LinPAC-51XX Quick Start

Version 1.3, 2012/06/28

➲ What's In the Box?

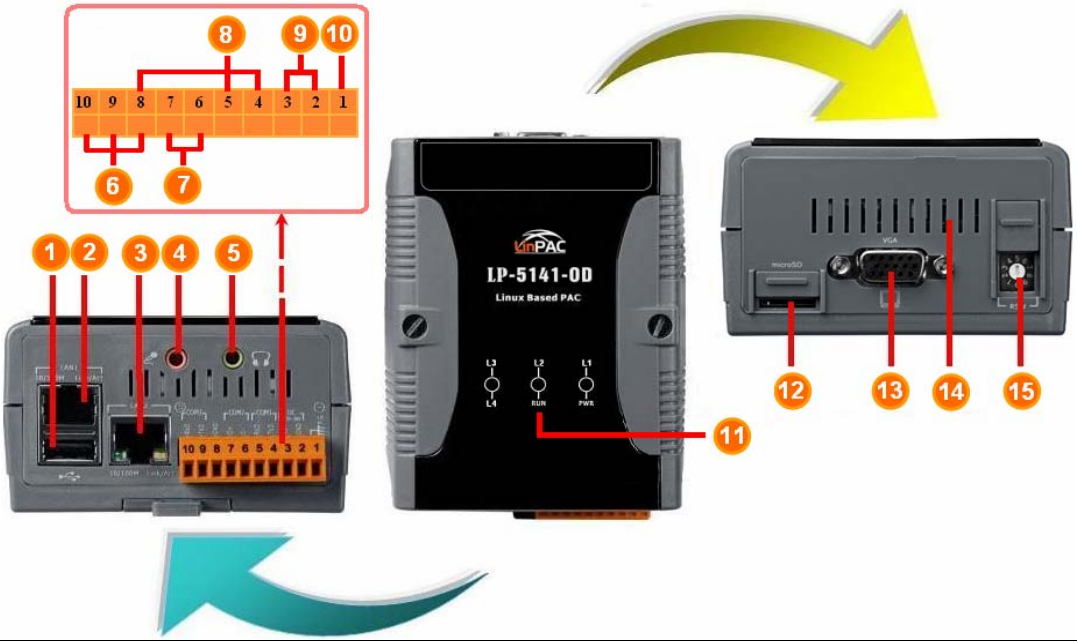
LP-51XX module microSD card Software Utility CD Screw Driver RS-232 Cable

➲ Preparing for start-up your LinPAC-51XX

Power Supply: +10V ~ +30V_{DC} (Ex: DP-665)

http://www.icpdas.com/products/Accessories/power_supply/power_list.htm

➲ View of the LinPAC-51XX



1	USB Port	**6**	COM 1 (RS-232)(console)	**11**	LED Indicator
2	Ethernet Port	**7**	COM 2 (RS-485)	**12**	microSD socket
3	Ethernet Port	**8**	COM 3 (RS-232)	**13**	VGA Port
4	Microphone-In	**9**	Power	**14**	XWboard (optional)
5	Earphone-Out	**10**	Frame Ground	**15**	Operating Modes Selector

➲ Configuring the operating mode

Rotary switch position	Modes of operation
0	Normal mode(Default)
1	Quick mode
2	OS update mode
3	Debug mode
Others	Reserved

❑ Normal mode(Default)

The normal mode is the default mode of operation. Use this mode for more tasks and configurations. Programs also are executed in this mode.

❑ Quick mode

The safe mode is used to skip the LinPAC-51XX boot screen form microSD/microSDHC card, so as to speed up the booting process.

❑ OS update mode

The mode is a way used to update OS, and the Linux OS image was just suitable for the LP-51XX by ICP DAS. If the LP-51XX cannot be boot or run the normal mode, please update OS image again. Please pay attention to backup important files first before updating OS image. For more information, please refer to "LP-51XX OS update manual".

