MXNB Whitepaper

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Introduction

As the financial landscape rapidly evolves, digital assets are increasingly becoming a fundamental part of the global economy. Stablecoins, in particular, are at the forefront of this transformation, offering a bridge between traditional fiat currencies and the efficiency, speed, and transparency of blockchain technology.

MXNB is a stablecoin designed to meet the demands of businesses and consumers in Latin America and beyond, offering a trusted, safe and scalable solution. Pegged 1:1 to the Mexican peso (MXN), MXNB combines the stability of traditional fiat currencies with the innovative potential of blockchain technology, enabling seamless integration into existing financial ecosystems.

Issued by Juno, MXNB is part of a broader vision to create a financial ecosystem that bridges the gap between traditional finance and the digital economy. MXNB allows fintechs, developers, and enterprises to access a new level of financial flexibility and efficiency, empowering businesses to create inclusive financial experiences, unlock new markets, and drive the adoption of cutting-edge technologies. Whether used for payments, remittances, or other financial services, MXNB provides a secure and compliant platform for cross-border transactions, making it easier for companies to operate within the dynamic Latin American market.

By leveraging industry-leading infrastructure and complying with the highest regulatory standards, MXNB is poised to become the cornerstone of the digital financial landscape in Latin America. It is not just a stablecoin—it's a catalyst for innovation, ensuring businesses and consumers alike can take advantage of the opportunities presented by the future of money.

MXNB

MXNB is a fully fiat-backed stablecoin pegged to the Mexican peso. Each MXNB token is backed one-to-one (1:1) by Mexican pesos (MXN) and cash-equivalents held in segregated reserves with regulated financial institutions.

Natively issued on the Arbitrum and Ethereum networks, MXNB follows the Ethereum Request for Comment 20 (ERC-20) token standard.

MXNB is a programmable stablecoin, designed to enable fast, secure and cost-efficient transactions. Financial service businesses, fintechs, and developers can now use this stable and transparent digital asset to power local payments, settlements, treasury management, cross-border transactions and decentralized finance (DeFi) applications.

By integrating MXNB, companies and individuals gain access to a stable, secure, blockchain-native representation of the Mexican Peso, removing inefficiencies in traditional financial systems and fostering innovation in digital payments and money movement.

MXNB aims to set a new standard for stablecoins pegged to emerging market currencies in Latin America. By being strategically launched in partnership with Bitso, the leading and most trusted Cryptocurrency Exchange in Latin America with a 10 year tenure, MXNB will be instantly connected to the Mexican financial rails – breaking through the last mile of payments and into the mainstream.

MXNB can be issued against and is always redeemable for Mexican pesos on a 1:1 basis. Initially, direct issuance and redemption capabilities against Mexican pesos will be reserved to qualified businesses who partner with the token's issuer, Juno.

Juno

Juno is a Bitso subsidiary that acts as the sole issuer of MXNB tokens.

Juno provides the end-to-end digital infrastructure to access and build the future economy, connecting fiat rails with blockchain infrastructure to enable more efficient ways to make financial transactions.

Its fiat-to-crypto infrastructure is designed for financial services businesses, Web3 native companies, developers, crypto exchanges, and builders of all kinds who are committed to reshaping the financial landscape.

In partnership, Juno creates solutions that are scalable, secure, and adaptable—enabling innovation that meets the needs of today and anticipates the demands of tomorrow.

Juno will be providing its services under the Digital Asset Service Provider and the Digital Asset Issuer registries before the Digital Asset National Commission (CNAD) in El Salvador.

Technical overview

Token features

Token standard: MXNB is built following the ERC-20 token standard. This standard ensures compatibility with various wallets and exchanges, providing users a familiar and secure experience. The technical framework consists of smart contracts that manage the minting, burning, and pausing functionalities, ensuring compliance and operational integrity.

MXNB is initially a "fork" of the source repository for smart contracts used by Circle's stablecoins on EVM-compatible blockchains.

Supported networks: MXNB is natively available in Arbitrum and Ethereum, both permissionless networks. MXNB over Arbitrum leverages the network's faster transaction speeds and lower fees for scalability, while being positioned to scale, as the network supports high transaction volumes (~40,000 TPS). Due to its high level of security and decentralization, MXNB on Ethereum is also an option for builders and businesses.

Contracts

- **FiatTokenV2_2 Smart Contract:** This contract manages the core functionalities without storing critical data such as token names or symbols, which are held in the proxy contract. It allows for the creation and destruction of tokens by designated roles and supports upgrades and fixes via a proxy standard.
- **FiatToken Proxy Smart Contract:** Acts as an intermediary, retaining essential information and enabling contract upgradeability. It holds the details of the FiatToken and facilitates the transition to new contract implementations.

