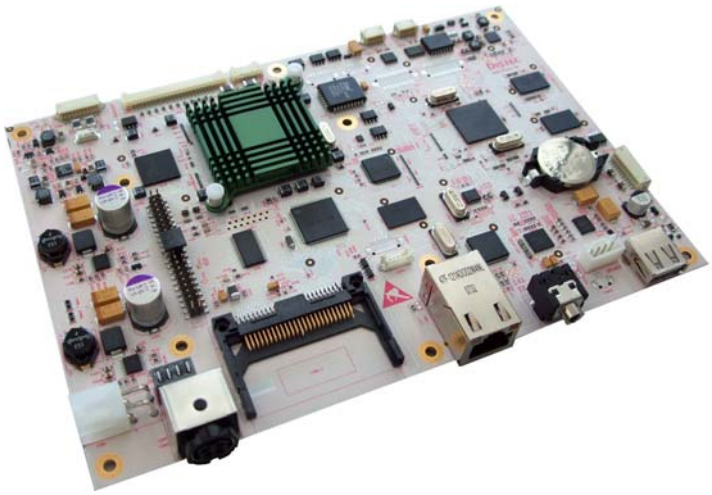
DATA DISPLAY GROUP

Manual

ArtistaMEDIA

Network Media Player

PA-09-XXX



Version 1.12

05.10.2011

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1 Revision History

Date	Rev.No.	Description	Page
07.05.2008	1.0	Preliminary release	all
09.07.2008	1.1	Updated for the first product release	all
26.09.2008	1.2	Added section 13, ArtistaMEDIA Firmware Update	18
09.10.2008	1.3	Some updates in section 13, ArtistaMEDIA Firmware Update	18
11.11.2008	1.4	• Updated for firmware version 1.2.0 • Added appendix about content creation • Updated company logos and contact info on last page	all
22.07.2009	1.5	Updated for firmware version 2.2.0	all
13.11.2009	1.6	Updated for firmware version 2.4.0	all
09.12.2009	1.7	Added specification of playlist file	31, 32
22.04.2010	1.8	Updated for firmware version 2.6.0	all
17.12.2010	1.9	• Updated for firmware version 2.8.1 • Removed information about updating firmware version 1.0.0 to 1.2.0	all
04.03.2011	1.10	Updated for firmware version 2.10.0	all
05.04.2011	1.11	Updated for firmware version 2.10.1	4, 35, 39
05.10.2011	1.12	Updated for firmware version 2.12.0	4, 35, 38, 42

2 General Description

ArtistaMEDIA is the media player of the Artista product family. Compared to ArtistaUSB and ArtistaNET, which both have been designed for displaying still images, ArtistaMEDIA has been designed for playing back audio and video files.

ArtistaMEDIA is equipped with an Ethernet interface for configuration via a standard web browser and for media content updates over network. The latter can also be done via USB Flash Drives. The media files are stored locally on a Compact Flash card or an IDE Hard Disk Drive.
TFT flat panels with LVDS interface and resolutions up to Full-HD (1920x1080) can be connected directly to the board.

Both hardware and software of ArtistaMEDIA has been developed by Distec GmbH.

3 What's new in this Release

The latest firmware version 2.12.0 adds the following new main features to ArtistaMEDIA:

- Support for display resolution 800x480

A detailed list of all changes in the firmware can be found in section Firmware Release History.

4 System Requirements

To use ArtistaMEDIA you need the following equipment:

- Standard PC with Windows XP, Vista or Windows 7 and with USB and Ethernet interface for configuration of the ArtistaMEDIA board and content updates
- Web browser (e.g. Internet Explorer) for configuration of the ArtistaMEDIA board
- ArtistaControlCenter (ACC) software installed on the Windows PC for playlist creation and content updates via USB flash drive or over network
- Optional: FTP server for automatic content updates over network

5 Getting Started

5.1 Network Configuration of ArtistaMEDIA via Web Frontend

To change the configuration of the ArtistaMEDIA board, perform firmware updates or get some system information, a Web Frontend is available. To get access to it with a standard Web Browser within your local area network (LAN) installation, you have to setup the network configuration of ArtistaMEDIA properly. The network interface of ArtistaMEDIA can be configured dynamically by using a DHCP server or statically by the system administrator. Every single ArtistaMEDIA board must be configured before it can be installed into your LAN infrastructure.

To configure the network settings of ArtistaMEDIA the first time, you have to execute the following steps:

- Ask your network administrator if ArtistaMEDIA should be configured to DHCP or to a static IP address
- If static configuration should be used, ask for the IP address which can be assigned to the ArtistaMEDIA board for use within your LAN
- Connect ArtistaMEDIA directly to your PC using a cross-link Ethernet cable or an Ethernet Switch and two Patch Cables
- Power up ArtistaMEDIA
- Configure your PC to a static IP address within the subnet 192.168.0 (e.g. 192.168.0.100)
- Start the Web Browser and enter the address http://192.168.0.1
- A logon dialog will appear. Enter "**Artista**" for both, user name and password
- The main menu of the ArtistaMEDIA Web Frontend will appear
- Select the entry "**Network Configuration**"
- For dynamic network configuration enable the check-box "**Use DHCP**". For static network configuration, enter the new IP address into the field "**ArtistaMEDIA IP Address**"
- Also adjust the other entries according to your requirements, press the button "**Submit Configuration**" and wait until ArtistaMEDIA saved all settings
- Disconnect ArtistaMEDIA from power supply, connect it to your LAN and power up the board again
- Now you can access the Web Frontend of ArtistaMEDIA for further configuration from any PC within the same subnet with a standard Web Browser (for different subnets a Gateway is required in the network)

5.2 Network Configuration of ArtistaControlCenter (ACC)

ArtistaControlCenter (ACC) is Windows software, which can be used to update the media content on the ArtistaMEDIA board over Ethernet. To use this functionality, ACC must be installed on the Windows Host system and configured properly.

For further details on this issue, please read the "**ArtistaControlCenter ACC Operating Manual**". This document comes with the ACC installation.

Please pay attention to enter the same IP address or Host Name you already have assigned to ArtistaMEDIA in section Network Configuration of ArtistaMEDIA via Web Frontend to the field "**Host name or IP**" into the "**Network Setup**" dialog within ACC.

To make sure, that everything is configured correctly, the connection test can be performed within ACC. If the results are positive, your ACC is prepared for content updates over Ethernet.

6 Content Update Procedures

There are three different methods to update content on ArtistaMEDIA:

1. Use an USB Flash drive that contains the new show, insert it into the board and wait until the new show starts on the player
2. Use ACC to transmit the new show over network directly to the player
3. Use a FTP server to store the new show. ArtistaMEDIA checks this server periodically for changes and downloads the new playlist and media files automatically

If the FTP method is used, the other two methods are disabled and vice versa. A detailed description of the content update procedures can be found below.

6.1 Content Update with USB Flash Drive

To update the media files stored on ArtistaMEDIA with an USB Flash Drive, the following steps have to be executed (firmware version 2.2.0 or higher is required):

- Use ACC to create a show and export it to the USB Flash Drive. This creates the directory "**ArtistaMediaContent**" in the root directory of the USB Flash Drive. This folder must contain the file "**playlist.xml**" and all the related media files
- Plug the USB Flash Drive into the USB port of ArtistaMEDIA and wait
- ArtistaMEDIA will automatically start to copy the new content (playlist and media files) to the internal data storage (Compact Flash Card or Hard Disk Drive). Depending on the size of the new media files, this can take several minutes. ArtistaMEDIA continues to play the old playlist in the meantime
- After copying the new content to the internal storage, ArtistaMEDIA will start to play back the new playlist in an endless loop. The old playlist and media files are deleted from internal data storage at the same time

- USB Flash Drive can be removed from ArtistaMEDIA now

- ArtistaMEDIA creates a small log file in the root directory of the USB Flash Drive. This file is called "**ArtistaMediaUsbUpdate.log**" and contains some useful information about the content update process

6.2 Content Update with ArtistaControlCenter (ACC)

ArtistaControlCenter (ACC) is Windows software, which can be used to create shows and update the media files on ArtistaMEDIA over Ethernet. To use this functionality, ACC must be installed on the Windows Host system and configured properly (see section Network Configuration of ArtistaControlCenter (ACC)).

For further details on this issue, please read the "**ArtistaControlCenter ACC Operating Manual**". This document comes with the ACC installation.

To update the media files stored on ArtistaMEDIA with ACC over network, the following steps have to be executed (ACC version 2.6.0 or higher and ArtistaMEDIA firmware version 2.2.0 or higher is required):

- Start the ArtistaControlCenter (ACC) software (make sure that the steps described in the section Network Configuration of ArtistaControlCenter (ACC) are already done)
- Open a valid ArtistaControlCenter configuration file (*.acc) for ArtistaMEDIA. If you don't have one available, this must be created first
- Select "**Network -> Upload current configuration**"
- Select the desired ArtistaMEDIA and playlist and press "**Start**" in the "**Upload to remote host**" dialog
- ACC will upload the selected playlist and media files (configuration) to ArtistaMEDIA. Depending on the size of the new media files, this can take several minutes
- During this process, ArtistaMEDIA will continue to play the old playlist until the new playlist has been transmitted completely
- After the transmission of the new playlist has been finished, ArtistaMEDIA stops playback of the old playlist, deletes it from the internal data storage (Compact Flash Card or Hard Disk Drive) and starts the new playlist in and endless loop again

6.3 Content Auto Update from FTP Server

ArtistaMEDIA can be configured to update the playlist and media files over network automatically. If this content auto update function is enabled, the other two content update procedures with ArtistaControlCenter (ACC) and USB flash drives are disabled (both methods are mutual exclusive).

Auto update means, that the playlist and the media files can be stored on a FTP server in the network and ArtistaMEDIA periodically checks this location for new content. If there is any change on the FTP server, ArtistaMEDIA automatically downloads the new files and saves them on the local storage. The configuration of the board regarding the FTP server is done with the Web Frontend.

6.3.1 Setup of FTP Server

Before the auto update function of ArtistaMEDIA can be used, a FTP server must be setup in the network. The IP address and the login information (user name and password) of the server must be known. If you are working with server names instead of IP addresses, the IP address of the name server must be known as well.
On the FTP server a directory must be created (e.g. "**media**"). It must contain the playlist file ("**playlist.xml**") and the corresponding media files which will be downloaded by ArtistaMEDIA.

6.3.2 Configuration of ArtistaMEDIA

- Open the ArtistaMEDIA Web Frontend and select the menu "**Content Auto Update**". Here all information about the FTP server must be set.

  Detailed information about the settings:

Setting	Description
FTP Server Media Content Directory	Path and name of the directory for the playlist file and the corresponding media files on the FTP server must be entered here (case sensitive)
FTP Content Auto Update Poll Interval	Enter a time interval in seconds here. ArtistaMEDIA will use this interval for checking the FTP server for new playlist and media files. If the value is set to "**0**", the **Content Auto Update** function is disabled and the ACC and USB content upload methods are enabled
FTP Content Auto Update Timeout	Enter a time interval in seconds here. In case of connection problems to the FTP server, ArtistaMEDIA stops trying to access the server after the time configured here

- Press "**Submit configuration**". ArtistaMEDIA will check the access to the FTP server. Check the output messages on the Web Frontend for failures carefully

- If access to the FTP server is available and the content can be found, restart the ArtistaMEDIA board by pressing "**Restart Artista -> Restart ArtistaMEDIA**" in the Web Frontend. This is required to apply the changes.

6.3.3 Content Update

After setting up the FTP server and the ArtistaMEDIA board properly as described in the two sections above, the media files on the ArtistaMEDIA board can be updated simply by updating the files on the FTP server. ArtistaMEDIA will periodically check the FTP directories with the time interval configured in the Web Frontend for any changes and will download the new playlist and media files automatically.

ArtistaMEDIA uses the following sequence for content update:

- Check the size and date of the **playlist.xml** file on the FTP server. If it is different to the version which currently used, download the new one
- Parse all media file names in the new playlist
- Check, which media files are new or changed and thus not available on the local storage yet
- Download all new media files in the background and store them locally
- If download is completed, stop the current play back
- Delete all outdated media files from the local storage
- Start play back with the new playlist again

ArtistaMEDIA handles the auto content update by applying the rules mentioned below:

- The playlist must be called "**playlist.xml**" (case sensitive) and must be valid (refer to example playlist)
- To decide, if a playlist is new, ArtistaMEDIA compares the date and the size in bytes of the "**playlist.xml**" file on the FTP server and the one currently used
- ArtistaMEDIA checks the available space on the local storage automatically:
    - If the new playlist and the associated media files exceed the available space on the local storage, the new playlist will be ignored
    - If the files currently stored on the local storage of ArtistaMEDIA plus the new files which should be downloaded according to the new **playlist.xml** are exceeding the available space on the local storage, the new playlist will be ignored
- If the new playlist contains media files, which are not available on the FTP server nor on the local storage, the new playlist will be ignored
- ArtistaMEDIA detects changes in the file name and the file size of the media files on the FTP server
- If there is no file in the directory on the FTP server, ArtistaMEDIA continues to play the current playlist
- First check for new files on the FTP server happens immediately after power on of the ArtistaMEDIA board
- Consecutive checks will be done periodically with the time interval specified in the Web Frontend

7 ArtistaMEDIA Web Frontend

To configure ArtistaMEDIA for your needs, a Web Frontend is available. You just have to open your Web Browser and enter the IP address of your board into the URL field. A logon dialog appears where you have to enter the user name and the password of your board. After that, the Home page of the ArtistaMEDIA Web Frontend appears. The following sections describe which parameters can be configured, how the firmware can be updated and which status information can be retrieved from the board.

