

Video Wall Controller

Quick Guide

Manual Version: V1.00

Notice

The information in this manual is subject to change without notice. Every effort has been made in the preparation of this manual to ensure accuracy of the contents, but all statements, information, and recommendations in this manual do not constitute the warranty of any kind, express or implied.

Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

Preface

Audience

This manual is intended for:

- Surveillance system planners
- Field technical support and servicing engineers
- Software installation, configuration, and servicing administrators
- Product users

Precautions




- If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, you might be required to take corrective actions.
- Do not remove the dismantlement-preventive seal from the chassis cover of the device without permission. If you want to open the chassis, contact the local agent of our company for help. Otherwise, we shall not be held liable for any consequence caused thereby.
- Make sure the device is sturdy and well grounded and meets heat dissipation and lightning protection requirements. Avoid vibration when using the device.
- Provide a stable and compliant power supply before powering on the device.

- Before performing the verification (refer to section “Check Before Power-On”), make sure that the power is disconnected, for fear of bodily injury or equipment damage caused by incorrect cable connection.
- Power interruption may cause hard disk damage or abnormal functions. To shut down the device, strictly follow the instructions. If power interruption often occurs, configure an uninterrupted power supply (UPS).

Safety and Compliance Information

Conventions Used Symbol

The symbols in this chapter are shown in the following table. They are used to remind the reader of the safety precautions during equipment installation and maintenance.

Safety Symbol	Description
	Generic alarm symbol: To suggest a general safety concern.
	ESD protection symbol: To suggest electrostatic-sensitive equipment.
	Electric shock symbol: To suggest a danger of high voltage.

Safety Information



WARNING!

Installation and removal of the unit and its accessories must be carried out by qualified personnel. You must read all of the Safety Instructions supplied with your equipment before installation and operation.

Warnings:

- If the product does not work properly, please contact your dealer or the nearest service center. (We shall not assume any

responsibility for problems caused by unauthorized repair or maintenance.)

- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
 - This installation should be made by a qualified service person and should conform to all the local codes.
 - Please install blackouts equipment into the power supply circuit for convenient supply interruption.
 - The separate earthing terminal must be permanently connected to earth.
 - For AC supplied model: The plug-socket combination must be accessible at all times as it serves as the main disconnecting device.
 - Before the power cable is installed or removed, the power must be turned off.
 - To avoid heat accumulation, good ventilation is required for a proper operating environment.
 - Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.
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Caution: Fiber optic ports – optical safety.



Never look at the transmit laser while the power is on. Never look directly at the fiber ports and the fiber cable ends when they are powered on.

Caution: Use of controls or adjustments to the performance or procedures other than those specified herein may result in hazardous laser emissions.

Regulatory Compliance

FCC statements

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful

interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

LVD/EMC Directive



This product complies with the European Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

WEEE Directive–2012/19/EU



The product this manual refers to is covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.

Battery Directive-2013/56/EC



Battery in the product complies with the European Battery Directive 2013/56/EC. For proper recycling, return the battery to your supplier or to a designated collection point.

Contents

1 Product Overview	1
Appearance	1
Front View	1
Rear View	2
Control Board and Service Boards	3
Control Board	3
VGA Video Input Board	5
DVI Video Input Board	6
HDMI Video Input Board	7
DVI Video Output Board	8
Network Parameter Factory Settings	9
2 Hardware Installation	9
Confirming Before Installation	9
Placing the Device	10
Placing the Device into a Cabinet	10
Installing the Device on a Workbench	11
Installing Service Boards	11
Installing Power Module	13
6-Slot Device	13
4-Slot Device	14
3 Device On/Off	15
Startup	15
Shutdown	16
4 Web Configuration	16

1 Product Overview

This product is a high-performance video image processing workstation that can display multiple dynamic screens on multiple displays to realize the window splicing function. This product, designed specifically for high-quality multi-screen scenarios, features flexible control of different types of screens with varied resolutions. It can be used in industries such as education and research, government announcements, information publishing, administrative management, military command, exhibition display, security monitoring, and home appliance sales.

Appearance



NOTE!

