

# MIO MVS-4HDMI Quad Multi-viewer system User manual v1.1



Gefei Tech Co.,Ltd

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## 1. Description

Based on Mini BOX platform, MIO MVS-4HDMI is a high-quality four viewers display system. It supports 4 channels HDMI signal input, provides the HDMI double output, HDMI output can reach 1920 x1080p.

MIO MVS-4HDMI is conveniently and flexibly set to monitor the project , such as display input resolution, AFD information, safety frame. it supports multiple resolution output, provide video and audio detection and alarm, such as black Field, frozen and audio overweight, It supports SNMP. It can be real-time managed and monitored by NETwork, via Ethernet.

MIO MVS-4HDMI widely used in the studio, video conference center, broadcast prison see room, outside, multimedia dispatching command center and so on the many kinds of applications

## 2. Features

- Compatible with a variety of formats signal adaptive input.
- > Support HDMI output system.
- > Support the same input signal displaying in different video channels
- > Provide build-in web server to control whole system via RJ45 interface
- Audio signals from input source are selectable to be embedded into HDMI or HDSDI output signal on the web control page
- > Flexible output options: 4:3, 16:9, customized aspect ratio
- > Editable one program UMD and up to 8 channel audio meters display
- > Provides several kinds of timer: air timer and countdown timers, analog and digital clocks types
- > Mark key signal/signals to find it/them rapidly in one complicated layout
- > Support user-define the border color of each channel separately or cancel border display
- > Support format display of input signal and AFD information display
- > Video/audio auto detection and alarming, such as video loss, video frozen, video black, audio silence, audio overload with high rate of accuracy
- > Two forms of alarm: text alarm and icon alarm
- Support customized layout to preset various layouts for different application, such as studio, OB van, production room and so on

# 3. Special Notice

- 1. In order to avoid network traffic congestion, please do not submit parameters before the last 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 gotten 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 HDMI connector without power-down.
- 5. Without the professional technological guidance from our company, users are not permitted to re-plug the modules away from the chassis or debug the internal operation .We do not undertake any obligation or responsibility of intentional destroy to the machine.
- Build-in Web server to control MIO MVS-4HDMI easily by your computer via Ethernet. Please make sure IP address of MIO MVS-4HDMI is in the same network segment as your computer. And the IP and Mac address of MVS are unique value in Ethernet.
- 7. Windows 2003, Windows XP, Windows Vista and Windows 7 are strongly recommended with Internet Explorer.exe.
- 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 Multi-viewer system without rejection. Power and network cannot be cut off during upgrading.
- Please set all channels to input inner test signal without waveform display before upgrade. So it will take less time to upgrade the system.
- 10. If the current output resolution of HDMI signal is not compatible with your monitor, you can change the output resolution on the web control server.

## 4. Panel Description

## 4.1Buttons Definition



- Template/Default: Key press and release 2 ~ 3s. You can call up the template. Key press and release 10~ 12s . 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 Mini box is restarted. The function of the button equals to turn off, and then turn on the Mini box.

## 4.2Right 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

1280x800x60p, 1280x1024x60p

1360x768x60p, 1400x1050x60p

1600x900x60p, 1680x1050x60p,

1920x1080x50i/60i, 1920x1080x50p/60p,

**Network**: RJ45 interface with 10/100/1000M auto-detection. And the default IP address is 192.168.1.76. and default password is 000000 (six zeros),The web server is remote control interface.

#### GPI/RS232: Serial port.

| Definition     | Pin | Definition     | Pin |
|----------------|-----|----------------|-----|
| CH1_TALLY      | 15  | GND            | 6   |
| CH2_TALLY      | 14  | GND            | 7   |
| CH3_TALLY      | 13  | GND            | 8   |
| CH4_TALLY      | 12  | GND            | 9   |
| тх             | 3   | GND            | 10  |
| Do'not connect | 1   | Do'not connect | 5   |
| Do'not connect | 2   | Do'not connect | 11  |
| Do'not connect | 4   |                |     |

RS232, DB15 definition;

## 4.3Left panel



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

HDMI IN1 & HDMI IN2 & HDMI IN3 & HDMI IN4: Cable with HDMI interface. Support various resolutions.

720p 50Hz/59.94Hz/60Hz 1080i 50Hz/59.94Hz /60Hz 1080p 50Hz/59.94Hz /60Hz

**IN1 & IN2 & IN3 & IN4:** Signal indicator, the indicator shows green as the video is locked with no errors. Correspondence between: IN1→HDMI IN1, IN2→HDMI IN2, IN3→HDMI IN3, IN4→HDMI IN4

## 5. How to Use the Remote Control Software

### 5.1Attention before Use

Multi-viewer system has a built-in WEBSERVER, so user can configure it by Internet Explorer easily and quickly when connecting RJ45 interface of MVS with one <u>straight-through cable</u>.

*First step:* you need to login <u>192.168.1.76/config.html</u> to open physical configuration of MIO MVS-4HDMI, such as editing the names of input sources and setting the position for screens.

<u>Second step:</u> Login <u>192.168.1.76</u> to open general web control of MIO MVS-4HDMI. There are several web labels, which are System, Alarm, User, Network, and Help.

The default IP address: 192.168.1.76.

