

BITMAIN S19j AntMiner Server Installation Guide

Contents

- [1 logo](#)
- [2 BITMAIN S19j AntMiner Server](#)
- [3 Product Information](#)
- [4 Product Usage Instructions](#)
- [5 Powering On](#)
- [6 Frequently Asked Questions](#)
- [7 Overview](#)
- [8 Overview](#)
- [9 Setting up the Server](#)
- [10 Configuring the Server](#)
 - [10.1 Setting up the Pool](#)
- [11 Monitoring Your server](#)
- [12 Administering Your Server](#)
- [13 Environmental Requirements](#)
- [14 Regulations](#)
- [15 Documents / Resources](#)
 - [15.1 References](#)

logo

BITMAIN S19j AntMiner Server

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Product Information

Specifications

- **Version:** S19j 94T
- **Model No.:** 240-Cb

Product Glance

| Version | Crypto Algorithm/Coins | Hashrate, TH/s | Power on wall@25, Watt |
|---------|------------------------|----------------|------------------------|
| S19j | SHA256/BTC/BCH | 94T | 20 |

Detailed Characteristics

- **Power supply AC input voltage, Volt:** 200~240

- **Power Supply AC Input Frequency Range, Hz:** 47~63
- **Power supply AC Input current, Amp:** 20
- **Network connection mode:** Wired Ethernet
- **Server Size (Length*Width*Height, w/o package), mm:** (specific dimensions)
- **Server Size (Length*Width*Height, with package), mm:** (specific dimensions)
- **Net weight, kg:** (specific weight)
- **Gross weight, kg:** (specific weight)

Product Usage Instructions

Unpacking and Setup

Follow these steps to unpack and set up your S19j server:

1. Open the package carefully and remove all contents.
2. Place the server in a well-ventilated area with sufficient space around it.
3. Connect the power supply APW12 to the server using the provided cords.

Powering On

To power on the server:

1. Ensure all connections are secure.
2. Press the power button located on the control panel.
3. Monitor the status indicators to confirm successful startup.

Frequently Asked Questions

Q: What should I do if my S19j server does not power on?

A: Check the power connections and ensure the power supply is functioning correctly. If the issue persists, contact customer support for assistance.

Q: How can I access the control panel settings?

A: Refer to the user manual for detailed instructions on accessing and configuring the control panel settings.

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Bitmain

Tel: +86-400-890-8855

www.bitmain.com

Overview

The S19j server is Bitmain's newest version in the 19 server series. Power supply APW12 is part of S19j server. All S19j servers are tested and configured prior to shipping to ensure easy set up.

FIG

Caution:

1. Please refer to the layout above to place your goods in usage in case of any damage.
2. The equipment must be connected to an earthed mains socket-outlet. The socket-outlet shall be installed near the equipment and shall be easily accessible.
3. The equipment has two power inputs, only by connecting those two power supply sockets simultaneously can the equipment run. When the equipment is powered off, be sure to power off all power inputs.
4. DO NOT remove any screws and cables tied on the product.

5. DO NOT PRESS the metal button on the cover.
6. Please note that the actual server shall prevail.

S19j Server Components

The main components and controller front panel of S19j servers are shown in the following figure:

FIG

Overview

FIG

Note:

There are two versions of the control panel, please refer to the pictures above to check the differences of SD Card Slots.

APW12 Power Supply:

FIG

Note:

1. Power supply APW12 is part of S19j server. For detailed parameters, please refer to the specifications below.
2. Additional two power cords are needed.

