Alexmining

A Globally Leading Cryptocurrency Mining Service Provider



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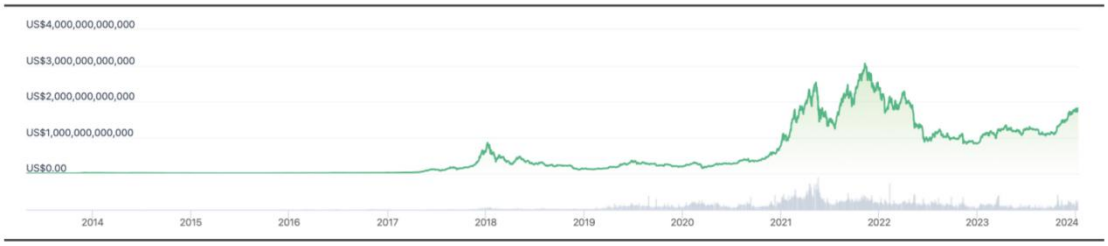
Chapter 1: Overview of the Cryptocurrency Mining Industry

1.1 The Development of the Cryptocurrency Market

As of July 2026, the total asset size of the cryptocurrency market has reached US$2.92 trillion, encompassing over 20,000 cryptocurrencies, reflecting the market's broad diversity and maturity. Cryptocurrency platforms, as a core component of the crypto market, provide trading environments characterized by abundant liquidity and a user-friendly experience. With the growing mainstream adoption of crypto assets and the gradual clarification of the regulatory landscape, these markets are poised to attract an increasing number of institutional and retail investors, thereby further expanding their market share and establishing themselves as pivotal hubs for cryptocurrency investment and trading.

According to monitoring data, by the end of 2025, the total asset size of the cryptocurrency market is projected to reach approximately US$3 trillion. Our estimate of the total cryptocurrency asset size is based on tracking 18,127 cryptocurrencies across 1,071 exchanges.

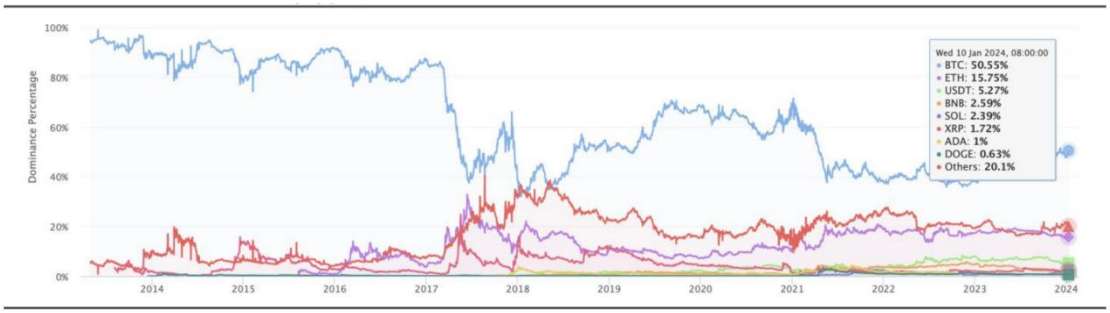


Total global cryptocurrency market capitalization

In terms of market capitalization distribution, in the entire cryptocurrency market in 2025, Bitcoin (BTC) accounted for 57.4% of the total market capitalization, followed by Ethereum (ETH) at 11.7%, Ripple (XRP) at 3.7%, Binance Coin (BNB) at 3.9%, SOL at 2.3%, and ADA at 0.4%; the remaining cryptocurrencies each accounted for less than 1% of the total market capitalization. Additionally, USDT, which is pegged to the US dollar, accounted for approximately 6.1% of the total market capitalization; USDT is classified as a type of stablecoin.

Looking at the historical trends in the share of various cryptocurrencies, BTC, as the leader among crypto assets, has consistently ranked first in terms of asset value.

The evolution of BTC's market capitalization share can be divided into three stages: the first stage, prior to 2017, saw BTC's market capitalization share remain above 80%; the second stage, spanning 2017–2021, was characterized by the emergence of numerous new cryptocurrencies following the first major market rally in 2017, which altered the previously high concentration of capital in BTC; the third stage, from 2021 to the present, has seen BTC's market capitalization share stabilize between 50% and 60%. ETH has consistently become the second-largest cryptocurrency asset, with its market capitalization share remaining steady between 10% and 20% since 2018; other cryptocurrencies, in turn, have undergone continuous cycles of replacement as technology progressively advanced.



Distribution of cryptocurrency market capitalization share from 2013 to present

We compare the total market capitalization of cryptocurrencies with that of stocks listed on the major U.S. exchanges (Nasdaq and NYSE). From a trend perspective, both the total market capitalization of major U.S. stock exchanges and that of cryptocurrencies reached their lows in 2018, then gradually increased from 2019 to 2021, before experiencing a significant decline again in 2022. From 2017 to 2022, the growth rate of market capitalization for both Nasdaq and NYSE remained below 50%, whereas the growth rate of the total cryptocurrency market capitalization was 302% in 2020 and 203% in 2021. Since the beginning of 2022, its share has continued to rise. In terms of absolute market capitalization, cryptocurrencies now account for approximately 5% of the total market capitalization of stocks on Nasdaq.

Furthermore, in 2024, the U.S. Securities and Exchange Commission (SEC) approved 11 Bitcoin ETFs, marking a significant milestone for the cryptocurrency industry. The issuers of these 11 approved spot Bitcoin ETFs are Grayscale, Bitwise, Hashdex, iShares, Valkyrie, Ark, Invesco Galaxy, VanEck, WisdomTree, Fidelity, and Franklin. Among them, iShares is affiliated with BlackRock, a global asset management giant. This decision will provide investors with additional opportunities to participate in the cryptocurrency market and, in turn, further drive the development of the crypto sector.

With the growth of the cryptocurrency market, the demand for market participation is also expanding further:

- Financial Services Sector: The financial services sector is the primary driver behind the adoption of cryptocurrencies, as digital assets offer the potential for faster, cheaper, and safer cross-border transactions.
- Retail Investors and Traders: An increasing number of retail investors and traders are entering the cryptocurrency market, seeking to diversify their portfolios and pursue opportunities for high returns through cryptocurrency investments.
- Large institutional investors—including hedge funds and asset management firms—are also entering the cryptocurrency market, signaling their growing confidence in digital assets as a legitimate class of assets.

North America holds a dominant position in the cryptocurrency market, and this position is expected to be maintained in the coming years. The growing number of Bitcoin exchanges in the United States has fostered healthy competition and market maturity.

Furthermore, as governments promote the adoption of blockchain technology, banks are also recruiting blockchain experts to enhance transparency within the financial sector and combat fraudulent activities. Emerging economies in regions such as the Asia-Pacific offer vast untapped potential for the cryptocurrency market. These regions are undergoing rapid digitalization, yet their coverage of traditional banking services remains limited, creating fertile ground for the adoption of cryptocurrencies. Many consumers in these emerging markets lack access to financial services, which in turn fuels demand for decentralized solutions like cryptocurrencies.

...requirements. Furthermore, governments of several emerging economies have begun exploring cryptocurrency-friendly regulations, recognizing the potential of cryptocurrencies to promote financial inclusion and stimulate economic growth.



1.2 Increasing Acceptance of Bitcoin Among Various Parties

When examining Bitcoin, we believe it possesses certain essential qualities for serving as a store of value. Looking ahead, we have every reason to be optimistic that the infrastructure surrounding Bitcoin and cryptocurrencies will continue to evolve and mature. Moreover, the rapid increase in mainstream acceptance of Bitcoin and other cryptocurrencies is driving growing interest in the opportunity to mine digital currencies.

1) Non-Profit Organization Accepting Bitcoin

In June 2011, Free.org, the Institute for Machine Intelligence, the Internet Archive, the Free Software Foundation, and several other organizations began accepting donations of Bitcoin.

In June 2011, the Electronic Frontier Foundation also accepted Bitcoin donations for a period of time, but subsequently announced that it would cease such practices, citing the absence of historical precedents for a monetary system like Bitcoin and its concerns regarding legal uncertainties. In November 2011, WordPress announced that it would accept Bitcoin payments, stating that in regions such as Kenya, Haiti, and Cuba, where international payment systems have been blocked, Bitcoin could help internet users in those areas purchase services.

In April 2013, following the Ya'an earthquake in Sichuan Province, China, the public fund "One Foundation" announced that it would accept Bitcoin as donations for the earthquake relief efforts. At that time, it had already received expressed donations of 50 Bitcoin (equivalent to approximately 40,000 yuan based on the exchange rate at the time).

In May 2013, the Electronic Frontier Foundation announced that, following its review of the *Regulations* on the Management of Virtual Currency Donations issued by the U.S. Treasury Department's Financial Crimes Enforcement Network, it would once again accept Bitcoin as a gift, treating it similarly to automobiles.

In February 2014, the University of Cambridge in northern England became believed to be the first public university in the world to accept the cryptocurrency Bitcoin as tuition fees. The Wikimedia Foundation accepts donations in Bitcoin and Bitcoin Cash via BitPay, but does not retain the resulting Bitcoin; instead, it exchanges the Bitcoin for US dollars for its own use.

2) Businesses That Accept Bitcoin

LaCie is a publicly traded company that accepts Bitcoin as a payment method for its Wuala service.

The anonymous organization "LulzSec" has announced that it is accepting Bitcoin donations. The group claims that it "needs Bitcoin donations to continue its operations."

In January 2013, online game developer Zynga announced that it would support Bitcoin payments.

On March 5, 2013, Namecheap announced that it would begin accepting Bitcoin payments.

In April 2013, platforms such as Pirate Bay and EZTV began accepting Bitcoin donations.

In May 2013, Forbes released"*The Top 10 Websites Accepting Bitcoin Transactions*".

In June 2013, PayPal prohibited regular merchants from selling Bitcoin. However, in September 2014, PayPal announced that it would accept Bitcoin via PayPal Payments Hub.

In October 2013, the world's first Bitcoin ATM debuted in Vancouver, Canada, allowing users to exchange Bitcoin for Canadian dollars for withdrawal, with a daily maximum limit of CAD 3, 000; alternatively, users could also purchase Bitcoin by depositing cash. By May 2017, the number of Bitcoin ATMs worldwide had reached 1,167, distributed across 58 countries.

Kenyan entrepreneur and programmer Pelle Braendgaard has launched a Bitcoin service called Kipochi. In Swahili, "Kipochi" means "wallet." Kipochi enables users to purchase Bitcoin using M-Pesa, helping Kenyans working abroad send money home without incurring high international bank transfer fees. While banking infrastructure in Kenya is limited, smartphones are nearly ubiquitous. M-Pesa, a mobile payment system launched by the mobile operator, has become widely popular in the country, allowing citizens to easily send money to others.

Bitcoin Channel reports that certain stores on eBay—the world's largest auction marketplace—accept Bitcoin, and approximately 240 stores offer Bitcoin-related services.

On January 9, 2014, the major U.S. online retailer Overstock officially accepted Bitcoin.

In July 2014, the Bitcoin Taiwan exchange platform bitbarterex—a marketplace for exchanging Bitcoin for goods and services—was renamed bitexc.

On July 18,2014, Dell began accepting Bitcoin payments, but has since suspended this service due to low demand.

In November 2014, online reports claimed that Microsoft's Xbox and digital products would accept Bitcoin payments.

In February 2016, the Japanese gaming and adult content platform DMM.com announced that it would accept Bitcoin payments.

In April 2016, the gaming platform Steam announced support for Bitcoin payments. However, in December 2017, Steam announced that it would no longer accept Bitcoin, citing surging transaction fees and extreme price volatility of the cryptocurrency.

In April 2017, the Japanese home appliance retail chain Bic Camera began accepting Bitcoin payments.

In May 2017, Leto Airlines announced that it would allow passengers to purchase flight tickets using Bitcoin by the end of that year, becoming the first airline in Japan to accept Bitcoin.

In August 2019, Hui Shi Home Furnishings announced a strategic partnership with Weever FinTech—a subsidiary of Shifu Financial Services Group—and QFPay, making it the first large-scale retail chain in Hong Kong to accept Bitcoin payments across its entire product range.

In March 2021, Elon Musk announced that his automaker, Tesla, would allow customers to purchase vehicles using Bitcoin.

Examining the development of blockchain and digital currencies, Bitcoin has played a pivotal role in driving this progress and continues to account for the largest share of the market. The core reason for this lies in its incentive mechanism: mining.



1.3 The Rapid Growth of the Cryptocurrency Mining Industry

As the upstream segment of the blockchain industry value chain, mining serves to build critical infrastructure while also providing numerous wealth-generating opportunities for the market. In recent years, blockchain technology has evolved rapidly; it has now reached a sufficient level of maturity in terms of performance, usability, and operational feasibility to support large-scale commercial applications. Concurrently, the growing number of blockchain projects further reflects the current market's strong enthusiasm for blockchain technology as a foundational support for the mining industry.

1) How to Mine

As long as a device can connect to the internet and is equipped with appropriate hardware—such as a central processing unit (CPU), a graphics processing unit (GPU), or a dedicated application-specific integrated circuit (ASIC)—it can be called a "mining rig," and anyone can engage in mining. To earn the Bitcoin reward every ten minutes, one must solve a mathematical puzzle that makes it difficult for malicious actors to tamper with the blockchain ledger, yet remains easy to verify; this process is as difficult as mining physical minerals, hence the term "mining," and those who use such rigs are called "miners." Mining also involves packaging and verifying thousands of transactions to form a block, thereby proving that the se nder possesses sufficient Bitcoin and preventing duplicate transactions of the same asset, which in turn generates transaction fees.