The default user name: admin

The default password: 000000

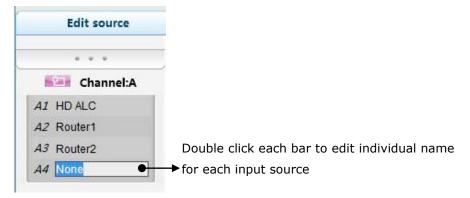
### 5.2Basic Physical Configuration

Open IE browser on Client PC, and input "http://192.168.1.76/config.html" in location bar to open web page of Physical Configuration. The page is shown as below.

| MIO MVS-   | 4  | Gefei-Tech                         |
|------------|--|------------------------------------|
| dit source | Edit Screen                                      | Chinese / Engl                     |
| • •        | Display IP Address 192.168.1.56 Module Placement |                                    |
| Channel:A  | Return to System                                 |                                    |
| г          |  |                                    |
| TV         |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            | First screen                                     |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  |                                    |
|            |  | www.gefei-tech.com Gefei Tech. Co. |

## 5.2.1 Edit Input Source

Edit name of input source for each input card on the left of web page.



The table of relationship between input source and inserted slots:

The signal name of A1 is the one inputted via HDMI IN1 interface, and so does A2, A3 and A4.

| Interface | Source Name on Web page |
|-----------|-------------------------|
| HDMI IN1  | A1                      |
| HDMI IN2  | A2                      |
| HDMI IN3  | A3                      |
| HDMI IN4  | A4                      |

## 5.2.2 Rotate Screen

|                 | 📫 MIO MVS-4              |  | Gefei-Te         | ch                   | ſ |
|-----------------|--------------------------|--|------------------|----------------------|---|
| Display         | Edit source              | Edit Screen                                      |                  | Chinese / English    |   |
| IP              | · · · ·                  | Display IP Address 192 168 1.56 Module Placement |                  |                      |   |
| address         | Channel:A                | Return to System                                 |                  |                      |   |
|                 | AI GEFEI-TECH<br>A2 CBVT |  |                  |                      | L |
| Return          | A3 CCTV<br>A4 BVF        |  |                  |                      |   |
| to              |                          |  |                  |                      |   |
| System          |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      | L |
|                 |                          | First screen                                     |                  |                      |   |
|                 |                          |  |                  |                      | L |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
| Display         |                          |  |                  |                      |   |
| Display<br>Area | ◀                        |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      | L |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          |  |                  |                      |   |
|                 |                          | vw   | w.gefei-tech.com | Gefei Tech. Co., Ltd |   |

Display IP address: Show the IP address of quad-viewer output system, read only.

**Return to System**: To release current name of input sources and arrangement of screens and jump to web page of 192.168.1.76

## 5.3General Configuration

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

Here appears a dialogue box for user login. Please input user name and initial password. Then click "login", you will enter into the actual control interface.

User name: admin;

Password: 000000.

| User Login                |            |  |
|---------------------------|------------|--|
| User Name :<br>Password : |            |  |
|                           | Login Exit |  |

### 5.3.1 Function Overview

| System | Alarm | User | Network | Help |
|--------|-------|------|---------|------|
|--------|-------|------|---------|------|

There are several labels at the top of the web page: System, Alarm, User, Network, and Help.

System: To design the output display layout via creating or deleting windows, clock, Logo, UMD and other display elements.

Alarm: The system supplies audio and video detection, such as audio overload, audio silence, video frozen, video black, and signal loss. Each alarm threshold can set to meet your needs.

User: The system supports user name called admin. The initial password is 000000 which can be changed, and new password will take effect when user logs in next time.

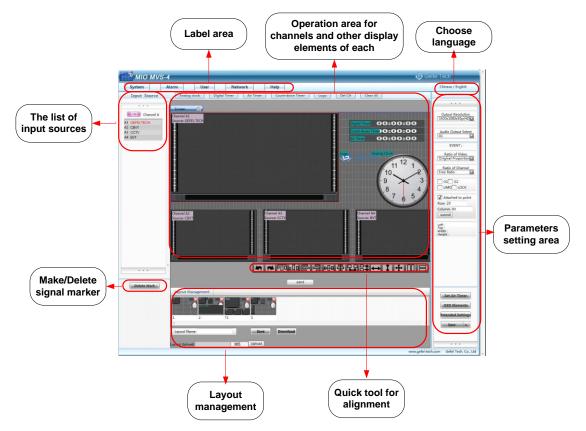
Network: To modify the IP address and upgrade the firmware. The modification will take effect after restart the machine.

Helps: To show the versions of each firmware here.

### 5.3.2 System Settings

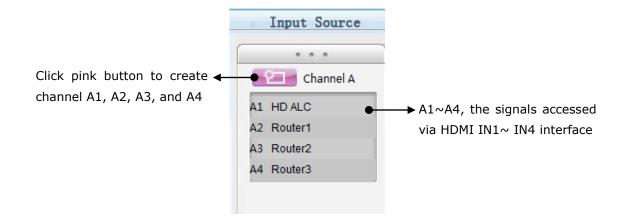
You can accomplish the basic configuration in the System Settings, which includes the following functions: to create or delete the channels, to add the clock and logo, to align selected channels via the quick tools, to undo the previous operations, and to set the parameters, such as output resolutions, aspect ratio, extended configuration and so on.

The descriptions are in detail as follows.

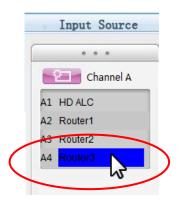


#### **Create a Channel**

According to the settings on web page of Physical Configuration, system detects the name of input source for each input card and makes a list of them.

