

D120-S3G User's Guide

GIGABYTE Technology Ltd.
Network & Business Unit



Table of Contents

1. How to connect console.....	Page 3 to 5
2. Login into Web UI.....	Page 6 to 11
3. GIGABYTE Management Console (IPMI web UI).....	Page 11 to 15
4. Firmware update.....	Page 15 to 22
5. LED identification.....	Page 22 to 23
6. Q & A.....	Page 23 to 23

1. How to connect console

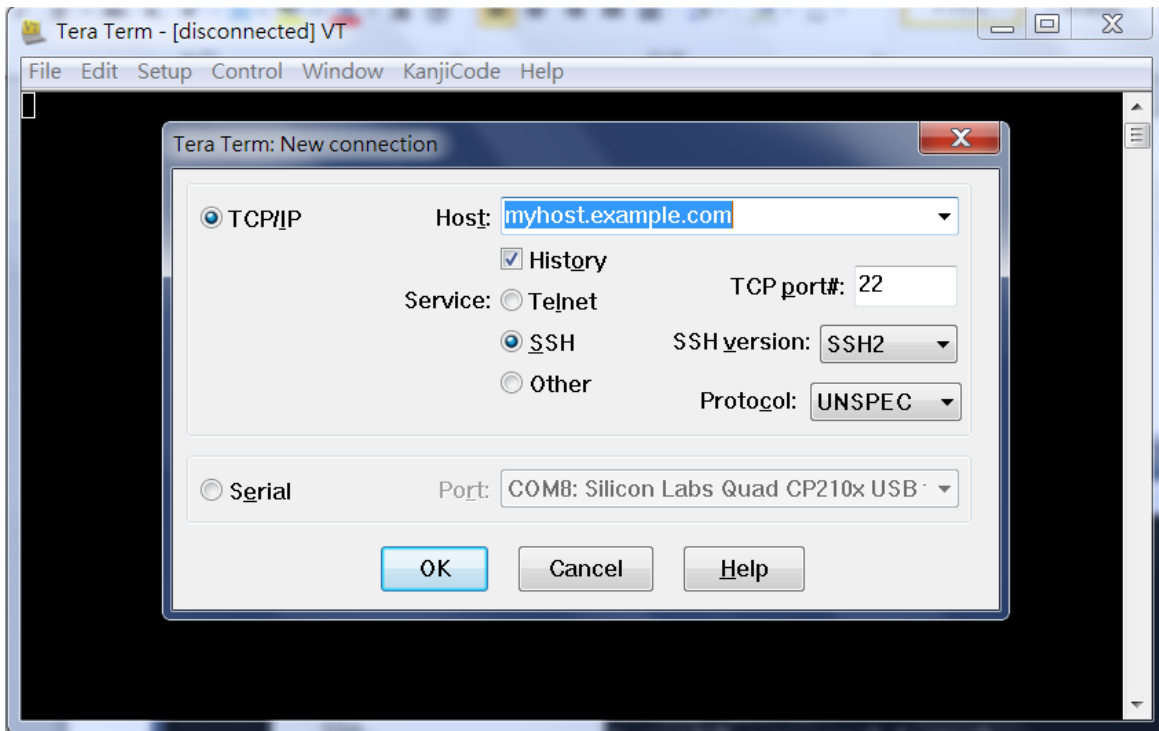
- 1-1. Plug a micro USB cable between D120-S3G and your PC, and connected LAN cable between LAN port and DHCP server.



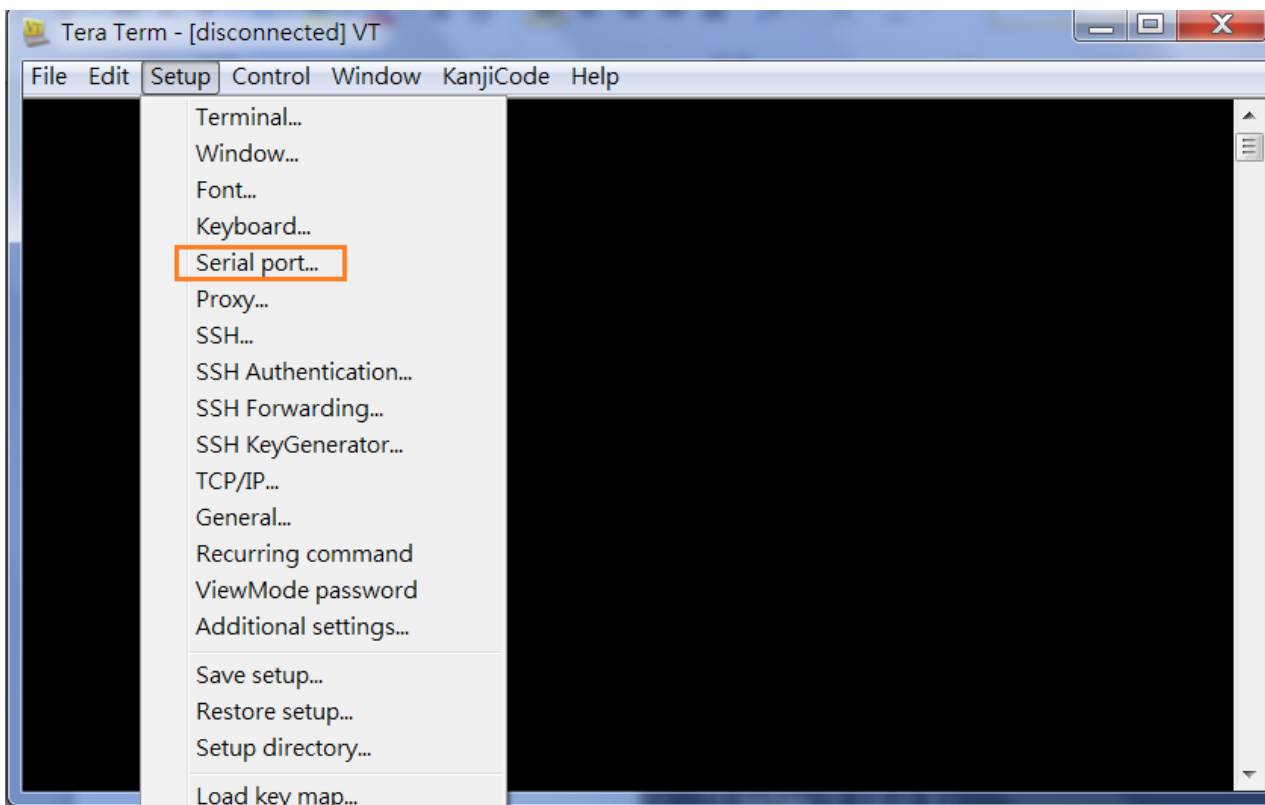
- 1-2. Install the UART driver in the client system.
- 1-3. To download the UART driver (Silicon CP2108), go to Gigabyte official website:
<http://b2b.gigabyte.com/>
- 1-4. Select product category. Select D120-S3G, go to support & downloads, Select Utility from download type and choose your OS. Save the file (Download Console driver USB to UART for Windows) to a known location on your client system.
http://download.gigabyte.asia/FileList/Utility/cp210x_vcp_windows.zip
- 1-5. Unzip CP210x_VCP_Windows.zip.
32 bits OS: Run CP210x_VCP_Windows\CP210xVCPInstaller_x86.exe
64 bits OS : Run CP210x_VCP_Windows\CP210xVCPInstaller_x64.exe
- 1-6. Install Tera Term program in client system, you can download this program from the following web link.
<http://logmett.com/index.php?/download/tera-term-487-freeware.html>

1-7. Press power button to power on the server. You may wait about 3 minutes and 10 seconds for firmware shows login prompt.

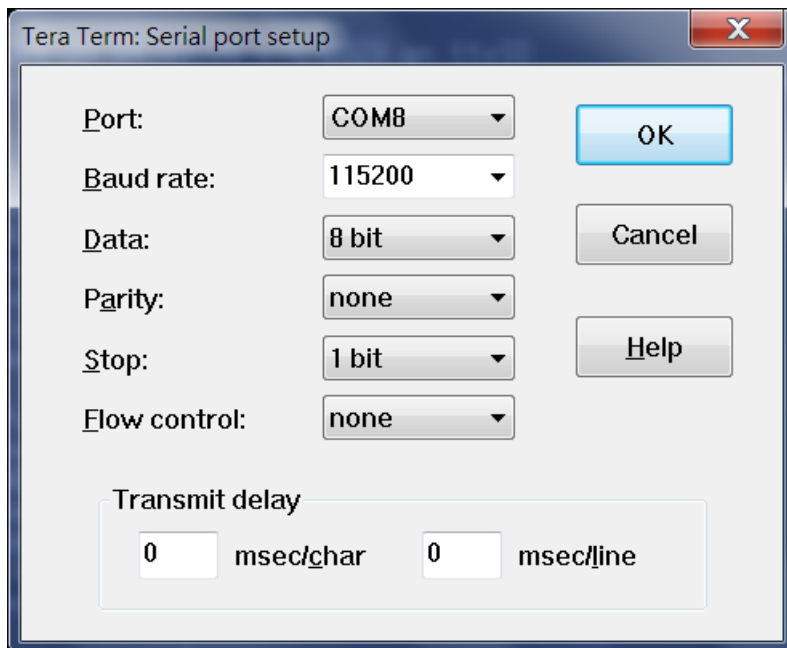
1-8. Execute ttermpro.exe, click [Cancel] button.



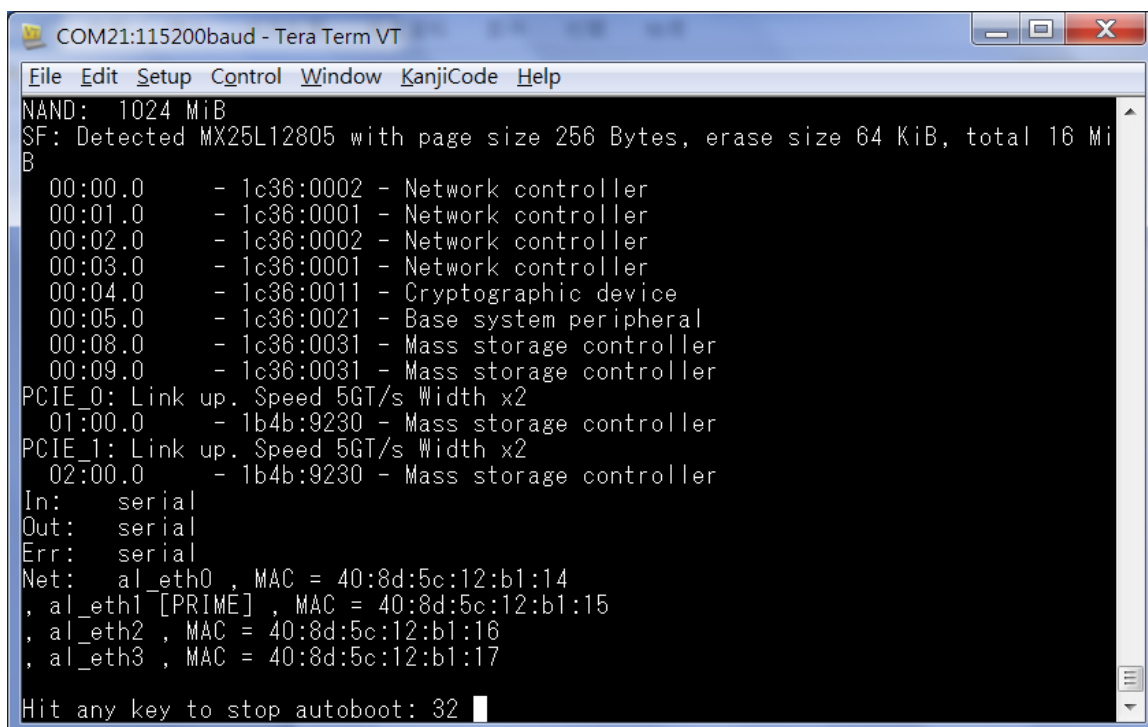
1-9. Click [Setup] item, select [Serial Port...]