2) Revenue Factors for Mining

There are numerous factors that influence the returns from digital mining, the most important of which are as follows:

- Mining difficulty: factors such as the inherent mining difficulty, output, block rewards, and algorithms of Bitcoin and Ethereum.
- Hardware costs: Primarily encompass mining hardware computing power, speed, power consumption, and other related factors.
- Marketfactors:cryptocurrencyprices,changesintotalnetworkcomputingpower,etc.
- Cost factors: O&M costs, electricity costs, mine site construction and maintenance, mining equipment deployment, labor costs, etc.

3) The Evolution of Mining Methods

On January 3, 2009, Satoshi Nakamoto mined the Bitcoin genesis block using a multi-core CPU. From that day onward, the mining industry was born. Nakamoto placed great importance on a fair mechanism; the initial mining difficulty of Bitcoin was not set high, and he hoped to ensure that every individual could hold a share, thereby granting everyone voting rights. In hindsight, that represented his envisioned "golden age" —an era of universal participation. Anyone could engage in mining with just an ordinary home computer, and a single ordinary CPU carried the Bitcoin conviction of the earliest miners.

As the number of miners grew and the overall network mining difficulty increased, the computing power of ordinary CPUs could no longer meet the demands of high-difficulty mining algorithms. In July 2010, one miner successfully pioneered the use of a personal GPU for mining, ushering in a new era of cryptocurrency mining. In fact, Satoshi Nakamoto had anticipated that chips with superior computing capabilities would disrupt the previous artisanal mining paradigm. He called for the drafting of a "gentleman's agreement" to delay the onset of an arms race. In his view, CPU mining represented the optimal path toward widespread adoption of Bitcoin.

However, the extraordinary computing power of GPUs drew a massive influx of miners. In just a few months, CPU chips went from being highly sought after to being largely ignored. The choices made by miners truly accelerated the evolution of mining hardware; GPUs then served to sustain that momentum for them. Consequently, miners designated 2010 as the "Year of GPUs." Before GPUs could even establish a firm foothold, new challengers already emerged. In February 2011, the price of Bitcoin surpassed $1 for the first time, and by June, it had briefly climbed to 30 yuan. These ever-increasing prices kept miners on edge: greater computing power meant higher returns on their investments. Driven by urgent market demand, the first FPGA-based Bitcoin miner appeared in mid-2011—a pioneering chip design specifically tailored for mining tasks. By integrating multiple FPGAs, this design could deliver exponentially increased mining computing power.

Given the substantial upfront costs associated with the development and production of mining rigs, a manufacturer called Butterfly Mining Rig attempted its first crowdfunding campaign for such equipment. However, due to its inability to meet delivery deadlines, Butterfly Mining Rig ultimately suffered a crushing defeat, emerging as the losing party, and the iteration cycle of FPGA mining rigs reached a deadlock. Simultaneously, this "Butterfly incident" instilled a sense of crisis within the industry. There were concerns that mining rig manufacturers like Butterfly might achieve a computational power monopoly, potentially enabling them to launch 51% attack attacks. In response, in January 2013, the Avalon team successfully launched the world's first ASIC supercomputing chip—A3256—designed for digital blockchain computation, along with its corresponding mining rig product, Avalon Gen 1. Although ASIC mining rigs were not yet as mature as FPGA solutions at that time, history has consistently favored successors endowed with innovative capabilities; faced with the ever-increasing computational power of ASIC mining rigs, FPGA technology found itself unable to keep pace.

The advent of ASIC mining rigs has ushered in an era of intense competition and strategic maneuvering among chip developers. Numerous mining rig manufacturers made fleeting appearances in the race for computing power only to ultimately fail, becoming forgotten in the dust of history, with no lasting legacy. Notable examples include: Pigeon, ASICME, MQH, Longmin, Shenyu, and 42BTC.

In the second half of 2013, Kaitao Mining Machines successively launched several ASIC-based mining devices, including the 13G Blade Miner, 10G MINI Miner, and 38G BOX Miner. By seizing the right timing and leveraging robust R&D iteration capabilities, Avalon and Kaitao emerged as the two dominant players in the mining hardware market. By the end of 2013, Bitcoin began to surge, rising from $207 to $1,149. This price spike was accompanied by a dramatic increase in mining hash rate and escalating mining difficulty. In response, Avalon 2 was launched, featuring a self-developed 55nm ASIC chip. Its hash rate increased by 75% year-on-year, making it highly sought after by miners; at its peak, the unit price was speculated up to $18,000 per machine. In the same month, Bitmain officially entered the market with its S1 mining machine.

In October 2013, the development of the Kao Mao mining rig encountered a bottleneck, and the second-generation chip could not be produced in a timely manner; in January 2014, the third-generation chip—successfully developed by Kao Mao—exhibited a persistent explosion issue that was difficult to remedy, resulting in 14,000 mining rig chips remaining unsold. Due to these severe setbacks in development, the Kao Mao mining rig gradually faded from public view.

4) Key Factors Influencing Industry Development

- The Matthew effect is intensifying: Currently, the competitive landscape within the industry has begun to take shape, and several major industry giants are poised to further expand their operations across both upstream and downstream segments, which will further exacerbate the degree of market monopoly.

- Energy consumption of mining rigs may become a key competitive factor: Currently, both ASIC mining rigs and GPU mining rigs consume substantial amounts of electrical energy during the mining process; therefore, reducing energy consumption will be a critical factor in determining the operational lifespan of these mining rigs.

- The sector is highly susceptible to both policy and market factors: digital currencies are currently undergoing a transition from their initial emergence to gaining widespread recognition, while laws and regulations in various countries are being continuously enacted or refined; furthermore, the government's stance toward the mining industry will exert a profound impact on the sector.



1.4 The Rise of New Mining Players

With the growth in cryptocurrency trading volume, an increasing number of related industries are also flourishing; as the upstream segment of this industrial chain, mining has generated substantial profits.

However, as the entry barriers in the mining industry continue to rise, the inherent drawbacks of the sector are also limiting users' returns:

- CPU mining: The earliest mining method, due to its low computational power, was phased out after only three months of operation;
- GPU mining: GPUs hold an advantage over the SHA256 algorithm, offering greater computing power, though this advantage has not persisted for long;
- FPGA mining: a type of semi-custom circuit within the field of application-specific integrated circuits (ASICs);
- ASIC Mining: Application-Specific Integrated Circuit. An integrated circuit specifically designed and manufactured to meet the requirements of mining operations;
- Large-scale cluster mining: By employing technical means to aggregate the computing power of a large number of ASIC miners, mining pools and mining farms are formed, thereby significantly enhancing overall computing power.

Overall, as mining difficulty increases, the equipment used for mining is becoming increasingly specialized, and the entry barriers are rising! Moreover, the costs associated with traditional mining are also steadily increasing:

- Investments in mining equipment, electricity costs, land resources, and other auxiliary equipment have led to a continuous increase in costs;
- Large-scale miners: Possess sufficient capital resources, can secure favorable electricity rates and suitable operational premises, but experience a prolonged payback period and may occasionally encounter cash flow issues.
- Ordinary miners: Retail investors constitute a large demographic base; they wish to engage in mining, but they have limited capital, lack knowledge of mining techniques, and have limited understanding of the industry landscape.

Against the backdrop of rapid industry growth, given the current limitations of industrial development, whoever can provide more efficient solutions to help industry practitioners overcome existing challenges will be able to create a brand-new ecosystem for mining and crypto digital assets—signaling the arrival of a new era of wealth distribution.

Furthermore, given the limitations of traditional mining methods, the industry must seek more competitive mining approaches to advance further—among which the core competitiveness of compute power Hosting mining is becoming increasingly prominent.

1) What is hosted mining?

In managed mining, certain mining farms sell their computing power to external users. If you lease or purchase mining rigs from such farms based on your computing power requirements and desired duration, you will not incur maintenance costs such as electricity or facility expenses. Users can rent or purchase mining rigs through the platform and receive regular earnings. The key advantages of cloud mining are that users do not need to have an in-depth understanding of mining principles or the various hardware and software components, nor do they need to purchase expensive mining rigs or perform 24/7 maintenance; instead, they can participate in mining simply by placing an order—akin to purchasing a yield-linked product. -This model is commonly referred to as contract mining (managed mining).

2) Alexmining stands out

Against the backdrop of rapid industry growth, Alexmining has emerged as a standout player! Given the current limitations of industry development, Alexmining and its efficient solutions are poised to help industry practitioners overcome existing challenges, fostering a brand-new ecosystem for mining and crypto digital assets. Furthermore, it aims to provide global users with a secure, stable, transparent, equitable, low-cost, and high-yield mining environment, coupled with a globalized digital asset circulation framework.

Alexmining aims to build a world-leading, high-compute-power mining asset value circulation ecosystem powered by advanced technologies, enabling global users to grow steadily within an environment that is secure, transparent, fair, low-cost, and high-yield. Simultaneously, Alexmining's native token is currently under active development and deployment, providing global institutional users with a medium that delivers high computing power, superior performance, high liquidity, and exceptional convenience—ensuring that both individual users and institutional investors maintain a competitive edge in the dynamic landscape of cryptocurrency mining and crypto asset competition!



Chapter 2 Alexmining Project Overview

2.1 Alexmining Introduction

Alexmining is a cutting-edge cryptocurrency mining enterprise dedicated to innovation, efficiency, and sustainability. Founded in 2013 and headquartered in Denver, Colorado, the company has rapidly expanded its operations to multiple locations worldwide, establishing large-scale cryptocurrency mining facilities at strategic sites—including Iceland, Norway, Russia, and Kazakhstan. As a pioneer in cryptocurrency mining, Alexmining was built by technology enthusiasts, investors, and industry expert teams. By integrating deep expertise in cryptocurrency technology, markets, and operations with substantial capital, resources, and management capabilities, the company combines state-of-the-art technology with sustainable practices to shape the future of digital assets. Leveraging the most advanced mining hardware, cutting-edge energy solutions, and strategic partnerships, Alexmining delivers high-performance, cost-effective mining solutions to global investors.

Since the rapid advancement of cryptocurrency mining technology in 201 8 , Alexmining has actively adapted to evolving market dynamics and regulatory developments. Given the impact of the Bitcoin halving event on market demand and profitability, coupled with the emergence of new mining technologies—such as energy-efficient ASIC miners and GPU-enhanced solutions—Alexmining has positioned itself at the forefront of the industry. Simultaneously, Alexmining's expertise in blockchain infrastructure, mining optimization, and energy management enables the company to maximize operational efficiency while reducing operating costs.

In 2020, Alexmining officially launched its online business, expanded its investor network, entered a new phase of growth, and designated Nigeria as its primary market. For instance, the company plans to introduce Alexmining's native cryptocurrency, providing investors with a new avenue to participate in the future of decentralized finance. As the global regulatory landscape becomes increasingly favorable—driven by supportive policies from the Nigerian government, new tax incentives in the United States, blockchain legalization in Europe, and governmental backing in Latin America—Alexmining is well-positioned to seize emerging opportunities and continue to lead the industry forward.

Alexmining's mission is to shape the future of cryptocurrency mining through technological innovation, strategic expansion, and sustainable operations. By leveraging its deep industry expertise and its commitment to efficiency and responsible mining practices, Alexmining empowers investors and contributes to the sustainable development of the digital economy.

Alexmining aims to achieve interoperability across diverse independent mining ecosystems, building bridges between different continents and enabling humanity to explore the crypto-world constructed through mining from a new perspective. To realize this vision, Alexmining will undertake the following key steps:

- Empowering value proliferation in the mining industry: By leveraging the high-performance mining rigs and foundational mining networks provided by Alexmining, we enable innovative economic models to empower the existing mining market, while ensuring that the distribution of computing power rewards and node rewards lays a global user foundation for the circulation of cryptocurrencies.

- Empowering Crypto Rights: By enabling the global circulation of the native cryptocurrency via Alexmining, we unlock crypto rights, granting every individual exclusive rights to the fruits of their mining efforts.

- Autonomous Community: Alexmining firmly believes that increasing trust in decentralized community governance models will be adopted in the development of the global mining industry.

Alexmining is a premier cryptocurrency mining service provider dedicated to building innovative mining ecosystems, leveraging high-performance mining rigs to consistently deliver high-quality mining farms, mining pools, and computing power resource services worldwide. Its ecosystem encompasses mining infrastructure, a comprehensive suite of computing power products, multi-currency and multi-system mining solutions, and the circulation of high-performance mining resources. By establishing an on-chain, global mining operational ecosystem centered on Alexmining, the company is poised to create new growth opportunities for the global cryptocurrency mining industry.



2.2 Background Qualifications

Alexmining has long been deeply engaged in the cryptocurrency sector, leveraging its core expertise in cryptocurrency mining to expand its business operations across diverse areas. The company has now obtained all necessary industry certifications, thereby laying a solid foundation for its global compliance development.

Furthermore, in the context of the rapid development of the cryptocurrency industry, regulatory compliance is crucial for the sustainable growth of enterprises. Alexmining fully recognizes this importance and has therefore been actively seeking the various qualifications and licenses required by the industry to ensure that its operations are lawful and compliant globally. By strictly adhering to the regulatory requirements of various jurisdictions, Alexmining has obtained multiple industry certifications, including cryptocurrency trading licenses, blockchain technology service qualifications, and payment service licenses. These certifications not only provide a safeguard for the legality of its business operations but also bolster the trust of its users and partners.



OFFICE OF THE SECRETARY OF STATE
OF THE STATE OF COLORADO

CERTIFICATE OF DOCUMENT FILED

I, Jena Griswold , as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office, the attached document is a true and complete copy of the

Articles of Incorporation

with Document # 20201489326 of

Alexmining Inc.

