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MIO AV-Viewer

User Manual V1.0



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Product Description

Based on Mini BOX platform, MIO AV- AViewer is a high-quality video and audio converter which can convert one CVBS signal to DVI or HDMI signal for digital display devices, such as LCD, DLP, and Plasma. It is the ideal ways to monitor digital signal.

MIO AV- AViewer can be controlled by Ethernet network via IE browser, which is convenient to configure the display parameters. The device provides various output resolutions and audio and video detection, such as signal loss, signal freeze, audio silence and so on. The text of UMD program can be edited freely.

Although the device adopts DVI output interface, the HDMI signal can be obtained by using a DVI to HDMI adapter or cable. In HDMI mode, the video and audio are embedded into HDMI signal.

Features

- Automatic input detection of NTSC and PAL signal
- Various output resolutions up to 1920x1080p60
- In HDMI mode, the analog audio are embedded into HDMI signal
- Provide audio and video monitoring and alarm, such as signal loss, signal freeze, audio silence and so on
- Display program UMD and 8 channels audio, and adjust transparency of them freely
- Provide various waveforms, such as illumination waveform, PbPr waveform, audio waveform and so on
- Build-in web server to control the device with user-friendly interface
- Adjust luminance, saturation, contrast and de-noise freely
- Provide on-screen display: input formats, safe marker
- Mini box structure easily installed inside frame racks, video walls and so on
- Widely used in broadcasting system, studios and other professional fields

Panel Description

Left Panel



DC IN: Standard power, 12V, 1A

HDMI/DVI-OUT: Via DVI-I interface (female) to output DVI-D and HDMI signal. Although the device adopts DVI output interface, the HDMI signal can be obtained by using a DVI to HDMI adapter or cable. In HDMI mode, the SDI audio signals are embedded into HDMI signal.

The output resolution can be configured as below.

1024x768x60p, 1280x720x50p/60p

1280x768x60p, 1280x800x60p

1280x1024x60p, 1360x768x60p

1400x1050x60p, 1600x900x60p

1680x1050x60p, 1920x1080x50i/60i

1920x1080x50p/60p, AUTO HDMI

Network: RJ45 interface with 10/100/1000M auto-detection. And the default IP address is 192.168.1.76. The web server is remote control interface.

Right Panel



PWR: Power indicator, the indicator shows green as the power is working normally.

IN: Signal indicator, the indicator shows green as the video is locked with no errors.

CVBS IN: BNC interface, CVBS video signal input

Support input formats as below

NTSC,PAL

L-IN & R-IN: RCA interface, 1 analog audio stereo signal input

Buttons Definition



Resolution/ Default: Using a push pin to short press the button, the output resolution

is changed among 1280x720x60p、1920x1080x60p and AUTO HDMI. Using a push pin to long press the button until the DVI output disappears. The parameters on the web page will be restored to default ones, including IP address and user password. The default IP address is 192.168.1.76, and default password is 000000 (six zeros).

Restart: Using a push pin to press the button, The function of the button equals to turn off. Probably around 5s, the power to restart .

Special Notice

1. In order to avoid network traffic congestion, please do not submit parameters before the first modification is applied.
2. In order to avoid hardware loose contact caused by continuous operations on the front panel, please do your second operation after you have got the first operation result.
3. Generally, it will spend about three seconds to get the results after you submit. The time is related with the monitor type. If the time is too long (over 7seconds), maybe there is something abnormal with the hardware's working status (overheating for example), please wait patiently.
4. Do not plug the DVI connector without power-down.
5. When there is no display output from the device on the monitor, maybe the output resolution don't match the monitor. Please try to change the output resolution though web server.
6. Windows 2003, Windows XP, Windows Vista and Windows 7 are strongly recommended with Internet Explorer.exe.
7. Build-in Web server to control Mini box easily by your computer via Ethernet. Please make sure IP address of Mini box is in the same network segment as your computer. And the IP and Mac address of Mini box are unique value in Ethernet.
8. User can also upgrade system under the label "Network". Before the upgrade, the

anti-virus software and firewall have to be closed to make sure that the upgrade data is transmitted to MIO AV- AViewer system without rejection. Power and network cannot be cut off during upgrading.

How to Use the Remote Control Software

Attention before use

MIO AV- AViewer has a built-in Web server, so user could configure it by Internet Explorer easily when connecting it through cable.