Specifications

Version: S19j 94T

Model No.: 240-Cb

| Product Glance | Value |
|---|-----------------------|
| Version | S19j |
| Crypto Algorithm/Coins | SHA256/BTC/BCH |
| Hashrate, TH/s | 94 + 3% |
| power on wall@25°C, Watt | 3243 ± 5% |
| power efficiency on wall @25°C, J/TH | 34.5 ± 5% |

| Detailed Characteristics | Value |
|--|------------------------------|
| Power Supply | |
| Power supply AC input voltage, Volt (1-1) | 200~240 |
| Power supply AC Input Frequency Range, Hz | 47~63 |
| Power supply AC Input current, Amp(1-2) | 20(1-3) |
| Hardware Configuration | |
| Network connection mode | RJ45 Ethernet 10/100M |
| Server Size (Length*Width*Height, w/o package), mm(2-1) | 400*195.5*290 |
| Server Size (Length*Width*Height, with package), mm | 570*316*430 |
| Net weight, kg (2-2) | 14.6 |
| Gross weight, kg | 15.8 |
| Environment Requirements | |
| Operation temperature, °C | 0~40 |
| Storage temperature, °C | -20~70 |
| Operation humidity(non-condensing), RH | 10~90% |
| Operation altitude, m(3-1) | ≤2000 |

Version: S19j 90T

Model No.: 240-Cb

| Product Glance | Value |
|---|-----------------------|
| Version | S19j |
| Crypto Algorithm/Coins | SHA256/BTC/BCH |
| Hashrate, TH/s | 90 + 3% |
| power on wall@25°C, Watt | 3105 ± 5% |
| power efficiency on wall @25°C, J/TH | 34.5 ± 5% |

| Detailed Characteristics | Value |
|--|------------------------------|
| Power Supply | |
| Power supply AC input voltage, Volt (1-1) | 200~240 |
| Power supply AC Input Frequency Range, Hz | 47~63 |
| Power supply AC Input current, Amp(1-2) | 20(1-3) |
| Hardware Configuration | |
| Network connection mode | RJ45 Ethernet 10/100M |
| Server Size (Length*Width*Height, w/o package), mm(2-1) | 400*195.5*290 |
| Server Size (Length*Width*Height, with package), mm | 570*316*430 |
| Net weight, kg (2-2) | 14.6 |
| Gross weight, kg | 15.8 |
| Environment Requirements | |
| Operation temperature, °C | 0~40 |
| Storage temperature, °C | -20~70 |
| Operation humidity(non-condensing), RH | 10~90% |
| Operation altitude, m(3-1) | ≤2000 |

Version: S19j 86T

Model No.: 240-Cb

| Product Glance | Value |
|---|-----------------------|
| Version | S19j |
| Crypto Algorithm/Coins | SHA256/BTC/BCH |
| Hashrate, TH/s | 86 + 3% |
| power on wall@25°C, Watt | 2967 ± 5% |
| power efficiency on wall @25°C, J/TH | 34.5 ± 5% |

| Detailed Characteristics | Value |
|--|------------------------------|
| Power Supply | |
| Power supply AC input voltage, Volt (1-1) | 200~240 |
| Power supply AC Input Frequency Range, Hz | 47~63 |
| Power supply AC Input current, Amp(1-2) | 20(1-3) |
| Hardware Configuration | |
| Network connection mode | RJ45 Ethernet 10/100M |
| Server Size (Length*Width*Height, w/o package), mm(2-1) | 400*195.5*290 |
| Server Size (Length*Width*Height, with package), mm | 570*316*430 |
| Net weight, kg (2-2) | 14.6 |
| Gross weight, kg | 15.8 |
| Environment Requirements | |
| Operation temperature, °C | 0~40 |
| Storage temperature, °C | -20~70 |
| Operation humidity(non-condensing), RH | 10~90% |
| Operation altitude, m(3-1) | ≤2000 |