Colorado Corporation

(Entity ID # 20201489326)

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 06/01/2020 that have been posted, and by documents delivered to this office electronically through 06/02/2020@ 19:22:35.

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 06/02/2026 @ 19:22:35 in accordance with applicable law. This certificate is assigned Confirmation Number 18134264

Secretary of State of the State of Colorado

**********End of Certificate**********

Notice: A certificate issued electronically from the Colorado Secretary of State's website is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's website, https://www.coloradosos.gov/biz/CertificateSearchCriteria.do entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our website, https://www.coloradosos.gov click "Businesses, trademarks, trade names" and select "Frequently Asked Questions."

Financial Crimes Enforcement Network
Department of the Treasury

MSB Registration Status Information

Date: 02/03/2026

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The MSB Registrant Search Web page, which is updated on a weekly basis, contains entities that have registered as Money Services Businesses (MSBs) pursuant to the Bank Secrecy Act (BSA) regulations at 31 CFR 1022.380(a)-(f), administered by the Financial Crimes Enforcement Network (FinCEN).

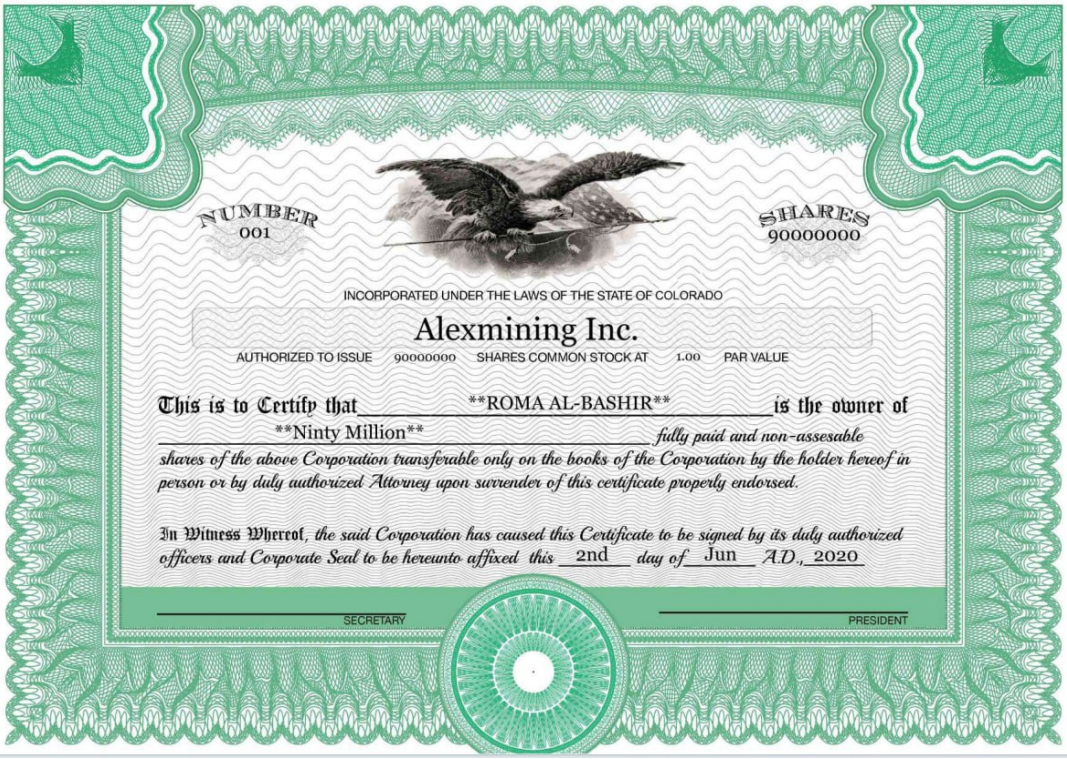
Information contained on this site has been provided by the MSB registrant. FinCEN does not verify information submitted by the MSB. Information provided on this site reflects only what was provided directly to FinCEN. If an error or incomplete information is detected on this site, the registrant should follow the appropriate instructions for correcting a Registration of Money Services Business (RMSB) form.

MSB Registration Number: 31000321387694
Registration Type: Initial Registration
Legal Name: Alexmining Inc.
DBA Name:

Street Address: 600 17th Street
City: Denver
State: COLORADO
Zip: 80202

MSB Activities:
Dealer in foreign exchange, Money transmitter, Seller of money orders
States of MSB Activities:
Alabama, Alaska, American Samoa, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District Of Columbia, Federated States Of Micronesia, Florida, Georgia, Guam, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Marshall Islands, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Northern Mariana Islands, Ohio, Oklahoma, Oregon, Palau, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Virgin Islands, US, Washington, West Virginia, Wisconsin, Wyoming
All States & Territories & Foreign Flag: All States/Territories

Number of Branches: 0
Authorized Signature Date: 01/29/2026
Received Date: 01/29/2026





FEDERAL REPUBLIC OF NIGERIA

CERTIFICATE OF INCORPORATION

OF A

PRIVATE COMPANY LIMITED BY SHARES

COMPANY REGISTRATION NO. 9543585

The Registrar - General of Corporate Affairs Commission

hereby certifies that

ALEXMINING NIGERIA LIMITED

is this day incorporated under the

COMPANIES AND ALLIED MATTERS ACT 2020

as a private company limited by shares

Given under my hand at Abuja this 13th day of May, 2026

Hussaini Ishaq Magaji SAN
Registrar - General

TAX IDENTIFICATION NUMBER: 2623743424068



SPECIAL CONTROL UNIT AGAINST MONEY LAUNDERING
(SCUML)

RN: SC 151844407

Certificate of Registration

I hereby certify that

ALEXMINING NIGERIA LIMITED

Has been duly registered in accordance with the provisions of Section 17(2)(a) of the Money Laundering (Prevention and Prohibition) Act, 2022 and any other Law or Regulation.

Director

Date of Issue: 18th MAY 20 26

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2.3 Collaborative Development With Top-Tier Teams

The Alexmining team comprises computer scientists, blockchain engineers, data scientists, mining system development experts, and risk managers. The team is committed to establishing a mining ecosystem under future high-compute-power reward mechanisms and node consensus incentive models. By integrating blockchain technology with high-compute-power mining, Alexmining aims to create an interconnected social architecture—encompassing offline mining farms, mining rigs, and mining pools, as well as online mining and delegated mining services—thereby enabling investment, acquisition, and leasing of computing power and mining hardware. This approach facilitates efficient value circulation and generates returns ranging from hundreds to thousands of times the initial investment, while serving as a bridge between the physical mining sector and the crypto ecosystem. Ultimately, Alexmining strives to empower the realization of a future interconnected value ecosystem for crypto mining.

The members of the senior management team at Alexmining are as follows:



ROMAAL-BASHIR

position: Founder and CEO

ROMAAL-BASHIR is the Founder and CEO of Alexmining, overseeing the company's strategic planning and long-term development direction.
He brings over 20 years of experience in the fintech industry and has previously held senior management positions at numerous international financial institutions.

During the early stages of blockchain technology development, ROMAAL-BASHIR demonstrated keen insight and actively drove his company into the cryptocurrency sector.
His leadership style—characterized by forward-thinking mindset and exceptional strategic vision—has laid a solid foundation for Alexmining's global market expansion.



Brian Thompson

position: Chief Marketing Officer (CMO)

Brian Thompson, serving as the Chief Marketing Officer of Alexmining, is fully responsible for the company's day-to-day operations and business execution. He possesses extensive experience in the technology sector, with particular expertise in translating technological innovations into commercial success. Brian brings a robust technical background and keen market insight to the realms of blockchain and cryptocurrencies, enabling him to accurately capture industry trends and drive the company's rapid growth.



Katherine Marie Davis

position: Chief Financial Officer (CFO)

Katherine Marie Davis is the Chief Financial Officer of Alexmining, where she is responsible for the company's financial strategy, budget management, and risk control. She brings over 15 years of experience in the financial industry and has previously served as a senior financial executive at multiple publicly traded companies. Katherine excels at leveraging data analysis to support the company's decision-making processes and in developing robust financial strategies within complex market environments.



Elizabeth Clar

position: Chief Human Resources Officer(CHO)

Elizabeth Clar serves as the Chief Human Resources Officer of Alexmining, where she is responsible for the company's human resources strategy and team building.
With over 10 years of experience in humanresources, she specializes in enhancing the company's core competitiveness through talent managementand the cultivation of organizational culture.
Elizabeth possesses a profound understanding of the rapid growthof the cryptocurrency industry and is committed to building a high-performing, innovative, and diverse team.



Sanjay Gupta

position: Chief Technology Officer (CTO)

Sanjay Gupta serves as the Chief Technology Officer (CTO)of Alexmining, overseeing the company's technological strategy and product development. With over ten years of experience in the blockchain domain, he is widely recognized as an expert within the industry. Mr.Gupta excels at applying cutting-edge technologies to real-world business scenarios, enabling the company to maintain a leading position in technological innovation. He has previously held technical leadership roles at multiple blockchain companies, where he has spearheaded the development and deployment of numerous blockchain platforms. His technical expertise spans distributed ledger technology, smart contract development, and high-performance computing. Renowned for his innovative mindset and technology-driven approach, Mr.Sanjay is adept at guiding his technical teams to consistently overcome technical bottlenecks, thereby providing robust technical support for the company's growth.

2.4 Key Competitive Advantages

Alexmining possesses first-mover advantages in technology, operations, security, business management, and operational execution, continuously optimizing these areas to develop its own unique innovative business model.

1) Information Safety

Alexmining places paramount importance on information security, strictly adhering to the decentralized principles of blockchain technology and prioritizing the protection of user data. The company employs advanced encryption technologies and security protocols to ensure that users' investment information remains confidential and secure at all times, and will never share such data with any unauthorized third parties. Furthermore, Alexmining has adopted a zero-trust architecture, implementing rigorous access controls and identity verification mechanisms to further reduce its attack surface and effectively mitigate both internal and external threats. The company has also established a comprehensive security monitoring system capable of detecting and mitigating potential security risks in real time, thereby safeguarding the integrity and availability of user data. Through these measures, Alexmining is committed to providing users with a secure and reliable investment environment, enabling them to engage in cryptocurrency-related activities with full confidence.

2) Flexible Cloud Mining

Alexmining's cloud mining service offers users significant convenience by enabling them to participate in cryptocurrency mining without the need to purchase expensive physical mining hardware. Users can simply rent or purchase a mining rig via an online contract to effortlessly begin their mining journey. This model not only reduces users' initial investment costs but also eliminates the complexities associated with equipment maintenance, power supply, and cooling systems. Alexmining's mining platform leverages advanced distributed computing technology to dynamically allocate resources based on users' specific mining needs, ensuring optimal mining efficiency. Furthermore, users can monitor their mining progress and earnings in real time through the cloud platform, allowing them to stay informed about their mining status anytime, anywhere. This flexible and efficient managed service enables ordinary investors to easily join the cryptocurrency mining wave and share in the benefits brought by blockchain technology.

3) Market Experience

Since 2020, Alexmining has rapidly risen in the cryptocurrency industry and established a strong reputation. Leveraging keen market insights and exceptional execution capabilities, Alexmining has achieved remarkable results in a short period of time, demonstrating its steadfast commitment to superior quality and customer satisfaction. Through continuous innovation and service optimization, the company has garnered widespread recognition and trust from users worldwide.

The team members of Alexmining are all top-tier professionals in the industry, possessing extensive experience and profound expertise in fields such as cryptocurrencies, blockchain technology, and fintech, enabling them to deliver high-quality, high-efficiency services to our users. The company also actively engages in industry exchange and collaboration, having established strategic partnerships with numerous renowned enterprises and institutions to jointly advance the development of the cryptocurrency sector. Leveraging years of market experience and technological expertise, Alexmining is confident in maintaining its leading position in the future and creating even greater value for its customers.

4) Exceptional Operational Efficiency

Alexmining has strategically selected locations worldwide to establish multiple mining operations in countries including Kazakhstan, Russia, Australia, Iceland, and Norway. These regions not only boast abundant power resources and lower operating costs, but also offer favorable natural cooling conditions, which help reduce the energy consumption and maintenance costs of mining equipment. The company employs advanced ASIC-specific mining hardware, which, through optimized design, significantly enhances mining efficiency and resource utilization.

Compared to traditional CPU and GPU mining hardware, ASIC mining devices offer significant advantages in terms of performance and energy efficiency, enabling companies to achieve higher return on investment. Furthermore, Alexmining has established a comprehensive operational management system. Through refined management practices and technological innovation, the company continuously optimizes its mining processes, enhances production efficiency, and ensures its sustained competitive edge in a highly competitive market environment. These initiatives have not only enabled Alexmining to achieve efficient and stable mining operations but also allowed it to deliver more competitive mining services to its users.

5) Technological Leadership

Alexmining has consistently striven to maintain its leading position in the field of mining technology, evolving from early-stage CPU mining to today's advanced ASIC mining equipment. The company has continuously increased its investment in research and development, actively exploring and applying cutting-edge technologies. Alexmining boasts a professional R&D team dedicated to research and innovation in areas such as blockchain technology, mining algorithms, and hardware optimization. Through collaborations with top-tier technology enterprises and research institutions worldwide, Alexmining gains timely insights into the latest industry developments and effectively integrates advanced technological achievements into practical mining operations. The company also actively participates in the formulation and promotion of industry standards, thereby advancing the standardization and normalization of mining technologies.