- 1-10. Select correctly serial port, baud rate change to 115200, data 8 bit, Parity none, Stop 1 bit, Flow control none, and then click [OK] button.

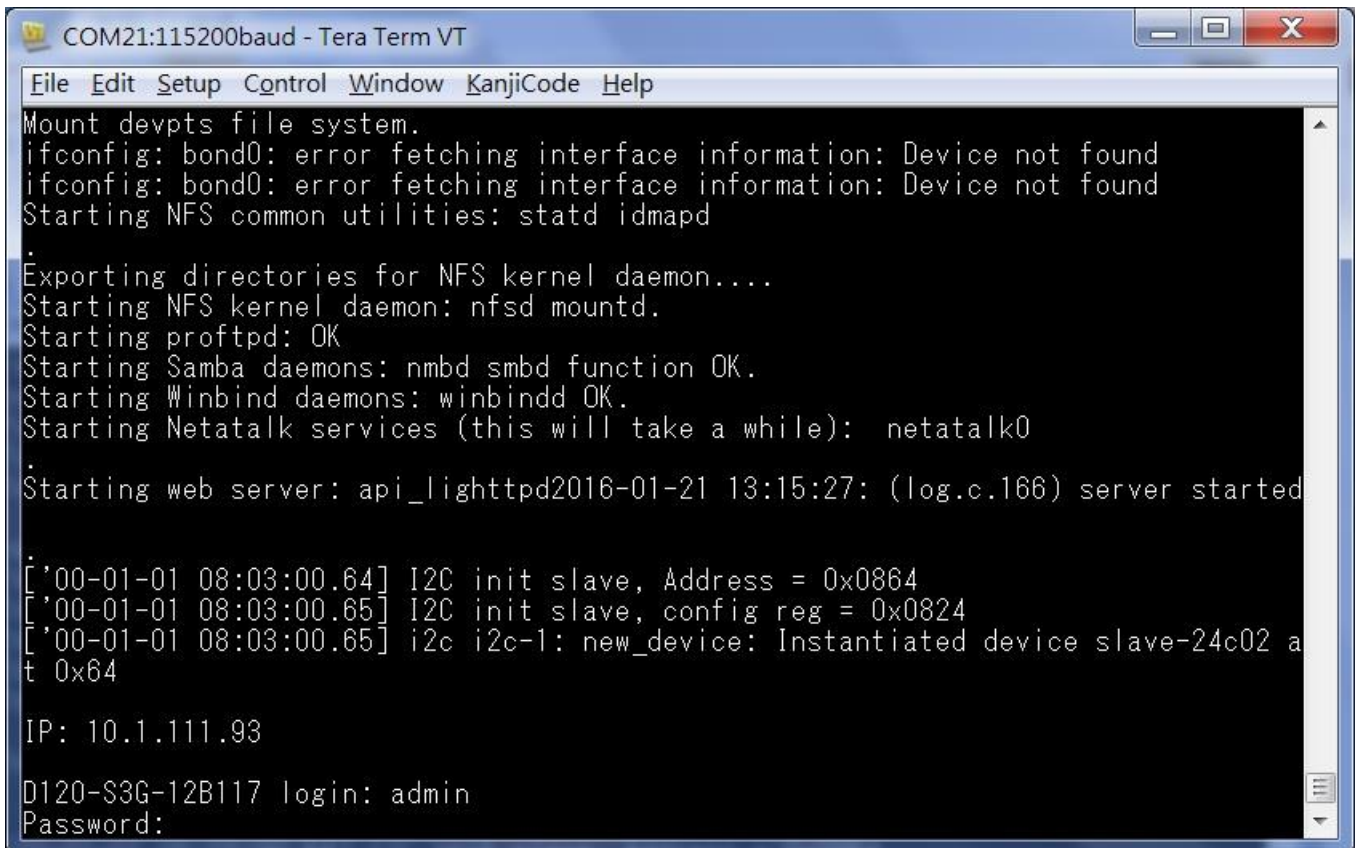


- 1-11. You will see the system booting as below screenshot after you have press Enter key.



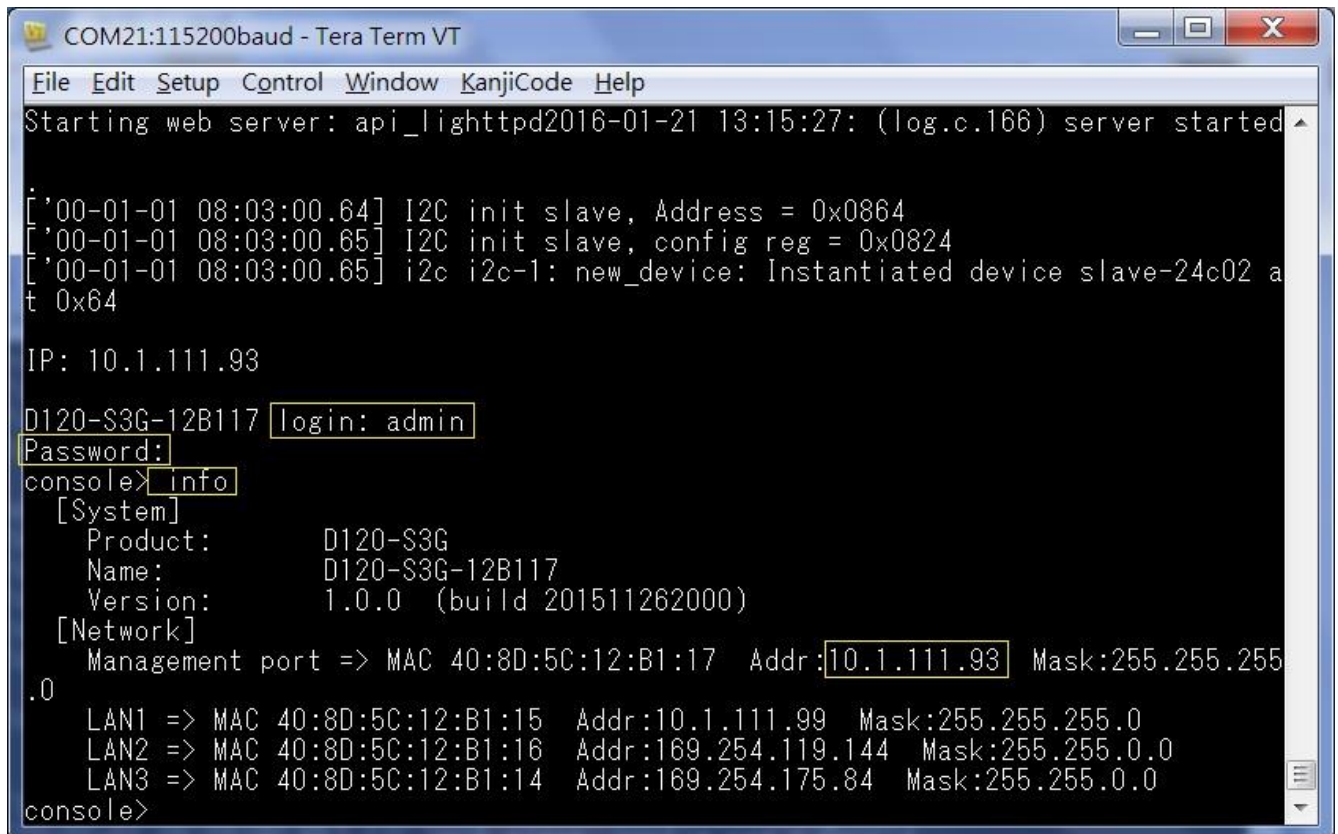
2. Login into Web UI

2-1. Please waiting about 3 minutes and 10 seconds after you press power button, you will see IP address, such as 10.1.111.93, and see login prompt as below screenshot. Please enter login ID: admin; Password: 1234. Now, you can enter this IP address in browser program.



```
COM21:115200baud - Tera Term VT
File Edit Setup Control Window KanjiCode Help
Mount devpts file system.
ifconfig: bond0: error fetching interface information: Device not found
ifconfig: bond0: error fetching interface information: Device not found
Starting NFS common utilities: statd idmapd
.
Exporting directories for NFS kernel daemon....
Starting NFS kernel daemon: nfsd mountd.
Starting proftpd: OK
Starting Samba daemons: nmbd smb function OK.
Starting Winbind daemons: winbindd OK.
Starting Netatalk services (this will take a while): netatalk0
.
Starting web server: api_lighttpd2016-01-21 13:15:27: (log.c.166) server started
.
['00-01-01 08:03:00.64] I2C init slave, Address = 0x0864
['00-01-01 08:03:00.65] I2C init slave, config reg = 0x0824
['00-01-01 08:03:00.65] i2c i2c-1: new_device: Instantiated device slave-24c02 a
t 0x64
IP: 10.1.111.93
D120-S3G-12B117 login: admin
Password:
```

- 2-2. Please enter info, you can find out management port, this management port is not BMC LAN port, it just let you know you can use this IP address login into Web UI to manage this server, please refer to screenshot as below.

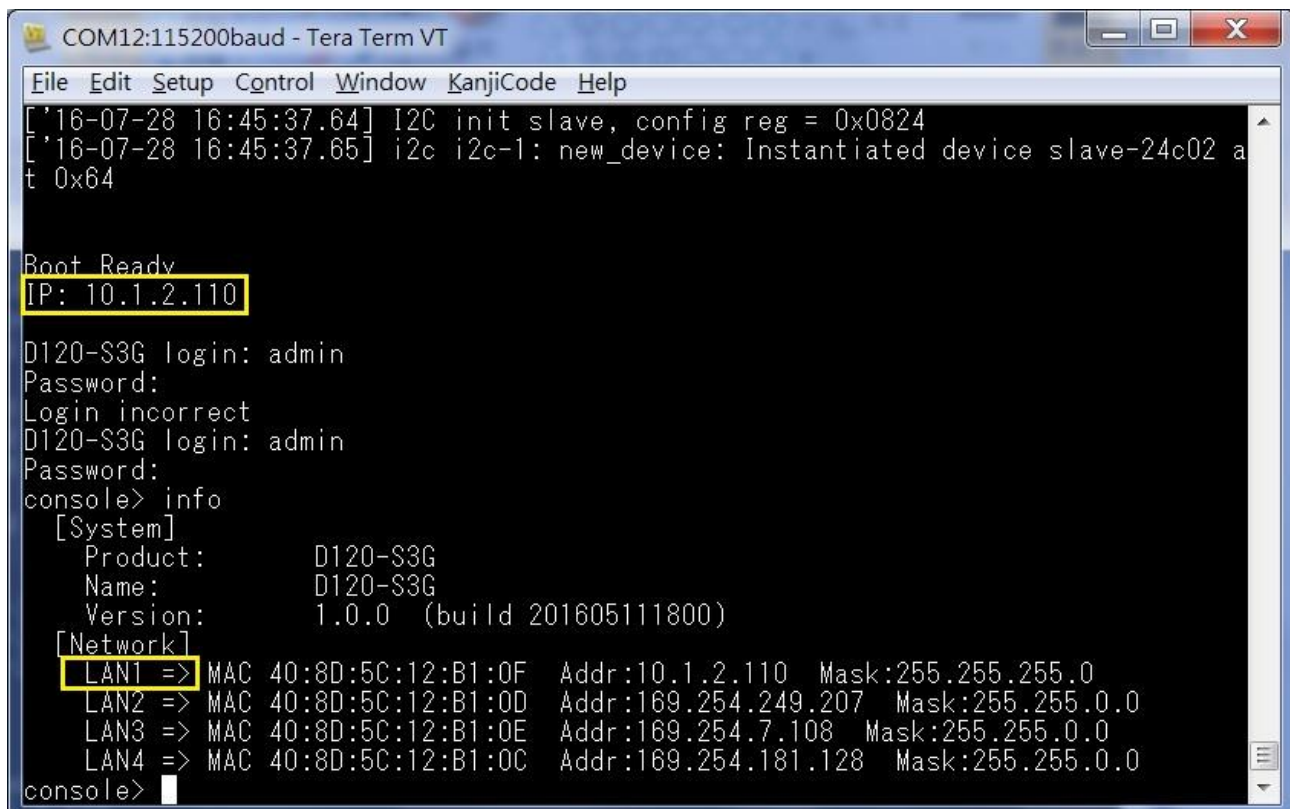


```
COM21:115200baud - Tera Term VT
File Edit Setup Control Window KanjiCode Help
Starting web server: api_lighttpd2016-01-21 13:15:27: (log.c.166) server started
['00-01-01 08:03:00.64] I2C init slave, Address = 0x0864
['00-01-01 08:03:00.65] I2C init slave, config reg = 0x0824
['00-01-01 08:03:00.65] i2c i2c-1: new_device: Instantiated device slave-24c02 at 0x64

IP: 10.1.111.93

D120-S3G-12B117 login: admin
Password:
console> info
[System]
Product:      D120-S3G
Name:         D120-S3G-12B117
Version:      1.0.0 (build 201511262000)
[Network]
Management port => MAC 40:8D:5C:12:B1:17 Addr:10.1.111.93 Mask:255.255.255.0
LAN1 => MAC 40:8D:5C:12:B1:15 Addr:10.1.111.99 Mask:255.255.255.0
LAN2 => MAC 40:8D:5C:12:B1:16 Addr:169.254.119.144 Mask:255.255.0.0
LAN3 => MAC 40:8D:5C:12:B1:14 Addr:169.254.175.84 Mask:255.255.0.0
console>
```

- 2-3. We have revised description in latest BIOS version, you would not confuse any more.

