

User Manual

Version 1.0

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1. Getting Started

1.1 Key features

Welcome to NovoDS, an easy-to-use software signage application that integrates with the NovoConnect device. NovoDS allows you to:

- Easily generate signage content with text, video, images and Web content.
- Export and update signage content via a wired or wireless connection.
- Use network-based device management to control multiple devices at the same time.
- Operate a stand-alone sign with the NovoConnect device using SD card content updates.

1.2 Modes of operation

Two modes of operation — stand-alone and network-based — allow users to manage content either remotely or via pre-loaded SD card.

1.2.1 Stand-alone mode

Stand-alone mode allows simple plug-and-play operation of NovoDS, and requires no direct management of the device. This mode is most suitable for the deployment of single devices operating independently.

- a. Create the desired signage content playlist on your PC using the NovoDS PC application software (See section 3.1 Create a Playlist).
- b. Save and/or export the playlist file to a microSD card.
- c. Launch the NovoConnect device.
- d. Insert the microSD card into the NovoConnect device and reset the device to auto-start the playlist.
- e. For more information on exporting a playlist to the NovoConnect device for use in Stand-alone mode, see **Section 3.2 Export Playlist**.

1.2.2 Network-based mode

Network-based mode allows users to sync their NovoDS playlist to multiple devices and update and manage content from their PC.

- a. Create the desired signage content playlist on your PC using the NovoDS PC application software (See section 3.1 **Create a Playlist**).
- b. Sync content to devices via Wi-Fi connection to the NovoConnect device.
- c. Initiate and terminate playback from user's PC. (See **Section 3.3 Device Management**)

1.3 Hardware setup

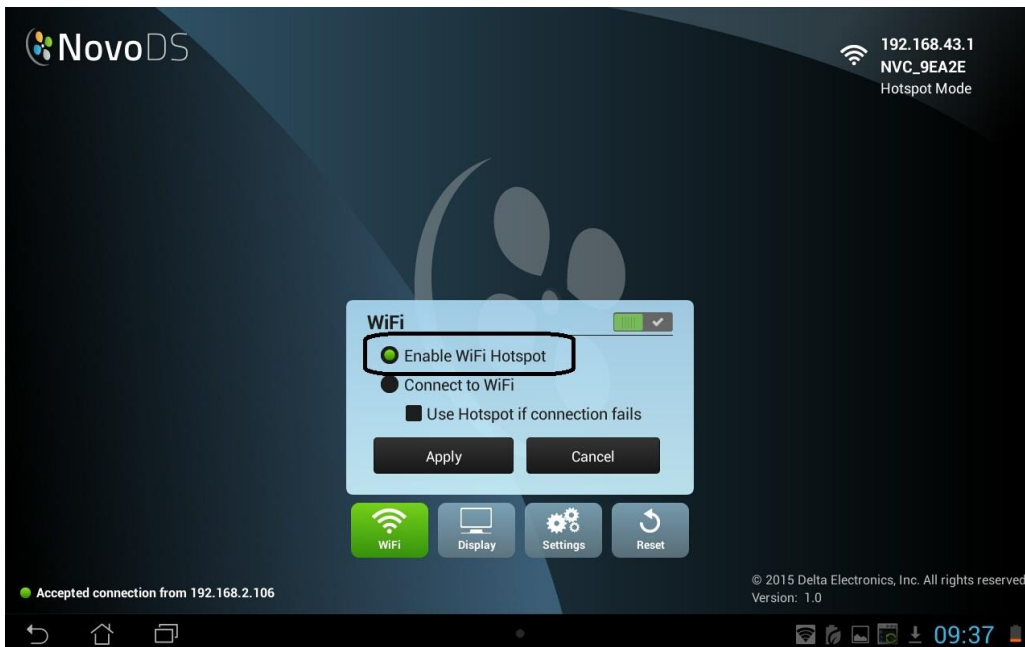
For Stand-Alone Mode

Connect your NovoConnect to a display device such as a television or projector via HDMI cable (*consult your NovoConnect user manual for additional instructions on the operation of the NovoConnect device*).

For Network Mode

- Launch the NovoDS app on your NovoConnect device.
- Open the Wi-Fi tab from the NovoDS main page. There are two ways in which you can connect to NovoDS in Network Mode: Hotspot mode and Wi-Fi mode.