Leveraging its robust technical capabilities and innovative prowess, Alexmining is able to provide users with more efficient and higher-quality mining services, catering to the diverse needs of its clientele. In its future development, Alexmining will continue to intensify its efforts in technological research and development, explore new mining technologies and application scenarios, create greater value for its users, and lead the way in shaping the future of the industry.

6) Global Layout and Redundancy

Alexmining operates in numerous countries and regions worldwide. This extensive geographical footprint not only helps to diversify operational risks but also ensures business stability. By establishing data centers and mining facilities across different regions, the company has achieved cross-regional resource sharing and coordinated operations. This strategic layout effectively mitigates the impact of force majeure events—such as natural disasters, political unrest, and cyberattacks—thereby guaranteeing that the company can maintain continuous and stable operations under any circumstances.

Furthermore, Alexmining has established a comprehensive redundancy management system, which, by deploying backup equipment and data backups across different regions, further enhances the system's reliability and fault tolerance capabilities. The company's data centers and mining facilities employ advanced network technologies and security measures to ensure the security and stability of data transmission. Through its global footprint and redundancy management strategies, Alexmining is able to provide uninterrupted services to its users, safeguarding both their mining returns and data security.

Through the expansion across these six key areas, Alexmining has demonstrated its strong advantages in information security, cloud mining services, market expertise, operational efficiency, technological innovation, and global strategic deployment. By providing users with comprehensive, high-quality cryptocurrency mining solutions and related services, the company has established its leading position within the industry.



Chapter 3 Alexmining Mining Business Strategy 3.

1 Composition of the Mining Ecosystem

Alexmining has developed a high-performance mining protocol based on multiple cryptocurrencies and algorithmic networks, enabling end-to-end synergy across mining, networking, ledger, and market operations.

1) Mining

Any user can participate in the Alexmining ecosystem network as a client, a sharing miner, or a node miner. Sharing miners contribute mining computing power to the network; they participate by providing their computing power and responding to Pug requests. To become a sharing miner, a user must stake collateral proportional to their computing power. Computing power miners respond to user Put requests by leveraging their computing power over specific time periods. If their proof fails or is lost, the computing power miner will have a portion of their collateral forfeited. Computing power miners are also eligible to mine new blocks; upon mining a new block, they receive the mining reward along with the transaction fees included in the block. Node miners provide data node validation services to the network; they participate in Alexmining by supplying the data required to fulfill user Get requests. Unlike sharing miners, node miners do not require collateral, do not need to submit computing power data, and do not need to provide computing power proofs. A computing power miner may simultaneously act as a node miner within the network. Node miners can earn rewards directly from clients or from the validation node marketplace. Each mining rig will generate coins 24 hours a day.

2) Network

We will abstract all users operating an Alexmining full node into a single abstract entity: a network. This network serves as the intermediary for running the management protocol. In simple terms, for each new block on the Alexmining blockchain, the full node manages available storage, validates collateral, audits storage proofs, and resolves potential failures.

3) Account Book

The Alexmining protocol is applicable to a variety of blockchain-based cryptocurrencies. For generality, Alexmining refers to this structure as a "blockchain." At any given time, all users have access to the blockchain. The blockchain is append-only, consisting of a sequential sequence of transactions. The Alexmining protocol can be implemented on any blockchain that supports proof-of-work interactions.

4) Market House

Computing power sharing and node consensus constitute two Alexmining markets: the mining computing power market and the node consensus market. These two markets form two decentralized ecosystems.

Users and miners set the prices for their service requests or service offerings by submitting orders to their respective markets. The platform provides both users and miners with a means to view matching bids and execute orders. If a service request is successfully fulfilled, the network—via the execution of the management protocol—ensures that miners receive compensation while users are charged a fee.

5) Polycomponent System

Alexmining offers a lifetime mining custody service, providing miners with a wide range of computing power options. Leveraging cutting-edge technology, it delivers custody mining services supporting multiple algorithms and various cryptocurrencies.

- Dashboard: View miners' mining revenue, monthly fees, and total computing power via the Alexmining dashboard.
- Mining Service System: For each blockchain algorithm, Alexmining provides some of the most efficient existing mining systems.
- Lifetime Hashrate: Alexmining offers multi-week mining lease and purchase contracts (for individual users) as well as exclusive lifetime plans (for institutional clients), providing extensive mining capabilities.



3.2 Mining Infrastructure

Alexmining has built extensive mining infrastructure at strategic locations worldwide and has secured electricity supply from renewable energy sources.

1）Toodyay Area，AUS



Date of establishment: 2025

Energy: 83% carbon-free

Features: The facility was purchased from Panasonic and has been upgraded to stimulate new economic growth points and increase local employment. The sit e is a combination of existing infrastructure and new construction.

- Power capacity: 150 MW
- Uptime: 99.9%

2) Molde，Norway



Date of establishment: 2019

Energy: 100% carbon-free

Features: Alexmining ’ s first mining data center in Norway. It consists entirely of Minerbase mobile mining units.

- Power capacity: 100 MW
- Uptime: 99.9%

3) North Dakota, USA



Project name: Data Center

Date of establishment: 2023

Features: It will adopt the highest standards of global mining operations and become a new data processing center to achieve smooth operation of new types of multi-threaded mining machines in the future.

- Power capacity: 50 MW
- Uptime: 99.9%

4) Washington, USA



Date of establishment: 2013

Energy: 100% carbon-free

Features: Alexmining ‘ s first mining data center in the United States. It adopts the highest standards of global mining operations, resulting in smooth operations.

- Power capacity: 50 MW
- Uptime: 99.9%

5) Texas, USA



Date of establishment: 2019

Energy: 63.5% carbon-free

Features: One of the largest mining data centers in the United States. Thefacility was converted from an abandoned aluminum factory and has undergone numerous upgrades. This facility has brought new economic growth points and increased local employment rates. The cost of electricity inthis region is relatively low compared to other parts of the United States.

- Power capacity: 375 MW
- Normal operating time: 98%

6) Tedal, Norway



Date of establishment: 2021

Energy: 100% carbon-free

Features: Alexmining has built its own substation in Norway. The facility consists of Minerbase mobile mining equipment and conventional mining facilities.

- Power capacity: 50 MW
- Uptime: 99.9%

3.3 Multi-Dimensional Value Support

Building upon diversified mining models (mining machines and managed mining) and node consensus mechanisms, Alexmining will leverage computing power assets and the VDF consensus main chain combined with a PoSt-based mining algorithm consensus mechanism as its core pillars. This approach aims to provide infrastructure for global cryptocurrency mining, circulation, and extended trading activities, enabling participants to benefit from dual rewards—both computing power and node consensus. This model allows ordinary miners to experience the value of blockchain technology more directly, while fostering a new mining ecosystem supported by a public-connected network of services and Alexmining's unique mining economic model. Additionally, Alexmining will establish the following initiatives as foundational value drivers:

1) Computational Power Acceleration Support

Alexmining will develop its own proprietary distributed acceleration service and, leveraging the Alexmining mining protocol, provide users with a CDN acceleration service built upon Alexmining. Its primary advantages are increased density, reduced power consumption, and significantly lower cost per TB of data compared to similar products in the market. Simultaneously, Alexmining will establish an open computing power resource marketplace. For application developers, who require computing resources—specifically, computing capabilities from cloud providers—to accelerate their applications, they currently lack access to a structured global marketplace; instead, they rely on a wide array of suppliers offering competitive pricing. However, because every stage of this process is controlled by intermediaries, prices have soared—a critical challenge facing the current acceleration market. Consequently, there is an urgent need to overhaul this entire infrastructure. Alexmining will create the first global marketplace for computing power and mining acceleration services. In future distributed infrastructure and market ecosystems, big data and high-performance computing applications, along with high-value datasets and computing resources, will benefit from blockchain mining characterized by high transparency, high elasticity, and high security.

2) Wallet Storage Support

Users can entrust their private keys and digital assets to the Alexmining wallet for management. Through "platform endorsement," they authorize the Alexmining wallet to securely manage and safeguard their assets. This model offers convenient access: cryptocurrencies held in the custodial wallet can be withdrawn anytime, anywhere. Furthermore, transfers and transactions between custodial accounts incur no handling fees or miner fees, feature rapid transaction speeds, and involve low transaction costs. Users also no longer need to worry about forgetting their private keys or mnemonic phrases, significantly reducing the risk of asset loss due to human error. Alexmining Wallet complies with the regulations of emerging internet finance markets both domestically and internationally; it is a compliant and legal wallet platform featuring a comprehensive platform ecosystem.

3) Mine/pool Support

Alexmining will build modern mining farms in over 100 countries across the Americas, Europe, Oceania, and Asia, deploying more than one million mining machines to provide distributed computing power across its network, thereby establishing itself as a large-scale global cloud computing power-sharing platform. Leveraging its robust technical operations and maintenance capabilities, competitive electricity cost advantages, and mining incentive mechanisms, Alexmining has become the primary business platform supporting mining farm alliances.

4) Supported by the Computing Power Trading Platform

Alexmining will launch a mining compute trading client based on its self-operated mining farm's compute pool, helping miners reduce costs and safeguard their mining returns. Miners can utilize rental and purchase contracts for mainstream cryptocurrency mining rigs via the compute trading platform, with all related service fees and transaction fees (including but not limited to trading, custody, and affiliation) settled in cryptocurrency.

In the future, the computing power trading system will also support computing power contract trading, financial derivatives trading, and a mining rig marketplace platform, enabling users to purchase and hold related products using Alexmining's native token. The platform encourages users to purchase its self-developed Alexmining series of mining rigs with its token and host them on the platform to qualify for corresponding discounts and generous compound rewards.



3.4 TOP Partners

Alexmining has established extensive strategic partnerships worldwide, collaborating with leading companies in the blockchain and cryptocurrency mining sectors to deliver exceptional value and innovative services to its clients. Simultaneously, Alexmining has secured support from top-tier technology firms, ensuring its leading position in the realms of mining and blockchain technology.

1) BITFURY

BITFURY is a globally renowned blockchain technology company specializing in providing high-performance mining hardware and data center solutions. The partnership between Alexmining and BITFURY encompasses not only the procurement of advanced mining hardware but also the operation and hosting services of data centers.

Alexmining operates multiple large-scale data centers in Georgia, each equipped with high-performance ASIC mining rigs supplied by BITFURY, enabling the provision of efficient and stable mining services to its customers. BITFURY's data center solutions also incorporate advanced cooling systems and energy management technologies, ensuring the stability and efficiency of mining equipment under high-load operation. Through its partnerships with BITFURY, Alexmining can offer users robust technical support and reliable infrastructure guarantees.

2) KEGOC

KEGOC is a large-scale power supplier specializing in providing stable power solutions for industrial and commercial customers. In the mining sector, a stable power supply is one of the critical factors in ensuring the efficient operation of mining equipment.

Alexmining has established a long-term strategic partnership with KEGOC. By leveraging the reliable power supply provided by KEGOC, Alexmining's mining facilities can operate efficiently and stably across diverse regions. KEGOC's power infrastructure not only meets the high energy demands of mining equipment but also reduces operational costs and enhances mining efficiency through optimized energy management. This collaboration provides a robust energy foundation for Alexmining's global business expansion.

3) BITMAIN

Bitmain is a global leader in ASIC mining hardware manufacturing, and its products enjoy an exceptional reputation in the mining sector. Alexmining has established a close partnership with Bitmain, procuring high-performance ASIC mining rigs through local agents to ensure the advanced technology and reliability of its mining equipment. Bitmain's mining rigs are renowned for their high computational power and low power consumption, which significantly enhance mining efficiency and return on investment. Additionally, Bitmain provides Alexmining with technical support and after-sales services, enabling rapid resolution of technical issues during operation and ensuring the continuity of mining operations.

4) Canaan Creative

Canaan Creative is one of the leading providers of high-performance computing solutions and advanced ASIC mining hardware. The company possesses extensive technical expertise and innovative capabilities in the research, development, and manufacturing of mining hardware. The collaboration between Alexmining and Canaan Creative aims to further enhance mining efficiency and resource utilization by integrating Canaan Creative's high-performance mining rigs. These rigs leverage advanced chip technologies and optimized thermal design, enabling them to maintain stable performance even under high load conditions. This partnership not only offers Alexmining users access to more efficient mining hardware options but also drives progress across the entire mining industry through technological innovation.

5) Enegix

Enegix is a globally renowned manufacturer of mining hardware, and its Whatsminer series of mining rigs enjoys an excellent reputation within the industry. The partnership between Alexmining and Enegix is dedicated to delivering efficient and reliable mining solutions. Enegix's mining rigs are widely recognized by the market for their high performance, low power consumption, and high stability.

Through its partnership with Enegix, Alexmining offers users a diverse range of mining equipment options to meet the varied needs of different users. Enegix's technical support team also provides on-site maintenance and optimization services for Alexmining's mining farms, ensuring the efficient operation and long-term stability of the equipment.

6) SBER BANK

SBER BANK is one of the largest banks in Russia, and its F2 mining pool is one of the largest mining pools globally. The partnership between Alexmining and SBER BANK aims to provide users with stable and efficient mining services via the F2 mining pool platform. Leveraging its robust computing power integration capabilities and advanced mining algorithms, the F2 mining pool can deliver higher mining yields and a more stable network environment for Alexmining users.

Furthermore, SBER BANK's extensive expertise in the financial sector provides Alexmining with both financial support and compliance safeguards for its business development. Through this partnership, Alexmining can offer users a one-stop solution combining mining and financial services, thereby meeting their diverse needs in the cryptocurrency landscape.

