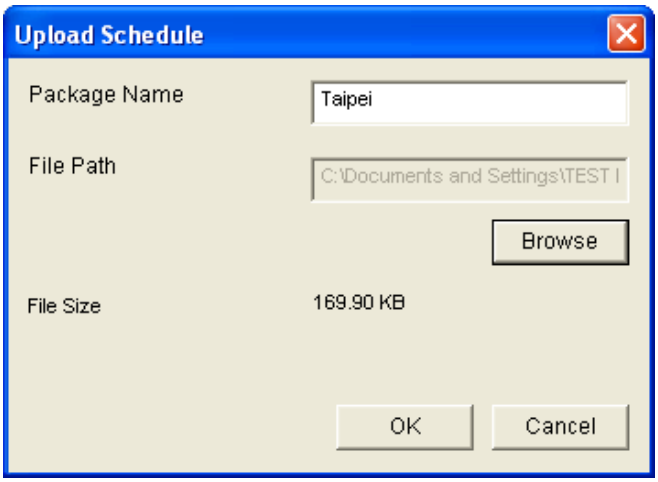


Figure 7-10

2. Type a name in the **Package Name** field for the uploading folder.
3. Click **Browse** to locate the **Output_Schedule** folder.
4. Click **OK**. The percentage of uploading process will be displayed in the Transfer Status column.

After the uploading process is complete, the **Schedule**, **Scenario** and/or **Loop_Video** folders in the device will be updated.

IMPORTANT: The upload action will remove previous **Loop Video**, **Scenario, Loop_Scenario** or **Schedule** folder from the local storage of the device.

7.9 Uploading the Firmware

To upload the firmware to the device, follow the steps below.

1. On the CMS Lite, select the desired device(s) and click the **Upload Firmware** button  to locate the firmware file.
2. Click **Open**. The percentage of uploading process will be displayed in the Transfer Status column.

After the uploading process is complete, the device will automatically restart.

7.10 Uploading the Scrolling Ticker

To upload a scrolling ticker to the device, follow the steps below.

1. On the CMS Lite, select the desired device(s) and click the **Ticker Setup** button  .

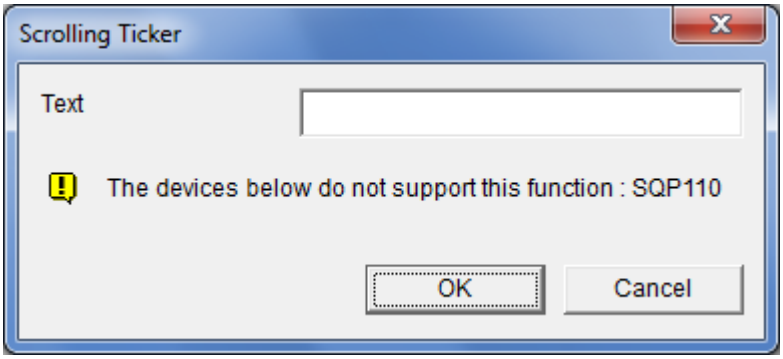


Figure 7-11

2. Type the text in the Text field. You can type up to 200 characters in the Text filed.
3. Click **OK**. The scrolling ticker will be uploaded to the device and displayed on the bottom of the screen.

Note:

1. If the project, created using the Content Designer, already includes a scrolling ticker, the position of the uploaded scrolling ticker will be the same as your original design in the project. If there is no scrolling ticker in the project, the uploaded scrolling ticker will be displayed at the bottom of the screen.
2. When you upload the scrolling ticker, this ticker becomes the only ticker in the device; it replaces all the tickers existed in the device. The screen displays the newly uploaded ticker only.

7.11 Changing the Device Name

To change the device name, follow the steps below.

1. On the CMS Lite, select the desired device(s) and click the **Edit Device Information** button  .

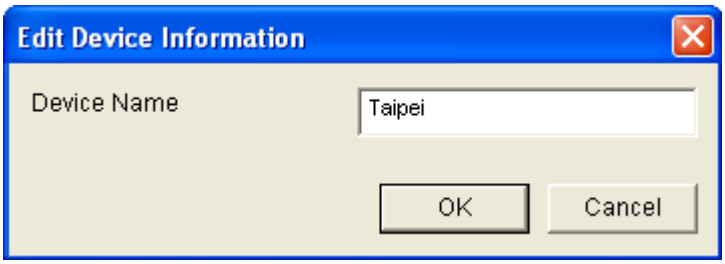


Figure 7-12

2. Type a name for the device.
3. Click **OK**. The CMS Lite will disconnect and then reconnect to the device automatically.

Note: You can find the device name in the Factory menu of the device. See *3.7 Setting the Device Name* (for PN400 / SQP133) or see *4.2 Configuring the General Settings* (for PN400).

Chapter 8 CMS Server

CMS Server is a Content Management System server that allows you to upload media files, scrolling tickers or firmware to up to 1000 digital signage devices using a Web interface. You can also look up records and analysis of user and device activities.

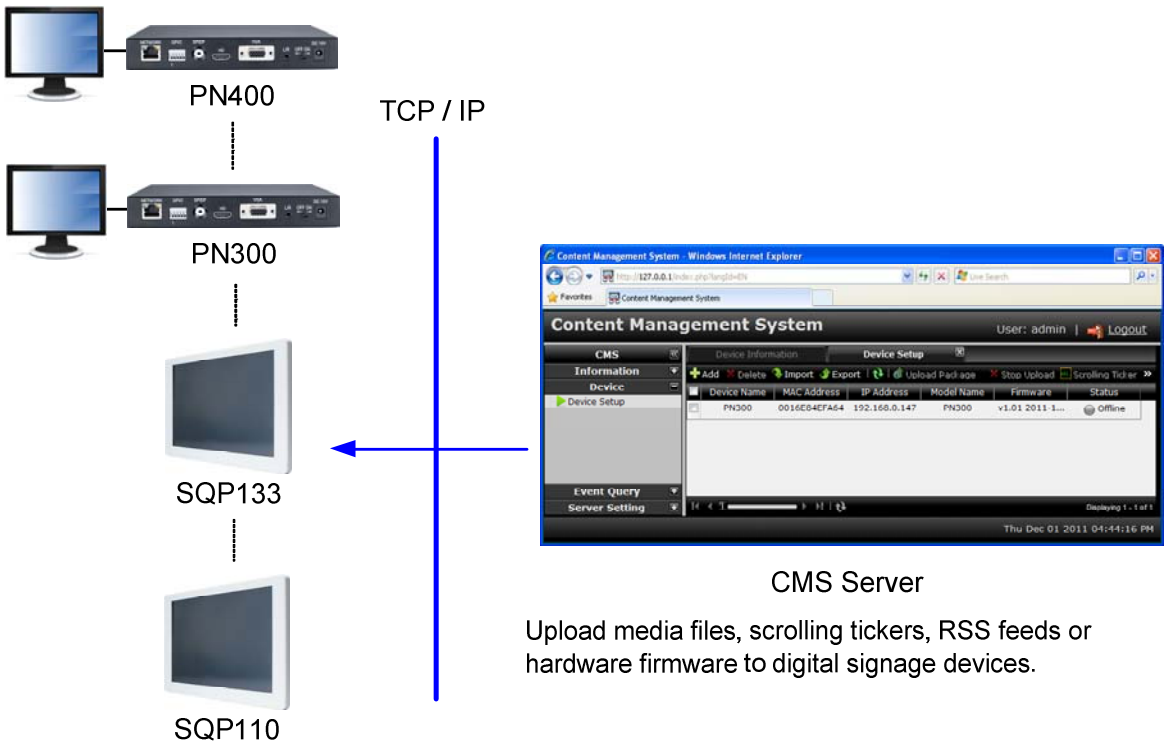


Figure 8-1

Note:

1. CMS Server is not supported by PN401.
2. For details on SQP110, see *SQP110 Series User's Manual*.

8.1 System Requirements

The system requirements for CMS Server are listed below.

Note: For the compatible firmware versions of PN300, PN400, SQP133 and SQP110 with the CMS Server, see *Compatible Firmware and Software Versions* at the beginning of the manual.

8.1.1 Minimum System Requirements

		500 Devices or less	500 Devices or more
OS	**32-bit**	Windows 7 / 8 / 8.1 /10 / Server 2008	
	64-bit	Windows 7 / 8 / 8.1 /10 / Server 2008 R2 / Server 2012 R2	
CPU		4th generation i3-4130, 3.4 GHz	4th generation i7-4770, 3.4 GHz
Memory		4 GB	8 GB
Browser		• Internet Explorer 11.0 • Firefox 47.0 • Google Chrome 51.0.2704.106	
Hardware		External / Internal GV-USB Dongle	
Note: It is recommended to use the internal GV-USB Dongle to have the Hardware Watchdog function which restarts the PC when Windows crashes or freezes.			

8.1.2 Software License

An USB dongle is required to connect CMS Server to devices. Starting from a minimum of 5 connections to a maximum of 1000 connections, different number of connections is available for purchase in increments of 5 connections.

Free License	N/A
Maximum License	1000 clients
Increment for Each License	5 to 1000 clients at an increment of 5
Optional Combinations	N/A
Dongle Type	External / Internal

8.2 Installing CMS Server

Installing from Software DVD

1. Insert the Software DVD to your computer. It runs automatically and a window pops up.
2. To install USB dongle driver, select **Install GeoVision USB Devices Driver** and follow the on-screen instructions.
3. To install the CMS Server, select **Install Content Management System**, select **Install CMS Server**, and follow the on-screen instructions.

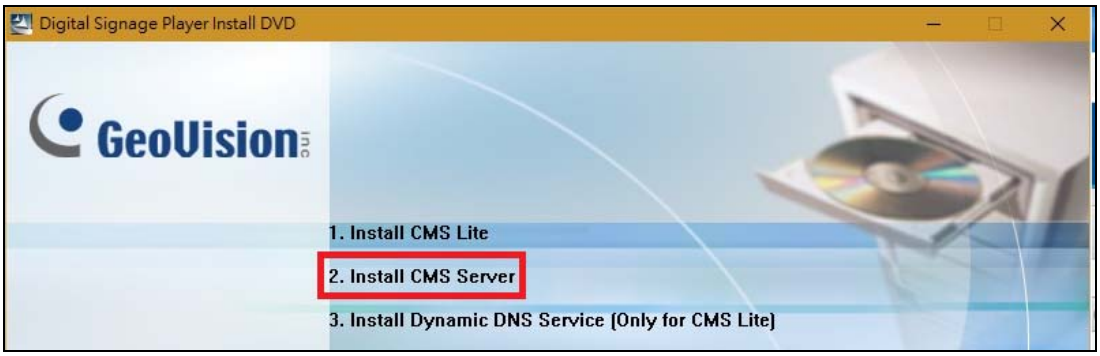


Figure 8-2

Downloading from GeoVision Website

1. Go to the Software Download and Upgrading page of GeoVision Website.
2. Select the **Digital Signage** tab and click the **Download** icon DOWNLOAD of **CMS Server (for PN400, PN300, SQP133 & SQP110)**.

Figure 8-3

8.3 Connecting the Devices to CMS Server

To connect the device to CMS Server, you have to set up the CMS settings. Make sure the device is already connected to the network. See *3.6 Setting the Network* (for PN300 / SQP133) and see *4.4 Setting the Network* (for PN400) for details.

1. To set up CMS settings:

   - For PN300 / SQP133: On the setup menu, select **Network** and select **CMS Setting**. This window appears.

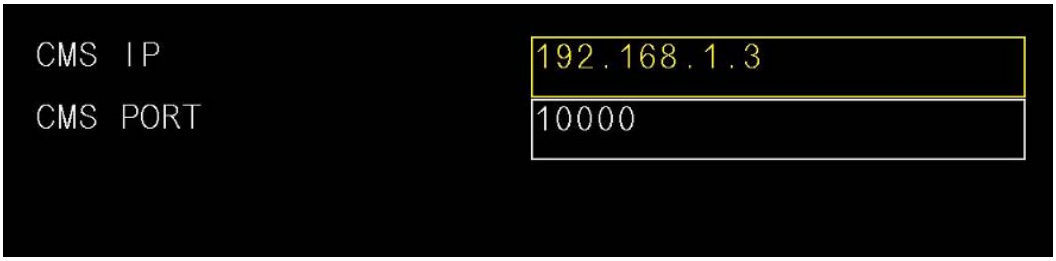


Figure 8-4

   - For PN400: Select **CMS** . This window appears.

Figure 8-5

2. In the **IP** field, specify the IP address of CMS Server.
3. Keep the **Port** value as 10000 or modify it to match the port on CMS Server.
4. Press **OK** to save the settings. For PN400, it will restart.

When CMS Server is started, the device will be listed in the Device Setup page as Invalid. Double-click the device to add the device to CMS Server.

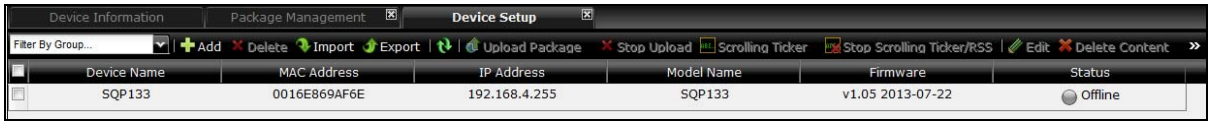


Figure 8-6

8.4 Starting CMS Server

After installing CMS Server, the CMS Server icon 

will appear in the system tray. Follow the steps below to configure general settings and access the Web interface of CMS Server.

1. To configure the general settings, right-click the CMS Server icon , click **Stop Service**, and click **Configure** to access the following options.

