

D120-S3G User's Guide

<image>



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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: <u>http://b2b.gigabyte.com/</u>
- 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. <u>http://download.gigabyte.asia/FileList/Utility/cp210x_vcp_windows.zip</u>
- 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 Team 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.

📒 Tera Term - [disconnected] VT			
File Edit Setu	p Control Windo	w KanjiCode Help		
	Fera Term: New con	nection		
	● TCP/ <u>I</u> P	Hos <u>t</u> : myhost.examp	ole.com 🗸	
		 Hist <u>o</u> ry Service: ⊚ Te <u>I</u> net	TCP port#: 22	
		© <u>s</u> sh	SSH <u>v</u> ersion: SSH2 •	
		© Other	Proto <u>c</u> ol: UNSPEC -	
	© S <u>e</u> rial	Port: COM8: Silicon	Labs Quad CP210x USB - 🔻	
		OK Cancel	Help	

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

📒 Tera Term - [disconnected] VT	
File Edit Setup Control Window KanjiC	ode Help
Terminal	A
Window	
Font	
Keyboard	
Serial port	
Proxy	
SSH	
SSH Authentication	
SSH Forwarding	
SSH KeyGenerator	
TCP/IP	
General	
Recurring command	
ViewMode password	
Additional settings	
Save setup	
Restore setup	
Setup directory	
Load key map	



1-10. Select correctly serial port, baud rate change to 115200, data 8 bit, Party none, Stop1 bit, Flow control none, and then click [OK] button.

Tera Term: Serial port set	up
Port:	СОМВ • ОК
Baud rate:	115200 -
<u>D</u> ata:	8 bit 🔹 Cancel
P <u>a</u> rity:	none 🔻
<u>S</u> top:	1 bit ▼ <u>H</u> elp
Elow control:	none 🔹
Transmit delay	/ <u>c</u> har 0 msec/ <u>l</u> ine

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

😕 COM21:115200baud - Tera Term VT
<u>Eile E</u> dit <u>S</u> etup C <u>o</u> ntrol <u>W</u> indow <u>K</u> anjiCode <u>H</u> elp
NAND: 1024 MiB SF: Detected MX25L12805 with page size 256 Bytes, erase size 64 KiB, total 16 Mi B
00:00.0 - 1c36:0002 - Network controller 00:01.0 - 1c36:0001 - Network controller 00:02.0 - 1c26:0002 - Network controller
00:03.0 - 1c36:0001 - Network controller 00:04.0 - 1c36:0011 - Cryptographic device
00:05.0 - 1c36:0021 - Base system peripheral 00:08.0 - 1c36:0031 - Mass storage controller 00:09.0 - 1c36:0031 - Mass storage controller
PCIE_0: Link up. Speed 5GT/s Width x2 01:00.0 - 1b4b:9230 - Mass storage controller PCIE_1: Link up. Speed 56T/s Width x2
02:00.0 - 1b4b:9230 - Mass storage controller In: serial Out: sorial
Err: serial Net: al_eth0 ,MAC = 40:8d:5c:12:b1:14
, al_eth1 [PRIME] , MAC = 40:8d:5c:12:b1:15 , al_eth2 , MAC = 40:8d:5c:12:b1:16 , al_eth3 , MAC = 40:8d:5c:12:b1:17
Hit any key to stop autoboot: 32

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.

```
X
   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 smbd function OK.
Starting Winbind daemons: winbindd OK.
Starting Netatalk services (this will take a while): netatalkO
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
  0x64
IP: 10.1.111.93
D120-S3G-12B117 login: admin
                                                                                                                       III
Password:
```

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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
<u>Eile Edit Setup Control Window KanjiCode Help</u>
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:
consoleX info
Product: D120-S3G
Name: D120-S3G-12B117
Version: 1.0.0 (build 201511262000)
[Network]
Management port => MAC 40:80:50:12:81:17 Addr:[10.1.111.93] Mask:255.255.255
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.



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.