By establishing strategic partnerships with leading global blockchain and mining companies, Alexmining has not only secured support from top-tier enterprises technically but also built robust infrastructure and operational networks across the globe. These partnerships deliver exceptional value and innovative services to Alexmining's users, ensuring the efficient and stable operation of its mining operations while maximizing investment returns. Moving forward, Alexmining will continue to deepen collaborations with existing partners and proactively pursue new strategic alliances, thereby further consolidating its leading position in the cryptocurrency mining sector and providing superior services to users worldwide.

Chapter 4: Multi-Modal Mining Solutions and Supporting Infrastructure

Leveraging robust infrastructure and strategic partnerships, Alexmining has established a global cryptocurrency mining network, enabling miners worldwide to secure sustainable returns. Simultaneously, to cater to investors with diverse needs, Alexmining has developed a suite of diversified mining solutions—including cloud computing-powered mining, liquidity mining, LP staking mining, and pooled mining—each complemented by integrated tooling. These initiatives ensure that both global investors and miners achieve satisfactory returns through Alexmining's services.

4.1 Computing Power Mining Custodial Solution

In response to market demand, Alexmining has introduced a mature cloud computing power mining solution. Under this framework, Alexmining plans to integrate mainstream public blockchains with 5G and computing power to build a high-performance computing power mining system.

As previously mentioned, the typical workflow of Bitcoin mining consists of "acquiring miners → deploying miners → establishing mining operations → generating revenue." However, deploying miners is subject to numerous factors, including electricity costs, available space, temperature, noise levels, and operational maintenance; overcoming these barriers requires specific conditions and specialized knowledge. Consequently, the blockchain sub-module of computing power emerged to address this need. The custodial mining solution we propose represents a remote mining paradigm: users purchase cloud computing capability contracts via our platform, lease their computing power to mining operations, and periodically receive income. The key advantage of this system is that users do not require an in-depth understanding of mining principles or the associated hardware and software, nor do they need to acquire expensive mining rigs or perform 24/7 maintenance themselves. By simply placing an order, users can participate in mining—akin to purchasing a revenue entitlement product. We posit that cloud computing capability constitutes a P2P model of computing power, wherein the platform is linked to the revenue entitlements (assets) of mining rigs and individual investors (or funds).

1) Alexmining **Advantages of Computing Power Mining Machines**

- No cryptocurrency mining rigs are required, offering low initial investment and a low entry barrier.
- There is no need to bear additional risks such as equipment failures or performance degradation in the mining operation, nor any upfront costs for subsequent maintenance, ensuring high investment stability.
- At the end of the contract, there is no need to dispose of mining equipment, the site, or other related assets, making the exit process relatively flexible.

For mine owners, leasing mining operation rights to customers at a price slightly below their self-operated mining revenue for a certain period can rapidly generate cash flow, enable them to pre-purchase the latest mining equipment, expand production capacity, and secure profits in the long term. To some extent, they can also acquire mining equipment at lower monetary costs, thereby diversifying their risk exposure and hedging against the risks associated with their self-operated mining operations.

2) Alexmining **Computing Power Trading Solution**

Computing power is a scarce resource in the internet ecosystem, and every internet application requires it. In particular, the future development of artificial intelligence and the Internet of Things will further increase the demand for computing power. A common approach currently adopted is to procure centralized cloud services from providers such as Amazon and Google; however, such computing power services entail extremely high costs.

In Alexmining's computing power mining solution, mining rigs are connected via a P2P network to establish a computing power trading platform. Owners of mining farms can lease out their excess computing power for use in servers and other computing applications. This approach not only reduces operational costs but also generates additional revenue streams for the mining farms. Simultaneously, Alexmining's cloud computing power mining solution leverages a P2P network to enable application owners and individual users (computing power "requesters ") to rent computing power from established mining farms (computing power "providers"). Furthermore, the underlying payment and transfer system facilitates direct payments among computing power buyers (requesters), sellers (providers), and software developers. For mining farm owners, the Alexmining computing power trading solution allows them to rapidly recover capital by selling their computing power, while also addressing the depreciation of second-hand mining rigs—thereby achieving two objectives at once. Additionally, the cloud computing power mining feature of Alexmining lowers the entry barrier for retail investors, enabling them to engage in mining simply by purchasing computing power, thereby eliminating the need to bear significant capital or technical constraints.



4.2 Liquidity Mining Solution

Whether using physical mining rigs, hosted mining rigs, or cloud computing power for mining, miners require a supporting ecosystem to maximize their value and achieve the goal of "generating new coins from existing coins, and earning passive income from holding those coins." Accordingly, Alexmining addresses this need by offering liquidity mining solutions tailored to practical scenarios, enabling miners to generate additional income beyond traditional mining activities.

Alexmining's mining ecosystem expansion will be built upon the DeFi liquidity mining model.

Since its resurgence in 2020, the popularity of DeFi has remained strong. DeFi is gradually demonstrating market effects driven by its robust financial paradigm, with mainstream investors also beginning to venture into DeFi. This widespread adoption has provided broader market support. In the DeFi space, liquidity mining refers to the process of participating in DeFi products that feature a mining mechanism—by depositing or lending specified token assets as required—to provide liquidity for the product's funding pool and thereby earn returns.

We have developed a liquidity mining protocol. This protocol is built on Ethereum and leverages asset-based supply and demand dynamics to create a funding pool where interest rates are algorithmically calculated. Asset suppliers and borrowers interact directly with the protocol to earn or pay floating interest rates. The Alexmining liquidity mining protocol we designed serves as a powerful tool—compared to alternative approaches such as targeted airdrops.

- Supply Assets: On a peer-to-peer platform, a user lends their assets to another user. Unlike exchange-based peer-to-peer platforms, this protocol aggregates the supply from each user, thereby providing greater liquidity and maintaining the balance of the funding system. Both borrowers and lenders, while trading cryptocurrencies, can earn rewards (interest) by adhering to the relevant agreements. Simultaneously, the exchange can adjust the protocol's parameters or provide returns to users by "settling" balances, which may unlock entirely new business models for the ecosystem.

- Borrowed Assets: The Alexmining liquidity mining protocol enables users to effortlessly borrow assets from the protocol using a token as collateral, for use anywhere within the ecosystem. Each currency market features a floating interest rate set by market forces, which determines the borrowing and lending costs for each asset. The assets held by the protocol have a collateralization factor ranging from 0 to 1, where the liquidity and value of the underlying assets determine the magnitude of this factor. The total amount of assets a user can borrow equals the collateralized assets multiplied by their respective collateralization factors.

- Interest Rate Model: This agreement eliminates the need to negotiate with suppliers, borrowers, terms, or interest rates; instead, it employs an interest rate model that achieves interest rate equilibrium based on supply and demand dynamics. According to economic theory, the interest rate (the "price" of money) should rise with demand; when demand is low, the interest rate should be low, and vice versa. The utilization rate U of each market a thus integrates supply and demand into a single variable: $U_a = \frac{Borrows_a}{Cash_a + Borrows_a}$ The demand curve is encoded through governance and expressed as a function of the utilization rate. For example, the borrowing interest rate may be specified as follows: Borrowing Interest Rate = 2.5% + Ua × 20%. The interest rate earned by the supplier is implicit and equals the borrowing interest rate multiplied by the utilization rate.

- Liquidity Incentive Mechanism: The Alexmining liquidity mining protocol does not offer liquidity; instead, it relies on an interest rate model to incentivize liquidity provision. During periods of extreme demand for its assets, the protocol's liquidity—measured by the number of tokens available for withdrawal or lending—will decrease; in such cases, the interest rate will rise, thereby stimulating supply and curbing lending activity.

By enhancing user-friendliness, security, and yield, Alexmining aims to lower the barrier to entry for small-capital users to participate in DeFi. Compared to other DeFi models, Alexmining not only curates an optimized portfolio of DeFi products to maximize returns but also continuously innovates its product designs and mechanisms. In the future, Alexmining will expand beyond liquidity mining to develop a diversified service ecosystem—including wealth management, insurance, derivatives, liquidity pools, and asset mapping—to meet users' comprehensive DeFi needs.



4.3 LP Pledge Mining Solution

Alexmining's LP staking solution provides risk hedging for miners: when the price of the cryptocurrency they are mining rises, miners can avoid risk concerns, as a sustained increase in the token's price ensures continuous earnings; however, if the cryptocurrency's price declines, miners must assume certain risks. Should their mining revenue fall below the total costs—including time, effort, equipment, and electricity—they may incur losses. To address this, Alexmining has developed an LP staking mining protocol to achieve such risk hedging.

In the AlexminingLP staking mining protocol, miners achieve continuous financing by staking underlying assets classified by risk tiers. After providing initial liquidity on the platform, market makers lock LP Tokens as collateral within the Alexmining protocol, thereby securing ongoing liquidity buy orders. When users provide liquidity on Alexmining and set a wide price range, the value fluctuations of the liquidated assets—denominated in the native cryptocurrency—remain relatively limited.

If a supplier stakes its LP Token in Alexmining, the collateral's risk resilience will be significantly enhanced under extreme market conditions, thereby making the boost pool system more robust: it enables appropriate risk alerts when the token price rises sharply, and provides effective risk buffers when the token price plummets. Ultimately, Alexmining can ensure that high-quality assets experience sustained price appreciation, while underperforming assets gradually decline and are phased out.

Within the platform, to achieve more precise risk pricing, it is necessary to classify the risks, thereby creating fixed-income tiered funds. In addition to the project initiator (IP), two primary roles are required: the general partner (GP) and the limited partner (LP). Both roles provide ongoing capital input to the project; the GP, as the direct investor, will convert the entire principal into project tokens, while the LP's capital will serve as leverage for the GP, helping the project achieve greater value growth.

Alexmining enables IP-based collateralization of high-quality assets, providing an additional layer of protection for GPs and encouraging substantial inflows of GP capital. Each influx of GP capital is channeled into the Vault to fund LP risk reserves and profit distributions. As the Vault's capital base grows, LPs' willingness to invest also gradually increases.

as follows:

$$LPw \propto Vault \propto IPcol * GPturnover * IPltv$$

$$GPturnover \propto GPw$$

among:

- IPcol is collateralized by IP.

- IPltv: Current IP collateralization rate
- GPturnover refers to the turnover rate of the GP.
- GPw represents GP's investment intent.
- LPw represents LP's investment intent.
- Vault is the reserve.

Thus, through effective signal transmission, IP-pledged underlying assets with lower volatility can effectively drive the funding capacity of LPs. As the most critical component in the market feedback loop, LP funding will then exert a positive multiplier effect. If the project consists of non-performing assets, GP participants—who have converted all their native currency holdings into project tokens—will face a leverage underlying asset volatility significantly higher than that of the IP collateral. In such cases, GPs may be liquidated first due to a decline in the project asset price. The remaining GPs, however, will prefer to hold the collateral after the IP liquidation, thereby reducing the turnover rate. This directly leads to a contraction in Vault increments, which in turn substantially dampens LPs' investment appetite, ultimately facilitating the gradual liquidation of inferior projects.

$$LPw \propto IPcol * GPturnover$$

$$GPturnover \downarrow \Rightarrow LPw \downarrow$$

This transmission mechanism not only ensures the proper functioning of Alexmining—enabling it to serve as a cleanup agent for non-performing assets—but also conveys substantial effective market information. This information acts as external data for risk pricing of Alexmining, providing decision-making insights to both investors and liquidity providers.



4.4 Aggregated Mining Solution

The core of Alexmining's pooled mining solution lies in its liquidity support, enabling users to participate in pooled mining with convenience, low costs, and high returns. Liquidity mining, collateralized lending, staking mining, and trading mining can inject greater vitality into DeFi; however, Alexmining carefully selects the safest and most profitable on-chain mining projects for its users. It then automatically allocates users' deposited funds into the highest-yielding mining pools, distributes periodic returns alongside rewards, and thereby incentivizes users to contribute higher liquidity to the market.

Alexmining's aggregated mining model enables users to maximize their yield rates, reduce mining costs, and benefit from substantial token incentives. Previously, whether it was SUSHI, CRV, or YAM, ordinary users found it extremely difficult to secure the first mining slot, which significantly diminished their potential returns. For the broader base of retail investors, the high mining costs rendered participation unfeasible; consequently, they were largely confined to purchasing tokens on secondary markets, effectively serving as the last resort for large players in the "mine—withdraw—sell" cycle. Furthermore, some mining projects exhibited vulnerabilities, with smart contracts lacking audits, making their security unguaranteed. These factors have severely eroded user confidence and dampened their enthusiasm for participating in such liquidity-providing initiatives.

Alexmining operates via smart contracts to enable automated pooled mining, while achieving automated distribution of rewards. This approach addresses two key objectives: mitigating the risks associated with centralization, and ensuring transparency in reward distribution. When a user's deposited tokens reach a specified threshold, they are added to the mining pool; once the accumulated rewards also reach a predefined threshold, they are transferred to the reward pool. Users can then submit a withdrawal request to the reward pool to claim their rewards. The reward pool distributes the mining costs among all participants, thereby significantly reducing overall operational costs. Additionally, users can stake the rewards in the reward pool to earn additional returns. Under this model, users primarily incur only the costs associated with token deposits and withdrawals, avoiding the high operational costs inherent to traditional mining.

In addition to aggregating user funds to distribute transaction costs, another way to reduce expenses is to leverage the aggregated mining model, which minimizes the number of times a wallet is accessed and the number of times a protocol is approved. By adopting aggregated mining, the frequency of repeated wallet accesses and protocol approvals can be significantly reduced, thereby saving substantial costs. Furthermore, to prevent malicious actors from launching poison attacks against Alexmining, the platform imposes requirements on users regarding fund deposits and locktime; these requirements are quantified based on the product of these two factors (Duration = Amount × LockTime). If this product value falls below a predefined threshold, the system will either reject the transaction or charge a preliminary transaction fee.