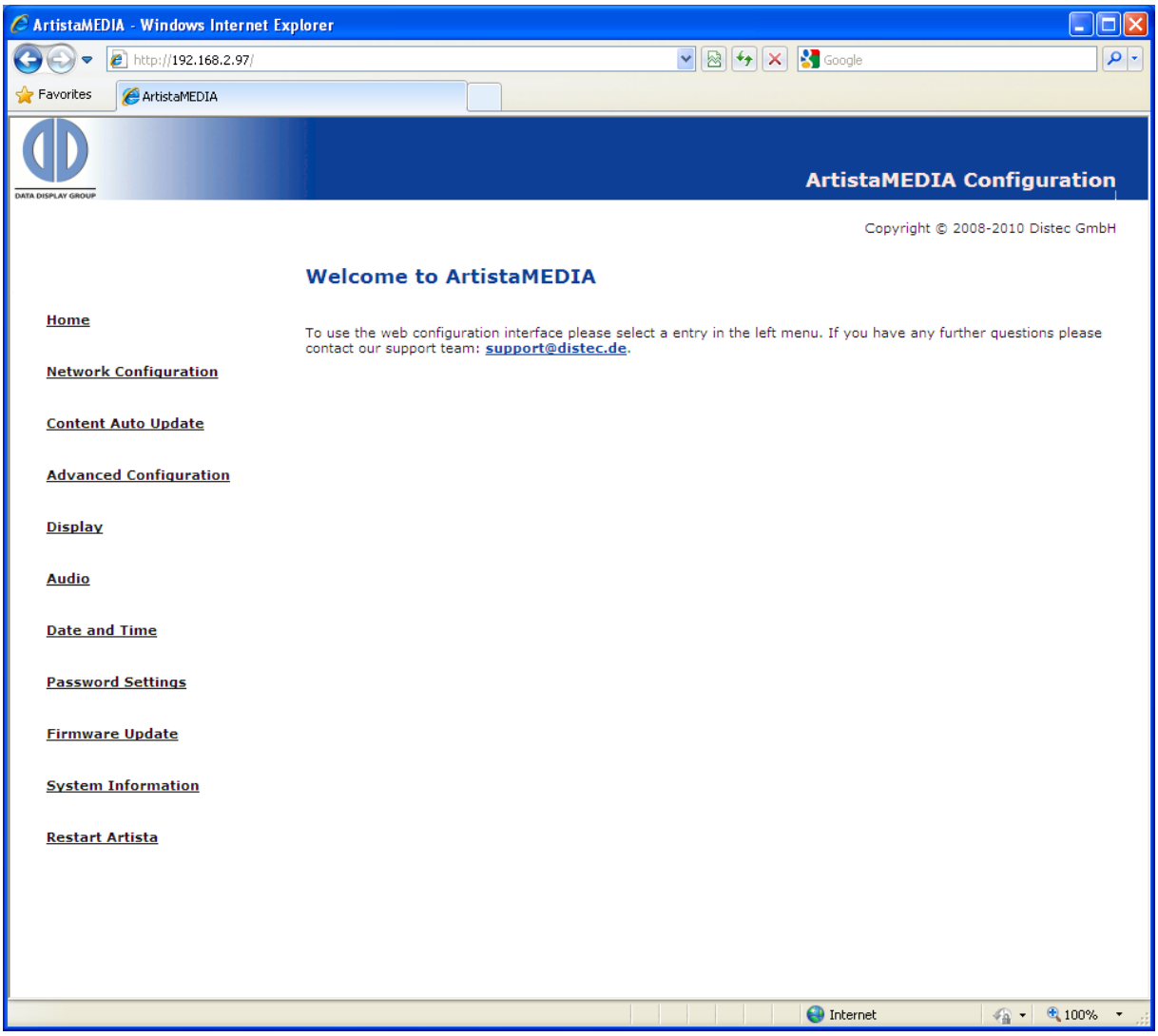
7.1 Normal Operating Mode

7.1.1 Login

The Web Frontend of ArtistaMEDIA requires a user name and a password for login. On default, these both values are set to "**Artista**".

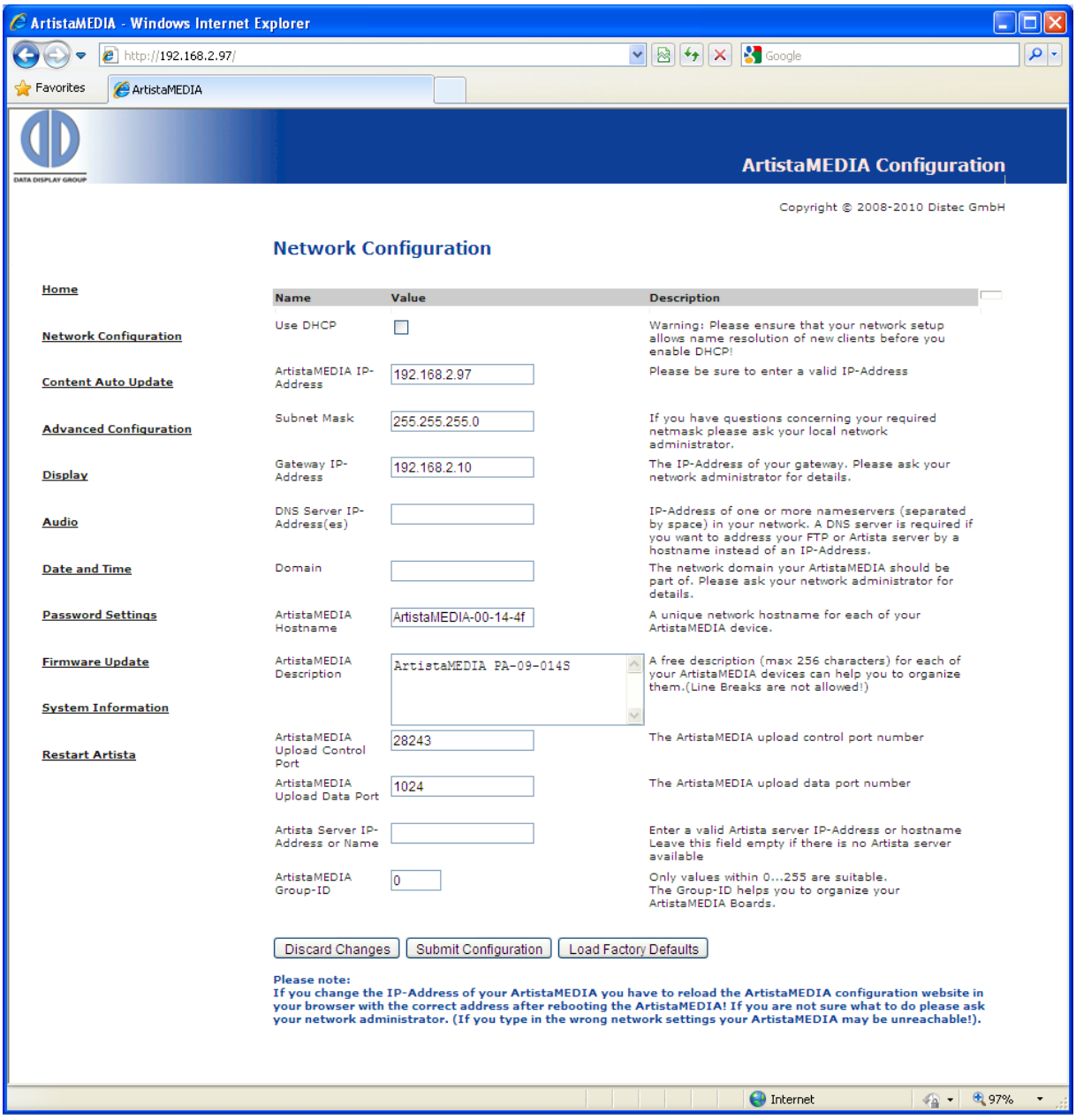
7.1.2 Home

The picture below shows the welcome screen of the ArtistaMEDIA Web Frontend in normal operating mode. A detailed description of the menus on the left can be found in the next sections.



7.1.3 Network Configuration

The picture below shows the network configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.



The following parameters can be configured here:

- Network configuration method DHCP or static
- ArtistaMEDIA IP address (to be manually configured for static configuration only)
- Subnet mask (to be manually configured for static configuration only)
- Gateway IP address (to be manually configured for static configuration only)
- DNS server IP address (to be manually configured for static configuration only)
- Domain (to be manually configured for static configuration only)
- ArtistaMEDIA host name
- ArtistaMEDIA description
- ArtistaMEDIA upload control port
- ArtistaMEDIA upload data port
- ArtistaMEDIA server IP address
- ArtistaMEDIA group ID

The default values can be found in section Network Factory Default Values.

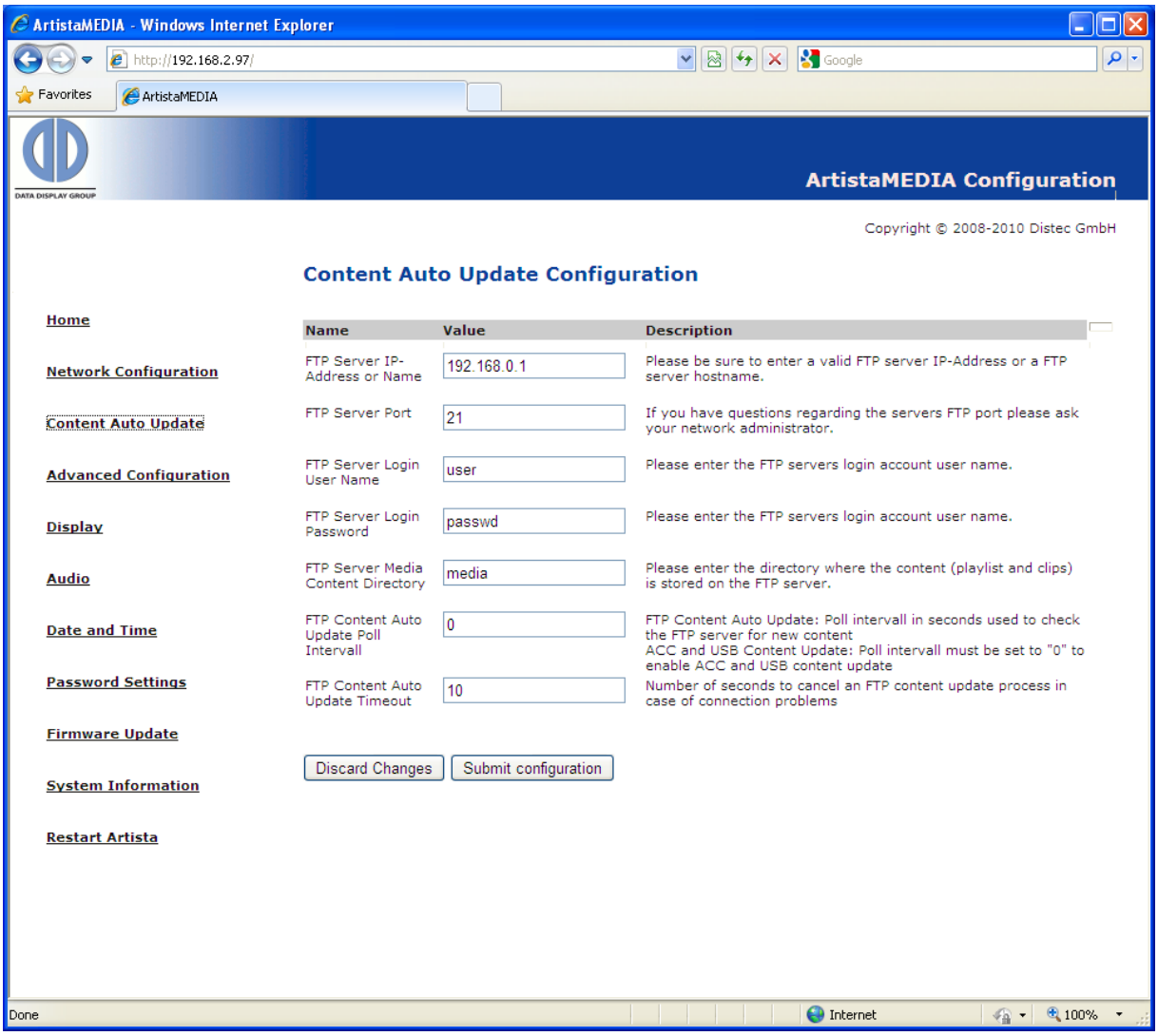
Discard Changes:
This button reverses your changes in the network configuration, if you have not pressed "**Submit Configuration**" yet.

Submit Configuration:
This button saves the changes in the network configuration on the board. You have to reboot the ArtistaMEDIA board to make the changes take effect. Select the menu "**Restart Artista**" to do this.

Load Factory Defaults:
This button can be used to preload the network configuration values with the factory default values. Press "**Submit Configuration**" to save these values on the board and restart it to make the new settings take effect.

7.1.4 Content Auto Update

The picture below shows the content auto update configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.