The default IP address: 192.168.1.76.

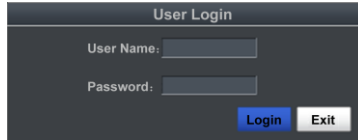
The default user name: admin

The default password: 000000 (six zeros)

Introduction of Web Control

You do not need to install the client software. Open the IE, and input the IP address in the location bar to open the user interface. Default IP address is "http://192.168.1.76".

Input user name (admin) and initial password (000000). Click "login", you will enter into the actual operation remote control.



Function overview



There are many labels at the top of the web page: Audio & Video, OSD, Alarm, Status, User, Network, and Help. Different functions can be achieved under different labels.

Audio & Video: Configuration of input source, output resolution, display mode, color parameters, and HDMI embedded audio.

OSD: Configuration of UMD display, Audio meters, AFD information display, Safe Marker, Waveform, and Layout management.

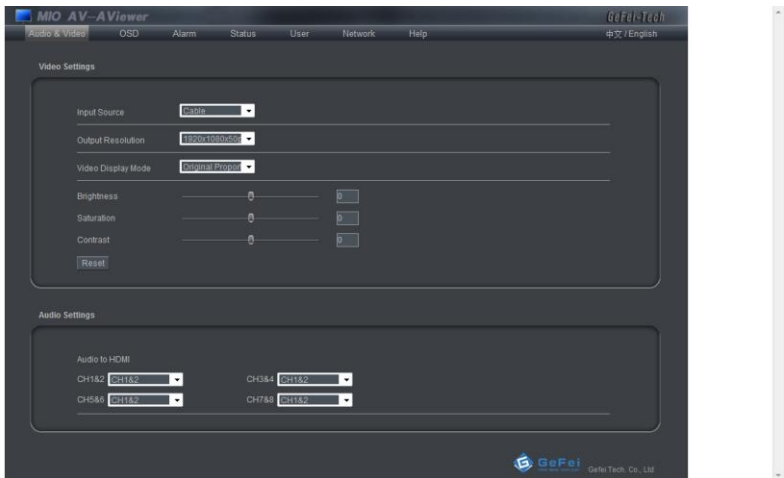
Alarm: The system supplies detection of audio, mute, frame frozen, black, signal loss. Each alarm threshold can set to meet your needs.

Status: Show the current status of video and audio.

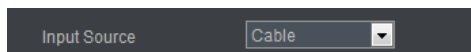
Network: Configuration of IP address and parameters for SNMP management, and upgrade the firmware.

Help: Show the versions of each firmware here.

Audio & Video

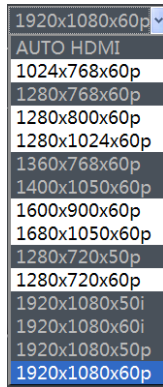


Input Source



You can choose input source between Cable and Fiber. So far, only the type of BNC cable is available.

Output resolution



HDMI output interface provides EDID detection from the monitor. And the resolutions from EDID are highlighted in the dropdown list. See the picture shown above. The output resolution of HDMI signal is up to 1920x1080x60p.

The output resolution can be configured as below.

1024x768x60p, 1280x720x50p/60p
1280x768x60p, 1280x800x60p
1280x1024x60p, 1360x768x60p
1400x1050x60p, 1600x900x60p
1680x1050x60p, 1920x1080x50i/60i
1920x1080x50p/60p, AUTO HDMI

(AUTO HDMI: auto-match the output resolution based on EDID detection of monitors.)

Video Display Mode

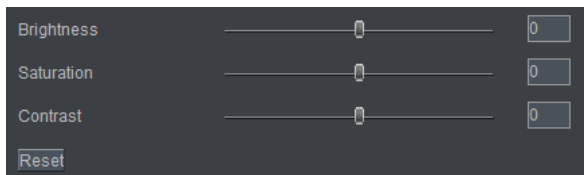


There are two types of video display: Full channel and Original Ratio.

Full channel means the video image will cover the entire window and ignore the aspect ratio of video signal.

Original Ratio means the video image always keeps the aspect ratio of video signal. So for SD input signal, the aspect ratio of video image is 4:3; And for HD input signal, it is 16:9.

