

# Quick Start for LinPAC-5000

Version 1.2, 2010/05/25

## ➔ What's In the Box?



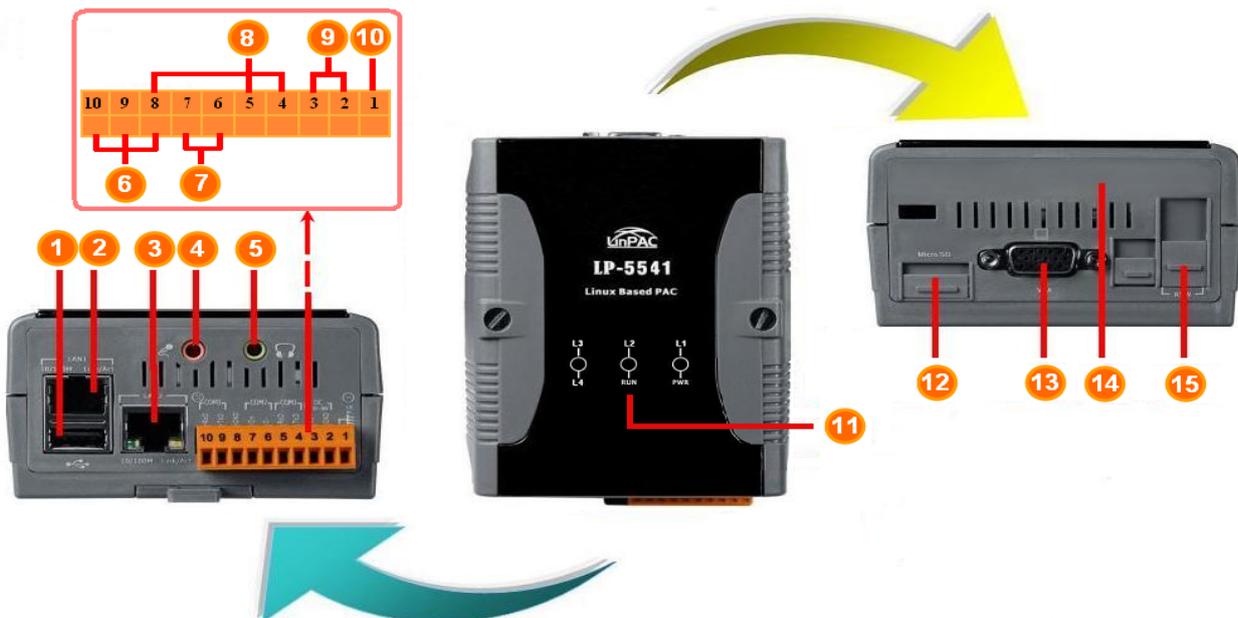
LP-5K module 2 GB microSD Software Utility CD Screw Driver RS-232 Cable

## ➔ Preparing for start-up your LinPAC-5000

Power Supply: +10V ~ +30V<sub>DC</sub> (Ex: DP-665)