		GSSM	Quick Insta	ll -	
				Language	English T
System setup					
	System	name:	D120-S3G-12B10	F	
	Time a	nd date:	2016/5/19 15:34:	19 (UTC+08:00)	
	Admin	password:	●●●● (Default	password: 1234)	
Network setup	þ				
	Networ	rk interface:	LAN1		
	IP addr	ess:	10.1.2.84/24		
Storage setup					M
	Configu	uration :	Create storage po	ool later	
D	isk 1	Disk 2	Disk 3	Disk 4	
D	isk 5	Disk 6	Disk 7	Disk 8	
D	isk 9	Disk 10	Disk 11	Disk 12	
Di	sk 13	Disk 14	Disk 15	Disk 16	

2-5. Applying new settings.

GSSM Quick Install

		Language	English	*
Applying new settings				
	🧭 System setup			
	Storage setup			
	O Network setup			

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

		Welcome to D120-S3G-12B10F	
		admin	
	GIGABYTE		
A Second		Login	And a second sec
	ile -		
	10 CT		and a good a goo

2-7. You already login into web UI.



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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.

Welcome to D120-S3G-	×		
← → C 🗋 10.1.2.8	4		< ♥ ☆ ■
D120-S3G-12B10F			Logou
A Network	General setting		
 General setting Default gateway DNS Loopback Ping / Traceroute ARP Power management UPS Maintenance 	LAN setting > IPv4 You can select 'DHCP' or 'BOOTP' to an Name: DHCP BOOTP Static Address: Mask:	cquire an IP address automatically, or select 'Static' to specify an IP address manually. LAN1 10.1.2.84 255.255.255.0	
 System informatio Import / Export Reset to factory de Reboot / Shutdow 		Reset Back Apply	

- 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.

Tera Term: New co	nnection		×		
© ТСР/ <u>І</u> Р	Hos <u>t</u> : 220.128.109.3 ✓ Hist <u>o</u> ry Service: ○ TeInet ◎ <u>S</u> SH ○ Other	32 TCP port#: SSH version: SS Protocol: UN	▼ 22 H2 ▼ SPEC ▼		
◉ S <u>e</u> rial	Po <u>r</u> t: COM22: Silic COM19: Silic OK OK COM20: Silic COM21: Silic COM22: Silic	on Labs Quad CP21 on Labs Quad CP21	0x USE ▼ 0x USB to UA 0x USB to UA 0x USB to UA 0x USB to UA	ART Bridge: Inter ART Bridge: Inter ART Bridge: Inter ART Bridge: Inter	face 2 (COM19) face 3 (COM20) face 1 (COM21) face 0 (COM22)

3-2. Please setting Baud rate to 57600.

	COM22 •	ок
<u>B</u> aud rate:	57600 -	
<u>D</u> ata:	8 bit 🔻	Cancel
P <u>a</u> rity:	none 🔹]
<u>S</u> top:	1 bit 🔻	<u>H</u> elp
Elow control:	none 🔻]

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]



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

<u>File Edit View Favorites Tools</u>	jelp	
MergePoint [®] Embedded Manager	nent Software	Support Help About
CICADVT		
UIUADTI	- (1997)	
	Logon to:	
	Username:	
	Password:	
	formation formation	
	OK Cancel	

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



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

Network Interface Configuration

IPv4 Settings

Use DHCP to obtain D Preferred DNS Server

Alternate DNS Server

Enabled

Use DHCP IP Address Subnet Mask Gateway

Name	iF Enabled	IPv4 Enabled	IPv4 Address	IPv6 Enabled	IPv6 Address
eth1	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**



10.1.111.108
255.255.255.0
10.1.111.253

10.1.1.3

0.0.0.0

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



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



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

Control Panel All Control	Panel Ite	ems 🕨		 ✓ ✓ ✓ Search Control Panel 	٩
Adjust your computer's settings				View by: Large icons 🔻	
		Date and time	V	Delaurerrograms	*
Desktop Gadgets		Device Manager	-	Devices and Printers	
Display	•	Ease of Access Center	£	Flash Player (32-bit)	
Folder Options	A	Fonts		Getting Started	=
📢 HomeGroup	R	Indexing Options		Intel(R) GMA Driver for Mobile	
Intel® Rapid Storage Technology	e	Internet Options	(il)	Java	
Keyboard		Location and Other Sensors	ð	Mouse	
Network and Sharing Center	C 00000	Notification Area Icons	<u>@</u>	NVIDIA 控制面板	
Parental Controls	140	Performance Information and Tools	K	Personalization	-

4-3. Click LAN connection.