Security and fraud prevention are paramount in the architecture of MXNB. Here are the mechanisms in place:

- **SignatureChecker Library:** This component ensures the authenticity of transactions by verifying signatures against the FiatTokenV2_2 contract. It checks both ECDSA and ERC1271 signatures, which are standard protocols for authenticating transactions on the Ethereum blockchain.
- **Role-Based Access Control:** The FiatTokenV2_2 Smart Contract defines specific roles with distinct capabilities, such as:
  - **MasterMinter:** adds and removes minters and increases their minting allowance.
  - **Minters:** create and destroy tokens.
  - **Pauser:** pause the contract, which prevents all transfers, minting, and burning.
  - **Blacklister:** prevents all transfers to or from a particular address, and prevents that address from minting or burning.

- o **Owner:** reassign any of the roles except for admin.
- o **Rescuer:** transfer any ERC-20 tokens that are locked up in the contract.

The **FiatTokenProxy Contract** serves as an administrative layer for the MXNB stablecoin, assigning one specific function:

- **Admin**: Manages proxy-level functionalities, such as updating the implementation contract, and is the default message sender (deployer address). The admin can change the admin address or execute transactions from an alternative address. Direct method calls by the admin to the proxy are not forwarded to the implementation contract.

FiatToken features: The FiatToken offers several capabilities, which are briefly described below. There are more detailed design docs in the doc directory in [MXNB's Github](). Among them, are:

- **ERC20 compatible:** The FiatToken implements the ERC20 interface.
- **Pausable:** The entire contract can be frozen, in case a serious bug is found or there is a serious key compromise. No transfers can take place while the contract is paused. The pauser address controls access to the pause functionality.
- **Upgradable:** A new implementation contract can be deployed, and the proxy contract will forward calls to the new contract. Access to the upgrade functionality is guarded by a proxyOwner address. Only the proxyOwner address can modify which address is the proxyOwner.
- **Blacklist:** The contract can blacklist certain addresses which will prevent those addresses from transferring or receiving tokens. The blacklister address controls access to the blacklist functionality.
- **Minting/Burning:** Tokens can be minted or burned on demand. The contract supports having multiple minters simultaneously. There is a masterMinter address that controls the list of minters and how much each is allowed to mint. The mint allowance is similar to the ERC20 allowance - as each minter mints new tokens their allowance decreases. When it gets too low they will need the allowance increased again by the masterMinter.
- **Ownable:** The contract has an Owner, who can change the owner, pauser, blacklister, or masterMinter addresses. The owner can not change the proxyOwner address.

Through these measures, MXNB ensures that the underlying technology not only supports the stable operation of the token but also safeguards against unauthorized access, potential breaches, and fraudulent activities. MXNB's smart contracts have been [audited]() and will be continuously audited to ensure any upgrades done to the token's contracts do not impact its security.

Product overview

Mint, burn and parity enforcement

MXNB uses fiat Mexican pesos as a reserve asset.

As a fully fiat-backed stablecoin, for every MXNB in circulation, there is an equivalent amount of Mexican pesos held in reserve, following a 1:1 basis. All MXNB tokens are minted only upon the receipt of Mexican pesos in an account owned by Juno, and always match the amount of fiat pesos received.

Reserves of Mexican pesos and cash equivalents backing the token are managed with the highest standards to not only preserve and grow their value, but to maintain liquidity to honor redemption requests from customers.

MXNB tokens are fully redeemable for Mexican pesos, which companies with a mint/redeem relationship with Juno can receive in exchange for their tokens. Every time a redemption is requested by a partner, MXNB tokens are burned and therefore put out of circulation before sending fiat MXN funds out of Juno's reserves. Issuances and redemptions are supported through the Juno Mint Platform and set of APIs.

The most strict technical and operational controls and alerts are in place to ensure that no amount of MXNB tokens is minted and put in circulation without sufficient Mexican pesos held in reserve. And, in parallel, the MXNB redemption flow is also strongly monitored to ensure proper burning before removing funds from Juno's reserves.

MXNB is always redeemable for an equivalent amount of Mexican pesos on a 1:1 basis, which any business registered with Juno can request via its proprietary Mint Platform.

Reserve management

Custody of reserves in Mexican pesos and cash-equivalents is held with multiple banking partners. Funds follow a strict, internally audited investment process in short-term government securities (Mexican Government bonds) at predefined durations to ensure liquidity requirements for redemptions are met.