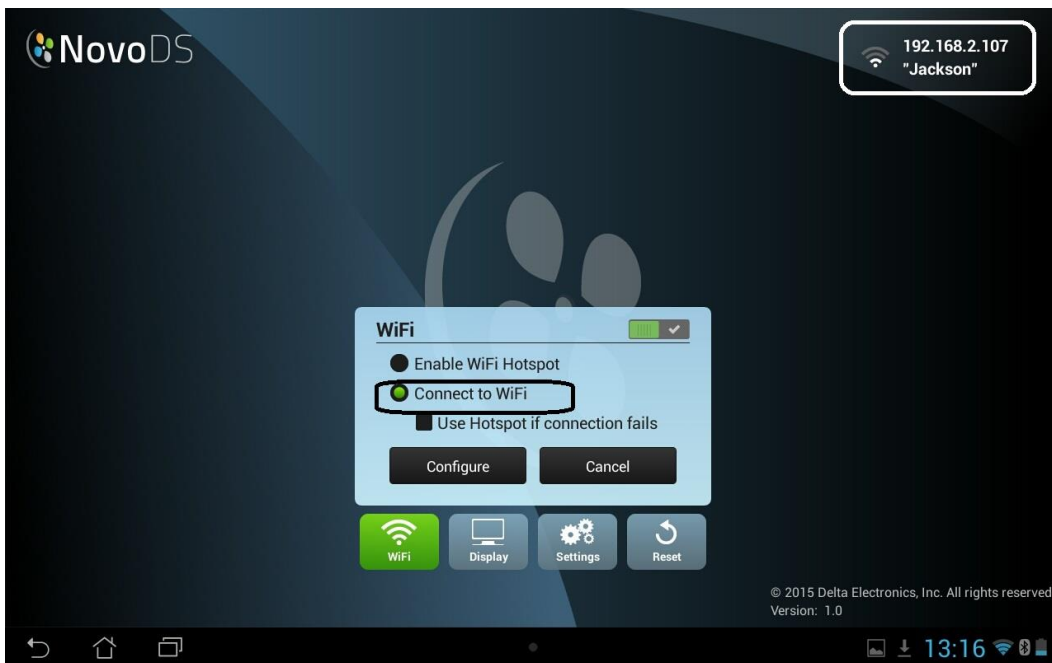
Hotspot Connection: This allows you to connect directly to our NovoConnect device wirelessly from your PC. This mode works best when the connected PC is near the NovoConnect device and the signage it will be controlling.



To connect in Hotspot Mode:

- With the Wi-Fi tab open, select “Enable Wi-Fi Hotspot”. An IP address SSID will be displayed for the NovoConnect device. In the above example the IP address is 192.168.43.1 and the SSID is “NVC_9EA2E.”
- Open the Wi-Fi settings on the computer running the NovoDS application and connect to the Wi-Fi access point with the same SSID as the NovoConnect device.
- Open the NovoDS PC application and select a playlist (more on creating playlists later in Section 3.1). To test the connection, enter the IP address associated with the SSID and select the connect button. The NovoDS should display a message confirming the connection in the lower left corner of the screen.
- Note: You cannot connect to multiple displays through the “Group” function in Hotspot Mode. The groups can only be used in Wi-Fi mode

Wi-Fi Network Connection: This allows users to access the device over your school or office network and is best in situations in which you plan to manage one or more devices over a larger physical area (the area covered by the wired or wireless network).



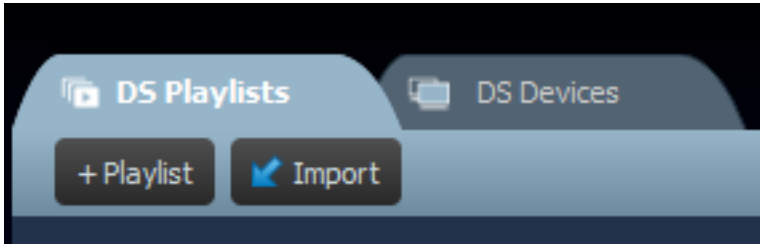
To connect via Wi-Fi Network:

