



DS-6001DI Series Network Decoder

USER'S MANUAL

Version 3.0

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Preventive and Cautionary Tips

Before connecting and operating your DVS, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Keep all liquids away from the DVS.
- Please check the power supply to avoid the damage caused by voltage mismatch.
- Please make sure the DVS work in the allowed range of temperature and humidity.
- Please keep the device horizontal and avoid the installation under severe vibration environment.
- The dust board will cause a short circuit after damping; Please dedust regularly for the board, connector, chassis fan etc with brush.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

TABLE OF CONTENTS

Chapter1 Product Description.....	4
1.1 Product Introduction.....	4
1.2 Model Description.....	4
1.3 Main Features	4
Chapter2 Installation Guide	5
2.1 Attentions	5
2.2 Panel Description	5
2.3 The pin definition of physics interfaces	6
2.3.1 PIN definition of RS-232 serial interface	6
2.3.2 PIN definition for RJ-45 connector of RS-485 serial interface	6
2.3.3 10M/100M Adaptive UTP network connect cable making method	6
Chapter3 Parameters Configuration	8
3.1 Network Parameters Configuration.....	8
3.1.1 Hyper Terminal Setup	8
3.1.2 Configuration by Hyper Terminal.....	10
3.2 Configuration by Client Software	12
Appendix I DS-6001DI Specifications	13

Chapter1 Product Description

1.1 Product Introduction

DS-6001DI Decoder is a network decoder that designed especially for the deployment and management of video monitoring system. DS-6001DI has a mature network function, and support a variety of network transmission protocols. It's also with the powerful decoding engine which can support multiple encoding formats.

DS-6001DI adopts embedded system that makes whether device or the system more stable, efficient and safer.

1.2 Model Description

Order Model:

- DS-6001DI: 1 channel video/audio output, support up to 4CIF video resolution;

1.3 Main Features

Network function

- Support Static Network IP Settings.
- Support DHCP Automatic Access to the Network IP Configuration.

User Settings

- Support multi-level user management, enhancing the flexibility of operator's safety management.

Transparent Access System

- Support establishment of Transparent Access between Decoder and front-end DVR.
- Support one local serial establishing multiple transparent accesses which can connect several front-end DVRs simultaneously.

Decoding

- DS-6001DI can support up to 2Mbps bit rate.
- DS-6001DI supports 4CIF resolution one screen decoding, which also can be set as CIF 4 screens or 2CIF 2 screens decoding.
- Support TCP, UDP network transmission protocols.

Development Support

- Provide SDK of decoder operation.
- Provide demo of application software source code for speeding up system development.

Chapter2 Installation Guide

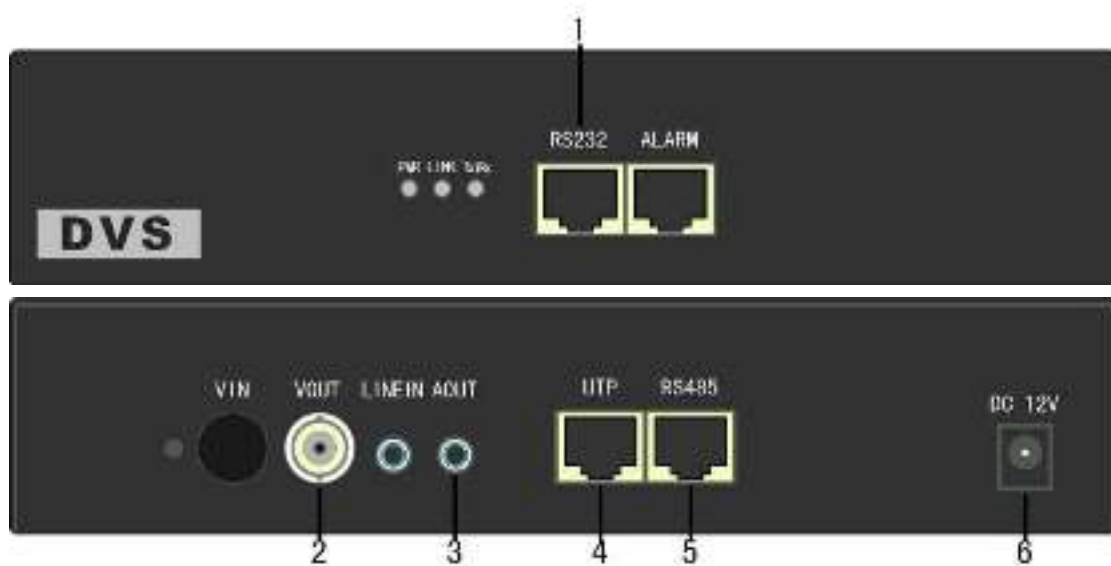
2.1 Attentions

- Please read this guide carefully before installation.
- Be sure to shut down all the related power supplies of equipment.
- Check the voltage of power supply to prevent the device damage due to the voltage mismatching.
- Installation Environment: Do not use it under humidity or with high temperature, maintain good ventilation, avoid blocking the vents.
- Place horizontally, prevent installation occurred in the vibration surroundings.
- Placing containers with liquid such as vase on the device is not allowed.