All reserves backing MXNB tokens are held in segregated custodial accounts, ensuring customer funds remain protected, and both legally and operationally separated from the Bitso group and affiliates funds. MXNB reserves are also segregated from any operational capital from the issuer, ensuring continuous access to token backing funds under all circumstances.

Juno operates as a single-purpose entity, structured to isolate MXNB reserves from the financial and legal risks of other companies in the group. Holders of MXNB retain a direct and

exclusive entitlement to the reserves. This design significantly reduces the likelihood of any adverse impact on the stablecoin's backing in the event of insolvency elsewhere in the group, and allows its reserves to be protected by a corporate veil in case of extraneous circumstances that generate creditor claims.

Reserves are audited periodically by third-party auditors and compared to MXNB tokens in circulation to attest to the proper backing of the token's supply.
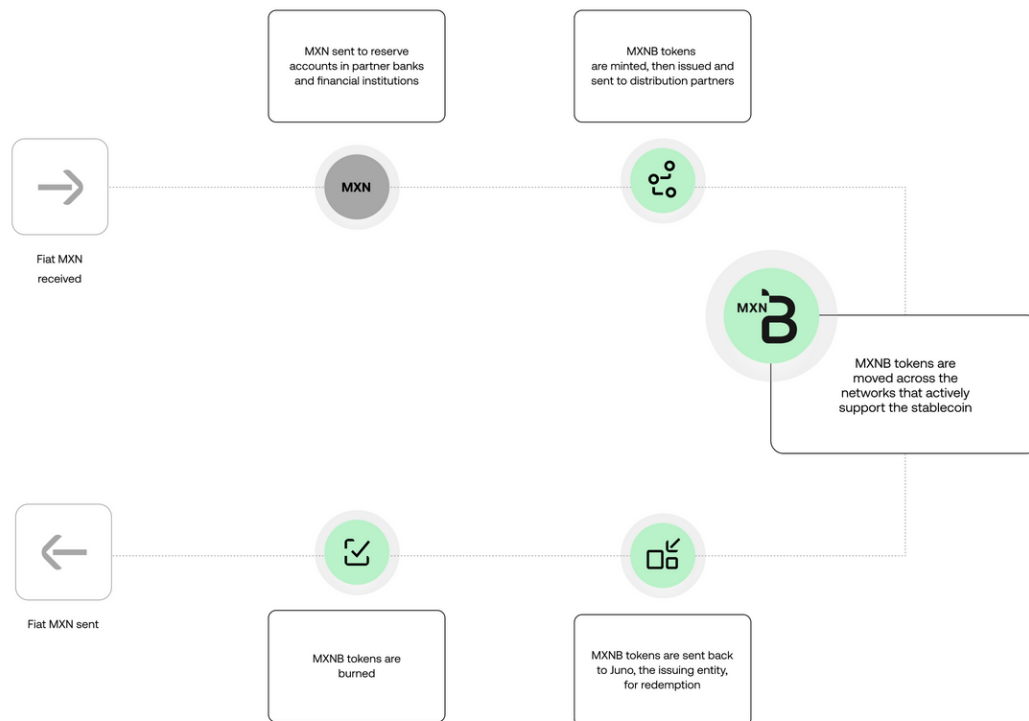
Supported methods for auto-conversion: MXNB issuance supports Mexican pesos as the sole pay-in currency. MXN to MXNB conversions are done automatically upon deposit, and follow a 1:1 ratio with no fees involved.

Conversely, redemptions of MXNB tokens are always paid out in Mexican pesos into Mexican bank accounts provided by Juno's business customers.

To access MXNB issuances and redemptions, companies must onboard by completing Juno's Know-Your-Customer (KYC) and Anti-Money Laundering (AML) validation process, and by accepting Juno's Terms and Conditions.

AML and Compliance Practices: As outlined within our technical overview, MXNB contracts have features that enable the token to comply with local regulations, such as the blacklisting function. Juno's KYC and AML policies are rigorously implemented to ensure thorough vetting and ongoing monitoring of all transactions and activities within its infrastructure.

In line with our commitment to regulatory compliance, MXNB has established internal policies and procedures for identifying and reporting suspicious activities to the relevant authorities. This proactive approach ensures adherence to legal obligations and contributes to the broader efforts to combat financial crimes.

Counterparties and Structure

The issuer

Juno is the sole issuer of MXNB tokens. It is compliant with all applicable frameworks in Mexico to ensure compliance with all pertinent laws, with a Virtual Asset Provider registry in the country. Additionally, it is in the process of obtaining registries as both a Digital Asset Provider and Digital Asset Issuer before the Digital Asset National Commission (CNAD) in El Salvador.

