

Merit LILIN Application Note How to Connect ePOS to NVR Touch Series

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Dept : Technical Support, Taipei

Subject: How to connect ePOS transactions capturing for NVR Touch series.

ePOS protocol support list:

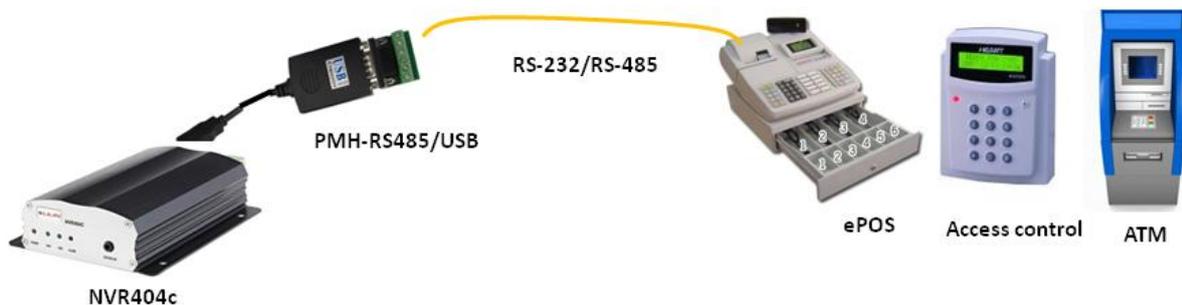
NVR Touch series have the following protocol built-in:

1. EPSON ESC/POS(partial), raw data capturing
2. UTC Standard Mode
3. UTC Enhanced Mode
4. AEDEX
5. ADM788 *3
6. WinPOS, WD304 (30x4 display)
7. PartnerTec, CD-5220 (20x2 display)

System Architecture

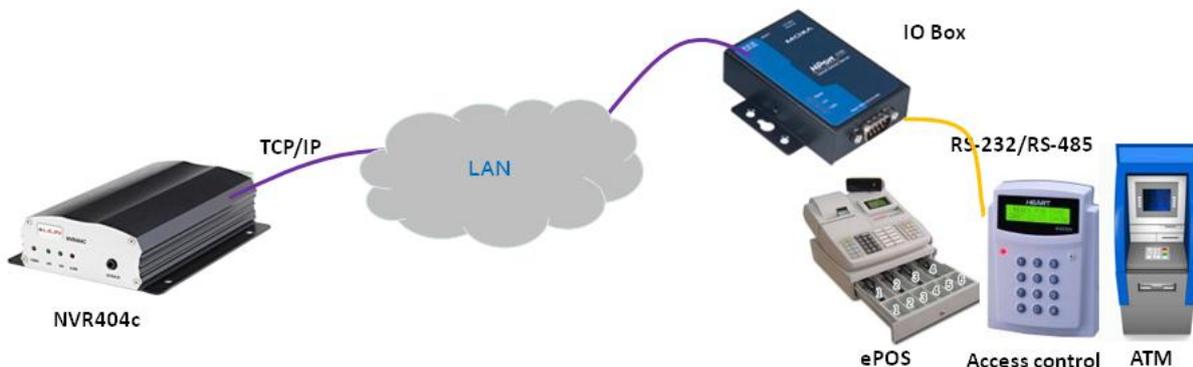
#1 RS-232 communication

LILIN NVR Touch series use RS-232 to capture the transactions from an ePOS, an access control, or an ATM. To connect, please use LILIN PMH-RS485/USB to connect to an ePOS, an access control, or an ATM.



#2 TCP/IP to RS-232 communication

If R TCP/IP to RS-232 network is required, please use Moxa NPort 5110 IO box to capture the transactions. If you can not find Moxa NPort product, contact your LILIN sales for purchasing the device.

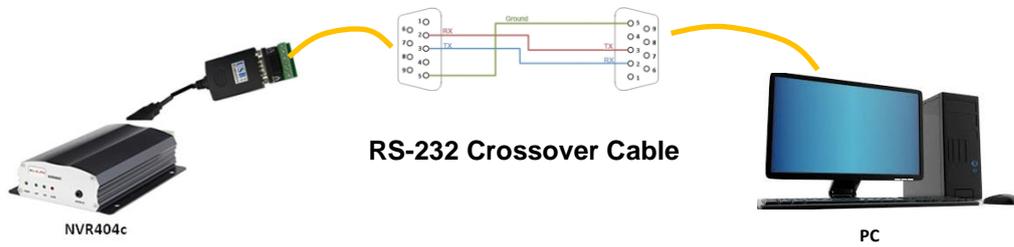


#3 HTTP based integration

See appendix for detail.