- Open the Wi-Fi settings tab in the NovoDS app on your NovoConnect device and select the “Connect to Wi-Fi” option. You may be instructed to turn on the devices Wi-Fi from the Settings tab. Choose the desired access point SSID from the available Wi-Fi SSIDs.
- The NovoDS will now display the SSID and IP address in the upper right corner of the screen.
- Connect your PC to the same SSID as the one used by your NovoConnect device.
- Note: The computer and all NovoConnect devices you wish to manage with that computer must be connected to the same SSID.
- Open the NovoDS PC application and select a playlist (more on creating playlists later in Section 3.1). To test the connection, enter the IP address associated with the SSID and select the connect button. The NovoDS should display a message confirming the connection in the lower left corner of the screen.

2. Work Flow

There are two phases of work flow when using the NovoDS software with your NovoConnect device.

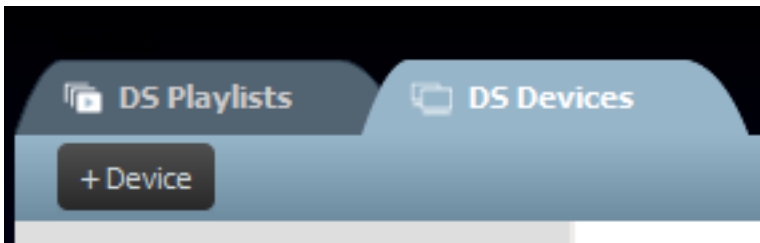
2.1 DS playlist



This phase covers the creation and organization of content for your digital signage display. This covers:

- Playlist creation
- Template selection and customization
- Placement and editing of content
- Playlist testing

2.2 DS devices



This phase covers the control and management of NovoConnect devices running the NovoDS app, which will display your digital signage content.

- Add/Delete NovoConnect devices
- Grouping multiple devices (e.g. Building-A's NovoConnect devices)
- Set a specific playlist for a device or group
- Synchronizing playlist content from PC to NovoConnect devices
- Play-Pause control

3. Operation

3.1 Create Playlist

Playlists control the content that will be displayed on your digital signage with the NovoDS app. Content can include a variety of media, including animated text, video, images, music/sound, and Web pages.