[Note] Please get in contact with the supplier if there are any questions.

2.2 Panel Description

DS-6001DI:

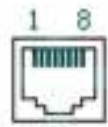


- ① RS-232 Serial Interface;
- ② VOUT Video Output Interface;
- ③ AOUT Audio Output Interface;
- ④ UTP Network Interface (with LAN);
- ⑤ RS-485 Serial Interface;
- ⑥ DC +12V Power Supply Interface.

2.3 The pin definition of physics interfaces

2.3.1 PIN definition of RS-232 serial interface

DS-6001DI decoder has one RS-232 standard serial interface, with RJ-45 connector. Its pin definition is as follows ('I' means input, and 'O' means output):

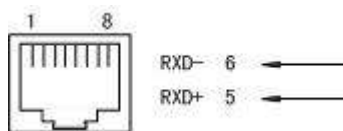


Pin No	Name	I/O	Explanation
1	DCD	I	Carrier Detect
2	RxD	I	Receive
3	TxD	O	Transmit
4	CTS	I	Clear send
5	RTS	O	Request to send
6	DTR	O	Data Terminal Ready
7	GND		GND
8			

Cable connects DS-6001DI to PC, one end of the cable is the 8-pin RJ45 connector and the other is DB9 connector.

RJ45	DB9 (DTE)
DCD 1	4 DTR
RXD 2	3 TXD
TXD 3	2 RXD
CTS 4	7 RTS
RTS 5	8 CTS
DTR 6	1 DCD
GND 7	5 GND
DTR 8	6 DSR

2.3.2 PIN definition for RJ-45 connector of RS-485 serial interface



- RXD+ :Signal Receive +
- RXD- : Signal Receive -

When serial keyboard is connected to RS-485 of DS-6001DI, generally decoder only needs to be receiving order signals.

2.3.3 10M/100M Adaptive UTP network connect cable making method

(1) PIN definition of the direct network cable connecting to switchboard and HUB:



(2) PIN definition of the cross network cable connecting to DVS and host PC:



Chapter3 Parameters Configuration

After hardware installation, firstly some network parameters of the server need to be configured, and then the video parameters configuration through client software.

3.1 Network Parameters Configuration

The parameters which need DS-6001DI decoder to configure are including: Decoder IP address, Subnet mask, Port, etc. You can configure them by Windows Hyper Terminal or NetTerm software.

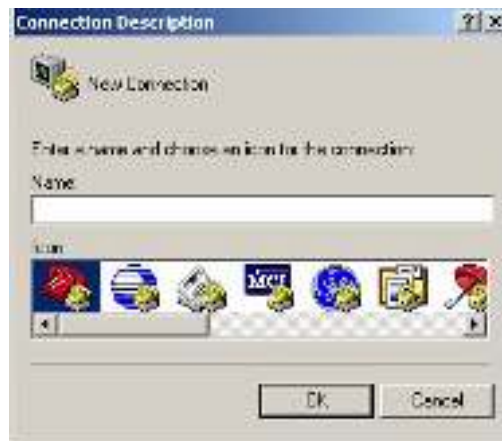
Decoder IP address is mainly configured by Hyper Terminal or RS-232 serial, the default IP address of DS-6001DI is 192.0.0.64. If the decoder IP address is unknown, you can only configure it by Hyper Terminal or NetTerm (serial ports connection is needed). More details are as below:

Please direct connect the RS-232 serial of PC with the RS-232 serial of DS-6001DI decoder before configuration.

3.1.1 Hyper Terminal Setup

Step 1: Enter Hyper Terminal.

Click “Start”→“Programs”→“Accessories”→“Communications”→“Hyper Terminal” in Windows system, and the dialogue box below will appear:



Step 2: Name the connection title and define the icon.

Input a name (e.g. aa), select an icon; press “OK”, and the connection dialogue box will appear.