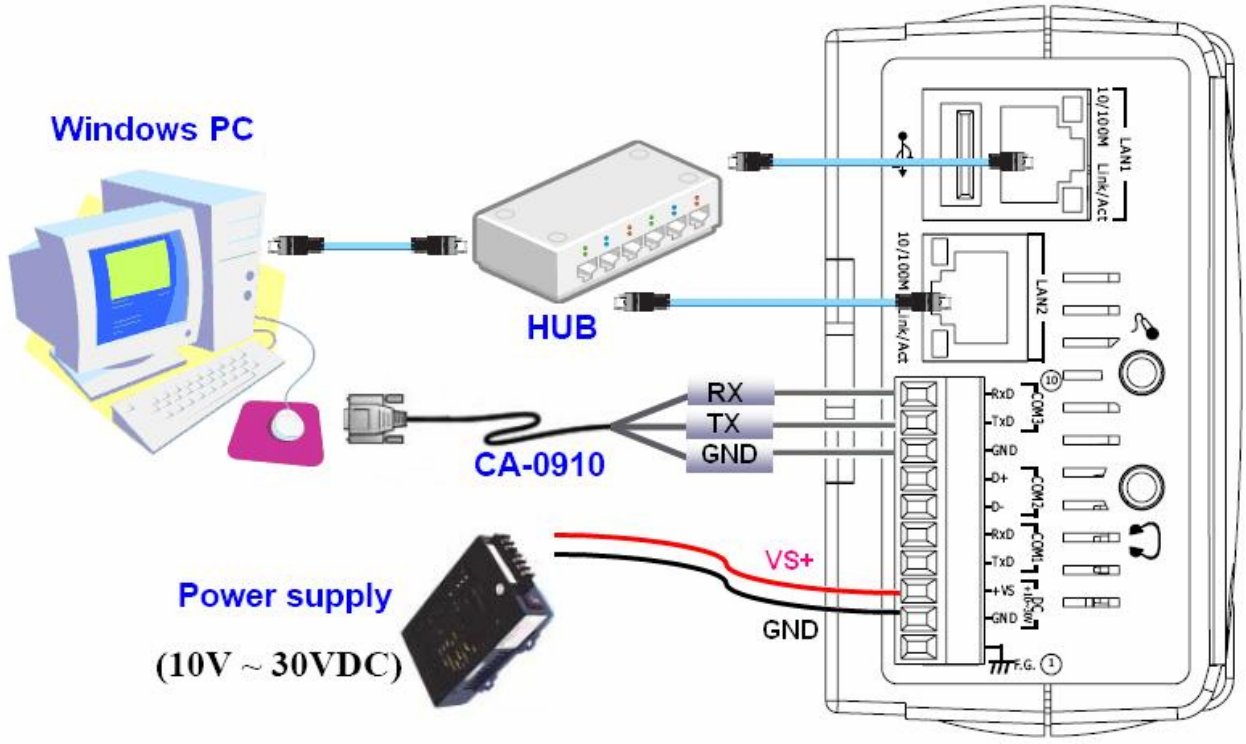
❑ Debug mode

The purpose of this mode is to development by ICP DAS.

❑ Reserved

Rotary switch position 4~9 are reserved by ICP DAS.

➲ Connect the LinPAC-51XX and Windows PC



- The port is located on the right-upper corner on the LinPAC-51XX. It is a standard RS-232 serial port (COM1), and it provides TxD, RxD, GND, non-isolated.

- Start **HyperTerminal** by clicking on '**Start** → **Programs** → **Accessories** → **Communications** → **Hyper Terminal**'

- In the 'COM properties' dialog box, please set for **115200 bits per second, 8 data bits, no parity, 1 stop bit and no flow control** to set up the communication parameters for the COM1 port, and press 'OK' when done.

- **Turn on the power**, and user should see a message appear on the screen, and the total process is completed.

