



NMP-200U
User's Manual
October 2009



Contents

| | |
|---|-----------|
| 1. Introduction | 1 |
| 1.1. Package Contents | 1 |
| 1.2. Software Management Features | 1 |
| 1.3. Physical features..... | 2 |
| 1.4. VESA-mount installation provisions | 2 |
| 1.5. Notes on security features | 2 |
| 2. Player System Setup | 4 |
| 2.1. Hardware setup | 4 |
| 2.2. Setting up Adfotain Manager Express | 5 |
| 2.3. Configuration with Adfotain Manager Express | 5 |
| 3. Content Management | 9 |
| 4. Specifications table | 10 |
| 5. Appendix: Setting the player clock (no network) | 11 |
| 6. Appendix: FAQ | 12 |
| 7. Appendix: Firmware Upgrades | 15 |
| 7.1. Firmware upgrade using Adfotain Manager Express..... | 15 |

1. Introduction

The NMP-200U is an industrial-grade digital signage system suitable for remote and local management use.

- High quality 480p dedicated video player for digital signage
- Compact Flash solid-state removable storage
- Industrial-grade industrial design with integral VESA-mount
- 24/7 operation featuring watchdog timer
- Low power consumption and fanless operation
- Compact size fits in the palm
- Easy network setup with bundled Adfotain Manager Express utility
- Scala Content Manager compatible

1.1. Package Contents



Media Player Unit



AC Power Adapter
5V DC output



CF Card Slot Cover
and Screw set



Software and
Documentation CD



Ethernet Cable



Audio Adapter Cable:
RCA to 3.5 mm



Audio Cable:
3.5 mm to 3.5 mm



Quick Start Guide



2GB CF card
(certain SKUs only)

Approximate video playback times

| CF capacity | 2GB | 4GB | 8GB |
|---------------|------------|---------|---------|
| Playback time | 90 minutes | 3 hours | 6 hours |

1.2. Software Management Features

Adfotain Manager Express software interface



Adfotain Manager Express helps you quickly set up and test playback on your digital signage player. Please see the Adfotain Manager Express User's Manual for operation details. Once you have scheduled your contents, a few clicks of the mouse quickly configures all players across the network simultaneously.

Disruption-free content update via USB

USB UPDATE

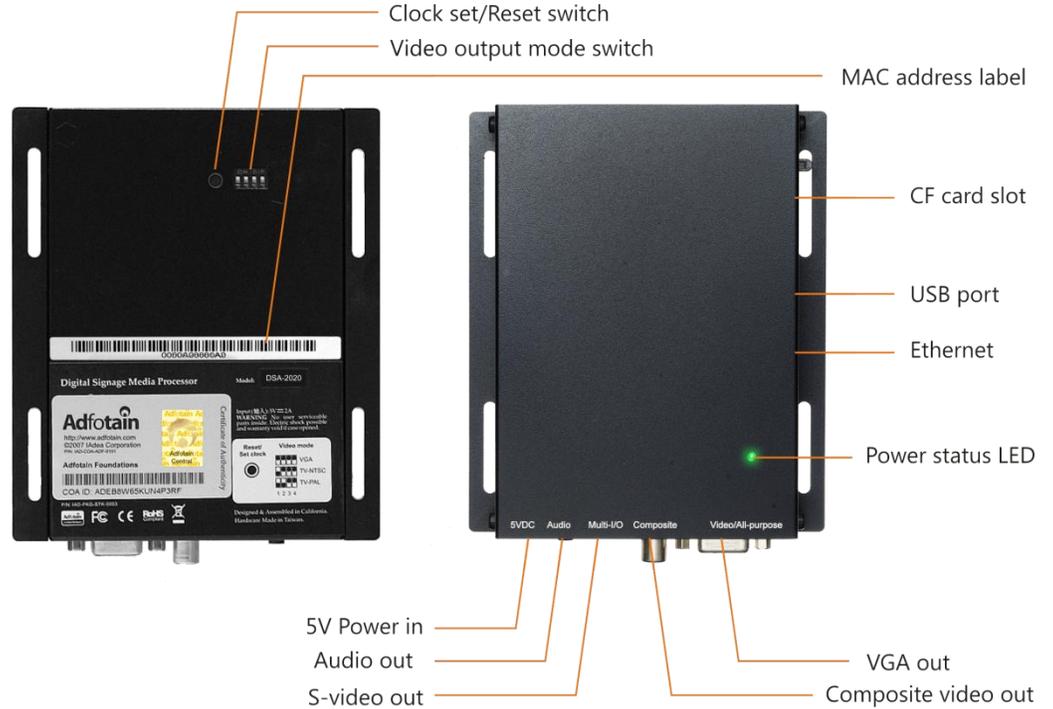
To manage the NMP-200U without network, use a USB mass-storage device to sync your contents. Simply export the new playlist and media files to a removable storage device and connect the device to the player to initiate automatic update.

