INSTALLATION AND OPERATION MANUAL

VS-C200

User Manual

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.

Table of Contents

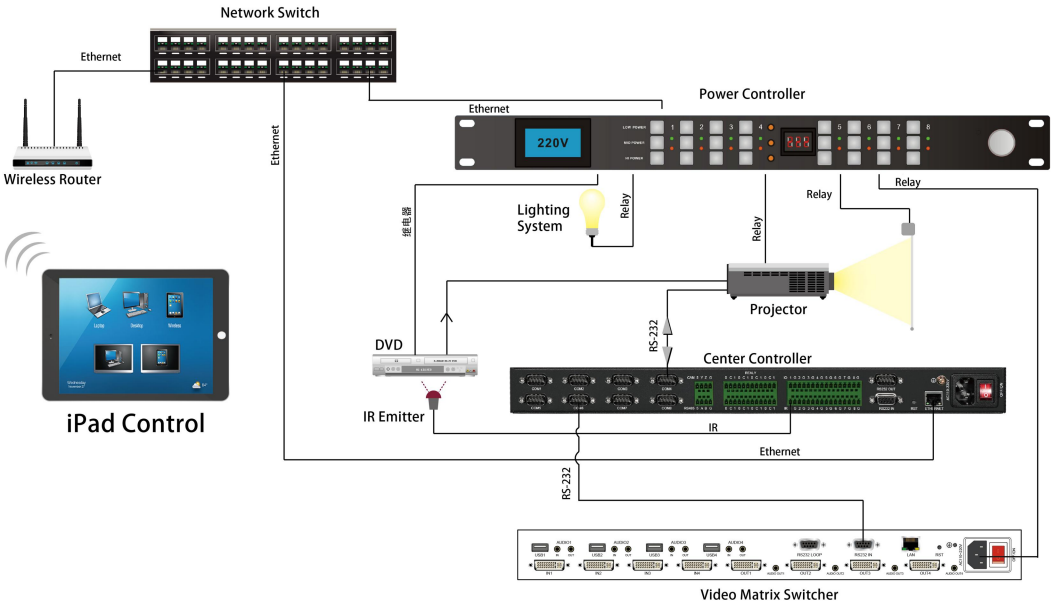
1 Product Description

This professional distributed network programmable controller supports abundant control interfaces and uses international standard communication interfaces to meet the control requirements of various audio and video and peripheral equipment. The host adopts industrial-level processing chips to ensure the high efficiency of all kinds of control and the stability of the system.

2 Features

- Support Android and iOS Mobile phones or tablets
- 8 independent programmable infrared transmission interfaces, support controlling many sets of the same or different infrared equipments.
- 8 independent programmable RS-232/422/485 control interfaces, user programmable Multiple control protocols and codes.
- 2 independent programmable RS-232 control interfaces, user programmable Multiple control protocols and codes.
- 8 weak relay interfaces.
- 8 digital input / output IO interfaces which supports ADC/DAC conversion
- 1 independent programmable CAN interface supports bidirectional communication.
- 1 independent programmable RS-485 interface supports bidirectional communication.
- Embedded infrared learning device, convenient debugging and maintenance.
- Support local and remote control.
- The built-in WEB configuration interface of the central control host can facilitate the configuration of basic parameters and improve the application efficiency of field engineers.
- The international general wide voltage (AC100 - 240V), can be wildly applied in any countries and regions.

