



Angekis RS232 Sabre Plus Controller User Manual

[Home](#) » [Angekis](#) » Angekis RS232 Sabre Plus Controller User Manual 

Angekis[®]

RS232 Sabre Plus Controller
User Manual



Preface

Features of keyboard controller:

- support VISCA protocol completely.
- can set and call 1-46 presets of Sony video conference camera.
- communication mode: RS485, RS422, RS232.
- all parameter can be set conveniently through function keys.

The primary function of the keyboard controller:

- can control a maximum 7 pcs Sony video conference camera.
- all input/output ports adopt lightning protection design, communication distance up to 1200m.

- support operation password function.
- key-press warning on/off function.
- can control Sony video conference camera rotate with variable speed by its joystick.
- LCD screen for displaying commands and camera's working status.



Declaration

This manual might not be accurate technically or contain minor typos.

The contents of this manual about production description and the program will be updated aperiodically without notification.

Note

- the LCD is fragile, with no crash or long exposure under strong light.
- The joystick is fragile, please make sure the product is packed in original packing material when you send it back for reparation.
- The keyboard controller shall be used in a specified environment where the temperature and humidity are suitable.
- Please follow the connection method defined in this manual.

Parameter:

Item	Parameter
Power supply	DC 12V±10%
Working temperature	-10℃~55℃
Working humidity	≤90% RH
Communication	RS485, RS422, RS232
Baud rate	2400bps, 4800bps, 9600bps, 19200bps
Ports	RS422 and RS232 port
Display	blue LCD screen
Size	420mm(L)*260mm(W)*170mm(H)

Accessories:

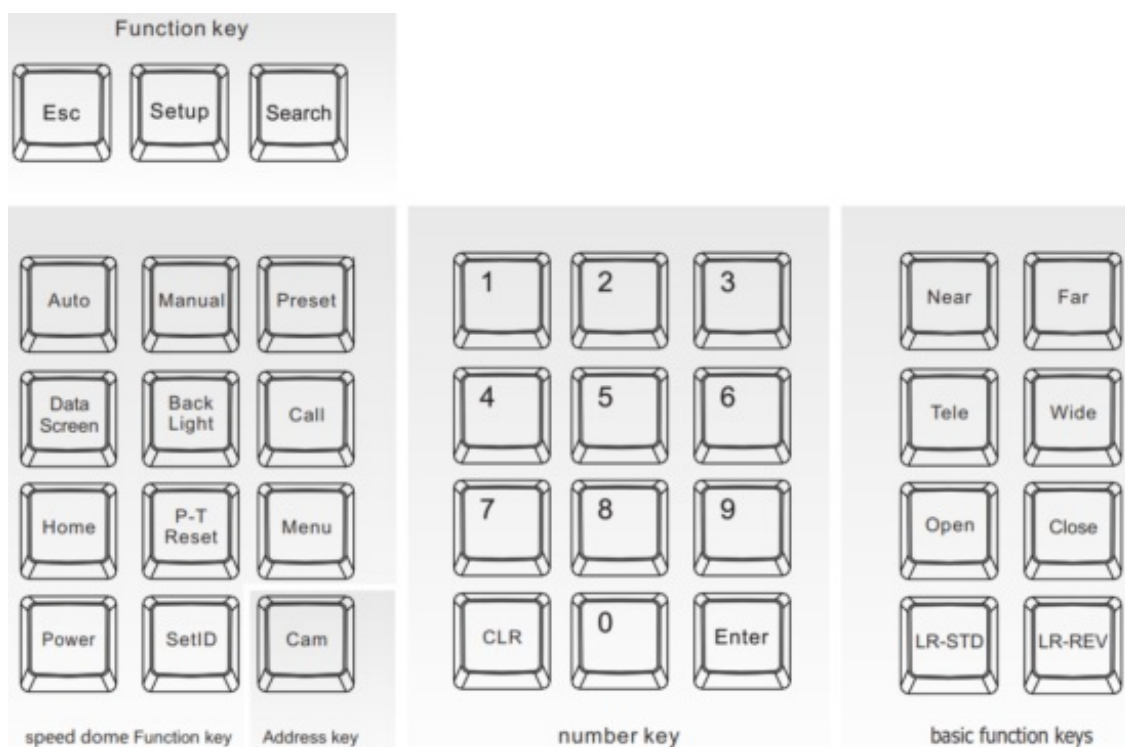
name	quantity	unit	note
connector	1	pc	N/A
DC 12V adapter	1	pc	Input: 100-240vac, 50/60Hz
<user manual>	1	pc	N/A