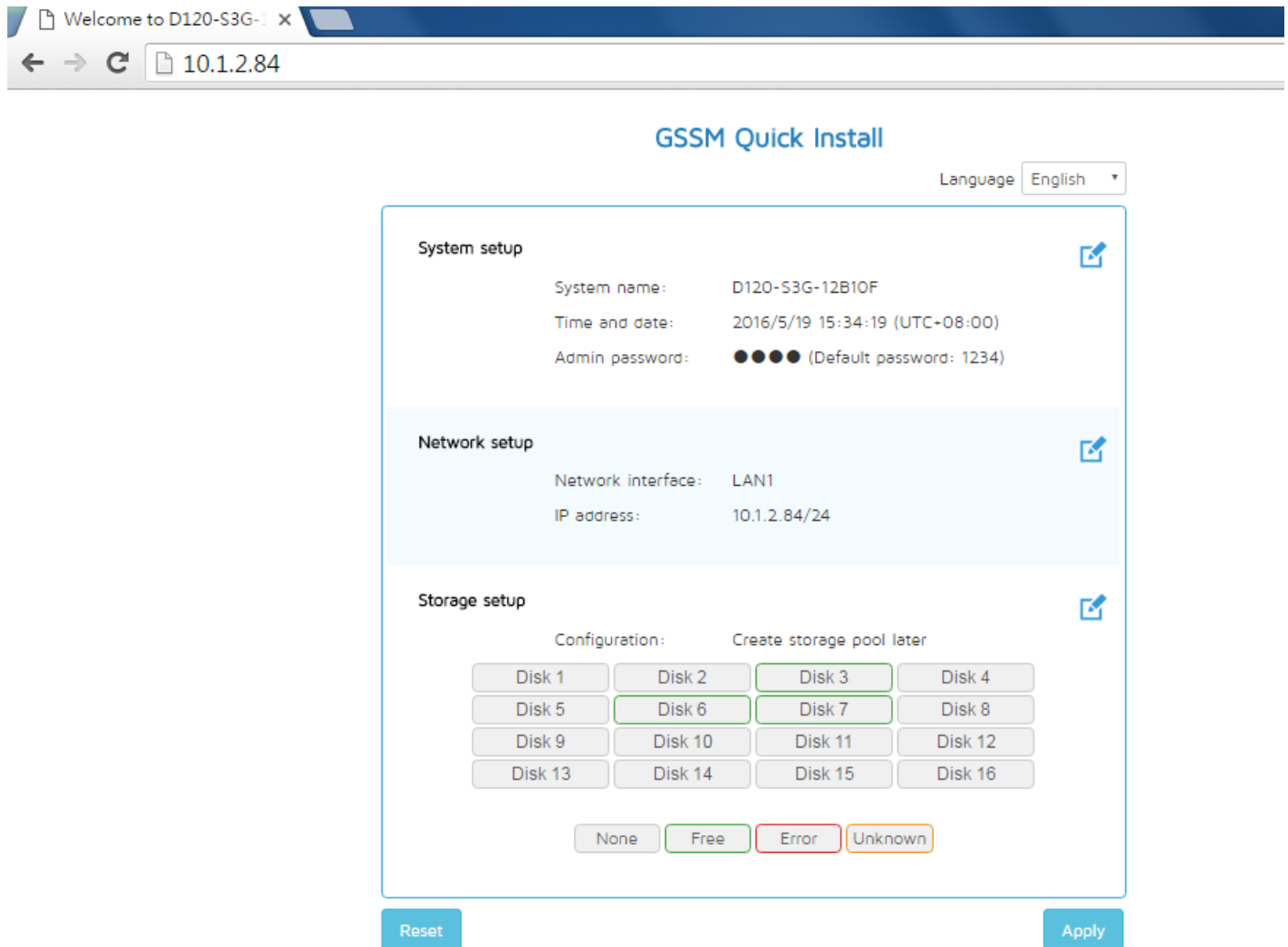


```
COM12:115200baud - Tera Term VT
File Edit Setup Control Window KanjiCode Help
['16-07-28 16:45:37.64] I2C init slave, config reg = 0x0824
['16-07-28 16:45:37.65] i2c i2c-1: new_device: Instantiated device slave-24c02 at 0x64

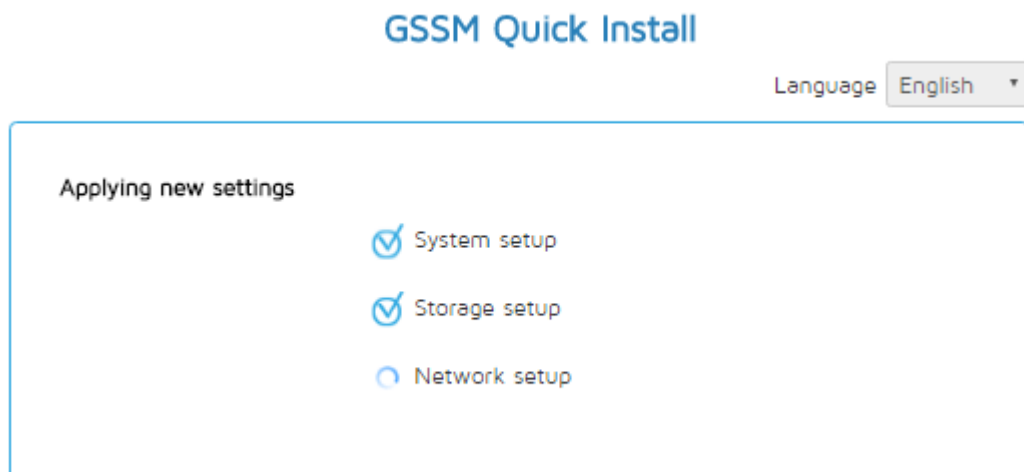
Boot Ready
IP: 10.1.2.110

D120-S3G login: admin
Password:
Login incorrect
D120-S3G login: admin
Password:
console> info
[System]
Product:      D120-S3G
Name:         D120-S3G
Version:      1.0.0 (build 201605111800)
[Network]
LAN1 => MAC 40:8D:5C:12:B1:0F Addr:10.1.2.110 Mask:255.255.255.0
LAN2 => MAC 40:8D:5C:12:B1:0D Addr:169.254.249.207 Mask:255.255.0.0
LAN3 => MAC 40:8D:5C:12:B1:0E Addr:169.254.7.108 Mask:255.255.0.0
LAN4 => MAC 40:8D:5C:12:B1:0C Addr:169.254.181.128 Mask:255.255.0.0
console>
```

2-4. Open web browser, input IP address of the storage device, it would show GSSM Quick Install page. Modify the setting if needed and click [Apply] button to go to the next page.



2-5. Applying new settings.



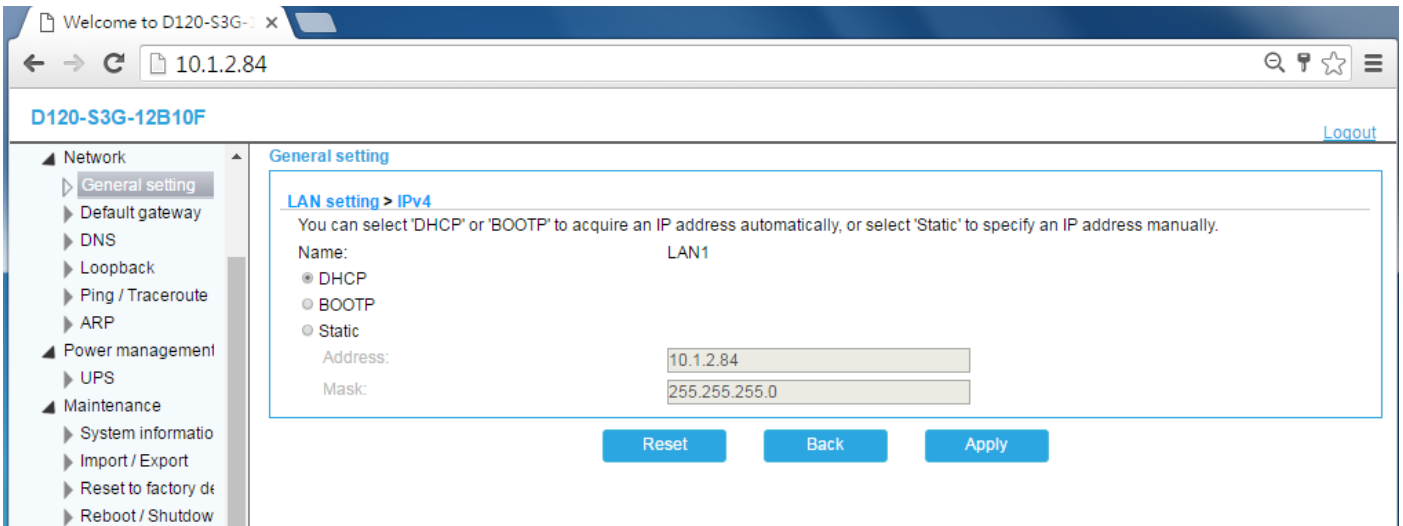
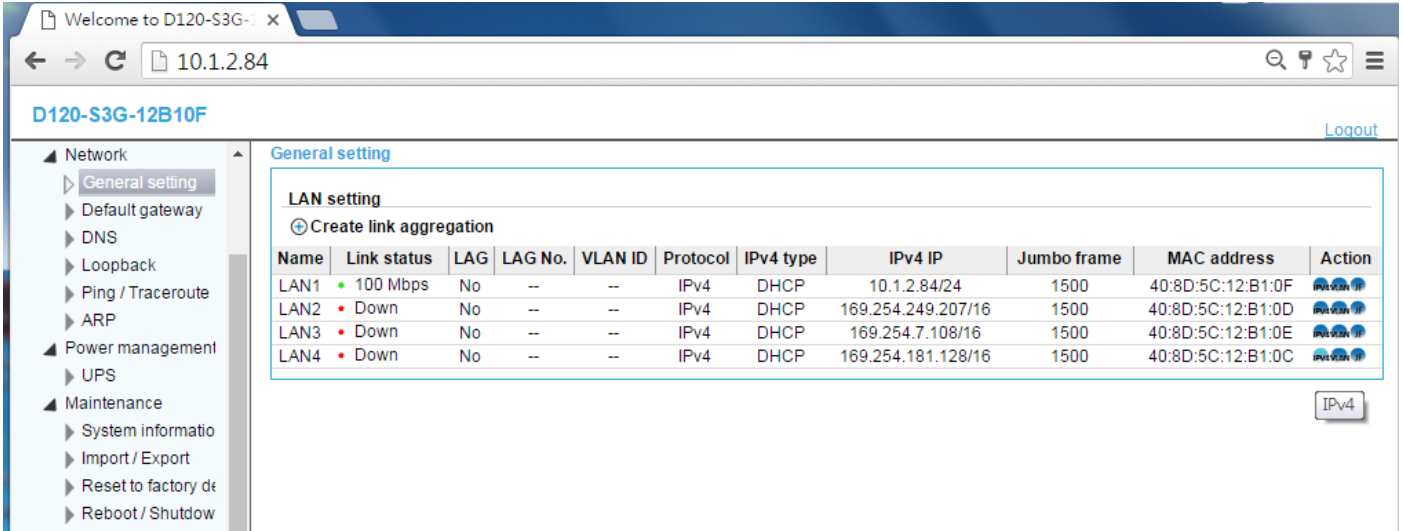
2-6. Enter login ID: **admin**; password: **1234**