Version: S19j 82T

Model No.: 240-Cb

| Product Glance | Value |
|---|-----------------------|
| Version | S19j |
| Crypto Algorithm/Coins | SHA256/BTC/BCH |
| Hashrate, TH/s | 82 + 3% |
| power on wall@25°C, Watt | 2829 ± 5% |
| power efficiency on wall @25°C, J/TH | 34.5 ± 5% |

| Detailed Characteristics | Value |
|--|------------------------------|
| Power Supply | |
| Power supply AC input voltage, Volt (1-1) | 200~240 |
| Power supply AC Input Frequency Range, Hz | 47~63 |
| Power supply AC Input current, Amp(1-2) | 20(1-3) |
| Hardware Configuration | |
| Network connection mode | RJ45 Ethernet 10/100M |
| Server Size (Length*Width*Height, w/o package), mm(2-1) | 400*195.5*290 |
| Server Size (Length*Width*Height, with package), mm | 570*316*430 |
| Net weight, kg (2-2) | 14.6 |
| Gross weight, kg | 15.8 |
| Environment Requirements | |
| Operation temperature, °C | 0~40 |
| Storage temperature, °C | -20~70 |
| Operation humidity(non-condensing), RH | 10~90% |
| Operation altitude, m(3-1) | ≤2000 |

Notes:

1. Caution: Wrong input voltage may probably cause server damaged.
2. Max condition: temperature 40°C, altitude 0m.
3. Two AC input wires, 10A per wire.
4. Including PSU size.
5. Including PSU weight.
6. When the server is used at an altitude from 900m to 2000m, the highest operating temperature decreases by 1°C for every increase of 300m.

Setting up the Server

To set up the server

The file IPReporter.zip is supported by Microsoft Windows only.

1. Go to the following site: <https://shop.bitmain.com/support/download>
2. Choose 'Others' and download the following file: IPReporter.zip.
3. Extract the file.

The default DHCP network protocol distributes IP addresses automatically.

4. Right-click IPReporter.exe and run it as Administrator.
5. Select one of the following options:
 - Shelf, Step, Position – suitable for farm servers to mark the location of the servers.
 - Default – suitable for home servers.
6. Click Start

FIG

7. On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).

FIG

The IP address will be displayed in a window on your computer screen.

FIG

8. In your web browser, enter the IP address provided.
9. Proceed to login using root for both the username and password.
10. In the Protocol section, you can assign a Static IP address (optional).
11. Enter the IP address, Subnet mask, gateway and DNS Server.
12. Click “Save”.
13. Click <https://support.bitmain.com/hc/en-us/articles/360018950053> to learn more about gateway and DNS Server.

FIG

Configuring the Server

Setting up the Pool

To configure the server:

1. **Click Settings marked below.**

FIG

Note:

Fan speed percentage can be adjusted, but we recommend to keep the default setting. The server will adjust the fan speed automatically if the fan speed percentage has yet been selected.

There are two working modes of S19j server: Normal mode and Sleep mode. The server enters the sleep mode under the condition that the control board is powered while hashboards are not powered.

2. Set the options according to the following table:

FIG

3. Click Save after the configuration.

Monitoring Your server

To check the operating status of your server:

1. Click dashboard marked below to check the server status (taking S19j 90T as an example).

FIG

Note: The S19j server (90T) is with fixed frequency 550 MHz. Firmware will stop running when the Temp (Outlet) reaches to 85°C there will be an error message “over max temp, pcb temp (real-time temp)” shown on the bottom of kernel log page. Meanwhile, the server temperature on the dashboard interface turns to abnormal and shows “Temp is too high”.

2. Monitor your server according to the descriptions in the following table:

| Option | Description |
|-----------------|---|
| Number of chips | Number of chips detected in the chain. |
| Frequency | ASIC frequency setting. |
| Real Hashrate | Real-time Hashrate of each hash board (GH/s). |
| Inlet Temp | Temperature of the inlet (°C). |
| Outlet Temp | Temperature of the outlet (°C). |
| Chip state | One of the following statuses will appear: <ul style="list-style-type: none">● The Green Icon – indicates normal● The Red Icon– indicates abnormal |

Administering Your Server

Checking Your Firmware Version

To check your firmware version:

1. Enter the backstage of your server, find the firmware version on the bottom.
2. Firmware Version displays the date of the firmware your server uses. In the examples below, the server is using firmware version 20210528.