Contents

- 1 Front panel and rear panel introduction
 - 1.1 All keys' function introduction
 - 1.2 LCD screen
 - 1.3 Joystick function
 - 1.4 Rear panel introduction
 - 1.5 Function item specification:
- 2 Operation introduction
 - 2.1 Single function key and combined function key introduction
 - 2.2 Combined function key specification
 - 2.3 Camera ID setup:
 - 2.4 preset setup and recall
- 3 Parameter setup and inquiry
- 4 Typical wiring diagram
- 5 FQA
- 6 Documents / Resources
- 7 Related Posts

Front panel and rear panel introduction

All keys' function introduction



1.1.1 keyboard controller function keys:

Esc back to the previous menu.

Setup press and hold for 3s, and get into the setup menu.

Search inquiry the keyboard controller's model number, S/N, key-press sound, and operation lock.

1.1.2 Sony video conference camera function setup/recall keys:

Auto enable autofocus

Manual Enable manual focus.

Data Screen open/close the data screen.

Back Light turn on/turn off the backlight.

Home control the camera toward ahead.

P-T Reset reset the camera.

Power power on/off the camera.

SetID camera ID setup.

Preset camera's preset set up, shall be used together with the number key and **Cam key**.

Call recall camera's preset, it shall be used together with number key and Cam key.

Menu get into the camera menu.

Cam select the camera's ID.

1.1.3 Number keys:

CLR delete key: delete all information that is keyed in.

0 9 number key: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

Enter confirm key: confirm and save all information that is keyed in.

1.1.4 Video conference camera basic function keys:

Near in manual focus mode, focus near.

Far in manual focus mode, focus far.

Tele zoom near in slow speed, enlarge the magnification, reduce the view angle, and enlarge the object (screw the joystick clockwise, zoom near in high speed).

Wide zoom far at slow speed, reduce the magnification, enlarge the view angle, and reduce the object (screw the joystick counterclockwise, zoom far at high speed).

Open in manual aperture mode: enlarge camera aperture.

Close in manual aperture mode: reduce camera aperture.







LR-REV press this key, and the camera will move in the opposite direction when operating the joystick.

LR-STD press this key, and the camera will move in the correct direction when operating the joystick.

LCD screen

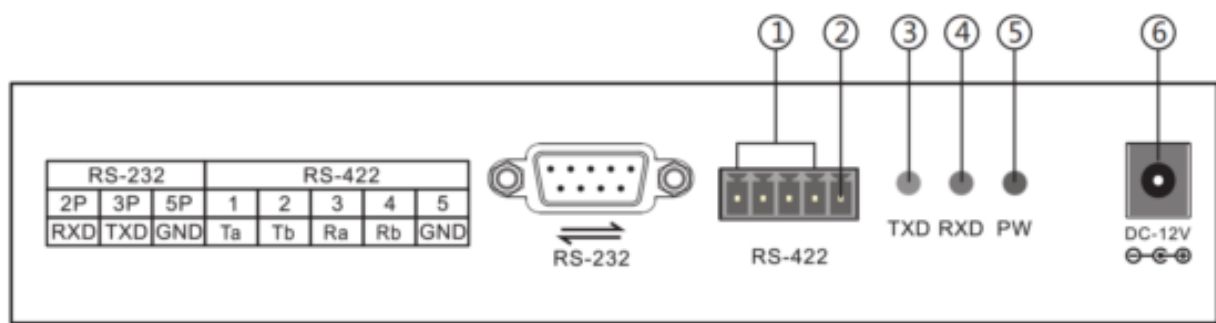
All operations of the keys or joystick will have corresponding information shown on the LCD screen. The LCD screen will get into power-saving mode if the user does not operate the keyboard controller over 30s (its brightness reduces to the lowest, and information which showed on the screen will back to its initial status).