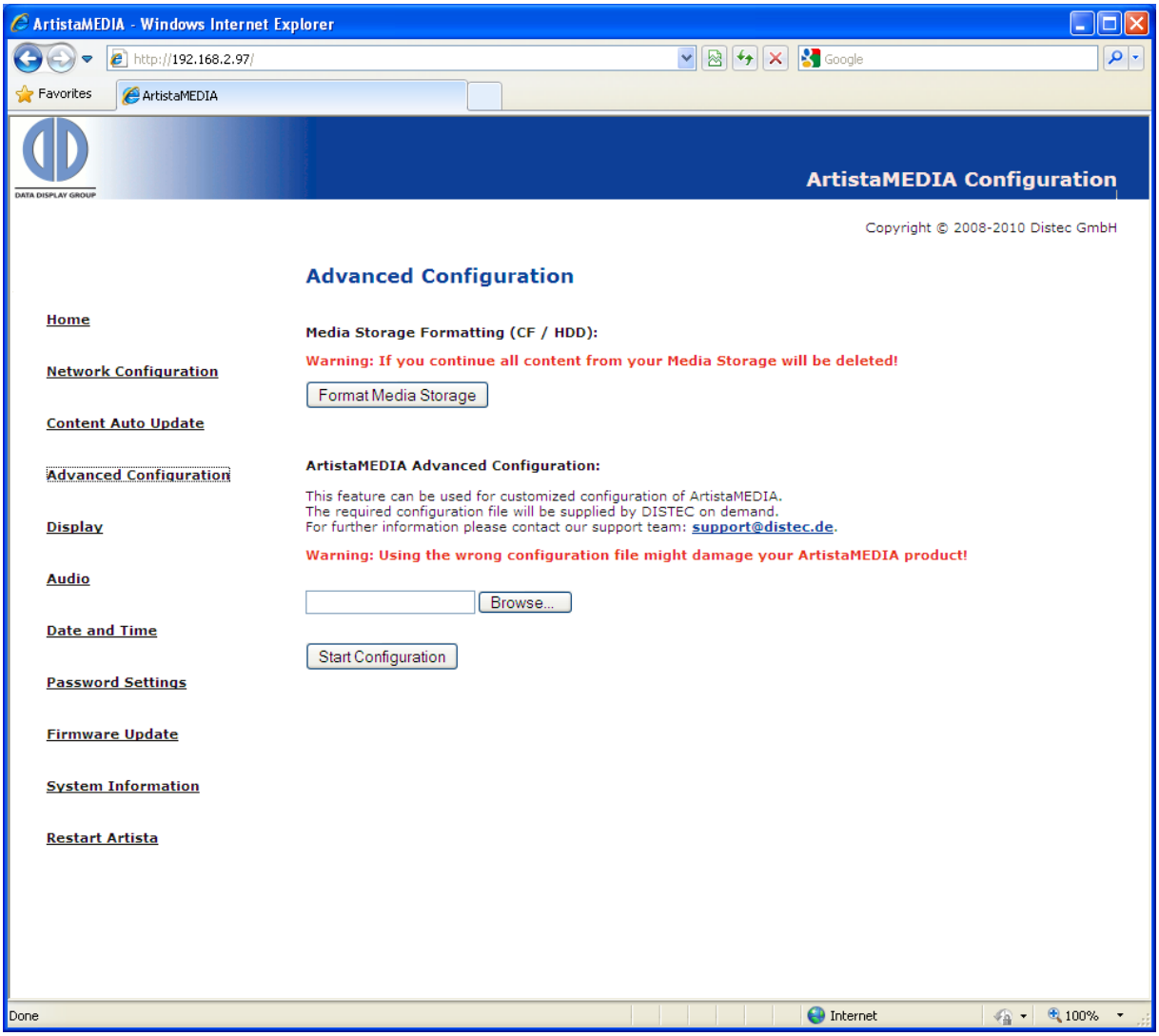
Setting	Description
FTP Server Media Content Directory	The name of the directory for the playlist and the appropriate media files on the FTP server must be entered here (case sensitive)
FTP Content Auto Update Poll Interval	Enter a time interval in seconds here. ArtistaMEDIA uses this interval for checking the FTP server for new playlist and media files. If the value is set to "**0**", the **Content Auto Update** feature is disabled and content update via ACC or USB flash drives is enabled instead
FTP Content Auto Update Timeout	Enter a time interval in seconds here. If there is currently no connection to the FTP server, ArtistaMEDIA stops trying to access the server after the time configured here

Discard Changes:
This button reverses your changes in the configuration, if you have not pressed "**Submit Configuration**" yet.

Submit Configuration:
By pressing this button ArtistaMEDIA checks the access to the FTP server and saves the current configuration on the board. Check the output messages on the Web Frontend if ArtistaMEDIA was able to log in the FTP server. If access to the FTP server is available and the content can be found you have to restart the ArtistaMEDIA board to make the changes take effect. Select the menu "**Restart Artista**" to do this.

7.1.5 Advanced Configuration

The picture below shows the advanced configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.

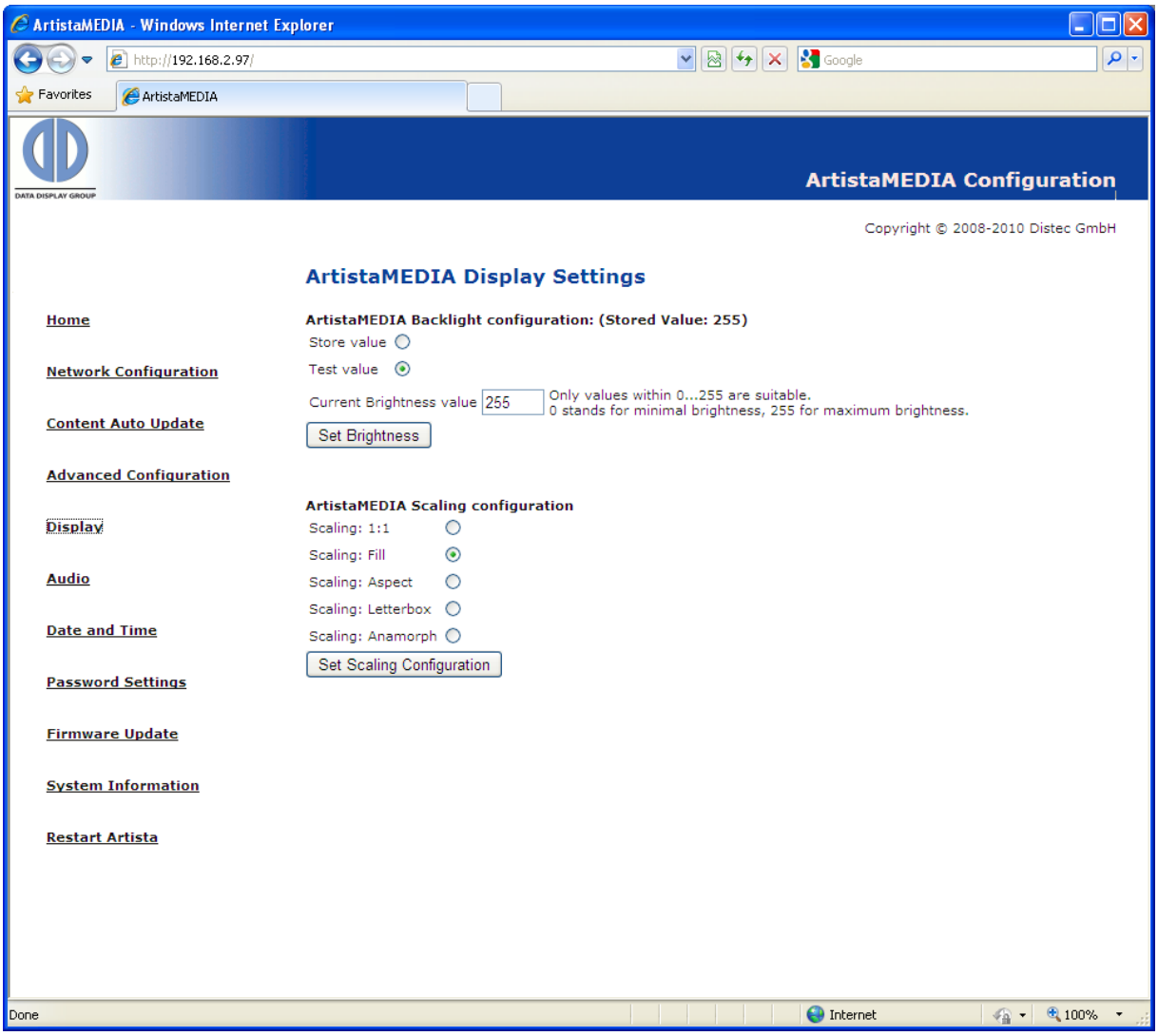


Media Storage Formatting:
The button "**Format Media Storage**" formats the installed CompactFlash Card or Hard Disk Drive which is used to store the media files and playlist. All data on the storage device is deleted during this process. Restart ArtistaMEDIA after formatting has been finished. Select the menu "**Restart Artista**" to do this. After ArtistaMEDIA has been restarted the display will remain black until a new playlist has been transferred to the board.

ArtistaMEDIA Advanced Configuration:
This feature can be used for customized configuration of ArtistaMEDIA. The required configuration file will be supplied by DISTEC on demand. Click "Browse…" and select the desired file. Press "**Start Configuration**" to execute the configuration. Please read the messages on the Web Frontend carefully and follow further instructions accurately.
Warning: Using the wrong configuration file might damage your ArtistaMEDIA product!

7.1.6 Display

The picture below shows the display configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.

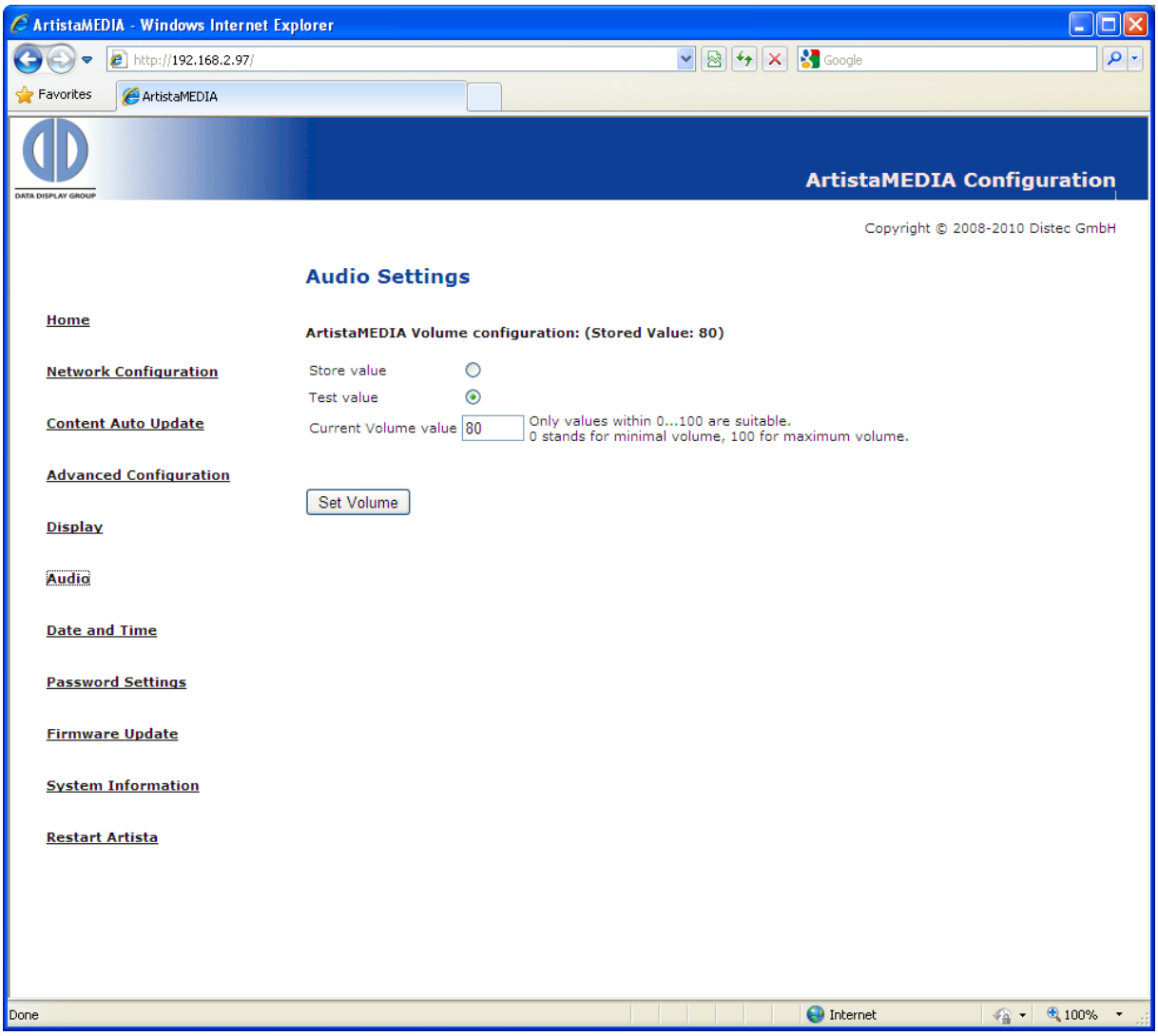


The following parameters can be configured here:

- Default backlight brightness
- Video scaling for the panel

7.1.7 Audio

The picture below shows the audio configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.

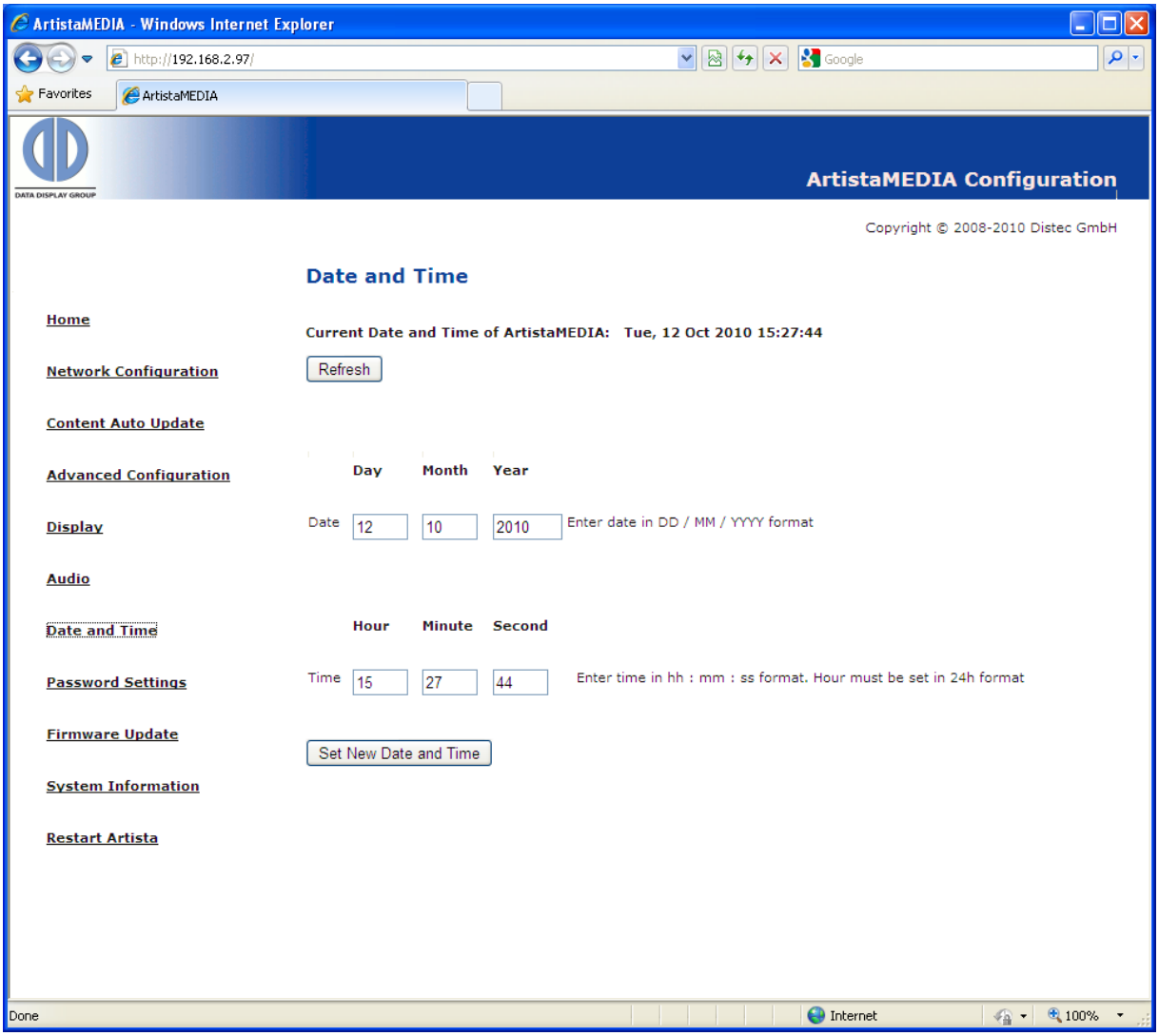


The following parameters can be configured here:

- Default volume

7.1.8 Date and Time

The picture below shows the date and time configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.



