



XPPOS

POS/ATM INTERFACE INTEGRATION MANUAL

2006-09 Edition

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Introduction

A POS system may be integrated to DVR system through direct serial connection or using POS Converter H/W. Through the integration, you can investigate a transaction with transaction data overlaying on a video image, by either live viewing or playing back.

1.1 FEATURES

- Viewing transaction text data overlayed on live and playback images
- Transaction data stored on database file
- Transaction data can be searched by the terms specified with corresponding video image
- Supports up to 16 POS systems (using POS Converter)
- Adjustable text and viewing area size

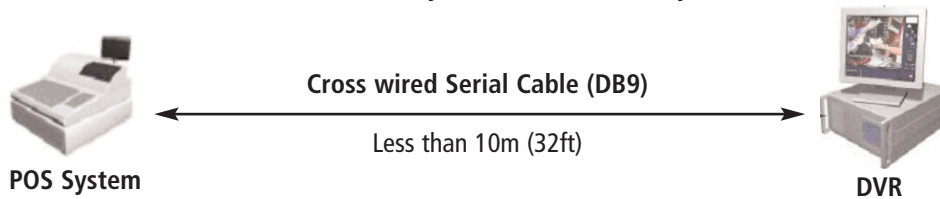
2. Direct POS To DVR Connection

2.1 System Connection

When the physical distance between POS system and DVR is short (less than 10m(32ft)), serial connection (RS232) can be used.

2.2 Connection Diagram

Connect cross-wired serial cable (DB9) from POS system to DVR directly.



2.3 DVR Program Setup

- Run the DVR Program.
- Go to "Control Setup" and check on "POS Enable" and press "Setting".
- Then check on "Serial".
- Set Module to the POS System name available from the list or "General" if not from POS Setup. And set Serial properties (Baud Rate, etc) corresponding to the POS System currently connected.

The screenshot shows the "POS Setup" dialog box with the following settings:

- Communication Type:** Serial (selected), TCP/IP (unselected)
- DVR IP Address:** 210.206.162.65
- DVR Port:** 5000
- Display Setting:** Show (checked)
- Font Setting:** Font Color (empty), Font Size: 14, Font Weight: NORMAL
- Text Area:** X: 80, Y: 10, Width: 200, Height: 230
- A Term Of Saving DB:** 7 Day
- POS Setup:** POS Device: POS 1, Mapping Camera: Camera-1, Module: General, Duration(sec): 5
- TCP/IP:** POS IP Address (empty)
- Serial:** POS Port: COM1, Baud Rate: 9600, Data Bit: 8, Parity Bit: None, Stop Bit: 1

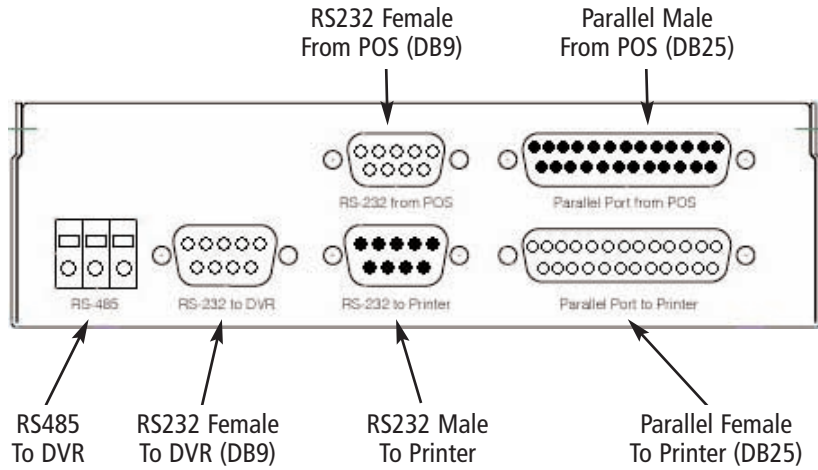
An "OK" button is located at the bottom center of the dialog box.