Color parameters



Brightness: to set the brightness or darkness of picture. The range is from -512 to 511.

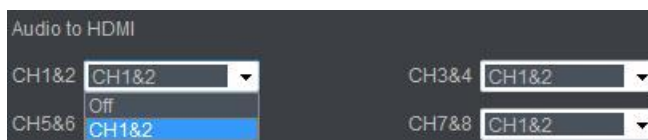
Saturation: to set the color of picture. The range is from 0 to 511.

Contrast: to adjust the clarity of picture. The range is from 0 to 511.

Put the mouse on the cursor and drag it to the assigned position; or you can fill in the certain value ranging from 0 to 255, and then press "Enter" on keyboard.

Reset button: to restore the factory default settings. The default value of brightness, saturation and contrast is zero.

Audio to HDMI



Select audio channels from analog audio to embed into HDMI signal. It supports eight audio channels for HDMI signal.

The drop-down list is shown as following.

Off/ CH1&2

"Off" option means no audio signal is embedded into the selected channels of HDMI signal.

OSD parameters

Here you can adjust various parameters for On-screen Display, such as UMD, Audio meters and so on.

Audio meter display



Audio meter monitoring

System provides four groups of audio meters to monitoring up to eight audio channels from CVBS signal. Each group can show two audio channels and be configured individually.

The drop-down list is shown as following.

Off/ CH1&2

“Off” option means the selected audio meters are turned off and not displayed on screen.

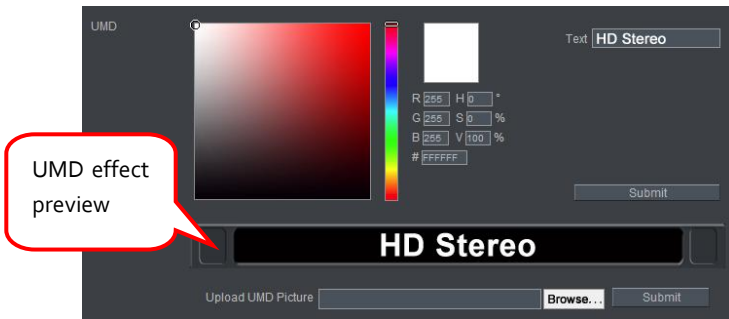
The position of audio meters

Both Sides: AM₁ and AM₂ are located on the left side of screen, while AM₃ and AM₄ are located on the right side of screen. If there are only AM₁ and AM₂ (or AM₃ and AM₄) displayed on the screen, so AM₁ (AM₃) is on the left side and AM₂ (AM₄) on the right side.

Left Side: AM₁, AM₂, AM₃, and AM₄ are all located on the left side of screen.

Right Side: AM₁、AM₂、AM₃、AM₄ are all located on the right side of screen.

Editable program UMD



Upload UMD Text

Type the characters in blank bar, change color of characters, and preview the UMD effect real time. Click "Submit" after all parameters are settled and all characters will be displayed in UMD.

Clear UMD Text

Delete all characters or enter a "space", and then click "Submit", the character in UMD area will be cleared.

Upload UMD picture

UMD picture can be changed to user-defined one freely through this function.

The picture that you need to upload must be 32bits TGA format with Alpha channel.

The size of picture is 720x60 pixels

Check/ uncheck UMD



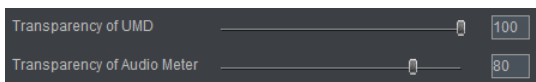
Check the box "UMD". It will be shown within the channel, otherwise, not.

Attach UMD and Audio meters to edge

Attach Audio & UMD to Edge

Check the box, UMD bar and audio meters are attached to the edge of screen which makes the video image be shown completely. If not, UMD bar and audio meters are overlaid on the image.

Transparency of Audio meters and UMD



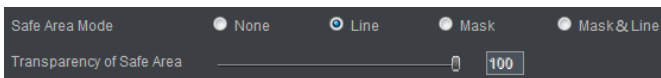
In this area, users can modify the transparency of audio meters and UMD. Put the mouse on the cursor and drag it to the assigned position; or you can fill in the certain value ranging from 0 to 100, and then press "Enter" on keyboard. "0" stands for full transparency and "100" stands for opacity.

Tally Display

Tally Display

This function is reserved so far.