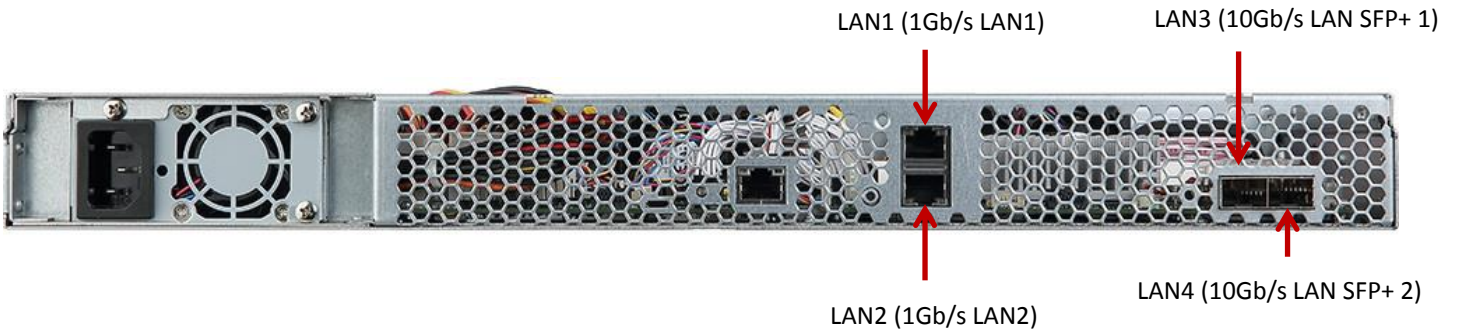
2-7. You already login into web UI.



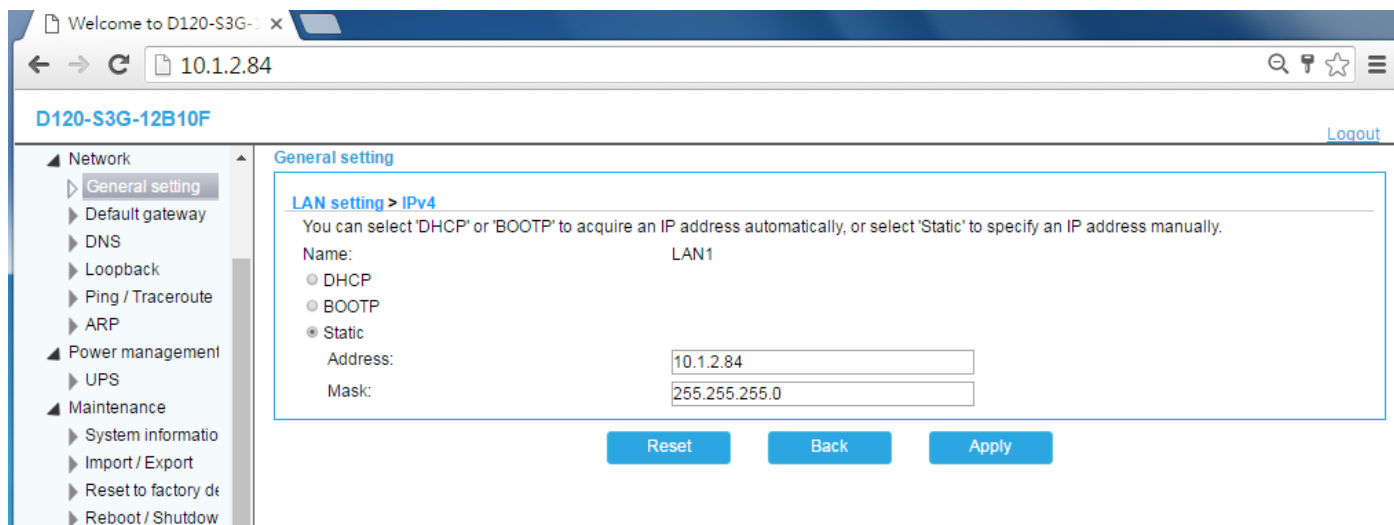
- 2-8. You could change the LAN setting for all LAN ports, click [System setting] → [Network] → [General setting] item, the default setting is getting IP address from DHCP, you could change static IP address in this page.



- 2-9. There are 4 LAN ports available in Web UI, see below picture for LAN locations.

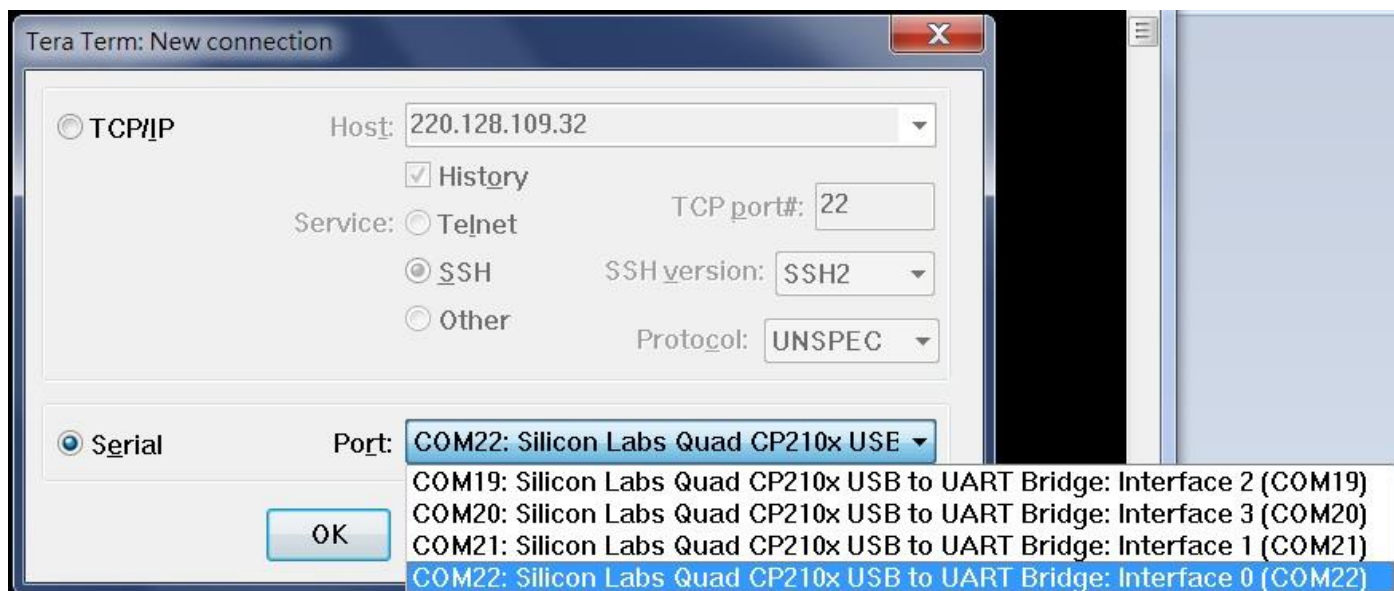


2-10. DHCP change to Static IP address.

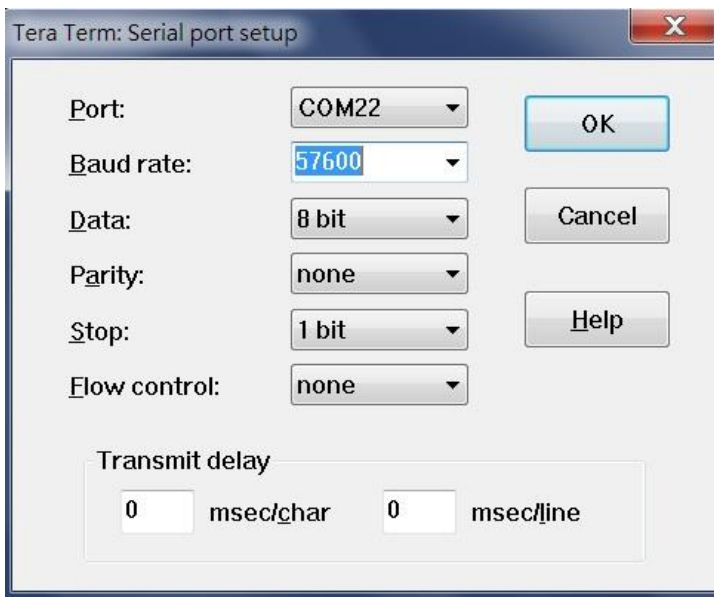


3. GIGABYTE Management Console (IPMI web UI)

3-1. You can get management (BMC) LAN IP address through console prompt. Please execute Tera Team program, select Serial item, and then select [Interface 0], for example as below screenshot.

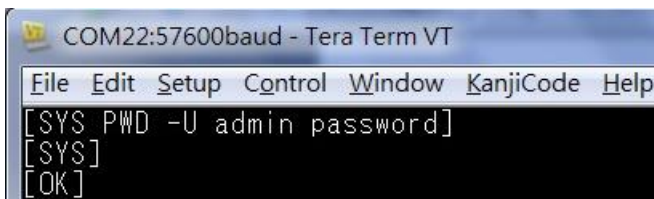


3-2. Please setting Baud rate to 57600.



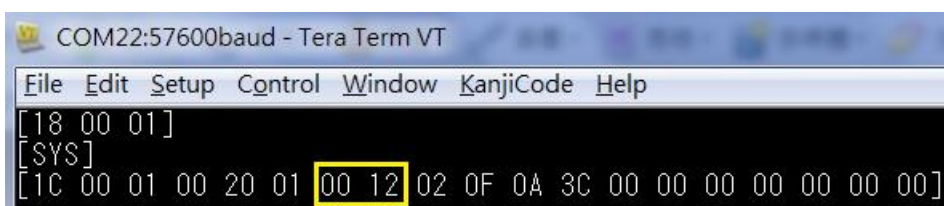
3-3. Enter the following command to enter the system. (If any word was wrong, please hit enter to type again. Backspace is not allowed in this command.)

[SYS PWD -U admin password]



3-4. Enter the following command to check BMC firmware version.

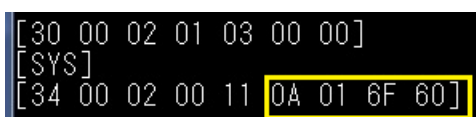
[18 00 01]



3-5. Enter the following command to get Management LAN (BMC LAN) IP address.

[30 00 02 01 03 00 00]

The IP address represented hexadecimal numbers. Convert hexadecimal to decimal, the IP address is: 10.1.111.96



How to convert hexadecimal to decimal? Please refer to the following URL.