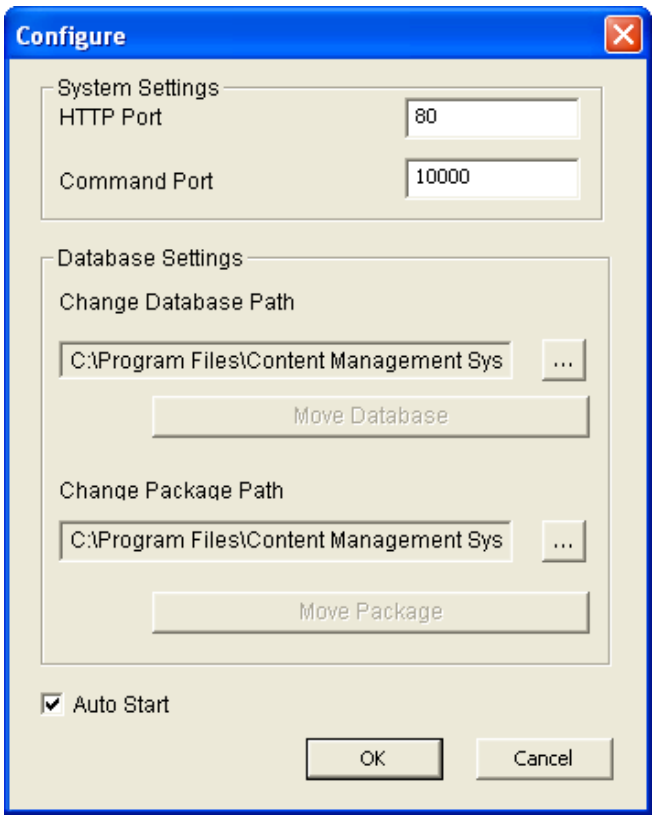


Figure 8-7

- **HTTP Port:** The default HTTP port is 80.
- **Command Port:** The Command port is used for communicating with digital signage devices. If other program is using the default port 10000, you may need to change the Command port value. The port range is 1 to 65534.
- **Change Database Path:** Changes the storage path for event log and device information.
- **Change Package Path:** Changes the storage path for content packages.
- **Auto Start:** Automatically start CMS Server at system startup.

2. Click **OK** to apply the settings.
3. To access the Web interface of CMS Server, right-click the CMS Server icon, click **Start Service** and click **Access Web Interface**. The Web Interface login page appears.

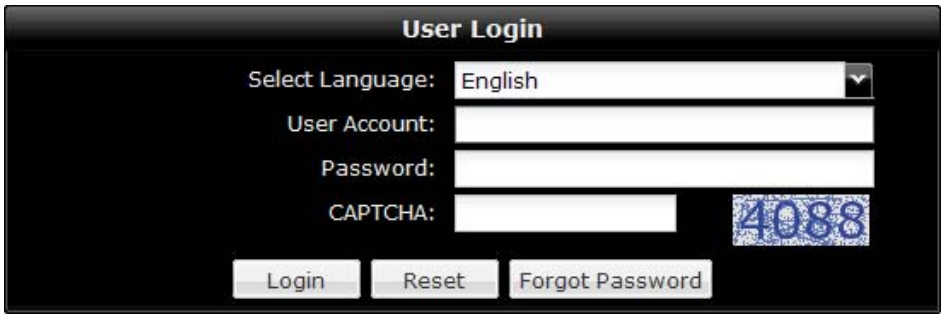


Figure 8-8

4. Type the **User Account** and **Password**. The default login name and password for the Administrator are **admin**.
5. Type the verification number shown in the image.
6. Click **Login**. The CMS Server Web interface is now displayed.
7. If you have forgotten your password, click the **Forgot Password** button and a new password will be sent to the email address of the user account.

To access the Web interface from a remote computer, start the Internet browser and type the IP address or the domain name of CMS Server in the Location/Address field. If the default HTTP port has been changed, type a colon and the port number after the IP address, for example, **http://192.168.3.199:81**. After the login page appears, follow steps 4 to 6 to log in the Web interface.

Note:

1. To enable the updating of images in Microsoft Internet Explorer, you must set your browser to allow ActiveX Controls and perform a one-time installation of GeoVision's ActiveX component onto your computer.
2. If CMS Server is installed behind a firewall or router, you may need to open these default ports: HTTP port 80 and command port 10000.
3. When updating the version of the CMS Server, right-click the CMS Server icon, click **Upgrade Database** and click **Start Service**.

8.4.1 List of Menu Options

After logging in the Web interface, the following menu options are available in the left panel. Refer to the section number below to see more details on each menu option.

8.10 Information	8.10.1 Device Information 8.10.2 System Information 8.10.3 User Information 8.10.4 Package Information
8.11 Device Setup	
8.12 Event Query	8.12.1 Behavior Log Query 8.12.2 Behavior Log Analysis 8.12.3 Device Event Query 8.12.4 Device Event Analysis (Counts) 8.12.5 Device Event Analysis (Elapsed Time) 8.12.6 Play Count Analysis
8.13 Upload Management	
8.14 Server Setting	8.14.1 User Account 8.14.2 Network Setting 8.14.3 Email Service

8.5 Getting Started

After logging into the Web interface, you will need to first establish connection with the devices (see *8.3 Connecting the Devices to CMS Server*). Next, prepare a content package, transfer the package to the designated storage path on the local PC, and then upload the package to the devices. You can also optionally plan your devices into groups for further management (see *8.8 Planning the Group*) and arrange the playing orders of files for looping videos and/or images (see *8.9 Arranging the Loop Video*).

8.5.1 Preparing the Package

There are 6 types of content packages you can upload to the device: **Loop Video**, **Scenario**, **Loop Scenario**, **Firmware**, **Schedule** and **Customized Loop Video**. For explanation on the concept of Schedule, Loop Video, Scenario and Loop Scenario, see *Appendix. Definitions of Folder Names*.

To prepare a content package, the Content Designer, Clip Design or Content Schedule tool is required. You can install them from the Software DVD or from the Upload Management section of the CMS Server. In the Upload Management section, select **Package Management**, click the **Download Tools** button and select the required tool.

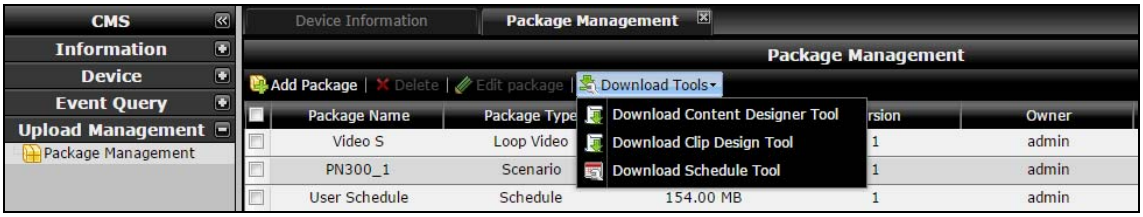


Figure 8-9

For details on Content Designer, see Chapter 5. For details on Content Schedule, see Chapter 6.

8.5.2 Transferring the Package

Before uploading the content package to the device, you need to first transfer the content package to the designated storage path on the computer.

1. In the Upload Management section, click **Package Management**. This page appears.

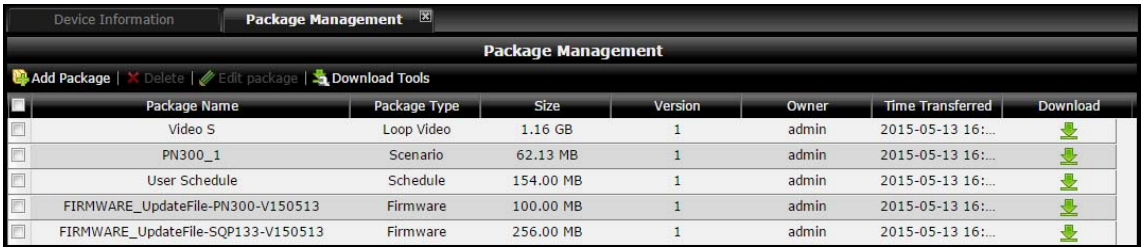


Figure 8-10

2. Click **Add Package** 

, type a **Package Name** and a **Version** number for your own reference. From the **Package Type** drop-down list, select whether the package is a **Loop Video**, **Scenario**, **Loop Scenario**, **Schedule** or a **Customized Loop Video**.

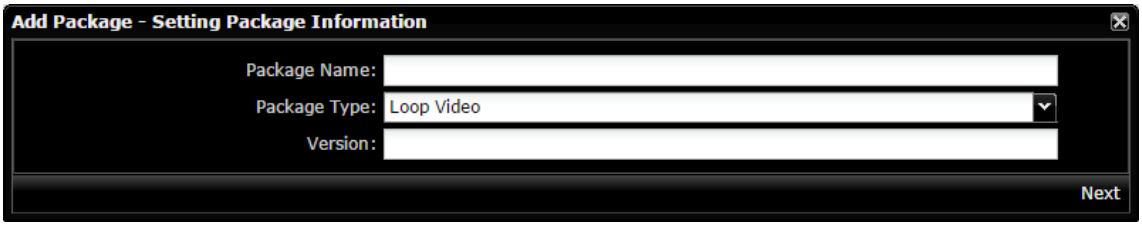


Figure 8-11

IMPORTANT: To upload a content package larger than 2 GB, it is required to upload the package from a remote storage link, e.g. https://www.dropbox.com/. At this step, select **Loop Video** or **Loop Scenario** and see Step 6 below.

Note: For how to customize a Loop Video, see *8.9 Arranging the Loop Video.*

---

3. Click **Next**. This dialog box appears.

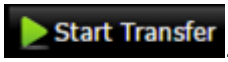
Figure 8-12

4. Select **Compressed** to transfer zipped files, or click **Browse** to locate the files for the package. You can press the Ctrl and Shift key to select multiple files.

Note:

1. The Scenario, Loop Scenario and Schedule files must be zipped before you can transfer to the local computer, while compressing files for Loop Video is optional. The compressed file must be in .zip format.
2. You can select up to 240 uncompressed files or select **Compressed** to include more than 240 zipped files.

---

5. Click the **Start Transfer** button 

. Click **Next** when the transfer is completed.

6. If you are uploading **Loop Video** or **Loop Scenario**, this dialog box will appear. To upload a media file larger than 2 GB, you need to upload the file from a remote storage link, e.g. https://www.dropbox.com/. You can add multiple URLs by using semicolons to separate addresses.

Figure 8-13

7. After the files are transferred, click **Finish**. This dialog box appears.

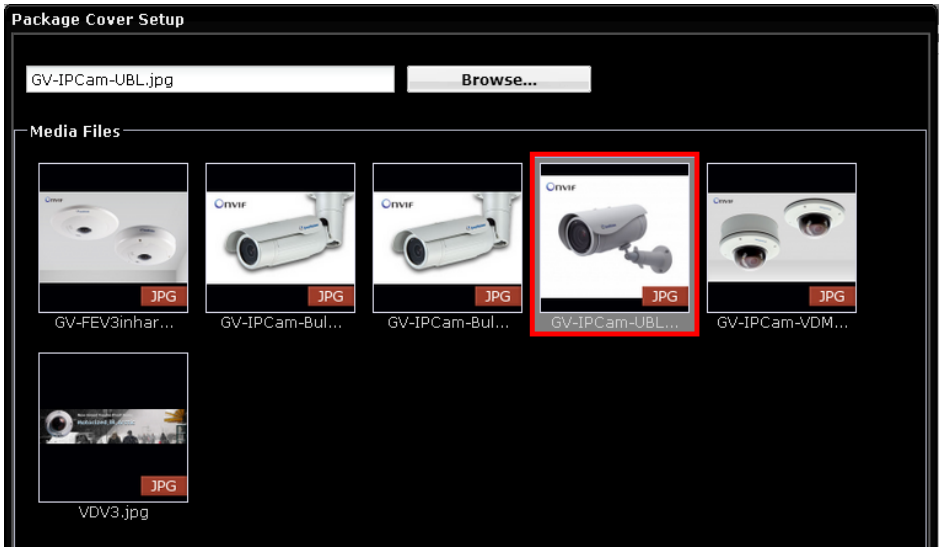


Figure 8-14

8. Click a media file to set it as the package cover and click **OK**. The cover will be shown on the Device Information page when this package is assigned. For example:

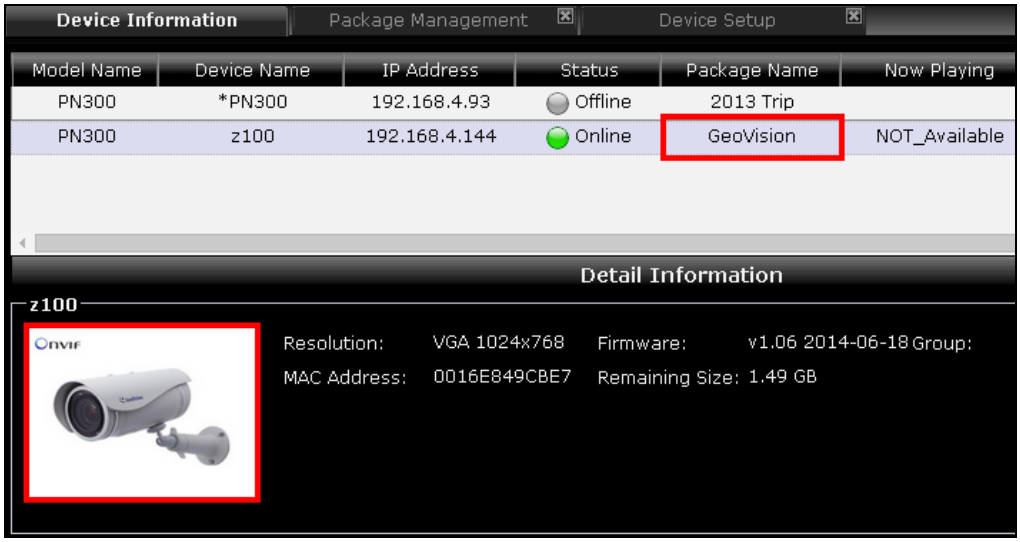


Figure 8-15

Note: For the package cover, if the selected item is a video file, its first frame will be used as the package cover.

8.5.3 Uploading the Package

After transferring the content package to the designated storage path, the content package can now be uploaded to the device. If the network settings on the device have not been set up, refer to *8.3 Connecting the Devices to CMS Server*.

Instant Uploading

1. In the Device section, click **Device Setup**.
2. If the device is displayed as Invalid in the Status column, double-click the device name to add the device.