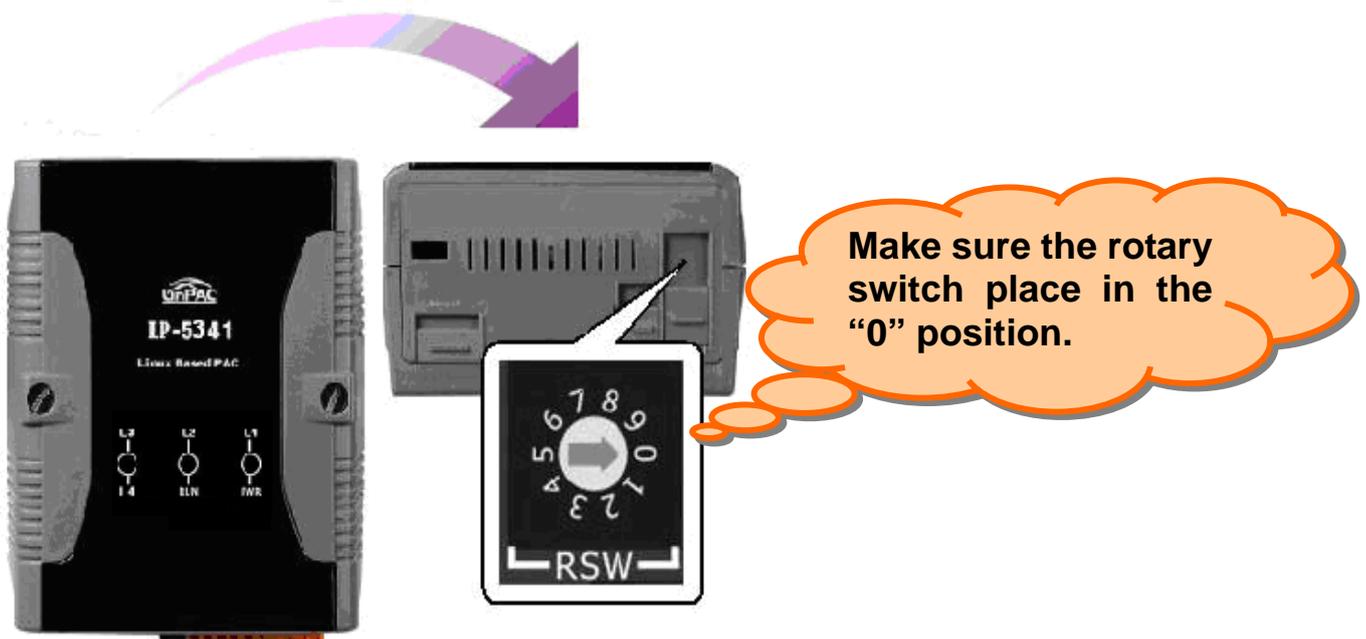
[http://www.icpdas.com/products/Accessories/power\\_supply/power\\_list.htm](http://www.icpdas.com/products/Accessories/power_supply/power_list.htm)

## ➔ View of the LinPAC-5000



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	Xboard (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-5000 boot screen form microSD/microSDHC card, so as to speed up the booting process.

### ❑ OS update mode

The debug mode is a way used to update OS and the Linux OS image was just suitable for the LinPAC-5000 by ICP DAS. If the LinPAC-5000 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. More detail information about update the LinPAC-5000 OS, please refer to “LinPAC-5000 OS image update manual”.

