

PX-01 Easy Manual

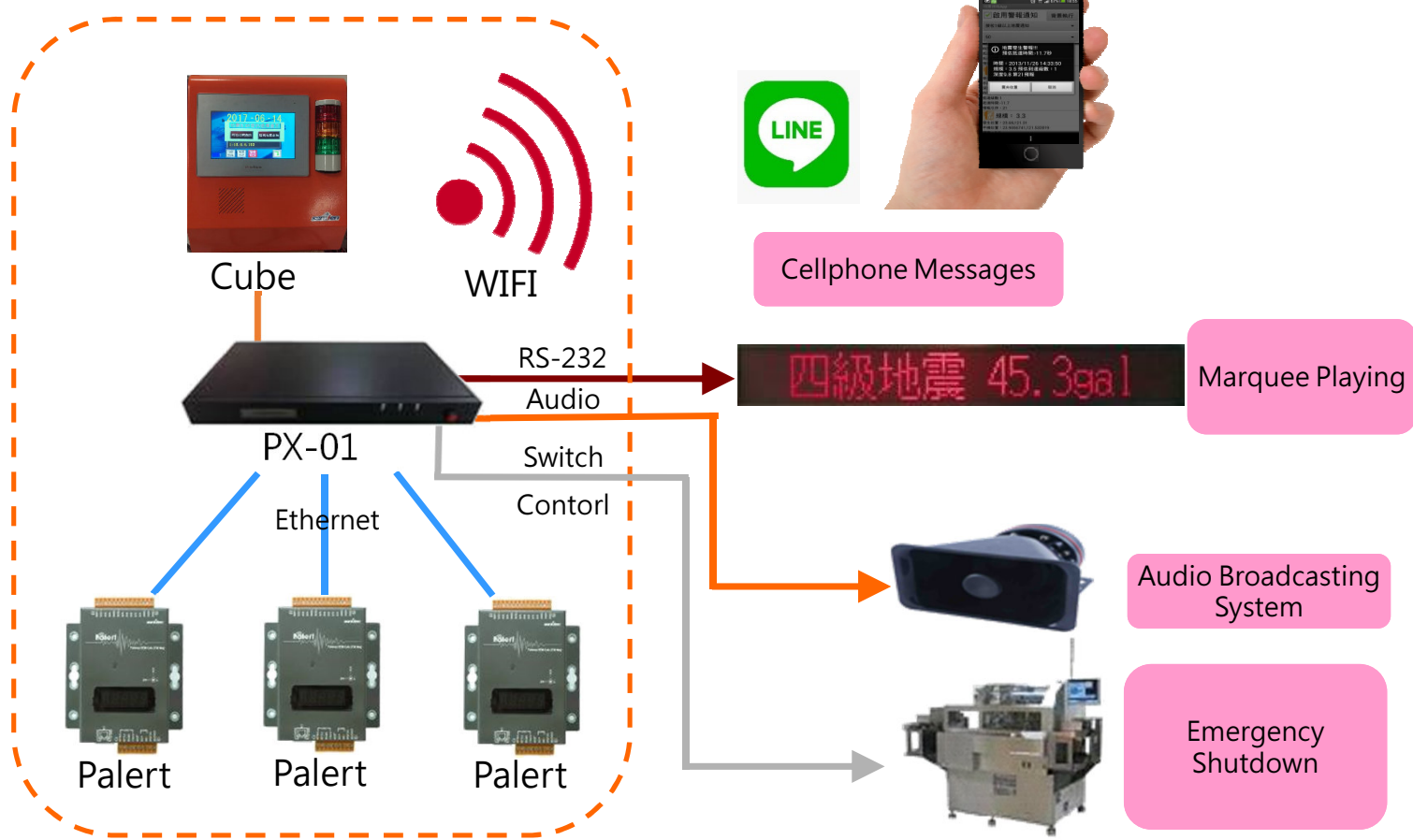
Version:2018/9/1

San-Lien Industrial Automation

www.sanlien.com.tw

Arranged by Jeremy Wang(F.A.E)