This menu can be used to configure ArtistaMEDIA with the current date and time. This is very useful to get valid time stamps in the log files (for more details refer to section Log Files). ArtistaMEDIA has a battery powered hardware clock onboard. This allows that the board keeps the correct date and time, even when it is switched off.

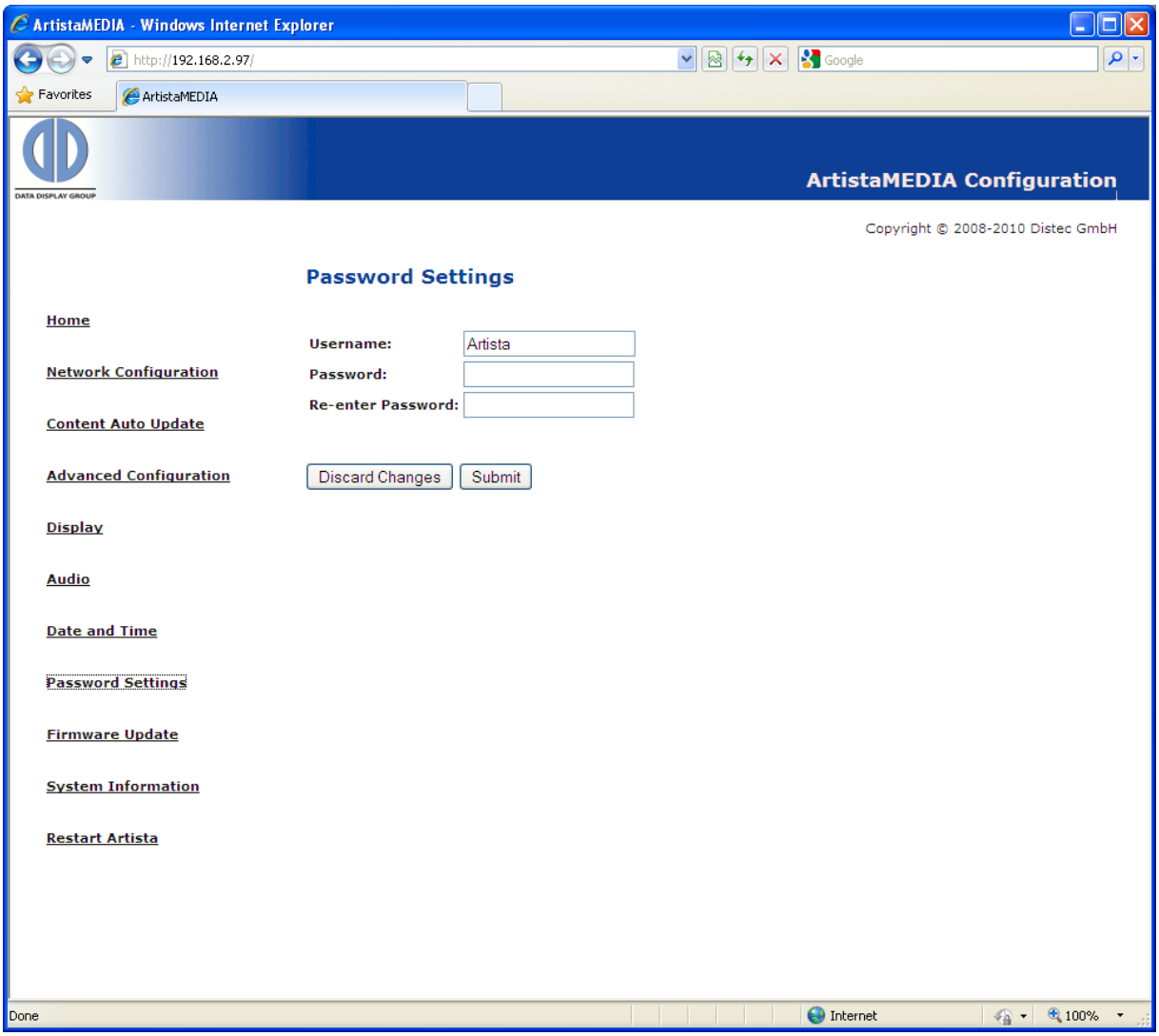
At the moment when this page is selected, the fields are preloaded with the current date and time values of the ArtistaMEDIA board. The "**Refresh**" button can be used to update the fields in the Web Frontend again.

To change the current setting, just enter the new values into the "**Date**" and "**Time**" fields. The date must be entered in day (two digits), month (two digits) and year (four digits) format. The time must be entered in hour (two digits in 24 h format, e.g. 1 p.m. is 13), minute, second (both with two digits) format.

The button "**Set New Date and Time**" must be pressed to store the new setting on the ArtistaMEDIA board.

7.1.9 Password Settings

The picture below shows the password configuration menu of the ArtistaMEDIA Web Frontend in normal operating mode.



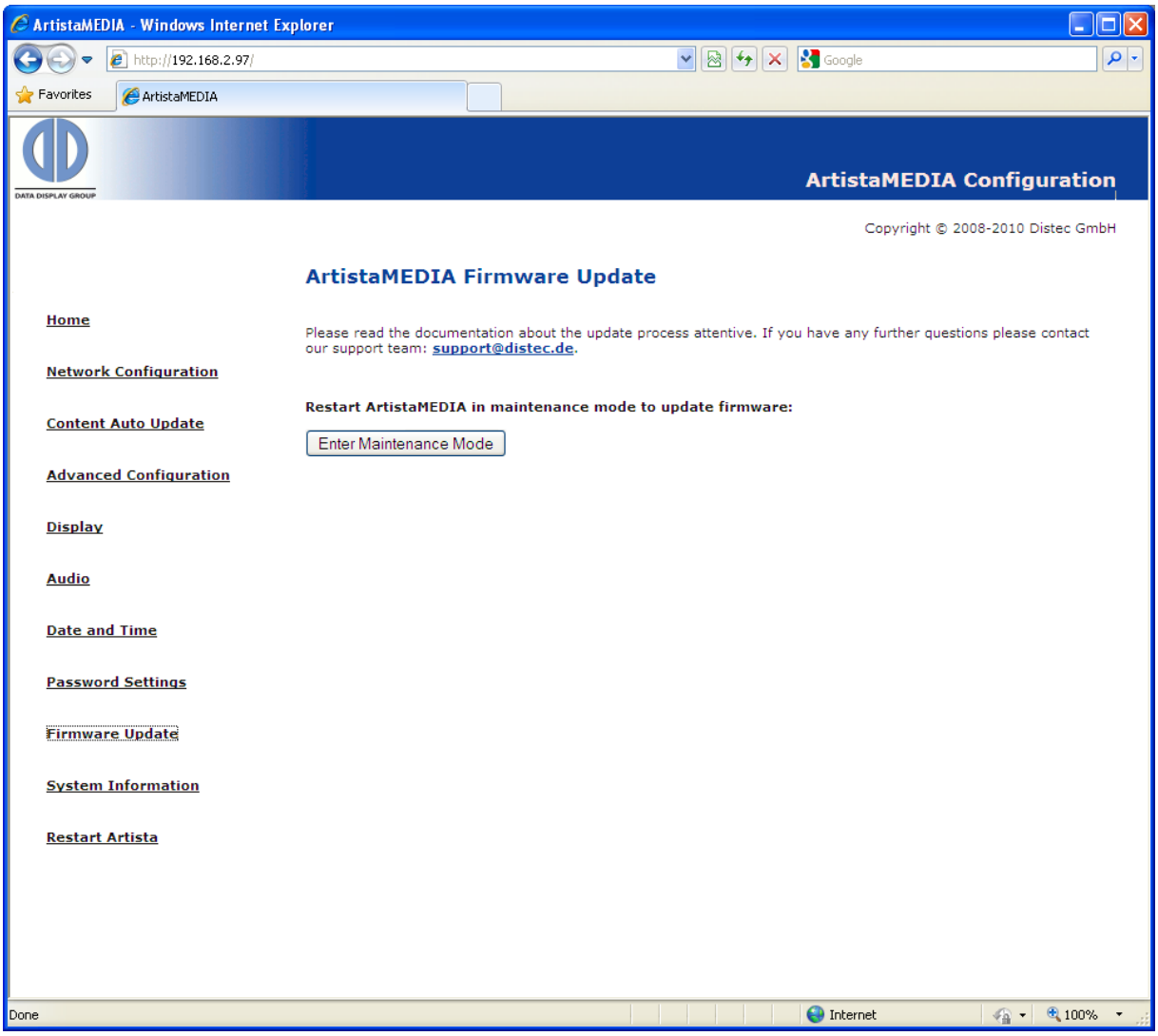
The following parameters can be configured here:

- User name for login dialog of Web Frontend
- Password for login dialog of Web Frontend

The default values can be found in section Network Factory Default Values.

7.1.10 Firmware Update

The picture below shows the firmware update menu of the ArtistaMEDIA Web Frontend in normal operating mode.

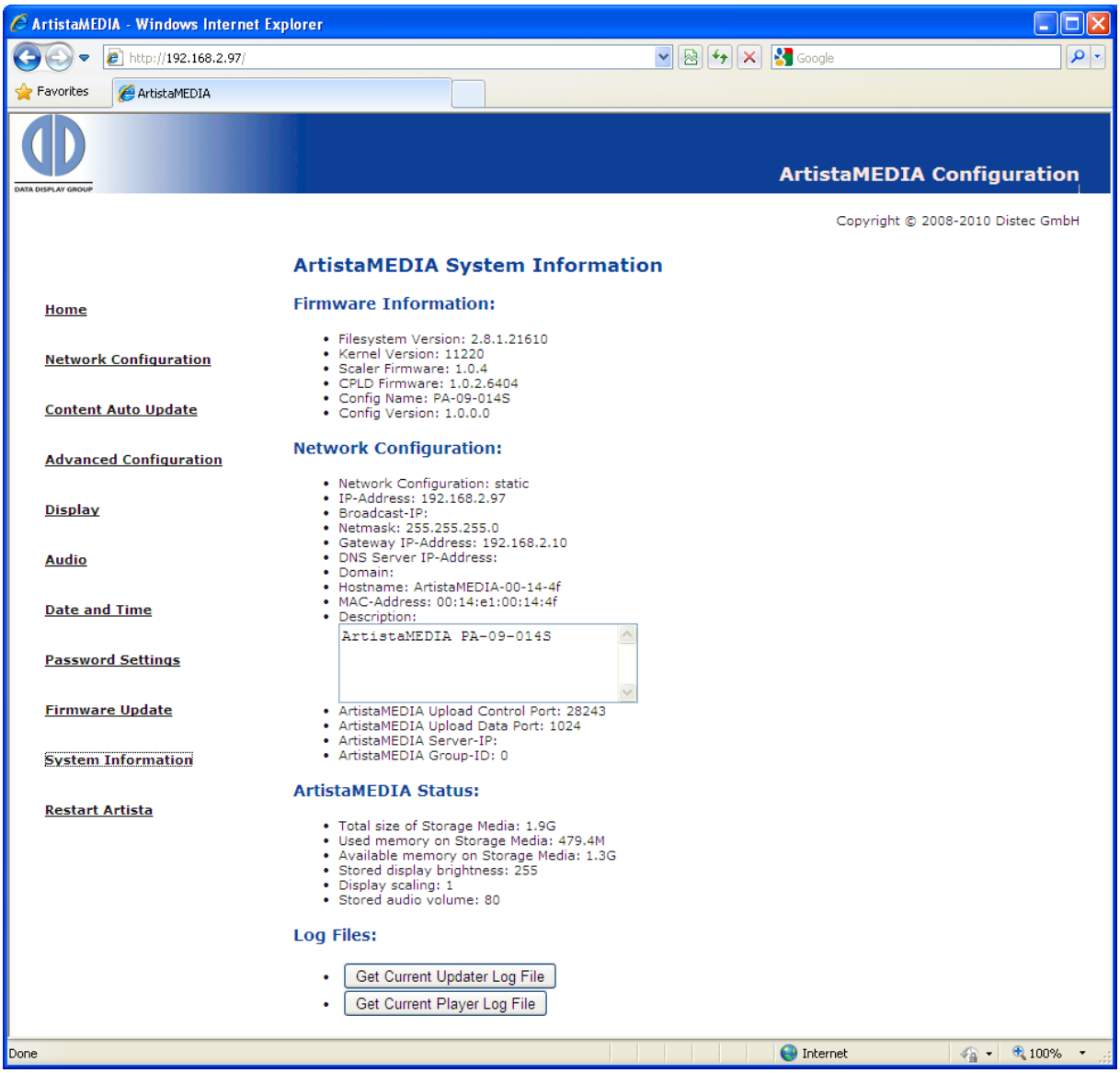


This procedure for firmware updates is supported for firmware version 1.2.0 and higher. If the installed firmware version is 1.0.0 a different update procedure must be used. Please contact Distec support for further information.

Enter Maintenance Mode:
This button is used to restart ArtistaMEDIA in maintenance mode. To get the welcome page of the ArtistaMEDIA maintenance mode press the reload button of your browser after about 2 minutes. Follow the update instructions in section Firmware Update then.

