

# POS NVR System Structure

## Table of Contents

1.1 “POS +NVR” mode .....	2
1.1.1 Introduction.....	2
1.1.2 NVR Configuration.....	3
1.1.3 Network POS + NVR .....	8
1.1.4 RS-232 POS (Serial Port) + NVR.....	9
1.1.5 Product selection .....	10
1.2 “iVMS 4200+POSNVR+POS” mode.....	11
1.2.1 Introduce .....	11
1.2.2 Configuration .....	11
1.2.3 Product selection.....	14

# 1 POS NVR System Structure

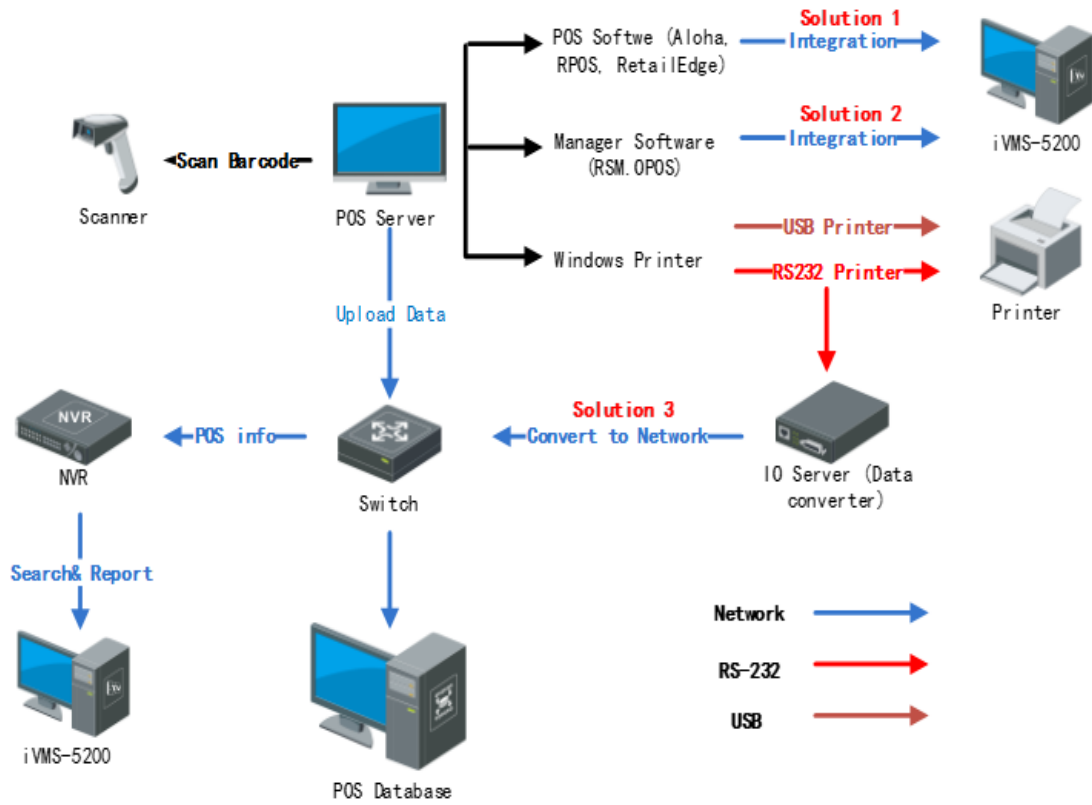


Fig.1 POS NVR System structure of the POS application

## 1.1 “POS +NVR” mode

### 1.1.1 Introduction

Currently there are two ways to connect NVR with POS terminals, via network or via serial port.

For example: The NVR initiates the connection to the POS server for the POS data communications between POS server camera.

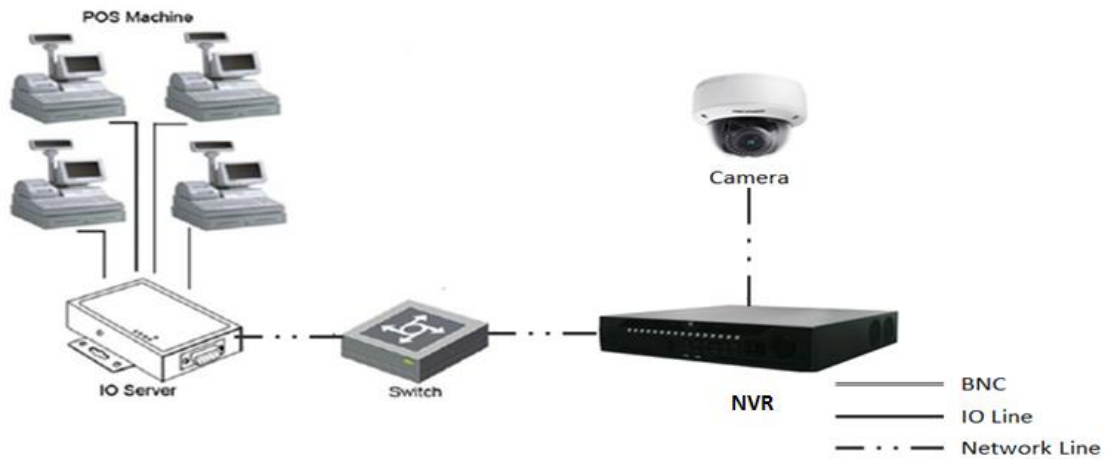


Fig.2 Basic network connection with camera

How to realize the connection is mainly based on the type of POS machine. It's very important that what type of POS machine is adopted. The following is POS NVR sever with model introduction.

### 1.1.2 NVR Configuration

We need to configure the NVR firstly.