Earthquake Early Warning Solution



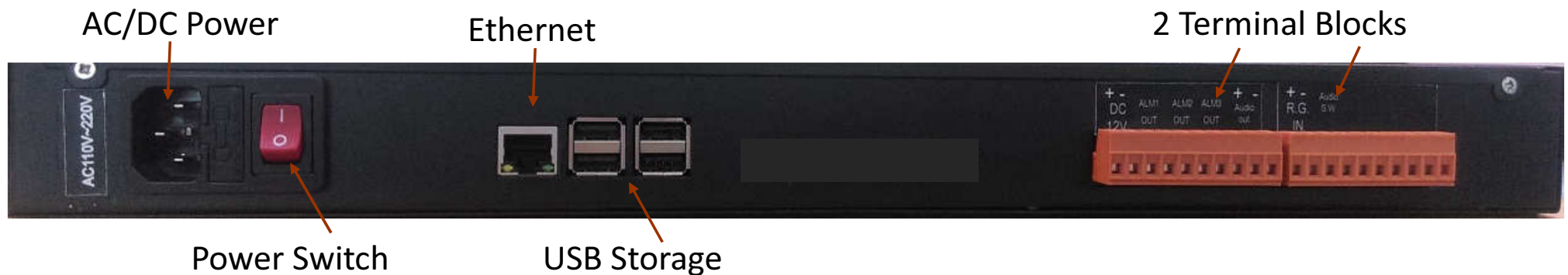
- PX-01 is main control unit(MCU) for E.E.W. system.
- It connects Palert and Cube for recording Earthquake event recording and basic record settings.
- It has relays and audio for itself to control for emergency switch.
- Embed Voice and light inside it, also add wireless SMS function.

PX-01 Appearance

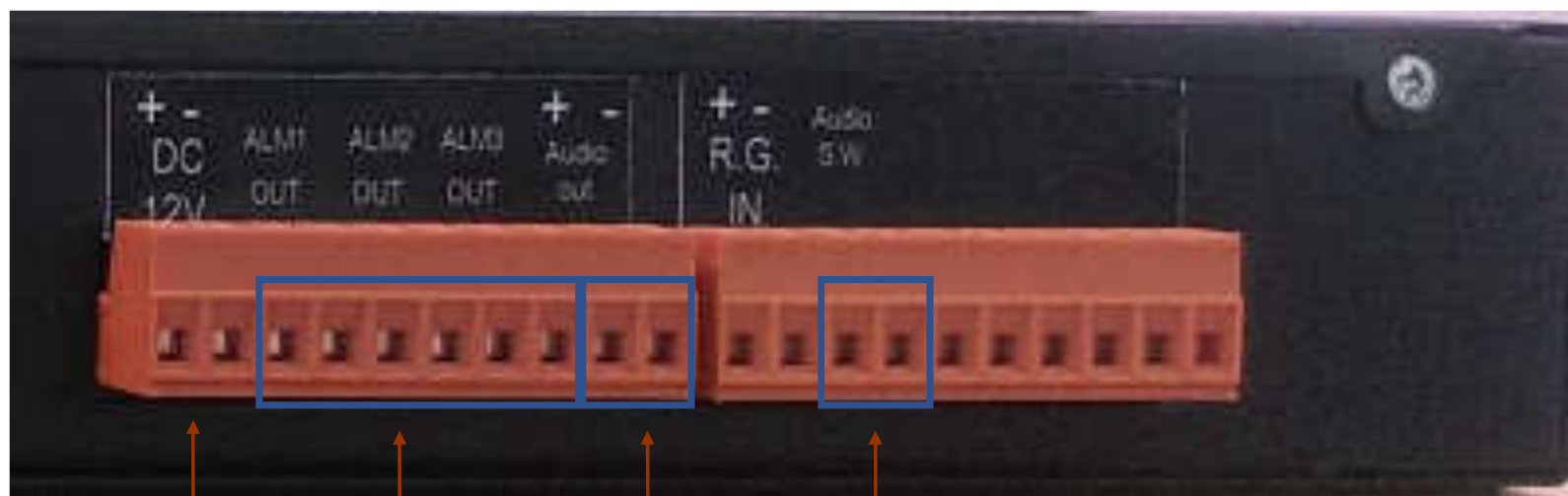


- PX-01 designs for easy and slim shape for install in rack box
- For the more detail introduction, please see the next page.