In extreme scenarios—such as during periods of significant asset price volatility—the yields from Alexmining may fall below the transaction fees, leading to losses that could render the system inoperable. Alexmining derives expected returns via an oracle and compares them against Ethereum transaction fees; if the expected returns are lower than the fees, it will increase the mining cost ratio or extend the duration of the staking tokens.

Alexmining's aggregated LP mining service offers high-quality DeFi mining pools, providing an ideal solution to common challenges in DeFi mining—such as high gas fees and cumbersome operational procedures. Users can freely select any mining pool to participate in, determine their desired subscription amount, and have Alexmining handle the remaining tasks—enabling true one-click mining and delivering comprehensive convenience.

4.5 Supporting Service Systems/Tools

1) Wallet Service

To facilitate users' management and circulation of mining cryptocurrencies, the Alexmining wallet employs an SPV architecture, allowing access to the wallet via a web interface. The wallet utilizes the SSL protocol and supports Symantec CA certificates. Additionally, it supports both cold wallets and hot wallets.

- Cold Wallet: A wallet designed for large-value mining coins. The public and private key pairs of the wallet are generated offline; users can create any key pair of their choice. Once the key pair is selected, the user can use the public key starting with "G" to receive large-value mining coins, while securely storing the private key information starting with "S".

- Hot Wallet: A hot wallet is suitable for scenarios involving small-value, high-speed transactions. The keys of a hot wallet are managed via a custodial model: when a user registers a wallet account, the payment password is used to encrypt the generated private key locally on the user's computer using 3DES, and the encrypted result is then hosted on the wallet's cloud server via the SSL protocol. Consequently, the hot wallet key information transmitted over the network and stored in the cloud consists of encrypted data; no one other than the wallet user can access the original content of the private key. When the user needs to sign a transaction, they retrieve the hosted private key from the wallet's cloud server, then use their payment password to decrypt the key locally on their computer. Upon successful decryption, the wallet's local application signs the transaction data using the private key and submits it to the Alexmining network for execution.

A wallet contains two types of assets: native assets and registered assets, which are analogous to RMB and various cards in a real-world wallet. Native assets can be used without any trust, whereas registered assets require trust in the corresponding assets to enable value exchange.

Furthermore, the wallet employs a dual-wallet design, enabling decentralized storage of multiple mainstream assets under a single software instance. It utilizes elliptic curve cryptography—identical to that employed by various mainstream cryptocurrencies—to derive the respective public keys for each asset; after applying Base58 encoding, two distinct addresses are generated. A single private key can be used across these multiple mainstream assets, facilitating secure and efficient management of them all.

2) IDcharacteristic

Blockchain enables humanity, for the first time in history, to address trust issues through technological means—this constitutes the core value of blockchain. The consensus-based trust framework established by blockchain elevates trust to its highest form: a passive trust model. By interconnecting through such consensus, a complete community can be formed; this can be understood as a trustless consensus protocol—a free protocol.

An ID serves as both a credential for membership in the Alexmining cloud computing mining community and the sole bearer of interoperability within the value trust network of the Alexmining project. Each ID is bound to a confidential private key, functioning much like a key that users use to unlock various features and applications. To a large extent, only by possessing an ID can users truly experience the full capabilities of the robust Alexmining project's free network.

In the future, the Alexmining work ID will serve as a virtual identity within the internet ecosystem and function as a metric for measuring personal value. Based on the value of an ID, users can achieve registration-free login via QR code scanning across various websites; those possessing higher-value IDs will be eligible for additional privileges and services. It can be said that the Alexmining project ID will evolve into a future anonymous virtual identity, widely adopted throughout the internet landscape. As an identity identifier within the Alexmining value-trust network, the ID acts as a unique transaction address, establishing relational links through specific transactions between addresses. This mechanism fosters an ever-expanding, viral propagation network that binds Alexmining users more tightly together. The number of successfully activated ID source points within Alexmining directly determines the number of value-trust network pathways that emerge. Each such value-trust network pathway can support an infinite hierarchy of relational links. In other words, all viral propagation relationships originate from these ID source points, with each ID source point positioned at the apex of its respective value-trust network pathway.

3) Transaction System

Alexmining will build an efficient trading ecosystem for mining tokens to deliver end-to-end mining services. Rather than storing users' mining token assets or personal data on its servers, Alexmining functions solely as an infrastructure layer that connects buyers and sellers seeking to trade these tokens. In terms of transaction workflows, fee structures, and core competitive advantages, Alexmining demonstrates greater viability than centralized exchanges.

- The model is simple, primarily focusing on matching transactions, and it does not custody users' mining tokens, thereby eliminating the risk of the exchange engaging in insider fraud.
- By employing smart contracts to implement a decentralized, trustless trading mechanism, this approach addresses internal operational risks, compliance and ethical risks, and asset theft—risks that can severely compromise users' asset security in centralized exchanges—by mitigating the impact of human factors.
- The key difference between Alexmining and traditional exchanges is that all of this is enabled by smart contracts to facilitate peer-to-peer transactions, with asset custody, trade matching, and asset settlement all executed on the blockchain.
- Users' custodial assets can be freely transferred without requiring any approval from any party, and users need not worry about issues such as hacking or loss of assets, ensuring robust security safeguards.

4) Lightning Payment Network

Lightning Network consists of a blockchain-based off-chain payment network that operates at the peer-to-peer (P2P) level; its availability depends on the establishment of bidirectional payment channels, through which users can conduct seamless cryptocurrency transactions.

To establish a payment channel, both parties need to set up a multi-signature wallet and store funds within it; these funds can only be accessed if both parties provide their private keys. Alexmining supports the Lightning Network to enable faster and more convenient transactions. The Lightning Network provides Alexmining miners with a scalable micro-payment channel, which will significantly enhance Alexmining's off-chain transaction processing capacity.

- If the parties to an Alexmining transaction have pre-established a payment channel on the blockchain, they can conduct multiple, fast, high-frequency, and bidirectional micro-payments.

- In the absence of a direct point-to-point payment channel between the two parties, the Lightning Network can enable reliable fund transfers between them via a multi-channel payment path composed of multiple payment channels.



Chapter 5 Alexmining Technical Module

5.1 Application Network Architecture

Alexmining provides infrastructure for cross-heterogeneous-chain asset migration channels—a distributed system that enables interconnectivity with diverse blockchain networks via cross-chain protocols, facilitates the exchange of data and information, and maintains detailed transaction records within individual chains. The system's technical architecture comprises four layers—foundation, platform, service, and application—delivering both technical and economic support to the entire ecosystem.

1) Base Layer

The foundational layer provides essential infrastructure support for the network, offering users services such as mining rig hosting and distributed computing; it constitutes the Alexmining infrastructure.

2) Core Layer

It defines the network's consensus mechanism, node staking mechanism, mining mechanism, smart contracts, and cross-chain protocols with other blockchains, forming the core of the Alexmining network.

3) Platform Layer

Provide underlying and component-based support for multi-currency mining.

4) Service Layer

Provide acceleration services and streamlined development support for Alexmining's internal ecosystem, third-party DApps, and other blockchain projects.

5) Application Layer

Alexmining is an open, foundational distributed mining network that provides a wide array of mining-related application services for on-chain users. These services encompass DApps across diverse scenarios—including mining, payments, transactions, storage, and cross-chain exchange—for users. Alexmining will be the first to offer users applications such as wallets, mining tools, and fund management solutions.

5.2 Core Algorithm

Alexmining leverages Docker containers and an independent underlying architecture to derive optimal profit algorithms for various hardware configurations by plugging real-time cryptocurrency price data, computational difficulty metrics, and other relevant parameters into a profit formula. The system automatically identifies hardware assets, matches them to the optimal algorithm, and allocates idle computing resources to mining containers based on profit potential. By integrating hardware configuration parameters with network status weighting coefficients, the system matches computational orders, and subsequently automatically loads, deploys, and tests the corresponding order containers.

For specific application workloads—such as those with IO throughput requirements, transmission rate constraints, or fog computing resource requests with explicit geographic coordinates—the system employs manually adjusted weighting coefficients, complemented by intelligent allocation, to dynamically allocate computing resources across the entire network, thereby delivering the optimal user experience for these application requests.

Alexmining introduces a novel optimal container expansion algorithm, which offers the following advantages:

- Low entry barrier;
- No security vulnerabilities;
- Free access and exit;
- Simply load Docker online;
- The distributed operating environment can be deployed quickly.

Meanwhile, to ensure the secure operation of the container-based computing power distribution platform, Alexmining has developed a five-layer protocol stack:

- Smart contract safeguard mechanism;
- Consensus protocol layer security mechanisms;
- Container physical isolation security mechanism;
- The resource intelligent filtering protocol filters out suspicious nodes;
- IPFS data layer encryption and node access control.

5.3 Algorithmic Model

Given the characteristics of the integrated application of mining rigs and mining pools, Alexmining proposes an improved algorithmic model based on PBFT; compared to other existing algorithms, this model exhibits the following features.

- Dynamic adaptability. A blockchain system is a typical P2P network in which nodes can dynamically join or leave the system in response to changes in the blockchain length; its consensus algorithm can promptly detect such changes, thereby ensuring excellent system robustness.

- High efficiency and high throughput. As the number of nodes increases, data can be efficiently transferred between nodes, enabling the system to handle a higher number of TPS requests compared to the PBFT algorithm.

- Improved fault tolerance. A typical PBFT algorithm can tolerate up to one-third of faulty nodes, whereas the algorithm proposed by Alexmining can theoretically tolerate up to half of Byzantine nodes.

1) Technical Advantages of the PBFT Algorithm

Digital Tag: Alexmining's blockchain is designed to store players' specific cryptocurrencies along with all transaction records of these cryptocurrencies, leveraging the immutability of blockchain technology to ensure that once data is onboarded, it can be securely stored. Even if the mining rigs cease to operate, the data remains accessible. Alexmining also provides users with a query platform that records all information regarding the operation of their mining rigs, while refraining from storing any personally sensitive information.

2) Advantages of Digital Tagging Technology

Developer Services: Leveraging blockchain technology and the software tool development kit developed by Alexmining, we provide system developers with a comprehensive suite of tools—including revenue models, operational frameworks, payment interfaces, one-click deployment capabilities, and account and virtual asset management features. Additionally, by offering an SDK interface, we enable system developers to utilize these tools using their most familiar programming languages and development environments.

3) Poreprotocol

Users upload their data to the Alexmining network; Alexmining then tracks and evaluates this data before transmitting it to miners. The following describes the process by which Alexmining validates retrieval operations:

Send

import:

- The prover of the key pair (M, D) generates the public key from the key pair parameters P and D; the prover sends the key Pksend, the miner's data parameters P, and the miner-provided data D, such that P & D ⟶ N.

output:

- A copy of the parameter P of the R-Replica data.
- DAG Root rt or R generates a directed acyclic hash root PrO of the π seed replica distribution proof.

process:

- Compute the hash value HN:= CH(N);
- Wrap R: =seal(N, s_kM);
- Compute the hash root rt of R as rt:= DAG CH(N);
- 》X:=(pkHN,rt);
- 》W:=(skP,N);
- Compute the distribution proof of R as π_msend:= SCIP.prove(pkseed, X, W);
- Output Result: R rt π Seed Prove

import :

- pkPodt: the distribution public key for data. Replica R
- The random challenge C checks a random number that represents the hash child node.

output :

- π Podt Distribution Proof

4) Consensus Algorithm

T: The settlement time of a given block period.

Random(t): Random number

Ptj: The computing power of miners during the block production cycle.

L: H(Yn) is a hash function, where L denotes the length.

Yn> msn: the signature of the mining machine Yn on the message msn.

<Yn>msn=((Yn)SIGmsn(H(Yn)))————--1

Mine:Yn

Compute

H(<tlrandom(t)>Yn)*—— --2

π=<t.r>i

verifier Node: Verfy(m,t,Yn) ——-3

- π is valid signature
- Ptj is Power of Yn at time t
- checkH(m)/

Miners use the above inequality to determine whether they have been selected as a block proposer; in this process, Formula 1 generates a random number based on the current time. The miner then generates a hash from this random number, signs Yn using the hash value, and subsequently performs another hash operation: it takes the hash value, raises it to the power of L (where L is a predefined exponent), and divides the result by 2 to obtain a number in the interval [0, 1].

Expression 2 represents the share of this mining rig's computational power within the entire network, thereby reflecting the fairness of this consensus mechanism. Each participant has only one voting opportunity within one block production cycle, and all votes are random. Random(t) is unpredictable; computation cannot be parallelized, nor can it be maliciously manipulated.

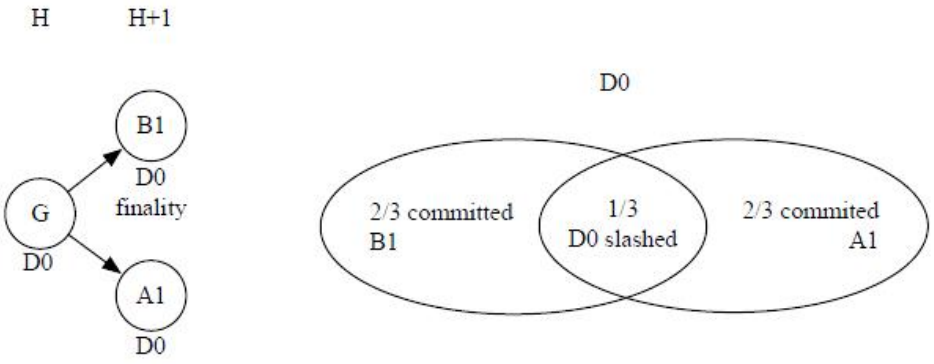
Because private key verification is required, malicious miners cannot forge signatures from other miners. At the same time, the mining process is publicly verifiable. If a miner determines that it is the winner, it must submit verification evidence to the entire network; at any given time, both the miner's computational power and the hash value of the generated random number can be verified.

