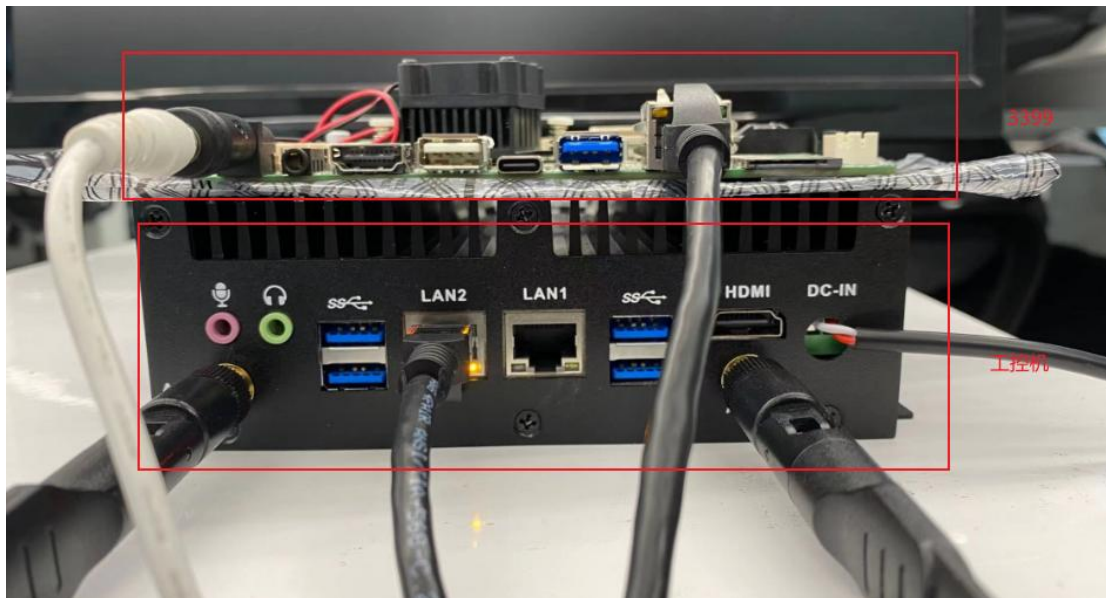


# Supporting Documents for Chassis connected to IPC

*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

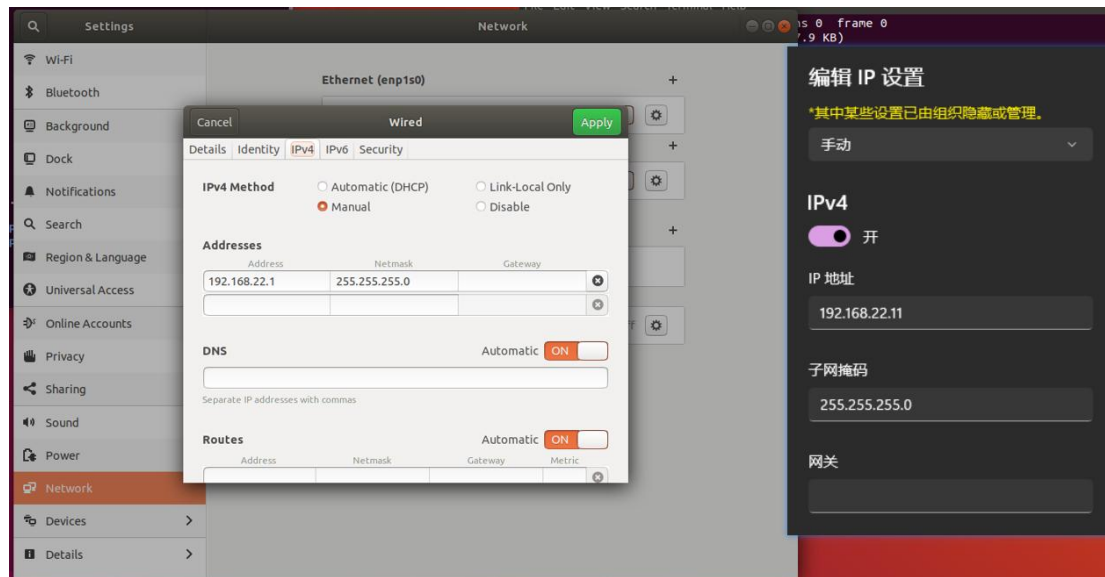


## 2. The environment configuration

*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)