PX-01 Appearance



PX-01 Appearance



DC 12V
Provided

3 Relays
Output
Control

Audio
Output

Audio
Switch

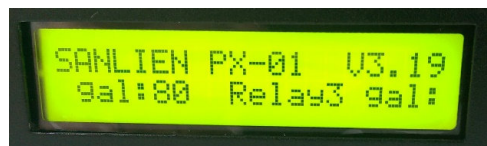
PX-01 Function in LCD Display

Delay Time in Second	Function
1	IP Display on LCD Screen
2	Voice Test
3	Warning Voice Cancel
4	Reload Parameters
7	FTP Update
8	USB Update
9	Test Mode
12	Manual Power Off

- PX-01 designs one button at right front side, the functions are using delay time control method.
- Normally, 4 seconds in button push is most import function for reload any changed settings.

PX-01 Function in LCD Display

Generally, LCD showings version
On the right top side, the setting will display
In turns on the bottom.



LCD shows the direct error messages on the right
top side if happen, then the marquee will shows the
detail item of



LCD will shows the time delay for convinces
visualization calculation. For this example is
push for 1 second to show the IP of PX-01

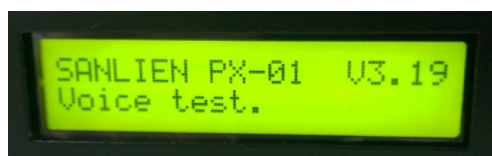


LCD shows the direct error messages on the right
top side if happen, then the marquee will shows the
detail item of



PX-01 Function in LCD Display

2 seconds for voice test,
It will speak "PX-01 vocal testing"



12 is for power off PX-01, you can switch off
the red switch in back of PX-01 after LCD
Shows "power off".

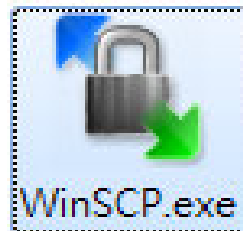


4 seconds is a very important function for
reloading parameters when any setting has been
changed.



Software using for PX-01

- Win-SCP and Putty are free software that you can download on the web.
<https://winscp.net/eng/download.php>
<https://putty.org/>
- PX-01 needs those 2 software for the functions showing below.

