INSTALLATION AND OPERATION MANUAL

VS-H808

Important note

⚠ Warning

In order to ensure the reliable performance of the equipment and the safety of the user, please observe the following matters during the process of installation, use and maintenance:

◆Please do not use this product in the following places: the place of dust, soot and electric conductivity dust, corrosive gas, combustible gas; the place exposed to high temperature, condensation, wind and rain; the occasion of vibration and impact . Electric shock, fire, wrong operation can lead to damage and deterioration to the product, either;

◆In processing the screw holes and wiring, make sure that metal scraps and wire head will not fall into the shaft of controller, as it could cause a fire, fault, or incorrect operation;

◆When the installation work is over, it should be assured there is nothing on the ventilated face, including packaging items like dust paper. Otherwise this may cause a fire, fault, incorrect operation for the cooling is not free;

◆Should avoid wiring and inserting cable plug in charged state, otherwise it is easy to cause the shock, or electrical damage;

◆The installation and wiring should be strong and reliable, contact undesirable may lead to false action;

◆For a serious interference in applications, should choose shield cable as the high frequency signal input or output cable, so as to improve the anti-jamming ability of the system.

Attention in the wiring:

◆Only after cutting down all external power source, can install, wiring operation begin, or it may cause electric shock or equipment damage;

◆This product grounds by the grounding wires .To avoid electric shocks, grounding wires and the earth must be linked together. Before the connection of input or output terminal, please make sure this product is correctly grounded;

◆Immediately remove all other things after the wiring installation. Please cover the terminals of

the products cover before electrification so as to avoid cause electric shock.

Matters needing attention during operation and maintenance:

◆Please do not touch terminals in a current state, or it may cause a shock, incorrect operation;

◆Please do cleaning and terminal tighten work after turning off the power supply. These operations can lead to electric shock in a current state;

◆Please do the connection or dismantle work of the communication signal cable , the expansion module cable or control unit cable after turning off the power supply, or it may cause damage to the equipment, incorrect operation;

◆Please do not dismantle the equipment, avoid damaging the internal electrical component;

◆Should be sure to read the manual, fully confirm the safety, only after that can do program changes, commissioning, start and stop operation.

Matters needing attention in discarding product:

◆Electrolytic explosion: the burning of electrolytic capacitor on circuit boards may lead to explosion;

◆Please collect and process according to the classification, do not put into life garbage;

◆Please process it as industrial waste, or according to the local environmental protection regulations.