7.1.11 System Information

The picture below shows the system information summary of the ArtistaMEDIA Web Frontend in normal operating mode.

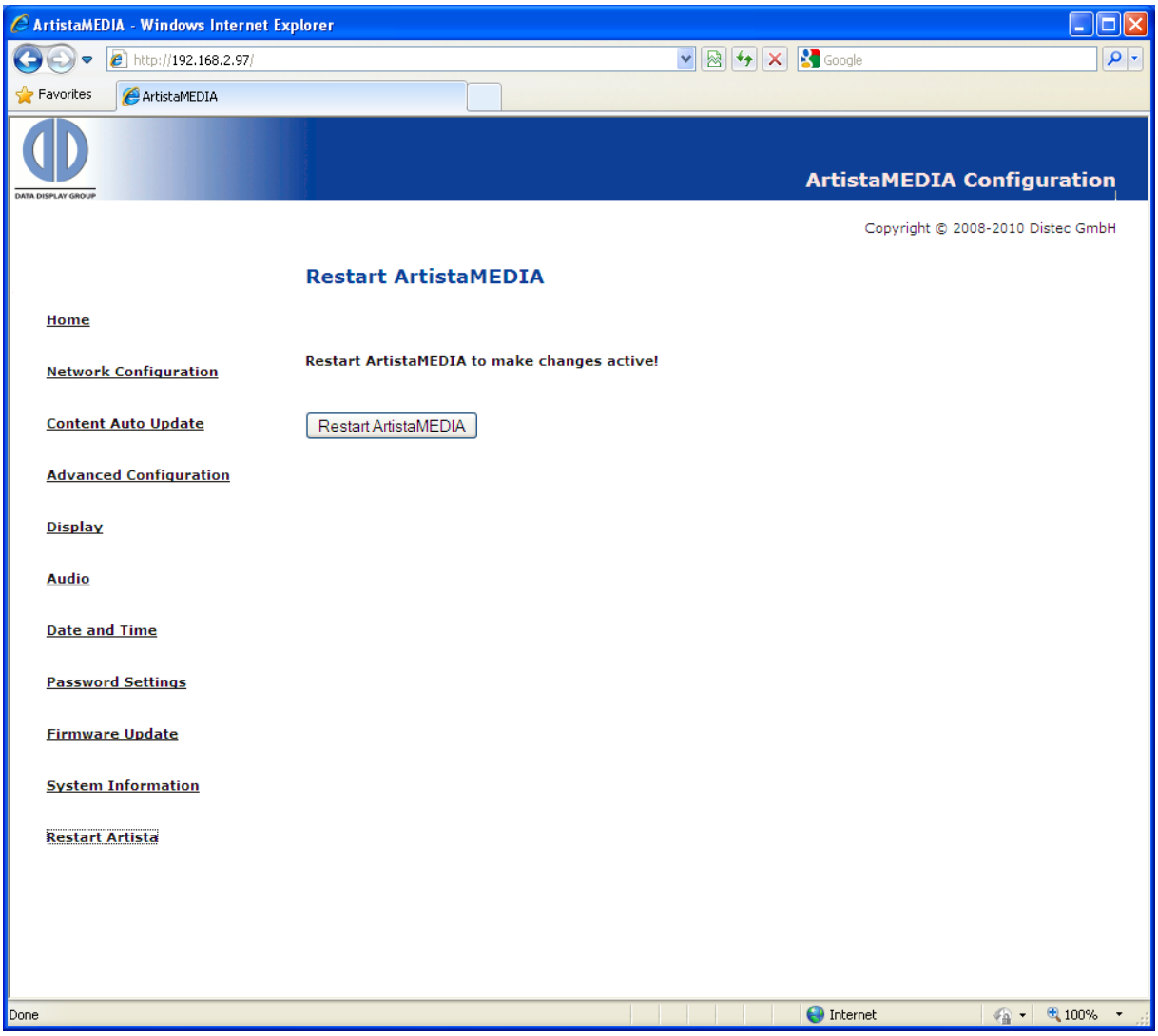


The following information about your ArtistaMEDIA board can be retrieved here:

- Firmware version
- Network configuration
- Current settings for audio volume, backlight brightness, etc.
- Log file for content update statistics
- Log file for player statistics

7.1.12 Restart Artista

The picture below shows the restart ArtistaMEDIA menu of the ArtistaMEDIA Web Frontend in normal operating mode.



Some configuration changes (e.g. network or content auto update configuration) require a restart of the ArtistaMEDIA board for the modifications to take effect. This can be done by pressing the button "**Restart ArtistaMEDIA**".

7.2 Maintenance Mode

Beside the normal operating mode ArtistaMEDIA also has a maintenance mode. This mode is used in two cases:

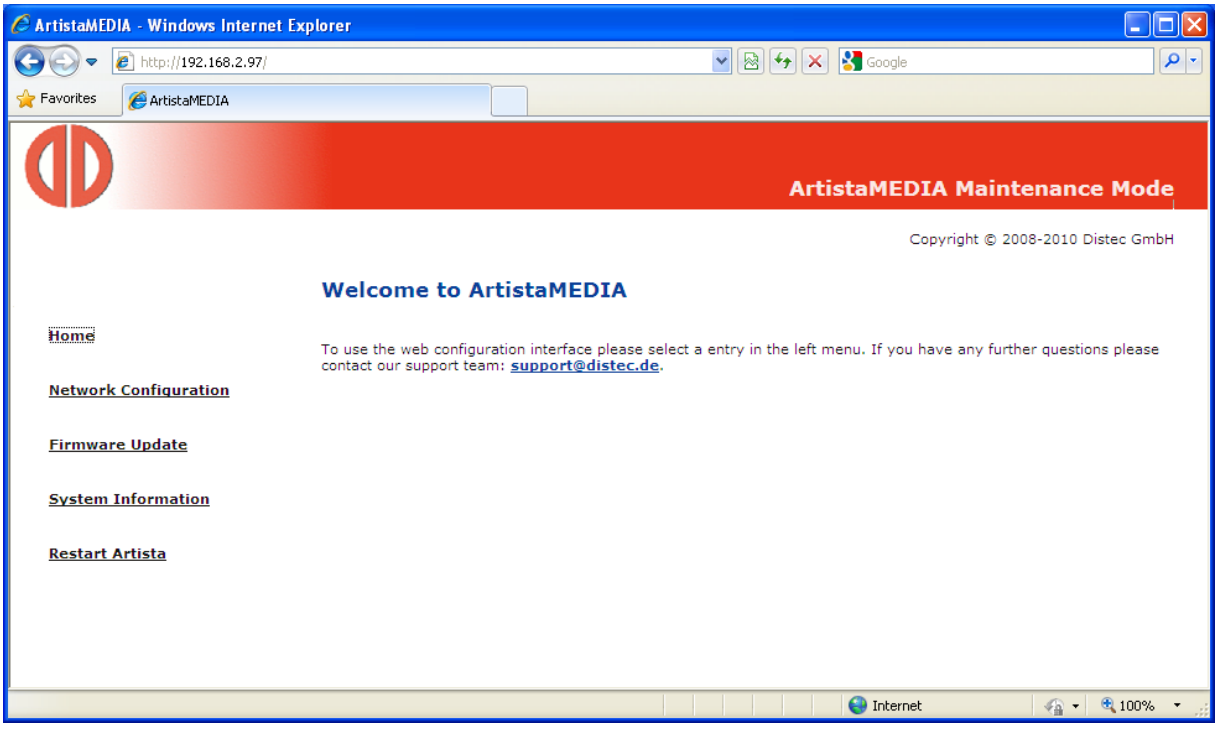
1. Firmware update
   - Enter the Web Frontend in normal operating mode
   - Select the menu "**Firmware Update**"
   - Press the button "**Enter Maintenance Mode**"
   - ArtistaMEDIA reboots now in maintenance mode

2. Reset the network configuration of the board to the factory defaults
   If you follow the instructions in section Reset ArtistaMEDIA to Network Factory Default Values, ArtistaMEDIA boots in maintenance mode as well.

Note: If ArtistaMEDIA is running in maintenance mode, the player and the display is switched off. The header of the Web Frontend is red and has the caption "**ArtistaMEDIA Maintenance Mode**".

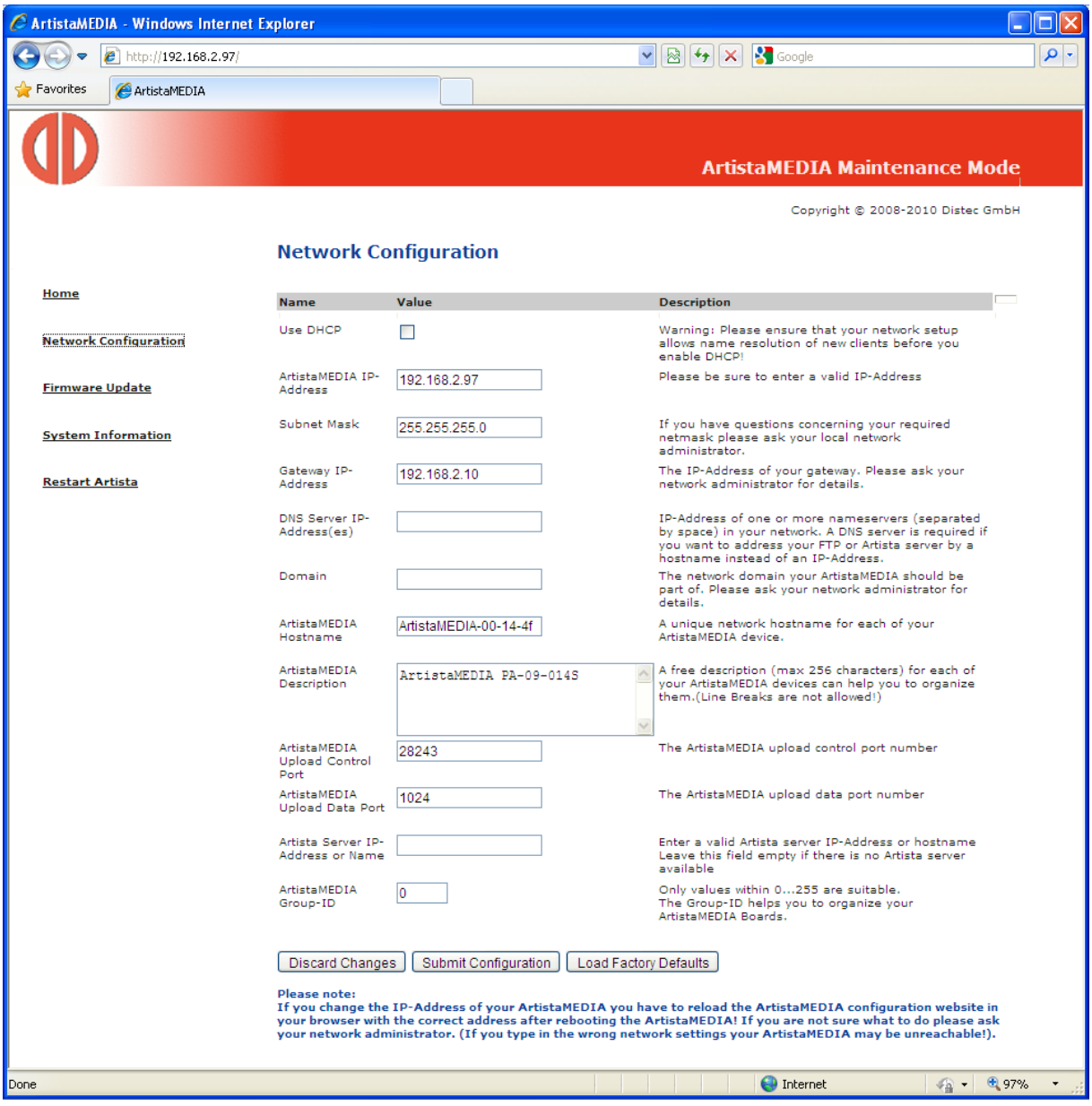
7.2.1 Home

The picture below shows the ArtistaMEDIA Web Frontend welcome screen if the board is running in maintenance mode.



7.2.2 Network Configuration

The picture below shows the network configuration menu in maintenance mode. It has the same function as the network configuration menu in normal operating mode.



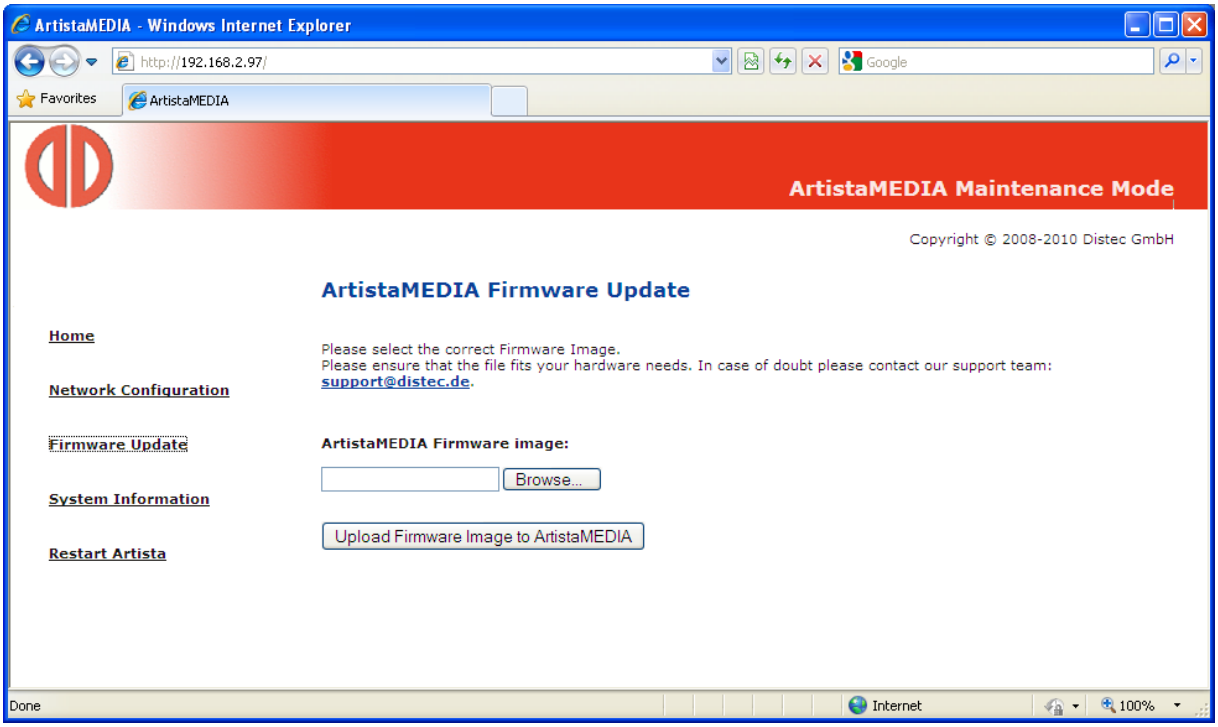
Discard Changes:
This button reverses your changes in the network configuration, if you have not pressed "**Submit Configuration**" yet.