Scala Network Enabled (Scala license required)

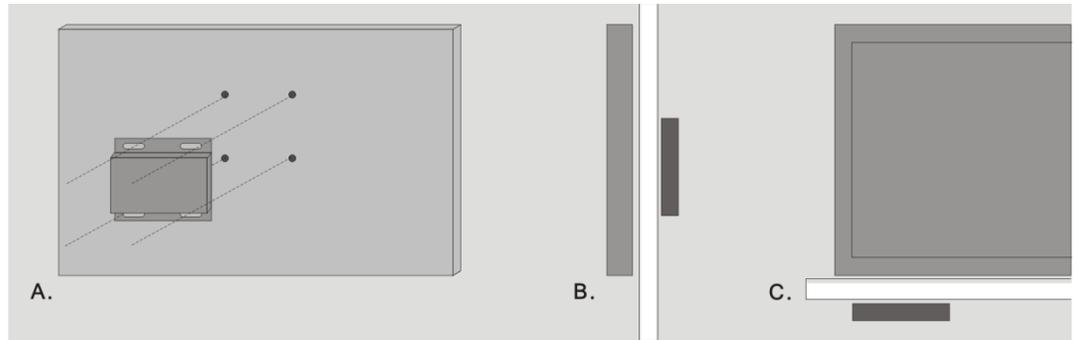
Scala Enabled

For industry leading network management, the NMP-200U is certified to work in a Scala Content Manager networked environment. This provides you with maximum flexibility in a reliable, RISC-based DVD quality signage player.

1.3. Physical features



1.4. VESA-mount installation provisions



The player enclosure features VESA-compliant screw-slots for convenient attachment. Suggested installations include:

- A. directly behind self-standing monitors using VESA standard mounting
- B. inside partition walls
- C. below counters

1.5. Notes on security features

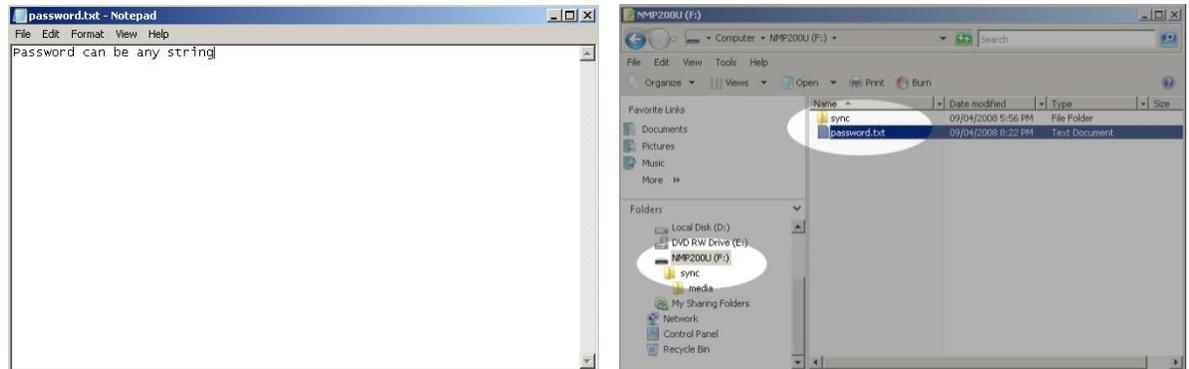
The **Reset/Set clock button** and **Video mode switches** are located on the player's back panel to avoid tampering after installation. Once you have established a working connection with the display, you can cover both panels by mounting the player to a flat surface. Clock settings are synchronized over the network, so you do not need to adjust it manually with the Reset/Set clock button.

To prevent the player's CF card from being removed from its slot, lock the CF card inside the player with the included **CF protective plate and screw set**.



Setting a player password and password retrieval

The NMP-200U features password protection to prevent unauthorized USB drive updates to its CF card storage area. A USB drive must have the same “password.txt” file as the CF card in order to replace previously loaded contents on the CF card. If password protection is not desired, then the “password.txt” file should not be present on neither the USB drive nor the CF card.



- 1 From a computer, create a file named “password.txt”.
- 2 Enter desired password and save the file.
- 3 Place one copy of the password.txt file on a USB drive’s top level (root) folder.
- 4 Place one copy of the password.txt file on a CF card. Remove the device's CF card and copy password file to the CF card’s top level (root) folder.
- 5 Once device is inserted with CF card that contains password.txt file, only a USB storage device with the same password file can perform updates to the device.

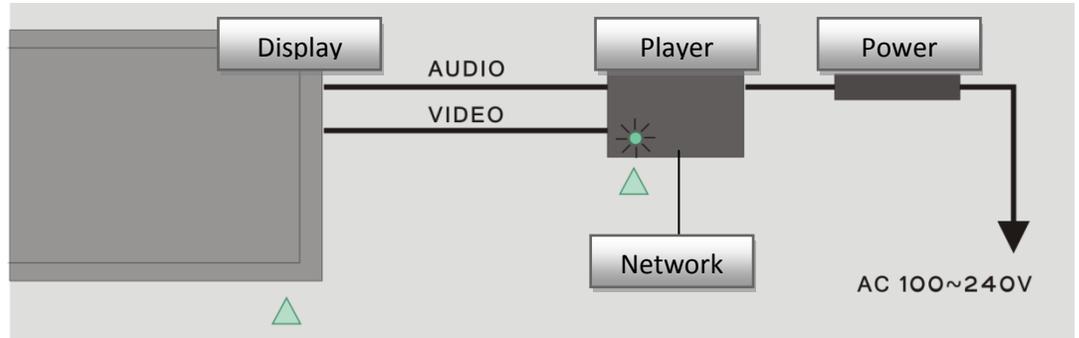
Note

The content authentication password cannot be cleared using the reset button. To retrieve the content authentication password, open the password.txt from the CF card.