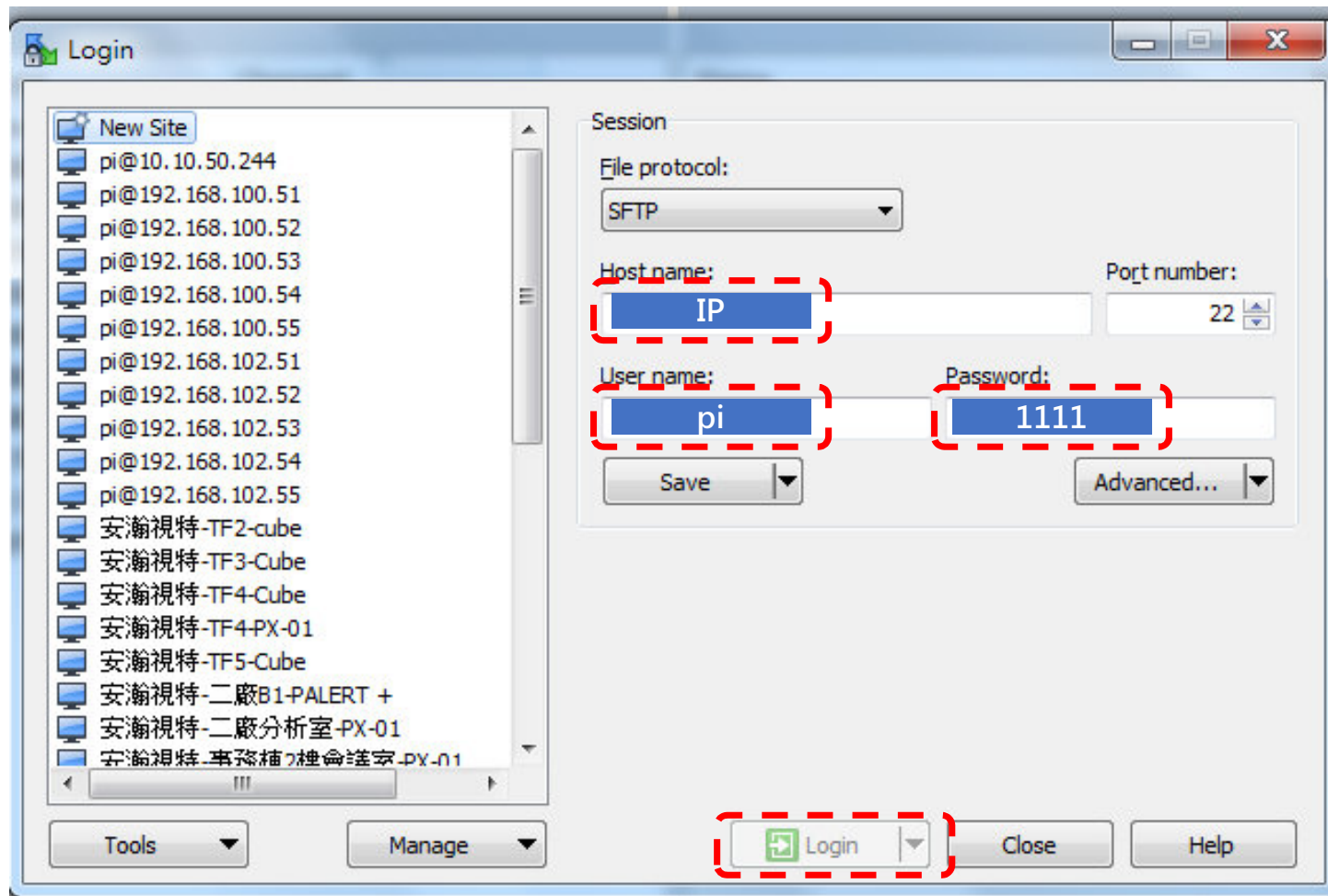


Firmware Update
&
Earthquake Event Requirement
Setting
&
Earthquake Event Record Date
Retrieving