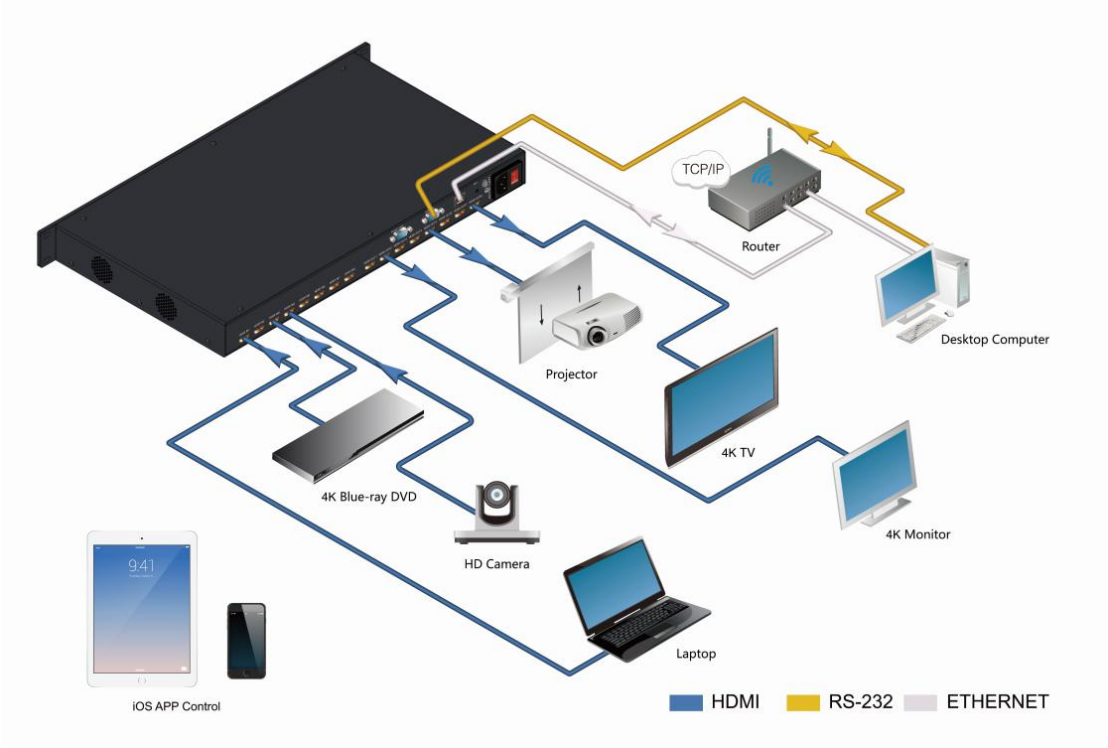
1 Product Description

The VS-H808 is a high performance UHD HDMI cross matrix switcher, which can cross-switch up to 4K*2K resolution HDMI signal between the 8 inputs and the 8 outputs, either with or without HDCP. It can be operated through versatile ways: RS-232, LAN, front panel buttons, and third party control systems. Its high performance and easy-to-manage property make allow itto be applied in both industrial and household projects, such as Broadcast & TV Stations, Meeting Halls, Big Display Projects, Hospitals, Schools, Home Theaters, etc.

2 Features

- 8 HDMI inputs, 8 HDMI outputs
- Support 3GHz video formats up to 4k × 2k @24 Hz/25 Hz/30 Hz, and all mandatory HDMI 3D TV formats
- HDCP and DVI compliant
- Support HDMI 1.4
- Supports 10/100/1000Mbps Ethernet network connection
- Supports Baudrates up to 115200bps
- Lossless and delay-less HDMI cross-switching
- Versatile Control Methods: Panel Buttons with LCD, RS232, TCP/IP control with RJ45 interface
- Support Mode Saving function: can save and recall 32 different scenes
- Support default HDMI EDID and reading EDID from display devices
- Input HDMI cable length up to 30 meters
- Standard rack-mounting installation design
- SupportiOS App control

3 Typical Application

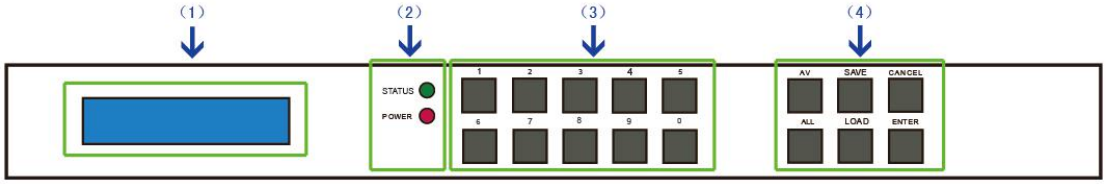


4 Specifications

Model	VS-H808
Input type	HDMI
Output type	HDMI
Video Protocol	HDMI 1.4, HDCP 1.3, compliant to DVI1.0
Maximum resolution	Up to 4kx2k at 24 Hz/25Hz/30Hz
HDMI interface	Type A, 19 pin, female
Serial Interface	RS-232 IN, DB9, Female; RS-232 OUT, DB9, Male
Input cable length	Adaptive equalizer for cable lengths up to 20 meters
Output cable length	≤ 15m
RJ45 control protocol	TCP/IP
Ethernet rate	Self-adaptive 10M/100M
Storage environment	Temperature: -20℃ ~ +70℃, humidity: 10%~90%
Work environment	Temperature: -20℃ ~ +70℃, humidity: 10%~90%
Power supply	AC 110~240V
Maximum power dissipation	22W
Dimensions(WxDxH)	1U（440mmx263mmx44mm）
Weight	About 4.3KG
MTBF	30,000 hours
Warranty	One year warranty and lifetime maintenance