Joystick function

operation	Output control	operation	Output control	operation	Output control
	up		down		left
operation	Output control	operation	Output control	operation	Output control
	right		Zoom near		Zoom far

Rear panel introduction

Rear panel: 5 ports for RS422, 1 RS232 port, 1 DC 12V input port, and 3 status indicator lights. Details as below:



Function item specification:

item	mark	interface	description
①	RS-422	Control command output port: Connector 1-4	Connect to RS422 port of video conference camera: Ta to RXD IN-, Tb to RXD IN+ Ra to TXD IN-, Rb to TXD IN+
②	Ground	Control line ground port	Control line ground port
③	TXD	Send command indicator	Flicking and green denote it is sending commands
④	RXD	Receive command indicator	Flicking and green denote it is receiving commands
⑤	PW	Power input indicator	It will be always on and red when the keyboard controller is powered on
⑥	DC-12V	Power input port	DC 12V input port

Operation introduction

Single function key and combined function key introduction

2.1.1 Single function key means: pressing this key, the camera will recall a function.

Single function keys:

Auto Data Screen Home Back Light P-T Reset Tele Wide Open Close LR-STD LR-REV Joystick.

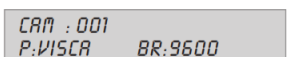
2.1.2 Combined function key means: need to press and hold for over 2s then the camera will recall a function.

Combined function keys:

Manual Preset Call Menu Cam Power SetID CLR

Combined function key specification

2.2.1 get into control status:

If LCD screen display:  denote keyboard controller is in control status. If it displays other information, please **press Esc key** back to control status.

2.2.2 Select camera ID:

Press **Cam key**, key in-camera ID number, and press **Enter** .
For example select camera ID “2”

Operation: press **Cam key**, LCD screen will display:

CAM : 001
CAM :

Press the ‘2’ key, LCD screen will display:

CAM : 001
CAM : 2

press **Enter** ,LCD screen will display:

CAM : 002
P:VISCAR BR:9600

Camera ID setup:

Sony D70/D100 video conference camera ID will be set as ‘1’ automatically after power on each time, so it shall be set by the keyboard controller.


2.3.1 There is only one video conference camera

Connect the camera to the keyboard controller properly, press and hold the **SetID** key for 2s, LCD screen will

display  , denoting the camera ID has been set as ‘1’.

2.3.2 there is more than one video conference camera(max. 7)

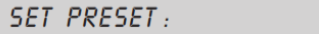
Connect the camera to the keyboard controller properly, all cameras shall be connected in cascade mode, press

and hold the **SetID key** for 2s, LCD screen will display,  denoting the cameras’ ID has been set in sequence as ‘1’, ‘2’, ‘3’..., the ID of the camera which directly connects to the keyboard will be set as ‘1’, and so on.

preset setup and recall

Preset setup: select the camera ID, then **press Preset key**, LCD screen will display, after adjusting the camera’s direction and zooming near/far, key in a number as this preset’s number, for example: ‘6’, then press **Enter** , setup finish. Repeat the above steps for another preset setup, or press **Esc key** to exit.

2.4 preset setup and recall

Preset setup: select the camera ID, then press Preset key, LCD screen will display,  after adjusting the camera’s direction and zooming near/far, key in a number as this preset’s number, for example: ‘6’, then press **Enter** , setup finish. Repeat the above steps for another preset setup, or press **Esc key** to exit.

Preset recall: select the camera ID, then press **Call key**, LCD screen will display, key in the preset number.


For example ‘6’, LCD screen will display,  press **Enter** , one preset is recalled. Repeat the above steps for recalling other preset, press **Esc key** to exit.