- Images are for reference only. Actual product appearance may vary.
 - The control board is installed in the purple slot, and the service boards (VGA video input board, DVI video input board, HDMI video input board, and DVI video output board, etc.) are installed in the blue slots (in any order).
 - Based on the number of service board slots, the products fall into 4-slot devices and 6-slot devices.
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Front View

Figure 1-1 Front View of a 4-Slot Device



1. Fan module, supporting hot plugging	2. Fan indicator
3. Control board	4. DVI video input board
5. VGA video input board	

Figure 1-2 Front View of a 6-Slot Device



1. LCD	2. Fan module, supporting hot plugging
3. Fan indicator	4. Control board
5. Filler panel	6. VGA video input board
7. DVI video input board	

Rear View

Figure 1-3 Rear View of a 4-Slot Device



1. Power module, supporting redundancy	2. Power indicator
3. Power interface	4. Power switch
5. DVI video output board	6. DVI video output board

Figure 1-4 Rear View of a 6-Slot Device



1. Power module, supporting redundancy	2: Power interface
3. Power indicator	4. Filler panel
5. DVI video output board	6: DVI video output board
7. DVI video output board	

Control Board and Service Boards

Control Board

Figure 1-5 Control Board



Table 1-1 Description of the Control Board

No.	Name	Description
1	RS232 interface	Four RS232 interfaces The first interface is used for device debugging and maintenance, and the other three for connection to RS232 standard devices.
2	RS485 interface	Four RS485 interfaces Connected to RS485 standard devices
3	Device management network interface	One 10/100/1000 Mbit/s self-adaptive Ethernet interface
4	Reset key	<ul style="list-style-type: none">● Press this key to reset the system.● Press and hold this key for more than 3 seconds to restore the factory settings.
5	USB interface	Two USB3.0 interfaces Connected to USB devices
6	Power indicator	<ul style="list-style-type: none">● Steady on: normal power supply● Off: no power input
7	System running indicator	<ul style="list-style-type: none">● Steady on: being started● Blinking: The system is started, and runs normally.● Off: not started
8	Indicator of ACT active control board	<ul style="list-style-type: none">● Steady on: The control board is the active control board.● Off: The control board is the standby control board.
9	Alarm indicator	<ul style="list-style-type: none">● Steady on: The board is faulty.● Blinking: The hardware is faulty.● Off: The board runs normally.

VGA Video Input Board

Figure 1-6 VGA Video Input Board

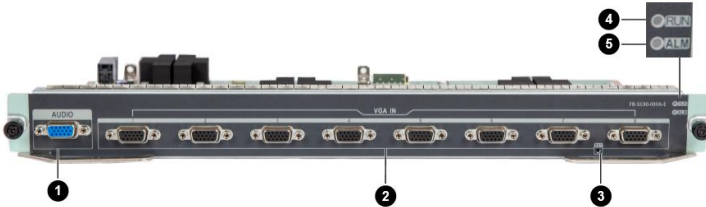


Table 1-2 Description of the VGA Video Input Board

No.	Name	Description
1	Audio input interface	Used for 8 channels of audio input (reserved)
2	VGA video input interface	Eight VGA input interfaces, used for video input
3	Reset key	<ul style="list-style-type: none"> When the board is powered on, press and hold this key for 3 seconds to power off the board. When the board is powered off, press and hold this key for 3 seconds to power on the board.
4	Running indicator	<ul style="list-style-type: none"> Steady on: being started Blinking: The system is started, and runs normally. Off: not started
5	Alarm indicator	<ul style="list-style-type: none"> Steady on: The board is faulty. Blinking: The hardware is faulty. Off: The board runs normally.

DVI Video Input Board

Figure 1-7 DVI Video Input Board

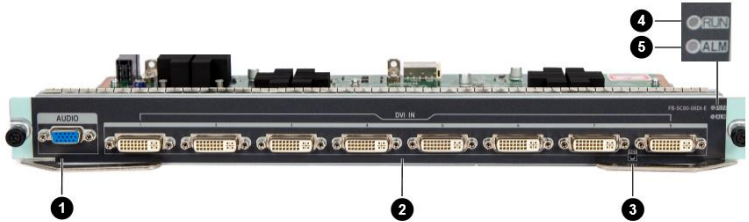


Table 1-3 Description of the DVI Video Input Board

No.	Name	Description
1	Audio input interface	Used for 8 channels of audio input (reserved)
2	DVI video input	Eight DVI input interfaces, used for video input
3	Reset key	<ul style="list-style-type: none"> When the board is powered on, press and hold this key for 3 seconds to power off the board. When the board is powered off, press and hold this key for 3 seconds to power on the board.
4	Running indicator	<ul style="list-style-type: none"> Steady on: being started Blinking: The system is started, and runs normally. Off: not started
5	Alarm indicator	<ul style="list-style-type: none"> Steady on: The board is faulty. Blinking: The hardware is faulty. Off: The board runs normally.