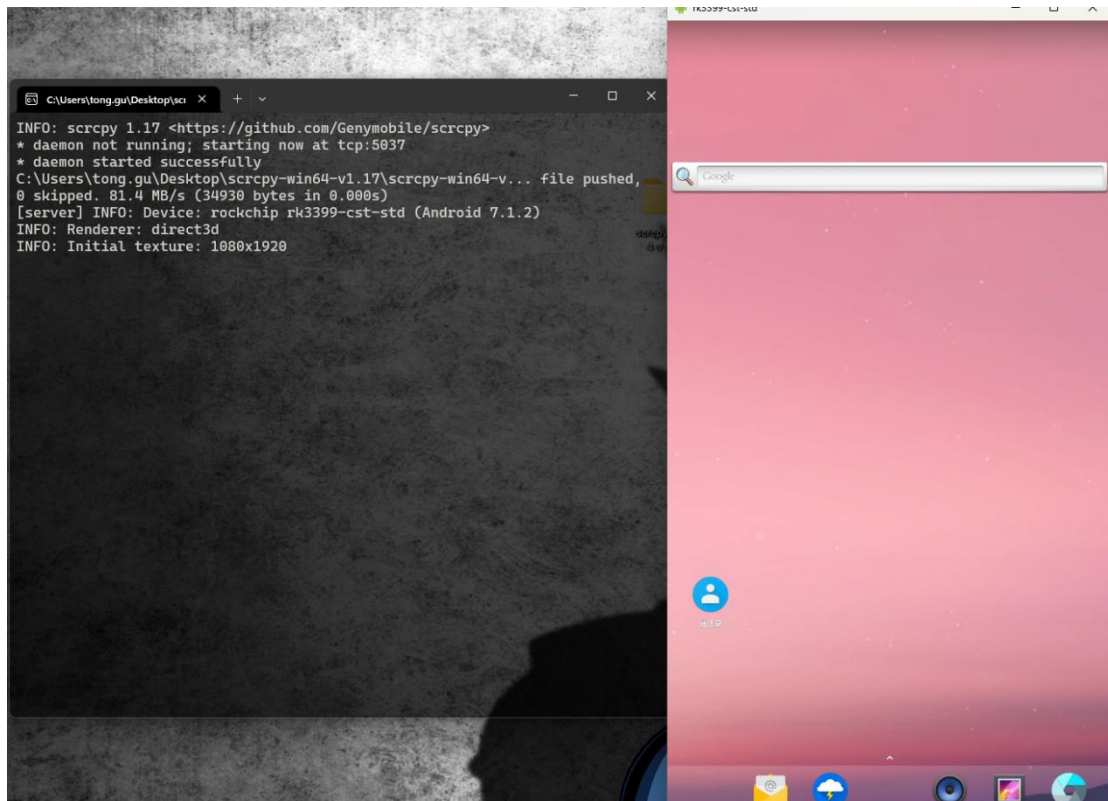
Install the ssh software, `sudo apt install openssh-server`, so that you can log in remotely via ssh on the PC, see 3.1 for details.

## 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 `srcpysrcpy-win64-v1.17.zip` software to remote the Android interface and perform the Ethernet setup of the 3399. The result of using the software is as follows.