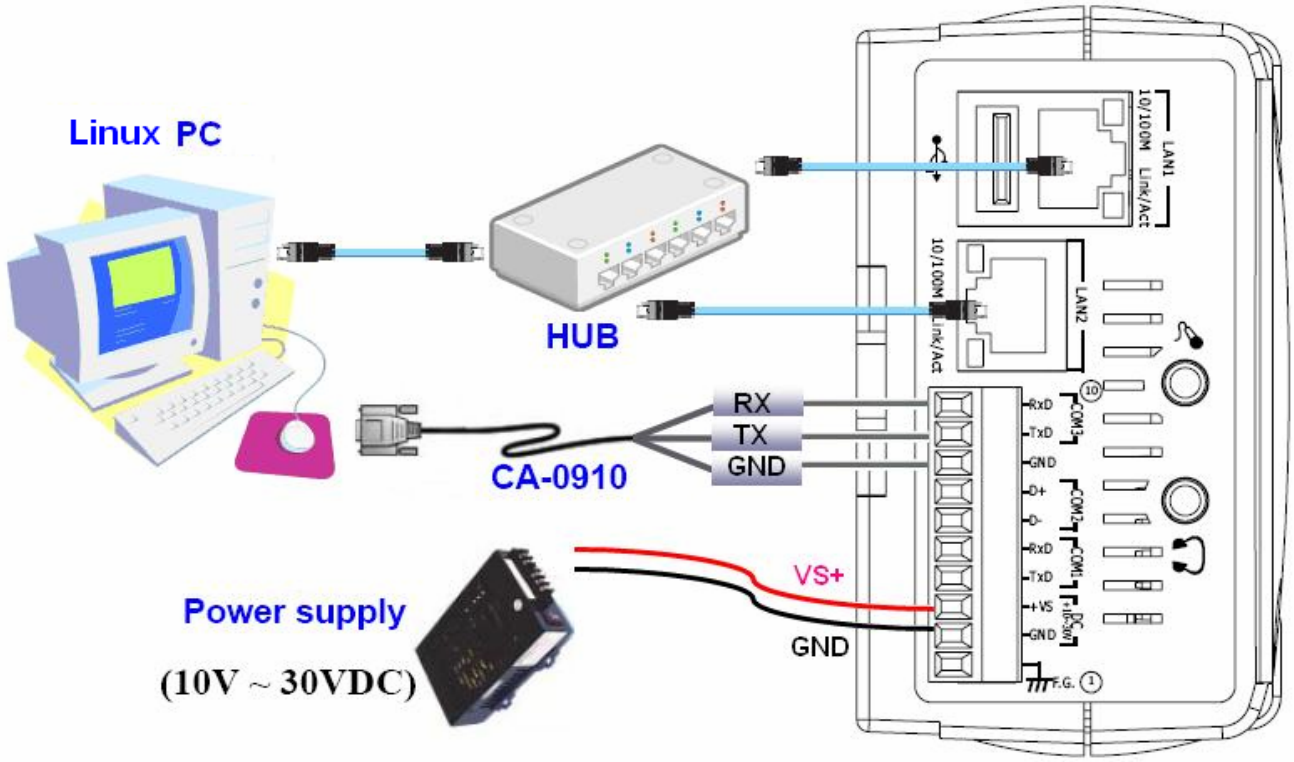
```
adding dns 10.0.0.1
Snmpd not in use (/etc/snmpd_not_to_be_run)
Starting SLOT services: ICPDAS slot driver (type 0) version 1.01a (2004-03-01) w
ith normal status 02f0
interval=6392 us, EEPROM_DELAY=30 ms
major : 215, S/N : 01 B5 70 80 12 00 00 60.
Starting COM port services: Serial: 8250/16550 driver $Revision: 1.90 $ 36 ports
, IRQ sharing enabled
Starting RAM Driver services: 1376 inodes
4096 blocks
Firstdatazone=47 (47)
Zonesize=1024
Maxsize=268966912
Setting the System Clock using the Hardware Clock as reference...
Mon May 18 14:22:38 2009  0.000000 seconds
Mon May 18 14:22:38 UTC 2009
Starting gqcam services: pwc: Philips webcam module version 10.0.12 loaded.
pwc: Supports Philips PCA645/646, PCVC675/680/690, PCVC720[40]/730/740/750 & PCV
C830/840.
pwc: Also supports the Askey VC010, various Logitech Quickcams, Samsung MPC-C10
and MPC-C30,
pwc: the Creative WebCam 5 & Pro Ex, SOTEC Afina Eye and Visionite VCS-UC300 and
 VCS-UM100.
usbcore: registered new interface driver Philips webcam
Starting X Server...
/bin/sh: can't access tty; job control turned off
#
icewm-session: using /root/.icewm for private configuration files
icewmbg: using /root/.icewm for private configuration files
IceWM: using /root/.icewm for private configuration files
icewmtray: using /root/.icewm for private configuration files
```