Both the CF card and the USB drive should be formatted in the FAT or FAT32 format to work properly.

2. Player System Setup

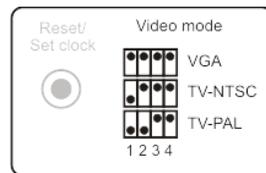
2.1. Hardware setup



Attach a video cable (Video, S-video, or VGA) to your display

Connect and power on your display. Turn on your display monitor and switch it to the corresponding video mode: VGA (sometimes referred to as "RGB"), S-video, or Composite. For audio output, connect the supplied stereo 1/8" mini-jack cable from the player to your monitor.

Setting the display output mode



Set the Video mode using the DIP switches on the back side of the unit (See illustration in 1.3 *Physical features*). Switch positions per video mode are provided on the product label.

For **traditional TV**: set to PAL or NTSC, depending on your region

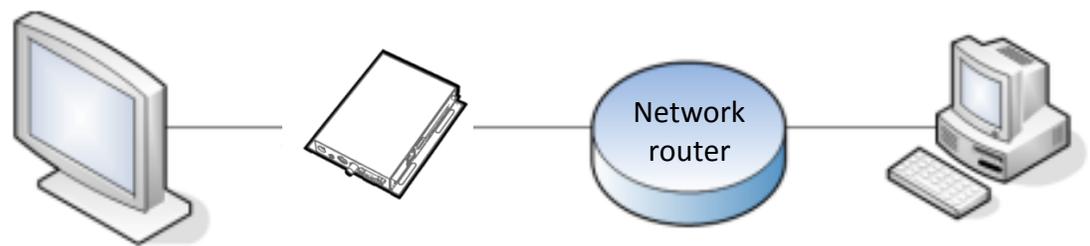
For **LCD TV, Plasma, computer monitors, and projectors**: set to VGA

Connect player to your network

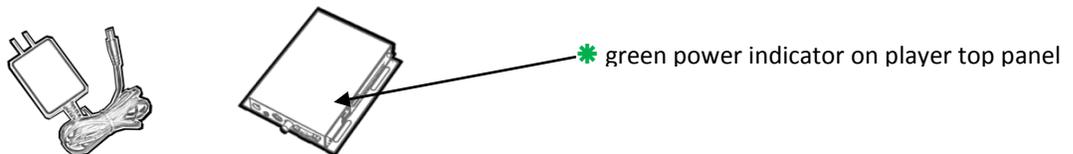
If you do not have a network capable computer at hand, please refer to the appendix to set up your player for playback without a network.

Adfotain Manager Express can detect the IP location of your player automatically on a DHCP network. See setting up Adfotain Manager Express in this section to set up the program on your PC.

*If your network requires a static IP, you can also use Adfotain Manager Express to set up the static IP. Please contact your network administrator if you are unsure which IP addresses are available on your network.



Attach the AC power adapter to power on the unit



If the system is set up properly, the display should show the player's on screen display (OSD) messages and the player's IP address (if network is DHCP capable).

2.2. Setting up Adfotain Manager Express

Adfotain Manager Express lets you perform player configuration, maintenance, and scheduling operations from your PC.

Installation

Minimum system requirements

| | |
|--|--------------------------------|
| Windows Vista or Windows XP operating systems | 1 GHz AMD or Intel CPU |
| .DirectX 9 | 512 MB of system memory |
| .NET Framework 3.0 | 20 GB hard drive |

(higher versions and numbers also compatible)

PowerPoint 2003 or 2007 required for PowerPoint slideshow feature.

Windows Media Player 10 or 11 required for video previews.

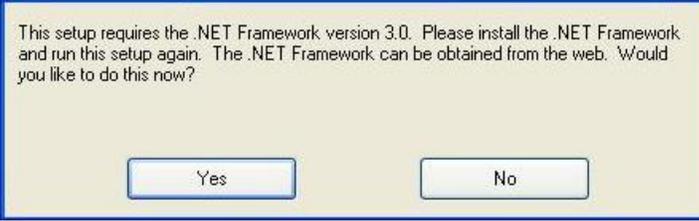
Setup process

Insert the Adfotain Manager Express CD and the installer should pop up automatically. If it does not start, click on “setup.exe” located on your CD using Windows Explorer. If you haven’t installed .NET Framework, you will be prompted to do so. If it is already installed, please proceed to the next section.