Safe Marker



Line: Marker showed with lines



Mask: block the image with Mark



Mask & Line: Apply both mode



None: No safe marker on the screen

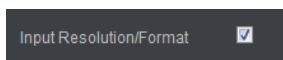


Transparency of Safe Area

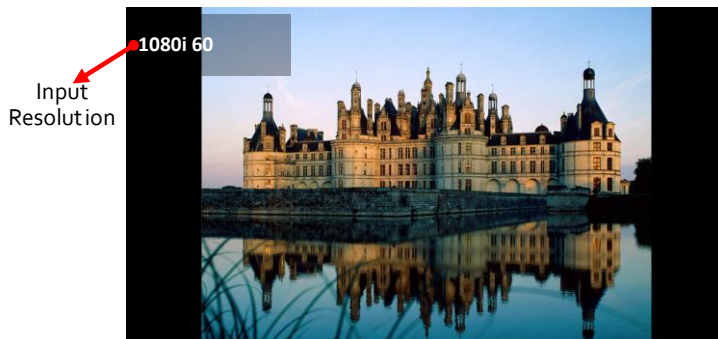
Adjust transparency value of Mark. The image can be blocked more or less by this adjustment.

Put the mouse on the cursor and drag it to the assigned position; or you can fill in the certain value ranging from 0 to 100, and then press "Enter" on keyboard. "0" stands for full transparency and "100" stands for opacity.

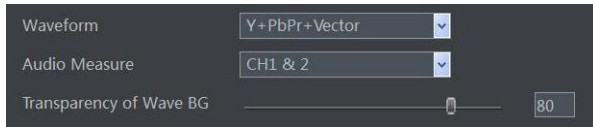
Input Format



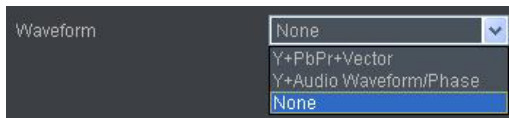
Check the box, and input resolution/format will be overlaid on the top of the screen, otherwise, not.



Waveform Display



Choose Waveform Mode



System supports display of real-time waveform and vector overlaid on image. There are three options in drop-down list. They are “None”, “Y+PbPr+Vector”, and “Y+Audio Waveform/Phase”.

Y+PbPr+ Vector

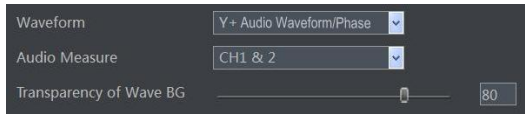


Y+Audio Waveform/Phase



None: No waveform on the screen

Select audio channels for Audio Measure



In the mode of "Y+Audio Waveform/Phase", Audio Waveform and Phase are based on the audio channels you selected from analog audio.

The drop-down list is shown as following.

Off/ CH1&2

Adjust transparency of Waveform Background

Adjust transparency value of Waveform Background. The image can be blocked more or less by this adjustment.

Put the mouse on the cursor and drag it to the assigned position; or you can fill in the certain value ranging from 0 to 100, and then press "Enter" on keyboard. "0" stands for full transparency and "255" stands for opacity.

Disable OSD (Full screen)



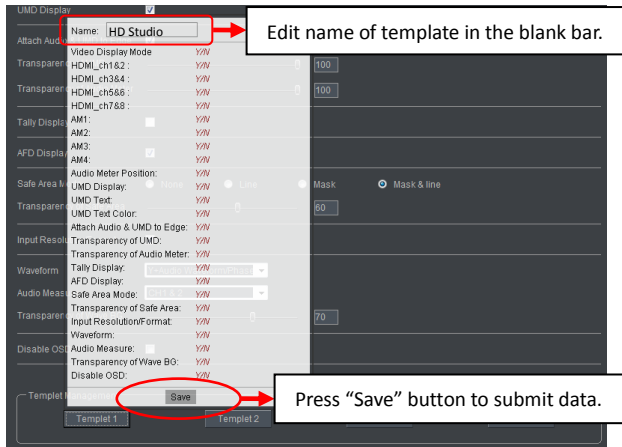
Check the box, on-screen-display elements all disappear, so the image is displaying in the full screen mode.

Uncheck the box, the checked elements appear on the screen. Meanwhile, the status of each on-screen-display element can be set individually.