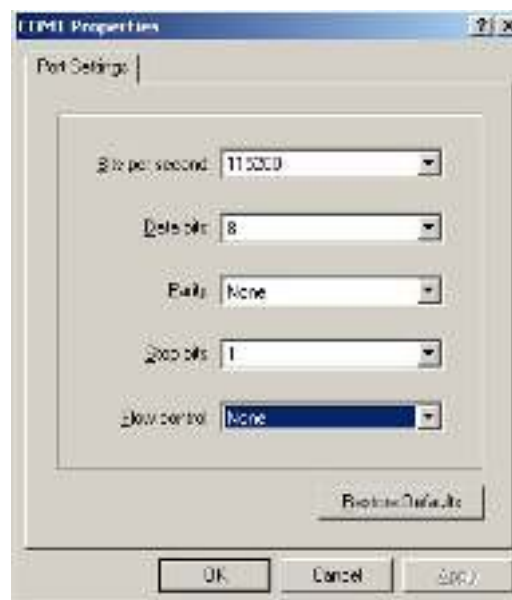
Step 3: Select the communication port.

Select “com1” communication port shown as above, press “OK”, the dialogue box will appear as below.



Step 4: Port Settings

Set port parameters in com1 properties as shown in figure below:



Bit Rate: 115200

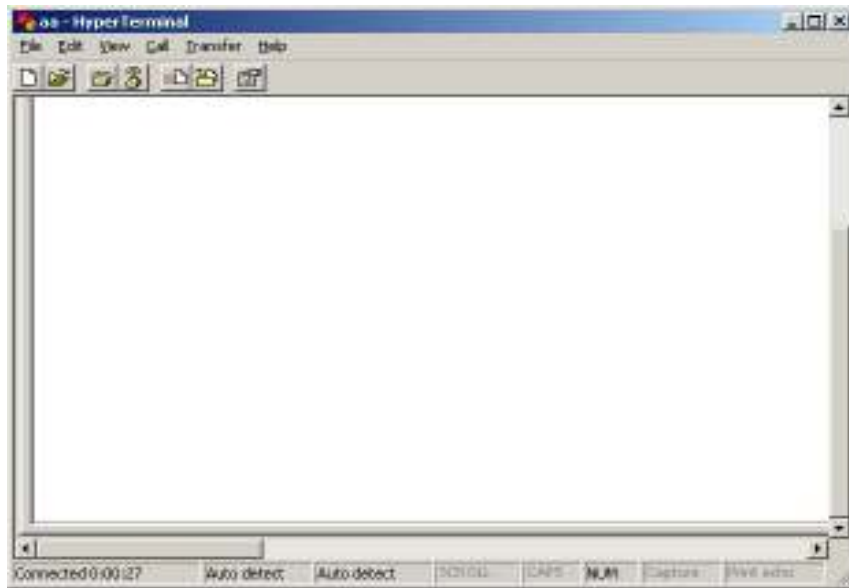
Data Bits: 8

Parity: None

Stop bits: 1

Flow control: None.

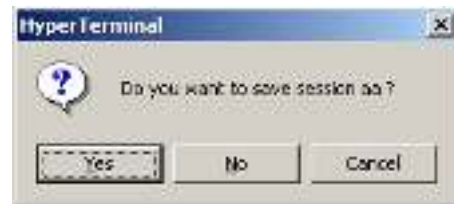
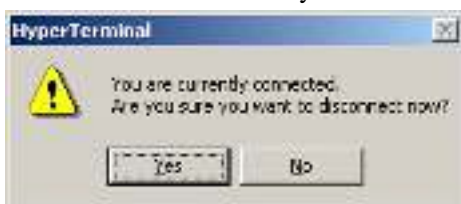
Press "OK" after finishing setting, the Hyper Terminal interface as figure below will appear:



Step: Disconnect and Save Session.

According to the tips, disconnect and save session "aa" for the next time.

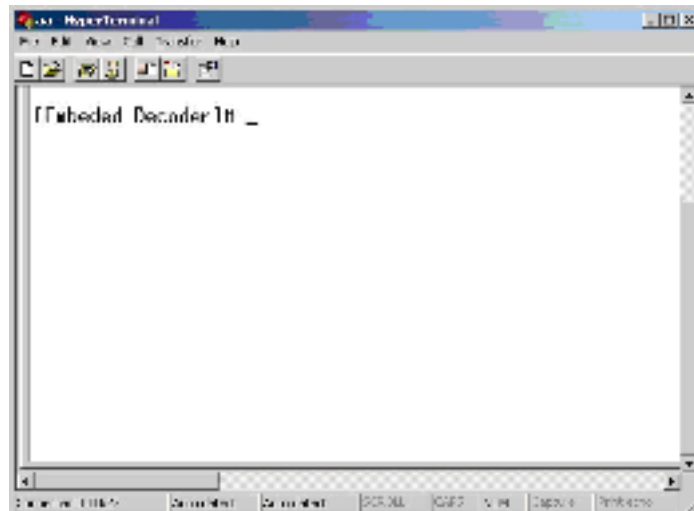
After saving, there will be a new "Hyper Terminal" item established in the program group "Start" → "Programs" → "Accessories" → "Communications" → "Hyper Terminal" and "Connection" names of all Hyper Terminal are included. Here you can see an icon named "aa".