1. Run the installer and follow the step by step instructions.
2. Close the installer to finish installation.

For Windows XP only: .Net Installation

The Windows .NET Framework is included on the CD and will be installed if absent from your system. Click Yes and follow the prompts to install it

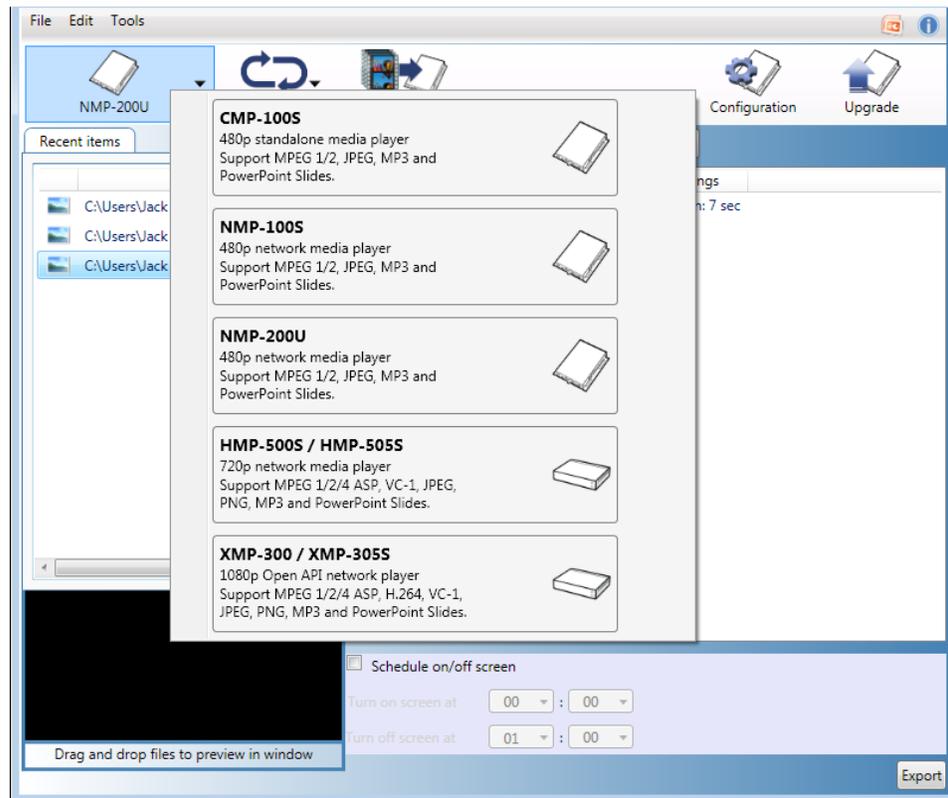


This setup requires the .NET Framework version 3.0. Please install the .NET Framework and run this setup again. The .NET Framework can be obtained from the web. Would you like to do this now?

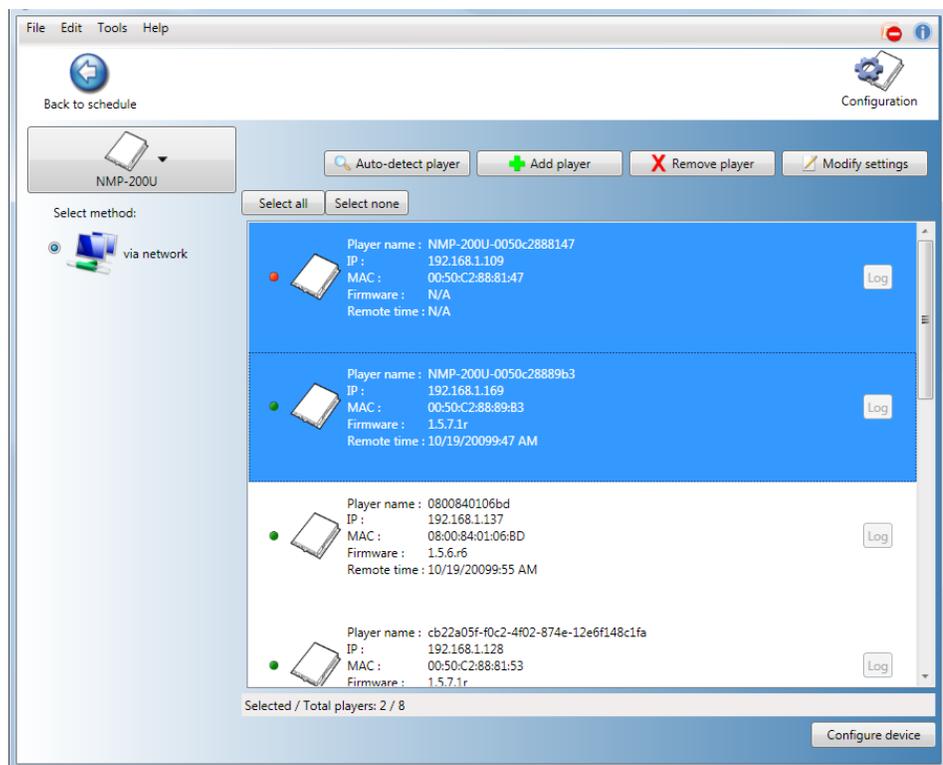
2.3. Configuration with Adfotain Manager Express