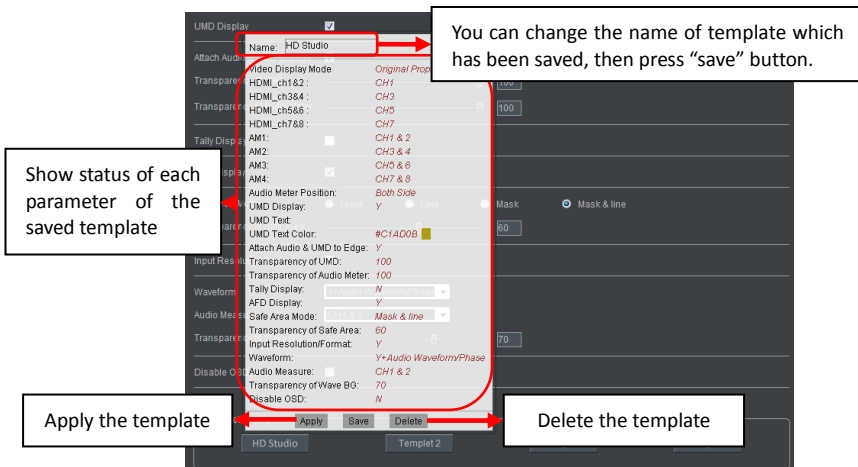
Layout management



All configured parameters can be saved as a template. System provides up to four templates for quick application of different occasions.



Click one of four buttons, for example, click "Template 1". Here is a message box appearing. Enter the name of template in the blank area on the top of message box, and click "Save" button on the bottom. So the name of the button is changed to the one you edited, not "Template 1" any more.

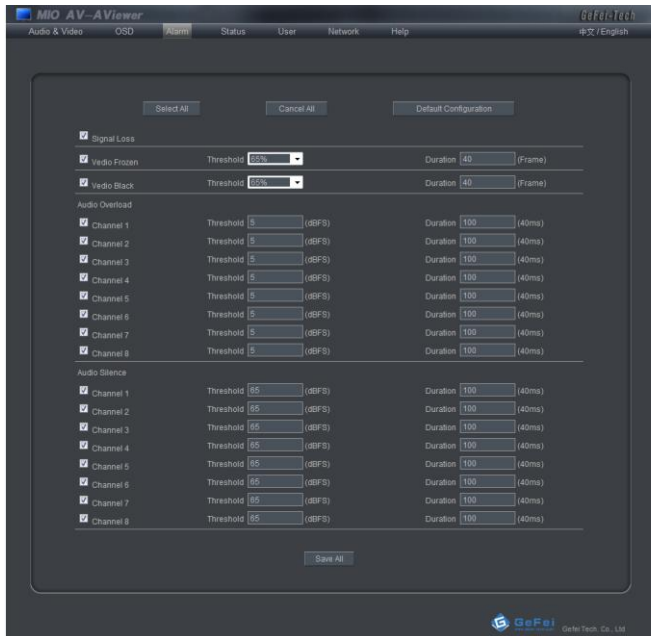


Click the template which is saved already, and a message box appears to show the status of its each parameter. You can apply the template, or delete the template. After you change its parameters, even its name, press "Save" button to submit the new data.

Apply: Click this button to apply the relevant parameters.

Delete: Click this button to delete the relevant parameters.

Alarm Settings








Select All: Check all the boxes for detection settings of selected channels

Cancel All: Cancel all the checks for detection settings of selected channels

Default Configuration: Restore Factory Setting

The video and audio signal can report signal status and validity, with detection of:

- (1) Video lose  (2) Video black  (3) Video frozen 
- (4) Audio overload  (5) Audio in silence 

Audio Detection

Measure unit of digital audio is dBFS (dB Full Scale). 0dBFS is the maximum audio level, corresponding to +24dBu of analog audio.



Audio Overload

It will prompt an alarm as soon as the audio level overloads the threshold you have settled. It provides 8 audio channels detection. And there is a box in front of each audio channel. This detection will take effect only the box is checked. The threshold and duration of detection can be configured for detection of each audio channel. The threshold means a maximum audio level. When actual volume is above this threshold, the system will prompt alarm of audio overload.