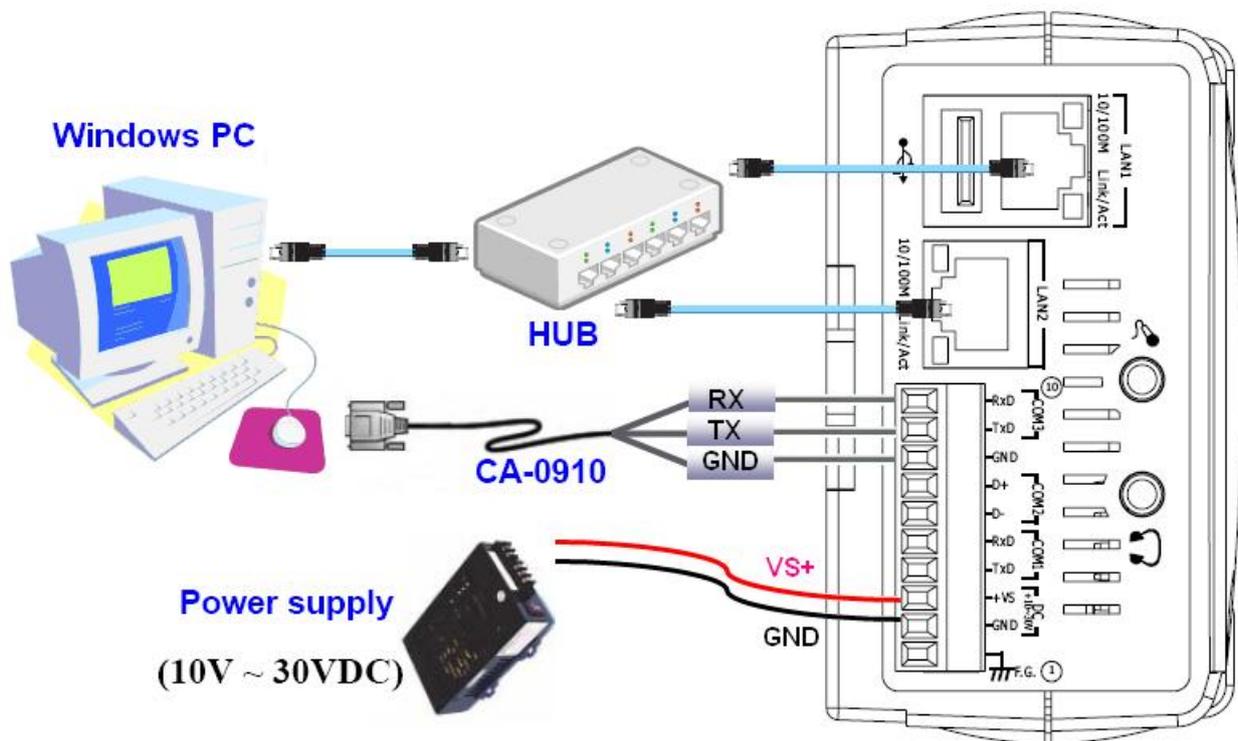
### ❑ Debug mode

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-5000 and Windows PC



- ➔ 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
Snmppd 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[401/730/740/750 & 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
-

```

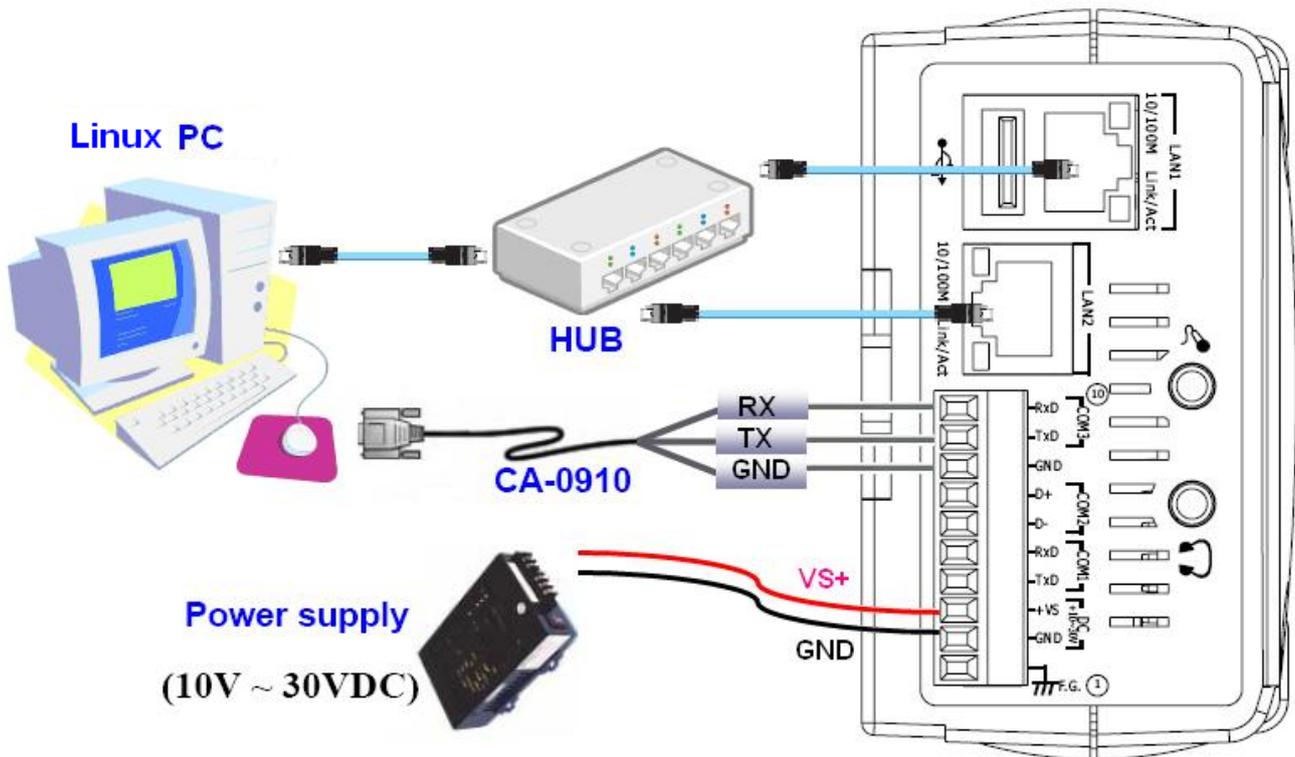
- ➔ To login LinPAC-5000 by '**getty**' command.
- ➔ ID: **root**
- ➔ Password: **root**