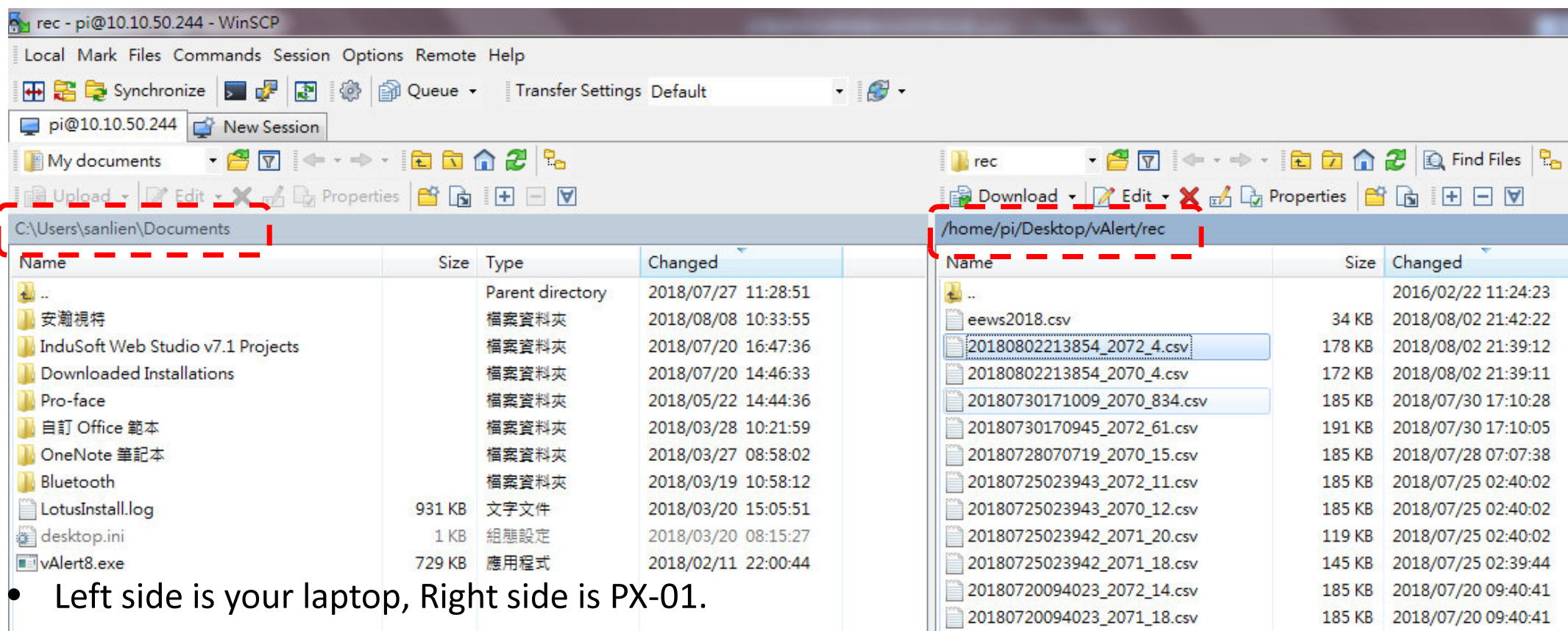
Self IP Setting
&
NTP DNS Setting

Win-SCP using for PX-01



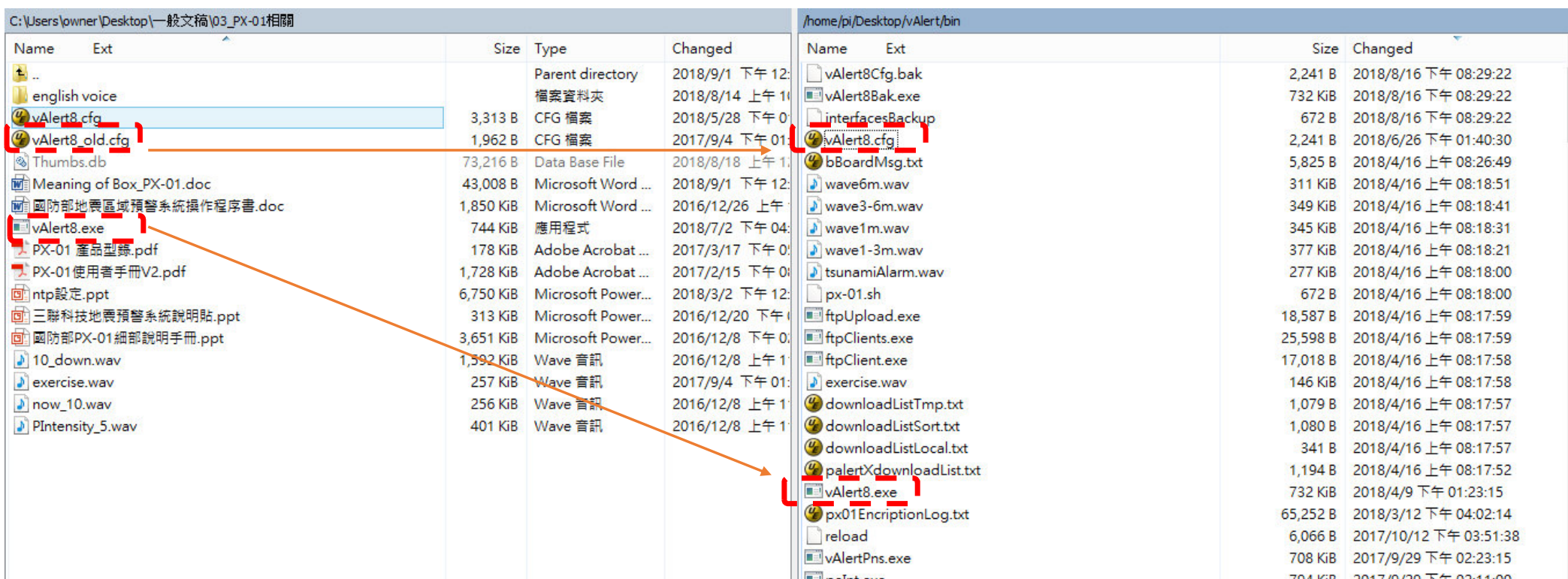
- Win-SCP is windows mode to connect with PX-01 setting.
- Default IP is 192.168.255.1, User name is “pi”, password is “1111”.
- Press login into PX-01(see next page)