3. POS To DVR Connection Through POS Convertor

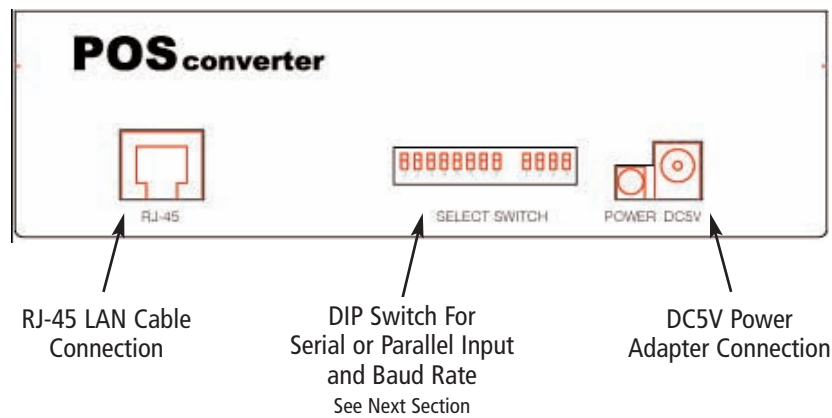
3.1 Overview of POS Convertor

When the distance between POS System and DVR is longer than 10m (32ft) or more than 2 POS Systems are connected, the POS Convertor H/W can be utilized

Front view:



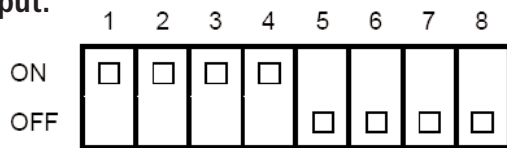
Rear View:



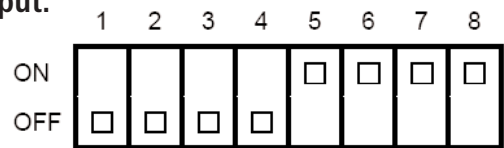
3.1.1 DIP Switch Selection

Input Type Selection (depending on the output type from POS)

Serial Input:



Parallel Input:



Baud Rate Selection: (depending on the Baud Rate which POS has)

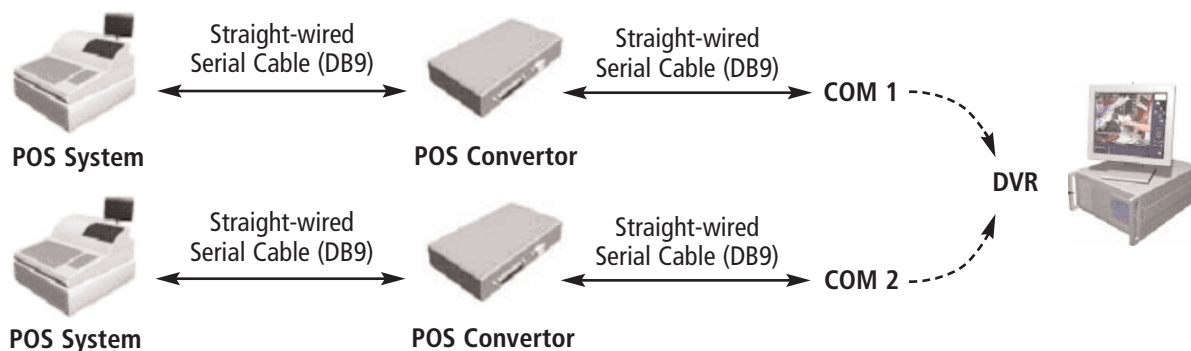
Baud Rate Selection DIP switch diagram with 4 switches labeled 1-4. ON/OFF positions are indicated.