The Connection

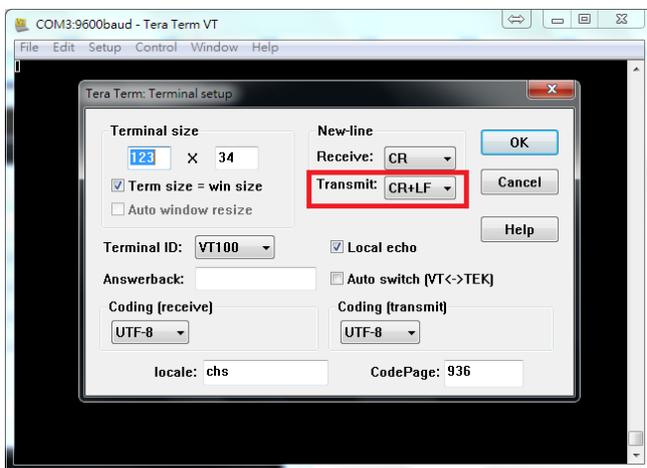
To verify the POS connection, use a PC to communicate an NVR via RS-232 by using Windows hyper terminal or Tera Term software. This example shows the verification process by using Tera Term software.



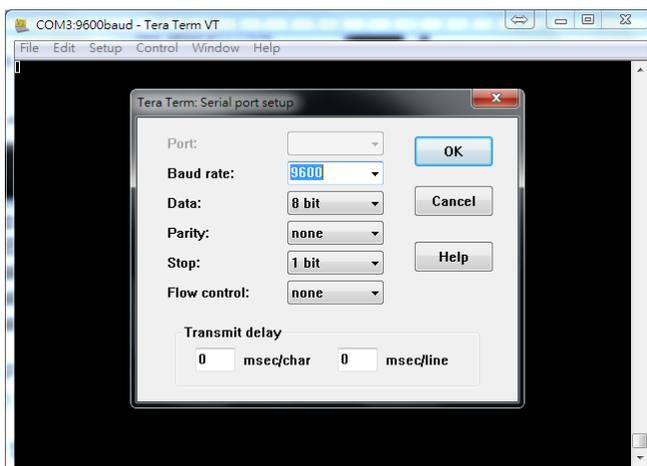
Verify the Connection

To verify the connection, make sure that a PC can connect to NVR Touch series and then start the verification for POS and NVR Touch series.

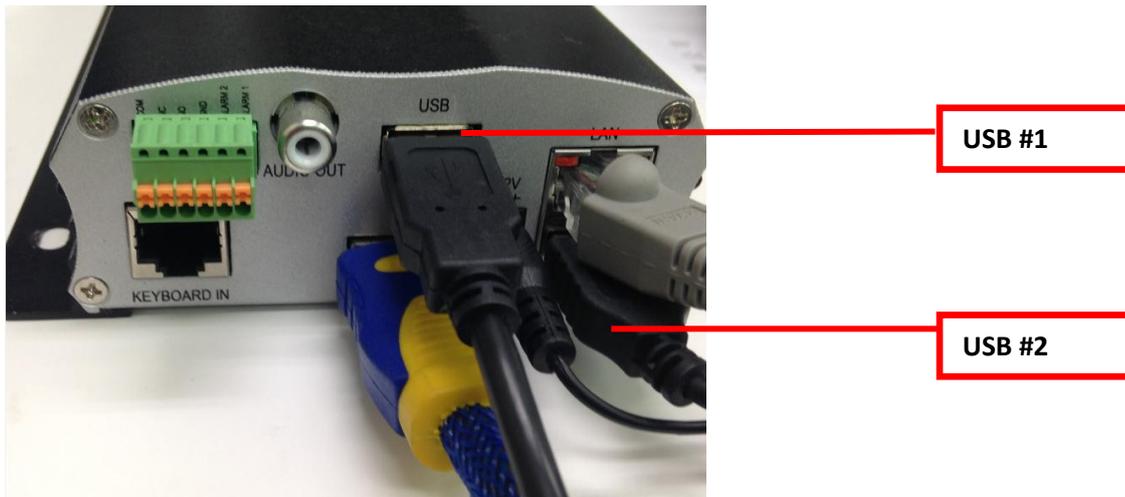
Step #1: To use Tera Term software on PC, please make sure that Transmit is CR+LF.