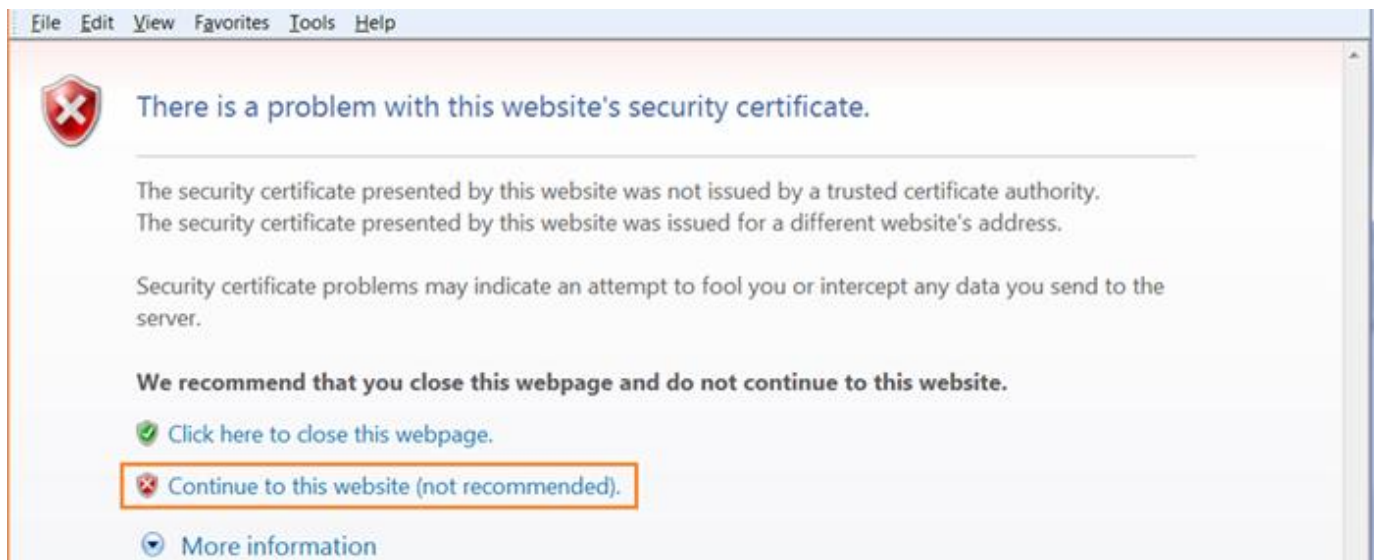
<http://www.convertworld.com/zh-Hant/numerals/%E5%8D%81%E5%85%AD%E9%80%B2%E5%88%B6.html>

3-6. Enter the following command to logout the system.

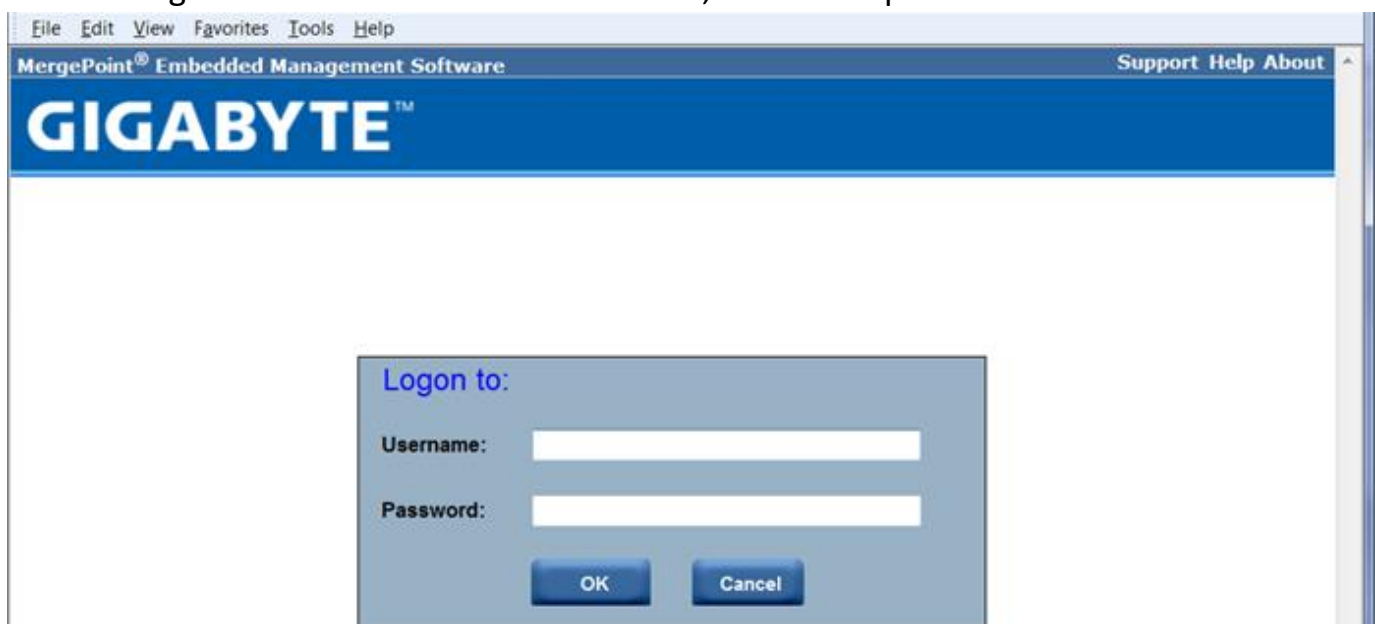
[SYS PWD -X]

```
[SYS PWD -X]
[SYS]
[OK]
```

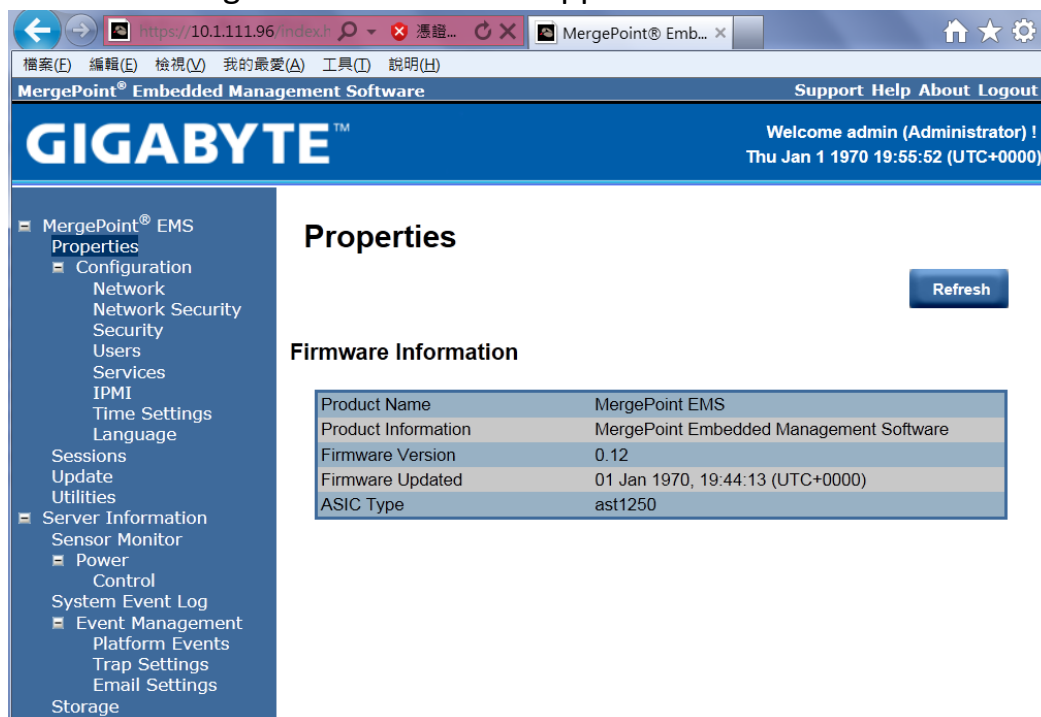
3-7. Please click [Continue to this website (not recommended)] option.



3-8. After you enter IP address in browser program, you will see IPMI web UI of Gigabyte Management Console. Username: admin, Password: password



3-9. After you successfully login into your Gigabyte management system console, the Remote Management Console GUI appears.



3-10. DHCP changed to static IP address, please click name eth1.

Network Interface Configuration

Name	iF Enabled	IPv4 Enabled	IPv4 Address	IPv6 Enabled	IPv6 Address
<u>eth1</u>	Enabled	Enabled	10.1.111.108	Enabled	::/0

3-12. Cancel "Use DHCP" item, and then enter static IP address, subnet mask and gateway.

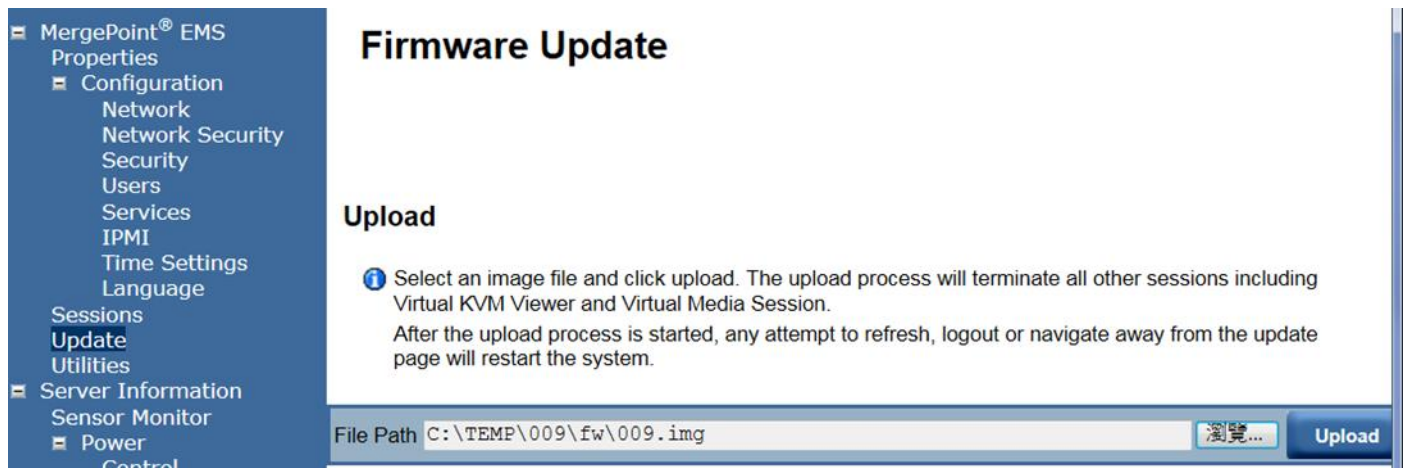
Network Interface Configuration eth1

Apply Changes Refresh

IPv4 Settings

Enabled	<input checked="" type="checkbox"/>
Use DHCP	<input checked="" type="checkbox"/>
IP Address	10.1.111.108
Subnet Mask	255.255.255.0
Gateway	10.1.111.253
Use DHCP to obtain DNS server addresses	<input type="checkbox"/>
Preferred DNS Server	10.1.1.3
Alternate DNS Server	0.0.0.0

3-13. BMC firmware update, choose the correct .img file then click upload to flash BMC.