Baud Rate	1	2	3	4
2400bps	OFF	OFF	OFF	OFF
4800bps	OFF	OFF	OFF	ON
9600bps	OFF	OFF	ON	OFF
19200bps	OFF	OFF	ON	ON
38400bps	OFF	ON	OFF	OFF
57600bps	OFF	ON	OFF	ON

3.2 System Connection Through POS Convertor

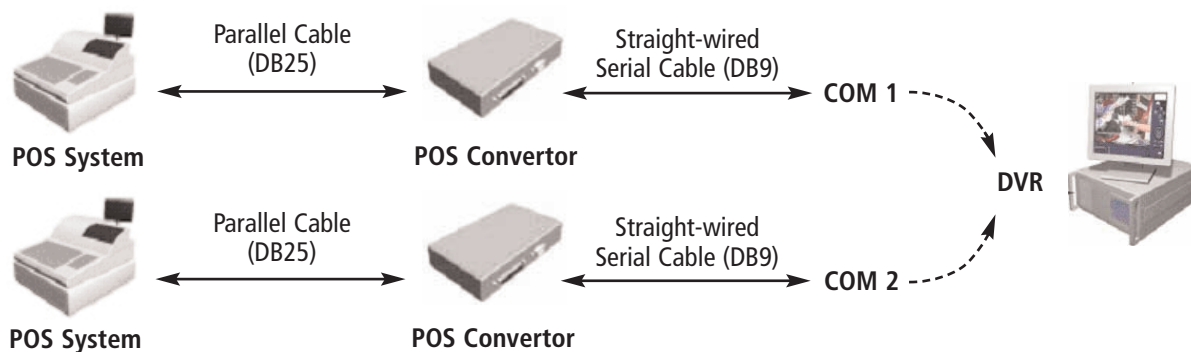
3.2.1 DB9 Input Connection

Physical distance between POS and DVR should be less than 10m (32ft).



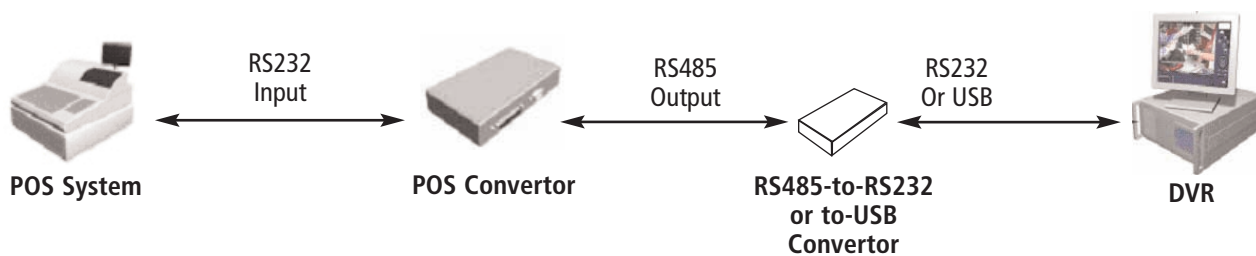
3.2.2 DB25 Input Connection

Physical distance between POS and DVR should be less than 10m (32ft).