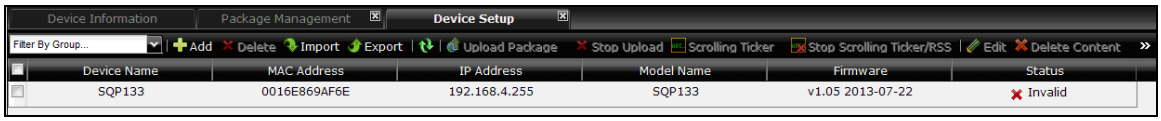


Figure 8-16

3. Select the device, click the **Upload Package** button and select **Scenario**, **Loop Video**, **Loop Scenario** or **Schedule** depending on the content of your package. This dialog box appears and the packages you transferred are listed.

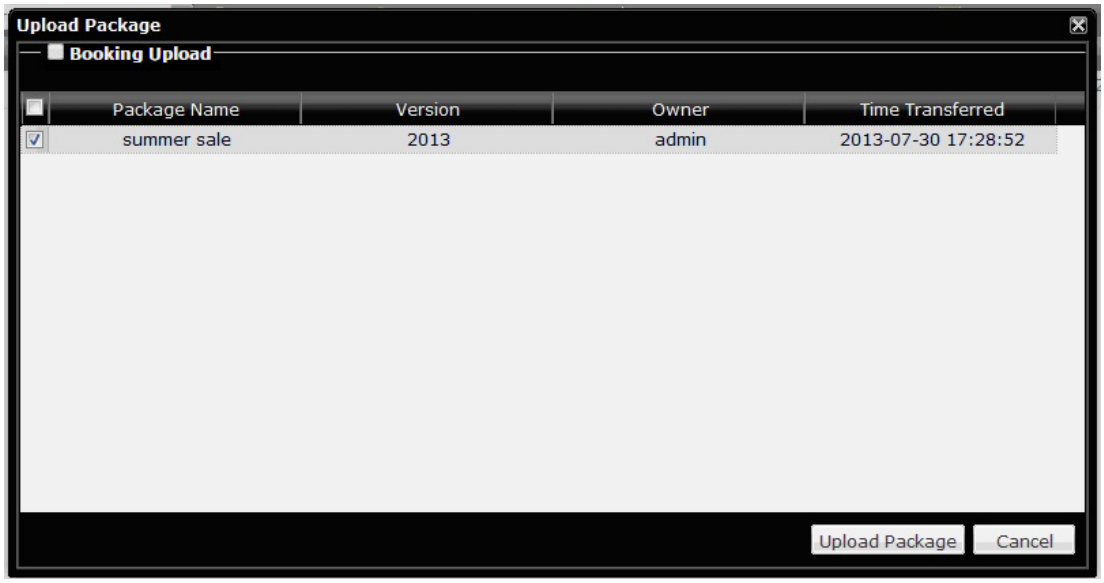


Figure 8-17

4. Select a package and click **Upload Package**. The package is now uploaded and will replace any existing packages.

Note: SQP110 series will reboot after the package is uploaded.

Scheduled Uploading

You can upload the packages based on your schedule. Using this function allows your device to play videos or images at the appointed time.

1. Select the **Booking Upload** option on the top left corner and the window expands as below.

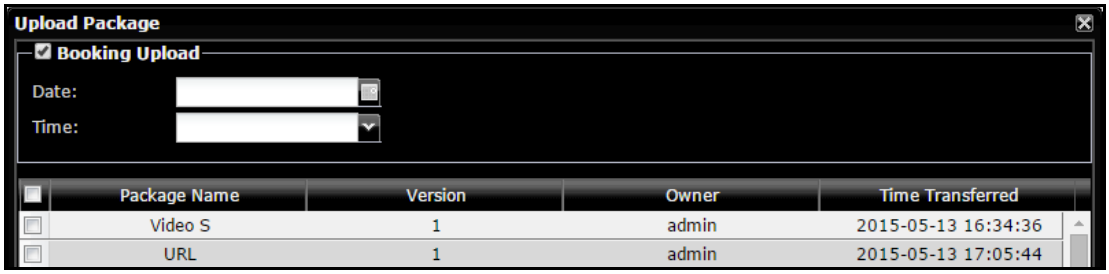


Figure 8-18

2. To upload the packages at the appointed time, select the **Date** by clicking the calendar button and select the **Time** by clicking the arrow button .
3. Select the listed package that you want to upload.
4. Click **Upload Package**.

Delayed Uploading

If you upload a package or firmware to a device that is not connected, the command will be stored in the Command List until the device is connected. The Command List can be accessed by double-clicking the IP address of the device.

Figure 8-19

8.5.4 Revising the Package

To add or delete files from an existing package, double-click the device's Package Type to access this page. To download the files, use the **Download** button.

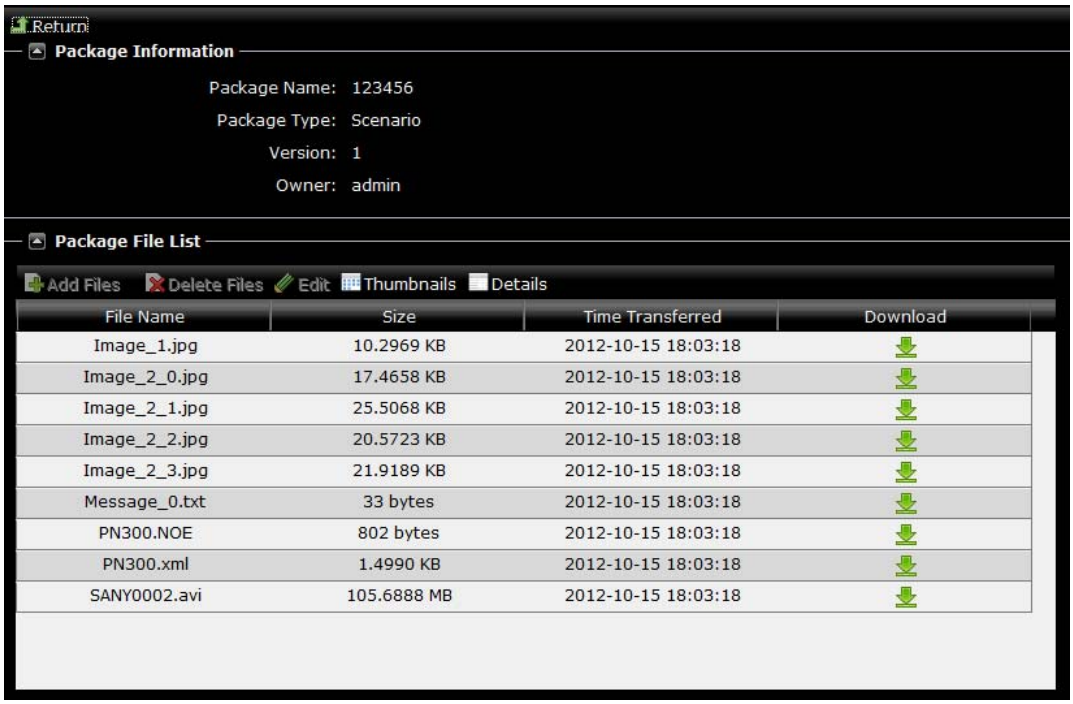


Figure 8-20

8.6 Applying the Scrolling Ticker

You can apply the scrolling ticker to the uploaded package. The scrolling ticker will be applied to the package and any existing scrolling ticker will be replaced.

1. In the Device Setup, select the desired device.

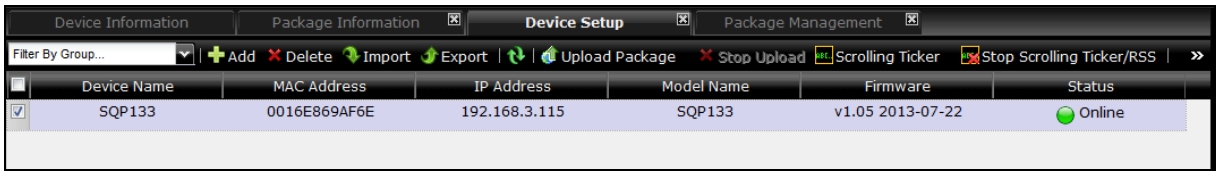
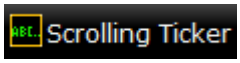


Figure 8-21

2. Click the **Scrolling Ticker** button  and select **Scrolling Ticker**.

3. When the dialog box below appears, type up to 200 characters and click **OK**.

Figure 8-22

To disable scrolling ticker, click the **Stop Strolling Ticker/RSS** button in the Device Setup page.

Note:

1. Scrolling Ticker is not supported on SQP110 series.
2. It is an either-or option between the scrolling ticker and the RSS feeds.

8.7 Applying the RSS Feed

You can apply RSS feeds to the uploaded package. When you apply new RSS feeds, any existing scrolling ticker or RSS feeds will be replaced.

1. In the Device section, click **Rss**. This page appears.

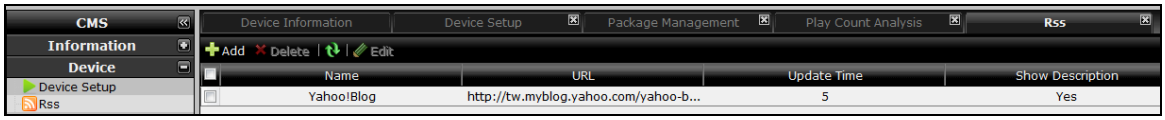


Figure 8-23

2. Click the **Add** button. Type a description in the **Name** field and a designated RSS site in the **URL** field.

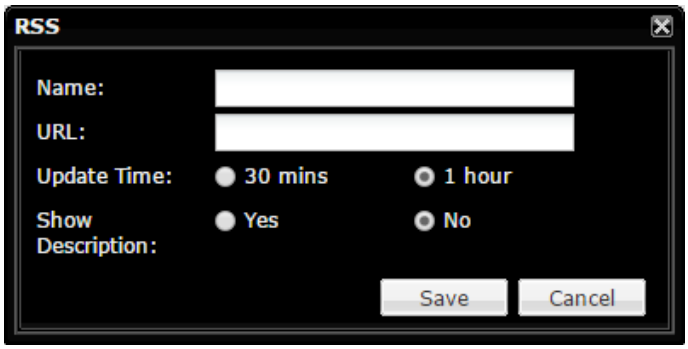


Figure 8-24

3. Select **30 mins** or **1 hour** for the device to update the RSS feeds every 30 minutes or 1 hour.
4. Select **Yes** or **No** to display the subtitle of the news.
5. Click **Save**.

Note: It is an either-or option between the scrolling ticker and the RSS feeds.

8.8 Planning Device Group

You can manage the devices by planning them into groups to avoid repetitive procedures when you upload the packages and upgrade the firmware.

1. In the Server Setting section, click **Group**. This page appears.

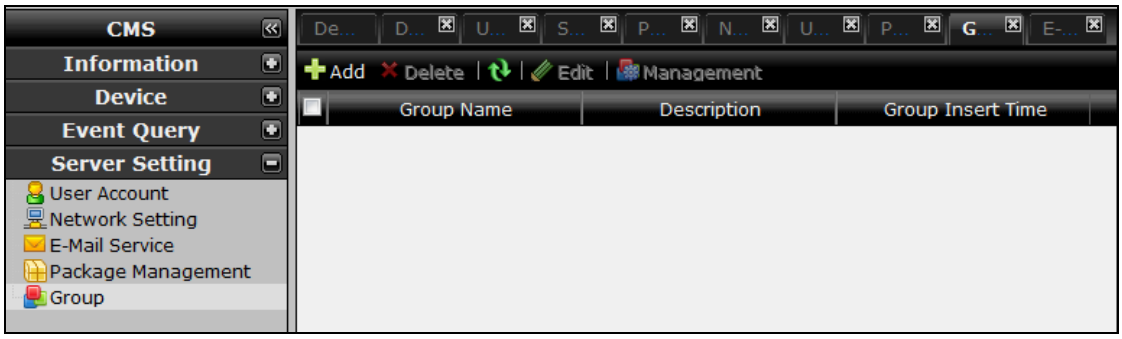


Figure 8-25

2. Click the **Add** button and type a group name and a description for your reference.

Figure 8-26

3. Select the newly added group and click the **Management** button. This page appears.

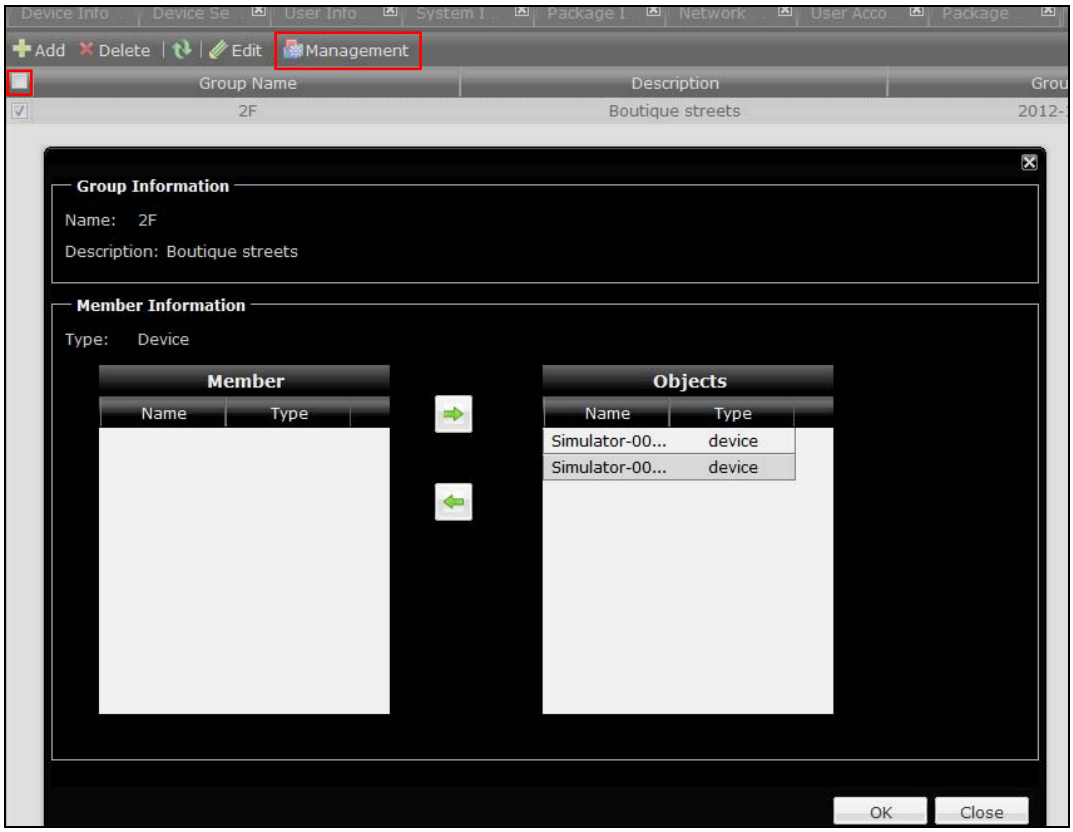


Figure 8-27

4. Click the device you want to add to the designated group from the Objects box. Move the selected devices by using arrow buttons.
5. Click **OK**.