2.5 Menu setup

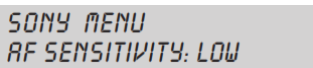
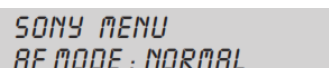
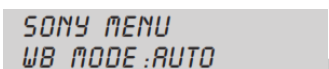
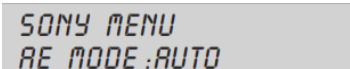
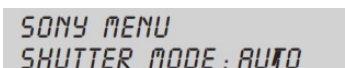

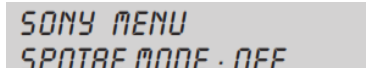
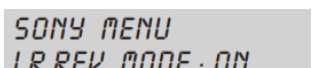
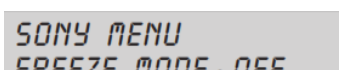
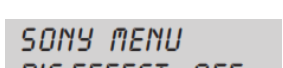
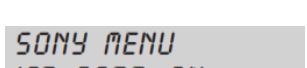

The following operation can change parts of the camera’s functions, for the camera’s detail functions, please refer to the camera’s user manual.

Note: move the joystick up/down to select a different sub-menu, and move the joystick left/right to set the sub-menu.

2.5.1 when the keyboard controller is in control mode, press **Menu key**:

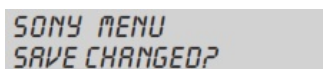
1. CAM_DZoomModelInq, LCD screen display,  move the joystick left/right to select D-Zoom ON or D-Zoom OFF.

2. CAM_DZoomC/SModelInq, LCD screen display,  move the joystick left/right to select Combine Mode or Separate Mode.

3. CAM_AFSensitivityInq, LCD screen display,  move the joystick left/right to select AF Sensitivity Normal or AF Sensitivity Low.
4. CAM_AFModelInq, LCD screen display,  move the joystick left/right to select Normal AF or Interval AF.
5. CAM_WBModelInq, LCD screen display,  move the joystick left/right to select Auto, In Door, Out Door, One Push WB, ATW or Manual.
6. CAM_AEModelInq, LCD screen display,  move the joystick left/right to select Full Auto, Manual, Shutter Priority, Iris Priority, Bright.
7. CAM_SlowShutterModelInq, LCD screen display,  ,move joystick left/right to select Auto, Manual.
8. CAM_ExpCompModelInq, LCD screen display,  move the joystick left/right to select On, Off.
9. CAM_SpotAEMModelInq, LCD screen display,  move the joystick left/right to select On, Off.
10. CAM_LR_ReverseModelInq, LCD screen display,  move the joystick left/right to select On, Off.
11. CAM_FreezeModelInq, LCD screen display,  move the joystick left/right to select On, Off.
12. CAM_PictureEffectModelInq, LCD screen display,  move joystick left/right to select Off, Neg.Art or B&W.
13. CAM_ICRModelInq, LCD screen display,  move joystick left/right to select On, Off
14. CAM_AutoICRModelInq, LCD screen display,  move the joystick left/right to select On, Off



Note:


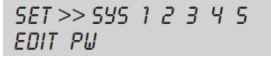
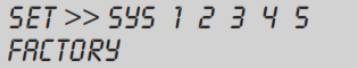
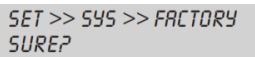
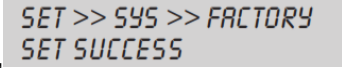
1. the keyboard control will receive the answer code from the camera when performing the above operation, if the answer code is not correct, the keyboard controller's LCD screen will display "RE DATA UNKNOWN".
2. When finish setup for the sub-menu, press Esc key, LCD screen display,  if press Esc key again, setup will be saved at present, after power off, it will be deleted. If press Enter key, the setup will be saved forever till it is modified by the user next time.

Parameter setup and inquiry


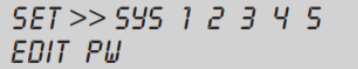
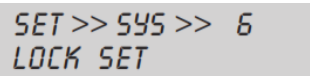
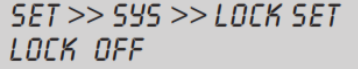
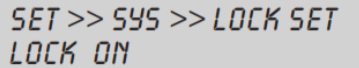
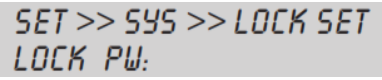
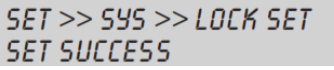
3.1 system parameter setup

the keyboard controller's system parameters include password, default factory, key-press sound on/off, ID, and lock. Please refer to the following setup description of 'default factory setup' and 'keyboard lock setup' for the setup method.