3 Typical Application

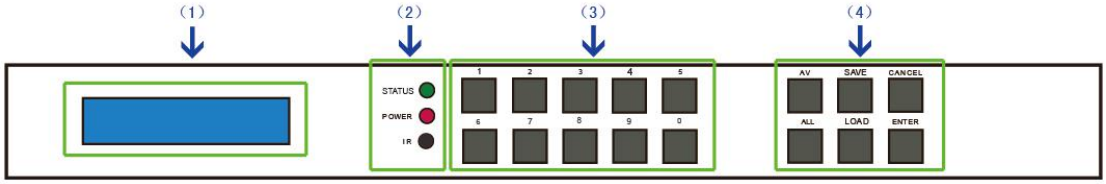


4 Specifications

Model	VS-C200
RAM	32M DDR-RAM，512M FLASH
FLASH	EEPROM: 4K, SPI FLASH: 4M
ETHERNET(TCP/IP)	1
Infrared emission	8
Digital I/O	8
Relay	8
RS-232/422/485 BUS	8
RS-485 BUS	1
CAN BUS	1
RS-232 BUS	2
Ground	YES
Maximum power dissipation	15W
Power supply	AC 110~240V
Dimensions(WxDxH)	1U（440mmx263mmx44mm）
Weight	About 4.6KG

5 Hardware Description

5.1 Front panel



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

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

Status—Status Indicator： this light is flashing when processing instructions。

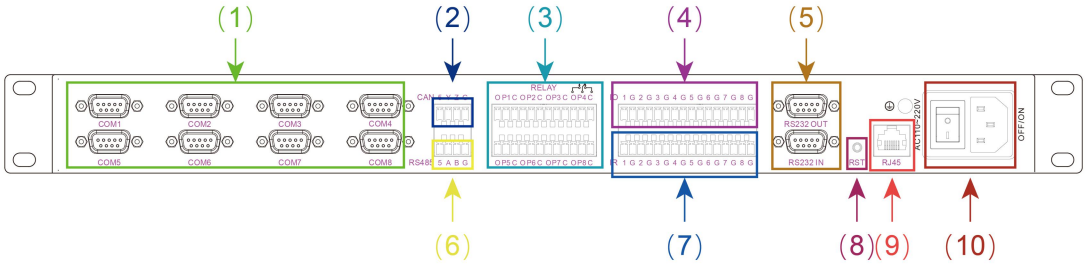
IR—IR Receiving Window： Programmable Ethernet Controller provided built-in IR Learning Module, and SENSOR can receiving the IR Signal to be learned for controlling。

(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

5.2 Back panel



(1) Eight COM ports, each port supports RS-232/422/485 bus standard

(2) One CAN bus control interface

(3) Eight programmable Low-current Relay Ports with NO (normal open) and NC (normal close)

(4) Eight programmable I/O ports: 5V/10mA output or 0~5V/10mA input

(5) Two RS-232 ports

(6) One RS-485 with 4-pin phoenix connector

(7) Eight Infrared Output Ports

(8) Hardware reset button

(9) Ethernet Interface

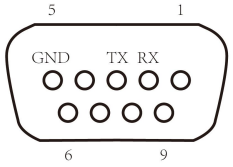
(10) Power supply: AC 110~240V

6 Hardware Interface Description

6.1 RS232 Control Interface

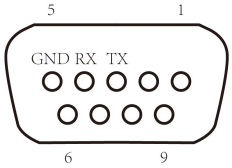
One RS-232 input interface, which can be used to control the VS-C200 by using computer or other control devices. It also has another RS-232 output port, designed to retransfer command order to other peripherals. The Pin description is as follows:

■ **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	-	-

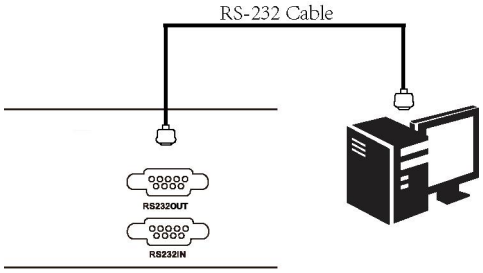
■ **RS232 OUT** PIN description：



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

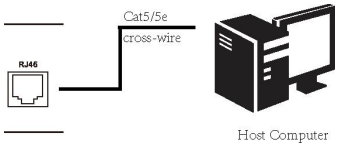
Link the VS-C200 to host control computer by using RS-232 cable, when connection is finished, you can control the VS-C200 with the instructions we provided.



6.2 Ethernet Interface

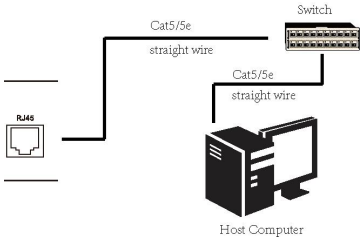
■ Cross-wire connection

Directly connect the VS-C200 to host computer by using Cat5/5e cross-wire.



