

NMAxe

NMAxe - Open source ASIC Solo Lottery hardware

The NMAxe is a Optimization device, which is based on the [Bitaxe project](#).

The NMAxe is designed for solo Lottery, revision of the NMAxe that now includes the BM1366 ASIC.



Goals

- Standalone: can mine directly to the pools over WiFi. No External computer needed.

- Embedded: low cost, low maintenance, high availability, high reliability, low power(less than 15W).
- ASIC: based on the very, very efficient BM1366 from Bitmain.

BM1366

- The BM1366 is a undocumented SHA256 mining ASIC from Bitmain.
- It's used in the Antminer S19XP and the S19k Pro.
- Bitmain claims the BM1366 has 0.021J/GH efficiency.
- The BM1366 is available (new) for around \$15 each in small quantities.

Software

The software NM-ESP-Miner is fully opensource.

It's from the opensource project: [ESP-Miner](#), has been adapted for the BM1366 and the NM Axe hardware.

How to use

Power Supply Requirements

- The NM Axe support the USB-PD, which is a big breakthrough from the Bitaxe. It's also support the 12V DC, should be capable of over 20W.
- The NM Axe needs 15W.
- The NM Axe also support the 5.5x2.1mm, center-positive barrel jack.

Which Cryptocurrency?

The BM1366 support SHA256, so the Cryptocurrency use the SHA256 both supported.

- Bitcoin Lottery, draws every ten minutes, 144 times every day, 52560 every year.
 - The lottery value about \$210,000.
 - Degree of difficulty: ★★★★★★★★★★
- BCH Lottery, draws every ten minutes, 144 times every day, 52560 every year.
 - The lottery value about \$1,000.
 - Degree of difficulty: 1/180 of Bitcoin Lottery.
- XEC Lottery
 - The Lottery value about \$60.
 - Degree of difficulty: 1/3300 of Bitcoin Lottery.
- DGB Lottery
 - The Lottery value about \$2.5.
 - Degree of difficulty: 1/100000 of Bitcoin Lottery.

The Solo Pool

- [nmpool](#), currently only support XEC solo. It's a opensource Lottery pool, fork from the [ecash-ckpool-solo](#), the NM Tech Team changed to well support the Axe Lottery devices. The eCash XEC Mining Pool, with maximum performance, real-time statistics, fast payments, fully compatible with Axe Lottery devices.
- [Molopool](#), support Bitcoin, BCH, XEC and DGB.
- [solopoll](#), support BCH, XEC and DGB.
- [MineMine](#), support BCH, XEC and DGB.

Specifications

Title	Info
Origin	Mainland China
ASIC	BM1366
Master Chip	ESP32-S3R8, Xtensa32 dual core processor
HashRate	500 ~ 550 GH/s
Wi-Fi	802.11 b/g/n, up to 150Mbps
Device management	Web service Axe OS/NMController
Firmware upgrade	Upgrade Over the air(OTA)/ NMFlashTool
Power Interface	Type-C USB\DC2.0
Supply mode	DC\PD3.0 DC adapter and PD charger are supported
Power supply range	12V /2A
Power Consumption	15~20W
Display	1.14 inch TFT-LCD ; 135*240;Full-color
Fan	DC 5V/Dual bearing brushless Fan
heat sink	40*40*14mm
Memory	512KB SRAM; 8MB PSRAM; 384KB ROM; 16MB SPI Flash
Dimensions	85*56*44mm
Operating temperature	-20 ~ 70 °C

Description

Summary

NMAxe is a NMMiner Official development board, with BM1366 ASIC, Wi-Fi, Bluetooth. It's a Solo lottery Miner, perfect for solo miners aiming to strike a Bitcoin

block. The NM Axe is your golden ticket to potentially earning the 3.125 BTC block reward. This high-efficiency, rewarding experience makes it the ultimate lottery miner on the market.

For current Nerdminer owners, the NM Axe boosts your mining speed from 115 KH/s to 500~550 GH/s, the winning probability has increased by nearly 5 million times.

Differences/Improvements from Bitaxe Devices:

- The NM Axe also supports the SSL connections, which solve the information security problems in some regions and countries.
- [NMMiner group controller](#), which can help to manage NMMiner and NM Axe devices together.
- At the same time, the device supports USB PD power supply, so common mobile TypeC adapters can be used to power the NM Axe.
- Besides, the portable power bank supplies power to the NM Axe devices. A regular 10000mAh power bank can provide power to NM Axe devices for over 1 hour. So, even with a portable power bank and WiFi hotspot, you won't miss the opportunity to get a BTC block reward.

Main Features

- Full graphic screens over 1.14 inch IPS screen.
- Two accessible buttons.
- Bitmain's BM1366AL chip.
- Operates exclusively on 2.4 GHz Wi-Fi.
- Requires a 12V power supply with at least 2A.
- Easy setup via the AxeOS portal.
- Built-in website for monitoring.
- Although the current mining capabilities of NM Axe position it as a solo miner compatible with any solo mining pool.
- Support different Cryptocurrency Solo mining, such as BTC/BCH/XEC/DGB.
- Support NMMiner Controller, Can easily manage multiple devices.
- The device is compatible with Raspberry Pi 5-size structure and can be compatible with Raspberry Pi related shell devices.

Product sellpoints

- NM Axe is a fork from bitaxe Ultra with fullcolor display graphics, a fully open-source Bitcoin ASIC miner equipped with Antminer's S19XP BM1366 ASIC chip.
- This design ensures an efficient and powerful mining capabilities, achieving 500 GH/s with an energy efficiency of 20 J/TH.
- It operates on a 12V DC power supply connected via a 2.5/5.5 mm barrel connector.

- The NMAxe also supports USB-PD, which is a common accessory for mobile phones.
- The NMAxe is compatible with the Raspberry Pi size and structure, the accessories for Raspberry Pi can be used to arm the NMAxe.

Key features and benefits

Outstanding efficiency

The NMAxe epitomizes energy efficiency. Consuming just 15 watts of power, it delivers a remarkable hashrate of up to 500 GH/s. For home miners seeking an optimal solution that balances performance and energy consumption, the NMAxe stands as the clear choice.

Open-source system

Harnessing the power of AXE OS, an open-source operating system, the NMAxe gives you complete control over your mining operations. Personalize settings, monitor performance, and steer your mining endeavors with unparalleled adaptability. Delve deeper into details at Bitaxe.org or engage with the Open Source Miner community on Discord for additional insights.

The device is compatible with Raspberry Pi 5-size structure and can be compatible with Raspberry Pi related shell devices.



Whats in the Box

The NMAxe arrives fully assembled with a 100-240V 12V/2A power supply included.

For our global miners, you may need a power cord tailored to your region. Here's what you get:

- Fully Assembled NMAxe
- 100-240V 12V/2A Power Supply

FCC Warning

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.