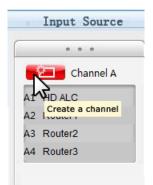


#### Steps to create a certain video channel:

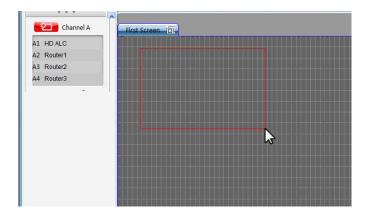


Step 1-Click the needed channel in the list of signal sources. For example, if the needed channel is A4, click the bar of "Router3", which turns blue.

Step 2-Click pink button



Step 3-Hold the mouse and drag a frame from top to bottom on the target screen.

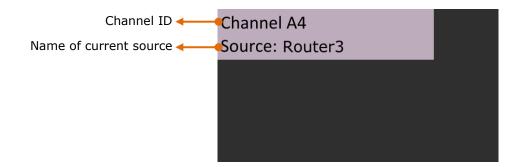


Step 4-Release the mouse. System creates a channel A4 as the size and position of the frame. You can change the size and position of the channel freely afterwards.

| Channel A  | First Screen               |  |
|------------|----------------------------|--|
| A1 HD ALC  |                            |  |
| A2 Router1 | Channel A4<br>Source: None |  |
| A3 Router2 | Source: None               |  |
| A4 Router3 |                            |  |
| -          |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |
|            |                            |  |

Note: If skip step 1 and operate by step 2 directly, then the channels will be created in the order of number 1 to number 4.

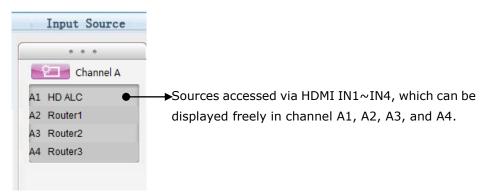
Channel A4 is created as below.



For each virtual channel, it shows three details.

- 1, Channel ID. Each channel has exclusive Channel ID;
- 2, Name of input source displaying in this channel currently, for example, "Router3";

#### 5.3.2.1 Choose Input Source



#### Steps to appoint input source to video channel

Step 1-Use the mouse to choose a needed input source in the list, and drag it out,

Step 2-Drag the signal out of the list until it located on the target channel, and then release the mouse.

#### 5.3.2.2 Make/Delete Signal Marker

Key signal can be marked with red font. Meanwhile, the channel whose current source is key signal will be marked with red border, in order to locate it quickly in a complicated layout, even after a series of position adjustment.

Name of key source is marked with red font in the list. And the channel which uses this signal as the current display source appears red border, not only on the web, but on the actual output as well. You can remove the signal marker by using "Delete Marker" button.

Note: 1. Multiple signals can be marked at same times.

2. On actual output, the channel which uses the signal as the current display source appears red border.



#### 5.3.2.3 Create Clock/Timer/Logo

Analog clock Digital Timer Air Timer Count-down Timer Logo

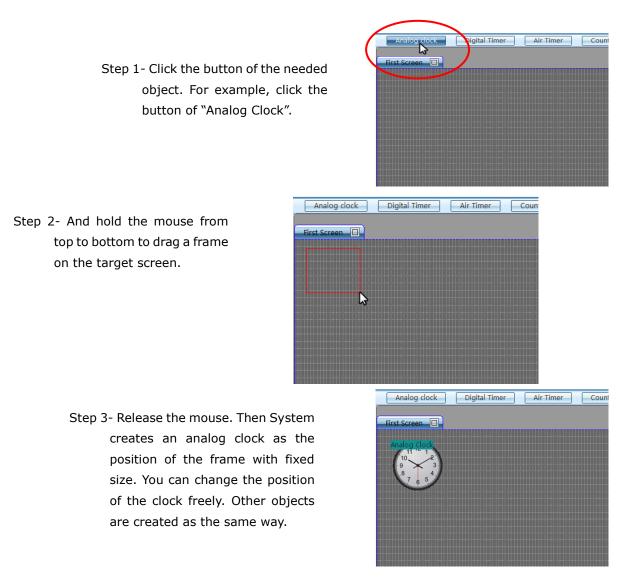
The following objects can be created besides video channels.

Analog Clock, Digital Timer, Count-down Timer, Air Timer, and Logo

You can create one of Analog Clock/ Digital Timer/ Count-down Timer/ Air Timer/ Logo on the screen.

The size of Logo and Analog Clock cannot be changed. You can change the size of Digital Timer, Count-down Timer, and Air Timer freely.

Here are steps to create an Analog Clock/ Digital Timer/ Count-down Timer/ Air Timer/ Logo. Take Analog Clock as an example.



Note: You can set the time for Air Timer. The details are described as following.

| Set Ari Timer         | Left :3400px<br>Top :748px<br>* :332px             |
|-----------------------|--|
| Hour: Minute: Second: | ж  |
|                       | Set Air Timer<br>OSD Elements<br>Extended Settings |

Air Timer can be configured. Press "Set Air Timer" button. Here is a message box popping out. See the picture above. Enter the numbers on three blank areas separately. Then press "OK" button to submit the data. The countdown timer is the interval time between air timer and current timer.

#### 5.3.2.4 Delete an Object

Choose the unnecessary objects (channels/ clock/ Timer/ LOGO), and then press the button

Del CH " The selected one will be deleted immediately. The hot key is "Delete" on keyboard.