- To get a LinPAC-51XX login prompt, and enter root ID and password.

```
linpac-51xx login: icewm-session: using /root/.icewm for private configuration files
icewmtray: using /root/.icewm for private configuration files
icewmbg: using /root/.icewm for private configuration files
IceWM: using /root/.icewm for private configuration files

linpac-51xx login: root
Password:
Distributor ID:         ICP DAS
Description:            LP-514x series
Release OS:             1.4
Release bootloader:     1.2
Flash vendor:           Samsung
Codename:               PACLNX 0.90
Jun 27 15:50:42 login[1075]: root login on 'ttySA0'
installed XW-boards list
slot 1 ... XW0
#
```

➲ Connect the LinPAC-51XX and Linux PC



- ❑ Install HyperTerminal tool in Linux PC such as minicom, gtkterm, etc.
- ❑ Take minicom as an example, please refer to the following steps:
  - ☑ Type '**minicom -s**' to configure COM1 port, and press down and select '**Serial port setup**'. (please set for 115200 bits per second, 8 data bits, no parity, 1 stop bit and no flow control to set up the communication parameters for the COM1 port). Finally, press '**Exit**'.

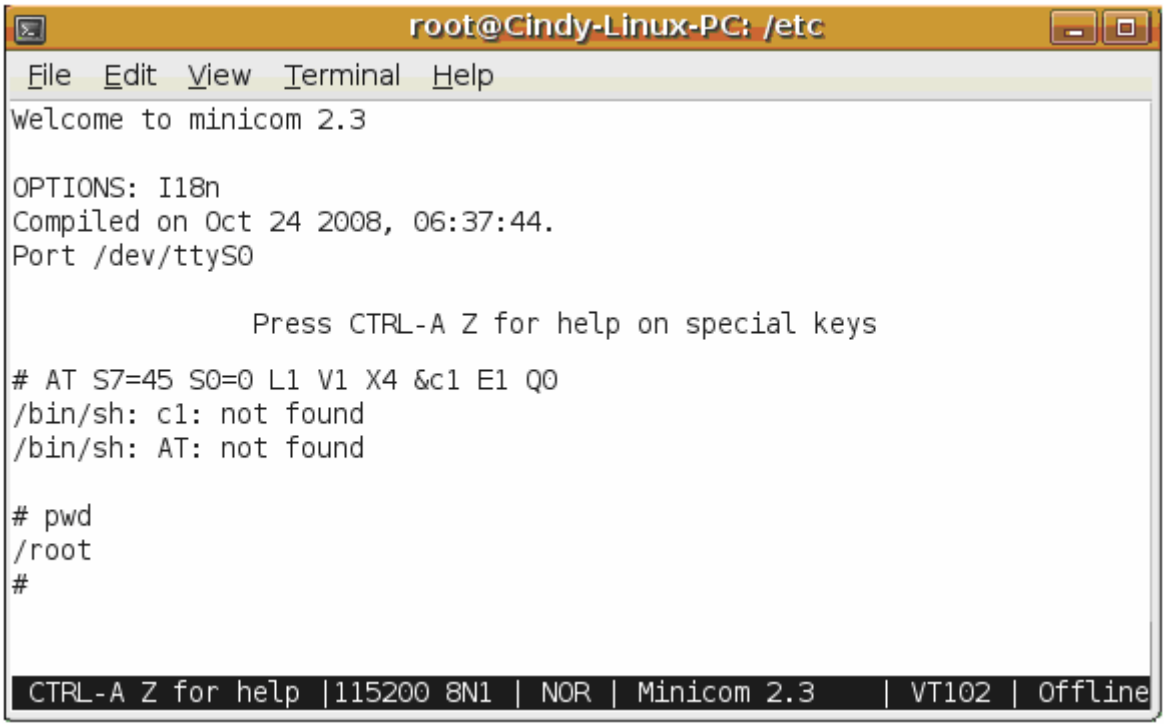
1.
```
+-----[configuration]------+
| Filenames and paths      |
| File transfer protocols  |
| Serial port setup        |
| Modem and dialing        |
| Screen and keyboard      |
| Save setup as dfl        |
| Save setup as..          |
| Exit                     |
| Exit from Minicom        |
+--------------------------+
```