1. Login the NVR on the local NVR page, select "system"->" POS", and edit a POS channel.

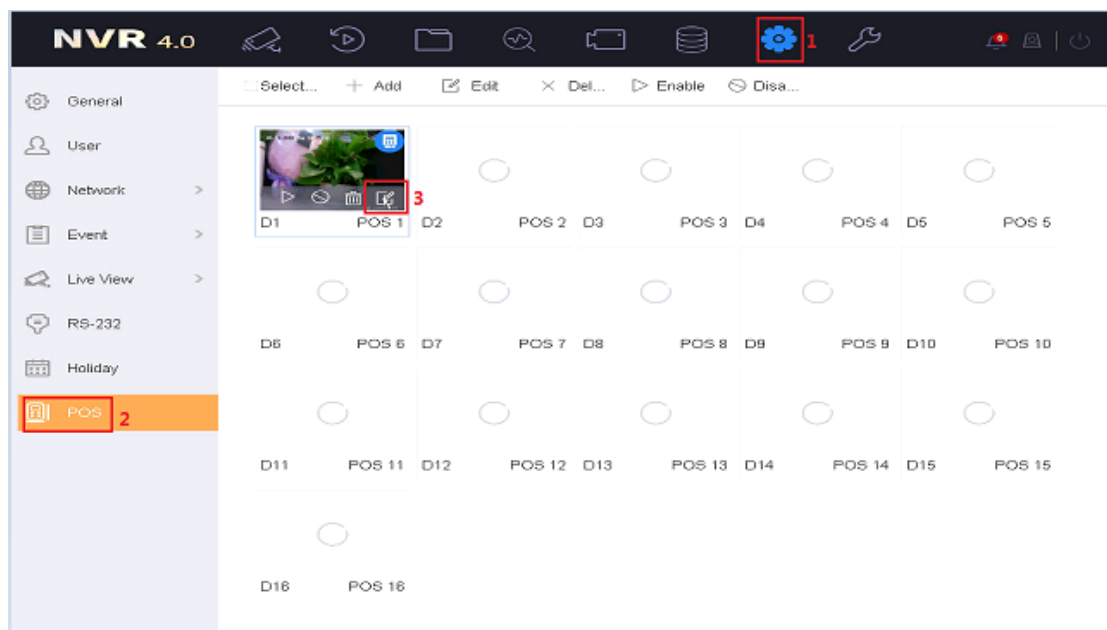


Fig.3 POS configuration page

2. Select a connection type. If the connection type is UDP Reception, you also need to configure the UDP Reception parameters.

