

iBeLink DM11G Specification and Operation Guide

Version Update List

Time	Description	Version
2017-07-07	Initial version for DM11G	1.0
2017-07-08	Update FAQ	1.1
2017-07-22	Add Sections 2 & 3 and other Minor Fixes	1.2

Component list

Index	Component	Count	Description
1	Main box	1	Size 49x35x18 cm
2	Power cord	1	For Power connection
3	Specification	1	This document

0 Disclaimer

1. The manufacturer is not liable for any loss or damage of the miner caused by irresistible force of nature.
2. The manufacturer is not liable for any loss or damage of hardware and/or software caused by unauthorized alteration of the miner.
3. The manufacturer is not liable for any loss or damage of the miner caused by over-clocking or improper heat dissipation.
4. The manufacturer is not responsible for any miner sold through unauthorized distribution channels.
5. The manufacturer is not responsible for any loss of the mining capability caused by ASIC unfriendly mining pool.
6. The manufacturer is not responsible for any loss due to the price fluctuation of crypto currency.

1 Feature

- Hash rate: 10.8GHash \pm 10%, power consumption: <810W/GHash
- Support all POW X11 algorithm encryption currency mining
- Support the Stratum protocol pool, p2pool, and solo mining
- Provide web management platform, ease of setup and large-scale deployment
- Web platform providing hash rate statistics, mining pool status monitor
- Support to restart mining software or to restart the machine through the web platform
- Support power-on self-test function and identifying each fault chip location
- Support hashing blade LED status indication, convenient for large scale mining operation
- Support main pool and multiple backup pool settings, and automatic switching of faulty pool
- Support email warning for hashing blade loss, and restart for self-recovery
- Support self-recovery from network and driver fault with independent system watchdog
- Modular design easy for DIY(Do-It-Yourself) problem identifying and fixing

2 Precautions

Please take safety precautions when working in and around the mining machine. Safety glasses are recommended when doing visual inspections while the mining machine is powered on. Some components may burst due to intense heat or a spike in current. Also take note that some parts of the mining machine will be hot to the touch.

3 Before Starting

Before powering on your mining machine, please do the following checks:

1. Open up the mining machine and do a visual inspection of the components inside. Check for damages that may have occurred during shipping such as loose or missing electrical components, loose wire connections, or broken fan blades.
2. Lightly shake the mining machine to check for hidden items that may have come loose during shipping. These items need to be removed as they can damage the mining machine.
3. Connect the mining machine to your local network with an Ethernet cable.
4. Check that the power supply is turned off before plugging in the power cable.

4 Operation Guide

4.1 Logging in to the Mining Machine

After linked to network and powered up around 1 minute, the four LED lights on the front panel will turn from red to blue one by one, indicating mining has started normally. On any computer in the same local network (exactly the same route) with the mining machine, enter the hostname (default name: iBeLink) or its IP address in the browser, such as: <http://iBeLink/>. You will access the login page as shown in Fig. 1. Input the default password: iBeLink and click the [Login] button to log into the mining system.



User Name	iBeLink
Password
Password	Login

Fig. 1 Login page

You can change or retrieve the password of the mining system by clicking the [Password] button at the login page to link to the password manager page as shown in Fig. 2.



User Name	iBeLink
Old Password	
New Password	
Confirm Password	
ReLogin	Change Password
MAC Address	
	Retrieve Password

Fig. 2 Password manager page

Fill in the old password and double check the new password, and then click the [Change Password] to update your new password. If you forgot your password, you can fill in the MAC address of the mining machine and click the [Retrieve Password] button to reset the password to default: iBeLink. Furthermore, if you have configured the warning email server and target email address (See the following description), clear the MAC address and click the [Retrieve Password] button and the forgotten password will be sent to your warning email account. You can find the MAC address on your router's DHCP page as in Fig. 3, and the MAC address is also displayed on the home page as in Fig. 4.



Fig. 3 MAC on the H3C router's DHCP page

4.2 State of the Mining Machine

After logging into the mining system, you can see the mining machine's home page, the web management platform, as shown in Fig. 4.

Address	Devs	Temp	Fans	Util	MH/s 5s	MH/s avg	Rec	Acc	Rej	H/W	Gets	Disc	Stales	Get Falls	Rem Falls
CGMiner-Dash	64 4/4	27.7°C 31.3°C	5400 rpm	59.17 (59.77)	9253.26 84.34	8989 81.93	1489	1471	15	3	138	270	0	0	0
DM0	Stop	0days 0:24:51	600	1500000	16 ffff	16 ffff	2714.46	2587.27	2063	411	405	6	0	3.11000327	16.29 (39.63)
DM1	Stop	0days 0:24:51	500	1500000	16 ffff	15 bfff	2261.2	2224.53	2194	353	352	1	0	3.11000327	14.16 (33.95)
DM2	Stop	0days 0:24:51	450	1500000	16 ffff	10 7a8f	2028.82	2204.13	2377	355	352	3	0	3.11000327	14.16 (34.09)
DM3	Stop	0days 0:24:51	500	1500000	16 ffff	16 ffff	2248.88	1973.07	2596	370	362	5	3	3.11000327	14.56 (34.87)