```

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
#
#
#
# getty ttySA0 115200
linpac-5000 login: root
Password:
MOKI 0.90
Oct 21 15:31:19 login[1546]: root login on 'ttyS0'
#
# pwd
/root
#

```

## ➔ Connect the LinPAC-5000 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?           |
+-----+
    
```

```

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           |
+-----+
    
```

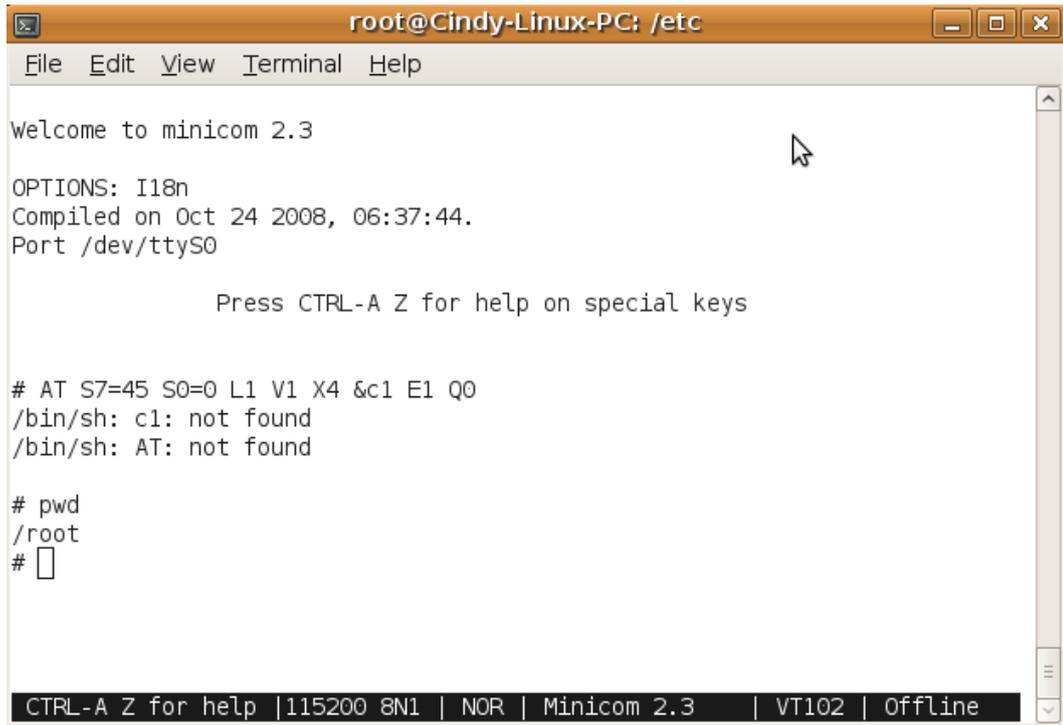
```

| Screen and keyboard         |
| Save setup as dfl           |
| Save setup as..            |
| Exit                         |
| Exit from Minicom           |
+-----+
    
```

```

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

➤ minicom in action