HDMI Video Input Board

Figure 1-8 HDMI Video Input Board



Table 1-4 Description of the HDMI Video Input Board

No.	Name	Description
1	Audio input interface	Used for 8 channels of audio input (reserved)
2	HDMI video input interface	Eight HDMI input interfaces, used for video input
3	Reset key	<ul style="list-style-type: none"> When the board is powered on, press and hold this key for 3 seconds to power off the board. When the board is powered off, press and hold this key for 3 seconds to power on the board.
4	Running indicator	<ul style="list-style-type: none"> Steady on: being started Blinking: The system is started, and runs normally. Off: not started
5	Alarm indicator	<ul style="list-style-type: none"> Steady on: The board is faulty. Blinking: The hardware is faulty. Off: The board runs normally.

DVI Video Output Board

Figure 1-9 DVI Video Output Board

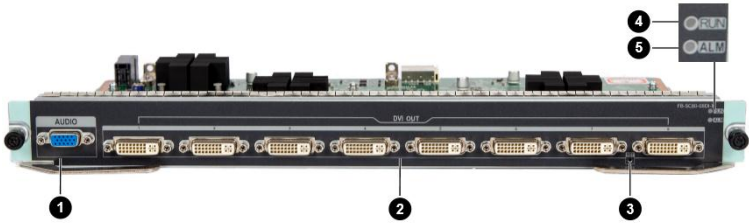


Table 1-5 Description of the DVI Video Output Board

No.	Name	Description
1	Audio output interface	Used for 8 channels of audio output (reserved)
2	DVI video output interface	Eight DVI output interfaces, used for video output Support digital/analog output, DVI-to-VGA connector output, and DVI-to-HDMI connector output.
3	Reset key	<ul style="list-style-type: none"> When the board is powered on, press and hold this key for 3 seconds to power off the board. When the board is powered off, press and hold this key for 3 seconds to power on the board.
4	Running indicator	<ul style="list-style-type: none"> Steady on: being started Blinking: The system is started, and runs normally. Off: not started
5	Alarm indicator	<ul style="list-style-type: none"> Steady on: The board is faulty. Blinking: The hardware is faulty. Off: The board runs normally.

Network Parameter Factory Settings

The following table lists the default network parameter configuration, which can be modified based on actual need.

Table 1-6 Network Parameter Factory Settings

Item	Description
Network management interface	<ul style="list-style-type: none"><li data-bbox="407 411 696 435">• IP address: 192.168.1.14<li data-bbox="407 448 736 472">• Subnet mask: 255.255.255.0<li data-bbox="407 485 745 509">• Default gateway: 192.168.1.1

2 Hardware Installation

Confirming Before Installation

1. Check device components.

Verify the device model and supplied accessories to confirm that the device components are complete. For details about the device model, and accessory types and quantities, see the packing list.

2. Check tools.

Users need to prepare the following tools:

- Phillips screwdriver
- ESD wrist bands or gloves

3. Check the installation site.

The device is for indoor use only, and needs to meet the surge protection and grounding requirements.

- The installation environment must meet the surge protection requirements, and the device can be equipped with a surge protector where necessary.

- The device must be correctly grounded through the ground connector.
-



WARNING!

- Do not disassemble the tamper seal on the chassis cap of the device.
 - To disassemble the tamper seal, contact the local agent of our company first. Otherwise, if the device fails to be maintained due to arbitrary disassembly, our company will not bear any consequence incurred.
-

Placing the Device

Placing the Device into a Cabinet

Based on the device height (the height of a 6-slot model is 5U, and that of a 4-slot model is 3U), plan the space in the cabinet. If the cabinet is equipped with a tray, preferentially use the tray. Otherwise, purchase a bracket slide rail from our company.

Check the grounding and stability of the cabinet, and confirm that the load-bearing capacity of the cabinet meets the device requirements and no obstacle in the cabinet or around the cabinet affects device installation.

Before installing the device in a 19-inch cabinet, check the following items:

- The cabinet is properly grounded and stably installed.
- The full load weight of the device is no more than 35 kg. The load-bearing capacity of the cabinet meets the device requirements and no obstacle in the cabinet or around the cabinet affects device installation.
- The cabinet is not equipped with a glass door.
- The cabinet is supported by brackets, not wheels.