#### 5.3.2.5 Clear All

Press the button "Clear All, clear up all the objects on the screen.

#### 5.3.2.6 Screen

There are various functions in this area. The main are following:

- 1. Display all the channels ,clock, timer and logo;
- 2. Adjust the position of the clock and logo with a mouse in this area;
- 3. Adjust the position and size by dragging the edge of channels with a mouse in this area;
- 4. Adjust the position and size of audio meters and UMD of each channel by dragging the edge of each audio meter or UMD with a mouse in this area;
- 5. Choose one or more objects in this area, before you change its parameters or take further operation.
- 6. Any video channel can be directly and simply moved from one screen to another screen in real-time.
- 5.3.2.7 Quick Tools

### ╸╺┉┉╘╝┉╋╬╬┽┼┾║╘

There are various quick tools for creating various layouts.

#### Do & Undo

| в | 4 | h | Ż  |    |
|---|---|---|----|----|
| B |   |   | E. | Р. |
|   |   |   |    |    |

: Undo, hotkey is "Ctrl+Z";

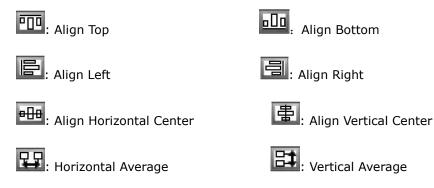


: Do, hotkey is "Ctrl+Y".

Alignment tools

## ┉┉╒╕┉ᆥ╬╬┽┼┿║ᆷ

All operations among these windows are aligned to the last selected one.



. Overspread with horizontal equal width



B: Overspread with vertical equal height

The buttons below are not only for channels, but also for UMD & Audio Meters as well. The selected audio meter is adjusted according to another one in the same channel. The buttons below can't be applied for audio meters from different channels.

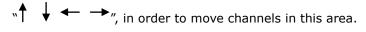


Equal Width

: Equal Height

: Equal Width & Height.

Except these alignment tools, the software supports hotkey on the keyboard, such as direction key



#### **Full Screen**

Choose one channel and double click it. Click the "send" button ,The selected channel will output in full

screen mode. When you want to quit the full screen mode, please use hot key "Ctrl+Z" or click

#### 5.3.2.8 Layout Management

The system allows customers to save multiple user-defined layouts. The max number of layouts is 10 for the customer. Layouts can be saved or applied at any time.

| Layout Manage  | ment |           |          | <br> |   |
|----------------|------|-----------|----------|------|---|
|                |      |           |          |      |   |
|                |      | ,         | -        | <br> | • |
| Layout Name    |      | Save      | Download |      |   |
| Layout Upload: |      | 浏览 Upload |          |      |   |

#### Save Layout

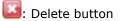
Enter the name of layout in the blank area and click "Save" button. The layout is saved as a thumbnail in the layout management area. The layouts of both screens are saved together at the same time. Click the thumbnail apply the relevant layout.

If the name of the layout is already existed, the newly-saved layout will take place of the old one.

#### Edit Layout

Click the thumbnail of the needed layout, and adjust the layout as you needed. After all the operation, click "save" button.

#### **Delete Layout**



Click delete button on the top of each layout thumbnail to delete the unnecessary layout.

#### Download Layout File

Click "Download" button and save the layouts you just designed in form of a BIN file. All the layouts in layout setting area are saved as one file, so they can't be downloaded individually.

#### Upload Layout File

Click "Browse" button to find and upload the layout file you have downloaded before. After a massage box appears to inform successful uploading, please refresh the page, and then layouts will appear in layout display area as thumbnails. And apply a layout by clicking its relevant thumbnail. Note that the latest uploaded layouts will replace the original one.

#### 5.3.2.9 HDMI Output Resolution

**Output Resolution** 1920x1080x50p(HD) 1024x768x60p 1280x720x50p(HD) 1280x720x60p(HD) 1280x768x60p 1280x800x60p 1280x1024x60p 1360x768x60p 1400x1050x60p 1600x900x60p 1680x1050x60p 1920x1080x50i(HD) 1920x1080x60i(HD) 1920x1080x50p(HC 1920x1080x60p(HE -

Choose output resolution in the drop-down list.

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 1920x1080p.

Supports output resolutions as following:

1024x768x60p, 1280x720x50p/60p,

1280x800x60p, 1280x1024x60p, 1360x768x60p

1400x1050x60p, 1600x900x60p, 1680x1050x60p

1920x1080x50i/60i, 1920x1080x50p/60p,

#### 5.3.2.10 Audio Output Settings

| A1      |   |
|---------|---|
| Silence | ~ |
| A1      |   |
| A2      |   |
| A3      |   |
| A4      |   |

The names of input sources are list in the drop-down list, and then choose one of them. When the input source is HDMI signal, eight channels HDM audio signals can be embedded into the HDMI output signal.

#### 5.3.2.11 Ratio of Video

| Ratio of Video             |    |
|----------------------------|----|
| <b>Original Proportion</b> |    |
| Original proportion        | *. |
| Full Channel               | *  |

This function aims to adjust aspect ratio of video image. There are two types of video display: Full channel and Original proportion.

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

Original proportion means the video image always keeps the aspect ratio of video signal even though the ratio of the channel or the size of UMD and Audio meters are changed. So for SD input signal, the aspect ratio of video image is 4:3: And for HD input signal, it is 16:9.