3.1.2 Configuration by Hyper Terminal

Enter Hyper Terminal

Click "Start" → "Programs" → "Accessories" → "Communications" → "Hyper Terminal" → "aa", then the Hyper Terminal interface will appear as figure below. Type Enter, and the prompt "Embedded Decoder" will appear which means connection between RS-232 interface of PC and RS-232 interface of DS-6001DI is established successfully by Hyper Terminal. The following operation commands are to accomplish the parameters setup in the prompt.



help

Type “help” and enter, then the list of configuration commands will be seen as below:

- help: console help command, Syntax: help “Shell command name”, Note: The shell command name is a string, it needs double quotation marks
- ifshow: Show information of Ethernet.
- getIp: Show the configuration of network;
- setIp: Configure the network;
- ping: ping remote host IP;
- reboot: reboot device and save current user settings;
- linksur: link to remote surveillance device;
- stopdec: stop a decoder channel;
- version: show version information.

More details below about usage of getIp, setIp commands.

getIp

Function: Show the configuration of network.

Format: getIp

Note: Case-sensitive.

```
[Embedded Decoder]# getIp
Network interface name:secEnd0
Physical Address:00-40-36-36-7A-26
EthMediaType:5
DHCP:0
IP Address          :192.0.0.64;
Subnet Mask         :255.255.255.0:0xffffffff00;
Broadcast Address   :
Default Gateway:192.0.0.200
First DNS Server:0.0.0.0
Second DNS Server:0.0.0.0
PC Client Port:8000
DHCP Server:0.0.0.0
DHCP Lease Obtained Time:2000/00/00 0:00:00
DHCP Lease Expires Time:0hours

See also "ifconfigshow" or "ifshow"
value = 0 = 0x0
[Embedded Decoder]#
```

setIp

Function: Configure the network. System will shut down access to DHCP mechanism automatically and switch to static network configuration mode.

Format: setIp "IP address", "Subnet Mask", " Default Gateway", " Main DNS", "Stand-DNS", "Command Port", "http P"

Note: Case-sensitive.

E.g. if you need to set IP address: 192.168.0.8, Subnet Mask: 255.255.248.0, Gateway: 192.168.0.1, input setIp "192.168.0.8", "255.255.248.0", "192.168.0.1", and type Enter to finish setting.

If you just want to set IP address of decoder: 192.168.0.188, Subnet Mask: 255.255.250.0, then input setIp 192.168.0.188: 255.255.250.0, and type Enter to finish setting.

Note: Case-sensitive, parameters need to be separated by commas.

```
[Embedded Decoder]# setIp "192.168.0.8","255.255.248.0","192.168.0.1"
See also "setnet"
value = 0 = 0x0
[Embedded Decoder]# System configurations automatic saved!
```

```
[Embedded Decoder]# setIp 192.168.0.188:255.255.250.0
ipstr:192.168.0.188
submask:255.255.250.0
value = 0 = 0x0
[Embedded Decoder]# System configurations automatic saved!
```

3.2 Configuration by Client Software

Please confirm before configuration:

- PC and decoder are connected by network line;
- You have already got IP address of the decoder by Hyper Terminal and confirm that you can use PING command.

Note: Please refer to the corresponding sections of client software for more details.

Appendix I DS-6001DI Specifications

Model	DS-6001DI
Video compression	H.264
Audio compression	OggVorbis
Decode resolution	QCIF/CIF/2CIF/DCIF/4CIF
Video output	1 channel
Video output interface	BNC(1.0Vp-p,75Ω)
Frame rate(per channel)	4CIF: 25(P)/30(N) fps
Stream type	Video stream/Video & Audio stream
Audio output	1 channel
Audio output interface	RCA (Linear, 600Ω)
Communication interface	1 RJ45 10M/100M Adaptive Ethernet port, 1 RS-232 interface, 1 RS-485 interface
Power supply	DC 12V
Power consumption	10W
Working humidity	10%~90%
Dimension (mm)	235(W)*136(D)*43(H)
Weight	2Kg