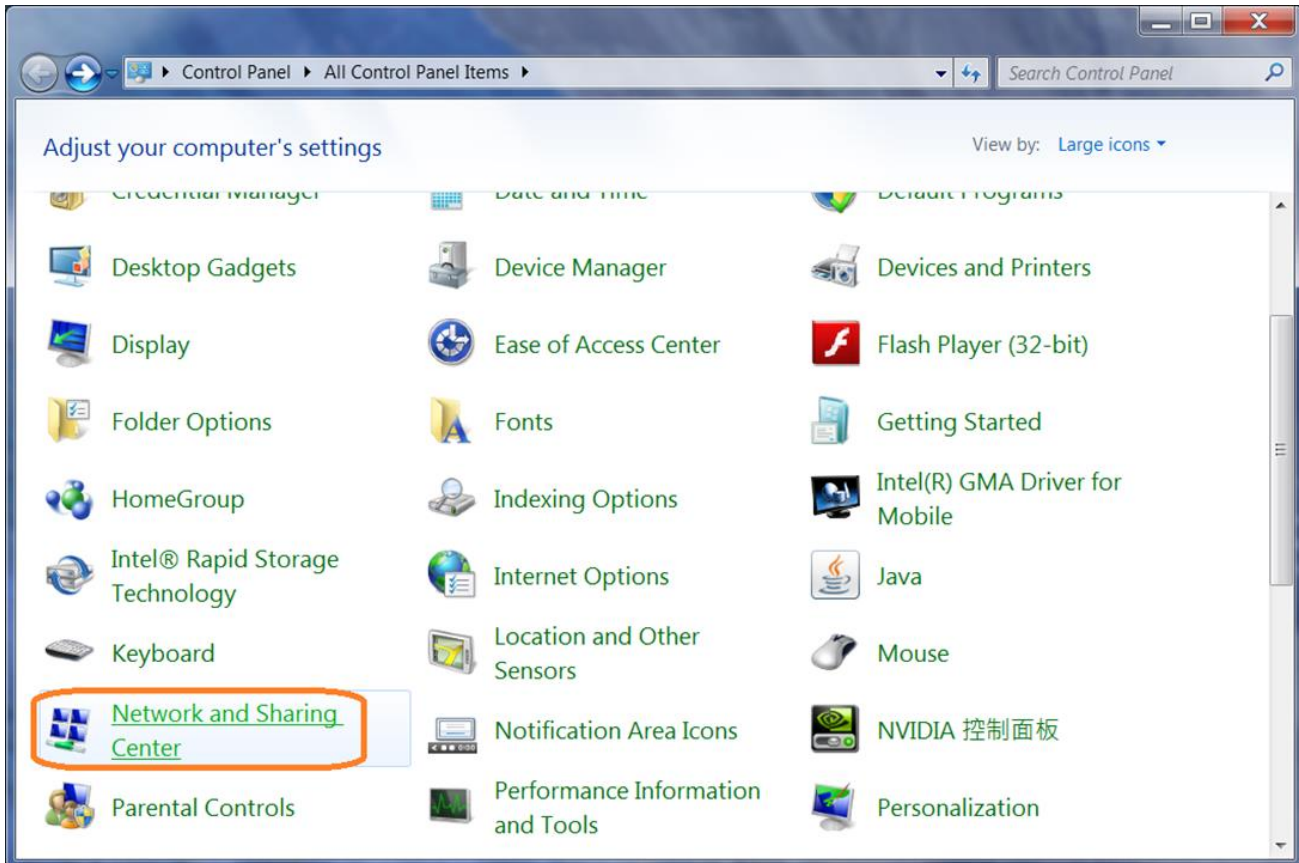
The screenshot shows a web interface for BMC Firmware Update. On the left is a navigation menu with categories like MergePoint® EMS Properties, Configuration, Sessions, Update, Utilities, Server Information, Sensor Monitor, and Power Control. The main content area is titled "Firmware Update" and contains an "Upload" section with instructions: "Select an image file and click upload. The upload process will terminate all other sessions including Virtual KVM Viewer and Virtual Media Session. After the upload process is started, any attempt to refresh, logout or navigate away from the update page will restart the system." Below the instructions is a "File Path" input field containing "C:\TEMP\009\fw\009.img" and a "浏览..." (Browse) button. To the right of the input field is an "Upload" button.

4. Firmware update

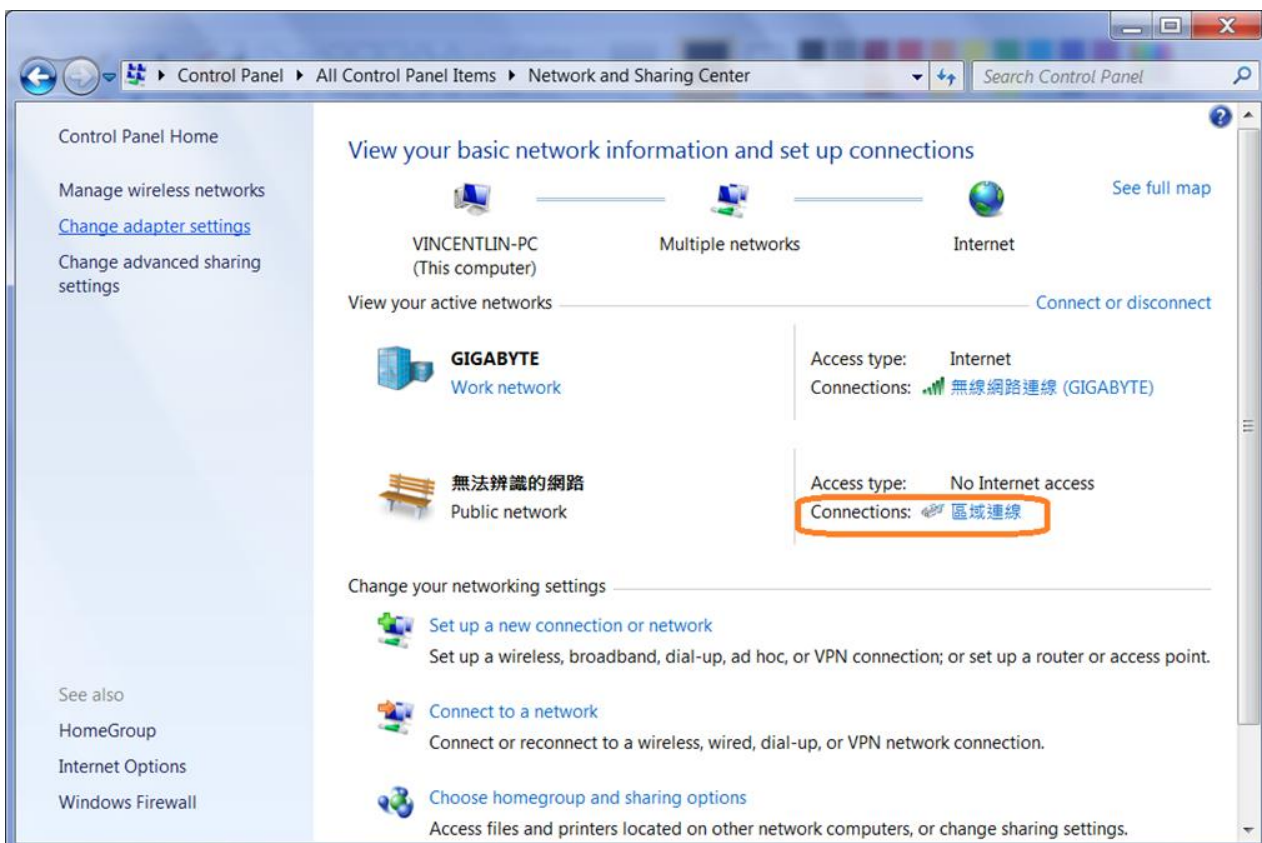
4-1. Connected LAN2 port of the storage and your PC or notebook directly and set static IP for both devices and please make sure both devices are in the same netmask. For example, storage IP is 192.168.6.1, PC or notebook IP is 192.168.6.2



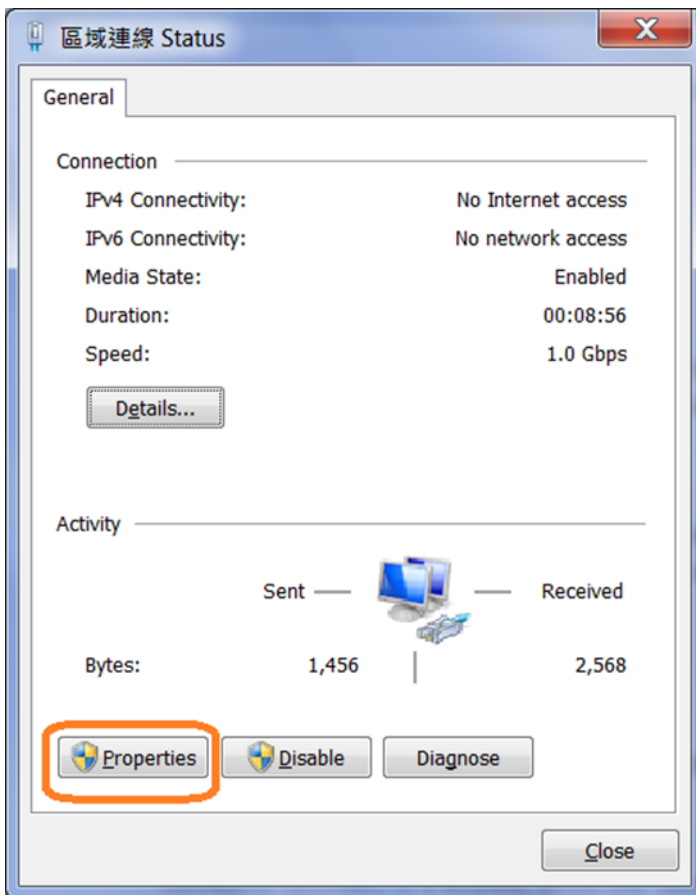
4-2. Click Network and Sharing Center in [Control Panel] from your PC.



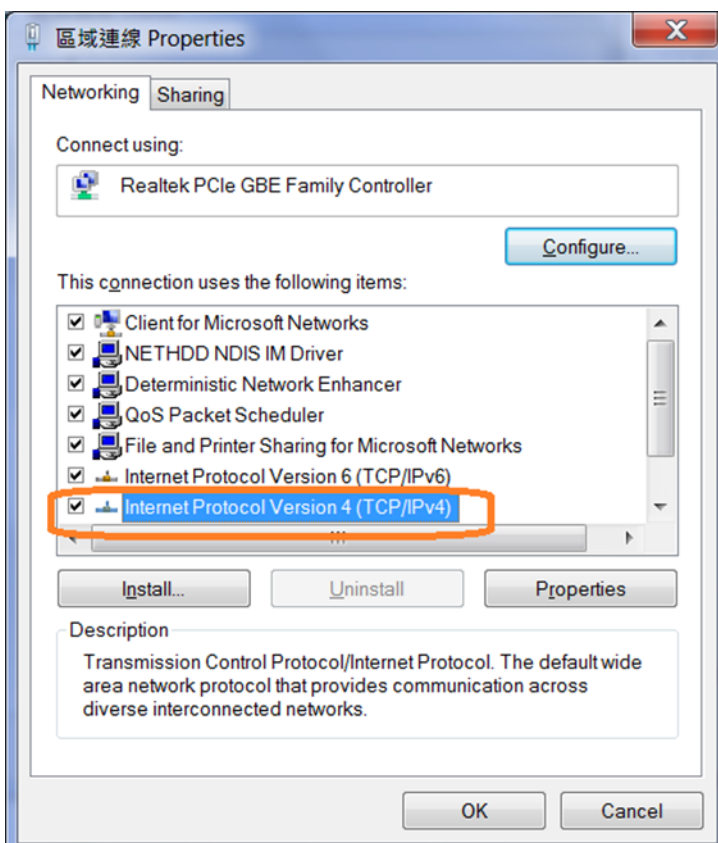
4-3. Click LAN connection.



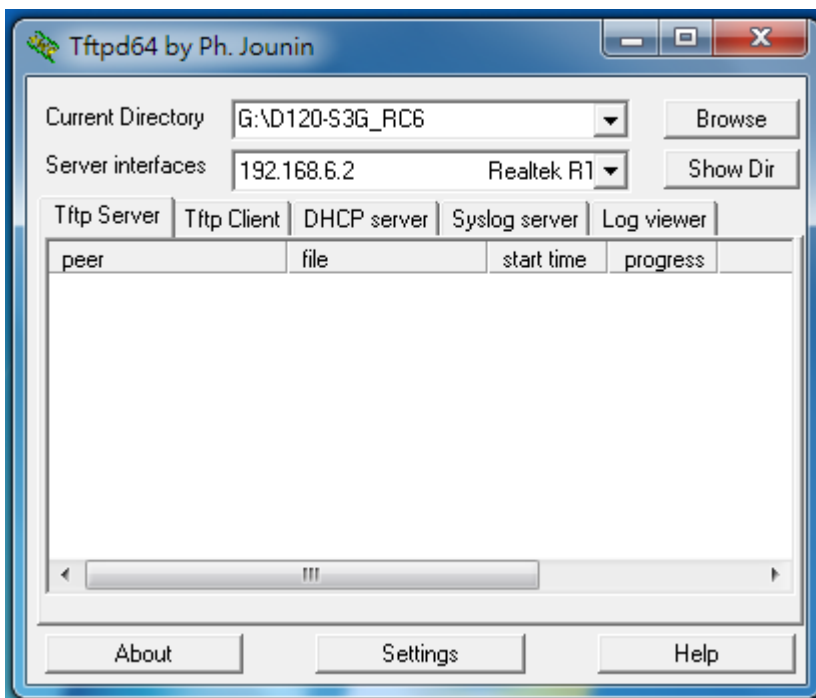
4-4. Click “Properties” button.