5.3.2.12 Ratio of Channel

| Ratio of Cha | nnel |
|--------------|------|
| Free Ratio   |      |
| Free Ratio   | ~    |
| 16:9         |      |
| 4:3          | -    |

This function aims to adjust aspect ratio of virtual channel. Aspect ratio contains 4:3, 16:9, and Free Ratio.

4:3-The size of channels can be changed following the aspect ratio of 4:3.

16:9- The size of channels can be changed following the aspect ratio of 16:9.

Free Ratio- The size of channels can be changed freely following any aspect ratio.

5.3.2.13 UMD & Audio Meters Display

**G**1 **G**2 G2 UMD LOCK

Check the box "UMD". It will be shown within the channel, otherwise, not. The system supports the UMD display. The further configuration can be completed the configuration of "OSD Elements" on

right-bottom of web page.

Check the box "G1", and audio meters of G1 from HD/SD signal will be displayed within the channel, otherwise, not.

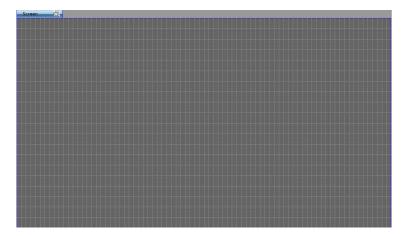
Check the box "G2", and audio meters of G2 from HD/SD signal will be displayed within the channel, otherwise, not.

Check the box "Locked". The audio meters and UMD are locked with widow. So the audio meters or UMD can't be operated separately. Otherwise, can.

5.3.2.14 Attach to point

| Attac   | hed to point |
|---------|--------------|
| Row: 20 |              |
| Column: | 80           |
| submit  |              |

If checking the box, there will be horizontal and vertical lines across the screen. So objects are moved or adjusted by attaching to point or align to the line. You can set the rows and columns to change the amount of lines and density of the cross points.



If un-checking the box, there will be no lines across the screen. So objects are moved or adjusted freely.



#### 5.3.2.15 Position and Size

| Left :0 | )рх        |  |
|---------|------------|--|
| Top :0  | )px        |  |
| Width   | :1920px    |  |
|         | nt :1080px |  |
|         |            |  |

Choose one object, the values of the channel's coordinates, width and height are shown on the right of web page, which are for read only, and cannot be adjusted so far.

#### 5.3.2.16 Set Air Timer

|                       | Left :3400px<br>Top :748px<br>* :332px |
|-----------------------|--|
| Set Ari Timer         | × :332px                               |
| Hour: Minute: Second: |  |
|                       | Set Air Timer                          |
|                       | OSD Elements                           |
|                       | Extended Settings                      |
|                       |  |
|                       |  |

Set Air Timer for screen . First, press "Set Air Timer" button. Here is a message box popping out. See the picture above. Enter the numbers on three blank areas separately. Then press "OK" button to submit the data. The countdown timer is the interval time between air timer and current timer.

#### 5.3.2.17 OSD Elements

| OSD Elements                                 | × |
|--|---|
| Channel A1                                   |   |
| UMD settings                                 |   |
| Mode Network Settings                        |   |
| Tally settings                               |   |
| GPI None                                     |   |
| UMD & Audio                                  |   |
| UMD 15                                       |   |
| Audio 15                                     | - |
| Attach to Edge                               |   |
| Dispalay Information                         |   |
| 🖌 AFD Information 🖌 Input Format 🗌 Underscan |   |
| Safe Marker 🗹 Border                         |   |
| Border Color                                 |   |
| Current border color Modify                  |   |

Do select the needed channel or all channels in the drop-down list before every operation.

Channel A1

#### UMD Settings

First, select the needed channel in the drop-down list. The system supports the single programmable UMD display. Two kinds of UMD mode are provided. They are static UMD via text upload and dynamic UMD via TSL protocol.

|         | settings |   |          |  |
|---------|----------|---|----------|--|
| Mode    | TSL      |   | Settings |  |
|         | Network  | * |          |  |
| Tally s | TSL      | - |          |  |

#### 1) Static UMD: Choose "Network" in the drop-down list, and click "Settings".

| OSD El                               | ements          | × |                |              |        |
|--------------------------------------|-----------------|---|----------------|--------------|--------|
| Channel A1                           |                 |   |                |              |        |
| UMD settings<br>Mode Network         | Settings        |   |                |              |        |
| GPI                                  | • <b>•</b>      |   |                |              |        |
| UMD & Audio                          |                 |   | R 255          | Но           | •      |
| Audio<br>Attach to Edge              |                 |   | G 255<br>B 255 | S 0<br>V 100 | %<br>% |
| Dispalay Information                 |                 |   | # FFFF         |              |        |
| AFD Information Input For            | Input Character |   |                |              |        |
| Border Color<br>Current border color | 3.<br>          | 6 | OK Can         | cel          |        |

#### Upload UMD Text

Type the characters in blank bar, change color of characters. Click "OK" to submit characters after all parameters are settled and all characters will be displayed in UMD bar.

#### To clear the UMD

Enter a "space", and then click "OK", the character in UMD bar will be cleared.

#### 2) Dynamic UMD: Choose "TSL" in the drop-down list and click "Settings".

The function is reserved

**Tally Settings** 

| ally [ | TSL Network port |   |
|--------|------------------|---|
|        | None             |   |
|        | Low level        | = |
|        | High level       | - |
| UMD    | TSL Network port | + |

Two kinds of Tally mode are provided. They are Static Tally and Dynamic Tally.