8.9 Arranging the Loop Video

You can arrange the videos and images in a Loop Video folder to play on the device in any type of order.

1. In the Upload Management section, click **Package Management**. This page appears.

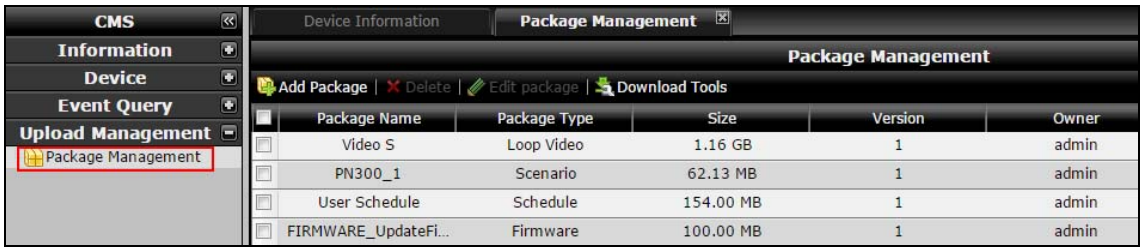


Figure 8-28

2. Click **Add Package**. Type the **Package Name** and **Version** for your references and select **Customized Loop Video** in the Package Type drop-down list.

Figure 8-29

3. Click **Next**.
4. Select a package from the **Loop Video** drop-down list.

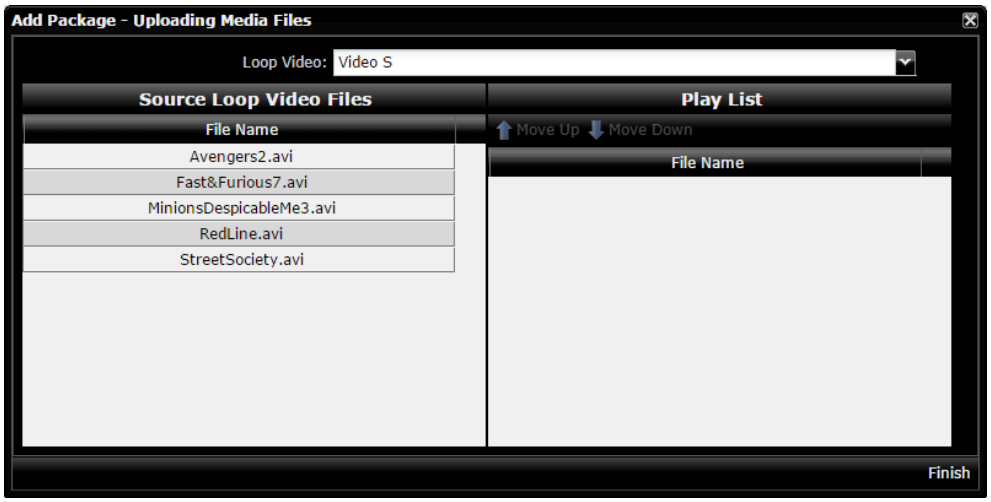


Figure 8-30

5. Click and drag the files from the left box to the right box.

6. You can use the **Move Up** and **Move Down** buttons 

to help you arrange the playing order. The top file is the first to play on the device.

7. When you finish arranging the order, click **Finish**.

8.10 Information

This section introduces how to look up device information, system information, user information and package information.

8.10.1 Device Information

The Device Information page shows device details such as device name, IP address, connection status, and the name of the package being played. After logging in CMS Server, the Device Information page is displayed by default and can later on be accessed by clicking the Device Information tab labeled in red.

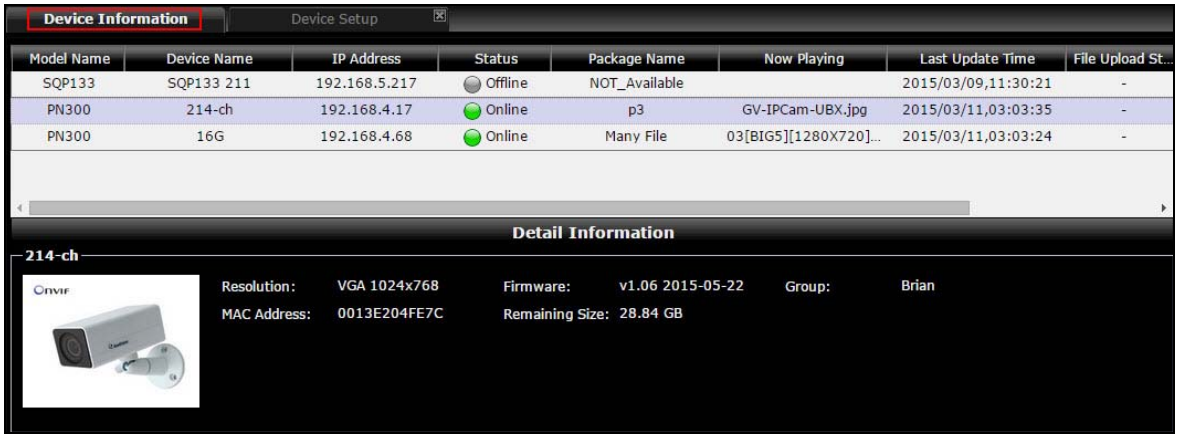


Figure 8-31

Device Status

- **Online:** A device is connected to the CMS Server.
- **Offline:** A device is disconnected from the CMS Server.
- **Connecting:** A device is connecting to the CMS Server.
- **Busy:** A media package is uploading from CMS Server to a device.
- **Formatting:** An SD card or a USB storage device connected to a device is being formatted on the CMS Server.

- **Sleep:** During the off-schedule period, a device is indicated as Sleep Mode.
-

Note:

1. The Package Name column only shows the packages uploaded from the CMS Server.
2. Formatting the SD card or USB storage device is only available on CMS Server V1.0.4.0 with PN300 / SQP133 firmware V1.06 or later, and CMS Server V1.0.5.0 with PN400.

8.10.2 System Information

The System Information page shows the version information, system time, maximum number of devices allowed and number of devices currently connected.

Note: The CMS Server synchronizes the devices' time with the Network Time Server automatically each time it connects to the devices.

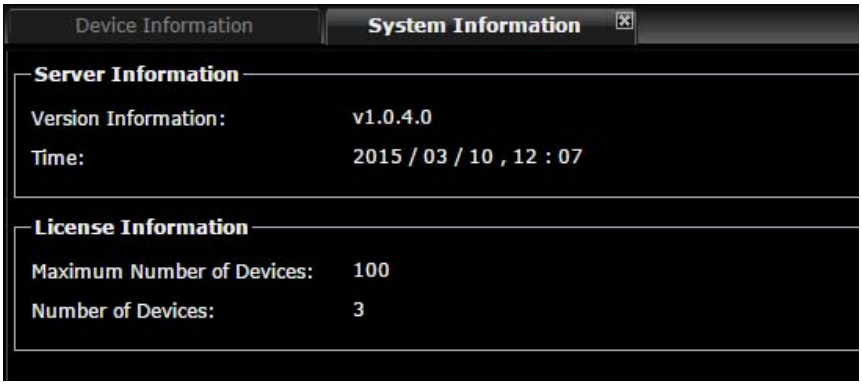


Figure 8-32

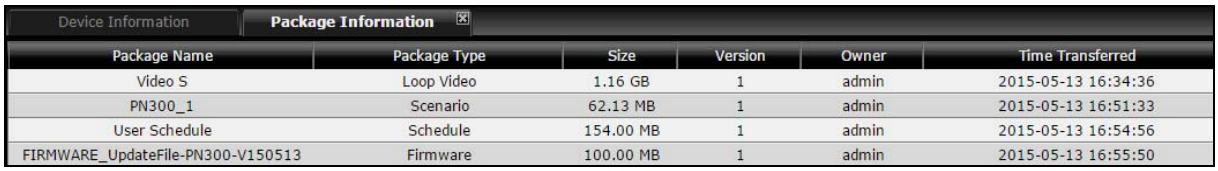
8.10.3 User Information

The User Information page shows the user accounts created, the password hint and the email address associated with the account.

Figure 8-33

8.10.4 Package Information

The Package Information page shows the name, type, size, version, owner and upload time of the content packages stored.

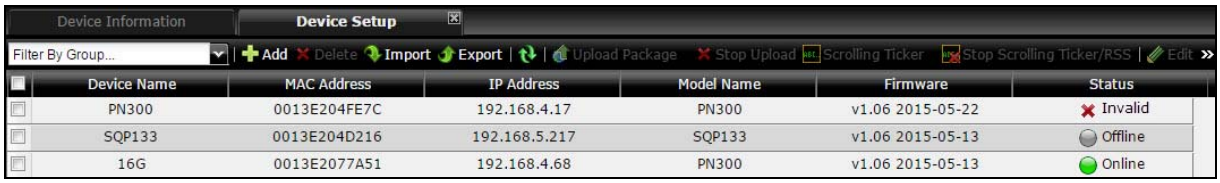


Package Name	Package Type	Size	Version	Owner	Time Transferred
Video S	Loop Video	1.16 GB	1	admin	2015-05-13 16:34:36
PN300_1	Scenario	62.13 MB	1	admin	2015-05-13 16:51:33
User Schedule	Schedule	154.00 MB	1	admin	2015-05-13 16:54:56
FIRMWARE_UpdateFile-PN300-V150513	Firmware	100.00 MB	1	admin	2015-05-13 16:55:50

Figure 8-34

8.11 Device Setup

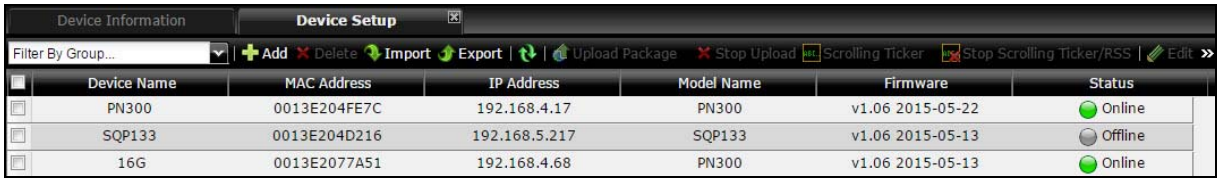
The device setup page allows you to see the devices available, connect to devices, upload content to devices and apply scrolling ticker. After you connect the device to CMS server, the device will be listed as **Invalid** in the device list as shown below.



Device Name	MAC Address	IP Address	Model Name	Firmware	Status
PN300	0013E204FE7C	192.168.4.17	PN300	v1.06 2015-05-22	Invalid
SQP133	0013E204D216	192.168.5.217	SQP133	v1.06 2015-05-13	Offline
16G	0013E2077A51	192.168.4.68	PN300	v1.06 2015-05-13	Online

Figure 8-35

To add the invalid device, double-click the device name. The device will appear as **Online** after it is connected.



Device Name	MAC Address	IP Address	Model Name	Firmware	Status
PN300	0013E204FE7C	192.168.4.17	PN300	v1.06 2015-05-22	Online
SQP133	0013E204D216	192.168.5.217	SQP133	v1.06 2015-05-13	Offline
16G	0013E2077A51	192.168.4.68	PN300	v1.06 2015-05-13	Online

Figure 8-36

Note: You can change the device name for your reference by clicking the name.

The following buttons are available:

- **Add:** Adds a device using the MAC address.
- **Delete:** Deletes the selected devices.
- **Import:** Imports a previously exported device list.
- **Export:** Exports the current device list.
-  **Refresh:** Refreshes the device setup page.
- **Upload Package:** Uploads scenario, loop video, schedule or firmware to the device.
- **Stop Upload:** Stops the upload while content is being uploaded to the device.
- **Scrolling Ticker:** Applies scrolling ticker to the device.
- **Stop Scrolling Ticker/RSS:** Disables the scrolling ticker/RSS applied.
- **Edit:** Edits the device name.
- **Delete Content:** Deletes the content of the device.
- **Reboot:** Reboots the device.
- **Format:** Formats your USB storage device or SD card inserted to the device.
- **Email Alarm:** Sets up an e-mail notification when the device is disconnected from the CMS Server. To establish an e-mail alarm, select a device, click  , point to **Email Alarm** and select **Email Alarm**. Make sure you have enabled the e-mail service for the CMS Server. For details, see *8.14.3 Email Service*.

8.12 Event Query

In the Event Query section, you can look up record of user activities and device activities.

8.12.1 Behavior Log Query

Using the Behavior Log Query, you can search user activities such as login, adding packages, adding devices and applying scrolling ticker.