■ Straight wire connection

Connect the VS-C200 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 VS-C200 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.

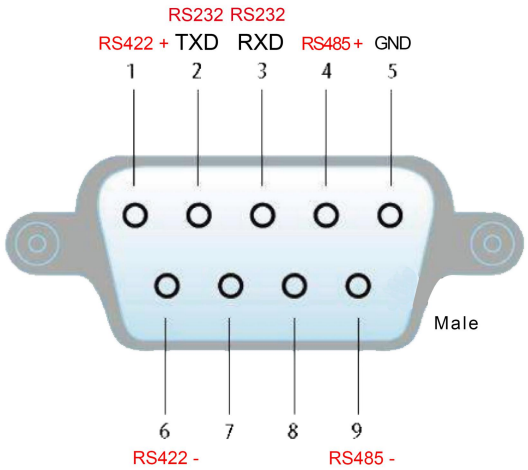
6.3 COM1-COM8（RS-232/422/485）

It contains 8 programmable bi-directional serial communication interfaces with DB9 (male) interface type and supports RS-232/422/485 serial communication transmission of data.

The factory default configuration (it can be modified by system command):

Baud Rate: 9600, Data Bit: 8 Bits, Stop Bit: 1, No Parity Check Bit

PIN assignment is defined below:



6.4 RS- 485 Bus

One RS-485 with 4-pin Phoenix interface type, it can connect various external RS-485 bus network devices, such as power controller, dimmer, volume controller, wireless receiver, wired touch screen, etc.

The factory default configuration (it can be modified by system command):

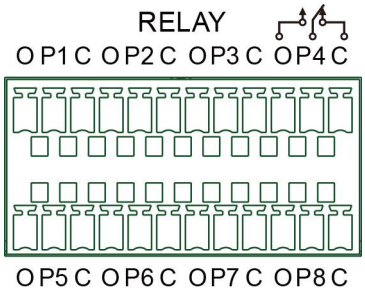
Baud Rate: 9600, Data Bit: 8 Bits, Stop Bit: 1, No Parity Check Bit

PIN assignment is defined below:

6.5 Relay Ports

It has 8 low-current relay modules, it can drive the load below AC 0.3A/125V and DC 0.3A/110V, DC 1A/30V. It can control the ON and OFF of electronic equipment to realize controlling high-current, high-voltage load with low-current, low-voltage controller.

PIN assignment is defined below:



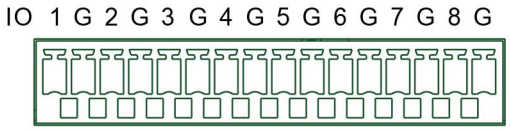
O: normal open; C: normal close; P1-P8: Public end

6.6 IO input/output Ports

With 8 input/output level control interfaces, it can provide 5V/10mA load output or receive 0~5V (10mA load current) signal input.

GPIO level, 5V/3.3V optional, factory default: 3.3V

PIN assignment is defined below:



1-8: IO IN/OUT; G: ground

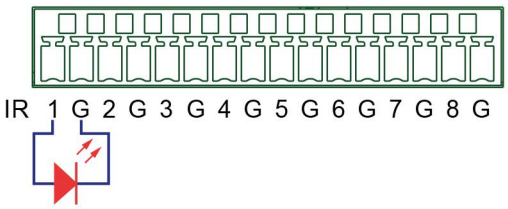
6.7 Infrared Output Port

It contains 8 independent programmable infrared output ports to control the different devices, such as DVD, VCR, MD, etc.

The 2-pin Phoenix interface type should be used in conjunction with the infrared emitter. Connect the infrared emitter to the infrared control interface. The IR emitter should be placed in front of the infrared receiving window of the controlled device (the distance is less than 15CM).

IR level: 5V/3.3V optional; factory default: 3.3V

PIN assignment is defined below:



1-8: IR out; G: ground

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.