#### Choose "None" in the drop-down list

The Tally function is disabled and Tally turns gray.



#### Via GPI-Static Tally

Static Tally is applied with DB15 interface. Based on the GPI lever for Tally, you can choose Low lever or high lever in the drop-down list.

#### 1) Choose "Low level" in the drop-down list to enable static Tally.

When there comes a low-level GPI, the TALLY area will turn light red; otherwise, dark red. Low level is the voltage which higher than -5V and Lower than 0V. Users can choose the modified channel from drop-down list.

If there is not a low-level GPI signal, the Tally area will turn dark red.

If there is a low-level GPI signal provided, the Tally area will turn light red.

2)Choose "High level" in the drop-down list to enable static Tally.

The function is reserved

#### 3) Via Ethernet-Dynamic Tally

Choose "TSL Network" in the drop-down list

The function is reserved

Adjustment the transparency of Audio and UMD

| UMD   | 0    |
|-------|------|
| Audio | <br> |

Choose the target channel or all channels from the drop -down list.

In this area, users can modify the transparency of audio meters or UMD of each channel. Choose the channel which needs to modify from the drop-down list, put the mouse on the cursor and drag it to the assigned position; or you can fill in the certain parameter ranging from 0 to 15, and press "Enter" on keyboard. "0" stands for full transparency and "15" stands for opacity

Attach to edge

Check "Attach to Edge", when the audio meters and the UMD are located at the bottom edge of the image, let the audio meters and the UMD cling to the edge which make the image be shown completely. If not, UMD and audio meters are overlaid on image.

**Display settings** 

| l | Display Settings             |           |
|---|------------------------------|-----------|
|   | AFD Information Input Format | Underscan |
|   | Safe Marker                  |           |
|   |                              |           |

Choose the target channel or all channels from the drop -down list.

Check the box "AFD Information" and AFD information will be overlaid on the top of the channel, otherwise, not. AFD information is shown in the form of picture, according to the AFD code inside of input signal.

Check the box "Input Format", and input resolution will be overlaid on the top of the channel, otherwise, not. Input resolution is shown as PAL/NTSC/720p/1080i/1080p.

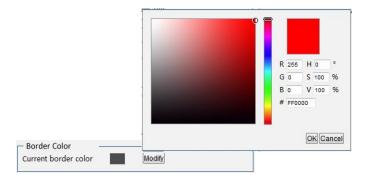


Check the box "Underscan" to make effect for selected channel.

Check the box "Safe Marker". The picture of HDMI signal is marked with 16:9 safe area markers, and the picture of HDMI signal is marked with 4:3 safe area markers, otherwise, not.

Check the box "Border", the selected channel is showed with border; otherwise, not. The border color of each channel can be configured freely. Please see the title below.

Adjust Border Color



Choose the target channel or all channels from the drop -down list, and click "Modify" to appear a color palette. Select the needed color and click "OK". Then the current border color is changed to the one you selected.

#### 5.3.2.18 Extended Settings

| Click the button "Extended Settings", | prompting the dialog box as following: |
|---------------------------------------|--|
|                                       | Extended Cattings                      |

| Brightness  |             | -0    | - 0     |
|-------------|-------------|-------|---------|
| aturation   |             |       | 255     |
| Contrast    | -           | -0    | 255     |
|             |             |       | Default |
|             | SL Template |       |         |
|             | e —         |       |         |
| Timing mode | GPS         | Local |         |

#### Set Color Parameters

| Brightness 🦳 | <br>þ   |
|--------------|---------|
| Saturation   | <br>255 |
| Contrast     | <br>255 |

Brightness: to set the brightness and 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.

Restore default button: to restore the factory default settings.

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

#### Series Ports Settings

| <ul> <li>Serial Port Settings</li> </ul> |              |
|--|--------------|
| Baud Rate                                | Parity Check |
| GPS TSL Template                         |              |

The function is reserved

#### **Timing Settings**

| l | <ul> <li>Timing Se</li> </ul> | ttings |       |     |  |
|---|-------------------------------|--------|-------|-----|--|
|   |                               |        |       |     |  |
|   |                               | GPS    | Local | NTP |  |

#### LTC,GPS and NTP the function is reserved

If check the box "Local", the analog clock and digital timer are controlled by computer which also accesses to the web control of MIO MVS-4HD through RJ45 interface. There are two items that required notice. First, the local IP address of computer should be configured in the same network segment as MIO MVS-4HD. Second, refresh the web page after checking the box "Local", in order to submit the current time of computer to MIO MVS-4HD. The factory setting of timing mode is Local timing. Check the box "Local", the local timing function is enabled, otherwise, not.

#### **Upload Custom Picture**

| Upload Custom Picture |          |
|-----------------------|----------|
| Upload Picture        |          |
| Browse.               | . Upload |
|                       |          |

The function is reserved

#### 5.3.2.19 Save

Click the button "Save , save "parameters setting area" parameter.