Submit Configuration:
This button saves the changes in the network configuration on the board. You have to restart the ArtistaMEDIA board to make the changes take effect. Select the menu "**Restart Artista**" to do this.

Load Factory Defaults:
This button can be used to preload the network configuration fields in the Web Frontend with the factory defaults. Press "**Submit Configuration**" to save these values on the board and restart it to make the new settings take effect.

7.2.3 Firmware Update

The picture below shows the firmware update menu in maintenance mode.



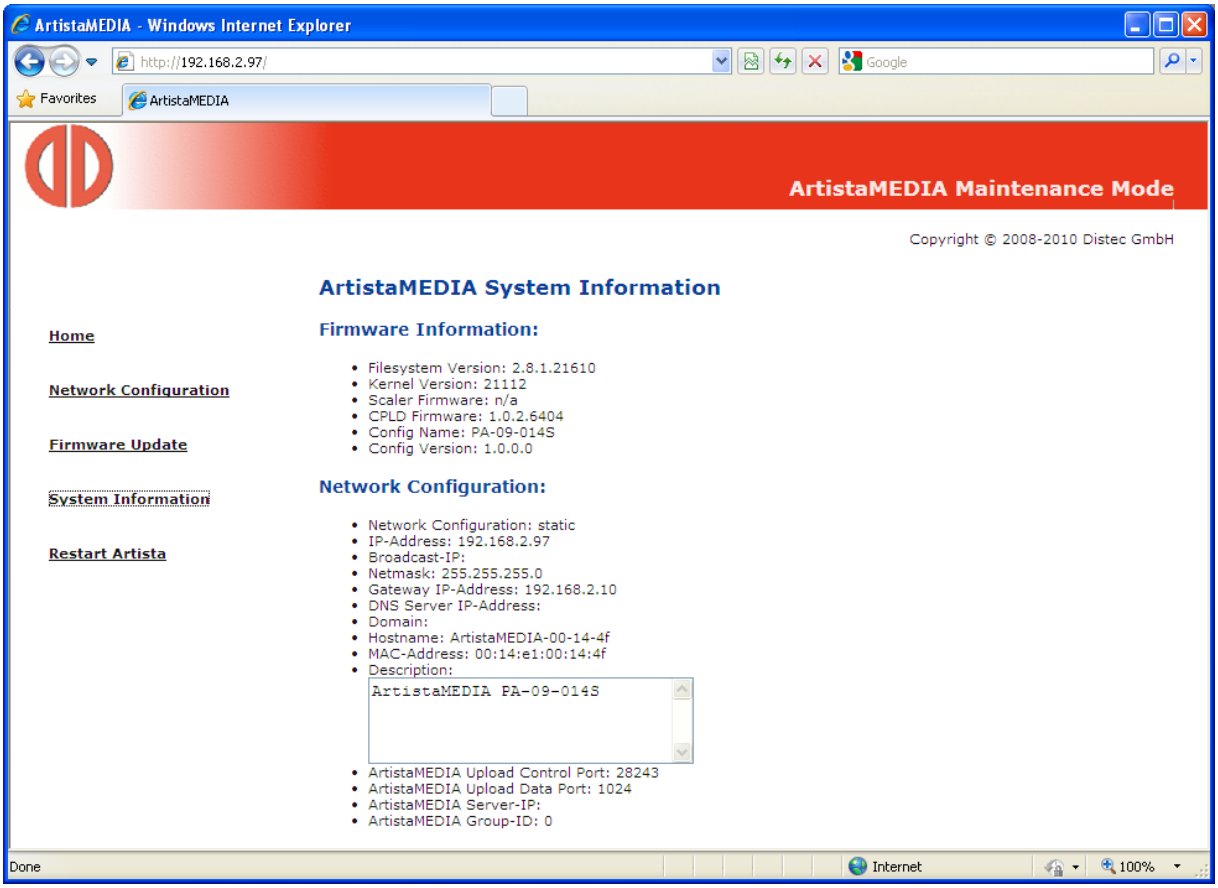
To install a firmware update the following steps have to be executed:

- Press "**Browse …**" and select the firmware update package in the file system of your PC
- Press "**Upload Firmware Image to ArtistaMEDIA**"
- Firmware update takes about 2 minutes. Messages showing the progress of the update process are displayed on the Web Frontend
- When the update process has been finished, restart the ArtistaMEDIA board by selecting the menu "**Restart Artista**" and pressing the button "**Enter Normal Operating Mode**"

Further details on the firmware update procedure can be found in section Firmware Update.

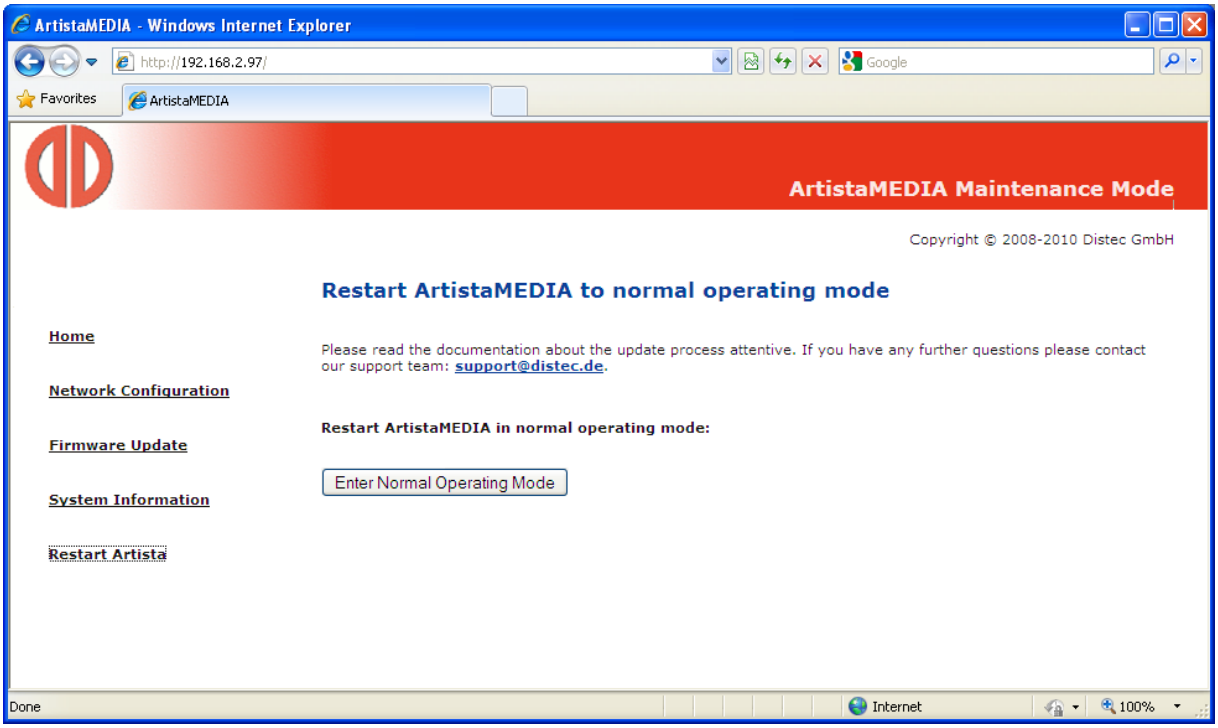
7.2.4 System Information

The picture below shows the system information menu in maintenance mode. It has the same function as the system information menu in normal operating mode, but in maintenance mode not all values are displayed. The current settings are just displayed and can not be changed here.



7.2.5 Restart Artista

The picture below shows the restart Artista menu in maintenance mode.



Press the button "**Enter Normal Operating Mode**" to leave the maintenance mode and restart ArtistaMEDIA in normal operating mode. After about 2 minutes the board will start playback of the current playlist again. Press the reload button of your Browser to get the Web Frontend menu of normal operating mode.

8 Log Files

ArtistaMEDIA creates two different log files which are stored on the local storage (CompactFlash card or Hard Disk Drive). They can be viewed and retrieved with the Web Frontend. There is one log file that contains all information regarding the content updates. The other log file contains all player related information and can be used to get player statistics.

Open the Web Frontend and select the page "**System Information**". On the bottom of this page between two and four buttons are displayed. Press the button "**Get Current Updater Log File**" or "**Get Current Player Log File**" to get the latest information. If these both files achieve the maximum allowed size, backup copies are created. These can be viewed by pressing the buttons "**Get Previous Updater Log File**" and "**Get Previous Player Log File**". If the current log files achieve the maximum size again, the old backup log files are overwritten then.

8.1 Log File for Content Updates

The log files for the content update process can be retrieved by selecting the buttons "**Get Current Updater Log File**" or "**Get Previous Updater Log File**".

An example of the log entries in these files are shown below:

```
################################################################################

Event: new playlist detected on server
Timestamp: Thu Apr 22 09:34:54 2010

New playlist title: Example Playlist A
Title: image_1.aib
Length: 00:00:05.000
Brightness: 80
Title: video_1.avi
Volume: 100
Brightness: 80
Title: image_2.aib
Length: 00:00:05.000
Brightness: 80
Title: video_2.avi
Volume: 100
Brightness: 80

Media state: video_2.avi, 4585632 bytes downloaded

################################################################################

Event: new playlist detected on server
Timestamp: Thu Apr 22 09:38:54 2010

New playlist title: Example Playlist B
Title: image_2.aib
Length: 00:00:05.000
Brightness: 80
Title: video_2.avi
Volume: 100
Brightness: 80
Title: image_3.aib
Length: 00:00:10.000
Brightness: 80
Title: video_3.avi
Volume: 100
Brightness: 80

Media state: image_3.aib, 829456 bytes downloaded
Media state: video_3.avi, 5097628 bytes downloaded

################################################################################
```

etc …

8.2 Log File for Player Statistics

The log files for the player can be retrieved by selecting the buttons "**Get Current Player Log File**" or "**Get Previous Player Log File**".

An example of the log entries in these files are shown below:

```
################################################################################

Loaded playlist: Example Playlist A
Timestamp: Thu Apr 22 09:35:00 2010
Title: image_1.aib
Length: 00:00:05.000
Brightness: 80
Title: video_1.avi
Volume: 100
Brightness: 80
Title: image_2.aib
Length: 00:00:05.000
Brightness: 80
Title: video_2.avi
Volume: 100
Brightness: 80

Starting playlist: Example Playlist A
Timestamp: Thu Apr 22 09:35:00 2010

Starting playlist: Example Playlist A
Timestamp: Thu Apr 22 09:35:28 2010
```

etc ...

```
################################################################################

Loaded playlist: Example Playlist B
Timestamp: Thu Apr 22 09:39:01 2010
Title: image_2.aib
Length: 00:00:05.000
Brightness: 80
Title: video_2.avi
Volume: 100
Brightness: 80
Title: image_3.aib
Length: 00:00:10.000
Brightness: 80
Title: video_3.avi
Volume: 100
Brightness: 80

Starting playlist: Example Playlist B
Timestamp: Thu Apr 22 09:39:01 2010

Starting playlist: Example Playlist B
Timestamp: Thu Apr 22 09:39:30 2010
```

etc ...

9 Specification of Playlist File

Since firmware version 2.2.0 ArtistaMEDIA supports playlists to define the order, in which several media files are played back. Further, the audio volume, the display brightness or the image length is defined here.

The playlist file must be called "**playlist.xml**" (case sensitive).