5.4 Prevention and Penalties for Malicious Attacks

In the Alexmining consensus mechanism, each block at a given height has a consensus validity period. If the difference between a particular height and the latest height exceeds 100, all blocks at that height will be deemed expired during the consensus process; consequently, any new consensus activities involving those blocks will be directly ignored. As a result, executing a long-range attack within the Alexmining consensus mechanism is virtually impossible; however, the possibility of launching a short-range attack while within the validity period still exists.

In a short-term attack, the Attacker attempts to forge Block A so that it replaces Block B as the authoritative chain, while Block A (at height H+1) has not yet expired. To achieve this, the Attacker must ensure that the score of Block A1 exceeds that of Block B1. Given that multiple attacks are severely penalized, the Attacker will inevitably need to bribe validators; otherwise, the attack cannot be completed. To demonstrate the security of the Alexmining consensus algorithm, we now analyze the costs the Attacker must incur when disabling a varying number of blocks.

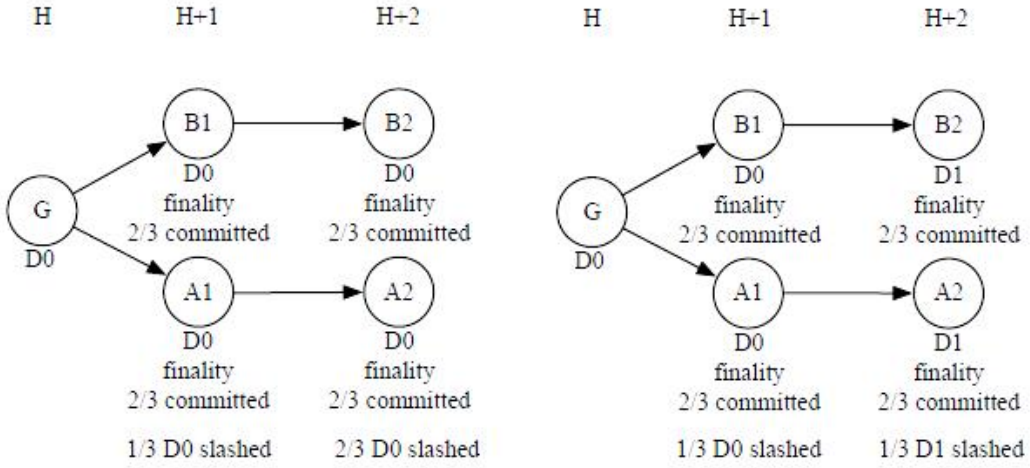
If the Attacker aims to render B1 invalid, the minimum cost scenario is illustrated in the figure below; this corresponds to a double-payment attack. If the Attacker happens to become the block proposer at height H+1, then it would require bribing at least one-third of the validators in epoch D0 to cast additional votes so that A1 achieves finality, with the minimum cost amounting to one-third of the total deposits.



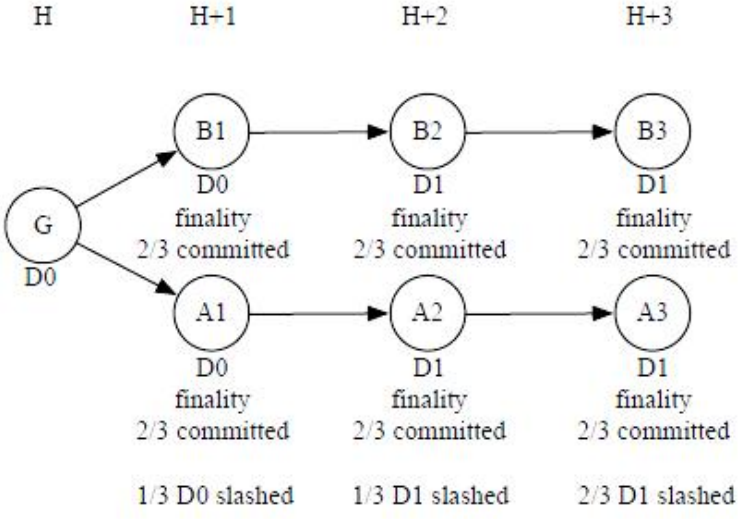
If the Attacker wishes to invalidate B_1 and B_2, assuming that both B_1 and B_2 have reached finality and that all transactions within the block have been finalized, two scenarios are considered to invalidate these transactions.

In the first scenario, as illustrated below, when heights H+1 and H+2 belong to the same epoch and share the same dynasty, the Attacker must first bribe one-third of the validators in D0 to enable A1 to achieve finality; in this case, these one-third of validators will be penalized, and their deposits will be fully forfeited. In the validation process of A2, the total sum of deposits is only two-thirds of that in A1. If the Attacker aims to enable A2 to obtain a committ vote of equivalent value to B2, it would require bribing all remaining validators who have not cheated. This would entail a total loss of at least three-thirds of the total deposits; even under such circumstances, there is no guarantee that A1 would secure a higher score than B1, making the attack highly risky.

In the second scenario, as illustrated in the figure below, the heights H+1 and H+2 fall within different Epochs and belong to distinct epochs; in this case, the Attacker must bribe 1/3 of D0 to enable A1 to reach finality, and then bribe 1/3 of D1 to enable A2 to reach finality. Completing such an attack requires a loss of at least 2/3 of the total deposit. In summary, launching a short-range attack to invalidate two finality blocks entails a minimum cost of 2/3 of the total deposit.



If the Attacker wishes to render B1–B3 ineffective—as illustrated below—the Attacker must first bribe one-third of the participants in D0 to achieve the finality of A1, then bribe one-third of the participants in D1 to achieve the finality of A2, and finally bribe all of the remaining two-thirds of participants in D1 to achieve the finality of A3. In total, the Attacker would incur losses amounting to at least 4/3 of the total stake. Preparing for such attacks would be exceedingly difficult; moreover, even if the Attacker succeeded, there would be no guarantee that A1 would score higher than B1, and the attack could still fail.

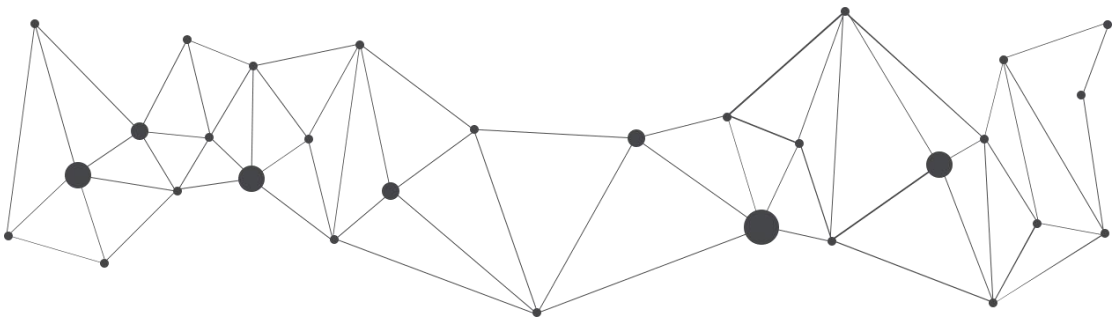


5.5 Technical Development and Expansion Support

Alexmining has undertaken a series of innovations in underlying technologies, operational philosophies, and business models, delivering a comprehensive future application ecosystem solution built upon Alexmining. This initiative will establish an effective bridge between the blockchain and cryptocurrency landscape and the real-world commercial ecosystem.

The Alexmining system serves as a high-quality transaction gateway between fiat and cryptocurrency, featuring super TPS (transaction throughput) that surpasses the processing speed of EOS. The underlying technology employed by Alexmining in its application workflow is the most suitable solution for building a global payment gateway. The design of Alexmining adheres to the principle of enhancing the commercialization of digital cryptographic assets, which is primarily reflected in the following aspects:

- Rapid application development: In the future, Alexmining will provide a lightweight REST API interface, enabling end-users to quickly build applications using JavaScript, Java, Go, Ruby, Python, or C#.
- Massive user support: Alexmining's commercial architecture leverages a relational database combined with OSS Bucket to abstract the billing and permission control for a vast number of users.
- Fast transaction validation: With a ledger closure time of 3–5 seconds, multiple transactions for the same account can be executed via the account's sequence mechanism.
- Visualized Operations Management: A visualization-based operational management approach leveraging both the node layer and the web layer is adopted to enable visualized management of data, transaction counts, and transaction records for each ledger consensus.
- Multi-party signature technology: It can be applied to the quantitative registration of assets within the Alexmining platform, multi-party transfers, and community governance of DAOs, while ensuring asset security through signature weight threshold controls.



5.6 Technological Superiority

1) Full Automation

With the integration of artificial intelligence technology, smart contracts are no longer limited to serving only those who know computer programming languages. Any user of Alexmining who specifies their mining objectives and revenue targets can have Alexmining automatically generate the corresponding smart contracts using AI; through high levels of automation, these smart contracts can now genuinely serve every individual.

2) Targeted Computing

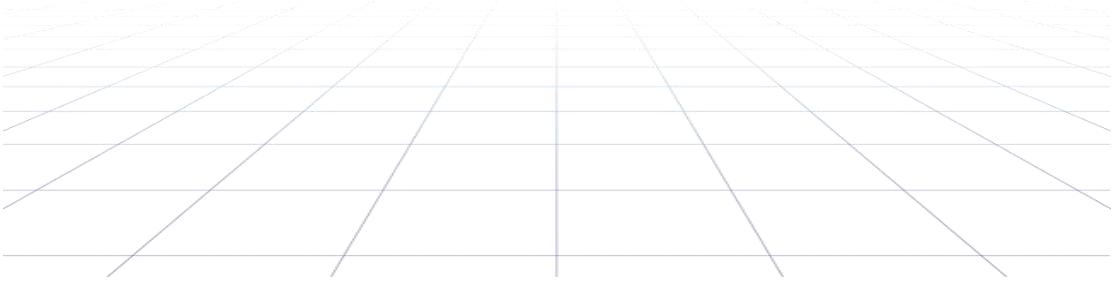
Unlike other PoW-based blockchain networks, Alexmining's computing power mechanism no longer involves calculating hash values or other cryptographic figures that provide no actual societal benefit. Instead, Alexmining deploys machines equipped with artificial intelligence and cloud computing capabilities on the blockchain as auxiliary resources, or enables participating nodes to acquire AI algorithms, leveraging these AI systems to allocate computing resources to meet diverse operational demands in order to earn rewards—thereby ensuring that computing power is genuinely directed toward endeavors that deliver tangible value to society.

3) Environmental Self-Inspection

Alexmining possesses self-evolution capabilities and continuously identifies vulnerabilities in contract applications; any transaction or program deployed on the blockchain, with the support of the platform, progressively approaches perfection, thereby mitigating risks and fostering a safer blockchain environment.

4) Intelligent Collaboration

Through self-learning and evolution, Alexmining gains the capability to handle increasingly complex transaction conditions, enabling smart contracts to go beyond merely processing quantitative criteria. Alexmining's super smart contracts feature high levels of intelligence, allowing them to quantify numerous qualitative conditions. This capability enables them to tackle mining tasks with more intricate constraints, thereby significantly expanding the industrial applicability of smart contracts.



Chapter 6: Design of Token Economy Models

In July 2026, Alexmining officially expanded its investor network based on the quality and scale of its active community, introducing Alexmining's native cryptocurrency—AMT—and providing investors with a new avenue to participate in the future of decentralized finance.

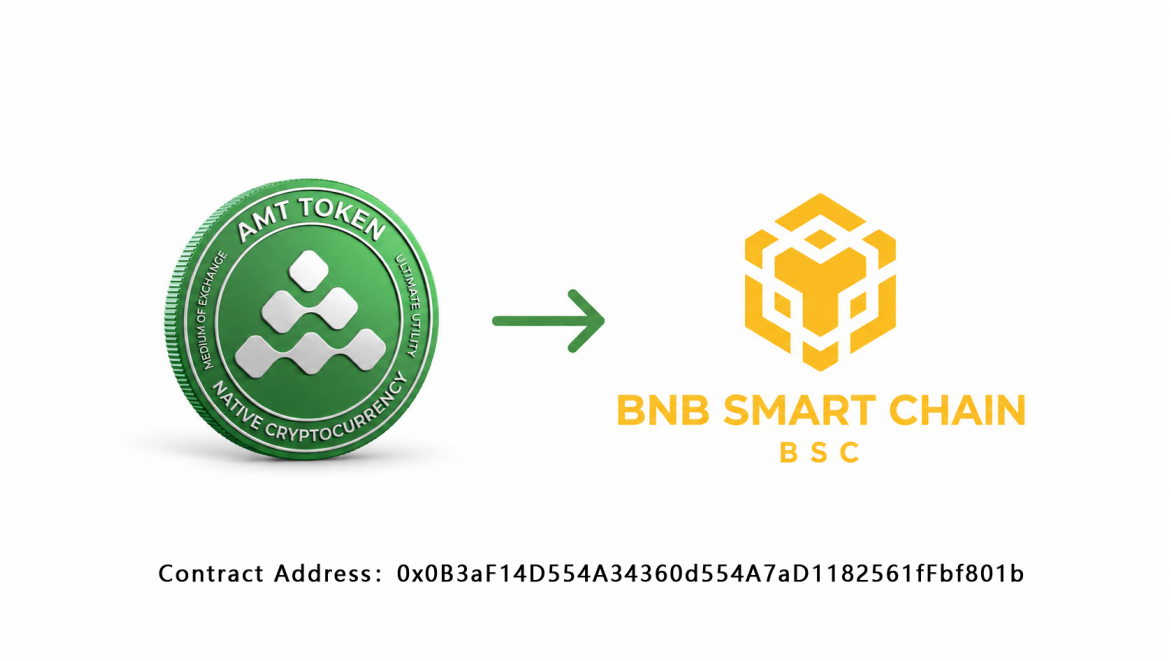
6.1 Token Economics

To achieve value appreciation for Alexmining and foster value interactions with mainstream global cryptocurrencies and communities, we will issue the AMT token. As an efficient global computing-power mining and mining hardware project, Alexmining has established its own mining farms and mining pools in multiple countries worldwide, enabling it to consistently and efficiently mine both mainstream cryptocurrencies and AMT tokens.