Fig. 4 iBeLink DM11G miner's homepage of management platform

The home page shows the basic information of the mining machine:

1. The current time, time zone, hostname, IP address, MAC address.
2. Mining machine chip count, blade count, temperature, average nonce count per minute, 5S and average hash rate statistics, returned nonce count from chip, accept/reject/error nonce count and rate from the starting up time.
3. The running time of the machine, PLL and serial baud rate parameter.
4. The chips count, the test result bitmap, returned nonce count from chip and bitmap during last 30 minutes, accept/reject/error nonce count and rate, the current task difficulty, average nonce count per minute, and current mining pool index, all for each blade.
5. Statistics of the task information from the mining pool.

4.3 Mining Configuration

1. Modify hostname: as shown in Fig. 4, input the new hostname in the text box next to NewHostName, Click [**change**] button to modify the hostname, and reboot machine to take effect.
2. Click [**reboot**] button to restart the whole machine system.
3. Click [**restart**] button to restart mining software.
4. Configuration
As shown in Fig. 4, click the [**Config**] button to show the configuration section shown in Fig.5 (three parts).

In part 1:

Click the [**√**] button to show the detail information of the selected pool (First line of part 2).

Click the [**Top**] button to set the highest priority for the mining pool.

Click the [**Stop**] button to disconnect the mining pool.

Click the [**Delete**] button to delete the mining pool.

In part 2:

Fill in the mining pool address in the Pool URL input box, mining worker name in the Pool User input box, mining worker's password in the Pool Password input box, and then click the [**Add Pool**] button to add new mining pool.

The screenshot displays the Mining Machine configuration interface. At the top, there is a table showing the status of two mining pools. The first pool is selected and highlighted in green. Below the table, the configuration section is divided into several columns with input fields and buttons. A red box highlights the configuration section, and a red number '2' is placed next to it. At the bottom, there are buttons for system and software management, with a red number '3' next to them.

Pool ID	Pool Name	Pool URL	Pool User	Pool Password	Pool Status	Pool Hashrate	Pool Temperature	Pool Fan Speed	Pool Voltage	Pool Current	Pool Power	
0	Top	stratum+tcp://bj.tiannengbo.com:7903	Xo28tAnHFaQGsQqBjtZV8ruTmRDj7YE	x	142	2.41	1591	15	280	0	0	0
1	Top	stratum+tcp://wkl.cybtc.info:8888			1	0	0	0	0	0	0	0

Configuration Section (Part 2):

- Pool URL:** stratum+tcp://bj.tiannengbo.com:7903
- Pool User:** Xo28tAnHFaQGsQqBjtZV8ruTmRDj7YE
- Pool Password:** x
- Action:** Add Pool
- Email Server:** [Empty]
- Email User:** iBeLink
- Email Password:** [Empty]
- Action:** Set Email Server
- Email Target:** [Empty]
- Low Hashrate Threshold(MH):** [Empty]
- High Reject Threshold(%):** [Empty]
- Low Hashrate & High Reject Warning Duration(m):** [Empty]
- Start Time(m):** [Empty]
- Time Zone:** [Empty]
- Temperature Check Interval(s):** 11
- Warning Temperature(°C):** 32
- Safe Temperature(°C):** 50
- Action:** Set Warning Param
- Static IP:** 192.168.0.197
- Netmask:** 255.255.0.0
- Gateway:** 192.168.0.1
- Action:** Set IP Config
- Static IP Enable:** Enable
- Action:** Set PLL
- PLL(25-600):** 600
- Action:** Save All Configuration
- Action:** Save Configuration

System Management Section (Part 3):

Already send Low hashrate warning Email count: and High reject warning Email count: and Temperature warning Email count:

To restart cgminer or reboot system or update/rollback/restore cgminer version, click the checkbox, then press the button. Current version cgminer-IB3.5.11

- Restart
- Reboot
- Update
- Rollback
- Restore

Fig. 5 Mining Machine configuration

5. Email warning configuration

Mining machine provides Email warning of High Temperature. Setup as following:

Fill in the Email Server such as "smtp.gmail.com", Email User such as "example@gmail.com" and Email Password such as "123456", and then click the [**Set Email Server**] button to set the

email account used to send warning emails. It should be noted that you will need to set up an **application-specific password** rather than using your account-password of Gmail - see:

<https://support.google.com/mail/?p=InvalidSecondFactor>

<https://security.google.com/settings/security/apppasswords>

For Chinese users using 163 or QQ email will also have the same question as Fig. 6. The password is the authorization code not the password you use to log into the email account using web browser.



Fig. 6 the authorization code of 163

So the system just support **Gmail, 163 and QQ** email for now. Other mail account may not work.

6. Temperature monitor configuration

Fill in the Email Target, the Temperature Warning Duration (minute) and the Warning Temperature (°C), and then click [**Set Warning Param**] button to set Email warning parameters.

