Supporting Documents for Chassis connected to IPC

Many of our customers have asked if they can install their own software on our 3399. However, we do not open our 3399 to our customers, but, we can add industrial computer for our customers' usage.

1. Overall device diagram



2. The environment configuration

For the customer, we have already configured it and can skip this step.

2.1 Configuring the IPC

For the first configuration of IPC, the computer and IPC has to be connected through the network cable. Configure the IP of the IPC and PC separately, and the IPC is configured through HDMI external display, as follows (left for IPC and right for PC)



Q Settings			Network		S 0 frame 0 7.9 KB)	
🔋 Wi-Fi		Ethernet (enp1s0)		+	编辑 IP 设置	
Bluetooth	-					
Background	Cancel	Wired		Apply	*其中某些设置已田组织隐藏或管理。	
Dock	Details Identity	14 IPv6 Security		+	手动	
Notifications	IPv4 Method	Automatic (DHCP)	 Link-Local Only Disable 		IPv4	
Q Search		- Manual	Obisable	+		
🖾 Region & Language	Addresses Address	Netmask	Gateway		• •	
O Universal Access	192.168.22.1	255.255.255.0		0	IP 地址	
				7 0	192.168.22.11	
🖐 Privacy	DNS		Automatic ON		子网接码	
< Sharing	Senarate ID addrerrer u	ith comme		_	3 133683	
€ ♥ Sound	Separate in addresses in	ich commes			255.255.255.0	
C Power	Routes	Netmask	Automatic ON Gateway Metr	ic	网关 网关	
🗗 Network				0		
Po Devices	>					
Details	>					

Install the ssh software, sudo apt install openssh-server, so that you can log in remotely via ssh on the PC, see 3.1 for details.

2.2 Configuring the IPC with 3399

After configuring the same network segment, you can directly call the slamwared and agent interfaces in the 3399 from the IPC, or ssh to log in to the 3399 remotely.

2.2.1 Configuring 3399

Use the type-c cable to connect the 3399 to the PC, then use the scrcpyscrcpy-win64v1.17.zip software to remote the Android interface and perform the Ethernet setup of the 3399. The result of using the software is as follows.





The final 3399 configuration is as follows.

IP address			
192.168.11.1			
netmask			
255.255.255.0			
gateway			
192.168.11.1			
dns1			
0.0.0.0			
dns2			
0.0.0.0			
Ethernet lp mode			

2.2.2 Configuring the IPC

Configure the ip of the specified Ethernet port as follows.

٩	Settings			Network		
()-	Wi-Fi					
*	Bluetooth	-	Ethernet (enp1s0)		+	
0	Background	Cancel	Wired	Ap	ply	
Q	Dock	Details Identity	Pv4 IPv6 Security		+	
	Notifications	IPv4 Method	 Automatic (DHCP) Manual 	 Link-Local Only Disable 		
۹	Search				+	
	Region & Language	Addresses Address	Netmask	Gateway		
0	Universal Access	192.168.11.2	255.255.255.0		3	
€	Online Accounts				1 🕸	
4	Privacy	DNS		Automatic ON		
<	Sharing	Separate IP addresses	with commas			
40	Sound				_	
Ge.	Power	Routes		Automatic ON		

This completes the Ethernet configuration, and the next step is to use it.

3. Instructions for use

3.1 Connecting the IPC

When connecting the IPC for the first time, there are several ways to connect to it. There are two main ways, depending on the situation, the later option require an external display via HDMI as well as a keyboard and mouse to operate the graphical interface.

3.1.1 Network cable connection

Continue to connect the 3399 to the computer using the network cable and configure the newly detected unrecognized network ip as follows.