2.
```
+-----------------------------------------+
| A -    Serial Device      : /dev/ttyS0  |
| B - Lockfile Location     : /var/lock   |
| C -   Callin Program      :             |
| D -  Callout Program      :             |
| E -    Bps/Par/Bits       : 115200 8N1  |
| F - Hardware Flow Control : No          |
| G - Software Flow Control : No          |
|                                         |
|    Change which setting?                |
+-----------------------------------------+
        | Screen and keyboard      |
        | Save setup as dfl        |
        | Save setup as..          |
        | Exit                     |
        | Exit from Minicom        |
        +--------------------------+
```

3.
```
+-----[configuration]------+
| Filenames and paths      |
| File transfer protocols  |
| Serial port setup        |
| Modem and dialing        |
| Screen and keyboard      |
| Save setup as dfl        |
| Save setup as..          |
| Exit                     |
| Exit from Minicom        |
+--------------------------+
```

4.
```
+----------------------+
|                      |
|  Initializing Modem  |
|                      |
+----------------------+
```

- minicom in action



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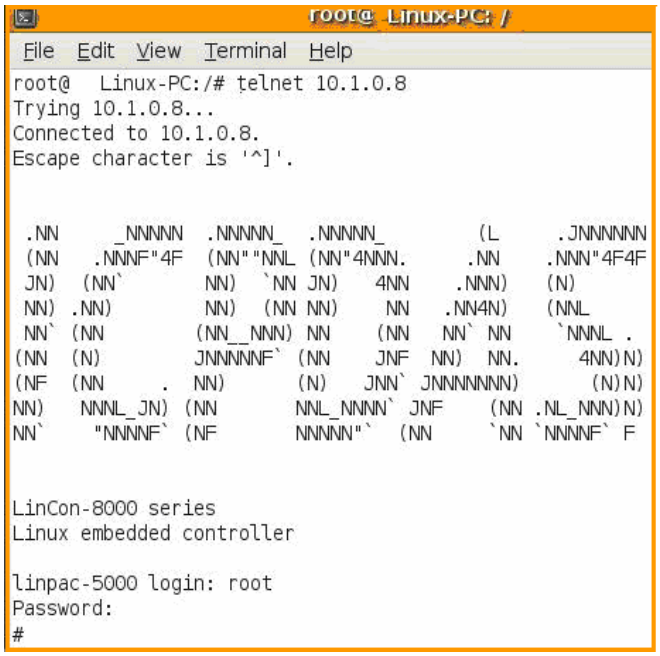
➲ Telent to LinPAC-51XX

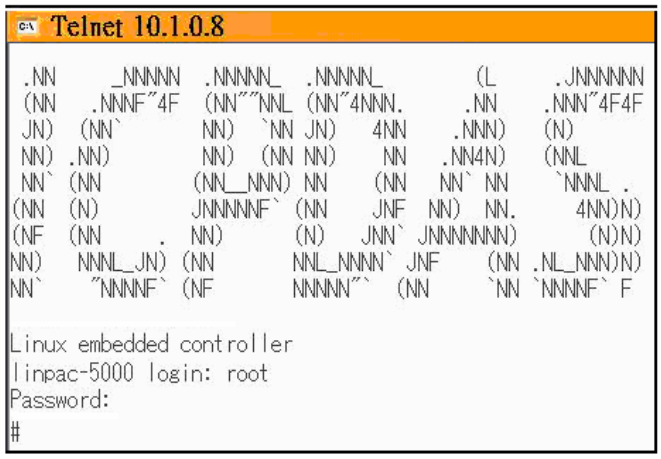
❑ In **HyperTerminal :**

```
# ifconfig eth0
eth0  Link encap:Ethernet  HWaddr 00:0D:E0:AB:CD:33
      inet addr:10.1.0.8  Bcast:10.1.255.255  Mask:255.255.0.0
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
      RX packets:87724 errors:0 dropped:0 overruns:0 frame:0
      TX packets:966 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)
      Interrupt:41 Base address:0x8000

#
# ifconfig eth1
eth1  Link encap:Ethernet  HWaddr 00:0D:E0:AB:CD:44
      inet addr:10.1.0.17  Bcast:10.1.255.255  Mask:255.255.0.0
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
      RX packets:50 errors:0 dropped:0 overruns:0 frame:0
      TX packets:11 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)
      Interrupt:114 Base address:0xc000

#
```