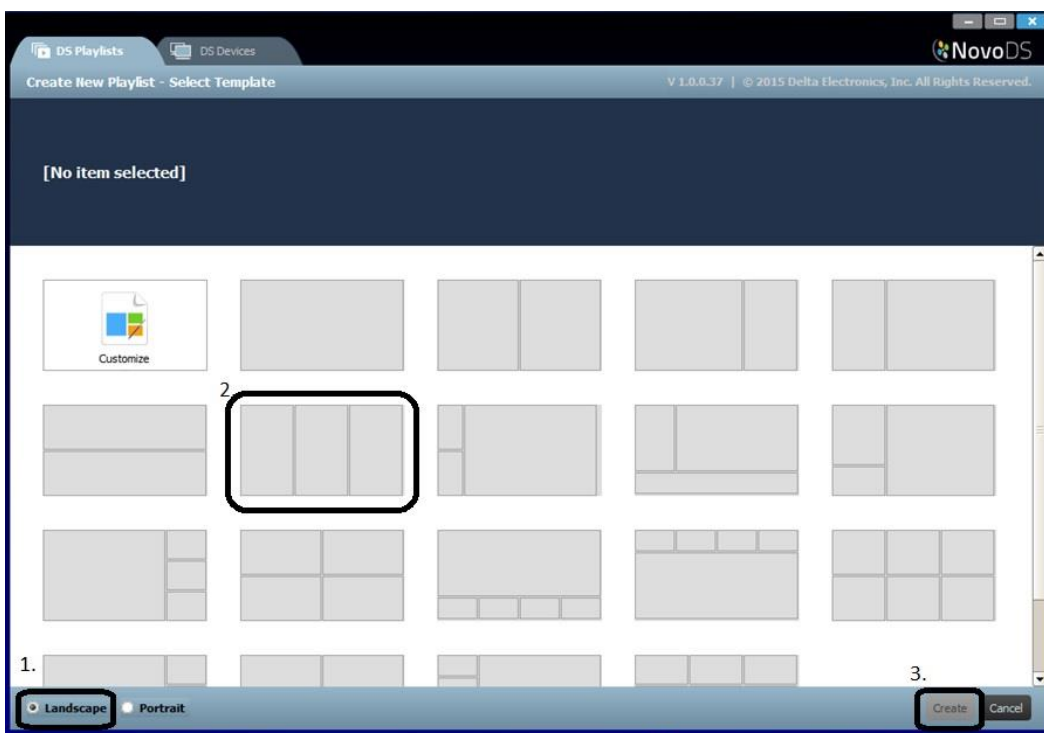
3.1.1 Select template

NovoDS provides 20 pre-made templates, offering a variety of regions in different sizes, configurations and numbers to choose from.

- a. To select a template, open the DS Playlists tab and click the “+Playlist” button from the NovoDS main page or the “Change...” button from the Edit Playlist page. You will be given the option of creating a custom configuration or choosing one of the 20 pre-made selections.



- b. Make a selection by clicking on the desired layout from the premade templates.
- c. Choose “portrait” or “landscape” orientation and click “change” to finalize your selection and return to the edit playlist screen. “Cancel” if you wish to return to the edit playlist screen without making a selection.



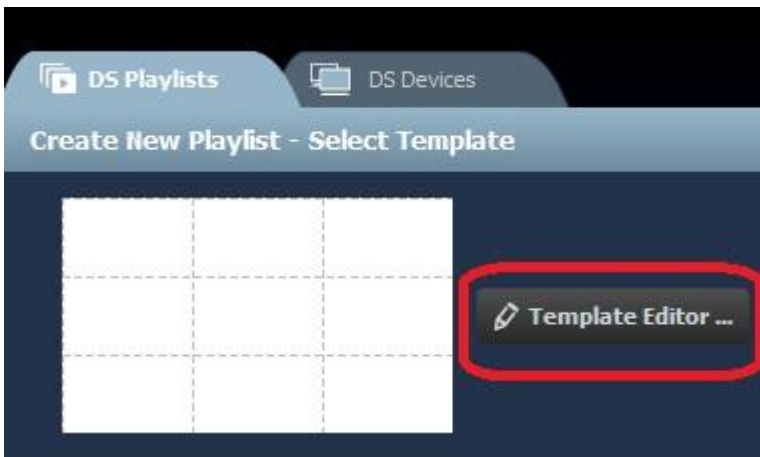
3.1.2 Create custom template

You also have the option of creating your own display configuration for your playlist.

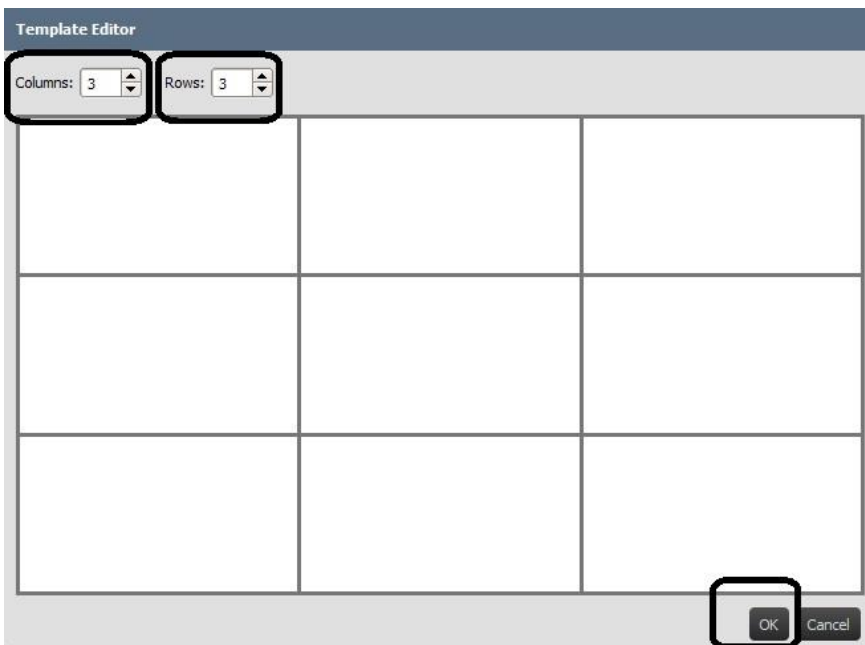
- a. Open the DS Playlists tab and click the “+Playlist” button from the NovoDS main page or the “Change...” button from the Edit Playlist page.