Set the clock and basic settings

1. Start Adfotain Manager Express and select player model



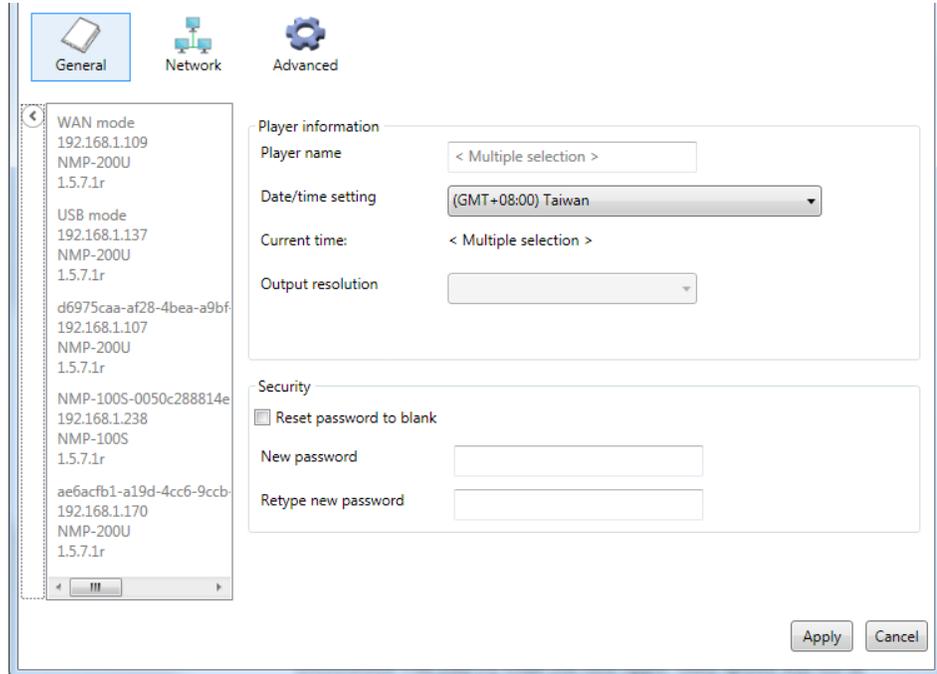
2. After selecting the player, click on the **Configuration** button on the top right.
3. Click **Auto-detect player** button to locate all network-connected devices of the same model. A progress bar is shown, and players are added to a list of operational network devices. You can also stop the search once the target device appears in the list.



Green ● : player is online Red ● : previously detected but currently offline

4. Select one or multiple players by holding your Control key on the keyboard. After you have selected all the players to configure, click **Configure device**.

- In the General Settings tab, you can see a list of players you are configuring. Confirm and select the appropriate **time zone** to ensure correct schedule playback. The time and date is automatically synchronized with your PC when you click Apply. Some options may not be available depending on your player model.

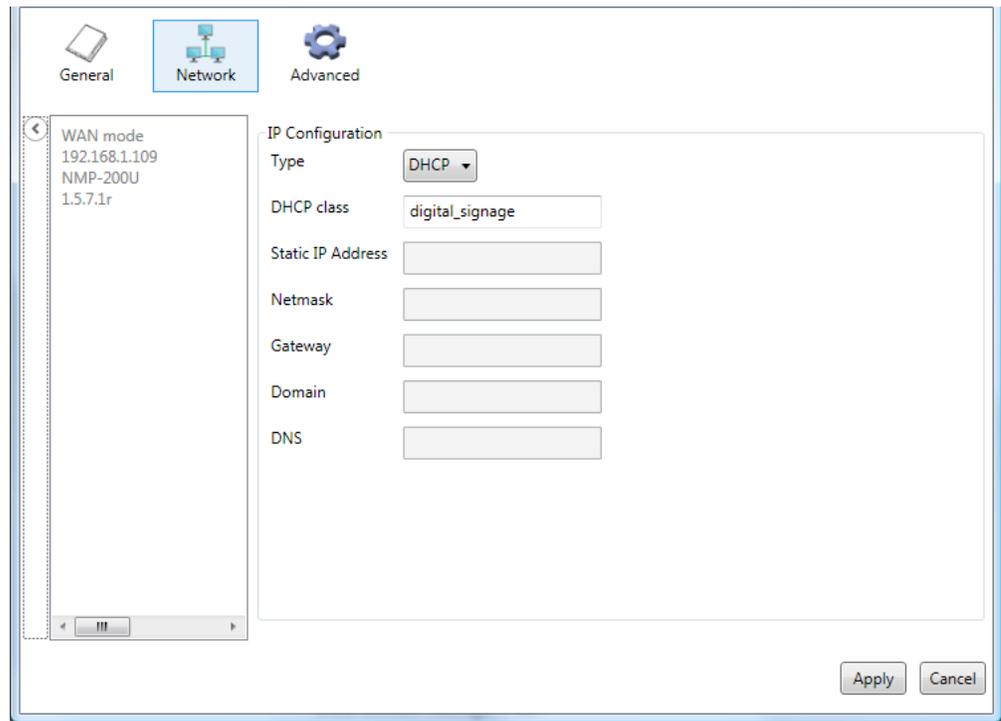


- Set the device password. The device password protects contents from being updated by unauthorized sources. You can either remove the password (check “Reset password to blank”) or specify a new password for the player(s).

Setting the network identification

If you are using a DHCP network, please proceed to the next section.