Win-SCP using for PX-01



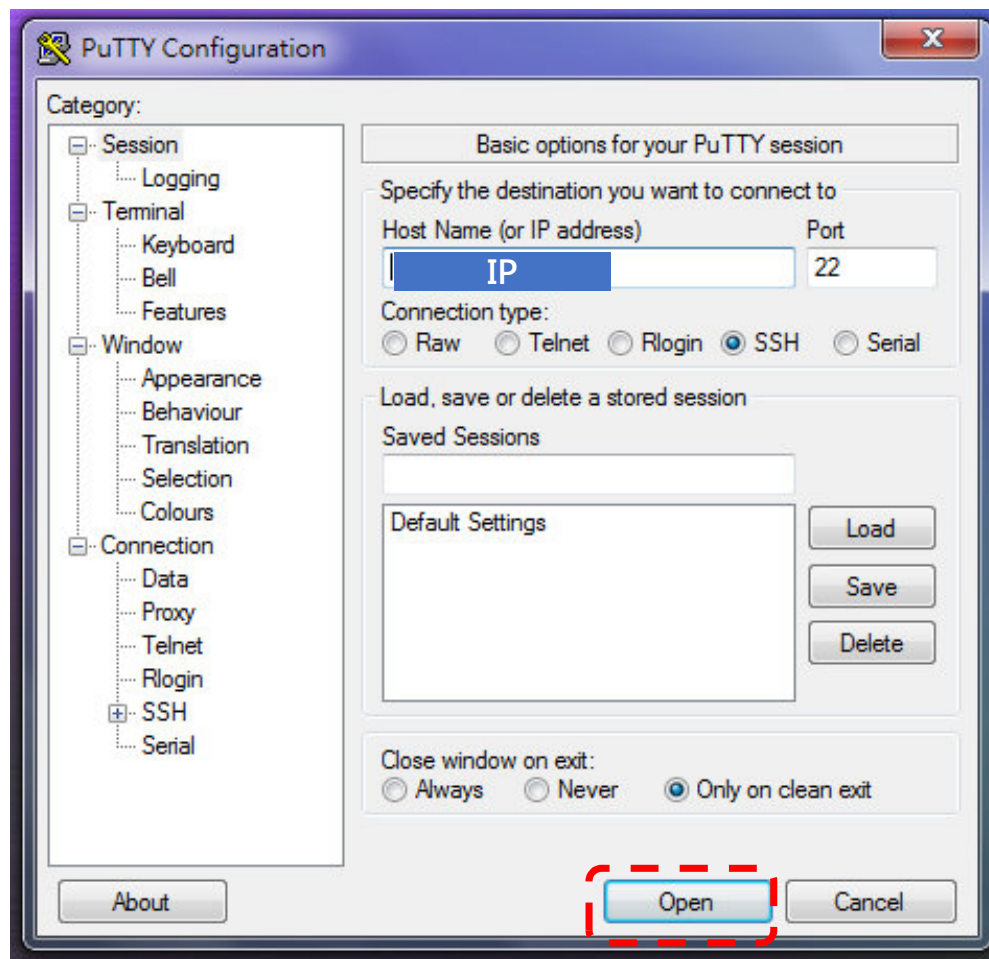
- Left side is your laptop, Right side is PX-01.
- PX-01 initial location is /home/pi/Desktop.
- If you want to retrieving earthquake event, change folder to /home/pi/vAlert/rec