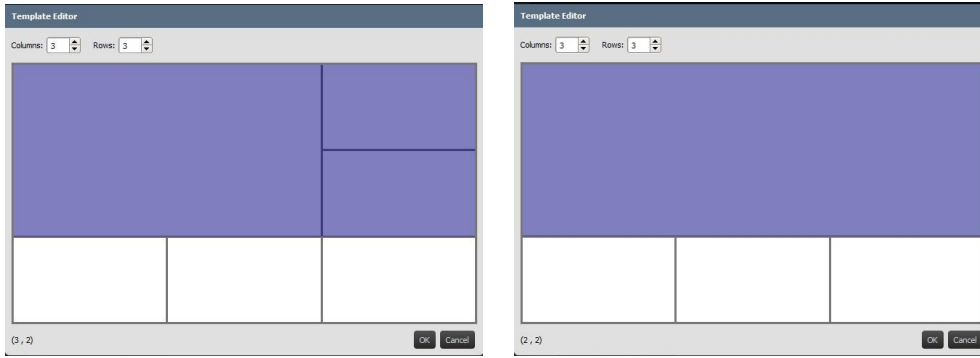
- b. Select “Customize” and then click the “Template Editor” button when it appears in the upper right corner of your screen.



- c. Select the number of columns and rows from the windows at the upper left of the screen. This will create a base grid for your layout.



- d. Click and drag over adjacent regions in your grid to combine them into larger regions.

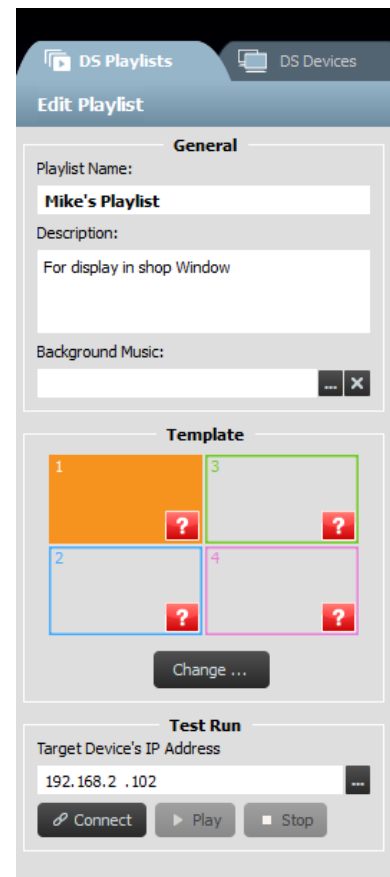


- e. When you have a layout for your template that you are satisfied with, click “OK.” This returns you to the change template page.
- f. Select your new custom template and click “Change.”

3.1.3 Edit playlist

Once you have selected a custom or premade template you are ready to edit your playlist.

- a. Start by entering a name for your playlist in the “Playlist Name” window.
- b. You can also add an optional description of your playlist in the “Description” window.
- c. Optional background audio can be added by clicking the “Background Music” window and selecting an .mp3 audio file from your computer.
- d. You are now ready to add content to the regions of your template. Select a region editor you will be given a choice of adding text, an image, a video or Web page content that region.



3.1.3.1 Add text

To add text to a region, select the “Text” button from the top of the region editor to open the text editor.



- Type the desired text into the “Content” window.
- From the “Visual Effects” tab, choose static, horizontal scrolling or vertical scrolling.
- Choose the color of your text from the “Text Color” tab. Light colors are best for dark backgrounds and vice versa.
- Choose a background color from the “Background Color” tab.
- Select the size of the text from the “Font Size” window.
- If you chose “Static” from the Visual Effects tab, select the alignment of your text from the “Align” tab. This tab only appears when “Static” is selected.
- If you selected scrolling text from the “Visual Effects” tab, choose the scrolling speed from the “Speed” tab.
- Click “save” and continue editing your playlist.