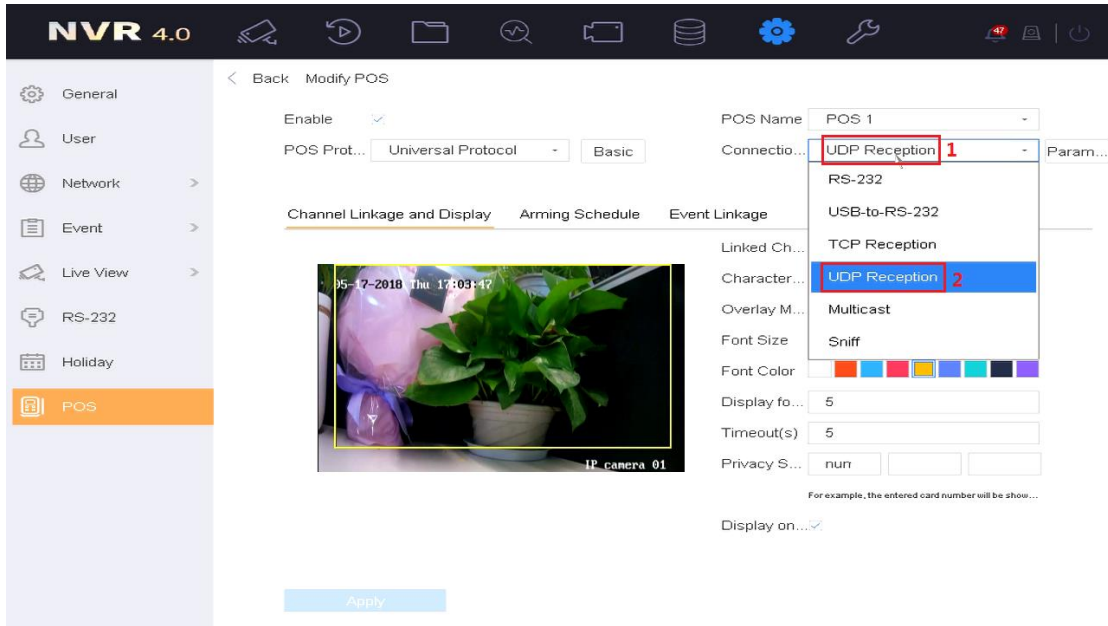


Fig.4 POS connection parameter setting 1

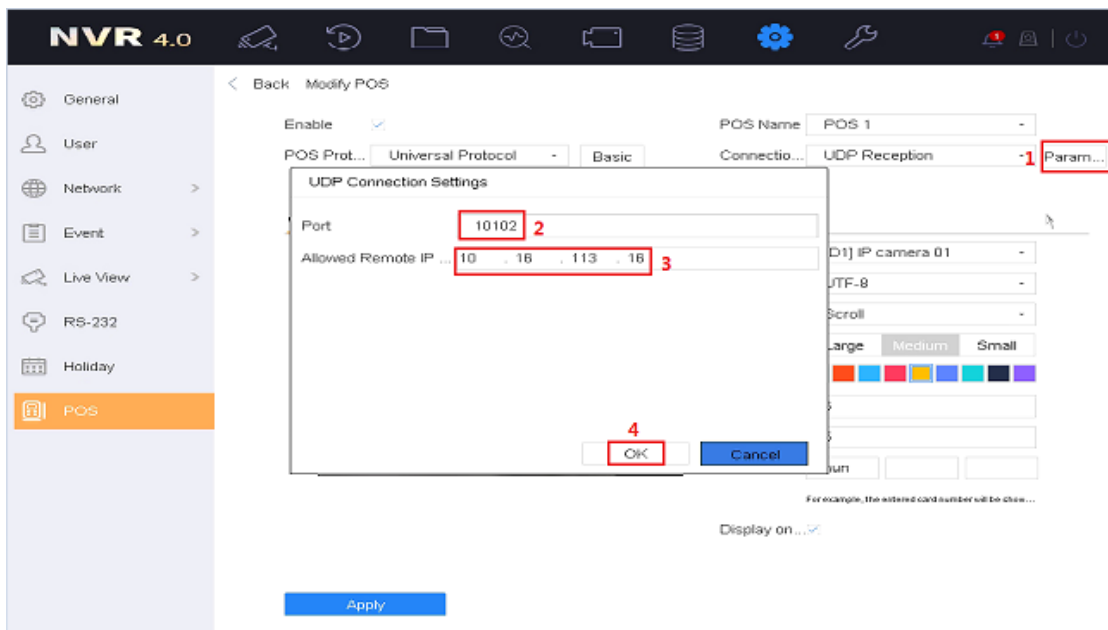


Fig.5 POS connection parameter setting 2

3. Then, select the overlay mode, font size, overlay time(s), font color in this page and so on.

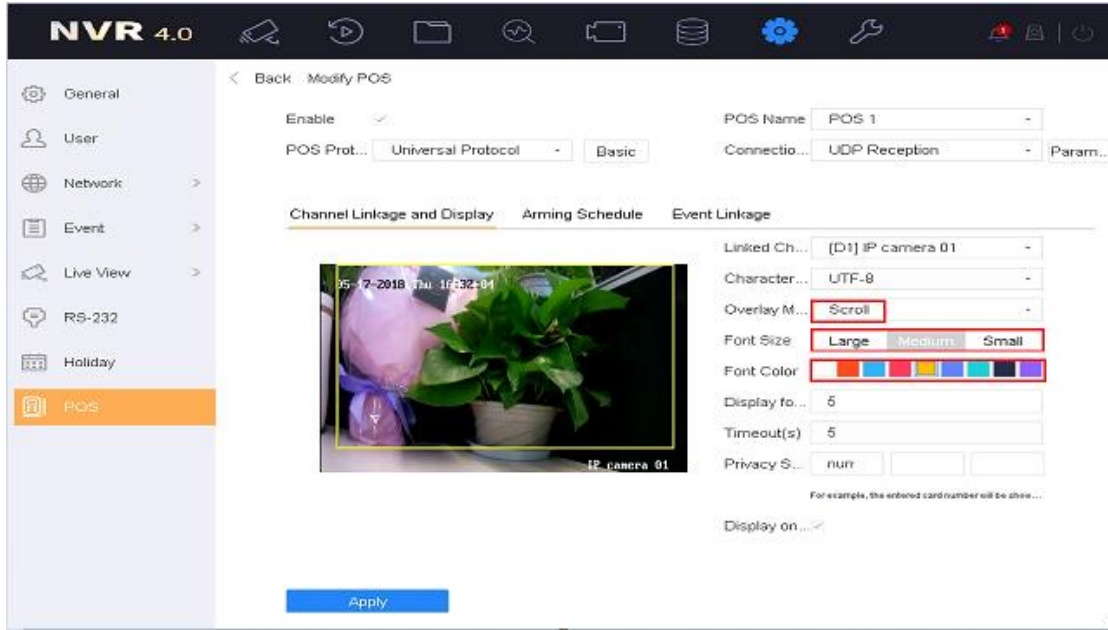


Fig.6 POS overlay setting

4. After setting the GUI of NVR, we should set the parameter in the Convert Tester. Including protocol, local host IP, local host port and then click 'connect'.