```
root@Cindy-Linux-PC: /etc
File Edit View Terminal Help

Welcome to minicom 2.3

OPTIONS: I18n
Compiled on Oct 24 2008, 06:37:44.
Port /dev/ttyS0

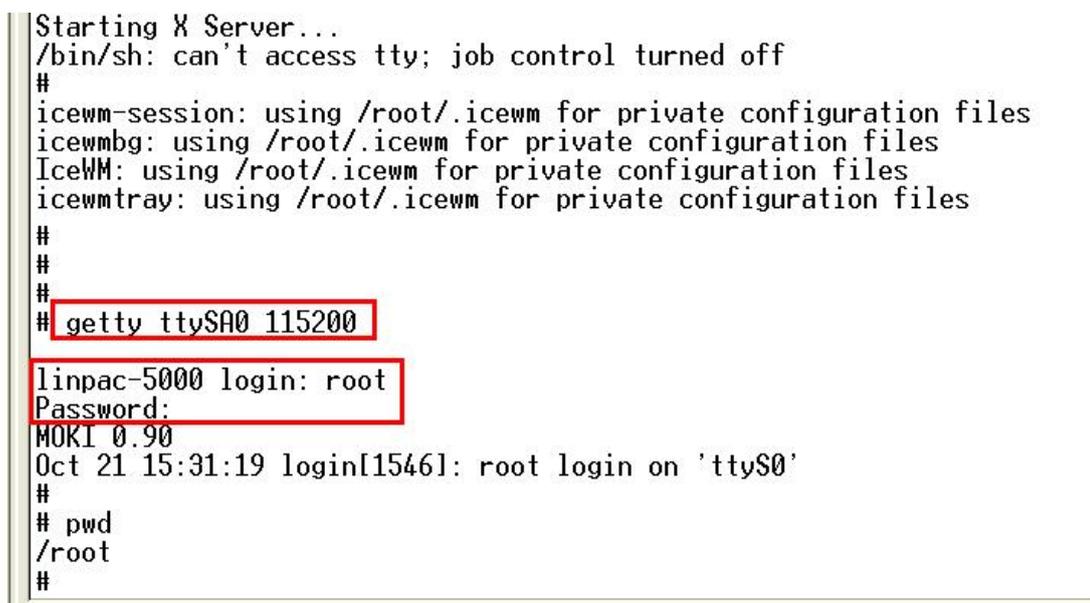
Press CTRL-A Z for help on special keys

# AT S7=45 S0=0 L1 V1 X4 &c1 E1 Q0
/bin/sh: c1: not found
/bin/sh: AT: not found

# pwd
/root
#
```

CTRL-A Z for help | 115200 8N1 | NOR | Minicom 2.3 | VT102 | Offline

- To login LinPAC-5000 by 'getty' command.
- ID: **root**
- Password: **root**



```
Starting X Server...
/bin/sh: can't access tty; job control turned off
#
icewm-session: using /root/.icewm for private configuration files
icewm-bg: using /root/.icewm for private configuration files
IceWM: using /root/.icewm for private configuration files
icewm-tray: using /root/.icewm for private configuration files
#
#
#
# getty ttySA0 115200
linpac-5000 login: root
Password:
MOKI 0.90
Oct 21 15:31:19 login[1546]: root login on 'ttyS0'
#
# pwd
/root
#
```

## Telnet to LinPAC-5000

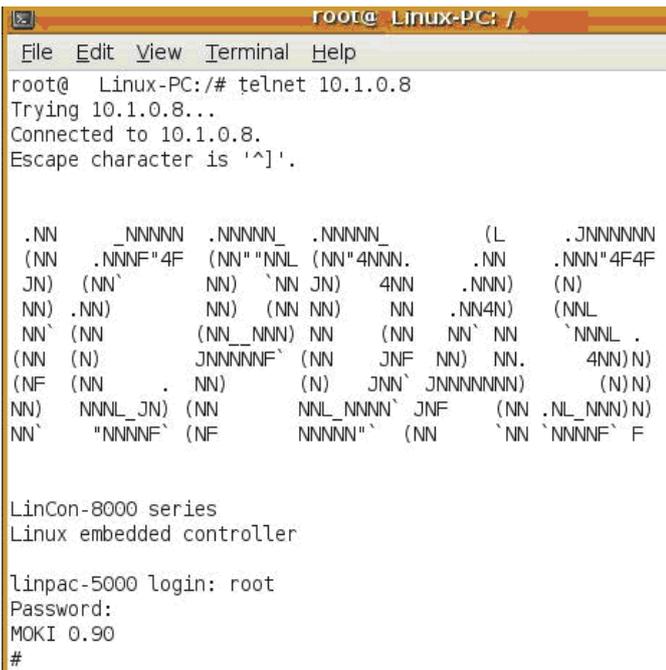
### In HyperTerminal :