5 Hardware Description

5.1 Front panel



(1) LCD：display real-time control status。

(2) Power：this light is on when power supply normally。

Status：this light is flashing when processing instructions。

(3) Digital key 0 ~ 9。

(4) Functional key。See brief description below：

AV	Switch button, separate input and output channel for switch control
All	Switch to all output channel
Save	Save current scene，used along with digital button
Load	Load scene saved before，used along with digital button
Cancel	Cancel current operation
Enter	Confirm current operation

5.1.1 LCD Display pattern

```
I N 1 1 1 1 1 1 1 1
OUT 1 2 3 4 5 6 7 8
```

VS-H808 has 8 input ports and 8 output ports, the second line in LCD indicate each output port and the number on the screen is settled. The digital numbers on the first line will change when you switch different input ports to different output ports.

5.1.2 Examples for front panel function description

■ One input port switch to one output port

For example, input port 3 switch to output port 4, press the button in the order like below:

“**3**”+“**AV**” + “**4**”+“**ENTER**” (LCD displayed as below when operate correctly):

```
I N 1 1 1 3 1 1 1 1
OUT 1 2 3 4 5 6 7 8
```

■ One input port switch to all output ports

For example, input port 2 switch to all output ports, press the button in the order like below:

"**2**"+"**AV**"+"**ALL**"+"**ENTER**" (LCD displayed as below when operate correctly):

I N	2	2	2	2	2	2	2	2
OUT	1	2	3	4	5	6	7	8

■ Save and load scenes (configurations)

Save current configurations, press the button in order like below：

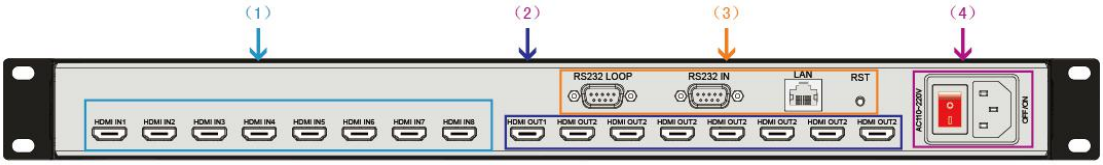
"**Digital button**"+ "**SAVE**"

Load configurations already saved, press the button in order like below：

"**Digital button**"+ "**LOAD**"

Note： save and load 32 different scenes. Use computer instructions can save and load 32 different scenes， use the button in front panel can only save 9 different scenes (1 ~ 9).

5.2 Back panel



(1) HDMI INPUT: HDMI input port

(2) HDMI OUTPUT: HDMI output port

(3) Control Interface:

RS232IN	Local RS232 bus control
RS232LOOP	Resend local matrix serial command
RJ45	TCP/IP control
RST	Restart Machine

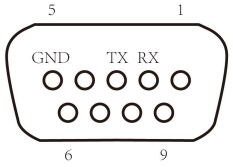
(4) Power supply: AC 110~240V input

6 Control Interface Description

6.1 RS232 Control Interface

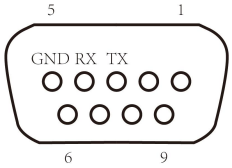
HDMI matrix provide one RS-232 input interface, which can be used to control the matrix by using computer or other center control devices. It also has another loop out RS-232 port, designed to transfer command order to other peripherals. The Pin description is as follows:

■ **RS232 IN** PIN description：



Pin	Signal	Description
1	-	-
2	TXD	RS-232 protocol，send data
3	RXD	RS-232 protocol，receive data
4	-	-
5	GND	Signal ground
6	-	-
7	-	-
8	-	-
9	-	-

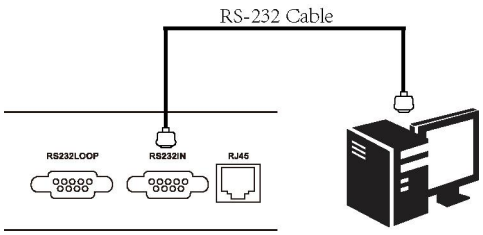
■ **RS232 LOOP** PIN description：



Pin	Signal	Description
1	-	-
2	-	-
3	RXD	RS-232 protocol，receive data
4	TXD	RS-232 protocol，send data
5	GND	Signal ground
6	-	-
7	-	-
8	-	-
9	-	-

■ RS232 Connection

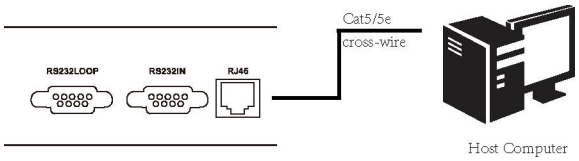
Link the HDMI matrix to host control computer by using RS-232 cable, when connection is finished, you can control the matrix with the instructions we provided.