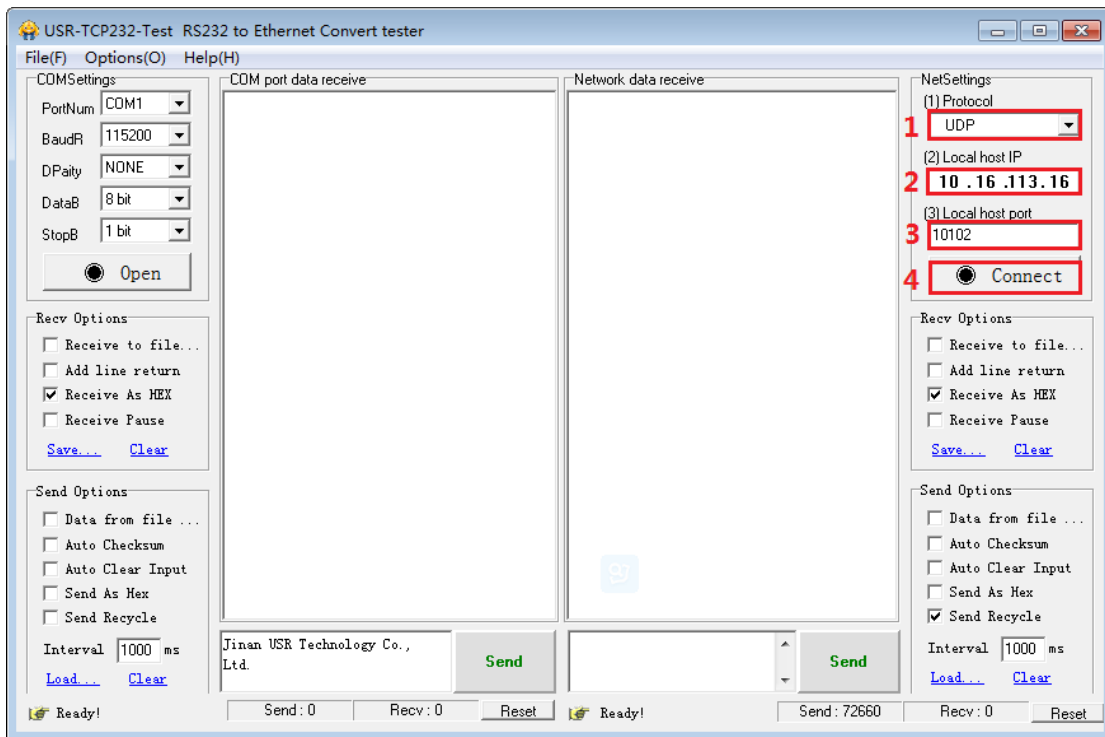


Fig.7 POS Convert Tester—Net setting 1

5. We should fill in the Remote IP as NVR's IP, Port, the POS content and click 'Send' in the Convert Tester.

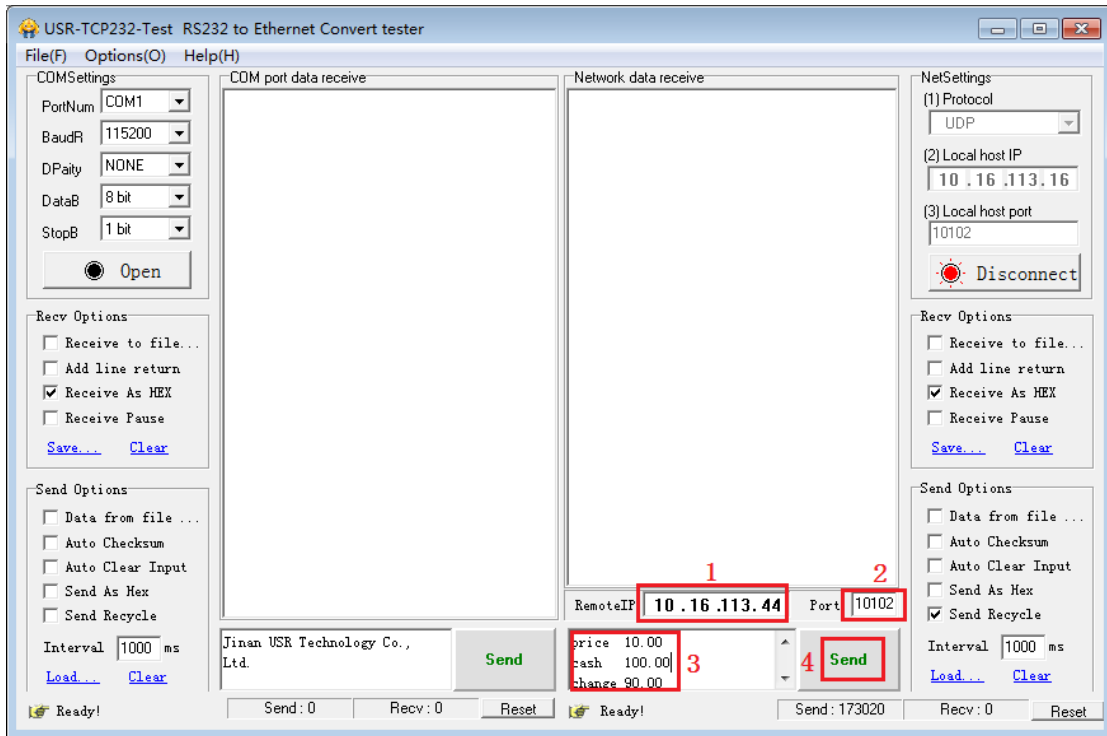


Fig.8 POS Convert Tester—Net setting 2

- Then the POS overlay you set will display to the live view local page. You can choose to display or not in POS configuration page or live view page.

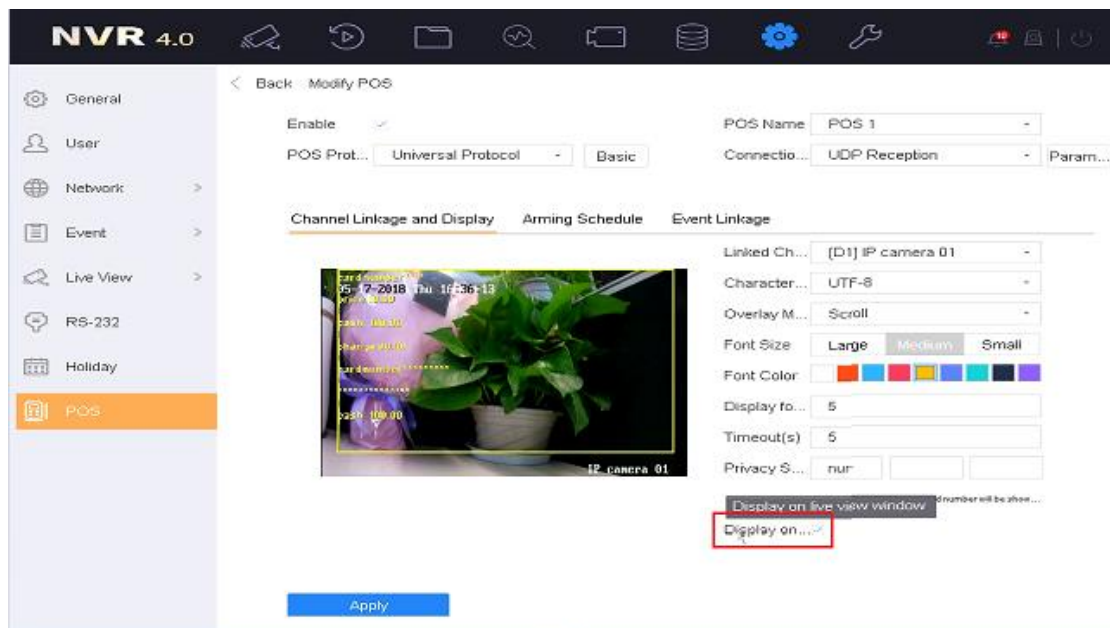


Fig.9 POS overlay setting



Fig.10 POS overlay setting in living view

7. Record configuration: Enable the POS schedule in the Storage. And click “edit” to check the day is POS record.

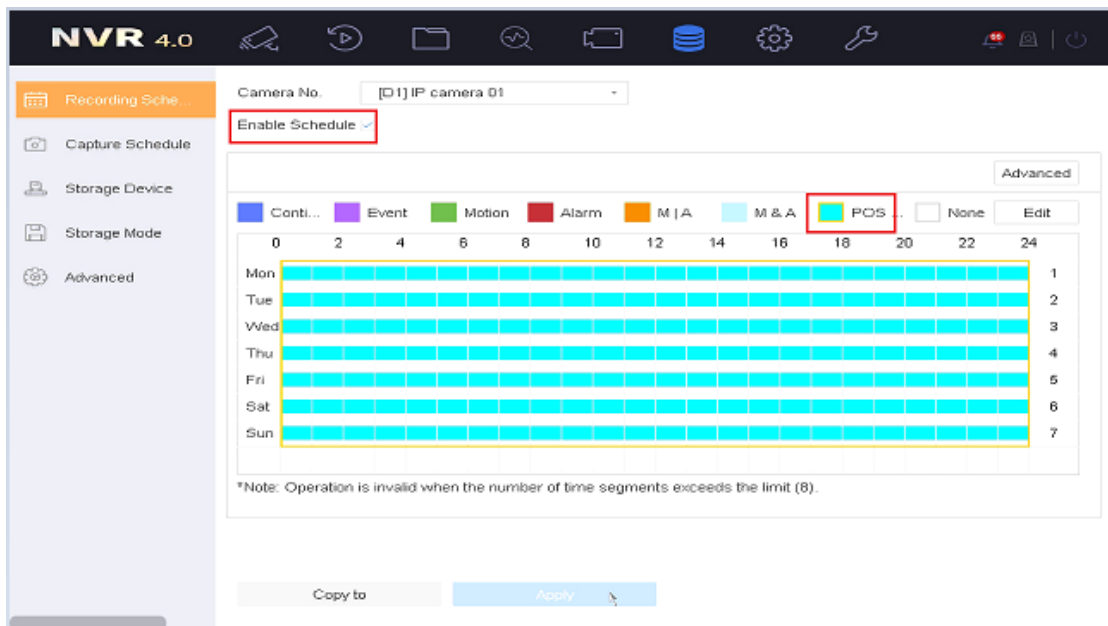


Fig.11 POS local record configuration1

8. Playback the POS channel in the local NVR playback page. The POS record bar is red as an event record. You can also click Disable POS overlay .Please refer to the below picture:



Fig.12 POS Playback

- Main POS parameter introduction;
  - POS Protocol: At present, there are four kinds of compatible protocols: Universal Protocol, EPSON, AVE, NUCLEUS.
  - POS Settings:
    - Overlay Channel: It can show most half of the POS cameras. Select the correct channel, you can overlay the information on it.
  - Connection ways:
    - Network connection (TCP, UDP, multicast, Sniff)
    - Serial Port connection (RS-232)
    - USB connection (USB to 232)
  
- Main POS Configuration tips:
  - POS only overlay to the main stream.
  - All the streams are stored in the disk, there is a control switch when playback, we can choose to show the overlay or not. The overlay is not in the stream.