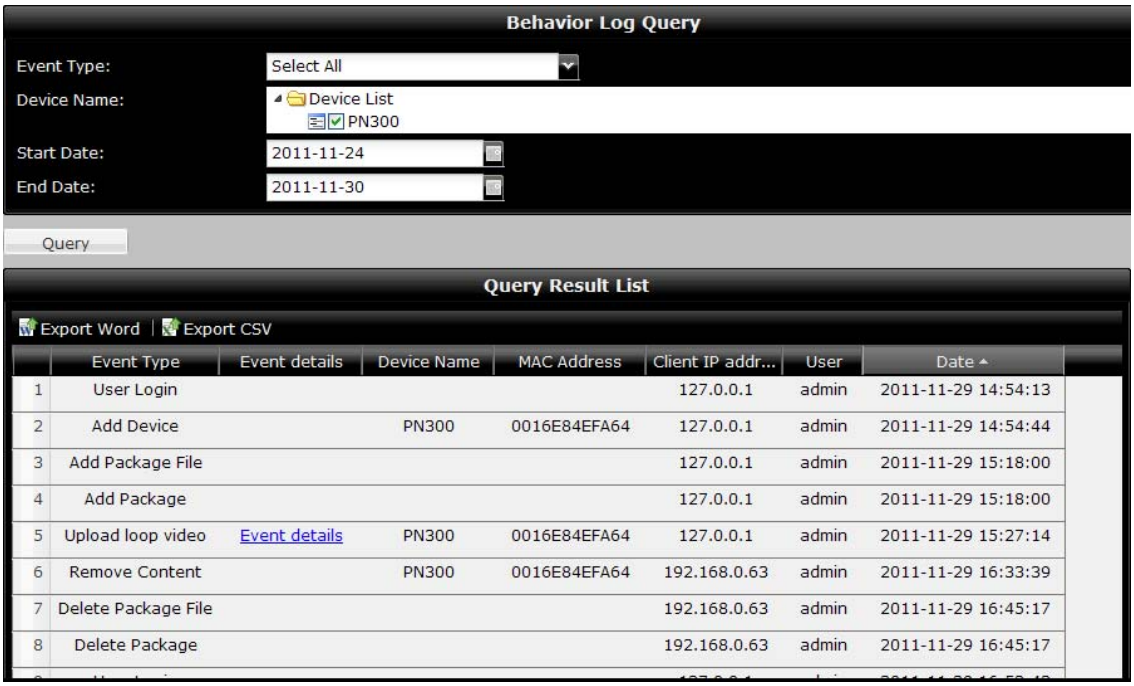


Figure 8-37

1. Use the **Event Type** drop-down list to select the type of event to search.
2. Select the devices to include in the search results.
3. Specify the time period by selecting a **Start Date** and an **End Date**.
4. Click the **Query** button to see the search results.

You can export the search results in Word format and Excel format by clicking **Export Word** or **Export CSV**.

8.12.2 Behavior Log Analysis

Using the Behavior Log Query, you can see user activities displayed in bar graph, pie graph or line graph.

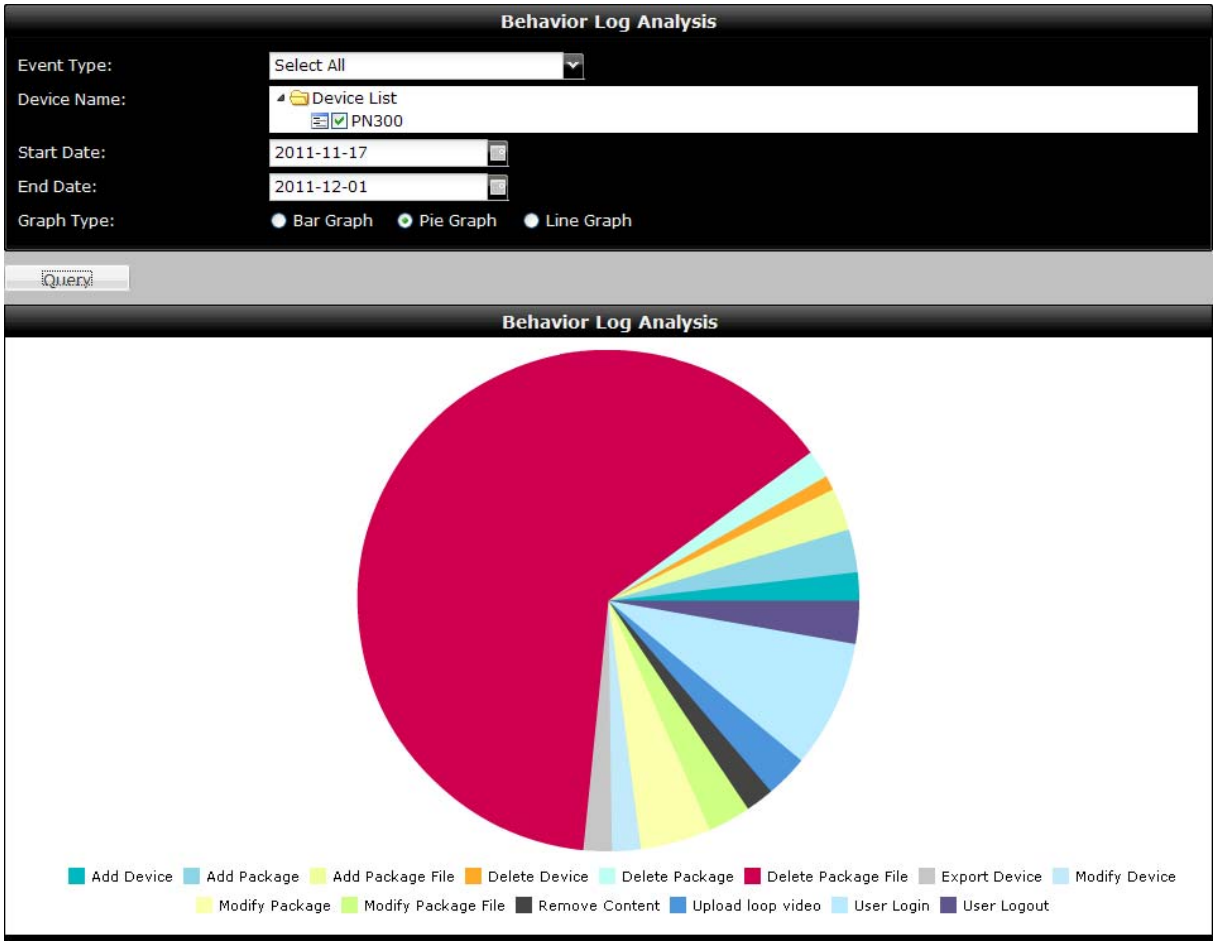
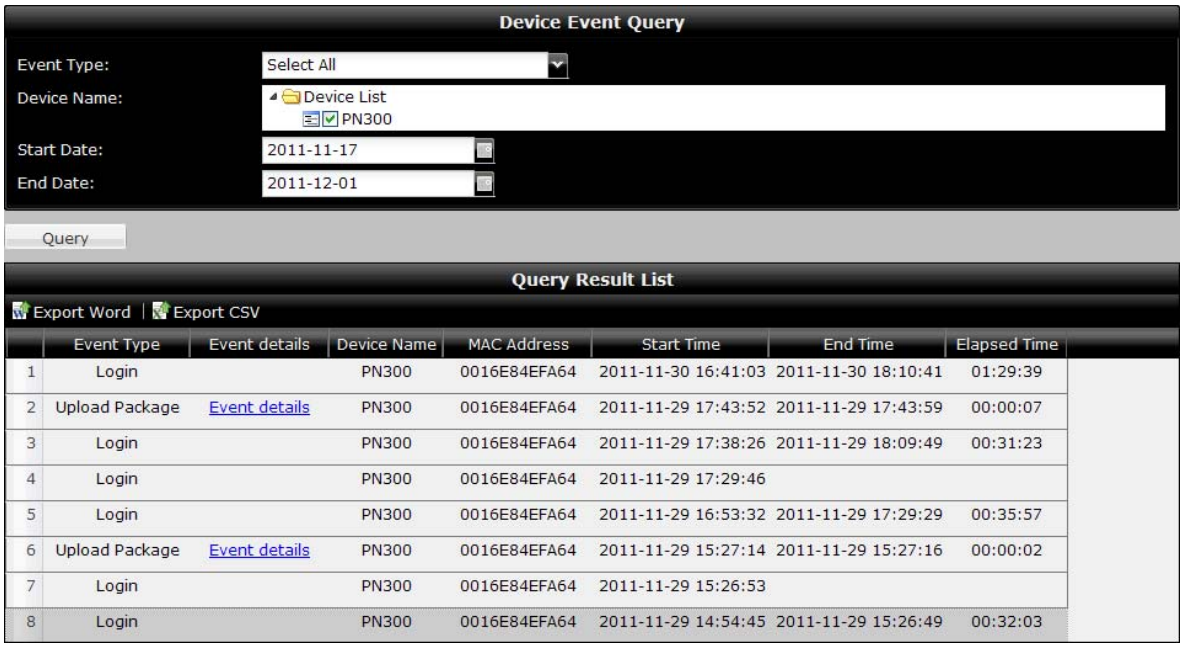


Figure 8-38

1. Use the **Event Type** drop-down list to select the type of event to search or click **Select All**.
2. Select the devices to include in the search results.
3. Specify the time period by selecting a **Start Date** and an **End Date**.
4. Select a type of graph to display the results.
5. Click the **Query** button to see the search results.

8.12.3 Device Event Query

Using the Device Event Query, you can search device events such as connection to devices and uploading packages to devices.



	Event Type	Event details	Device Name	MAC Address	Start Time	End Time	Elapsed Time
1	Login		PN300	0016E84EFA64	2011-11-30 16:41:03	2011-11-30 18:10:41	01:29:39
2	Upload Package	Event details	PN300	0016E84EFA64	2011-11-29 17:43:52	2011-11-29 17:43:59	00:00:07
3	Login		PN300	0016E84EFA64	2011-11-29 17:38:26	2011-11-29 18:09:49	00:31:23
4	Login		PN300	0016E84EFA64	2011-11-29 17:29:46		
5	Login		PN300	0016E84EFA64	2011-11-29 16:53:32	2011-11-29 17:29:29	00:35:57
6	Upload Package	Event details	PN300	0016E84EFA64	2011-11-29 15:27:14	2011-11-29 15:27:16	00:00:02
7	Login		PN300	0016E84EFA64	2011-11-29 15:26:53		
8	Login		PN300	0016E84EFA64	2011-11-29 14:54:45	2011-11-29 15:26:49	00:32:03

Figure 8-39

1. Use the **Event Type** drop-down list to select the type of event to search.
2. Select the devices to include in the search results.
3. Specify the time period by selecting a **Start Date** and an **End Date**.
4. Click the **Query** button to see the search results.

You can export the search results in Word format and Excel format by clicking **Export Word** or **Export CSV**.

8.12.4 Device Event Analysis (Counts)

Using the Device Event Analysis (Counts), you can see the number of connections made to devices and the number of packages uploaded in bar graph, pie graph or line graph.

Figure 8-40

1. Use the **Event Type** drop-down list to select the type of event to search or click **Select All**.
2. Select the devices to include in the search results.
3. Specify the time period by selecting a **Start Date** and an **End Date**.
4. Select a type of graph to display the results.
5. Click the **Query** button to see the search results.

8.12.5 Device Event Analysis (Elapsed Time)

Using the Device Event Analysis (Elapsed Time), you can see the total connection time and package upload time for each device in bar graph, pie graph or line graph.

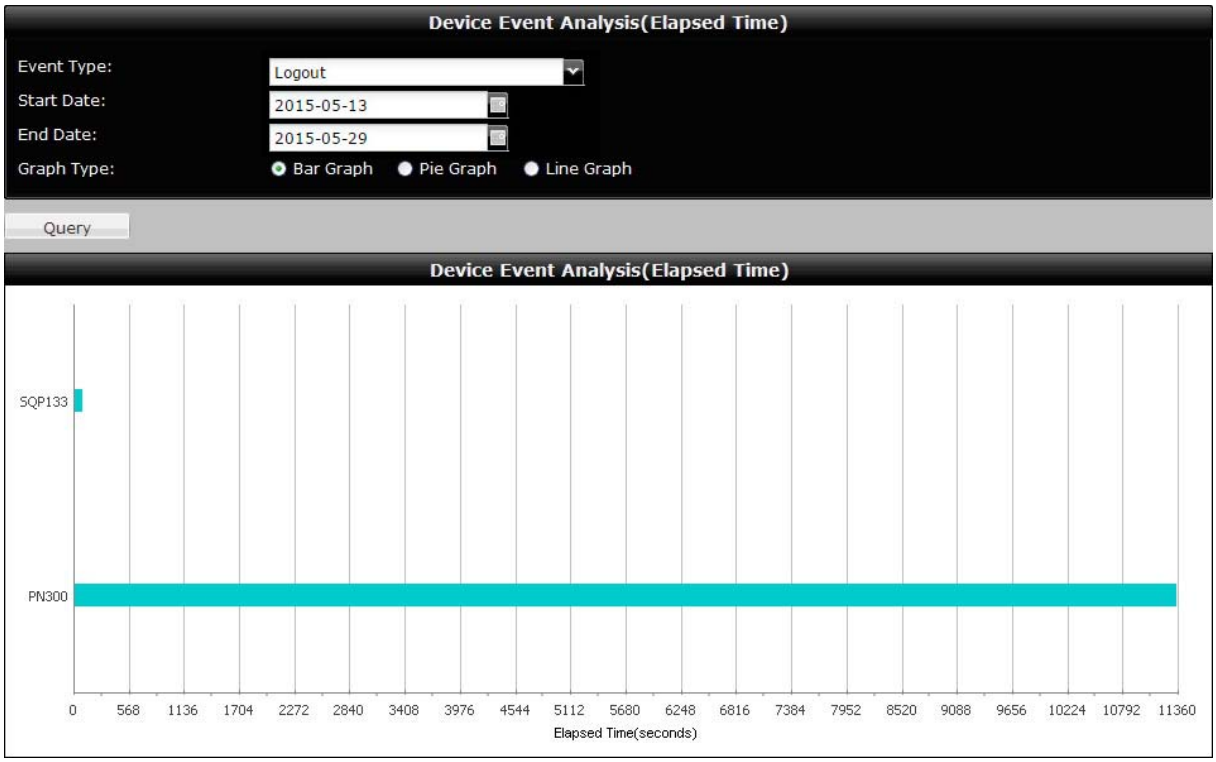


Figure 8-41

1. Use the **Event Type** drop-down list to select the type of event. Select **Logout** to see the total connection time of each device or select **Upload Package** to see the total package upload time of each device.
2. Specify the time period by selecting a **Start Date** and an **End Date**.
3. Select a type of graph to display the results.
4. Click the **Query** button to see the search results.