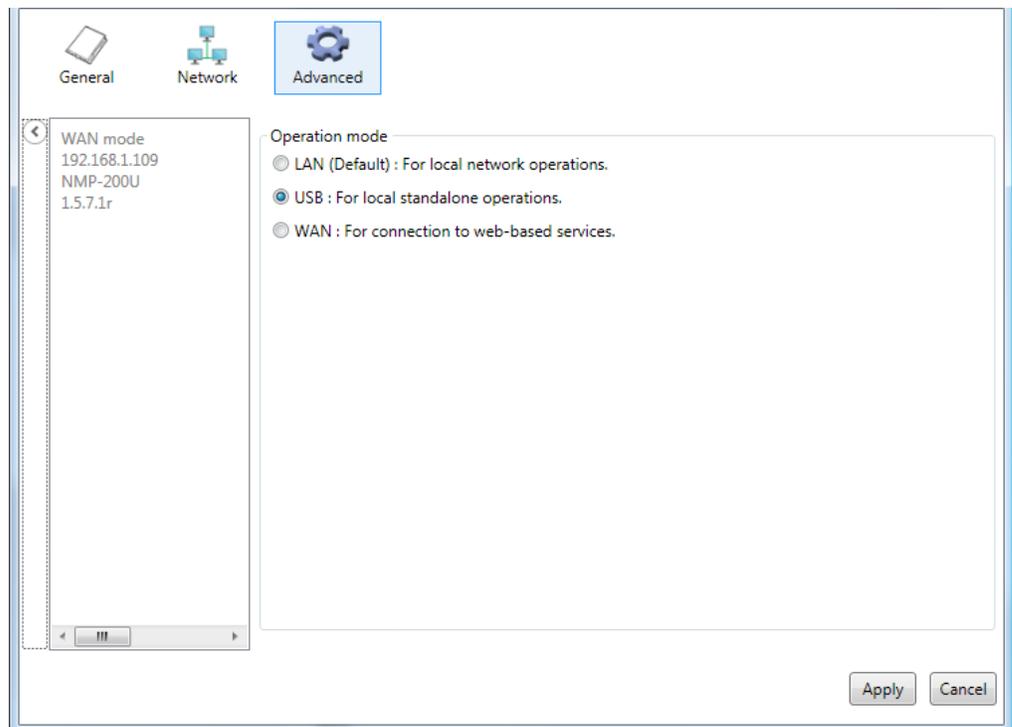
The network settings tab lets you specify the player’s static IP address and other settings. It’s important that no two devices on the network share the same IP. Net mask, gateway, domain, and DNS can also be configured on this page. Please consult your network administrator if you are uncertain of the values to these settings.



Advanced settings

This page lets you change the management mode of the device.

1. LAN mode (default): Enables network configuration via Adfotain Manager Express.
2. USB mode: This mode limits player content updates via USB drive or CF card only.
3. WAN mode: For optional Scala Content Manager network management.



3. Content Management

For testing videos and player connectivity, please see the *Adfotain Manager Express Software Manual* for operating instructions.

For setting up the player on a Scala Content Manager Network, please see the *IAdea SD Player Scala Setup Guide*

4. Specifications table

| NMP-200U | |
|----------------------------------|--|
| Video format support | POPAI Screen Media Standards S6 (MPEG-1 SIF, 3Mbps CBR) S7 (MPEG-1 480p, 10Mbps CBR) S9 (MPEG-2 480p, 6Mbps CBR) E7 (MPEG-4 ASP, 480p, 10Mbps CBR) |
| Image format support | POPAI Screen Media Standards S1 (JPEG 480p baseline) |
| Audio codec support | POPAI Screen Media Standards S4 (MPEG L2 audio) S5 (MP3 audio, 384Kbps) |
| Playback control | Alphabetical looping Adfotain playlist |
| Content management method | WAN – Optional Scala Content Manager LAN – Adfotain Manager Express Replace/edit CF card - Adfotain® Manager Express |
| Physical I/O connectors | VGA S-Video, composite 3.5mm audio Jack Ethernet copper 10/100 BASE-T USB |
| Local storage | Removable Compact Flash card (Required, not supplied. A 4GB card holds up to 3-hours of typical 3 Mbps video) |
| Accessories | RCA male-3.5mm female audio adapter cable 3.5mm male-male audio cable Ethernet cable CF card protective cover UL approved AC power adapter |
| Power requirement | 5V, 2A DC |
| Power consumption | Typical* 4.8W |
| Environmental | Operating temperature: 0 – 40° C / 32 – 104° F Humidity: 5 – 85% @ 40° C / 32 – 104° F non-condensing |
| Dimensions | 133.5x113.5x 25 (mm) (excluding projections) 5.3" X 4.4" X 1" (inches) (excluding projections) |
| Weight | 0.5kg 1.1 lbs. |
| Safety | UL-approved AC adapters |
| Certifications | CE/FCC RoHS |
| Warranty | One-year limited parts & labor |

*typical usage when playing 480p video

5. Appendix: Setting the player clock (no network)

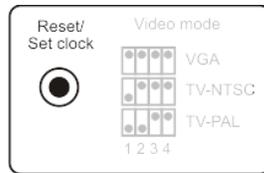
Adfotain Manager Express automatically synchronizes the player's built-in clock with your computer's current time. To use the player without a network connection, you will need to set the clock manually on the device.