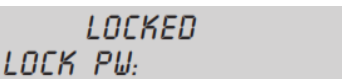

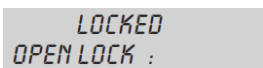
3.1.1 default factory setup

press and hold Setup key for 3s, LCD screen display  key in password(default is 8888),
press Enter key, LCD screen display  move joystick right, LCD screen display ,
 press Enter key, LCD screen display ,  press Enter key again,
buzzer will sound for about 1s, LCD screen display,  setup is finished(press Esc key to quit and setup will not be saved), press Esc key for 2 times back to normal mode.

3.1.2 Keyboard lock on/off setup

press and hold the Setup key for 3s, LCD screen display  ,
key in the password, press Enter key, LCD screen display  ,
move the joystick to select item 6, LCD screen display  ,
press Enter key, LCD screen display  ,it means the keyboard lock function is off,
move joystick left or right, LCD screen display  ,
press Enter key, LCD screen display  ,
key in 4 digit password (please keep it in mind), press Enter key again, LCD screen display  ,
press Esc key for 2 times to quit and back to normal mode.

3.1.3 use the method of keyboard lock function

in normal mode, press Esc key, LCD screen display  ,
key in the password, press Enter key, LCD screen display  , it means keyboard controller is locked now.
Press each key, LCD screen display  ,
key in the password, press Enter key, keyboard controller will back to unlock mode.

3.2 parameter setup framework

>SYSTEM Setup	>SET PASSWORD	OLD PW	4 digit
		NEW PW	4 digit
		AGAIN PW	4 digit
	>LOAD DEFAULT	SURE?	Enter to confirm Esc to quit
	LOAD ISP	SURE?	Enter to confirm Esc to quit
	SOUND	ON	Move the joystick to select, Enter to confirm
		OFF	
	KB ID	ID	Number 0 - 15
	LOCKSET	ON	Move the joystick to select, Enter to get into sub-menu
		OFF	

3.2 system parameter inquiry

Press Search key, following information, will display:

System inquiry	MODLE: XXXXXXXXXXXX	Maximum 10 digit
	SN; XXXXXXXXX	8 digit
	KB ID: XXX	2 digit
	LOCK(ON/OFF)	Keyboard lock status(on or off)
	SOUND(ON/OFF)	Key-press sound status(on or off)