8.12.6 Play Count Analysis

Using the Play Count Analysis, you can see the frequency or the length of the time of the designated file which have been played on the device and export the play count files.

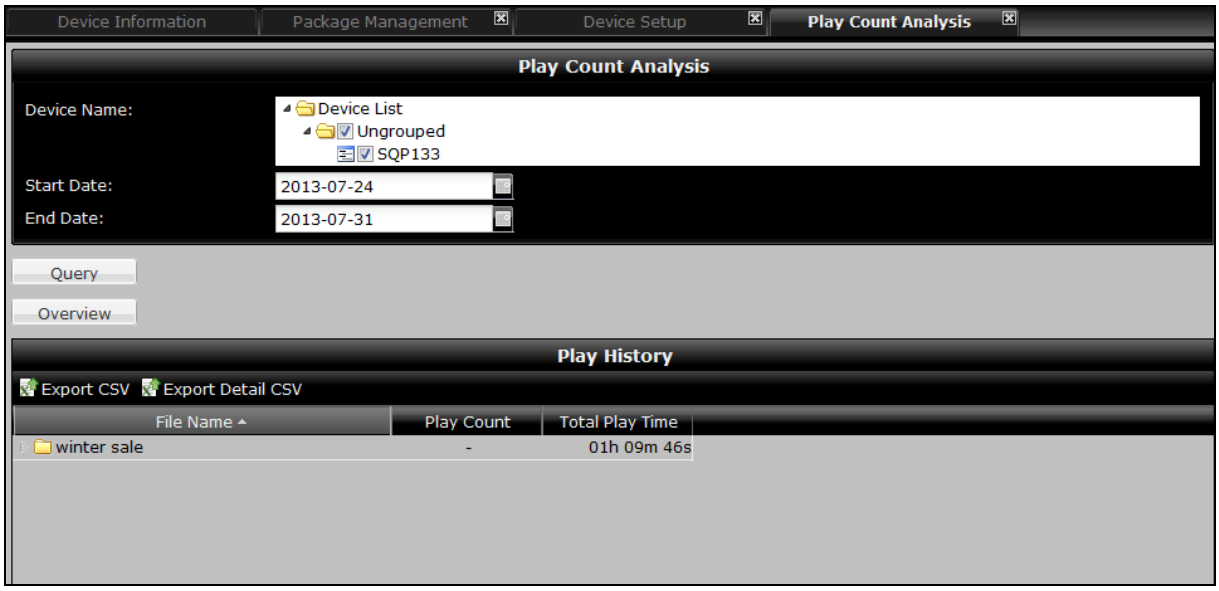


Figure 8-42

To Show the Play History

1. When you open this window, all the devices connected to the server will be automatically selected from the Device Name field. You can unselect the devices that you do not wish to proceed with.
2. Click the calendar button to specify the **Start Date** and the **End Date**.
3. Click the **Query** button to display the list of the packages in the Play History section.
4. Double-click the desired File Name and click the **Overview** button.
5. To show the frequency of the designated file being played on the device, select **Play Count** from the top left corner. To see the length of time of the designated file being played on the device, select **Play Time** from the top right corner.

The following two figures show the count result of a Scenario package which includes images files (.jpg), video files (.mp4) and stickers or RSS (.txt).

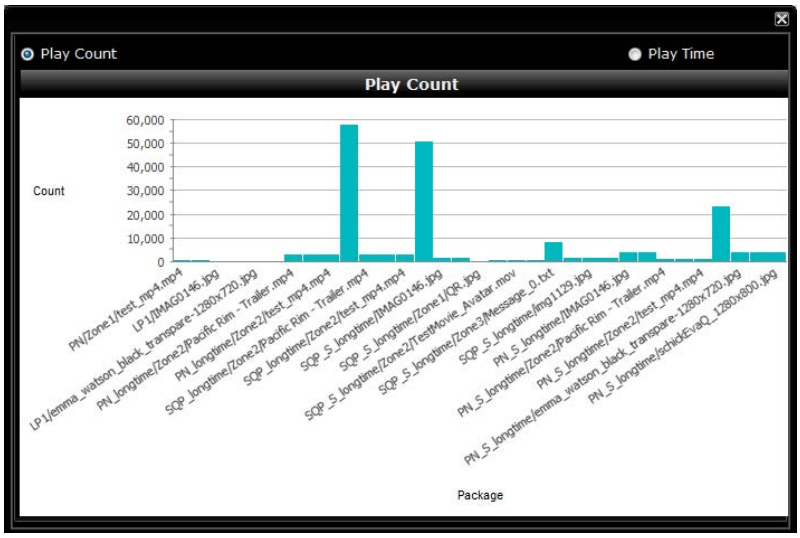


Figure 8-43 Play Count

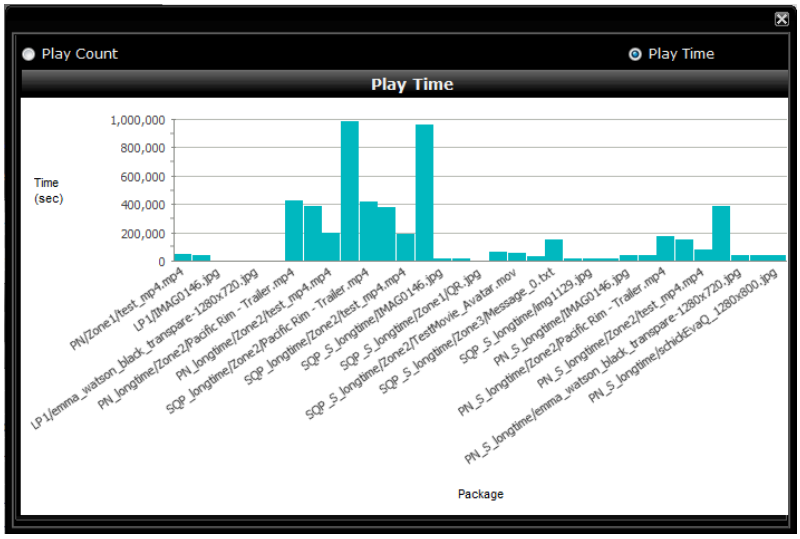
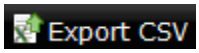


Figure 8-44 Play Time

To Export the Play History Files

1. Click the **Query** button to display the list of the files in the Play History section.
2. Click the **Export CSV** button 

to save or open a Windows Excel file to see the listed play time and play count of each played file. Or click the **Export Detail CSV** button 

to save or open a Windows Excel file to see the start time and stop time of each played file.

8.13 Upload Management

Before uploading video or image to the device, you need to transfer the content to the specified storage location in **Package Management** of the Upload Management section.

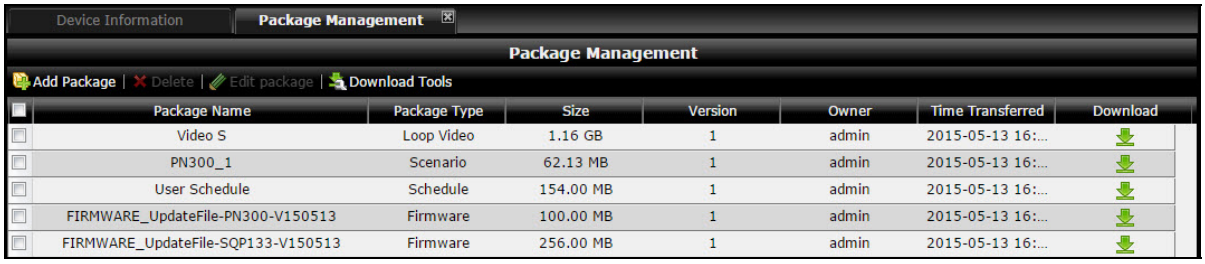


Figure 8-45

- **Add Package:** Adds packages to the specified storage location. See *8.5.2 Transferring the Package* for more details.
- **Delete:** Deletes the package.
- **Edit Package:** Edits the name and version number of the package. You can also click the package name or version to edit.
- **Download Tools:** Click to download **Content Design Tool**, **Clip Design Tool** or **Schedule Tool**.
- **Download** : You can use this button to download the uploaded package.

8.14 Server Setting

In the Server Setting section, you can create user accounts, configure network settings, set up mail server for password retrieval and manage packages. The Server Setting section is only available for the administrator.

8.14.1 User Account

You can create user accounts to access CMS Server.

Figure 8-46

1. Click the **Add** button. This dialog box appears.

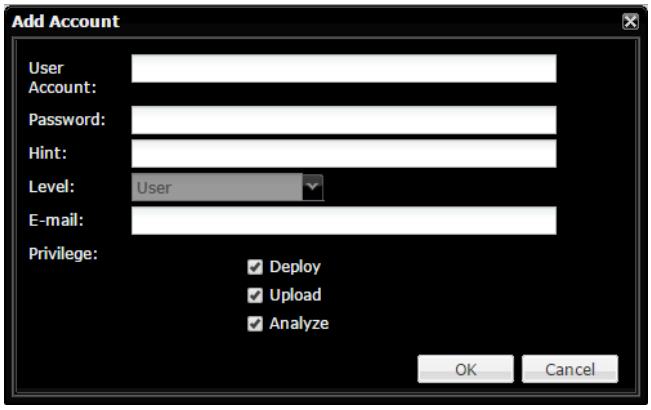


Figure 8-47

2. Type a **User Account** name, **Password** and **Hint** for the account.
3. Type an **E-mail** address for the account. When you forget the password, a new password can be sent to your e-mail account using the Forget Password link in the login page. Make sure you have enabled the e-mail service for the CMS Server. For details, see *8.14.3 Email Service*.
4. Select the privilege(s) allowed for the user.
   - **Deploy** allows access to the Device section.
   - **Upload** allows access to the Upload Management section.

- **Analyze** allows accessi to the Event Query section.

5. Click **OK** to return to the User Account List.
6. You can edit the account setting using the **Change Password** and **E-Mail** buttons.
7. To delete an account, select an account and click the **Delete** button.

8.14.2 Network Setting

In the Network Setting page, you can configure basic network settings as well as set up SSL protocol and Dynamic DNS.

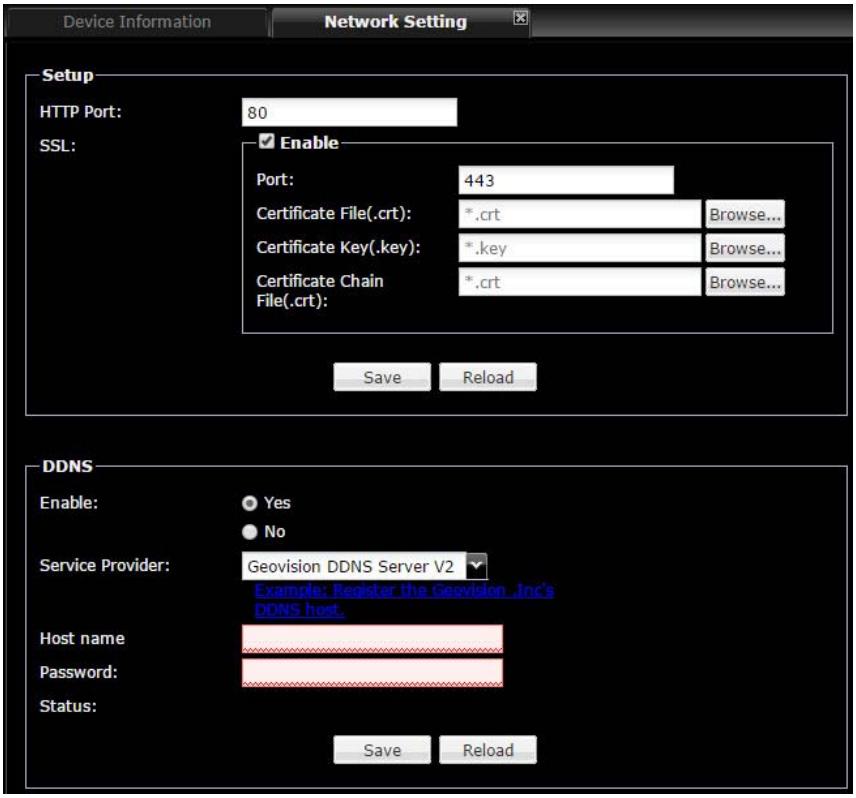


Figure 8-48

[Setup]

- **HTTP Port:** The default HTTP port is 80.
- **SSL:** Enable the Secure Sockets Layer (SSL) protocol for a more secure Internet connection. To use your own Certificate File, Certificate Key File and Certificate Chain File, click the **Browse** buttons and select the files stored at your computer. The encryption strength depends on your SSL certificate.

[DDNS] Dynamic DNS allows you to register a domain name to easily access your CMS Server when using a dynamic IP address.

- **Enable:** Select to enable DDNS.
- **Service Provider:** Click the link below to register a GeoVision DDNS Server. The provider is GeoVision DDNS Server V2 by default.
- **User Name:** Type the username used to enable the service from the GeoVision DDNS Server. For GeoVision DDNS Server V2, type the complete host name.
- **Password:** Type the password used to enable the service from the DDNS.
- **Status:** Shows whether the DDNS server is connected.

8.14.3 Email Service

You can configure the SMTP server settings to send password to the user's email address when the user forgot the password. An e-mail notification can also be sent when a device is disconnected from the CMS Server.

For details about the e-mail alarm setting, see *8.11 Device Setup*.