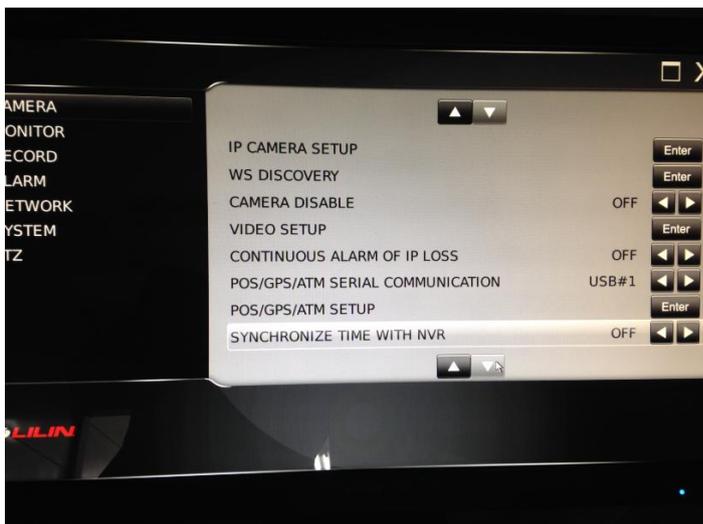
Step #2: Set baud rate, parity, stop, and flow control to 9600, 8 bit, none, 1 bit, and none.



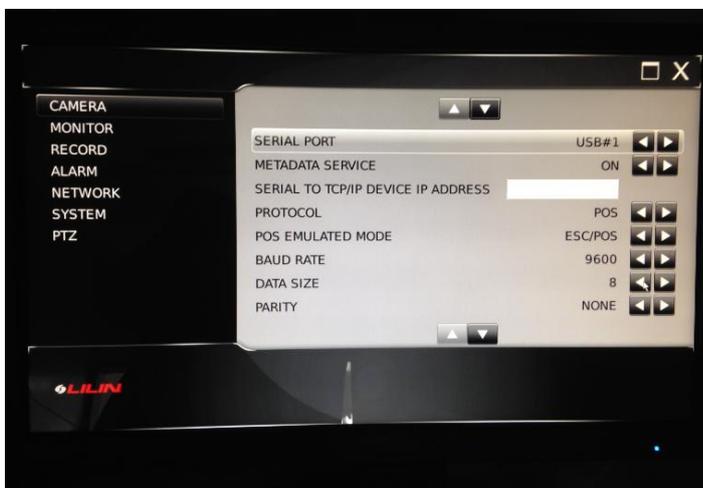
Step #3: At NVR site, the USB-to-RS232 cable is connected to USB #1.



Step #4: At NVR setup menu, select CAMERA->POS/GPS/ATM SERIAL COMMUNICATION accordingly.
Enter the setup menu at CAMERA->POS/GPS/ATM/SETUP.

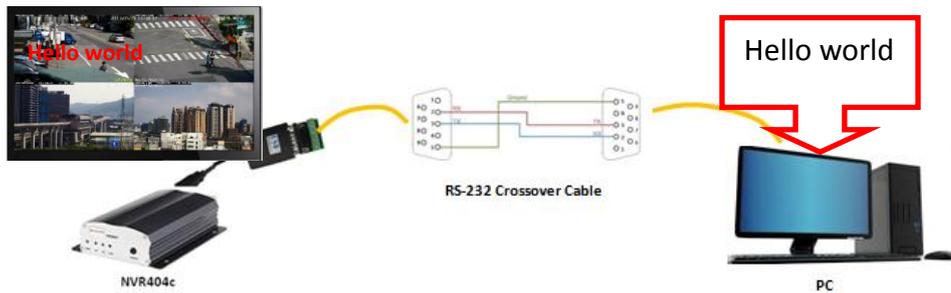


Step #5: Set PROTOCOL to POS and POS EMULATED MODE to ESC/POS option. The baud rate, data rate, and parity accordingly.





Step #6: You can now type in text in PC. The text can be displayed and recorded on NVR Touch series.



Supported Devices

The following USB-to-RS232 devices are supported by NVR Touch series.