4-4. Click "Properties" button.

📱 區域連線 Status		×	
General			
Connection			
IPv4 Connectivity:		No Internet access	L
IPv6 Connectivity:		No network access	L
Media State:		Enabled	L
Duration:		00:08:56	L
Speed:		1.0 Gbps	L
D <u>e</u> tails			
Activity			
	Sent —	Received	
Bytes:	1,456	2,568	
Properties	<mark>)</mark> <u>D</u> isable	Diagnose	
		Close	

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.

🔖 Tftpd64 by Pł	n. Jounin		
Current Directory	G:\D120-S3G_RC6	•	Browse
Server interfaces	192.168.6.2	Realtek R1 💌	Show Dir
Tftp Server Tftp	Client DHCP server Sy	slog server Log v	riewer
peer	file	start time pro	gress
•	m		•
About	Settings		Help

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

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

● TCP/ <u>I</u> P	Hos <u>t</u> :	myhost.exan	nple.com		٠
	Service:	✓ History ○ Telnet	TCP po	rt#: 22	
		<u>ө s</u> sн	SSH version:	SSH2	•
		Other	Proto <u>c</u> ol:	UNSPEC	3
) S <u>e</u> rial	Port:	COM8: Silico	n Labs Quad CF	210x USB	

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

📒 Te	era Te	rm - [disconnected] VT				l	
File	Edit	Setup Control Window	KanjiCode	Help			
		Terminal					*
		Window					
		Font					
		Keyboard					
		Serial port					
		Proxy					
		SSH					
		SSH Authentication					
		SSH Forwarding					
		SSH KeyGenerator					
		TCP/IP					
		General					
		Recurring command					
		ViewMode password					
		Additional settings					
		Save setup					
		Restore setup					
		Setup directory					
		Load key map					·

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

Tera Term: Serial port se	tup		×
Port:	COM8	•	ОК
<u>B</u> aud rate: <u>D</u> ata:	8 bit	•	Cancel
P <u>a</u> rity: <u>S</u> top:	none 1 bit	•	Help
<u>F</u> low control:	none	•	
Transmit delay	y c/ <u>c</u> har 0	ms	ec/ <u>l</u> ine

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.

🧶 COM17:115200baud - Tera Term VT
<u>Eile Edit Setup Control Window KanjiCode H</u> elp
NAND: 1024 MiB SF: Detected MX25L12805 with page size 256 Bytes, erase size 64 KiB, total 16 Mi B
00:00.0 - 1c36:0002 - Network controller 00:01.0 - 1c36:0001 - Network controller 00:02.0 - 1c36:0002 - Network controller 00:03.0 - 1c36:0001 - Network controller 00:04.0 - 1c36:0011 - Cryptographic device 00:05.0 - 1c36:0021 - Base system peripheral 00:08.0 - 1c36:0031 - Mass storage controller 00:09.0 - 1c36:0031 - Mass storage controller
PCIE_0: Link up. Speed bGI/s Width x2 01:00.0 - 1b4b:9230 - Mass storage controller PCIE_1: Link up. Speed 5GT/s Width x2 02:00.0 - 1b4b:9230 - Mass storage controller In: serial Out: serial
Err: serial 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: 31

4-12. Update kernel \rightarrow 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 \rightarrow 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
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: 40758784
NAND write bytes left: 31981568
NAND write bytes left: 15204352
73924608 bytes written: OK
device 0 whole chip
do_nand: set partition base address to=0
upd_linux done
ALPTNE_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	
<u>Eile Edit Setup Control Window KanjiCode H</u> elp	
AHOOO15: 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): netatalkO	*
Starting web server: api_lighttpd2016-01-08 10:20:27: (log.c.166) serv	er 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 sla t 0x64	ive-24c02 a
IP: 10.1.111.80	
D120-S3G-12B10F login: PHP Notice: Undefined index: REASON in /www/li php on line 35	b∕vbd_lib.
D120-S3G-12B10F login: PHP Notice: Undefined index: REASON in /www/li php on line 35	b∕vbd_lib.
D120-S3G-12B10F login: admin Password:	-

5. LED identification and behaviors





PW button w/ LED behavior

System on: Blue System off: off

Independent HDD LED behavior

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

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.

Reset button behavior

Push to reset system

BMC behavior

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