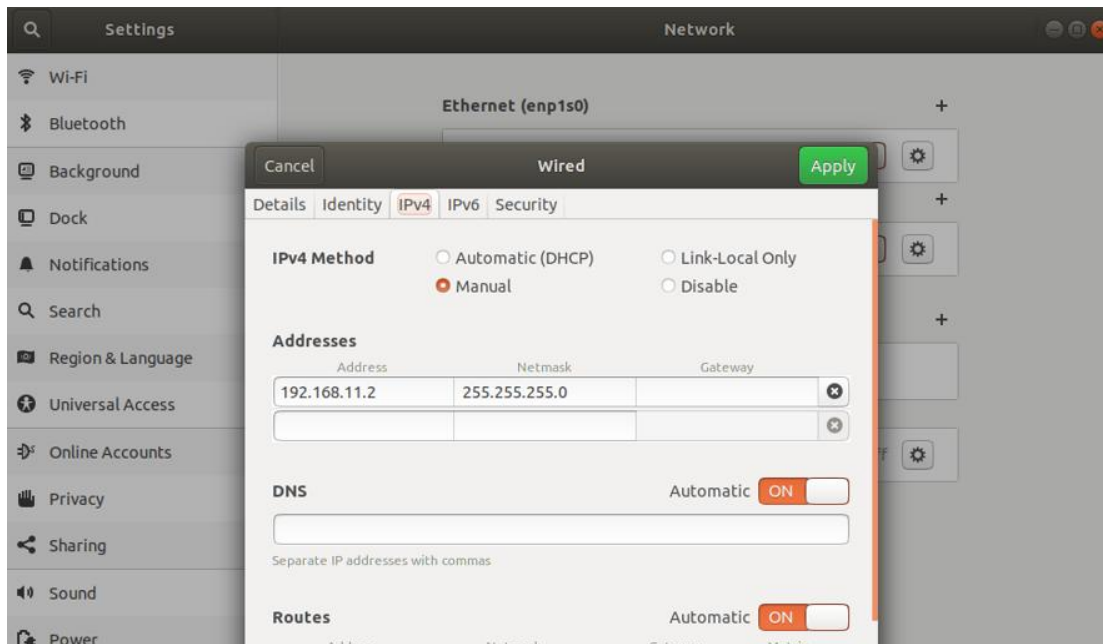


The final 3399 configuration is as follows.

Ethernet	
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 ip mode	static

## 2.2.2 Configuring the IPC

Configure the ip of the specified Ethernet port as follows.



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

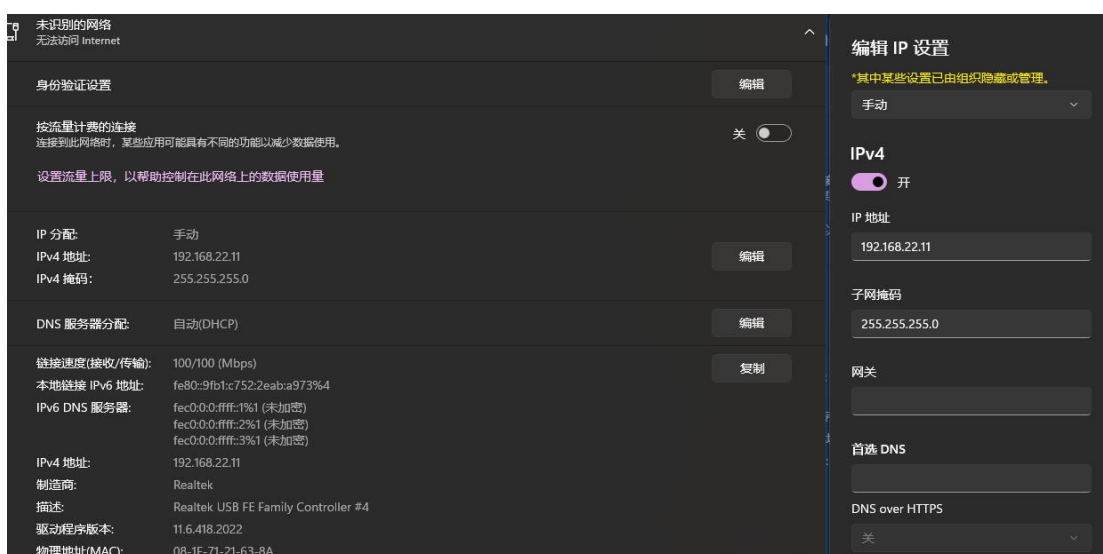
## 3. Instructions for use

### 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.



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`.