-e _l	未识别的网络 无法访问 Internet			编辑 IP 设置
	身份验证设置		编辑	*其中某些设置已由组织隐藏或管理。
	按流量计费的连接 连接到此网络时,某些应用 设置流量上限,以帮助挂	可能具有不同的功能以减少数据使用。 它制在此网络上的数据使用量	* 💽	₽×0 IPv4 ● 开
	IP 分配: IPv4 地址: IPv4 掩码:	手动 192.168.22.11 255.255.255.0	編輯	IP 地址 192.168.22.11
	DNS 服务器分配:	自动(DHCP)	编辑	255.255.255.0
	链接速度(接收/传输): 本地链接 IPv6 地址: IPv6 DNS 服务器:	100/100 (Mbps) fe80:9fb1c752:2eab:a973%4 fec0:00:ffff:1%1 (未加密) fec0:00:ffff:2%1 (未加密) fec0:00:fff:3%1 (未加密)	复制	网关
	IPv4 地址: 制造商: 描述: 驱动程序版本:	192.168.22.11 Realtek Realtek USB FE Family Controller #4 11.6.418.2022		DNS over HTTPS
	物理地址(MAC):	08-1F-71-21-63-8A		

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This allows you to connect via the ssh remote tool. The user name is robot, the password is robot123, and the command is ssh robot@192.168.22.1.

3.1.2 Enabling Ubuntu hotspot

With an external monitor, keyboard and mouse, we have a graphical interface, which makes things easier. The way to turn on ubuntu's hotspot is divided into the three steps.

- 1. Turn On Wi-Fi Hotspot for ubuntu
- 2. PC connected to ubuntu's hotspot
- 3. You can login remotely by ssh in 3.1.1

3.1.2 Connecting to the same wifi

Connect the IPC to the same wifi as the PC, record the IP, and log in remotely via ssh in 3.1.1. The screenshots are as follows, with the IPC connected to Slamtec-Guest and the PC connected to the same network.

Q	Settings	Wi-Fi Connected	
()-		Vicible Networks	
*	Bluetooth	Cancel Slamtec-Guest Apply	£ ≈
۲	Background	Details Identity IPv4 IPv6 Security	1
▣	Dock	Signal Strength Excellent	
	Notifications	Link speed 120 Mb/s	•
۹	Search	Security WPA2	₽ ?
	Region & Language	IPv4 Address 10.160.78.252 IPv6 Address fe80::a969:b9e1:6f89:3655	₽ 😤
0	Universal Access	Hardware Address 9C:D2:1E:5B:92:71	₽ Ŧ
=Ds	Online Accounts	Default Route 10.160.0.1	₽ ₹
4	Privacy		≞ ╤
<	Sharing	Connect automatically Make available to other users	₽ 🕆
W 10	Sound	Restrict background data usage	≙ 🤶
Ge.	Power	Appropriate for connections that have data charges or limits.	₽ 후
	Network	Forget Connection	
-	Devices	>	
0	Details	>	



3.2 Ports for forwarding slamware

In the IPC, you can actually access our 3399 directly through 192.168.11.1, and you can also call the 1445 SDK1.0 interface and the 1448 SDK2.0 interface. But how the PC can directly be connected to the IPC, for example, if you want to use RoboStudio and Postman directly on the PC, you need to forward the port.

1. Create a new forwarding port script sudo vim /usr/local/bin/run_redir.sh and fill in the following information.

```
Bash

#! /bin/bash

set -x

sleep 10

killall redir

/usr/bin/redir -n :1445 192.168.11.1:1445 &

/usr/bin/redir -n :1448 192.168.11.1:1448 &

wait
```

2. sudo chmod 777 /usr/local/bin/run_redir.sh

3. Create a new self-redirect service to ensure that the port is forwarded on its own every time you boot up, sudo vim /lib/systemd/system/slamware-redirect.service and fill in the following information.

Bash



```
[Unit]
Description=Slamware redirect
[Service]
ExecStart=/usr/local/bin/run_redir.sh
Restart=always
StartLimitInterval=1min
StartLimitBurst=10
StartLimitAction=none
```

[Install]
WantedBy=multi-user.target

- 4. sudo chmod 777 /lib/systemd/system/slamware-redirect.service
- 5. Set to self-enable systemctl enable slamware-redirect.service
- 6. Reboot and you're done!

3.3 Interface calls

https://wiki.slamtec.com/pages/viewpage.action?pageId=36208700