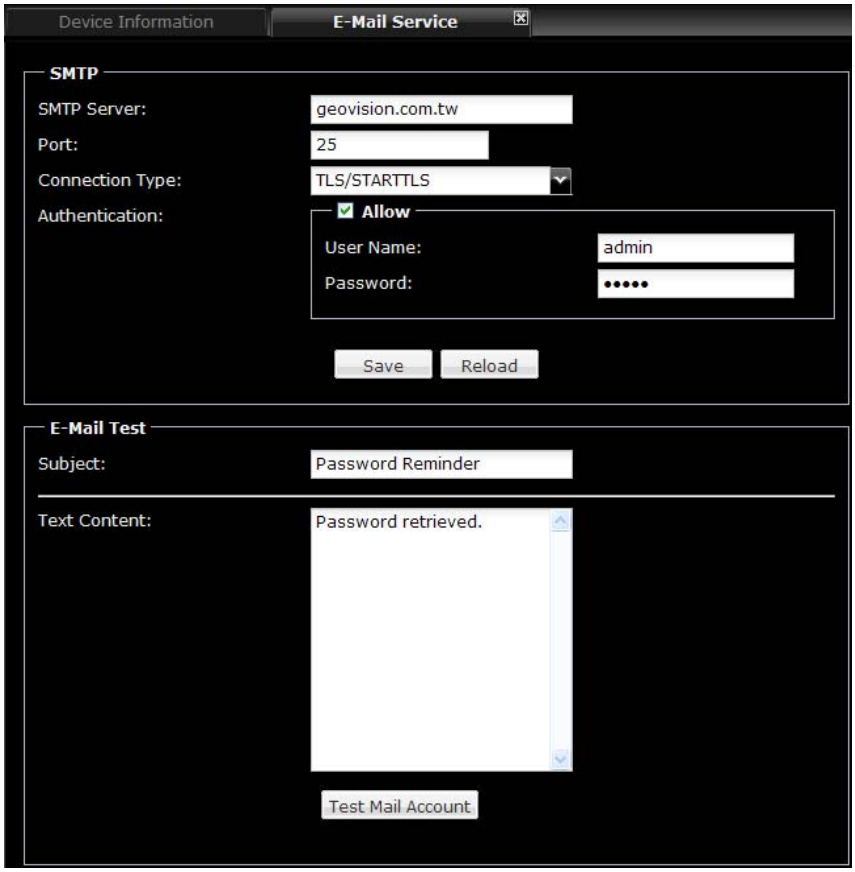


Figure 8-49

[SMTP]

- **SMTP Server:** Type your SMTP Server's URL address or IP address.
- **Port:** The default port for most SMTP servers is 25. However webmail Yahoo and Hotmail generally use different SMTP port. In this case, check your e-mail provider for the SMTP port number.
- **Connection Type:** For a more secure connection, use the drop-down list to select **SSL** or **TLS/STARTTLS**.
- **Authentication:** If your mail server needs login authentication, select **Allow** and type your login account name and password.

[Email Test]

- **Subject:** Type a subject for the password retrieval email.
- **Text Content:** Type the content of the email.
- **Test Mail Account:** Click this button to send a test e-mail to the assigned account.

8.15 Upgrading the Firmware

To upload firmware to the device, follow the steps below.

1. In the left menu, click **Upload Management**, select **Package Management** and click the **Add Package** button.
2. Select Firmware from the **Package Type** drop-down list. Click **Next**.

Figure 8-50

3. Select **Compressed** if the firmware is zipped or click **Browse** to locate the firmware file. This dialog box appears.

Figure 8-51

4. Click **Start Transfer**.
5. Click **Finish** after the file is transferred successfully.
6. In the left menu, click **Device**, select **Device Setup** and select the device you want to upgrade.
7. Click the **Upload Package** button and select **Firmware**.
8. Select the firmware you want to upload and click **Upload Package**.

After the uploading process is completed, the device will automatically restart.

Note: You need to allocate at least 100 MB in the device storage before upgrading the firmware.

Chapter 9 Dynamic DNS

Dynamic DNS (Domain Name System) provides a convenient way of accessing the CMS Lite when using a dynamic IP address. Dynamic DNS can direct the changing IP address of the CMS Lite to a same domain name, so that you don't need to go through the trouble of checking if the IP address assigned by the DHCP server or ISP has changed.

Note: Dynamic DNS is not supported by PN401.

For details on GV-Dynamic DNS, see the Installation Guide.

Chapter 10 Digital Signage Management Server

Using the Digital Signage Management Server (DSS), you can remotely manage the digital content packages on multiple PN401 devices connected.

10.1 System Requirements

To access the Digital Signage Management Server, ensure your PC has good network connection and use one of the following web browsers:

- Microsoft Edge
- Google Chrome
- Firefox

Note: Internet Explorer is not supported by Digital Signage Management Server.

10.2 Connecting PN401 to Digital Signage Management Server

Installing the Digital Signage Management Server

1. Download the **Digital Signage Management Server** from our download page.
2. Click the Windows **Start** button and select **iDSS**. The iDSSManage icon appears at the system tray.

Figure 10-1

3. Right-click the **iDSSManage** icon and select **Start**. The icon becomes  .

4. Open your browser and type the IP address **127.0.0.1**. This page appears.

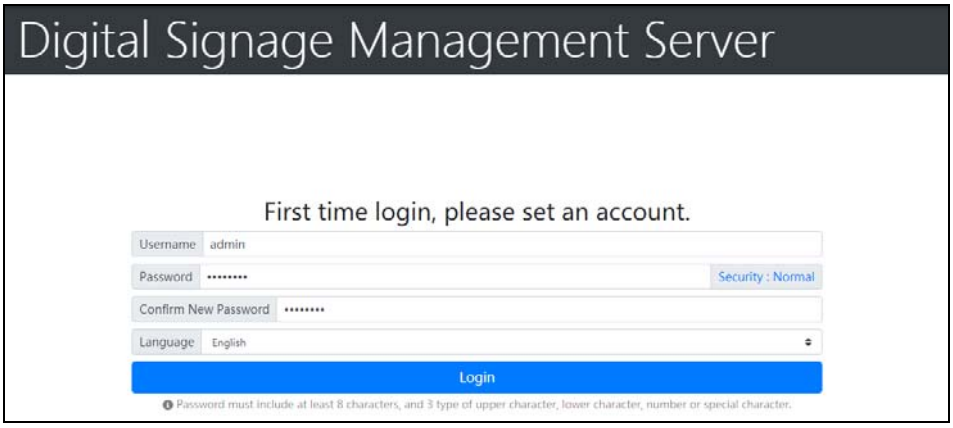


Figure 10-2

5. Create an account for the server and click **Login**. The Devices List section appears.

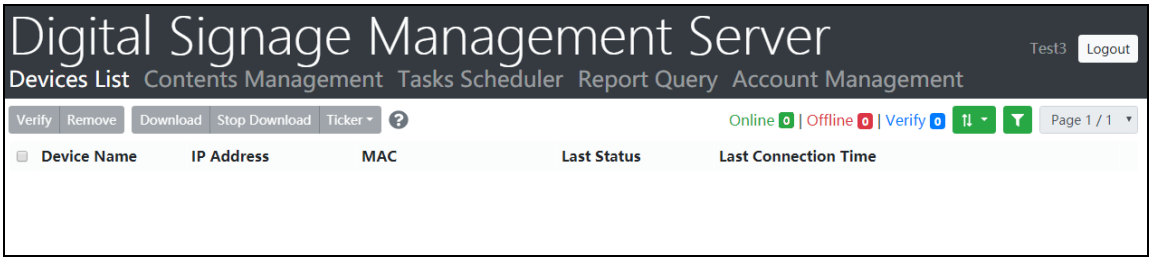


Figure 10-3

Connecting to PN401

Once the Digital Signage Management Server is installed on your PC, follow the steps below to connect to PN401.

1. Select **Service** on the Setup Menu of the device. This page appears.

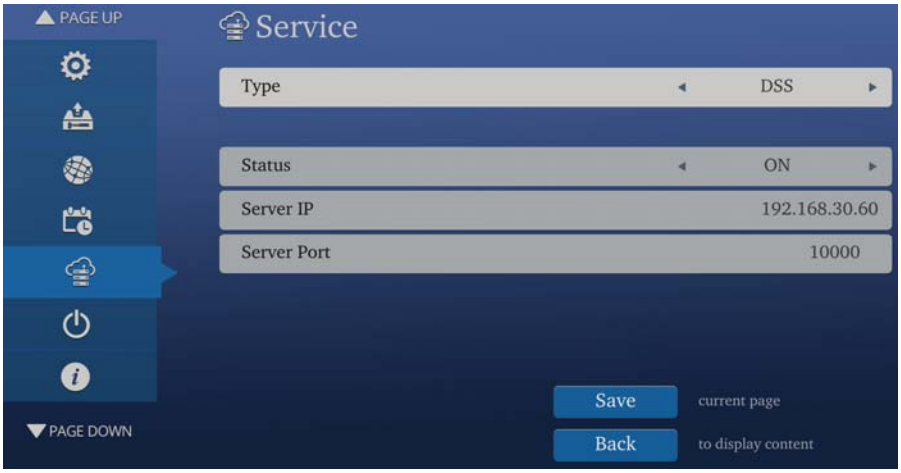


Figure 10-4

2. Follow the selections below:
   - Type: DSS
   - Status: ON
   - Server IP: Type the IP address of the DSS server
   - Server Port: 10000, or match the port with that on DSS server (see *Figure 10-6*)
3. Select **Save** and click **OK** for the request to reboot. The device reboots.
4. Once the device appears on the DSS main page, select the device and click **Verify**. Your device is now connected to the Digital Signage Management Server.

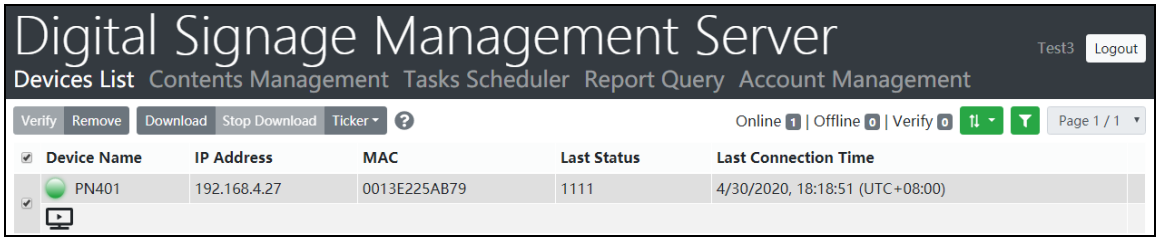


Figure 10-5

Note: The definition of each status color is listed below.

Status color	Definition
PN401	Connection to PN401 is pending for verification
PN401	Online: PN401 is connected to DSS
PN401	DSS is uploading a content package to PN401
PN401	Offline: PN401 is not connected to DSS

Settings of the DSS server

To configure the general settings of the DSS server, right-click the **iDSSManage** icon on the system tray, click **Stop**, and click **Setting** to access the following options.

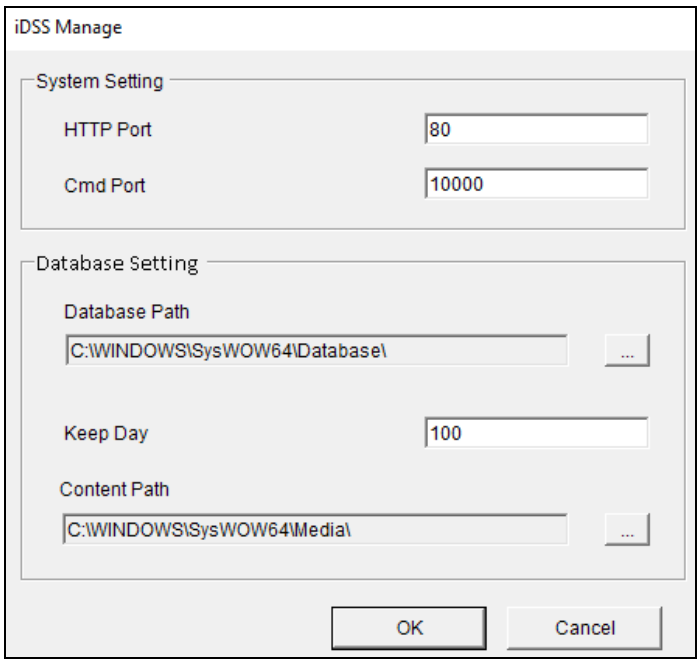


Figure 10-6

- **HTTP Port:** The default HTTP port is 80.
- **Command Port:** The Command port is used for communicating with digital signage devices. If another program is using the default port 10000, you may need to change the port value to avoid conflicts. The port range is 1 to 65534.
- **Database Path:** Changes the storage path for event log and device information.
- **Package Path:** Changes the storage path for content packages.
- **Keep Day:** The default Keep Day is 100.

10.3 Transferring the Package

To upload content packages to the Digital Signage Management Server, follow the steps below.

Note: You can also upgrade the firmware to multiple PN401 devices by following the instructions below, and select the firmware file on Step 2.

1. Click the Content Management section and click **Add**. The Add window appears.
2. Type a desired name in **Package Name**, select a folder type in **Package Type**, and click **Browse Files**. For details on folder types, see *Appendix A*.
3. Once the content package appears in the Add window, click **Upload** and **OK**.

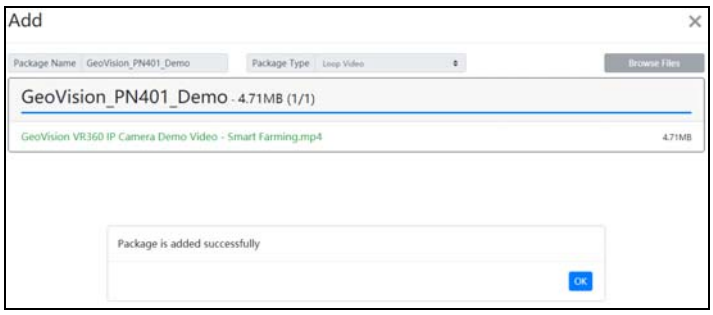


Figure 10-7

Note:

1. The maximum file size for each upload is 2 GB. The total capacity for upload is dependent on the capacity of your local storage.
2. You can select up to 240 uncompressed files or select **Compressed** to include more than 240 zipped files.