3.1.3.2 Add image

This option allows you to added single or multiple image files to a region. NovoDS supports image files with the following extensions: .gif, .jpg, .jpeg, .png, and .bmp.

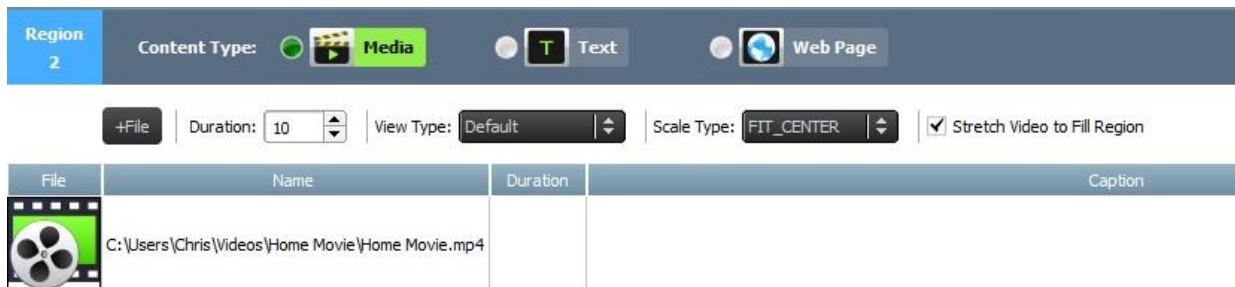


- To begin, select the desired region and click the “Media” tab at the top of content editor.
- Choose an image with one of the above file extensions.
- If you have chosen an image file, the image options will be displayed across the top of the page, including “Duration”, “View Type” and “Scale Type”.
- Once the file is selected you will see the file information including a thumbnail image, the file name and location, the file duration, and the window for an optional caption.
- To adjust the duration of the image (if loading multiple images into the field), select the display time from the “Duration” tab.

- f. The “View Type” option allows the user to select either a standard static view called “Default” or a pan and scan visual effect with “Ken Burns Effect.”
- g. “Scale Type” give the user three scaling options: Fit_Center, Fit_XY, and Center_Crop.
- h. An optional caption can be added to a photo by clicking on the “Caption” field and typing text.
- i. Add additional images for a slideshow effect by clicking “+File” button and selecting more image files.
- j. Image files can be removed from the playlist by click selecting the file and clicking the trash can icon.

3.1.3.3 Add video

This option allows the user to add video content to a region. NovoDS supports video files with the following extensions: .wmv, .mp4, .3gp.



- a. To begin, select the desired region and click the “Media” tab at the top of content editor.
- b. Choose video file with one of the above file extensions.
- c. If you have chosen an image file, the image options will be displayed across the top of the page, including “Duration”, “View Type” and “Stretch Video to Fill Region.”
- d. Once the file is selected you will see the file information including a video icon, the file name and location, the file duration, and the window for an optional caption.
- e. To adjust the duration of the video (if loading multiple video files into the field), select the display time from the “Duration” tab.
- f. The “View Type” option allows the user to select either a standard static view called “Default” or a pan and scan visual effect with “Ken Burns Effect.”
- g. “Stretch to Fill Region” allow the user to resize small videos to fill the borders of the selected region. This may affect the quality of the video.
- h. An optional caption can be added to a photo by clicking on the “Caption” field and typing text.
- i. Add additional videos for a slideshow effect by clicking “+File” button and selecting more video files.
- j. Video files can be removed from the playlist by click selecting the file and clicking the trash can icon.

3.1.3.3 Add Web page

This option allows users to add a Web page content to a region.



- To begin, select the desired region and click the “Web Page” tab at the top of content editor.
- Type the address URL for the desired Web page into the window at the top of the screen.
- Hit return or tap the reload button on the Web browser controls to load the page.
- Note: NovoDS cannot display flash animations or video contained in Web page, so take this into account when choosing a Web page to display.
- Unlike other media formats, Web pages cannot be scaled, repositioned or stretched to fit a region. Take this into account when choosing a region to display Web pages. It is a good idea to test the Web page in the desired region before saving the playlist.