- The device is installed in the lower part of the cabinet if possible.

Installing the Device on a Workbench

If no cabinet is available, you can place the device on a clean workbench.

Before installation, check the following items:

- The workbench is firm enough to bear the weight of the device and cables.
- The workbench is stable and properly grounded.
- The cooling air ducts of the device point to the front, lateral, and rear directions, so at least 30 cm space must be reserved in front and at the rear of the device, and 10 cm space must be reserved at the lateral sides of the device.
- Do not stack the device or put other objects onto the device.

Installing Service Boards



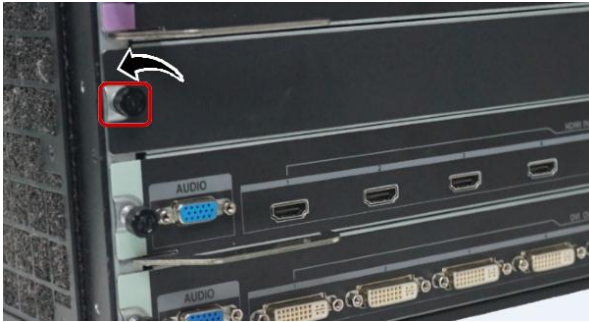
NOTE!

- Before installation, be sure to wear ESD wrist bands or gloves.
 - The installation procedure of a 4-slot device is the same as that of a 6-slot device. The following figures take a 6-slot device as an example.
 - The installation procedure of the service boards (including VGA video input board, DVI video input board, HDMI video input board, and DVI video output board) is the same as that of the control board. The following figures take the control board as an example.
 - The control board must be installed in the purple slot, and the service boards (including VGA video input board, DVI video input board, HDMI video input board, and DVI video output board) must be installed in the blue slots. You are advised to install the service boards to the rear slots first to facilitate cabling.
-

1. Remove the filler panel.

Loosen the screws on the filler panel, and remove the panel.

Figure 2-1 Removing the Filler Panel



2. Install the control board and service boards.

Align the boards with the slots, and push the boards in gently to keep both sides parallel.

Figure 2-2 Installing the Control Board and Service Boards



3. Fix the control board and service boards.

Push the boards down to the slots, fasten the buckles, and tighten the screws.

Figure 2-3 Fixing the Control Board and Service Boards



Installing Power Module

6-Slot Device

1. Remove the filler panel from the power module.

Hold the buckle and handle of the filler panel tight, and pull the panel outward gently.

Figure 2-4 Removing the Filler Panel from the Power Module



2. Install the power module.

Align the power module with the slot at the right side, and push the power module down to the slot.

Figure 2-5 Installing the Power Module



4-Slot Device

1. Remove the filler panel from the power module.
Loosen the screws using a screwdriver, and remove the filler panel.

Figure 2-6 Removing the Filler Panel from the Power Module



2. Install the power module.
Align the power module with the slot at the right side, and push the power module down to the slot. Tighten the screws.

Figure 2-7 Installing the Power Module



3 Device On/Off

Startup

i **CAUTION!**

- Before connecting the power supply, ensure that the ground cable is properly connected.
 - The full load power of the device is no more than 650 W. Ensure that the power supply meets the device requirements.
-

- 6-slot device

The device is automatically started after it is connected to the power supply.

- 4-slot device

Connect the device to the power supply, and turn on the switches of the power modules at the rear of the device.

i **CAUTION!**

The switches of all the power modules must be turned on. Otherwise, the device may be faulty.

Shutdown

- 6-slot device

The device is automatically shut down after it is disconnected from the power supply.

- 4-slot device

The device is automatically shut down after it is disconnected from the power supply or the switches of all the power modules are turned off (recommended).

4 Web Configuration

On the web page, you can perform system setting, device maintenance, and user management. For details, see the Online Help of the device.



NOTE!

- When logging in to the web page for the first time, use the default admin password 123456.
 - This password is used only for initial login. To ensure account security, change the default password to a stronger one with no less than eight characters immediately after login.
-

The procedure for logging in to the web page is as follows:

1. On a client PC, open a web browser, enter "http://IP address of the device" into the address bar (for example, http://192.168.1.14), and press Enter.
2. In the login dialog box, enter the admin password, and click Login to enter the web page.

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