Win-SCP using for PX-01



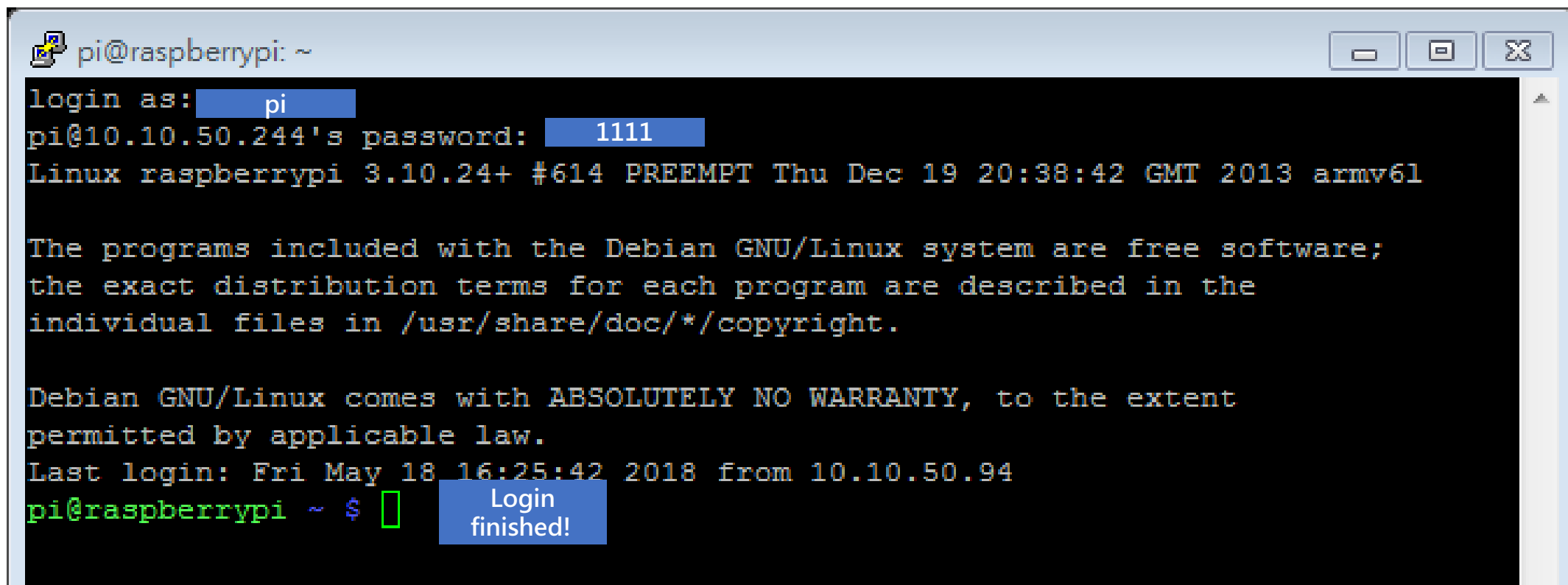
- vAlert8.cfg and vAlert8.exe are command setting file and firmware individually, if you want to updating, mouse pulls them form left side(laptop) to right side(PX-01), then push for 4 seconds.

Putty using for PX-01



- Putty is a command mode of PX-01 setting software, it using for IP and NTP, DNS settings.
- Press “Open” button to open putty(see next page)

Putty using for PX-01



```
pi@raspberrypi: ~  
login as: pi  
pi@10.10.50.244's password: 1111  
Linux raspberrypi 3.10.24+ #614 PREEMPT Thu Dec 19 20:38:42 GMT 2013 armv6l  
  
The programs included with the Debian GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Fri May 18 16:25:42 2018 from 10.10.50.94  
pi@raspberrypi ~ $
```

Login finished!

login in: inset pi , password insert 1111

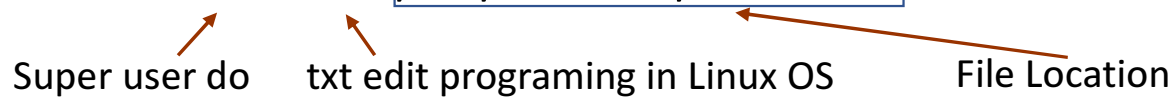
Putty using for PX-01

```
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permitted by applicable law.
Last login: Fri May 18 16:25:42 2018 from 10.10.50.94
pi@raspberrypi ~ $ sudo nano /etc/network/interfaces
```

Insert “sudo nano /etc/network/interfaces” in command line



Putty using for PX-01

```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /etc/network/interfaces

auto lo
auto eth0
#auto eth0:0
[
iface lo inet loopback
#iface eth0 inet dhcp
iface eth0 inet static
address 10.10.50.244
netmask 255.255.255.0
gateway 10.10.50.200
#post-up route add default gw 210.67.131.254 metric 1
#pre-down route del default gw 210.67.131.254

#iface eth0:0 inet static
#address 192.168.255.103
#netmask 255.255.255.0
#post-up route add default gw 10.0.0.254 metric 2
#pre-down route del default gw 10.0.0.254

[ Read 24 lines (Converted from DOS format) ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

- Hashtag(#) symbol means no functioning, open “static” for insert IP, including netmask and gateway, Ctrl + O for Write Out when finished edit.
- Ctrl + X for exiting this edits window, then insert “sudo/etc/init.d/networking restart” to reload changed setting or push PX-01 button 4 seconds for manually reload.

Putty using for PX-01