## 5.3.3 Detection Settings

| System  | MVS-4   |   |   |   |  | Gefei-Tech                              |
|---|---|---|---|---|--|---|
|   | Alarm   | User Net  | vork Help   |   |  | Chinese / English                       |
|   |   | select all channel  | reSelect cha  | nnel deselect   | Default Configuration                                |   |
|   |   | 💟 Channel A1 🛛 💟 Chann  | el A2 📝 Channel A3  | Channel A4  |  |   |
|   |   |   |   |   |  |   |
|   |   |   | Select All  | Cancel All  |  |   |
|   |   | Signal Loss   |   |   |  |   |
|   |   | Video Frozen  | Threshold 70%   | •   | Duration 40 (Fram                                    |   |
|   |   | Video Black   | Threshold 70%   | •   | Duration 40 (Fram                                    | )                                       |
|   |   | audio channel 1   | Threshold 5   | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | audio channel 2   | Threshold 5   | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | audio channel 3   | Threshold 5   | (dBFS)  | Duration 100 (40ms<br>Duration 100 (40ms             |   |
|   |   | <ul> <li>☑ audio channel 4</li> <li>☑ audio channel 5</li> </ul>  | Threshold 5   | (dBFS)<br>(dBFS)  | Duration 100 (40ms<br>Duration 100 (40ms             |   |
|   |   | audio channel 6   | Threshold 5   | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | <ul> <li>☑ audio channel 7</li> <li>☑ audio channel 8</li> </ul>  | Threshold 5   | (dBFS)<br>(dBFS)  | Duration 100 (40ms<br>Duration 100 (40ms             |   |
|   |   | Audio Silence   | Threshold 0   | (0013)  | Duradon 100 (40115                                   |   |
|   |   | audio channel 1   | Threshold 65  | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | audio channel 2   | Threshold 65  | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | audio channel 3 audio channel 4   | Threshold 65<br>Threshold 65  | (dBFS)<br>(dBFS)  | Duration 100 (40ms<br>Duration 100 (40ms             |   |
|   |   | audio channel 5   | Threshold 65  | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | <ul> <li>✓ audio channel 6</li> <li>✓ audio channel 7</li> </ul>  | Threshold 65  | (dBFS)<br>(dBFS)  | Duration 100 (40ms<br>Duration 100 (40ms             |   |
|   |   | audio channel 7   | Threshold 65  | (dBFS)  | Duration 100 (40ms                                   |   |
|   |   | Alarm mode 🛛 💿 Text   | Icons   | Save All  |  |   |
|   |   | Alarm mode 💿 Text   | ○ Icons   | Save All  |  | www.gefei-tech.com Gefei Tech. Co., Ltd |
| t all chan<br>lect chan   | ; C   | Alarm mode Text   | oxes for c  | nannels   | be selected.   | www.gefei-tech.com Gefei Tech. Co., Ltd |
| lect chan   | inel : S  | heck all the bo   | oxes for c  | nannels   | be selected.   | www.gefei-tech.com Gefei Tech. Co., Ltd |
| lect chan   | ancel al  | heck all the bo<br>elected will be  | oxes for c<br>clear, the  | nannels<br>e others will  | be selected.   | www.gefei-tech.com Gefei Tech. Co., Ltd |
| lect chan<br>lect : Ca  | ancel al  | heck all the bo<br>elected will be<br>the checks<br>Restore Facto   | oxes for c<br>clear, the<br>ry Setting  | nannels<br>e others will  | be selected.   |   |
| lect chan<br>lect : Ca<br>llt Configu<br>t All : Cl                           | ancel al  | heck all the bo<br>elected will be<br>the checks<br>Restore Facto<br>the boxes for                                  | oxes for c<br>clear, the<br>ry Setting<br>detection                             | nannels<br>e others will<br>settings of s                                   |  | els                                     |
| lect chan<br>lect : Ca<br>llt Configu<br>t All : Cl<br>el All : Ca<br>1VS-4HE | inel : S<br>ancel al<br>iration :<br>heck all<br>ancel al<br>D Series | heck all the bo<br>elected will be<br>the checks<br>Restore Facto<br>the boxes for<br>the checks fo<br>provides two | oxes for c<br>clear, the<br>ry Setting<br>detection<br>r detectic<br>kinds of w | nannels<br>e others will<br>settings of s<br>on settings of<br>earning mode | selected chann<br>f selected chan<br>e: texts and sm | els<br>nels<br>all icons. And only on   |
| lect chan<br>lect : Ca<br>lt Configu<br>t All : Cl<br>el All : Ca<br>IVS-4HE  | inel : S<br>ancel al<br>iration :<br>heck all<br>ancel al<br>D Series | heck all the bo<br>elected will be<br>the checks<br>Restore Facto<br>the boxes for<br>the checks fo<br>provides two | oxes for c<br>clear, the<br>ry Setting<br>detection<br>r detectic<br>kinds of w | nannels<br>e others will<br>settings of s<br>on settings of<br>earning mode | selected chann<br>f selected chan<br>e: texts and sm | els<br>nels                             |

The video and audio input of each channel can report signal status and validity, with detection of (text and icons):



Several channels can be configured at the same time. If the detection parameters of each channel differ from others, the configuration should be completed separately.