Typical wiring diagram

4.1 Typical wiring diagram

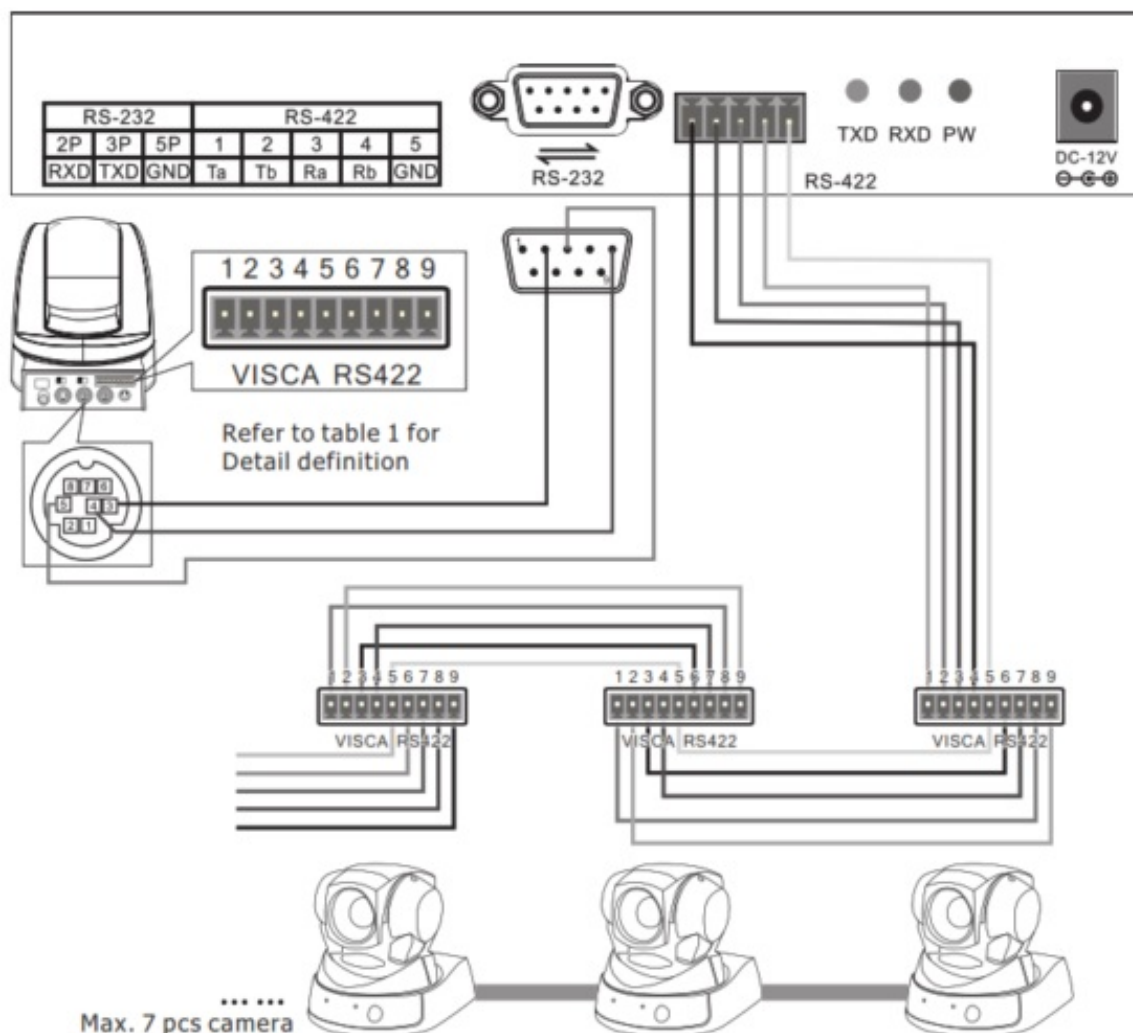


Table 1. VISCA RS422 port definition:

item	1	2	3	4	5	6	7	8	9
definition	TXD IN+	TXD IN-	RXD IN+	RXD IN-	GND	TXD OU T+	TXD OU T-	RXD OU T+	RXD OU T-

4.2 specification:

4.2.1 connection between keyboard controller and camera

When adopting the RS422 control bus, the 3rd port of the keyboard controller(Ra) connects to the 3rd port of the camera(TXD IN-), the 4th port of the keyboard controller(Rb) connects to the 4th port of the camera(TXD IN+), the 1st port of keyboard controller(Ta) connect to the 1st port of camera(RXD IN-), the 2nd port of keyboard controller(Tb) connect to the 2nd port of camera (RXD IN+).

Keyboard controllercamera

RaTXD IN

RbTXD IN+

TaRXD IN

Tb..... RXD IN+

When adopting the RS232 control bus, the 1st connector(RXD) of keyboard controller RS232 port connects to the 3rd connector(TXD) of the camera RS232 port, the 2nd connector(TXD) of the keyboard controller RS232 port connects to the 5th connector(RXD) of camera RS232 port, the 3rd connector(GND) of keyboard controller RS232 port connects to the 4th connector(GND) of camera RS232 port(or use a standard RS232 cable to connect both devices).