Setting the clock manually

The clock settings run on built-in battery for up to several years, but initially you will need to set it to your time zone for properly scheduled playback.

After powering on both the player and the display, "PLEASE WAIT..." appears on the screen for 10 seconds. After video appears on screen, set the clock by pressing and holding the RESET/SET CLOCK button. You will see the following on screen display:

YYYY/MM/DD



- Press RESET/SET CLOCK button BRIEFLY to increase each digit value
- Hold button to advance to the next digit

REMINDER: You should set the clock before you physically mount the player or keep the button accessible if you are not planning the network clock set feature.

6. Appendix: FAQ

What can I do if I forgot the player's password?

In this case, you should perform a factory restore using the reset button:

1. Disconnect all power.
2. Press and hold reset button at the back of device.
3. Power on device and release the button until "Reset" appears on screen.

Can I use a password-enabled USB drive to update a non-password-protected media player?

No, the password.txt on USB flash drive must be identical to the one on device's storage, or absent if the password.txt.

If there is no corresponding password file on device side, the files will not be updated. In this case, delete or rename the password file on your USB device to continue updates.

What can I do to improve Adfotain Manager Express performance on my PC?

The latest Microsoft .NET 3.5 SP1 offers improved performance and bug fixes to Adfotain Manager Express. You can install the update via this internet browser link <http://go.microsoft.com/fwlink/?LinkId=124150> or by searching for ".NET 3.5 SP1" At www.microsoft.com.

Does the CF card speed rating affect playback performance?

No, the CF card speed won't have a significant impact on device playback. Standard definition videos (480p) play at relatively low data rates, typically 3 Mbps, therefore a standard speed CF card should be sufficient.

Is there limitation on CF card size?

The NMP-200U accepts CF cards up to 32GB in capacity. However, since an 8GB CF card can play up to 6 hrs, a 4GB CF card should be enough for most situations.

What is maximum file size for a single video file?

For NMP-200U, the maximum video file size is 1GB. We recommend reserving a safety margin to avoid exceeding the limit (i.e. limiting files to 990MB for NMP-200U).

How do I manage playback of my contents?

Playback on a schedule is one of the main functions of a digital signage player. Scheduling is managed via the easy to use Adfotain Manager Express software.

Unlike the difficulty of programming VCRs from a remote control, the Adfotain Manager Express software is designed to be simple by leveraging the power of your personal computer. Anyone with basic computer skills can quickly create or modify schedules, delivering the right message to the right audience at the right times. Please refer to the Adfotain Manager Express User's Manual for detailed operations and techniques.

Why isn't Flash supported?

Adobe Flash animation requires high CPU power to process smoothly. Even with mainstream dual core processors, there may be hiccups and stuttering when playing complex Flash content. For an optimized presentation and viewing experience, most RISC-based media players support only video playback in most major video compression formats.

How does PowerPoint support work?

The media player lets you create content for large-screen display using Microsoft PowerPoint 2003 and 2007 as a layout tool. Adfotain Manager Express converts PowerPoint files on PowerPoint-equipped PCs into still frame slide shows. This lets users leverage the easy to use templates, text, 3D, and image composition features offered by PowerPoint. The duration of each auto-advancing slide is preserved as you have set it in PowerPoint, but any animations and transitions will be omitted.

Why can't I see my video playing in the Adfotain Manager Express preview window?

The Adfotain Manager Express preview window only supports WMV videos and JPEG pictures, since these are built in to the Windows OS, and any other codecs that are installed on your system. You can install a video codec pack to enable preview for most video formats. Note that player not all previewed videos can play on your PC.

Why won't some media files play smoothly?

The video data bit-rate may be higher than the recommended bit rate of 3~5 Mbps.

The video data bit-rate is the amount of video or audio data used per second to store or play the contents, usually expressed in Mbps (mega-bits per second). Video encoded with excessive bit-rates will not playback smoothly in the media player, likely due to storage i/o bottlenecks. To resolve this, recompress unplayable video files at lower bit rates using the free and open source Handbrake tool at <http://handbrake.fr/>. Once you have found the right output settings for size and quality, save them in Handbrake **profiles** to convert any unplayable files you encounter in the future.

Why won't some media files play at all?

Even though the player fully supports industry-standard video formats, sometimes the videos, depending on the compression settings, may fall outside the compatibility matrix.

If the files can play on your PC but not on your player, you should **recompress** the file to ensure playback. For greatest compatibility, we recommend outputting to the MPEG2 format (3 to 5 Mbps bit-rate). To resolve the situation, recompress unplayable video files with recommended file formats and bit rates using the free and open source Handbrake tool at <http://handbrake.fr/>. Once you have found the right output settings for size and quality, save them in Handbrake **profiles** to convert any unplayable files you encounter in the future.

The media playback looks different on a PC compared to the media player's screen. (Wrong aspect ratio)

There are 2 major aspect ratios (width-to-height ratios) for video content, but many kinds of displays. If you play 4:3 video on a 16:9 display (or vice versa), a circle becomes oval, and the picture takes on a squeezed or stretched look. To avoid this distorted look, adding black bars are a common technique.