4-5. Click “Internet Protocol Version 4 (TCP/IPv4)”.

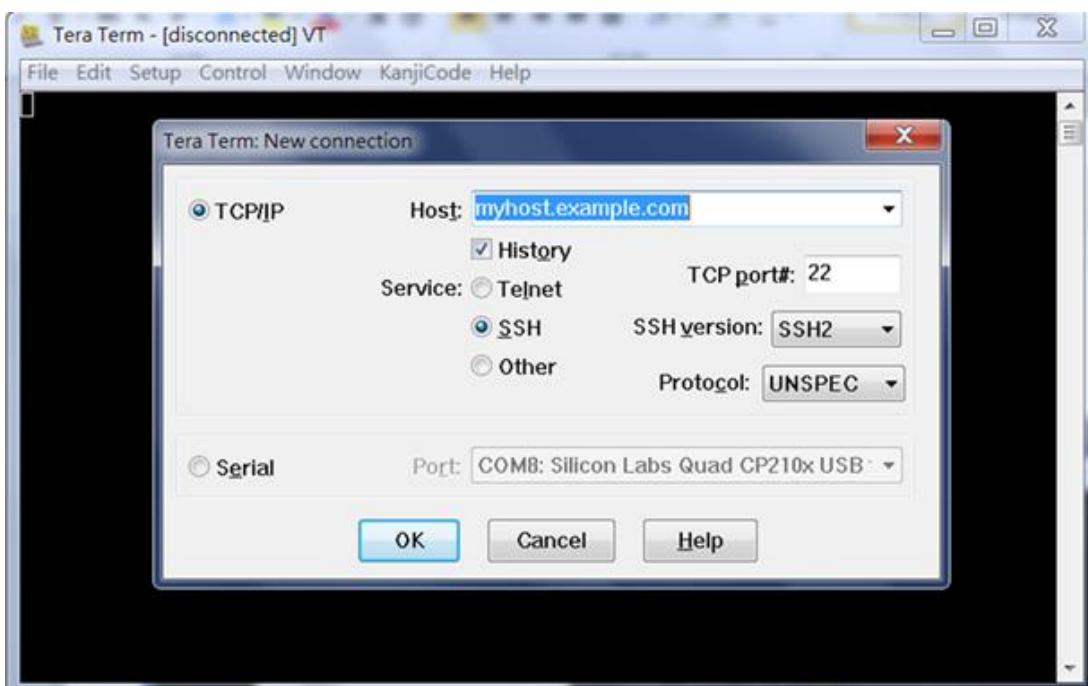


- 4-6. From Obtain and IP address automatically change to User the following IP address.
Please setup the same network segment between your PC and RMC board, such as IP address:192.168.6.2, subnet mask: 255.255.255.0, and then press [Ok] button.
- 4-7. Execute Tftpd64 or Tftpd32 utility program, click [browse] to find firmware location and select 192.168.6.2 for server interfaces.

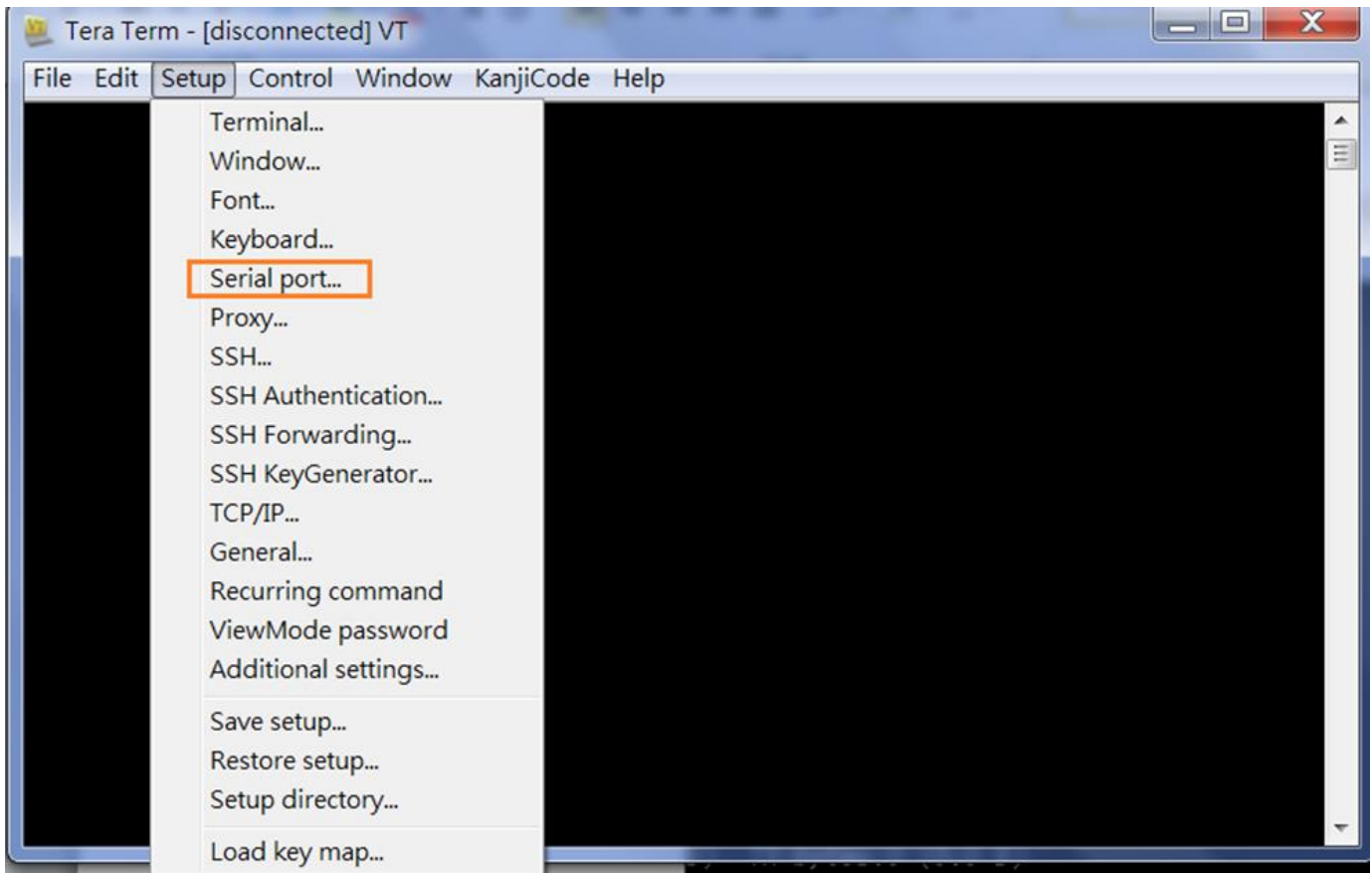


TFTP utility download web-link: http://tftpd32.jounin.net/tftpd32_download.html

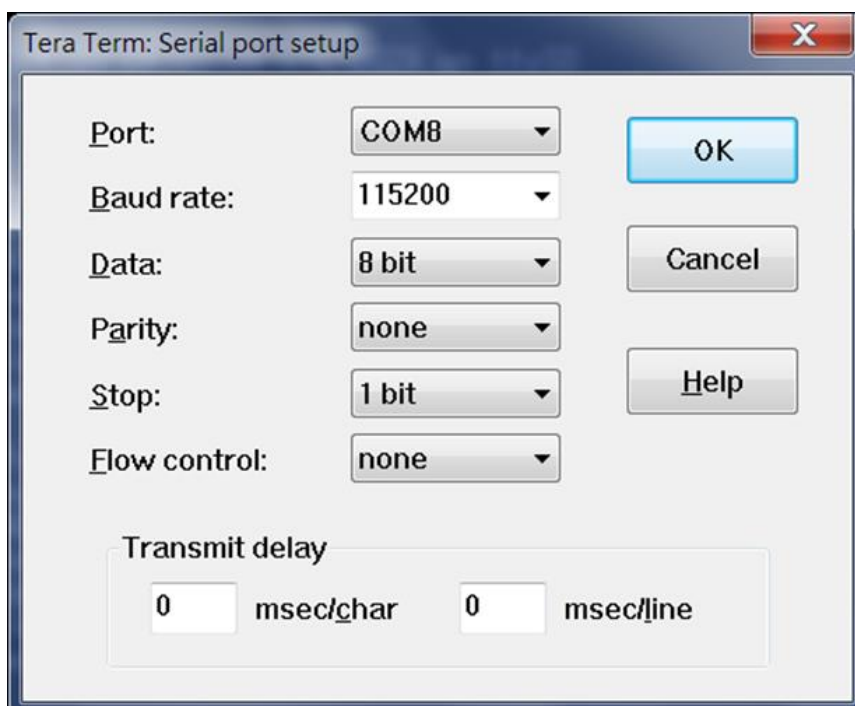
- 4-8. Execute ttermpro.exe, click [Cancel] button.



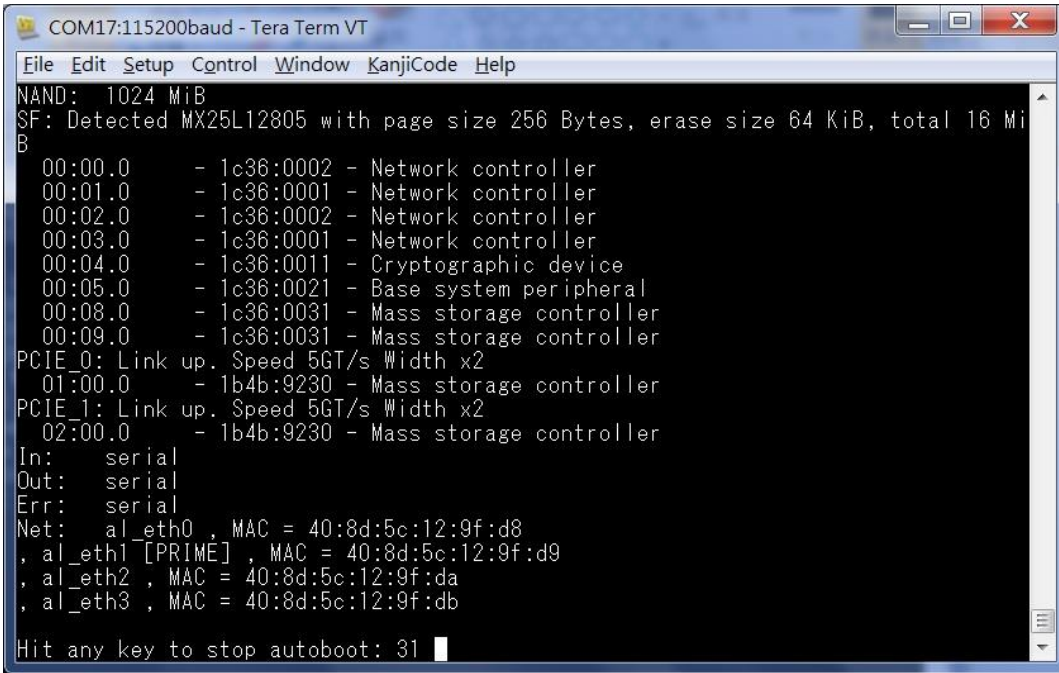
4-9. Click [Setup] item, and select [Serial Port...]



4-10. Select correctly serial port, baud rate change to 115200, data 8 bit, Parity none, Stop 1 bit, Flow control none, and then click [OK] button.



4-11. You will see the system booting as below screenshot after you have press Enter key., and then hit any key to stop auto boot when you see below prompt.