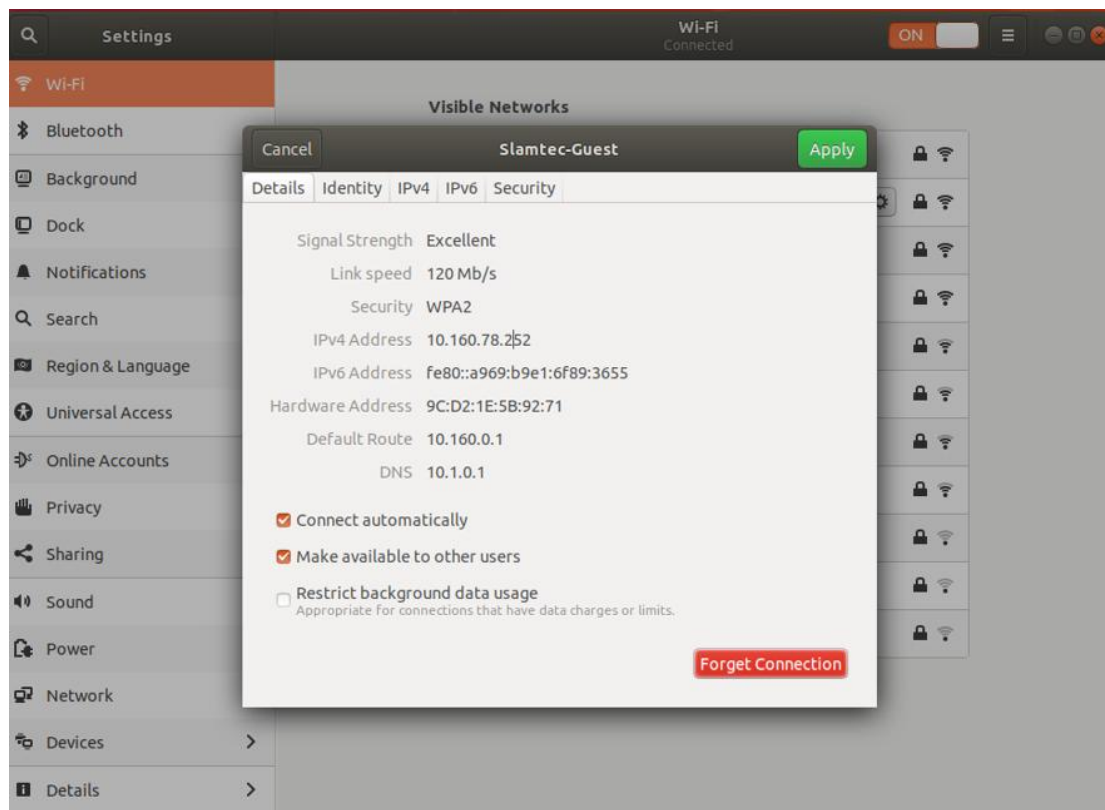
### 3.1.2 Enabling Ubuntu hotspot

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.



```

23-02-24 12:01:26 /home/mobaxterm ssh robot@10.160.78.252
Warning: Permanently added '10.160.78.252' (RSA) to the list of known hosts.
robot@10.160.78.252's password:
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 5.4.0-139-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:   https://landscape.canonical.com
 * Support:      https://ubuntu.com/advantage

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.

   https://ubuntu.com/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

73 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

Last login: Fri Feb 24 11:59:37 2023 from 192.168.22.11
robot@robot-Default-string:~$

```

## 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>