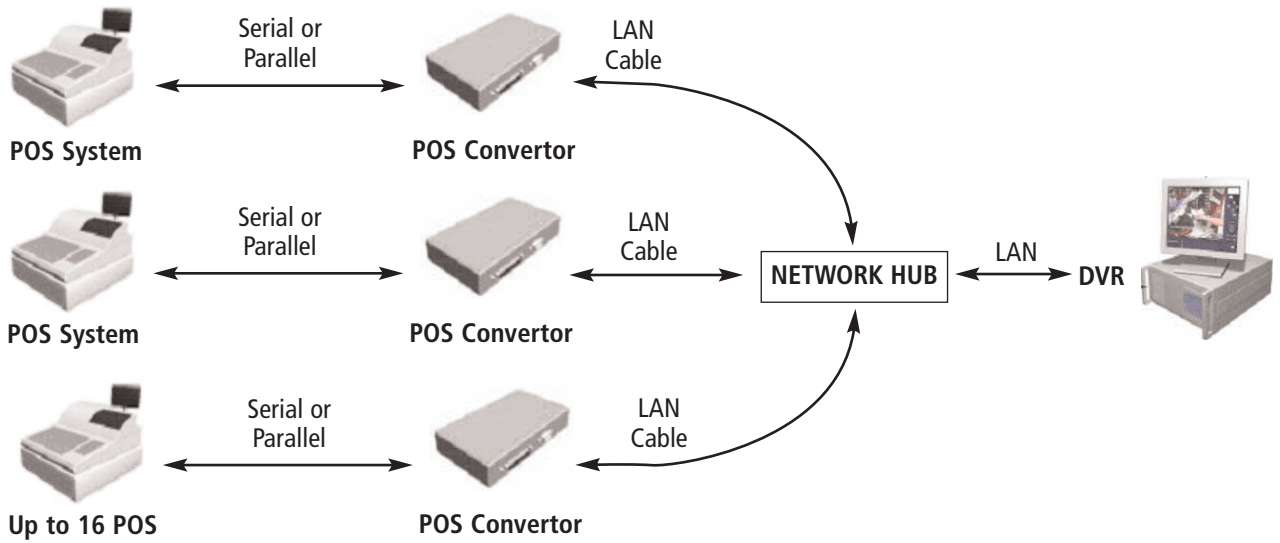
3.2.3 RS485 Output Connection

For distances greater than 10m (32ft).



3.2.4 RJ45(LAN) Output Connection

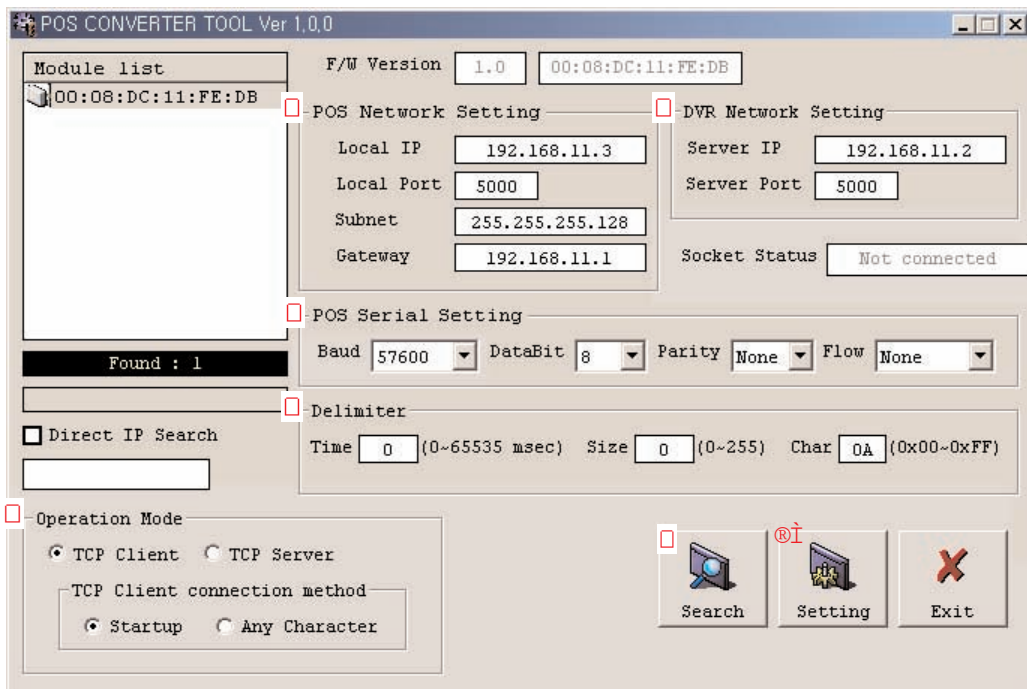
For distances greater than 10m (32ft) or up to 16 POS Systems connection over TCP/IP network



NOTE: IP address must be assigned the POS Convertor. Please refer to the next section.