The internal structure of the playlist file is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<AMPlaylistDoc Title="Example Playlist" Version="2.0">
  <AMPlaylist_Entry>
    <AMEntry_Title>image_1.aib</AMEntry_Title>
    <AMEntry_LengthMs>5000</AMEntry_LengthMs>
    <AMEntry_Brightness>80</AMEntry_Brightness>
  </AMPlaylist_Entry>
  <AMPlaylist_Entry>
    <AMEntry_Title>video_1.avi</AMEntry_Title>
    <AMEntry_Vol>100</AMEntry_Vol>
    <AMEntry_Brightness>80</AMEntry_Brightness>
  </AMPlaylist_Entry>
  <AMPlaylist_Entry>
    <AMEntry_Title>video_2.mp4</AMEntry_Title>
    <AMEntry_Vol>100</AMEntry_Vol>
    <AMEntry_Brightness>80</AMEntry_Brightness>
  </AMPlaylist_Entry>
</AMPlaylistDoc>
```

When executing a playlist, ArtistaMEDIA starts at the first entry. After playback of this media file has been finished it automatically jumps to the next entry and plays it. When the end of the playlist is reached, the board starts from the beginning again. The playlist is played back in an endless loop until a new playlist is available.

Detailed description of the tags in the playlist file:

Tag	Description	Notes
<?xml version="1.0" encoding="UTF-8"?>	XML header: Don't change this line	
<AMPlaylistDoc …> </AMPlaylistDoc>	Tags the beginning and the end of the playlist. This tag has two attributes: • **Title:** Keeps the name of the playlist. The name defined here can be found in the log files for reference, e.g. "Example Playlist" • **Version:** Keeps the version number of the playlist structure. Version "1.0": can contain videos only Version "2.0": can contain images and videos	Attribute "**Version**" is supported since firmware version 2.6.0
<AMPlaylist_Entry> </AMPlaylist_Entry>	Tags the beginning and the end of one playlist entry. Each playlist entry consists of further tags called **<AMEntry_Title>**, **<AMEntry_Vol>**, **<AMEntry_Brightness>** or **<AMEntry_LengthMs>** For further details on these tags see below	Tag **<AMEntry_LengthMs>** is supported since firmware version 2.6.0
<AMEntry_Title> </AMEntry_Title>	Name of the media file, e.g. "video_1.avi" Constraints: • The media file name must not include any special characters. Just alpha-numeric characters and **. - _** can be used (7-bit ASCII) • The media file name must not exceed 200 characters • The extension of the file must be "**.aib**", "**.avi**" or "**.mp4**"	File extension "**.aib**" is supported since firmware version 2.6.0 File extension "**.mp4**" is supported since firmware version 2.8.1
<AMEntry_Brightness> </AMEntry_Brightness>	Relative display brightness setting. This value can be set to any integer value between **0** and **100** and defines the percentage of the default brightness. The display default brightness can be set in the Web Frontend in the **Display** menu. E.g. • Default brightness is set to **80** and the brightness entry in the playlist is **100**, then the resulting display brightness is **80** • Default brightness is set to **80** and the brightness entry in the playlist is **50**, then the resulting display brightness is **40** • Default brightness is set to **80** and the brightness entry in the playlist is **0**, then the resulting display brightness is **0** This tag is used for images and videos	

Tag	Description	Notes
<AMEntry_LengthMs> </AMEntry_LengthMs>	Defines the time how long an image is displayed in ms. This tag is used for images only	Tag **<AMEntry_ LengthMs>** is supported since firmware version 2.6.0
<AMEntry_Vol> </AMEntry_Vol>	Relative audio volume setting. This value can be set to any integer value between **0** and **100** and defines the percentage of the master volume. The audio default volume can be set in the Web Frontend in the **Audio** menu. E.g. • Default volume is set to **80** and the volume entry in the playlist is **100**, then the resulting output volume is **80** • Default volume is set to **80** and the volume entry in the playlist is **50**, then the resulting output volume is **40** • Default volume is set to **80** and the volume entry in the playlist is **0**, then the resulting output volume is **0** This tag is used for videos only	

10 Supported Media Formats

The tables below describe which video and image formats are supported by ArtistaMEDIA.

Supported video formats:

Supported Container Format	File Extension	Video Codec	Audio Codec	Notes
AVI (Audio Video Interleave)	.avi	MPEG-2	MPEG-1 Layer 2 (MP2)	
MPEG-4 AVC	.mp4	MPEG-4 AVC / H.264	AAC LC	

Detailed description of supported video Codecs:

Video Codec	Parameter	Supported Values	Notes
MPEG-2	Profile	Main	
	Level	Main	
	Video Resolution / Frame Rate	• 720 x 480 / 29.97 fps • 720 x 576 / 25 fps	fps: Frames per second
	Scan Mode	Progressive Scan	
	Aspect Ratio	• 4:3 • 16:9	
MPEG-4 AVC / H.264	Profile	Baseline	
	Level	up to 3.0	
	Video Resolution / Frame Rate	• 720 x 480 / 29.97 fps • 720 x 576 / 25 fps	fps: Frames per second
	Scan Mode	Progressive Scan	
	Aspect Ratio	• 4:3 • 16:9	

Detailed description of supported audio Codecs:

Audio Codec	Parameter	Supported Values	Notes
MPEG-1 Layer 2 (MP2)	Sample Rate	48 kHz	
	Bit Rate	up to 384 kbit/sec	
	Channels	Stereo	
AAC LC	Sample Rate	48 kHz	

	Bit Rate	up to 384 kbit/sec	
	Channels	Stereo	

Supported image formats:

Supported Image Format	File Extension	Parameter	Supported Values	Notes
AIB	.aib	Resolution	• 720 x 480 • 720 x 576 • 800 x 480 • 800 x 600 • 1024 x 768 • 1280 x 768 • 1280 x 800 • 1280 x 1024 • 1366 x 768 • 1440 x 900 • 1680 x 1050 • 1920 x 480 • 1920 x 1080	Artista proprietary image format
		Color Depth	16 bits per pixel	

11 Firmware Update

This section describes how firmware updates can be installed on ArtistaMEDIA boards.

Before the update process can be started, the following checks are necessary:

- Open the Web Frontend in normal operating mode (refer to sections Network Configuration of ArtistaMEDIA via Web Frontend and ArtistaMEDIA Web Frontend for more details)
- Select the menu "**System Information**"
- Check the "**Config Name**" in the section "**Firmware Information**":
  - **PA-09-…**: A standard ArtistaMEDIA firmware is installed. Firmware update packages for the standard ArtistaMEDIA product can be installed. Firmware update packages for customized PU-09-… products can not be installed here
  - **PU-09-…**: A customized ArtistaMEDIA firmware is installed. A special firmware update package for your specific product must be installed. Firmware update packages for the standard firmware can not be installed on these customized products
- Check the "**Filesystem Version**" in the section "**Firmware Information**":
  - **Version 1.0.0**: It is not possible to update ArtistaMEDIA firmware version 1.0.0 to version 2.2.0 or higher versions directly. The firmware must be updated to version 1.2.0 first. Contact Distec support for further assistance
  - **Version 1.2.0**: It is not possible to update ArtistaMEDIA firmware version 1.2.0 to version 2.8.1 or higher versions directly. The firmware must be updated to version 2.6.0 first. Contact Distec support for further assistance
  - **Version 2.2.0 or higher**: The procedure to update the firmware to the latest version over network by using the Web Frontend is described below

Procedure to update the firmware on ArtistaMEDIA:

- Save the firmware update package on the file system of your PC
- Open the Web Frontend in normal operating mode
- Select the menu "**Firmware Update**"
- Press the button "**Enter Maintenance Mode**"
- Wait about 1 minute until the board has been restarted in maintenance mode
- Press the reload button of your Browser to get the home page of the ArtistaMEDIA Web Frontend in maintenance mode
- Select the menu "**Firmware Update**" in maintenance mode again
- Press "**Browse …**" and select the firmware update package on the file system of your PC
- Press the button "**Upload Firmware Image to ArtistaMEDIA**"
- Firmware update takes about 2 minutes. Messages showing the progress of the update process are displayed on the Web Frontend
- When the update process has been finished, restart the ArtistaMEDIA board by selecting the menu "**Restart Artista**" and pressing the button "**Enter Normal Operating Mode**"
- After about 2 minutes ArtistaMEDIA will be running in normal operating mode again
- Playback of the current playlist will be started

- Press the reload button of your Browser to get the home page of the ArtistaMEDIA Web Frontend in normal operating mode
- Select the menu "**System Information**" and verify, that the "**Filesystem Version**" has the new version number now
- Firmware update has been finished successfully then

12 Network Factory Default Values

ArtistaMEDIA has the following network factory default values. These values are used on delivery of the ArtistaMEDIA boards and remain until the user re-configures them by using the Web Frontend.

NOTE: Dynamic network configuration (DHCP) is disabled by default.

- DHCP: disabled
- Static IP address of the ArtistaMEDIA board: 192.168.0.1
- Subnet mask: 255.255.255.0
- Gateway: 192.168.0.100
- Password for Web Frontend: Artista
- ACC upload control port: 28243
- ACC upload data port: 1024

ArtistaMEDIA can be reset to these values by using the procedure described in section Reset ArtistaMEDIA to Network Factory Default Values.

13 Reset ArtistaMEDIA to Network Factory Default Values

If you want to reset the network configuration of your ArtistaMEDIA board to the factory defaults mentioned in section Network Factory Default Values (e.g. because you don't know the IP address of your ArtistaMEDIA board and can not access it via the Web Frontend any more), you have to execute the following steps:

- Power down ArtistaMEDIA
- Pull down the factory reset pin (CON18, Pin 9) to Ground level and power up ArtistaMEDIA again
- Keep the pin pulled down until both LEDs LED6 and LED7 are flashing once. This is about 10 seconds after powering on the board. Now the pin can be released again
- ArtistaMEDIA will boot in **Maintenance Mode** now by using the network default values. In maintenance mode the video playback is deactivated and the panel will stay black
- Access the ArtistaMEDIA board via the Web Frontend by using the IP address 192.168.0.1
- Enter the menu "**Network Configuration**" and enter a proper network configuration for your ArtistaMEDIA board. Press "**Submit Configuration**" to save the new settings
- Select the menu "**Restart Artista**" and press the button "**Enter Normal Operating Mode**"
- ArtistaMEDIA will boot in normal operating mode now and will start playing back the playlist again, if there is one available on the internal storage

14 Pre-configured Default Values

TBD

15 Functions of the LEDs on the ArtistaMEDIA Board

There are several LEDs available on the ArtistaMEDIA board. The functions of all the LEDs are described below.

Reference	Label	Colour	Function
LED 1	+5V	Red	**On**: Panel power supply is configured to +5 V **Off**: If both LED1 and LED2 are off, the panel power supply is configured to + 3.3 V
LED 2	+12V	Blue	On: Panel Power Supply is configured to +12 V Off: If both LED1 and LED2 are off, the panel power supply is configured to + 3.3 V
LED 3	GP3	Red	TBD
LED 4	GP4	Green	TBD
LED 5	ACTIVE	Green	**On**: Signals activity on the IDE bus (Compact Flash card or Hard Disk Drive)
LED 6	GP1	Red	Flashing once if the network configuration has been reset to the factory default values (for more details see section Reset ArtistaMEDIA to Network Factory Default Values)
LED 7	GP2	Green	Flashing once if the network configuration has been reset to the factory default values (for more details see section Reset ArtistaMEDIA to Network Factory Default Values)

16 Firmware Release History

F/W Version	Date	Description
2.12.0	05.10.2011	• Added support to display still images (AIB format) with the resolution of 800 x 480 • Fixed issue where in very rare situations a video couldn't be started after a still image in native display resolution has been shown. After this issue occurred, the next videos and still images couldn't be displayed properly any more. A player restart was necessary to recover from that error • Fixed issue where sometimes the beginning of a video was corrupted for about a second when a still image in native display resolution has been shown before

F/W Version	Date	Description
2.10.1	05.04.2011	• Fixed issue where still images with larger resolutions than the native display resolution have not been displayed • Fixed issue where download of files from some FTP servers did not work (error message in log file was: "Error performing request: FTP: unknown PASV reply(13)")
2.10.0	04.03.2011	• Added support to display still images (AIB format) with the following resolutions: 800 x 600, 1024 x 768, 1280 x 768, 1280 x 800, 1280 x 1024, 1366 x 768, 1440 x 900, 1680 x 1050, 1920 x 480, 1920 x 1080 • Added support to show the splash screen in native display resolution during startup of ArtistaMEDIA • Fixed issue where some AVI and MP4 videos which have been encoded with VBR did not start to play (execution of the playlist has been stopped and the last frame of the previous video remained on the display)
2.8.1	20.10.2010	• Added support for MP4 video files (MPEG-4 AVC / H.264) • Added support for dynamic network configuration (DHCP) • Added splash screen which shows IP address, host name and Gateway address during startup of ArtistaMEDIA • Fixed issue where content update from USB flash drive didn't work when it was inserted before startup of ArtistaMEDIA • Fixed issue where still images have not been updated on ArtistaMEDIA when the file name didn't change • Fixed issue where the last image of the previous video has been displayed just before the start of the second video for some ms in mixed video – still image – video playlists • Improved Web Frontend: - Updated "Network Configuration", added DHCP and Domain - Moved configuration of name server (DNS) from "Content Auto Update" to "Network Configuration" - Removed configuration of "FTP Connection Type" from "Content Auto Update", "passive" connection type is used now by default - General update of "System Information" - Added status message after button "Restart ArtistaMEDIA" has been pressed • General update of maintenance system • General update of video player engine