4. The uploaded content packages will appear in the Contents Management section.

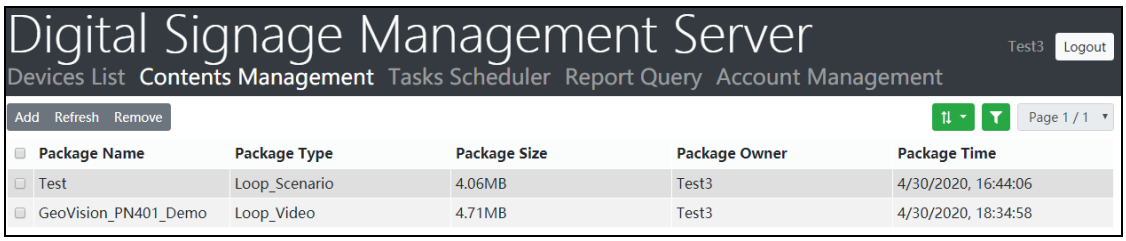


Figure 10-8

If your content package does not appear in the Contents section after upload, click **Refresh**. To delete content packages, select the desired content packages and click **Remove**.

10.4 Uploading the Package

Once your content packages are transferred to the Digital Signage Management Server, you can upload them to a connected PN401. The content packages will play on the display monitor connected to the PN401 instantly or as scheduled.

10.4.1 Uploading and Scheduling Content Packages

1. Go to the Devices List section and double-click the device.

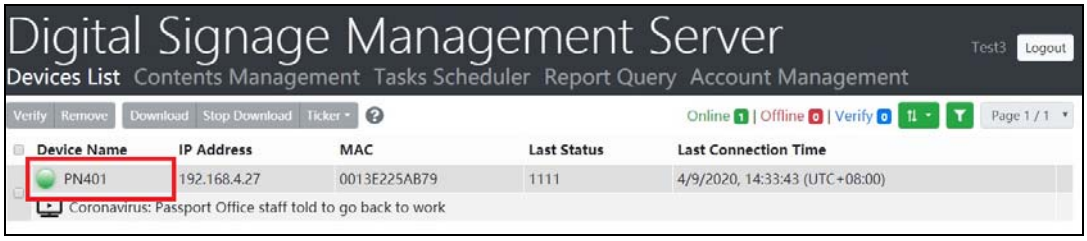


Figure 10-9

2. In the Device Information window, click **Download**.

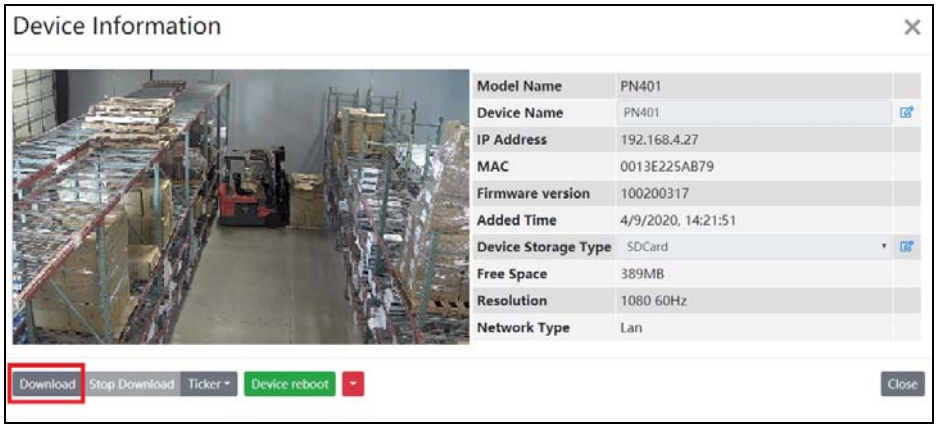


Figure 10-10

3. In the Download window, schedule the download by selecting **Now** or specifying the **Date**, **Time**, and **Minute**.

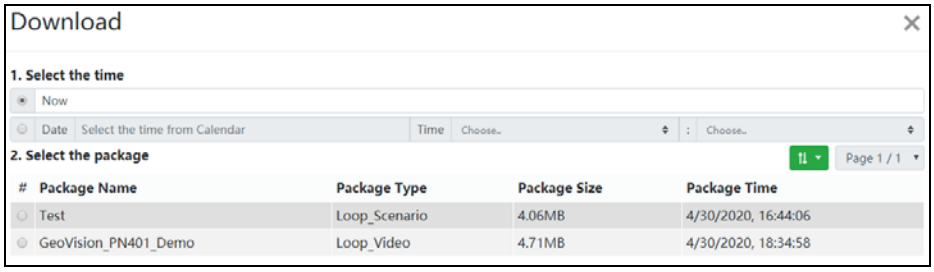


Figure 10-11

4. Select the desired content package and click **Submit**.
5. If **Now** is selected, the content package will begin to play. If a future time is scheduled, the content package will play at the specified time.

10.4.2 Assigning Tickers

You can apply a scrolling ticker to the displayed content package. The added ticker will replace your existing ticker until manually removed.

1. In the Devices List section, select your device and click **Ticker** to open its drop-down list.

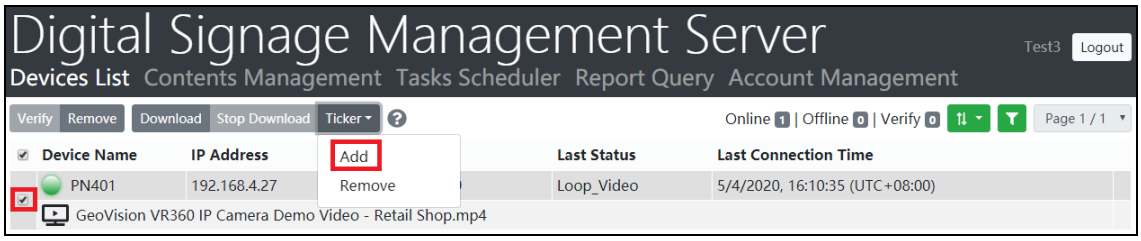


Figure 10-12

2. Select **Add**. This dialog box appears.

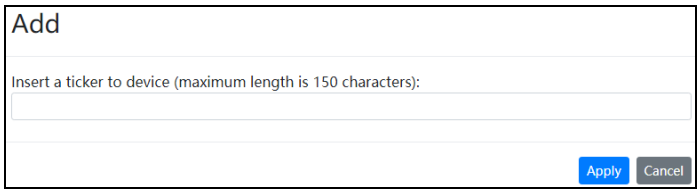


Figure 10-13

3. Type the desire text and click **Apply**.
4. If you wish to remove the added ticker, repeat step 1 and select **Remove**.

10.5 Content Package Schedules and Statistics

In the Tasks Scheduler and Report Query sections, you can view the details of the content packages played or scheduled to play.

10.5.1 Reviewing the Uploaded Content Packages

In the Tasks Scheduler section, you can view the basic details of a content package from any time.

1. Go to the Tasks Scheduler section and adjust the calendar to select the desired date.

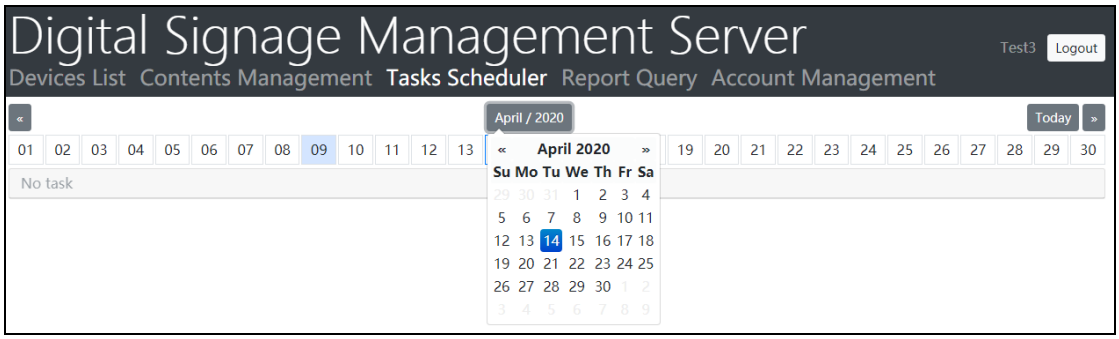


Figure 10-14

2. Select the desired content package listed. The details of the selected content package is displayed.

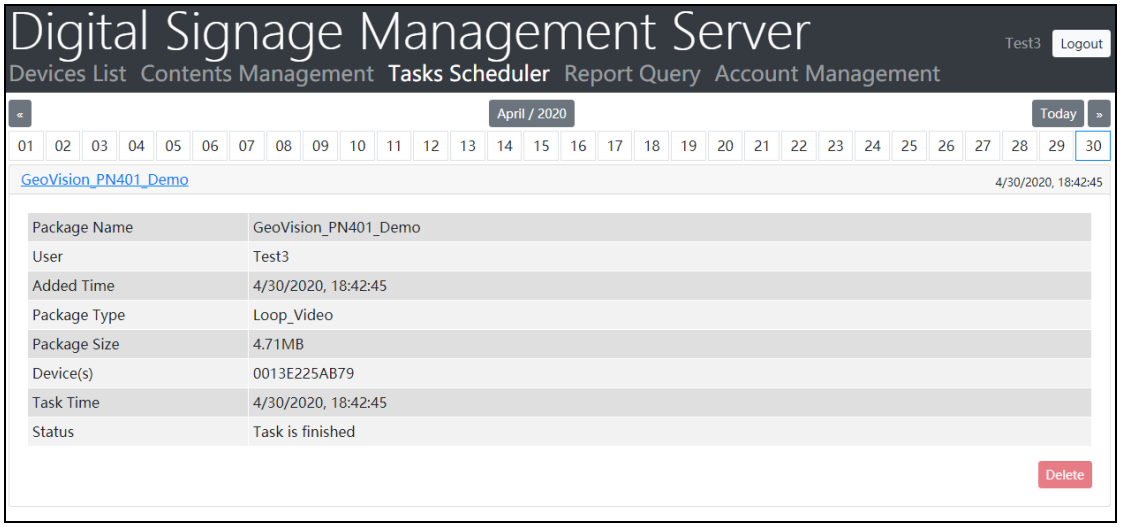


Figure 10-15

10.5.2 Viewing Reports

In the Report Query section, you can generate a summary of all the played content packages and the total number of times they are played on the specified PN401.

1. Go to the Report Query section, select the desired **Start Time**, **End Time**, and **Device Name**. Click **Submit.** The number of times for each content package played appears.

Figure 10-16

2. Click **Download** to obtain an excel file of the report.

10.6 Creating User Accounts

When you created an account on the Digital Signage Management Server for the first time, that account is automatically registered as an Administrator (admin) in the Account Management section. To modify or add user accounts, follow the steps below.

1. Go to the Account Management section and select **Add**.
2. Type a username and password and click **Apply**.

Note: The maximum number of user accounts supported is 10.

To edit user accounts, click . To remove user accounts, click .

Specifications

PN401

For detailed specifications, see Datasheet.

PN400

For detailed specifications, see Datasheet.

PN300

Model	PN300	
Video Format	Multimedia support	
Audio Format	G.711	
Photo Format	PNG / JPEG / BMP	
Audio Output	High Definition, 3.5 mm jack	
Video Output at 60 Hz	HDMI	VGA
	480p	640 x 480
	720p	1024 x 768
	1080i	1280 x 768
	1080p	1366 x 768
TV Standard	NTSC / PAL	
SD Card	Class 4 or above (FAT32 and NTFS formats)	
USB	USB 2.0 backward compatible (FAT32 and NTFS formats)	
IR Remote Control	Yes	
Operating Temperature	0°C ~ 40°C / 32 °F ~ 104 °F	
Operating Humidity	20 % ~ 80 % (with no condensation)	
Dimensions (W x H x D)	182.5 × 29 × 141.5 mm / 7.19 × 1.14 × 5.58 in	
Net Weight	615 g / 1.36 lb	
Language	English / French / German / Italian / Japanese / Portuguese / Russian / Spanish / Traditional Chinese	
Note: NTFS format is only supported by PN300/SQP133 V1.06 or later with CMS Server V1.0.4.0.		

All specifications are subject to change without prior notice.

SQP133

Model	SQP133
Video Format	Multimedia support
Audio Format	G.711
Photo Format	PNG / JPEG / BMP
Audio Output	Built-in speakers (4 Ω / 1.5 W)
Video Output	1280 x 800
TV Standard	NTSC / PAL
SD Card	Class 4 or above (FAT32 and NTFS formats)
USB	USB 2.0 backward compatible (FAT32 and NTFS formats)
IR Remote Control	Yes
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Operating Humidity	20% ~ 80% (with no condensation)
Dimensions (W x H x D)	342.8 × 220.3 × 38.3 mm / 13.5 x 8.7 x 1.5 in
Net Weight	1160 g / 2.6 lb
Housing	Black / White
Language	English / French / German / Italian / Japanese / Portuguese / Russian / Spanish / Traditional Chinese
Note: NTFS format is only supported by PN300/SQP133 V1.06 or later with CMS Server V1.0.4.0.	

All specifications are subject to change without prior notice.

Appendix

A. Definitions of Folder Names

The followings are the names and the descriptions of the folders workable with digital signage devices.

Folder Name	Description
Loop_Video	The folder stores the image and/or video files, and is used for the slideshow to be played repeatedly on the device. See *2.4 Playing the Slideshow*.
Scenario	The folder stores the media project created using the Content Designer software. See *Chapter 5 Content Designer.*
Schedule	The folder stores the schedule setting files created using the Content Schedule software. See *Chapter 6 Content Schedule*.
Loop_Scenario	The folder stores multiple Scenario projects. The Scenario projects will be played in alphabetic order and each project will be played 5 min at maximum. For how to create a Scenario, see *Chapter 5 Content Designer.*

B. Definitions of Aspect Ratio Mode

Letter Box	Set to display the video in its original proportions with black margins at the top and bottom of the video.
Pan and Scan	Set to display the video in its original proportions to fill the screen, often cutting off portions at the top and bottom or left and right sides of the video to focus on the prominent aspects of the video.
Ignore	Set to display the video to fill the screen by cutting off portions at the top and bottom or left and right sides of the video.