3.3 Assigning IP Address to POS Convertor

When RJ45(LAN) output method is used to POS Convertor, IP address must be assigned over TCP/IP network. Plug in the POS Convertor to network and run "POSConverter.exe" from CD-Rom provided or from C:\DVSS4\POSConfig and IP configuration tool runs as shown below.



- **Search**

Run Search and MAC Addresses of all POS converters connected to LAN will be listed on Module List.

- **POS Network Setting**

Enter internal IP address (e.g 192.168.100.1), Subnet, and Gateway. Set Port to default 5000.

- **DVR Network Setting**

Enter IP address of DVR. Set Port to default 5000.

- **POS Serial Setting**

Set Baud to 57600, DataBit to 8, Parity and Flow to None.

- **Delimiter: Time, Size, Character**

Enter '0' in Time and Size and type '0A' (hexadecimal) in Character.

- **Operation mode: TCP server, TCP client**

Select 'TCP client' and 'Startup' to connect to DVR.

- **Setting**

After configuration is done, press Setting to apply the changes.

3.4 POS Configuration From DVR Program

Run DVR program. Go to "Control Setup" and check on "POS Enable" and press "Setting".

The screenshot shows the 'POS SETUP' configuration window. It is organized into several panels:

- Communication Type:** Radio buttons for 'Serial' (selected) and 'TCP/IP'. Below are 'DVR IP Address' (210.206.162.50) and 'DVR Port' (5000).
- Display Setting:** A checked 'Show' checkbox. 'Font Setting' includes 'Font Color' (empty), 'Font Size' (14), and 'Font Weight' (NORMAL). 'Text Area' has four spinners with values 10, 80, 200, and 230.
- A Term Of Saving DB:** A dropdown menu set to '7 Day'.
- POS SETUP:** 'POS Device' (POS 1), 'Mapping Camera' (Camera-1), 'Module' (None), and 'Duration(sec)' (5).
- TCP/IP:** A 'POS IP Address' text field.
- Serial:** 'POS Port' (COM1), 'Baud Rate' (9600), 'Data Bit' (8), 'Parity Bit' (None), and 'Stop Bit' (1).

An 'OK' button is located at the bottom center of the window.

3.4.1 Serial Output From POS Convertor

- **Communication Type**

Select Serial

- **POS Setup**

- POS Device / Mapping Camera : POS1 connects to Cam1, POS2 to Cam2etc
- Module : set to the POS System name available from the list or "General" if not
- Duration : text display time on live video image

- **Display Setting**

- Show : check on to view text on live video image
- Font Setting : set font color, size and weight of the text displayed
- Text Area : set text viewing area in live camera view

- **A Term Of Saving DB**

Set the period to keep transaction data in DB. Default 7 days.

- **Serial**

- Set POS Port to the current COM port connecting to POS System.
- Set Baud Rate, Data Bit, Parity Bit and Stop Bit to the same value the POS has

3.4.2 RJ45 (LAN) Output From POS Convertor

- **Communication Type**

Select TCP/IP

- **POS Setup**

- POS Device / Mapping Camera : POS1 connects to Cam1, POS2 to Cam2....
- Module : set to the POS System name available from the list or "General" if not
- Duration : text display time on live video image

- **Display Setting**

- Show : check on to view text on live video image
- Font Setting : set font color, size and weight of the text displayed
- Text Area : set text viewing area in live camera view