3.2 Import Playlist

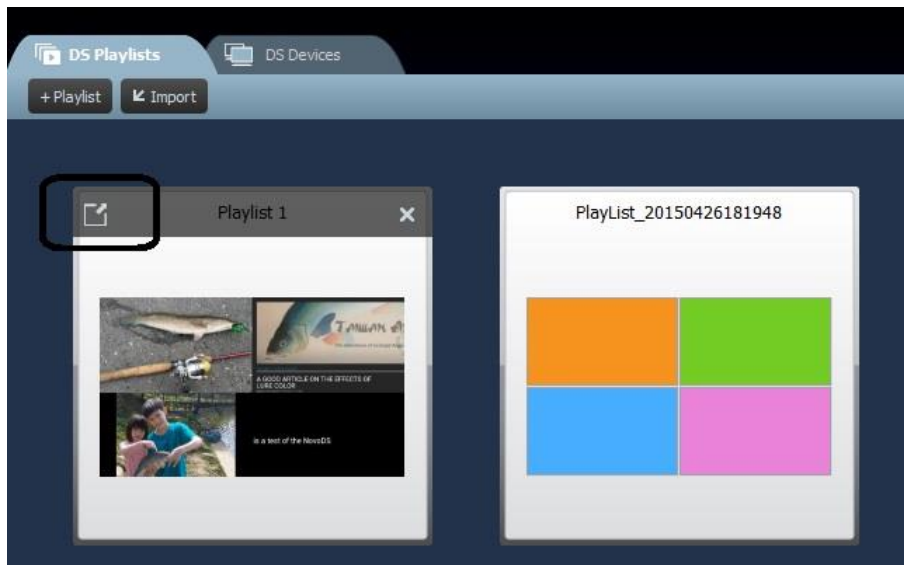


Once a playlist has been created and saved to your computer, it can be opened again using the “Import Playlist” function. Select the “Import” button from the main page of the NovoDS PC application. Locate and select the playlist file from your computer’s hard drive.

3.3 Export Playlist (Stand-alone Mode)

The “Export Playlist” function allows the user to save a playlist onto a microSD card for use in Stand-alone Mode. To export a playlist to a microSD card:

- Connect your microSD card to your computer via card slot or adapter.
- From the DS Playlists screen in the PC application, mouse over the playlist you wish to export.



- c. Click the export icon in the upper left corner of the playlist.
- d. Select the destination folder for your microSD card.
- e. When the dialog box asks “Export as NovoDS’s Startup Playlist?” select “Yes.”
- f. The playlist and content will begin transferring to the microSD card.
- f. Once the transfer is complete, remove the card from your computer and launch the NovoConnect device.
- g. Insert the microSD card into the NovoConnect device and reset the device to auto-start the playlist.

3.4 Device Management (Network-based mode)

This feature allows users to manage one or more devices from a single computer over a network. Note: all devices must be connected to the same network SSID and the computer controlling them.



- a. To add a device to the list of devices managed by this computer, click the “+Device” button. Enter the name and the IP address for the device. Users can also add select a playlist and group from the corresponding pull-down menus. Click “OK” to complete the action.

Create New Device

Name:

Description:

IP Address:

Group:

Playlist:

b. Connect to a device on your device list by clicking the connect icon.

| | Name | IP Address | Group | Playlist | Action | Description |
|--|---------|---------------|-------|-----------------------|--------|------------------------|
| | Jackson | 192.168.2.105 | | PlayList_201504251440 | | Living room television |

c. From the DS Devices page, you will now see fields for device name, IP address, group, playlist, actions, and an option device descriptions (such as the location of the device).

d. To select a playlist for a single device, click the playlist field for that device and choose a playlist from the pull-down list. Note: you will need to have either created or imported playlists first (See sections 3.1 and 3.2).

Individual controls:

Users can control individual devices with the “Action” buttons for each device.



a. Connect to an individual device by clicking the connect button for that device.



b. Send a playlist to a device and play it by clicking the play button. Stop play by clicking stop button.



c. Manage device setting by selecting the setting button.