FIG

Upgrading Your System

Make sure that the S19j server remains powered during the upgrade process. If power fails before the upgrade is completed, you will need to return it to Bitmain for repair.

To upgrade the server's firmware:

1. In System, click Firmware Upgrade.

FIG

2. For Keep Settings:

Select "keep settings" to keep your current settings (default).

Unselect "keep settings" to reset the server to default settings.

3. Click the **FIG** button and navigate to the upgrade file. Select the upgrade file, then click Update.
4. When the upgrade is completed, restart the server and it will turn to the setting page.

FIG

Modifying Your Password

To change your login password:

1. In System, click the Password tab.
2. Set your new password, then click Save.

FIG

Restoring Initial Settings

To restore your initial settings

1. Turn on the server and let it run for 5 minutes.
2. On the controller front panel, press and hold the Reset button for 10 seconds.
Resetting your server will reboot it and restore its default settings. The red LED will automatically flash once every 15 seconds if the reset is operated successfully.

Environmental Requirements

Please run your server in accordance with the following requirements

Basic Environmental Requirements:

Climatic Conditions:

| Description | Requirement |
|-----------------------|---------------------------|
| Operating Temperature | 0-40°C |
| Operating Humidity | 10-90%RH (non-condensing) |
| Storage Temperature | -20-70°C |
| Storage Humidity | 5-95%RH non-condensing |
| Altitude | <2000m |

Site Requirements of the Server Running Room:

- Please keep the server running room away from industrial pollution sources:
- For heavy pollution sources such as smelters and coal mines, the distance should be more than 5km.
- For moderate pollution sources such as chemical industries, rubber and electroplating industries, the distance should be more than 3.7km.
- For light pollution sources such as food factories and leather processing factories, the distance should be more than 2km.
- If unavoidable, the site should be chosen in the perennial upwind direction of the pollution source.
- Please do not set your location within 3.7km from the seaside or the salt lake. If unavoidable, it should be built as airtight as possible, equipped with air conditioning for cooling.

Electromagnetic Environmental Conditions:

Please keep your site away from transformers, high-voltage cables, transmission lines and high-current equipment, for example, there should be no high-power AC transformers (>10KA) within 20 meters, and no high-voltage power lines within 50 meters. Please keep your site away from high-power radio transmitters, for example, there should be no high-power radio transmitters (>1500W) within 100 meters.

Other Environmental Requirements

The server running room shall be free of explosive, conductive, magnetically conductive and corrosive dust. The requirements of mechanical active substances are shown below:

Requirements of Mechanical Active Substances

| Mechanical Active Substance | Requirement |
|-----------------------------|---------------------------------|
| Sand | $\leq 30\text{mg/m}^3$ |
| Dust (suspended) | $\leq 0.2\text{mg/m}^3$ |
| Dust (deposited) | $\leq 1.5\text{mg/m}^2\text{h}$ |

Requirements of Corrosive Gas

| Corrosive Gas | Unit | Concentration |
|------------------|------|---------------|
| H ₂ S | ppb | < 3 |
| SO ₂ | ppb | < 10 |
| Cl ₂ | ppb | < 1 |
| NO ₂ | ppb | < 50 |
| HF | ppb | < 1 |
| NH ₃ | ppb | < 500 |
| O ₃ | ppb | < 2 |

Note: ppb (part per billion) refers to the unit of concentration 1ppb stands for the volume ratio of part per billion.

Regulations

FCC Notice (FOR FCC CERTIFIED MODELS):

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.


Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



EU WEEE: Disposal of Waste Equipment by Users in Private Household in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Documents / Resources

| | |
|---|--|
|  | BITMAIN S19j AntMiner Server [pdf] Installation Guide S19j, S19j AntMiner Server, AntMiner Server, Server |
|---|--|

References

-  [BITMAIN](#)
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