7. Static IP configuration

Mining machine provides DHCP as default. If you want to configure a static IP, it can be configured as following:

Fill in the Static IP, Netmask, Gateway and select the Static IP Enable checkbox, then click [**Set IP Config**] button to enable the static IP. If you want to switch to default DHCP mode, just clear the static IP enable checkbox and click [**Set IP Config**] button.

Attention, some routers may need to be configured accordingly in order to use your static IP for mining. So you need to know your router well, and have a deep understanding of your network before you decide to use the static IP option.

IP mode configuration will take effect after rebooting the machine system.

8. Save Configuration

After all parameters are configured, click [**Save Configuration**] button to save all the configurations, otherwise some configuration may be lost when you reboot the system.

9. ASIC chip parameter configuration

The default value of PLL is 600 MHz. You can set the value of PLL for the mining chips. Input a valid value of PLL in PLL input box, then click [**Set PLL**] button to set. **We do not advise you to change the default PLL unless you understand the reason to change it.** The new value of PLL will take effect after reboot the machine system.

In part 3:

10. Restart/Reboot/Update/Rollback/Restore

As shown in Fig. 5, the current mining software version is shown to the user, such as cgminer-IB3.5.5.

Check the [Restart] select box, click the [**Restart**] button to restart mining software.

Check the [Reboot] select box, click the [**Reboot**] button to reboot the whole system.

Check the [Update] select box, click the [**Update**] button to update the software version.

Check the [Rollback] select box, click the [**Rollback**] button to rollback the last version of mining software.

Check the [Restore] select box, click the [**Restore**] button to restore mining software default version and load factory default configuration.

5 FAQ

- **Can iBeLink DM11G miner be overclocked?**

No, ABSOLUTELY CAN NOT. You may permanently damage the ASIC chips inside your miner with high probability if you perform any kind of overclock.

- **How to maintain iBeLink DM11G miner running at high efficiency?**

Do your best to keep this miner in a “COOL” environment. If you can maintain your mining facility room temperature under 33C, you should be able to achieve a good mining efficiency.

- **What does the “DIY problem identifying and fixing” mean?**

iBeLink DM11G is designed with a modular philosophy. It is designed for the purpose of easy maintenance and problem fixing by you instead of sending all faulty miners back to the manufacturer. For most of the problems that arise, you should be able to debug and resolve on site by yourself. We have prepared a series of short “how to” videos to help you perform various on-site DIY projects. We believe the iBeLink DM11G could provide you the best product ownership cost of your X11/Dash mining life.

- **Why can't my browser configure the parameters of the miner?**

It is recommended to use the Google Chrome browser to configure the parameters of the miner.

- **What does the Chips Map mean on the home page?**

When the mining software starts, it will self-test all ASIC chips on each blade, if the test result is normal, the bitmap values set to 1, otherwise to 0 corresponding to the chip position. Active Map values reflect the nonce return corresponding to the chip position and clears to 0 every 30 minutes.

- **Why does my home page shows ASIC chip count less than FF sometimes?**

Due to electrical instability or software driver abnormality, mining software may fail to accurately detect all chips.

- **How to disable the Email warning?**

Empty Target Email text box, then click the [**Set Warning Param**] button to disable the Email warning function.

- **Why the blades loss warning is not required during configuration?**

Blade abnormal loss influences hash rate substantially, so the corresponding Email warning function is enabled by default. After setting your warning mail server and target e-mail address to receive, with any abnormal loss of the blade the mining software will automatically send emails and turn the corresponding LED to red. It will then wait for about 2 seconds and then restart the mining software to try to retrieve the lost blade. If warning email function is

disabled, no warning email will be sent out, but mining software will still automatically restart to retrieve the lost blade.

- **Why does the mining software automatically restart?**

Mining software supports self recovery from network or driver fault, with watchdog monitoring for the whole system. When an anomaly is detected, the mining software will automatically restart, trying to self-recover from the fault. Therefore, the mining software auto restarting is a normal phenomenon.

- **How to recover the mining software after crash?**

After the miner has crashed, click the [Config] button to arrive at the page shown in Fig. 7. You can choose to update to the latest mining software version or roll back to the last version or restore to the default version and factory configuration.



Fig. 7 Recover the miner after crash

- **Why the hash rate statistical results are not the same on different mining pools?**

Mining software does hash rate statistics by returned nonce, different mining pools provide different difficulty so returned nonce count are not the same, leading to different hash rate statistical results.

- **Why my miner is not in the main mining pool but in reserve pool sometimes?**

In multiple mining pools configuration, the mining software uses the highest priority among the mining pools. If the main mining pool connection fails, it will automatically switch to an available reserve backup mining pool to mine.

- **Popular X11 algorithm mine pool**

<https://www.nicehash.com>

<https://www2.coinmine.pl>

<https://www.multipool.us>

<https://www.coinotron.com>

<http://www.p2poolmining.us>

6 iBeLink DM11G Technical Support Info

<https://dashtalk.org/>

support account: iBeLink_1