```
# 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 :



```
root@ Linux-PC: /
File Edit View Terminal Help
root@ Linux-PC:/# telnet 10.1.0.8
Trying 10.1.0.8...
Connected to 10.1.0.8.
Escape character is '^['.

.NN      _NNNNN  .NNNNN_ .NNNNN_      (L      .JNNNNNN
(NN      .NNNF"4F (NN"NNL (NN"4NNN.  .NN      .NNN"4F4F
JN) (NN`      NN) `NN JN) 4NN      .NNN) (N)
NN) .NN)      NN) (NN NN)  NN      .NN4N) (NNL
NN` (NN      (NN_NNN) NN      (NN NN` NN      `NNNL .
(NN (N)      JNNNNNF` (NN      JNF NN) NN.      4NN)N)
(NF (NN      . NN) (N) JNN` JNNNNNNN) (N)N)
NN) NNNL_JN) (NN     >NNL_NNNN` JNF (NN .NL_NNN)N)
NN`      "NNNF` (NF      NNNNN" (NN      `NN `NNNF` F

LinCon-8000 series
Linux embedded controller

linpac-5000 login: root
Password:
MOKI 0.90
#
```

### >> In Windows PC :



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\user>telnet 10.1.0.8

Telnet 10.1.0.8

.NN      _NNNNN  .NNNNN_ .NNNNN_      (L      .JNNNNNN
(NN      .NNNF"4F (NN"NNL (NN"4NNN.  .NN      .NNN"4F4F
JN) (NN`      NN) `NN JN) 4NN      .NNN) (N)
NN) .NN)      NN) (NN NN)  NN      .NN4N) (NNL
NN` (NN      (NN_NNN) NN      (NN NN` NN      `NNNL .
(NN (N)      JNNNNNF` (NN      JNF NN) NN.      4NN)N)
(NF (NN      . NN) (N) JNN` JNNNNNNN) (N)N)
NN) NNNL_JN) (NN     >NNL_NNNN` JNF (NN .NL_NNN)N)
NN`      "NNNF` (NF      NNNNN" (NN      `NN `NNNF` F

LinCon-8000 series
Linux embedded controller

linpac-5000 login: root
Password:
MOKI 0.90
#
```

## ➔ Get & Configure IP of LinPAC-5000

The LinPAC-5000 network setting includes two ways. One is **DHCP** and the other is “**Assigned IP**”. DHCP is the default setting after the LinPAC-5000 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 LinPAC-5000 and telnet to LinPAC-5000 first.
- ➔ Type in “**vi /etc/network/interfaces**” to open the network setting file.

```

c:\ Telnet 192.168.0.200
auto lo
iface lo inet loopback

# Enable dhcp on eth0
iface eth0 inet dhcp
iface eth1 inet dhcp
iface wlan0 inet dhcp
iface ppp0 inet dhcp

# Or unmark following lines and modify the ip configuration to enable ethernet
#iface eth0 inet static
#   address 192.168.0.200
#   netmask 255.255.0.0
#   gateway 192.168.0.254

~
~
:wq
```

## ➔ Technical Support

ICP DAS Website: [www.icpdas.com](http://www.icpdas.com)

ICP DAS Service : [service@icpdas.com](mailto:service@icpdas.com)