### 1.1.3 Network POS + NVR

For example: We based on TCP Reception type, NVR will initialize the connection between camera and POS terminal for POS data transmission. The topology as shown in Fig.12Fig.12.



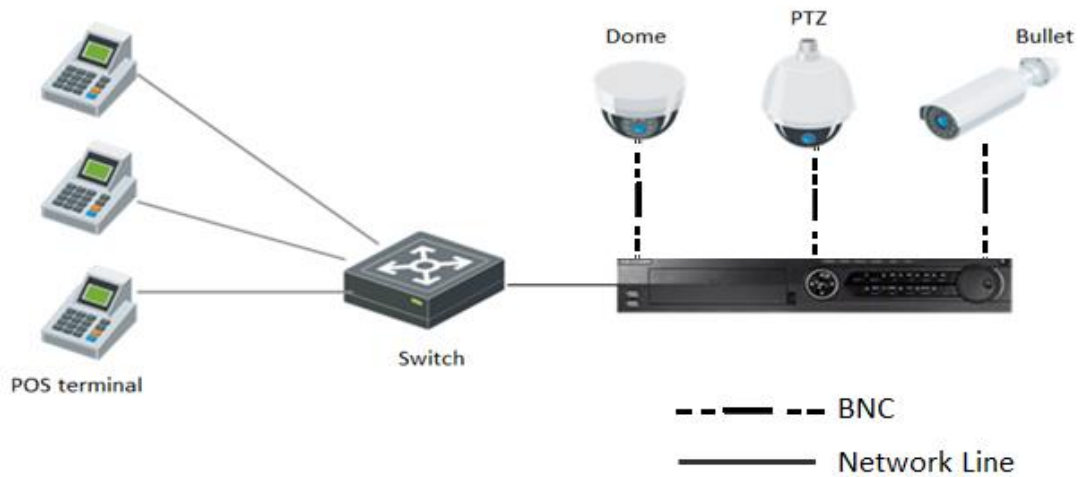


Fig.13 Network POS with NVR topology

### 1.1.4 RS-232 POS (Serial Port) + NVR

To RS-232 POS, there are three connection ways.

1) POS machine connect to the NVR, the topology usually like this below:

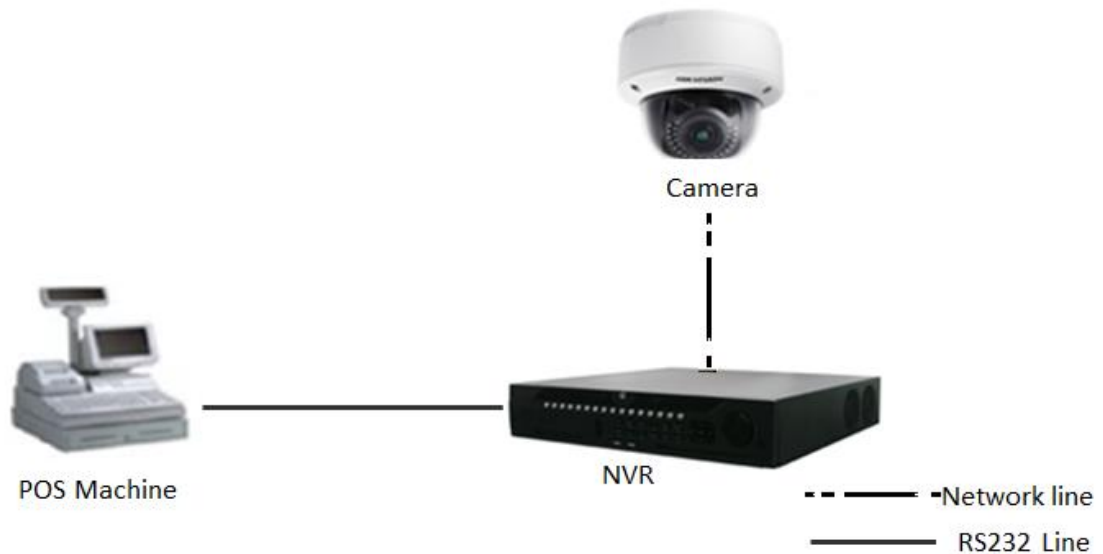


Fig.14 RS-232 POS with NVR topology1

2) Also, we usually will see the IO server in this mode. The POS machine connect to the IO server, the IO server turn 232 signals into network signals, the topology usually like this below:

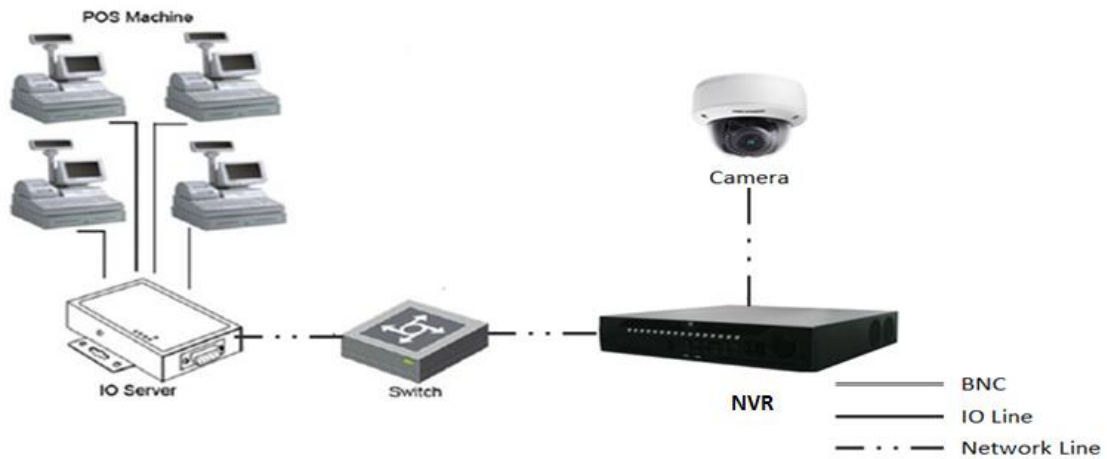


Fig.15 RS-232 POS with DVR topology2

3) Use RS-232 to USB converter, there is an extra RS-232 hardware with the USB to connect to the NVR, the port in converter and POS are one to one correspondence, POS1 should be connected to port1 of converter. The topology like this below:

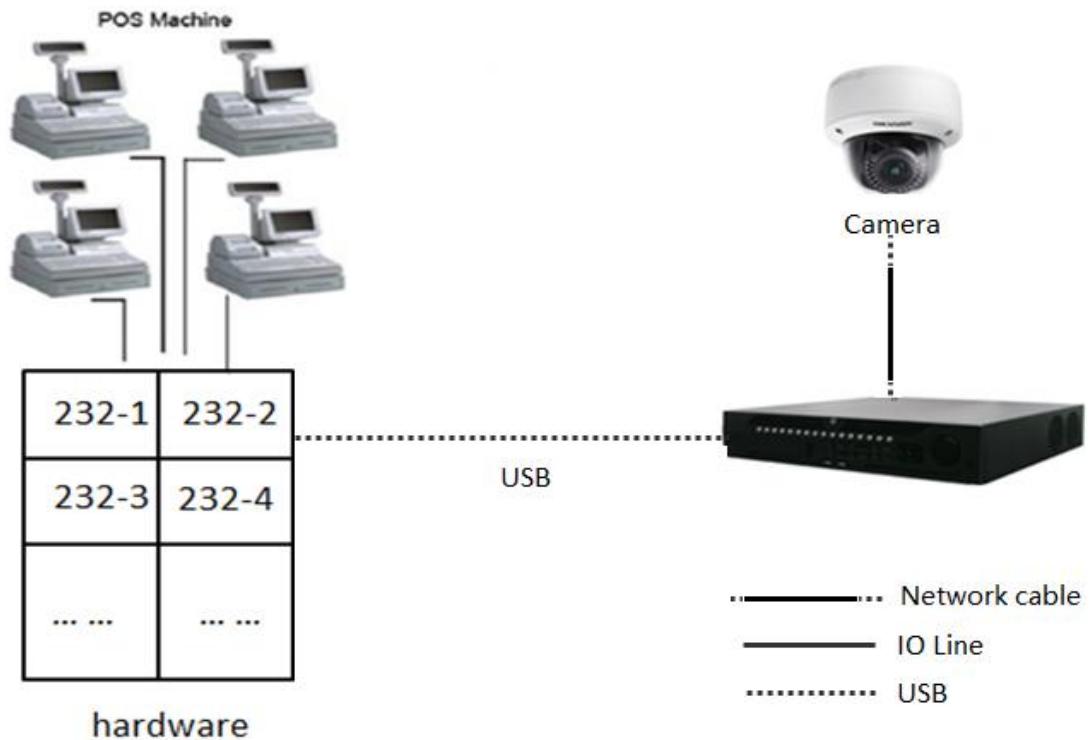



Fig.16 RS-232 POS with NVR topology2

### 1.1.5 Product selection

Table 4 Product List

Product	Product Model	Description	Image
---------	---------------	-------------	-------

NVR	I series NVR	1.Support POS rule configuration 2.Support POS local live view, record local playback 3.Support POS event playback, backup 4. It can support half of the channels to overlay the POS information.	
-----	--------------	--	---

## 1.2 “iVMS 4200+POSNVR+POS” mode

### 1.2.1 Introduce

With high compatibility and wide adaption, the iVMS-4200 can manage analog, IP and hybrid signal devices; it can access to the devices of different network environment namely LAN, WAN, cable or wireless connection. For example, we add the POS to the NVR, then we use the following topology:

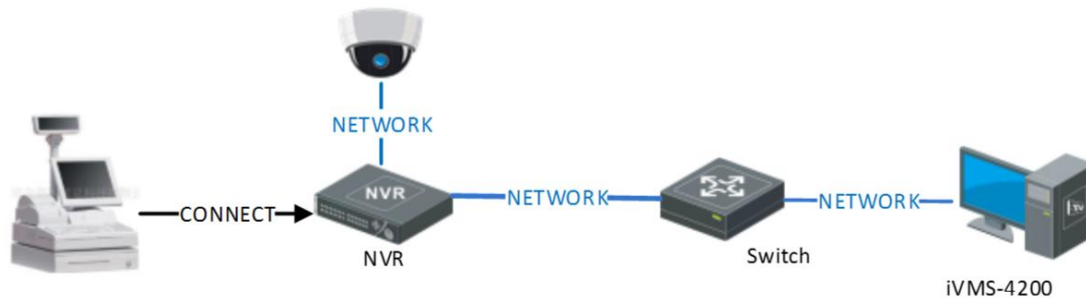


Fig.17 “iVMS 4200+POSNVR+POS” mode topology

### 1.2.2 Configuration

1. Firstly, we need to keep the NVR with cameras online; then, we can add the device in the 4200, do the configuration in the 4200 configuration page.