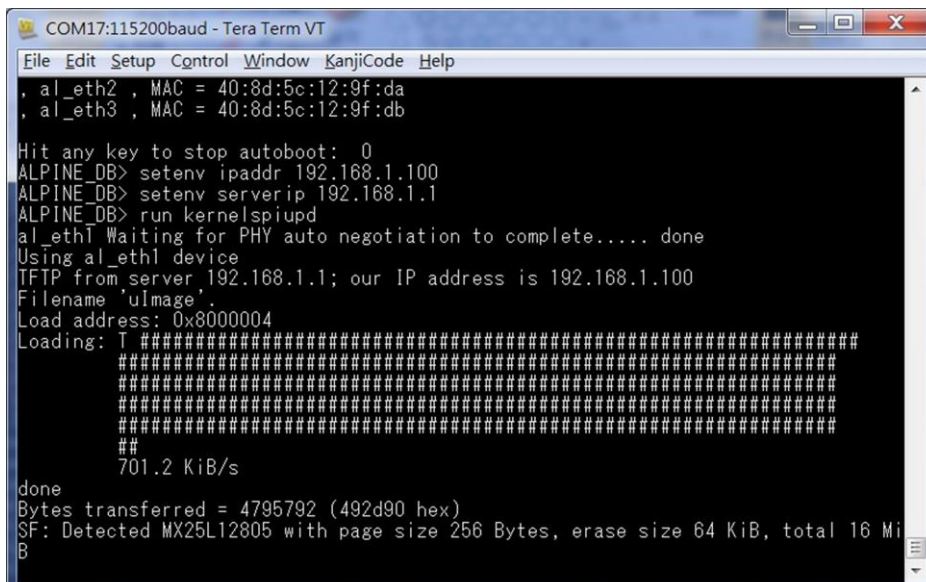
4-12. Update kernel → ulmage. Please follow below command.

setenv ipaddr <storage IP address > For example: 192.168.6.1

setenv serverip <PC or notebook IP address> For example: 192.168.6.2

run kernelspiupd

reset



4-13. Update rootfs → kernel & rootfs. Please follow below command.

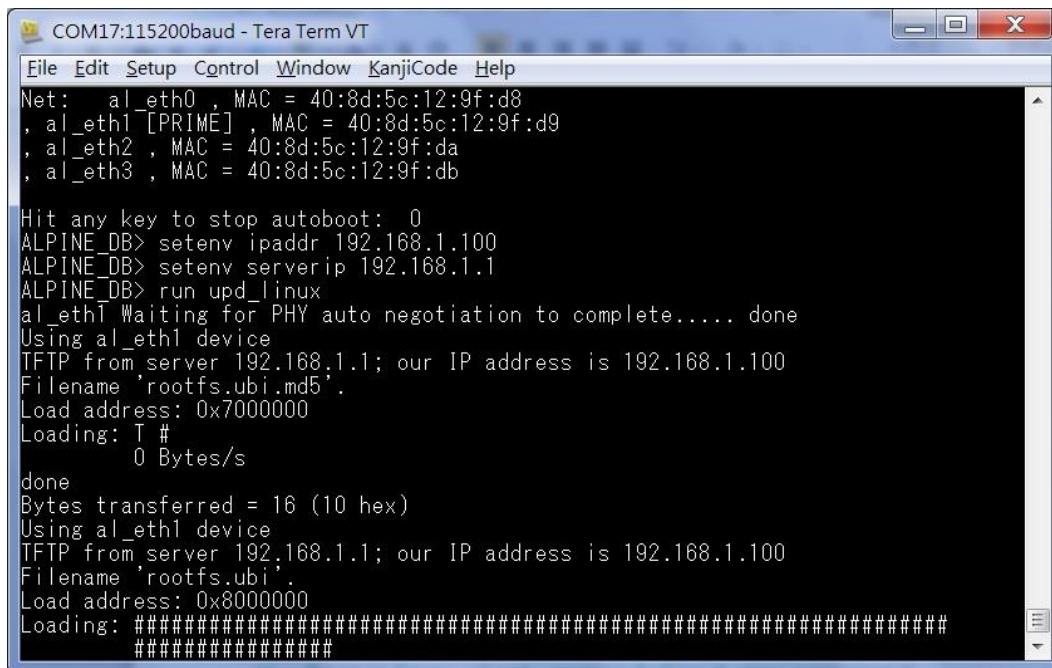
Update kernel&rootfs follow below command

```
setenv ipaddr <Platform IP address>
```

```
setenv serverip <Server IP address>
```

```
run upd_linux
```

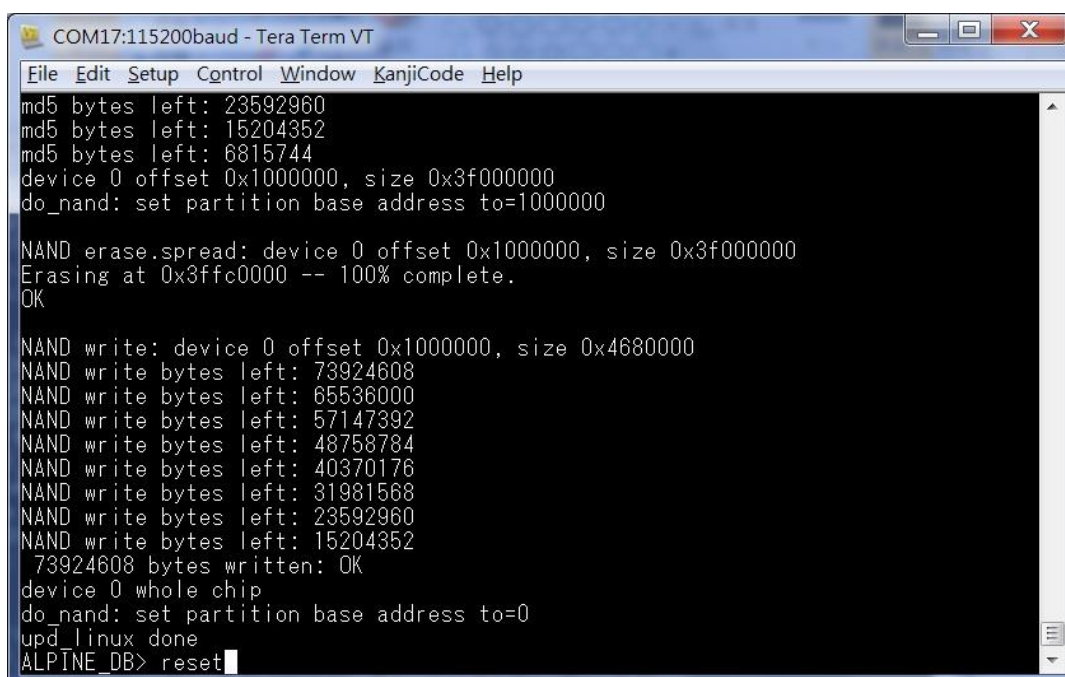
```
reset
```



```
COM17:115200baud - Tera Term VT
File Edit Setup Control Window KanjiCode Help
Net:   al_eth0 , MAC = 40:8d:5c:12:9f:d8
      , al_eth1 [PRIME] , MAC = 40:8d:5c:12:9f:d9
      , al_eth2 , MAC = 40:8d:5c:12:9f:da
      , al_eth3 , MAC = 40:8d:5c:12:9f:db

Hit any key to stop autoboot: 0
ALPINE_DB> setenv ipaddr 192.168.1.100
ALPINE_DB> setenv serverip 192.168.1.1
ALPINE_DB> run upd_linux
al_ethT Waiting for PHY auto negotiation to complete..... done
Using al_eth1 device
TFTP from server 192.168.1.1; our IP address is 192.168.1.100
Filename 'rootfs.ubi.md5'.
Load address: 0x7000000
Loading: T #
          0 Bytes/s

done
Bytes transferred = 16 (10 hex)
Using al_eth1 device
TFTP from server 192.168.1.1; our IP address is 192.168.1.100
Filename 'rootfs.ubi'.
Load address: 0x8000000
Loading: #####
          #####
```



```
COM17:115200baud - Tera Term VT
File Edit Setup Control Window KanjiCode Help
md5 bytes left: 23592960
md5 bytes left: 15204352
md5 bytes left: 6815744
device 0 offset 0x1000000, size 0x3f000000
do_nand: set partition base address to=1000000

NAND erase.spread: device 0 offset 0x1000000, size 0x3f000000
Erasing at 0x3ffc0000 -- 100% complete.
OK

NAND write: device 0 offset 0x1000000, size 0x4680000
NAND write bytes left: 73924608
NAND write bytes left: 65536000
NAND write bytes left: 57147392
NAND write bytes left: 48758784
NAND write bytes left: 40370176
NAND write bytes left: 31981568
NAND write bytes left: 23592960
NAND write bytes left: 15204352
73924608 bytes written: OK
device 0 whole chip
do_nand: set partition base address to=0
upd_linux done
ALPINE_DB> reset
```

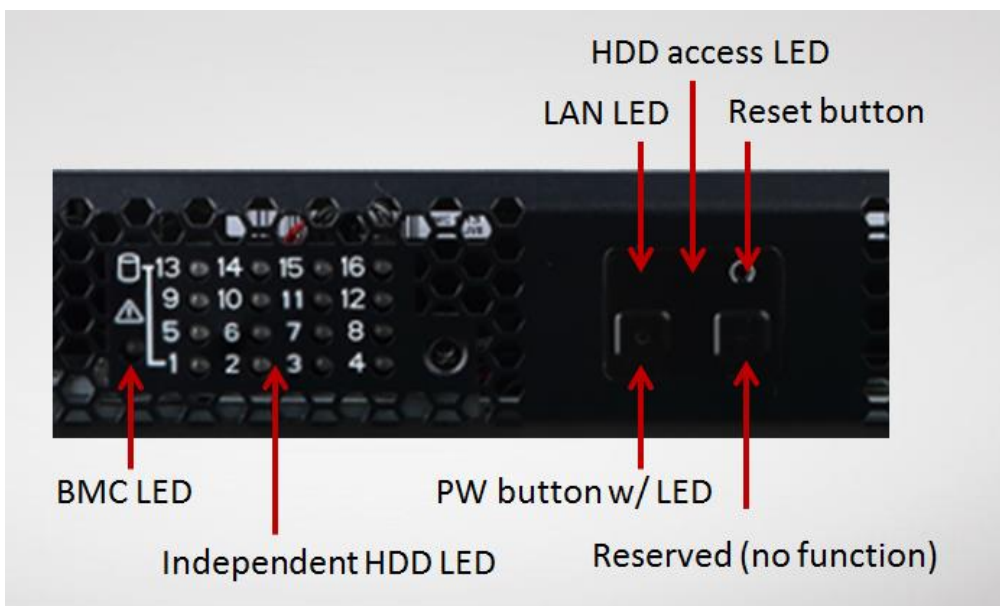
4-14. Please waiting about 3 minutes and 10 seconds, you will see login prompt as below.

Please enter login ID: admin; Password: 1234.

```

COM12:115200baud - Tera Term VT
File Edit Setup Control Window KanjiCode Help
AH00015: Unable to open logs
Starting proftpd: OK
Starting Samba daemons: nmbd smbd function OK.
Starting Winbind daemons: winbindd OK.
Starting Netatalk services (this will take a while): netatalk0
Starting web server: api_lighttpd2016-01-08 10:20:27: (log.c.166) server started
['00-01-01 08:03:09.58] I2C init slave, Address = 0x0864
['00-01-01 08:03:09.58] I2C init slave, config reg = 0x0824
['00-01-01 08:03:09.59] i2c i2c-1: new_device: Instantiated device slave-24c02 at 0x64
IP: 10.1.111.80
D120-S3G-12B10F login: PHP Notice: Undefined index: REASON in /www/lib/vbd_lib.php on line 35
D120-S3G-12B10F login: PHP Notice: Undefined index: REASON in /www/lib/vbd_lib.php on line 35
D120-S3G-12B10F login: admin
Password:
    
```

5. LED identification and behaviors



PW button w/ LED behavior

System on: Blue
System off: off

Reset button behavior

Push to reset system

Independent HDD LED behavior

No HDD: off
Have HDD: Green
SMART ERROR: Amber
Rebuild: Green/Amber blinking

BMC behavior

BMC initialize: Amber
Ready to power on: Green
Fan fail: Amber

HDD access LED behavior

Any of HDD access: Green blinking

LAN LED behavior

1Gb/s LAN activity: Green blinking

6. Q & A

6-1. Is it possible using iKVM function through IPMI web UI?

Answer: No, because this system have no integrated in Aspeed® 2D Video Graphic Adapter.

6-2. This system cannot connect through console cable suddenly.

Answer: The micro USB cable quality issue, please replaces a new one, or check USB cable header connection well or not in client PC side.