- **A Term Of Saving DB**

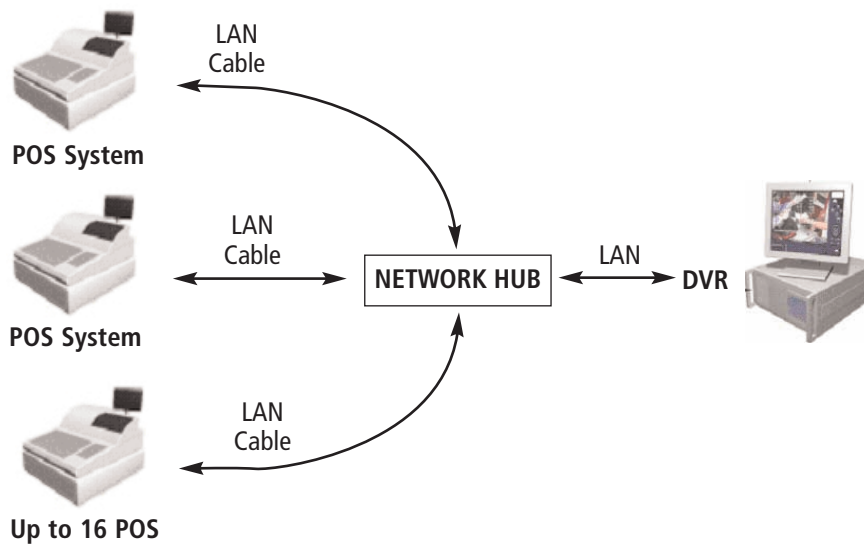
Set the period to keep transaction data in DB. Default 7 days.

- **TCP/IP**

Enter the IP address of POS Convertor (refer to 3.3 Assigning IP Address to POS Convertor)

4. POS To DVR Connection Through TCP/IP

If the POS System has the capability of sending transaction data through TCP/IP to the specified IP address of DVR (normally PC-based POS System), TCP/IP connection method can be used without POS Converter.



As this integration job may require more customizing depending on the capability of POS, please contact your local distributor to get more technical information.

5. POS Transaction Data Search

Run POS Search from Search Mode of DVR Program to search from transaction data DB.

The screenshot shows the POS INVESTIGATER software interface. It includes search criteria, search results, a video image view, and a data calendar.

Terms for Search: SELECT POS: POS 1, MODULE: General, DATE: 2005-05-10 12:55:46 to 2005-05-10 13:55:46.

Search Result:

ID	DATE	C...	ITEM
594	2005-05-10 13:46:59.250	1	START
595	2005-05-10 13:47:00.390	1	POS 01 05/10/2005 13:47
596	2005-05-10 13:47:01.328	1	Item Qty Price Total(\$)
597	2005-05-10 13:47:02.328	1	ORANGE JUICE 1 x 4.80 4.80
598	2005-05-10 13:47:03.562	1	CRAB MEAT 1 x 5.80 5.80
599	2005-05-10 13:47:04.328	1	COFFEE 1 x 1.00 1.00
600	2005-05-10 13:47:05.328	1	GREEN TEA 1 x 2.00 2.00
601	2005-05-10 13:47:06.609	1	MILK 1 x 1.00 1.00
602	2005-05-10 13:47:07.328	1	Total \$14.60
603	2005-05-10 13:47:08.328	1	END
604	2005-05-10 13:47:09.328	1	START
605	2005-05-10 13:47:10.328	1	POS 01 05/10/2005 13:47
606	2005-05-10 13:47:11.328	1	Item Qty Price Total(\$)
607	2005-05-10 13:47:12.593	1	BOOK 1 x 3.80 4.80
608	2005-05-10 13:47:14.500	1	BALLPEN 1 x 6.80 5.80POS
609	2005-05-10 13:47:15.328	1	NOTEBOOK 1 x 1.00 2.00
610	2005-05-10 13:47:16.328	1	PAPER 1 x 1.00 1.00
611	2005-05-10 13:47:17.328	1	Total \$14.60
612	2005-05-10 13:47:18.359	1	END
613	2005-05-10 13:47:19.328	1	START
614	2005-05-10 13:47:20.328	1	POS 01 05/10/2005 13:47

Video Image View: Camera-1, 2005-05-10 13:47:09.734 (x1)

Playback Control: Data Calendar for 2005, 05. The calendar shows the date 10 is selected.