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### Preparation

Devices: Switch DS-3E1310P-E, ATM DVR DS-8104AHQI-K4 firmware V3.5.57. Bulid 181203 Software: NetAssist, Serial Port Debug Assistant

NetAssist.exe 串口调试助手V2.2. exe

In this case, we will test two work modes of ATM configuration, Network interception and Serial Port Interception.

# How to use ATM DVR

# 1. Network Interception

## 1.1 Network Topology



### **1.2 Switch configuration**

1) Network cable connection

For example, use network cable to connect the first laptop (TCP server) with port1, then connect the second laptop (TCP client) to port3, and connect ATM DVR to port2.

2) Switch configuration

Set the switch configuration below.



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HIKVISIO	$\mathbb{N}^{\times}$					ᆂ admin	E• Logout
Administration	Port Configuration Port Mirrorin	g Statistics Rate Limit			Help		
Port Management	Mirroring Port				-		
Link Aggregation	Mirroring Destination Por	2 •	DVR po	ort	🗄 ОК		
Network	Sniffer Mode	Egress & Ingress •					
Extension	Source Port		Mirroring Stat	e			
PoE Management	1		V	TCP server port			
	2			TCP client port			
VLAN Management	3		V	rer client port			
Device	4						
Management	5						
Configuration	6						
Management	7						
	8						
	G1/G1-F						
	G2/G2-F						

# 1.3 Network Setting configuration

## 3) IP setting

First, disable two PC wifi. Then, set the laptop's IP address as showing in the picture below.



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$\rightarrow$	🗸 个 💆 > 控制面板 > 角	所有控制面板顶	> 网络连接		~ U	搜索"网络连接"		۶
织▼	禁用此网络设备 诊断	◎ 以 间这个连括	<sub>太网 屋性</sub> Internet 协议版本 4 (TCP/IPv4) 属性	×			• 🔳	Ì
	WLAN hikvision.com Intel(R) Dual Band W	网緒 Virele 【	常规 如果网络支持此功能,则可以获取自动指 络系统管理员处获得适当的 IP 设置。	派的 IP 设置。否则,你需要从网				
		此 日 日 日 日	<ul> <li>● 自动获得 IP 地址(Q)</li> <li>● 使用下面的 IP 地址(S);</li> <li>IP 地址(I);</li> </ul>	192.168.0.123				
		8 9 1 8	子网掩码(U): 默认网关(D):	255.255.255.0         192.168.0.254				
		8 8 <	<ul> <li>自动获得 DNS 服务器地址(B)</li> <li>●使用下面的 DNS 服务器地址(E):</li> <li>首选 DNS 服务器(P):</li> </ul>	· · ·				
		-1	备用 DNS 服务器( <u>A</u> ):	· · ·				
项目	选中1个项目		□ 退出时验证设置(L)	高级(⊻)				

4	大図 尾性		1		-
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E C	<ul> <li>○ 自动获得 IP 地址(Q)</li> <li>● 使用下面的 IP 地址(<u>S</u>)</li> </ul>				
	IP 地址():         192           子网掩码(U):         255	168 . 0 . 21 255 . 255 . 0			
E	默认网关( <u>D</u> ): 192	168.0.254			
0	○ 自动获得 DNS 服务器地址(B)				
	●使用下面的 DNS 服务器地址(E):				
	首选 DNS 服务器(P):				
	备用 DNS 服务器(A):	· ·			





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#### **ATM DVR IP address**

Now that: TCP server IP 192.168.0.123-Port 1, TCP client IP 192.168.0.21-Port 3, ATM DVR IP 192.168.0.64-Port 2



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### 4) NetAssist software configuration

Open NetAssist software on laptop 1(TCP Server), and set the configuration as below. Do the same job on laptop 2 as the picture below.

After that, press *Connect* on laptop 1, then press *Connect* on laptop 2.



Laptop 1(TCP Server)



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Laptop 2(TCP Client)



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# 1.4 ATM DVR configuration

5) Set Network interception IP address as TCP Server IP. Save and reboot.



**Network Interception IP** 

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### Data packet: set start identifier AZ, and end identifier BY, ASCII format.

	- bit	1¥9-×sq5589	Statement of the local division of the local	and the second s		
		State of the second	and the second		国内DZ_袁爽力_00	1 Simoli
	-		Configuration			
200	General	ATM Settings				
*	Network		ATM 1			
٨	Alarm					1.00
۰	Live View	Data Packet Trading Info	ATM Settings Trigger Channel			
	Exceptions	Packet Start Identifier	AZ			
**	User	ASCII Packet End Identifier	● HEX BY	I		
	ATM	Data Packet Filter	HEX			
		Enable Contain the Contact				
		ASCI				
		Content Position	HEX			
				OK	Cancel	
多	么忙 — — —				Apply B	ack
不i	能忘	PC	The state of the second		212	
			SAMSUNG	13: Qaz 45x123	Salahit man	1
	Son and the state of the					AUTO

Data Packet

Trading Info-

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Card No: location Fixed Offset25, Length 6, Overlay Position 32 32

	The second s	Configuration	
尊 General	ATM Settings		
ぷ Network	ATM Enable ATM	ATM 1	
🎄 Alarm	CONTRACTOR OF THE OWNER OF	ATM Settings	
	Location		
	Fixed Offset 2	:5	
at Lines	Token Offset     Token Value		
24 Oser	ASCI	HEX	
ATM ATM	Multiplier		
		OK Cancel	
A Live View			Apply Back
官山作多么忙 自由人 <b>不</b> 從中	PC	SAMEUNO CON	

Location



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Length



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**Overlay Position** 



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Trade Account: location Fixed Offset58, Length 12, Overlay Position: 64 64

Serial No: location Fixed Offset92, Length 4, Overlay Position: 128 128

**Trigger Channel:** Set the trigger channel as showed in the picture below. Time delay means the time which overlay information will last.