NMP-200U outputs the video to the full extents of your display. If you wish to correct the distortion this introduces, you need to add black bars into the video file itself, using a video editing program such as Windows Movie Maker, which is included free with Windows XP or Vista OS. Refer to the Windows Movie Maker help system and search for the keywords "aspect ratio." Some JPEG images cannot play on media player.

Some JPEG images cannot play on media player.

Progressive JPEG are not supported. Please convert to baseline JPEG for maximum compatibility.

JPEG images can be either of 2 types: baseline or progressive compression. Baseline JPEG offers greatest compatibility, while progressive JPEGs are suitable for web site images. Progressive images are downloaded and displayed "progressively," being rendered more clearly as more data is received over the internet. Devices with local storage such as the NMP-200U are usually incompatible with the latter type. Make sure to save images as baseline JPEG in your photo editor, or resave them as baseline JPEGs using free tools such as Paint.net (<http://www.paint.net/>).

Does my media player support video streaming?

No, all media files are designed to play from local storage (CF card).

The media player downloads entire contents to player's local storage before presenting them on screen. This ensures the best possible presentation and delivery of your video message. Video streaming raises many playback quality issues such as image freezing, blocking, or blue-screens, costing you valuable "air time" and losing your audience's attention.

Could the media player be controlled by external input devices or interfaces?

No, unless specifically developed for.

Touch panel, bar code scanner, and motion sensors are popular input devices for PC based digital signage media players, but RISC based players require considerable effort to develop special hardware drivers for each I/O device.

The media player is not playing. What should I do?

Check the player's messages on the display (OSD, or on screen display) for status information, and check if the player is keeping the correct time and date.

Since RISC-based media player usually lack input devices such as keyboard or mouse, troubleshooting is usually based on the player's on-screen error messages and status report log files.

If the playback is scheduled to play at specific time, check to see if the device is set to the right time. When nothing seems wrong, the timer clock settings may be the reason the program is not played.

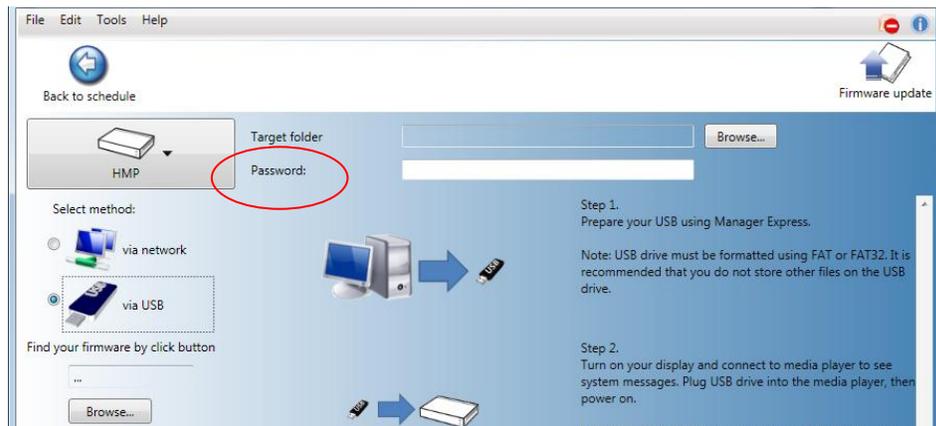
7. Appendix: Firmware Upgrades

If you are using Adfotain Manager Express to manage existing media players, you may be prompted to upgrade the firmware to ensure to enable the latest scheduling features. Current versions of the firmware update files are included on the Adfotain Manager Express CD, while future upgrades may be obtained from your reseller.

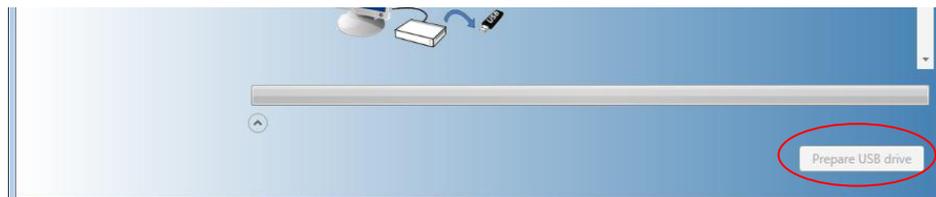
7.1. Firmware upgrade using Adfotain Manager Express



1. Click “Firmware update” to enter the firmware update page
2. Select your player model. If the model is not shown, then choose another applicable upgrade method to proceed.
3. Select an upgrade method: Network, USB, or CF card (not all methods are available for all models). You can also manually select the location of a firmware obtained from your reseller.



4. If you selected USB or CF card upgrade, you will need to specify the destination path of the drive or card. If you have set a password for the player, enter it in the **Password** field. Related instructions will be displayed on this page to help you complete the upgrade process.



5. Finally, click on the **Update device**, **Prepare CF card**, or **Prepare USB drive** button to begin transfer of firmware. If the firmware source file cannot be found, you will be asked to locate the firmware manually. The firmware should be available on your Adfotain Manager Express CD or via your reseller.