#### 5.3.3.1 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 a warning picture 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 warning of audio overload.

| Audio overLoad                 |           |   |        |          |     |        |
|--------------------------------|-----------|---|--------|----------|-----|--------|
| 🔽 audio channel 1              | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |
| audio channel 2                | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |
| 🗹 audio channel 3              | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |
| ✓ audio channel 4              | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |
| <mark>ℤ</mark> audio channel 5 | Threshold | 5 | (dBFS) | Duration | 100 | (40ms  |
| audio channel 6                | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |
| 🗹 audio channel 7              | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |
| audio channel 8                | Threshold | 5 | (dBFS) | Duration | 100 | (40ms) |

#### Audio in Silence

It will prompt a warning 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 warning of audio in silence.

| Audio Silence     |           |    |        |          |     |        |
|-------------------|-----------|----|--------|----------|-----|--------|
| audio channel 1   | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| 🔽 audio channel 2 | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| audio channel 3   | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| audio channel 4   | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| ☑ audio channel 5 | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| 🔽 audio channel 6 | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| audio channel 7   | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |
| audio channel 8   | Threshold | 65 | (dBFS) | Duration | 100 | (40ms) |

#### 5.3.3.2 Video Detection

| Signal Loss  |               |                      |
|--------------|---------------|----------------------|
| Vedio Frozen | Threshold 65% | Duration 100 (Frame) |
| Vedio Black  | Threshold 65% | Duration 100 (Frame) |

#### Loss of Signal

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

#### Video Frozen

It will prompt a warning 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 a warning 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.

#### 5.3.4 User Configuration

The software provides password-protected function. The initial user name is admin, and the initial

password is 000000. 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."

The function of download alarm diary is reserved.

| - Switch User   | Current User: |  |
|---|---------------|--|
| User Name:<br>Password:                                 | admin 💌       |  |
| - Change Password                                       | admin         |  |
| Old Password:<br>New Password:<br>Confirm New Password: |               |  |
|   | Submit        |  |

### 5.3.5 Network Configuration

| <sup>5</sup> міо м | VS-4  |      |           |   |      |        | 🧔 Gefei-T | ech              |
|--------------------|-------|------|-----------|---|------|--------|-----------|------------------|
| System             | Alarm | User | Network   | Help  |      |        | ci        | ninese / English |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      | - Network |   |      |        |           |                  |
|                    |       |      |           | 100 100                                       |      |        |           |                  |
|                    |       |      |           | IP Address: 192 , 16<br>Subnet Mask: 255 , 25 |      |        |           |                  |
|                    |       |      |           | Default Gateway: 192, 16                      |      |        |           |                  |
|                    |       |      |           | DNS Address: 0 . 0                            |      |        |           |                  |
|                    |       |      |           | MAC Address: 0 , e0                           |      |        |           |                  |
|                    |       |      |           | Manager IP: 192, 16                           | 1 51 |        |           |                  |
|                    |       |      |           | Trap common: Gefei                            |      |        |           |                  |
|                    |       |      |           | Trap Port: 162                                |      |        |           |                  |
|                    |       |      |           | NTP Server: 192,16                            | 1 51 |        |           |                  |
|                    |       |      |           | subn  |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      | update p  | rogram  |      |        |           |                  |
|                    |       |      |           | Main DSP:                                     | 浏览   | update |           |                  |
|                    |       |      |           | Slave DSP:                                    | 浏览   | update |           |                  |
|                    |       |      |           | Font file:                                    | 浏览   | upload |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |
|                    |       |      |           |   |      |        |           |                  |

#### Change IP address

User can modify the IP address. If modified successfully, the system prompts a message box labeled "Network has been configured successfully, please turn off the power and restart the device again."

Restart the device, enter the new IP address in IE address and the web software will be opened.

#### Change manager IP for Voice Alarm

Configure the "Manager IP" to be the local IP address of computer for Voice Alarm. The computer and MVS series should be in the same network segment. And Trap common and Trap port are for SNMP of voice alarm. Do not change them.

#### Change NTP IP for NTP Timing

Configure the "NTP Server" to be the IP address of NTP server for NTP timing. And the NTP server and MIO MVS series should be in the same network segment.

#### Upgrade firmware of system

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 MVS series system without rejection. Windows 2003, Windows XP, Windows Vista and Windows 7 system are strongly recommended to upgrade the system with Internet Explorer.exe.

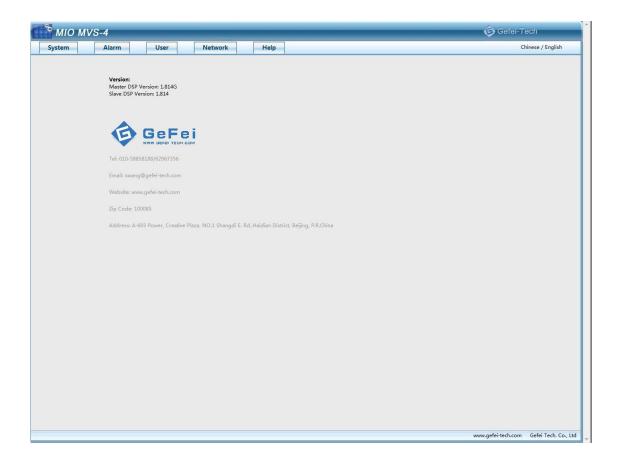
There are two items for upgrading, such as main DSP, slave DSP, if there are new version released, we will supply 1-2 files named according to the items name. Each item should be upgraded separately one by one from main DSP. Power and network cannot be cut off during upgrading. When system is upgraded successfully, please turn off the power and restart the device again. It takes about 5 minutes to upgrade slave DSP, and about 5 minutes to upgrade main DSP.

#### Upgrade Text file for UMD font

The" Font" item means you can refresh the font style from your PC system. So as to upgrade the software, you can update the font for Font item. The amount of data of font file must be less than 6MB. Before the upgrade, the anti-virus software and firewall have to be closed to make sure that the upgrade data is transmitted to MIO MVS-4HDMI series system without rejection.

### 5.3.6 Help

Show the version of firmware.



## Contact Us

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