F/W Version	Date	Description
2.6.0	22.04.2010	• Added support for still images in the playlist (AIB format with resolutions of 720 x 480 or 720 x 576) • Increased max. number of supported playlist entries from 16 to 512 • Solved issue where the content on the USB Flash Drive has been copied to the internal storage even in cases where it has not been used because the board was configured to "Content Auto Update" • Solved issue where media files with unsupported file extensions in the playlist have not been detected and ignored during content updates • Improved fall back behavior with unsupported or corrupt media files
2.4.0	13.11.2009	• Improved behavior regarding gap between two videos: - Compared to firmware version 2.2.0 the best case load time for videos has been decreased from 2.2 sec to about 1 sec - The last frame of the previous video is visible until the next clip starts playing. Thus no switching to black on the display any more Notes: - If the new video has a different mode (e.g. 480p vs. 576p), the display still switches to black - If the new clip has a different brightness, the load time increases - Each minute of clip length increases the load time by about 0.1 sec • Solved issue where brightness setting in playlist.xml has not been used by ArtistaMEDIA • Solved issue where the FTP connection has not been closed after accessing the FTP server in "Content Auto Update" mode • Solved issue where ArtistaMEDIA did not find the FTP server if the user entered the server name instead of the IP address in the Web Frontend in "Content Auto Update" mode • Improved entries in the Updater log file for the case if just a clip has been changed on the FTP server • Solved issue where clips with spaces in their file name could not be updated and played back on ArtistaMEDIA • Solved issue where clips with file extensions other than .avi (all letters lower case) could not be updated and played back on ArtistaMEDIA • Solved issue where clips with up to 8 letters and all letters in capitals could not be updated with USB flash drive

F/W Version	Date	Description
2.2.0	22.07.2009	• Added playlist support, audio volume can be set for each clip individually • Added "Content Auto Update" function. Content is stored on a FTP server. ArtistaMEDIA checks it for content updates periodically and downloads changes automatically • Improved content update. While receiving new content, ArtistaMEDIA continues to play the old content. When all new files are available, ArtistaMEDIA switches to the new content • Improved content update over network. Content update over network is optimized to minimize network traffic. Just new files are transmitted • Added automatic video mode detection. Video modes 720 x 480 @ 29,97 fps and 720 x 576 @ 25 fps are detected automatically now. No configuration in Web Frontend necessary any more • Added date and time configuration in Web Frontend. The onboard clock is used to create valid timestamps for the log files • Added log file to get statistics about content updates • Added log file to get statistics about played clips
1.2.0	05.11.2008	• Solved audio/video sync issue during playback of videos with 25 and 29.97 fps • Solved issue with empty Gateway IP address in Web Frontend (if it was set to empty, the ArtistaMEDIA board was not reachable any more) • Solved audio clipping for audio clips with high recording level • Improved Maintenance Mode for firmware updates • Improved content upload over ACC and SDK • Improved factory default values • Enhanced support for Artista SDK • Artista SDK support can be disabled by setting the ArtistaMEDIA Server IP address to empty in the Web Frontend • ArtistaMEDIA Upload Data Port can be configured in Web Frontend now • Added button in Web Frontend to format the media storage • Reworked Web Frontend to Data Display Group CI
1.0.0	09.07.2008	Initial Release

17 Known Issues

The table below lists all known issues of the latest firmware version 2.12.0:

Known Issue	Detailed Information
Playlists with both AVI and MP4 video files are not working reliable	It is not recommended to have playlists with both AVI and MP4 videos in one show. It is recommended to have either AVI or MP4 videos in the playlist
Display switches to black between videos and still images if both have different resolution	If a playlist contains videos and still images in native display resolution, the display is black for about 1 … 2 seconds between both. If the still images are in video mode resolution, there is no black gap between both
Video playback jerks during insertion and removal of USB Flash Drives	ArtistaMEDIA continues to play the current playlist while updating the content from USB Flash Drives. But during insertion and removal of the USB device it can happen that playback jerks for some seconds
Video file (AVI or MP4) must contain audio track	The video file must contain a video and an audio track. Clips without audio track can not be played back; execution of the playlist will be stopped and the last frame of the previous video remains on the display. ArtistaMEDIA continues to play when new content is available
Compatibility break in USB content update	• F/W version 1.2.0: **video.avi** directly in root directory of USB Flash Drive • F/W version 2.2.0 or above: **playlist.xml** and all video clips in folder **ArtistaMediaContent** on USB Flash Drive
Compatibility break in ACC content update	• F/W version 1.2.0: ACC version 2.0.0 up to 2.4.1 required • F/W version 2.2.0 or above: ACC version 2.6.0 or above required
Compatibility break in SDK content update	• F/W version 1.2.0: SDK version 3.0.0 or above required • F/W version 2.2.0 or above: SDK version 4.4.0 or above required

18 Trouble Shooting

Problem	Reason	Solution

19 Additional Documents for ArtistaMEDIA

The following documents are available for ArtistaMEDIA:

Document Name	Description
ArtistaMEDIA Manual	This document
ArtistaMEDIA Data Sheet	Technical specification of the ArtistaMEDIA board
ArtistaMEDIA Accessories	Lists all accessories available for ArtistaMEDIA
ArtistaControlCenter ACC Operating Manual	Manual for ACC. Comes with the ACC installation setup

20 News and Updates for Artista Products

The latest version of drivers and software packages can be found at:
German Site: http://www.distec.de/de/Downloads/Artista.html
English Site: http://www.distec.de/en/Downloads/Artista.html

The latest version of documents can be found at:
German Site: http://www.distec.de/de/Downloads/Docu.html
English Site: http://www.distec.de/en/Downloads/Docu.html

21 Glossary

TBD

22 Additional Information about Media Files

This section gives some additional information about how to create media files for ArtistaMEDIA and how to play back these files on a Windows PC.

22.1 Required Software Tools

Below you can find a list of tools which are very useful to prepare the media files for ArtistaMEDIA. All these tools require a standard PC with Windows XP, Service Pack 2 or above.

22.1.1 TMPGEnc 4.0 XPress

This tool is very useful to convert media files with different video and audio formats to the formats supported by ArtistaMEDIA. Further it can be used to multiplex (combine an audio- and a video elementary stream to a media file, which contains both in one file) and de-multiplex (the reverse process of multiplexing) media files.

Free trial and commercial full versions of this tool are available here:
http://tmpgenc.pegasys-inc.com/en/index.html

22.1.2 avidemux

This tool can be used to convert *.mpg files to *.avi files.

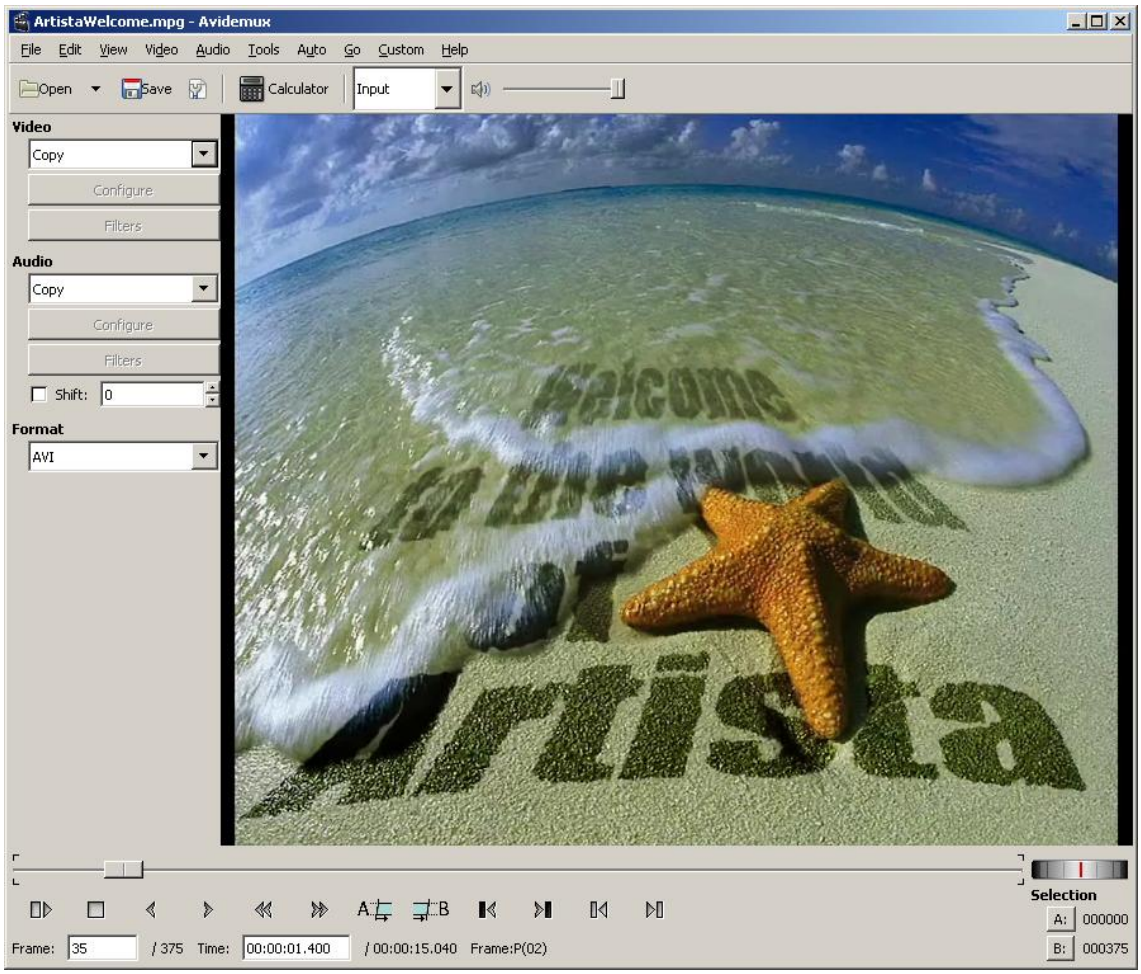
This tool is free and available here:
http://avidemux.sourceforge.net/

22.2 Converting .mpg Files to .avi Files with avidemux

If you have a *.mpg file, which contains MPEG-2 video and MPEG-1 Layer 2 audio as required, it can be converted to *.avi by using the tool “avidemux” very easily. If you are not sure, if the correct audio and video elementary streams are used, you can verify and change it with TMPGEnc.

The following steps have to be performed:

- Open the *.mpg file with “File -> Open …”
- A dialog “This looks like mpeg. Do you want to index it?” appears. Click “Yes”.
- Use the default settings in the “Video”, “Audio” and “Format” drop down menus (see also Picture 1):
    - Video: Copy
    - Audio: Copy
    - Format: AVI
- Save the AVI file by selecting “File -> Save -> Save Video…” and typing the file name with the extension “avi” into the field “Name” (e.g. “output.avi”)
- The “output.avi” file can be played back on ArtistaMEDIA then



Settings to convert a *.mpg file to AVI

22.3 Converting various Video Formats to MPEG-2

There are many different video formats available. If the video clip you want to play back with ArtistaMEDIA is not available in MPEG-2 you have to convert it to the supported format, before you can use it with ArtistaMEDIA.

This section describes how video formats can be converted to MPEG-2 using TMPGEnc.

The following steps have to be performed:

- Open the file with “Source -> Add file” and click “OK” after reviewing the clip settings
- Select “Format”
- The “Output format selection” dialog appears. Here the correct output settings have to be selected for ArtistaMEDIA. We created templates for TMPGEnc which should help you to load the correct settings. The following templates are available and can obtained from your sales contact at DATA DISPLAY:
    - ntsc_720x480_p_4_3.txp4e 720x480@29.97 fps, progressive, 4:3 format
    - ntsc_720x480_p_16_9.txp4e 720x480@29.97 fps, progressive, 16:9 format
    - pal_720x576_p_4_3.txp4e 720x576@25 fps, progressive, 4:3 format
    - pal_720x576_p_16_9.txp4e 720x576@25 fps, progressive, 16:9 format

  Select “Browse…” and load the template that is suitable to your ArtistaMEDIA installation.
- Select “Encode”, define an output file name and select the “Start encode” button. The resulting output file has the extension *.mpg and is a MPEG Program Stream. This file has to be converted to AVI before it can be played back on ArtistaMEDIA. A description of this process can be found in the next section “**Converting MPEG to AVI Files**”.

22.4 Playing Back ArtistaMEDIA AVI Files with Windows Media Player or ACC

To play AVI files with MPEG-2 video as they are required for ArtistaMEDIA on a Windows PC with Windows Media Player or ACC, a set of plug-ins must be installed on the PC.

ffdshow is a free set of DirectShow filters, which enables the Windows Media Player and ACC to play *.avi files with MPEG-2 video.

It can be downloaded here:

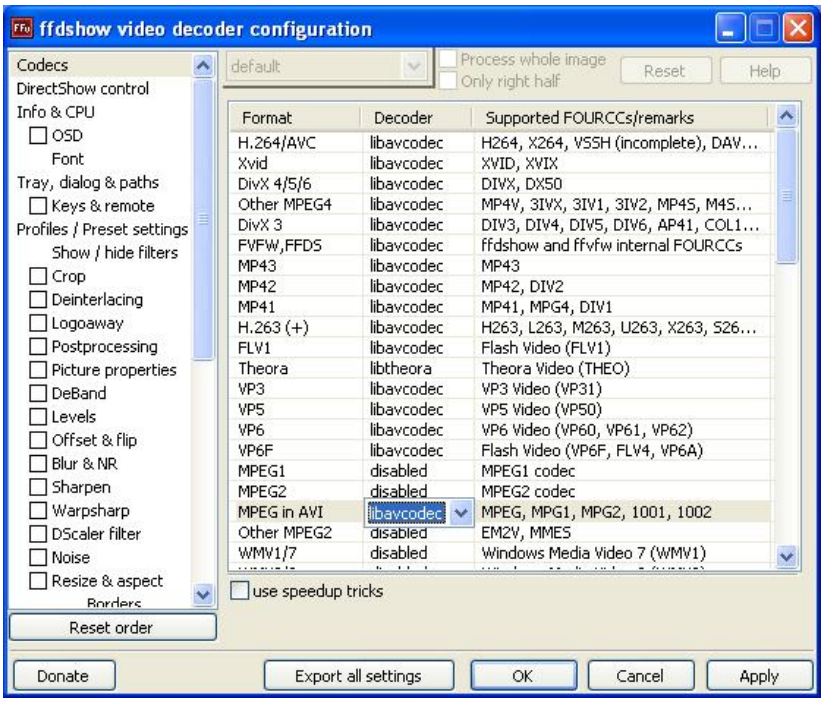
- http://sourceforge.net/projects/ffdshow-tryout/
- Go to “Download” and use the latest available generic build

or

- http://codecs.com/download/FFDShow.htm
- Go to “Download FFDShow MPEG-4”. This package also contains the required plug-ins

The downloaded EXE file must be installed on the Windows PC. The default settings suggested by the setup wizard should be used. After the installation is finished, the following setting must be verified:

- Open the dialog “Start -> All Programs -> ffdshow -> Video decoder configuration”
- Select the menu “Codecs” on the left side
- Enable the format “MPEG in AVI” by selecting “libavcodec” or “libmpeg2”



- Apply the setting
- Now the ArtistaMEDIA AVI files can be played back with Windows Media Player or ACC on a standard Windows XP PC

22.5 Playing Back MP4 Files with Windows Media Player or ACC on Windows XP

To play MP4 files on a Windows XP system with Windows Media Player or ACC, additional software must be installed. This is not the case for Windows Vista or Windows 7 as they are supporting MP4 playback out of the box.

"DirectShow FilterPack" is a light-weight package of DirectShow media filters which, together with FFDShow, will enable you to play MP4 files on Windows XP.

It can be downloaded here:

- http://www.codecs.com/download/DirectShow_FilterPack.htm
- Follow the link "Download DirectShow FilterPack" to store the software package on your PC

System Requirements:

- Windows XP
- FFDShow (see Playing Back ArtistaMEDIA AVI Files with Windows Media Player or ACC)
- DirectShow based media player like Windows Media Player or ACC

Installation:

- Extract the downloaded ZIP package on your PC. The archive contains a file called "DSFP-x.yy.exe" (x and yy are placeholders for version numbers)
- Execute this file and extract the software package. If you select "C:\Program Files" for example, the whole content will be extracted to "C:\Program Files\DirectShow FilterPack"
- Browse to the directory you just extracted the whole content to
- Browse the sub-directory "MP4 Splitter"
- Run "install.bat" to install and register the DirectShow filter on your system

In every subdirectory of "C:\Program Files\DirectShow FilterPack" you'll find an "install.bat" and "uninstall.bat" to install or uninstall every filter separately. If you don't plan on using a specific DirectShow filter, you can savely remove it's directory.

Removal:

- Browse to the "DirectShow FilterPack" directory
- Browse the sub-directory "MP4 Splitter"
- Run " uninstall.bat" to uninstall the DirectShow filter from your system
- Delete the "DirectShow FilterPack" directory

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