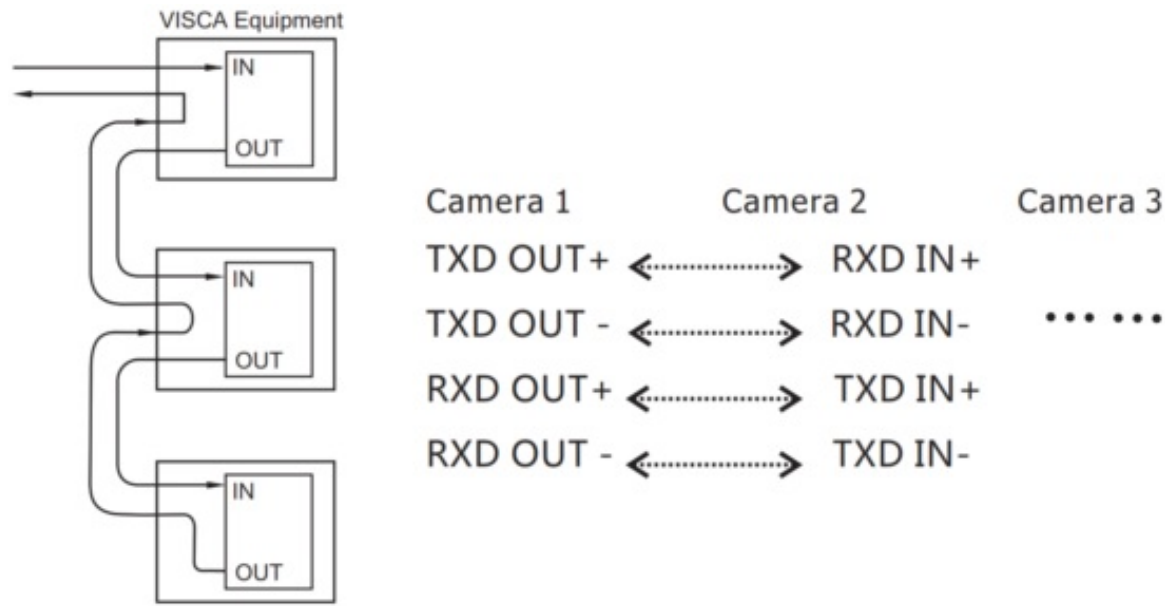
Keyboard controlled..... camera

RXDTXD

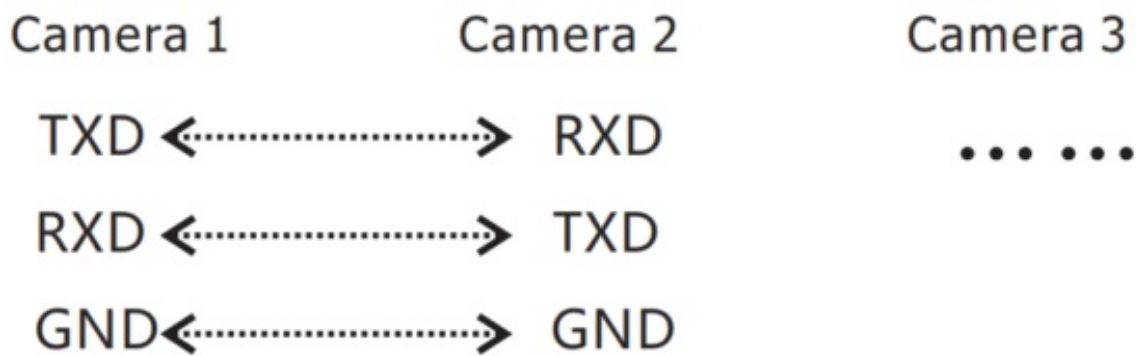
TXDRXD
 GNDGND
 The client can select each of the above connection methods.

4.2.2 connection between cameras

When adopting the RS422 control bus, the 1st camera’s output port connects to the 2nd camera’s input port, the 2nd camera’s output port connects to the 3rd camera’s input port, and so on. Please refer to the following figure:



When adopt the RS232 control bus, the connection method is almost the same, the 1st camera’s output port connects to the 2nd camera’s input port, the 2nd camera’s output port connects to the 3rd camera’s input port, and so on. Please refer to the following figure:



FQA

Phenomenon	Reason	Solve method
The keyboard can not control the camera	Faulty wiring	Please refer to section 4.2 for the correct wiring method
	Faulty setup	Please make sure the baud rate is correct
some cameras can be controlled, the other can not	Faulty wiring	Please refer to the section 4.2 for the correct wiring method
	Faulty setup	Confirm the camera's setup is correct
All cameras will be controlled together	Faulty wiring	Please refer to section 4.1 for the correct wiring method
Forget the keyboard lock password	reset the password	

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Documents / Resources

 <p>RS232 Joystick User manual</p>	<p>Angekis RS232 Sabre Plus Controller [pdf] User Manual RS232, Sabre Plus Controller, RS232 Sabre Plus Controller</p>
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