☑ In Linux PC



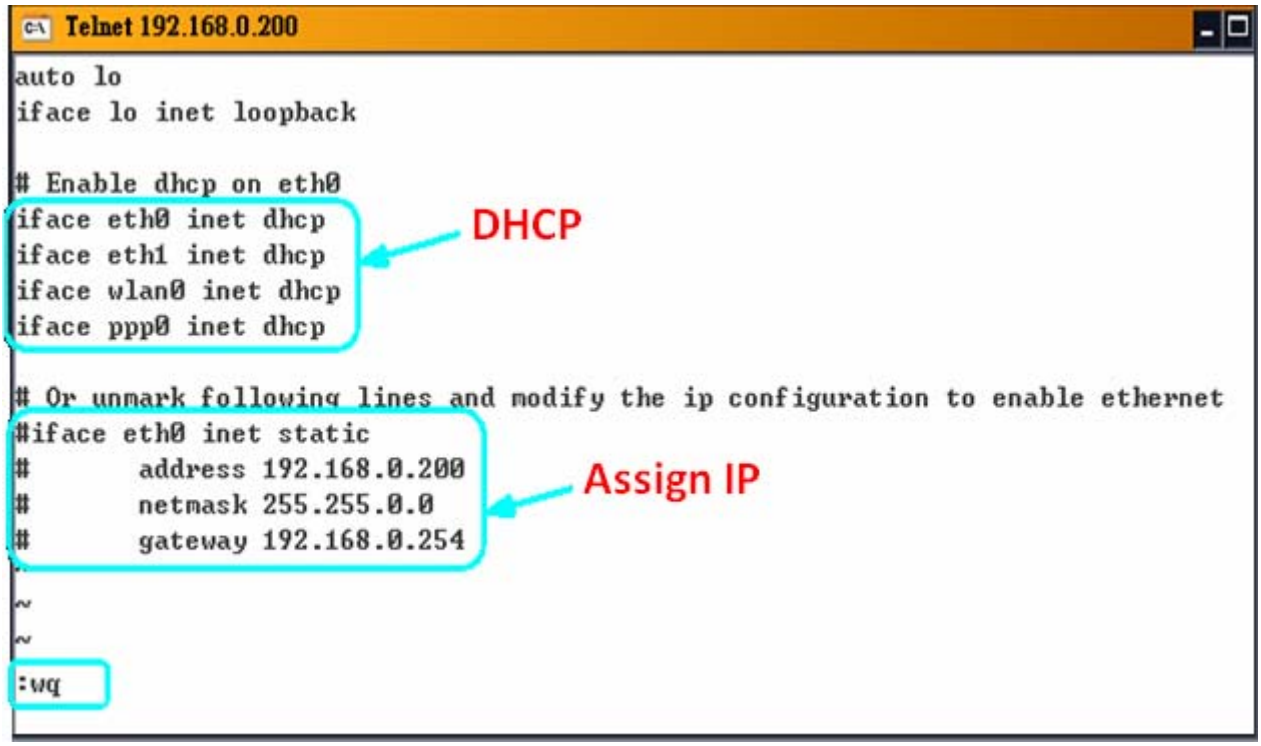
☑ In Windows PC



➲ Get & Configure IP of LinPAC-51XX

The LinPAC-51XX network setting includes two ways. One is **DHCP** and the other is "**Assigned IP**". DHCP is the default setting after the LinPAC-51XX is produced and this way is easy for users. However, if your network system is without DHCP server, then users need to configure the network setting by using "Assigned IP".

- ❑ Boot up and telnet to LinPAC-51XX first.
- ❑ Type in **"vi /etc/network/interfaces"** to open the network setting file.



➲ Technical Support

ICP DAS Website: www.icpdas.com.tw

ICP DAS Service : service@icpdas.com

service.icpdas@gmail.com