Audio Overload		
<input checked="" type="checkbox"/> Channel 1	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 2	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 3	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 4	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 5	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 6	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 7	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 8	Threshold <input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)

Audio in Silence

It will prompt an alarm picture as soon as the audio level lowers the threshold you settled. It provides 8 audio channels detection. And there is a box in front of each audio

channel. This detection takes effect only if the box is checked. The threshold and duration of detection can be configured for detection of each audio channel. The threshold means a minimum audio level. When actual volume is below this threshold, the system will prompt alarm of audio in silence.

Audio Overload			
<input checked="" type="checkbox"/> Channel 1	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 2	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 3	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 4	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 5	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 6	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 7	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)
<input checked="" type="checkbox"/> Channel 8	Threshold	<input type="text" value="10"/> (dBFS)	Duration <input type="text" value="100"/> (40ms)

Video Detection

<input checked="" type="checkbox"/> Signal Loss			
<input checked="" type="checkbox"/> Video Frozen	Threshold	<input type="text" value="65%"/>	Duration <input type="text" value="40"/> (Frame)
<input checked="" type="checkbox"/> Video Black	Threshold	<input type="text" value="65%"/>	Duration <input type="text" value="40"/> (Frame)

Loss of Signal

It prompts an alarm picture as soon as signal is lost. This detection takes effect only if the box is checked.

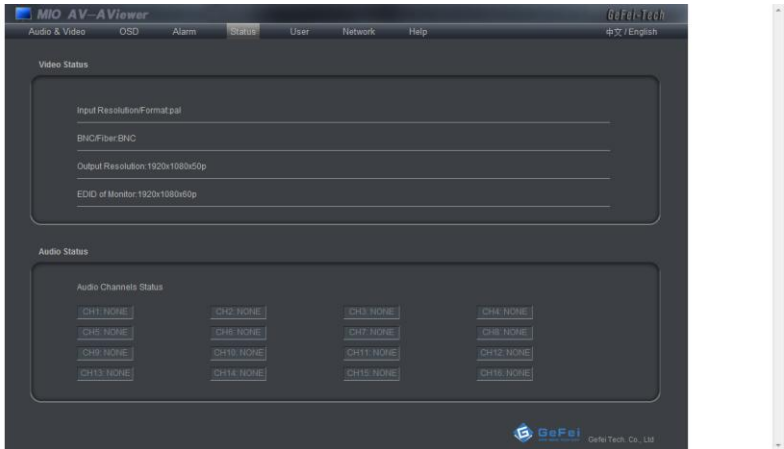
Video Frozen

It will prompt an alarm picture as soon as the regular pixels ratio of the image is lower the threshold you have settled. This detection will take effect only if the box is checked. The threshold and duration of detection can be configured. The threshold means the frozen pixel percentage in one frame.

Video Black

It will prompt an alarm picture as soon as video level is lower the threshold. This detection will take effect only if the box is checked. The duration of detection can be configured.

Status of Video and Audio



Video status

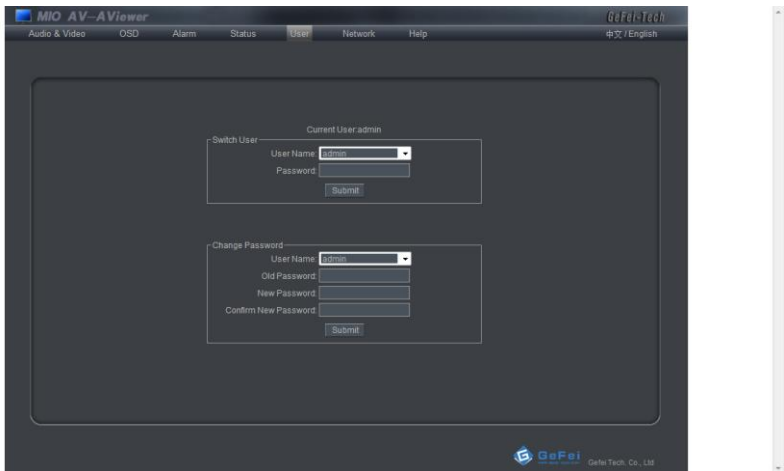
Show input format and input type of signal source, current output resolution and EDID detection of monitor.