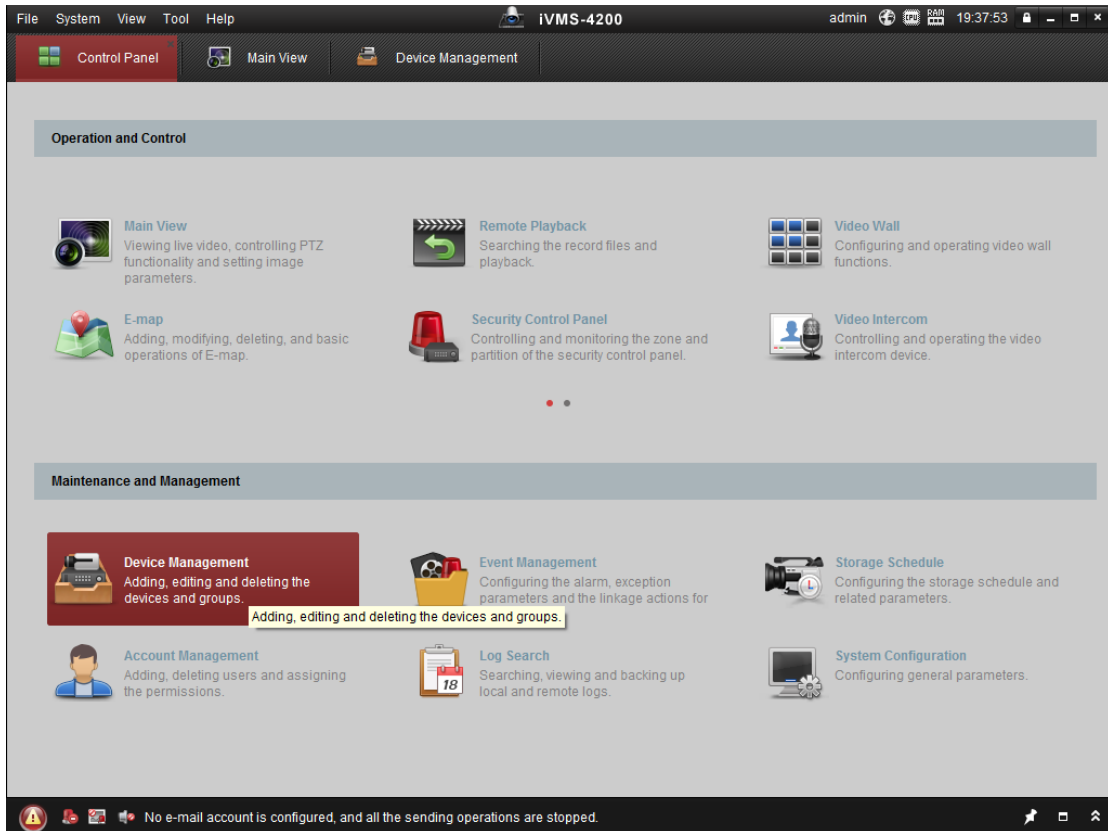


Fig.18 “ivMS 4200 “maintenance management page

2. Select the POS NVR, click to open the device remote configuration page, click the POS tab to set the parameters.

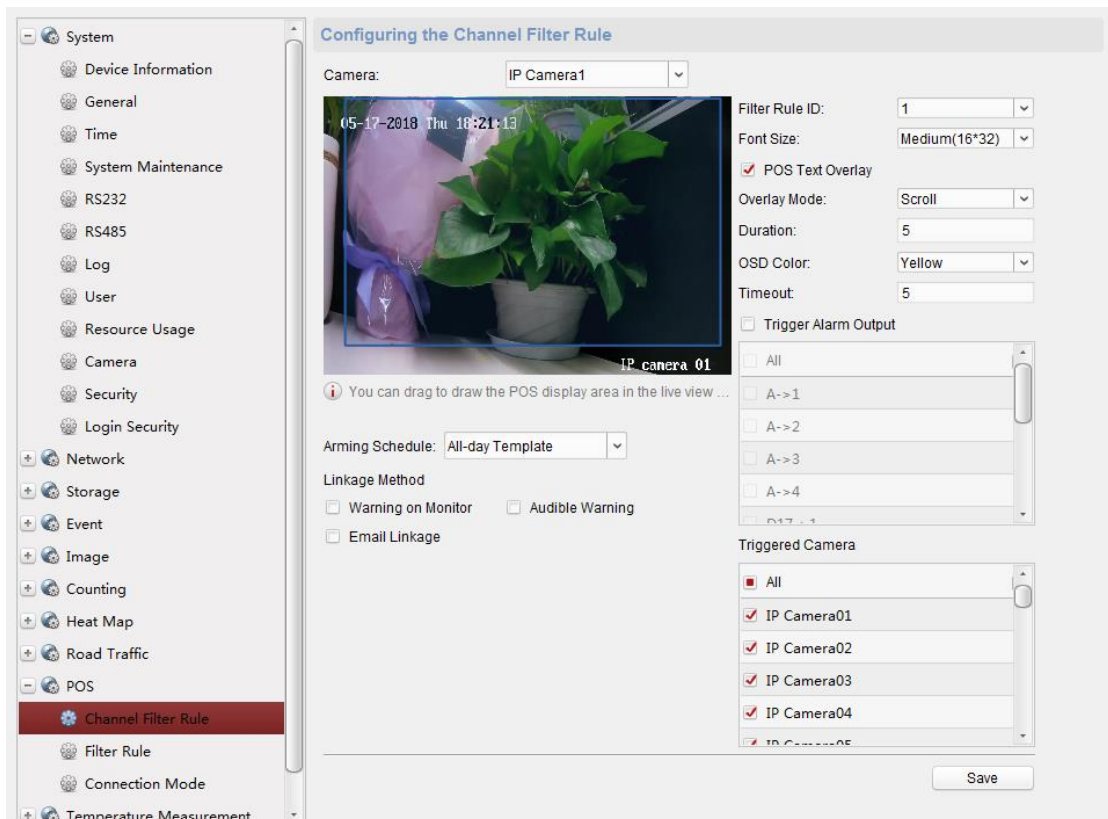


Fig.19 Remote configuration page

### 3. Live view the test overlay.

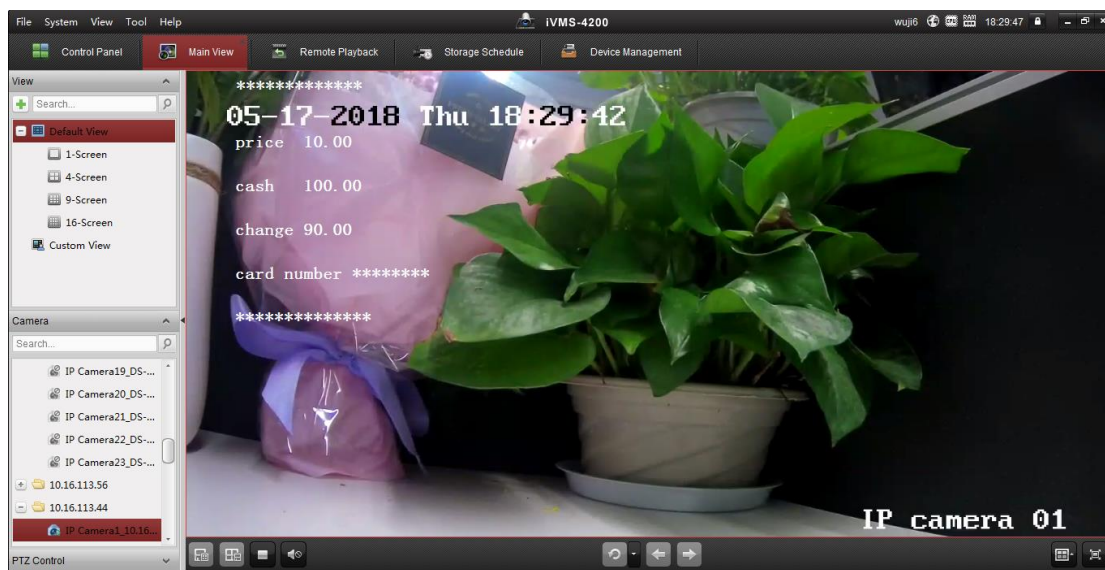


Fig.20 Live view the test overlay

### 4. Record configuration: configure the event record in the storage schedule page.

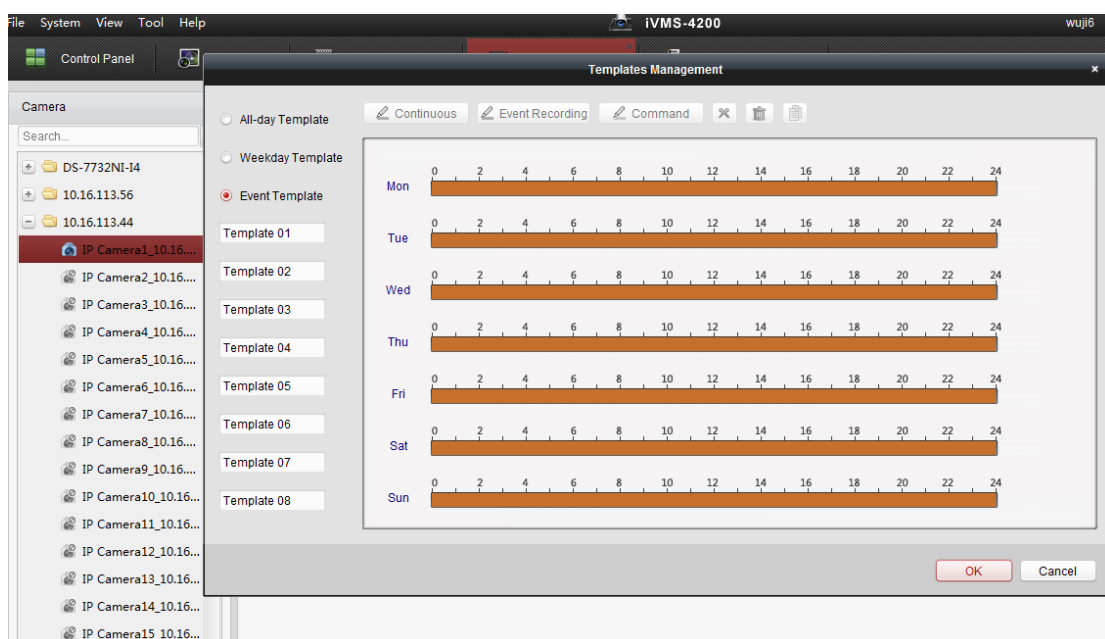


Fig.21 Storage schedule configuration