```
GNU nano 2.2.6      File: /etc/ntp.conf
# pool.ntp.org maps to about 1000 low-stratum NTP servers.  Your server will
# pick a different set every time it starts up.  Please consider joining the
# pool: <http://www.pool.ntp.org/join.html>
#server 0.debian.pool.ntp.org iburst
#server 1.debian.pool.ntp.org iburst
#server 2.debian.pool.ntp.org iburst
#server 3.debian.pool.ntp.org iburst
server 192.72.1.2
#server 168.95.1.1 iburst prefer

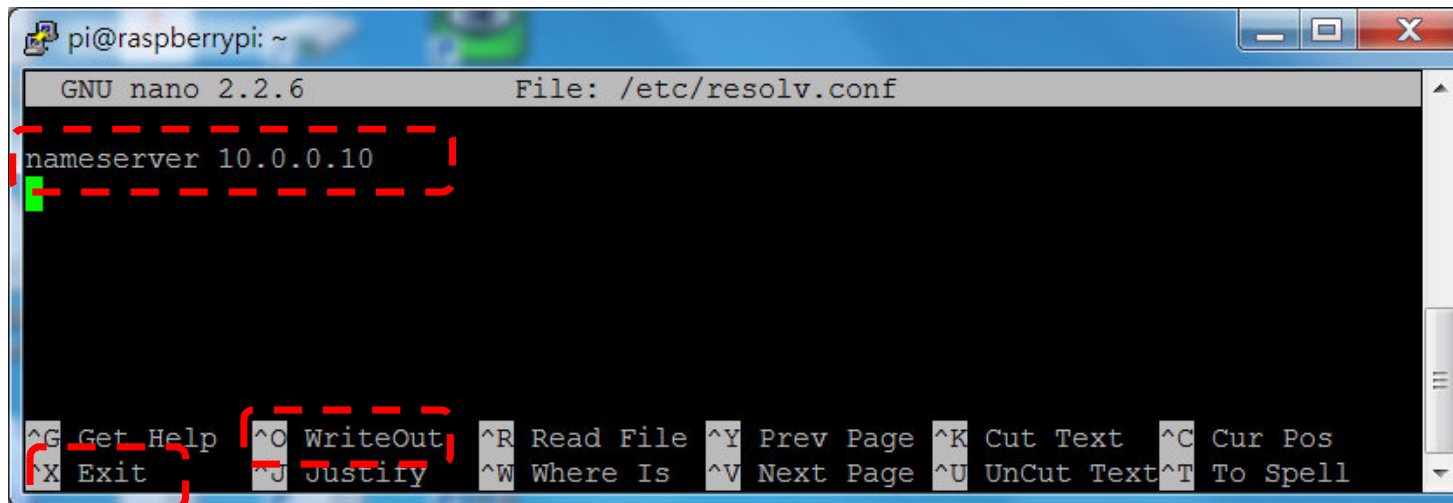
# Access control configuration; see /usr/share/doc/ntp-doc/html/accopt.html for
# details.  The web page <http://support.ntp.org/bin/view/Support/AccessRestrict$
# might also be helpful.
#
# Note that "restrict" applies to both servers and clients, so a configuration
# that might be intended to block requests from certain clients could also end
# up blocking replies from your own upstream servers.

# By default, exchange time with everybody, but don't allow configuration.

[ Read 56 lines ]
^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page ^K Cut Text  ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page ^U UnCut Text ^T To Spell
```

- Inserts “sudo nano /etc/ntp.conf” command line in terminal, it will open a NTP ASCII file for time synchronization, by this file, PX-01 will get the precise network time from internet.
- Add “server IP” for NTP time server.
- Ctrl + O for Write Out, Ctrl + X for exit, then push PX-01 button for 4 seconds for manually reload.

Putty using for PX-01



```
pi@raspberrypi: ~
GNU nano 2.2.6 File: /etc/resolv.conf
nameserver 10.0.0.10
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

- Inserts “sudo nano /etc/resolv.conf” in terminal, it will open a ASCII file for DNS using. When you have DNS, PX-01 will knows the IPV4 protocol.
- Add “nameserver IP” for DNS server.
- Ctrl + O for Write Out, Ctrl + X for exit
- push PX-01 button 4 seconds for manually reload.