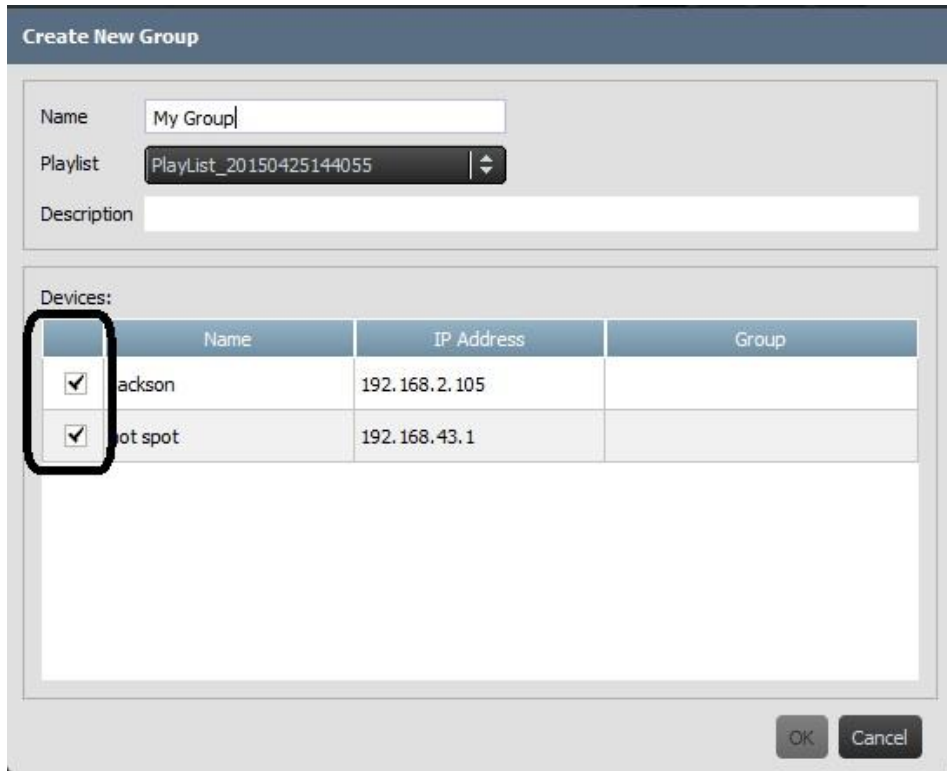
Group controls:

Devices can be grouped together and managed collectively.

a. To create a new group, select the “+Group” button.



- b. A “Create New Group” window will open, allowing the user to name the group, add an optional description, select a playlist for the group (all devices in a group must use the same playlist).
- c. Once a name, playlist and description are selected, add devices to the group by checking the corresponding boxes.



- d. Click “OK” to finalize the group.
- e. The group is now shown in the Group List on the left side of the DS Devices page.



- f. Click the group name from the Group List to bring up the devices in that group.
- g. The devices can now be synched and played simultaneously or individually. Select “Play All” for simultaneous playback. “Stop All” stops all devices in the group.
- h. Devices can also be played individually from the “Action” keys.

4. Specifications

| Device Capabilities | |
|----------------------------|---|
| Feature | Specification |
| Media Supported | <ul style="list-style-type: none"> • Video: MPEG2, MPEG4, H.264, VC-1(WMV), WebM • Audio: MP3, WMA, AAC • Image: JPEG, PNG, GIF, BMP • Web: non-Flash preferred • Text |
| Screen Partition | Built-in templates or build-your-own templates |
| Auto Start Feature | Automatically start media playback upon power-up |
| Operation Modes | <ul style="list-style-type: none"> • Standalone: playback from micro-SD card directly • Network-based: content synchronization and playback control from a remote computer |
| Firmware Upgrade | Upgrade over the Internet |
| PC Software Specifications | |
| OS | <ul style="list-style-type: none"> • Windows 7 and above • Mac OS 10.6 and above |
| Template | <ul style="list-style-type: none"> • 36 built-in templates • Fully-customized template |
| Playlist editing | <ul style="list-style-type: none"> • Import pictures, video clips, web links, and text. |
| Playlist Export/Import | <ul style="list-style-type: none"> • Export playlists to SD card for standalone playback • Export playlists to pre-build content packages • Import playlists from pre-built content packages |
| Remote Device Management | Manage multiple devices from one computer <ul style="list-style-type: none"> • Monitor device status • Basic management task, like start, stop, upgrade firmware, etc. • Push playlists to multiple devices via one-button click |
| Software Upgrade | Upgrade over the Internet |

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