6.2 TCP/IP Control Interface

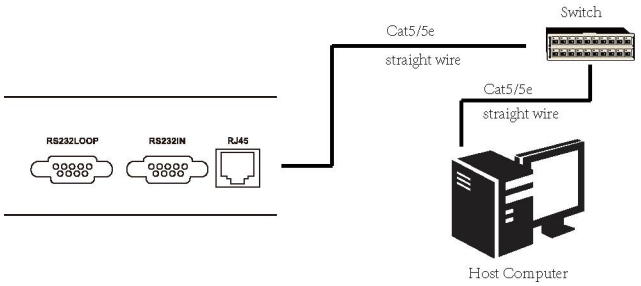
■ Cross-wire connection

Directly connect the matrix to host computer by using Cat5/5e cross-wire.



■ Straight wire connection

Connect the matrix to router or switch by using Cat5/5e straight link wire.



■ Wire line order

In this system, the CAT5/5e cable is used to connect the matrix to network control equipment, each end of the line is fixed with the RJ-45 connector (commonly known as the crystal head). The standard line order is not random, the purpose is to ensure the symmetry of the cable connector layout, so that the interference between the cable and the cable can be offset. Generally, Cat5/5e cable has four twisted pairs which are marked by different colors.

EIA/TIA 568B and EIA/TIA 568A standard:

T568A							
1	2	3	4	5	6	7	8
white green	green	white orange	blue	white blue	orange	white brown	brown
T568B							
1	2	3	4	5	6	7	8
white orange	orange	white green	blue	white blue	green	white brown	brown

Straight wire connection： both ends use T568B standard.

Cross-wire connection： one end use T568A standard, one end use T568B standard.

7 RS-232 and TCP/IP Command

7.1 Video switching

■ Single channel switching

Command	Function Description	Matrix Return	Example
[X1]V[Y2].	Input[X1] ---> Output[Y2]	V:[X1]->[Y2]!	1V2.
[X1]V#.	Input[X1] ---> Output[Y1]	[X1] V Through!	1V#.
[X1]#.	Input[X1] ---> Output[Y1]	[X1] A/V Through!	1#.

■ Multiple channel switching

Command	Function Description	Matrix Return	Example
[X1]V[Y1],[Y2].	Input[X1] ---> Output [Y1],[Y2]	V:[X1]->[Y1],[Y2] !	1V1,2,3.
[X1]All.	Input[X1] ---> All Output	[X1]A/V TO All!	1All.
AllV#.	All Input[Xn] ---> All Output[Yn]	All V Through!	AllV#.
All#.	All Input[Xn] ---> All Output[Yn]	All A/V Through!	All#.
[X1],[X2]V#.	Input[Xn] ---> Output[Yn]	[X1],[X2] V Through!	1,2,3V#.
[X1],[X2]#.	Input[Xn] ---> Output[Yn]	[X1],[X2] A/V Through!	1,2,3#.

7.2 Mode Saving and Recall

Command	Function Description	Matrix Return	Example
Save[N].	Saves the current cross-switch status	Save To F[N]!	Save1.
Load[N].	Invokes the saved cross-switch status	Load From F[N]!	Load1.

7.3 Status checking

Command	Function Description	Matrix Return	Example
Status[Y1].	Return the current cross-switch status of Output[Yn]	V:[X1]->[Y1]!	Status1.
Status.	Return all of the current cross-switch status	V:[X1]->[Y2]! ……	Status.

Disclaimer:

The pictures or diagrams in the manual are just for instruction and reference, the outlook of the product can only be judged by real product. Information in this manual is subject to change without notice.