USB-to-RS232 cable—LILIN USB to RS-232 cable, PMH-RS485/USB, PL2303 driver

USB-to-RS232 cable—ATake USB to RS-232 cable, AUD-AM09MY105, PL2303 driver

USB-to-RS232 cable—Magic USB to RS-232 cable, PL2303 driver

TCP/IP-to-RS232

Moxa NPort 5110 RJ-45 to RS232 TCP/IP IO box

GPS

Gosget BU-373 GPS

ND-100S GPS

USB-to-RS232 Windows Driver Supported

Visit http://www.prolific.com.tw/US/ShowProduct.aspx?p_id=225&pcid=41 for PL2303 driver.



Appendix

How to Get and Set POS/GPS/ATM/Access Control Transactions for Integration

If your device supports HTTP protocol, you can use HTTP protocol to send or to get the transactions.

Set transaction to NVR Touch series via HTTP

Syntax:

```
http://<serverIP>/sendMetaData?ch=<Ch>&data=<transaction>
```

Example:

<http://192.168.0.111/sendMetaData?ch=1&data=123>

Return:

```
<metadata>
<channel>1</channel>
<alarm_ts>Fri Dec 13 12:44:47 2013</alarm_ts>
<data>123</data>
<result>1</result>
</metadata>
```

Get run-time transaction from NVR Touch series via HTTP

You can also get the RS-232 transaction from POS/GPS/ATM/Access Control data at run-time for the transaction data via HTTP protocol.

Syntax:

```
http://<serverIP>/getMetaData?ch=<Ch>
```

Return: YYYY/MM/DD HH:MM:SS

Parameters:

Parameter	Values	Description
ch=<string>	0~15 All	Channel 1 ~ channel 16 For all channels

Example:

Get meta data from channel #2.

<http://192.168.0.111/getMetaData?ch=1>

```

\r\n
--myboundary\r\n
Content-Type: text/plain\r\n
Content-Description: ch=1 encoding=binary\r\n
Content-Length: 000070 Stamp: 07de0808 00090f0b 00\r\n
\r\n
actuarial9510164761340000000043CWD0804123826000000000000007603180300000005
0000\r\n
\r\n
--myboundary\r\n
Content-Type: text/plain\r\n
Content-Description: ch=1 encoding=binary\r\n
Content-Length: 000072 Stamp: 07de0808 00090f0b 00\r\n
\r\n
9510164761340000000035CWD08041244150000000000000076031807000000050000\r\n

```



```
--myboundary\r\n
Content-Type: text/plain\r\n
Content-Description: ch=1 encoding=binary\r\n
Content-Length: 0 Stamp: 07de0808 00090f0b 00\r\n
\r\n
```

Get historical transactions from NVR Touch series via HTTP

You can also get the RS-232 transaction from POS/GPS/ATM/Access Control data text for the transaction data via HTTP protocol.

Syntax:

<http://<serverIP>/getMetaText?ch=<Ch>?date=<YYYY>/<MM>/<DD>&time=<HH>:<MM>:<SS>>

Parameters:

Parameter	Values	Description
ch=<string>	0~15 All	Channel 1 ~ channel 16 For all channels
Date	YYYYMMDD	YYYY: year MM: month DD: day HH: hour MM: minute SS: second

Example:

<http://192.168.0.111/getMetaText?ch=1&date=2014/04/12>

<http://192.168.0.111/getMetaText?ch=all&date=2014/04/12>

<http://192.168.0.111/getMetaText?ch=1&date=2014/04/12&time=14:30:30>

Return:

```
--myboundary\r\n
Content-Type: text/plain\r\n
Content-Description: ch=0 time=20140804144124 encoding=binary\r\n
Content-Length: 000080 Stamp: 07de0808 00090f0b 00\r\n
\r\n
9510164761340000000043CWD08041238260000000000000760318030000000500009510164761
\r\n
--myboundary\r\n
Content-Type: text/plain\r\n
Content-Description: ch=0 time=20140804144124 encoding=binary\r\n
Content-Length: 000080 Stamp: 07de0808 00090f0b 00\r\n
\r\n
9510164761340000000043CWD08041238260000000000000760318030000000500009510164761
\r\n
\r\n
--myboundary\r\n
Content-Type: text/plain\r\n
Content-Description: endoffile\r\n
Content-Length: 000000 Stamp: 07de0808 00090f0b 00\r\n
\r\n
```