Alexmining aims to develop AMT tokens into a second-generation cryptocurrency whose value can rival that of Bitcoin. Accordingly, users can purchase contracts via the platform, lease mining resources, receive regular returns at scheduled intervals, and obtain a fixed daily output of AMT tokens. Simultaneously, to achieve the goal of increasing the value of AMT tokens, the community will conduct token buybacks using profits generated from mining mainstream cryptocurrencies through its self-built mining pool. All users who participate in purchasing mining capacity will earn substantial returns that guarantee their initial investment. Furthermore, as AMT tokens find applications and circulate across diverse scenarios, their value is poised to continue doubling. This approach ensures that users not only protect their initial investment through mining but also secure enhanced returns.



In October 2026, the AMT token was deployed on Binance's BSC network. Upon its official public launch, it will adopt the BEP-20 standard, while simultaneously storing transaction and holding data from Alexmining, and implementing intelligent distribution to enable decentralized on-chain issuance, circulation, and asset management.



Contract Address: 0x0B3aF14D554A34360d554A7aD1182561fFbf801b

Examples of use cases for AMT tokens are as follows:

- Miner Incentives: The primary component is designed to incentivize miners within the ecosystem to provide computational power and act as witnesses in recording transaction data on the blockchain; additionally, a portion of these incentives is allocated to encourage the activity levels and community co-creation behaviors of other participants within the ecosystem, such as token dividend distributions.
- Dedicated Computing Power Purchase: The platform will continue to launch dedicated activity zones where users can purchase mining machine contracts using AMT;
- Withdrawal fees: The withdrawal fees applicable to the daily mined coin volume during the contract period may be offset using AMT;
- Storage fees for idle computing power: Individual users with idle mining rigs may use AMT to pay storage fees, such as electricity costs and operational maintenance fees;
- Electricity fee deduction: The electricity costs of personal idle mining rigs may be used as a deduction via AMT;
- Node Fee: For some new projects that face insufficient computing power to secure the main network after launch, after staking a certain amount of AMT,AMT can allocate a portion of the computing power to serve as security nodes.

6.2 Basic Value Attributes of Tokens

Through AMT, we will establish a healthy and sustainable incentive model within the Alexmining ecosystem, ensuring that the majority of the revenues are distributed to miners and community members—thereby encouraging them to actively support and enhance the community network. Community members, in turn, can contribute to creating value for the project by leveraging their expertise in adoption, promotion, and effective marketing.

We aim to fully integrate AMT's values into the design of the cloud computing power economy ecosystem:

- Independent viability: Possessing a clear business model that ensures stable operation, thereby establishing a foundation for circulation for AMT;
- Autonomy and Consensus: Communities and sub-communities (e.g., ecosystems within the same worldview) gradually establish joint decision-making mechanisms, ultimately operating under the principle of consensus, and establish a development decision-making framework based on AMT holders' participation in voting;
- Sharing: A portion of the value generated by the community is pooled as shared assets to support the community's survival and enhance its competitiveness;
- Self-Evolution: Establish an AMT reward mechanism to encourage members to continuously provide suggestions regarding the community's technical and economic mechanisms.

The fundamental value attributes of AMT encompass the following dimensions:

1) Property Rights Attributes

In well-defined Alexmining market circulation scenarios, users holding AMT enjoy ownership and disposal rights over the tokens—that is, they hold property rights over the tokens and may dispose of them at will within the limits prescribed by law.

2) Monetary Attribute

An AP centered on encrypted tokens enables data circulation and the circulation of tokens. In the circulation scenario of AMT, user behavioral data, electronic tokens, and consumption activities can all be recorded on the blockchain, while valid behavioral data can be further converted into tokens. Each participant operates an independent node and shares the ledger data, thereby significantly enhancing the transparency of token usage. In other words, tokens establish a bridge for "value exchange."

3) Equity Attributes

AMT is a digital token whose primary use case is Alexmining's global business network; token holders hold specific equity interests. Specifically, holding a certain number of AMT tokens entitles holders to receive token-based dividends; however, it should be noted that these tokens do not constitute a specific type of investment.

4) Distribution Attributes

As an efficient, centralized mining project, the circulating characteristics of the AMT token encompass the following aspects:

•: Accessing Trusted Computing Resources: All purchases of trusted computing computing power, on-chain resources, and off-chain data storage within Alexmining projects are settled using AMT.

- Data Trading Protocol Fees: Alexmining will provide a standardized data collection, analysis, and trading protocol in the form of a smart contract, serving as the data trading infrastructure. This protocol enables an ecosystem where both buyers and sellers maintain confidentiality while ensuring the trustworthiness of their assets. The AMT token serves as the legal settlement currency for data trading and participates in market regulation.

- Security Guarantees: The Alexmining network requires a Gatekeeper to serve as a security node, which must remain online at all times; to be elected as the Gatekeeper, one must provide AMT as collateral. If the Gatekeeper engages in malicious behavior, its collateral will be forfeited.

- Community Governance:AMT token holders who exceed a specified threshold are entitled to participate in the governance and voting of the Alexmining project DAO.

- Payment for other services: AMT will also be used for other applications or service settlements within its ecosystem, such as WeB3 Analytics and cross-chain bridges that provide secure smart contracts for other blockchains.

6.3 Market Incentives

In the initial phase, we will distribute AMT tokens via airdrops, rewards, and other channels to further attract miners and fans to pay attention to the Alexmining project. Within the Alexmining ecosystem, holders of AMT can enjoy a range of benefits, including token appreciation, fee offsets, asset value growth, yield rebates, governance oversight, voting rights, token value appreciation, and NFT rewards. Alexmining provides AMT rewards to users who contribute to system liquidity through various incentive mechanisms. Simultaneously, it rewards community users by granting them access to diverse benefits within the Alexmining community simply by holding AMT tokens.

At the launch of its exchange, AMT has leveraged multiple channels—including KOLs, media coverage, and community influencers—to promote its "register and receive coins" campaign, recruit partners, and offer reduced transaction fees, thereby actively fostering the development of a vibrant community ecosystem. Through community management led by key influencers, comprehensive promotional campaigns, lucky draws, and Q&A sessions with gift giveaways, AMT has demonstrated its steadfast commitment to growth to both global Alexmining advocates and new users.

Chapter 7: Market Cooperation and Development

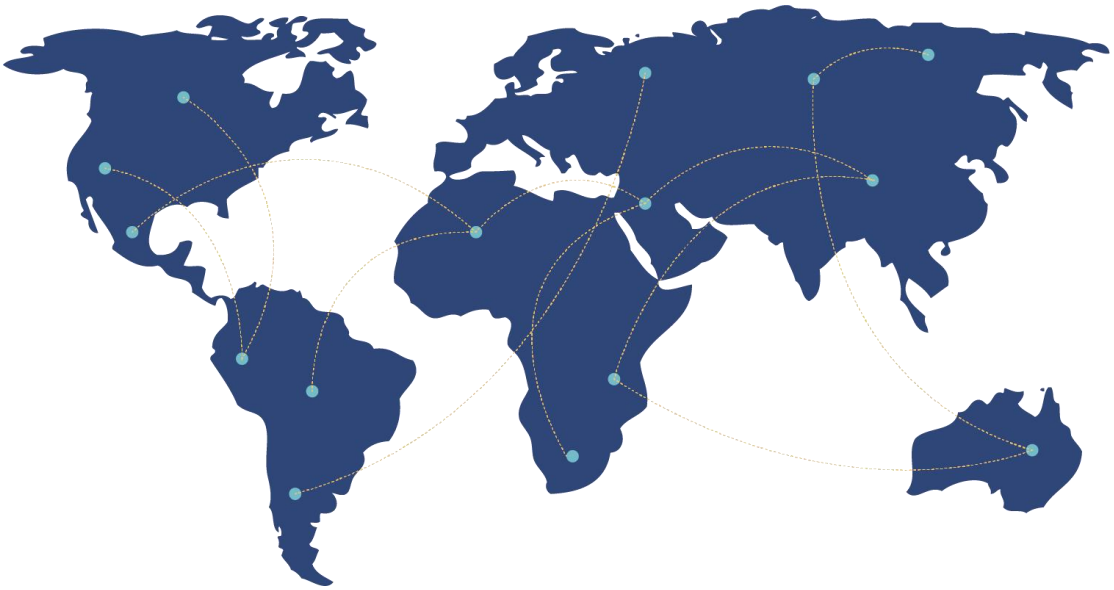
7.1 Community Layout

To secure a leading position within the industry, Alexmining is building a global community aimed at aggregating miners, users, investors, and other stakeholders worldwide.

Alexmining will expand globally, with plans to operate in multiple countries—including Russia, Iceland, Australia, Kazakhstan, Singapore, Cambodia, the Philippines, Thailand, Japan, France, and South Korea—simultaneously across 120 communities.

Communities constitute the primary driving force behind the development of blockchain. At the same time, however, individual members or teams within these communities may hold divergent values and stakeholder interests. Moreover, the blockchain industry faces an indisputable reality: despite over a decade of development, both the communities and their application ecosystems remain underdeveloped, lagging significantly behind those of the traditional internet landscape. From the perspective of grassroots organizational management, the existence of a healthy community governance environment and robust governance mechanisms is of paramount importance for the sustainable advancement of blockchain.

Alexmining adheres to the decentralized philosophy of blockchain technology, leveraging community strength as its foundation and prioritizing the interests of miners as its core principle, thereby gradually transitioning toward a fully autonomous, community-based digital asset integration ecosystem. The global Alexmining community will adopt a globally distributed collaborative working model, bringing together diverse stakeholders who share distinct advantages and aligned philosophies to uphold decentralized values, and to achieve shared benefits, co-ownership, and co-governance among the community, users, and all participants.



7.2 Promoting Collaboration

To drive the growth of Alexmining miners, we will launch comprehensive promotional campaigns through channels such as community networks, media outlets, and exchanges.

1) Community Promotion

As a community-driven project, Alexmining inherently embodies decentralized values. Currently, our partners span the globe, including the Radar Community, IPFS Community, Moore Community, Xunzhi Capital, BiZhanggui Community, JR Community, Caitou Community, Caribbean Community, Taxue Community, Mango Community, 128 Alliance, Utopia Community, 631 Community, Highlight Community, Rainbow Community, Transcendence Community, Peace Community, Brave Community, and Glory Community, among others.

2) Media Promotion

As more application features are launched and the AMT token goes live on exchanges, Alexmining will also conduct promotional campaigns across global media platforms, including Coindesk, Cointelegraph, The Block, Decrypt, CoinMarketCap, Meta, YouTube, and Telegram.

3) Celebrity Partners

To help safeguard the security of Alexmining, we have recruited a team of top-tier partners from the fields of cryptocurrency trading, artificial intelligence, computing power applications, and DeFi to serve as validators for the Alexmining network.

5) Token Launch on Exchanges

In the future, Alexmining will collaborate with top global exchanges to introduce the AMT token to the market, thereby providing liquidity to the market, enabling investors to appreciate the value of their holdings, and connecting more like-minded individuals and entrepreneurs. As Alexmining integrates with leading exchanges—including Binance, Coinbase, Huobi, OKEx, MEXC, and Bitget—the value of the AMT token is poised to continue rising.

In the future, Alexmining is committed to leveraging support from communities, media outlets, and exchanges to develop more high-quality applications, collaborate with users worldwide to achieve shared success, and continuously refine the comprehensive super-mining ecosystem for global miners.

7.3 Compliant Development

Alexmining actively participates in the development of industry standards, maintains close communication with regulatory authorities worldwide, and jointly promotes the healthy development of the cryptocurrency mining industry.

Alexmining will continue to collaborate closely with regulatory and law enforcement agencies worldwide. The company aims to establish a robust compliance framework, encompassing anti-money laundering principles and tools for financial institutions to detect and address suspicious activities, while maintaining a strong track record of supporting law enforcement agencies globally. Alexmining's anti-money laundering measures will be even more stringent than those adopted by traditional banks, leveraging new control and regulatory technologies in partnership with organizations such as CipherTrace—a blockchain-based security intelligence firm—and undergoing multiple external AML audits. Simultaneously, Alexmining will actively engage in cooperation with international anti-crime organizations, including UNODC and Interpol.

Within Alexmining, a dedicated business security team will also be established to research the latest hacking techniques and fortify business processes to protect users from financial losses. The wallet security architecture for user funds employs a cold-hot separation design, and strictly implements the absolute ciphertext policy for private keys throughout their generation, storage, and usage phases. Additionally, multi-layered security risk control mechanisms are deployed across these stages, including the KYT strategy, which enables real-time monitoring of every transaction and detection of anomalies.



Chapter 8: Disclaimer

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Regarding Auditing

Formal verification

CERTIK

WEB3 Security and Compliance Audit

HACKEN

Code Review and Smart Contract Audit

SLOWMIST