Audio status

System supports status auto-detection of each audio channel of input source. If audio value of one channel is above -70dBfs , the status of the audio channel is existed marked as "Yes". If audio value of one channel is below -70dBfs , the status of the audio channel is mute marked as "None"

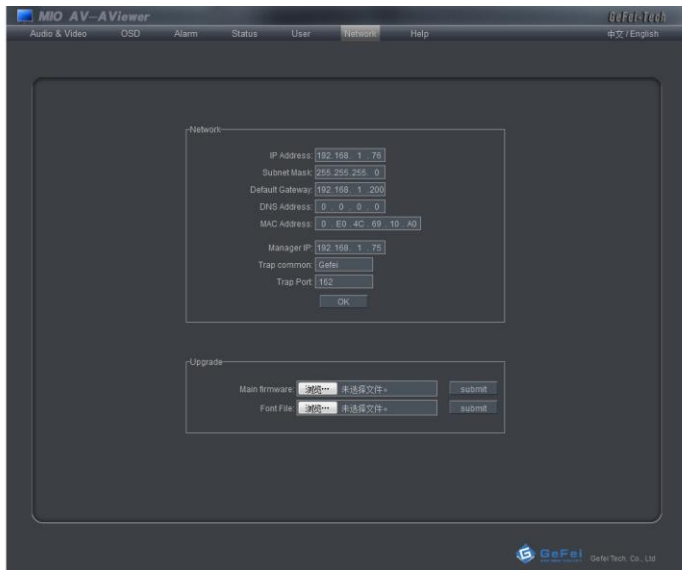
So far, audio G1 and G2 of input source can be detected, and G3 and G4 are not.

User Configuration



The software provides password-protected function. Default user name is admin, and default password is 000000 (Six zeros). Users can modify the password; maximum password length is 12 bits. When you modify the password successfully, information will prompt as "The password is altered successfully. It will take effect when you login next time."

Network Configuration



Change IP address

User can modify the IP address. If modified successfully, the system appears a message box telling the operation successful. Then restart the device, enter the new IP address in IE address and the web software will be opened.

Change manager IP for SNMP Management

Configure the "Manager IP" to be the local IP address of SNMP Server. The Server and MIO mini box should be in the same network segment. And Trap common and Trap port are for SNMP. Do not change them.

Upgrade firmware of system

A screenshot of a web-based interface for upgrading system firmware. The interface is titled "Upgrade" and contains two rows of input fields. The first row is labeled "Main firmware:" and has a text input field, a "Browse..." button, and a "submit" button. The second row is labeled "Font Base File:" and has a text input field, a "Browse..." button, and a "submit" button. The entire interface is enclosed in a dark grey border.

User can also upgrade system under this label. Before the upgrade, the anti-virus software and firewall have to be closed to make sure that the upgrade data is transmitted to Mini box without rejection. Windows 2003, Windows XP, Windows Vista and Windows 7 system are strongly recommended to upgrade the system with Internet Explorer.exe.

There are two items for upgrading, main DSP and font, if there is new version released, we will upgrade file to the customs. Power and network cannot be cut off during upgrading. When system is upgraded successfully, please turn off the power and restart the device again. It takes about 5 minutes to upgrade main DSP or font.

Specifications

Video Input

Input interface: 1* BNC connector

Impedance: 75 ohms

Format: NTSC/PAL

L-IN & R-IN

Interface: RCA interface, analog audio input

Max level: +24dBu

DVI Output

Interface: 1*DVI-I (Female / DVI-D and HDMI signal)

Output resolution: changeable via Web server

1024x768x60p, 1280x720x50p/60p, 1280x768x60p

1280x800x60p, 1280x1024x60p, 1360x768x60p

1400x1050x60p, 1600x900x60p, 1680x1050x60p

1920x1080x50i/60i, 1920x1080x50p/60p, AUTO HDMI (EDID)

Ethernet Control

1 x RJ45, 10/100/1000M adaptive

Status Indicator

Input signal status indicator

Power indicator

(Indicate by shining or extinguishing of the green LED)

Dimension

120x98x27mm

Power

12V 1A

Contact Us

Technical support:

Tel:010-58858188

Fax:010-58858189

Website

www.gefei-tech.com

E-mail: swang@gefei-tech.com

Address:

Gefei Tech. Co., Ltd

A-603 Power Creative Plaza NO.1 Shangdi E.Rd.Haidian District Beijing 100085

To Find More information, please visit www.gefei-tech.com