5. You can search the record by key word, such as: enter the keywords to filter in a period of time. Enter Remote Playback firstly, and then click POS playback. Enter the keywords, click Search, and you can search the POS video including the keywords.

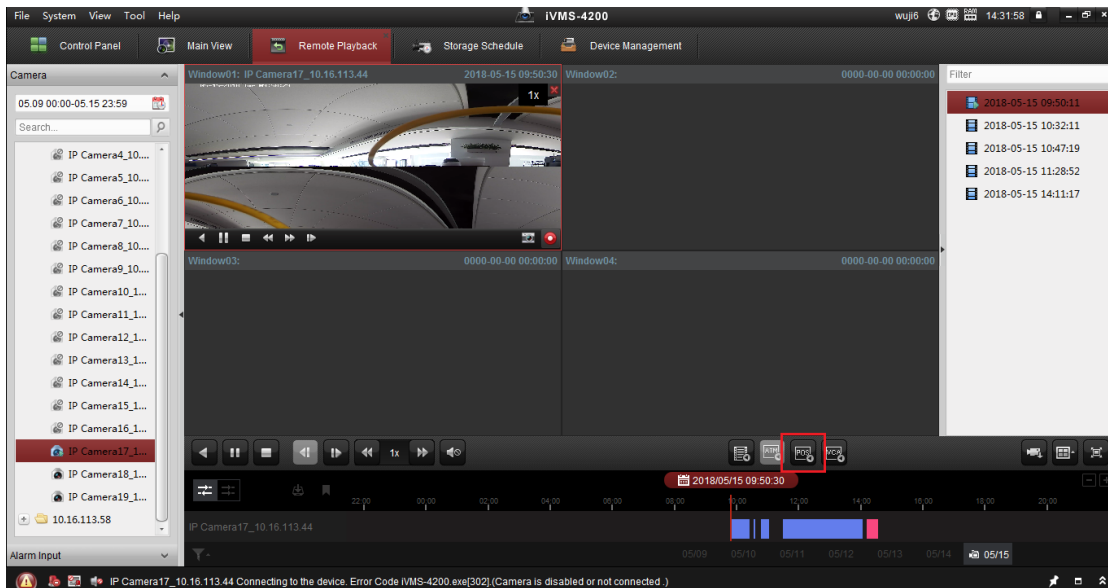


Fig.22 POS playback

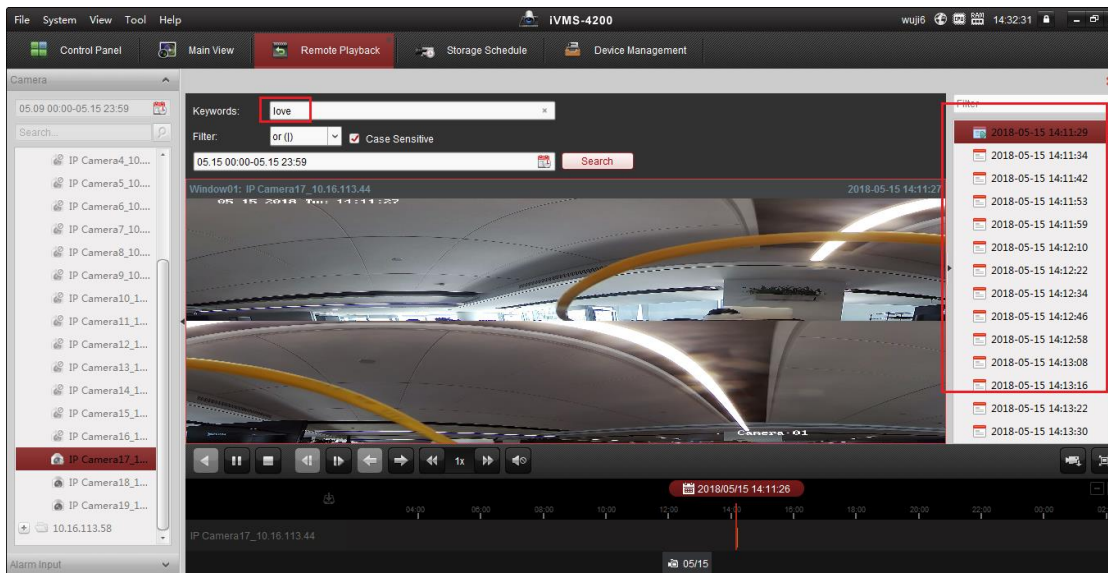


Fig.23 POS keywords playback

### 1.2.3 Product selection

Table 5 Product List

Product	Product Model	Description
iVMS-4200	V2.7.1.4 build20180403	1.Support configure NVR's POS parameter 2.Suppot POS live view and playback 3.Support search POS video