**Overlaid Position:** Set the position by custom

Save the configuration and reboot.

NUT IT THE REAL									国内DZ_1	袁爽力_001	
尊 General	ATM Settings			Confi	guration			Martin S.S.			
ಹಿ Network				ATM 1							
♠ Alarm	Data Packet Tra	ding into		ATM s	Settings						
Live View	☑ Analog	■A1	A2				-				
User		<b>⊠</b> A7	Ma8 M			MA AS	<b>⊠</b> A6				
ATM			ĸ								
	Enable Time	Dolou									
	Time delay	Delay	10								
						c	рк	Cance			
Live View			-					A	pply	Back	_
2 / ht		-		-							

**Trigger Channel** 



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# 1.5 Sending database

### Sending data

And you will see the overlay information on DVR local preview.



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USR-TCP232-Test RS	232 to Ethernet Convert tester				
e(F) Options(O) He	lp(H)				
OMSettings	COM port data receive		Network data receive		NetSetting
PortNum COM1			Receive from 192, 168, 0, 123	10000 ] :	(1) Protocol
laudR 115200 -			AZ1234567890123456789012345678 1234567890123456789012345678901	901234567890	TCP Client
			345678901234567890BYAZ1234567890	123456789012 901234567890	(2) Server IP
ataB 8 bit 👻			123456789012345678901234567890	123456789012	192.168. 0 .123
			345678901234567890123456789012	34567890BYAZ	(2) Server Port
			345678901234567890123456789012	345678901234	10000
🖲 Open			5678901234567890BY		Disconnect
					DISCONNECC
ev Uptions					Recv Options
Add line water					Receive to file
Receive de HFX					Add line return
Beceive Pause					Receive As HEX
					Receive Pause
<u>citai</u>					Save Clear
d Options					-Send Options
Data from file					□ Data from file
Auto Checksum					T Auto Checksum
Auto Clear Input					T Auto Clear Input
Send As Hex			1	n ( 05070	☐ Send As Hex
Send Recycle			LocalRost[192.166. U .21	tort 1002/2	Send Recycle
iterval 1000 ms	Jinan USR Technology Co.,	Send		Sond	Interval 1000 ms
oad <u>Clear</u>		2614		Send	Load Clear
Readyl	Send: 0 Becy: 0	Beset	Let Restal	Sand: 0	Paper 212 Dave

**TCP** client



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CARD : 456 10-15-2019 AMOL	bra bra bra seq5587 5789 5789 5789012345678.00 Serial ND:1234			-	国内DZ_袁爽力_0
	NOV	IDEO			NO VI
an a	and the second sec	Camera (	•		NO VID
不管工作多么忙信息安全不能忘		IDEO NO V			Via Auto

### **Overlay information**

### Explanation

AZ12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890BY

#### Card No:

location Fixed Offset25——Start from"A", counting the 26<sup>th</sup> character Length 6——"456789" Overlay Position 32 32——Coordinates



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### 2. Serial Port Interception

### 2.1 Device topology

1) Connect the PC with ATM DVR through serial port cable, and open serial port debug assistant software, Check the RS232 setting and set COM 3, baud rate as show in the picture below.





Serial Port debug assistant software



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### RS232 setting

- 2) In serial port Interception mode, the ATM configuration is the same with Network Interception Mode.
- 3) Before each test, reopen the serial button.
- 4) Sending data

"AZ123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890BY"

5) And you will see the overlay information on DVR local preview.

듺 串囗调试助手 SComAssistant V2.2 For WIN9X/NT/2000	_		×
串口       COM3 ▼         波特率       1152C ▼         校验位       NOME ▼         数据位       8 ▼         停止位       1 ▼			p
有空接收区     接收区       停止显示        ● 自动有空        十六进制显示        保存显示数据     更改       C: \COMDATA			
清空重填 发送的字符/数据 「十六进制发送 <u>手动发送</u> 自动发送 (周期改变后重选) 自动发送 (周期: 1000 変秒 选择发送文件 还没有选择文件 发送文件	3456789012 MAIL	23456789 WEB TW 关	OBY 、 ) ) )
山 STATUS: COM3 OPENED, RX:0 TX:208 计数清零	新期 72	ECH	/A

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	版本	修订人		修订记录		
	V1.0	陆翔		2019.10.15		
	V2.0	陆翔		增加串口侦听模式模式		
				2019.12.06		

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