Partnership with Bitso

MXNB's issuer, Juno, has partnered with Bitso to launch this token. To help businesses and individuals access and build the future economy, we work with the largest and most trusted blockchain-based financial company in Latin America.

MXNB infrastructure and team

Our team's background in various financial regulatory environments equips us with a deep understanding of the importance of adhering to regulatory requirements, which often vary significantly between jurisdictions.

We recognize the subtleties and nuances within financial regulations and have tailored MXNB's operations to align with these diverse legal landscapes. This along with the infrastructure and service support from our main partner Bitso, ensures operational excellence with increased usability, broadening the scalability and potential use cases served by MXNB.

Oversight and risk management

Transparency and financial auditing

To ensure transparency and trust in the MXNB token, a third-party auditing firm conducts quarterly audits over reserves. These reports value Mexican peso and cash-equivalent reserves, and compare them to MXNB's circulating supply. The independent auditing firm attests to the proper backing of each token, and quarterly attestation reports are available on MXNB's website along with balance disclosures.

Smart contract management

MXNB's approach to risk management is further strengthened by a seasoned team of engineers and third-party advisors. These professionals bring a wealth of experience and expertise, ensuring that every aspect of MXNB's operations, from technical infrastructure to regulatory compliance, is managed with meticulous attention to detail and a proactive stance on risk mitigation.

Smart contract auditing

MXNB's contracts are audited by a top-tier industry player. Audits assess MXNB's smart contract security, functionality, and efficiency, ensuring it operates as intended without vulnerabilities. Audits are available here.

Know Your Customer (KYC) & Anti-Money Laundering (AML)

MXNB's issuer Juno has policies and procedures in place to prevent illicit activities and ensure compliance with financial regulations.

Use cases

Payments and settlements

Businesses can use MXNB to streamline domestic payments, reducing costs and settlement times compared to traditional banking systems.

E-commerce platforms and merchants can accept MXNB to lower processing fees, mitigate chargeback risks and make faster settlements. MXNB can also be used for payouts - facilitating a direct connection between blockchain transactions and the last mile of payments done through traditional rails.

Cross-border payments

Stablecoins are enablers of near instant, secure international payments. In an increasingly connected global economy, the potential for stablecoins to reduce settlement times and reduce costs becomes evident.

With MXNB, companies can not only swiftly convert between other currencies with stablecoins pegged to their value, but can now settle in a digital-native asset.

The opportunity between the United States and Mexico is a multi-billion dollar one, and money flows between emerging economies are prone to friction, high costs and slow transaction times. MXNB is natively global, which, when paired with other stablecoins, can bring significant improvements to cross-border payments.

Remittances

MXNB enables fast and cost-efficient remittances by reducing intermediaries who add layers of fees and have longer processing times. Recipients can convert MXNB to fiat MXN or use MXNB to save, spend or send their money in a fully digital manner.

On- and off-ramping

MXNB serves as a gateway into the future, on-chain economy. By using MXNB as an on-ramp, retail users and businesses can hold a stable and secure asset without the need to become exposed to more volatile assets, or to FX risks.

Businesses in the crypto and DeFi spaces with mint and redeem access can create simplified onboarding user experiences for their blockchain native products by integrating MXNB. Automatic conversions for fiat pay-ins in Mexican pesos into MXNB on a 1:1 basis, supported

by Juno's Mint Platform and APIs allow these businesses to contribute to a seamless transition into the on-chain economy.

Treasury management

Businesses and financial institutions can hold MXNB as a digital cash equivalent to Mexican pesos to optimize liquidity management, facilitate payroll disbursements, or hedge against currency volatility.

Final remarks

MXNB, combines the strength of the Mexican Peso with the speed and ease of modern blockchain technology. The integration of MXNB into the global and Mexican financial landscapes presents a compelling case for its potential to transform payments, cross-border transactions, remittances, decentralized finance, and treasury management.

By leveraging the growth and significance of stablecoins, addressing the unique needs of the Mexican market, and capitalizing on the investment potential of MXN, MXNB positions itself as a pivotal player in the digital finance revolution. Its commitment to transparency, regulatory compliance, and innovation further enhances its attractiveness to users and investors alike, setting a new benchmark in the realm of stablecoins. Leveraging the power of the Mexican Peso, with the power of crypto.

By offering stability and efficiency in transactions involving MXN, MXNB can help increase investment flows into Mexico and enhance liquidity within the MXN market. MXNB aims to be not just a facilitator of transactions but also a strategic tool for expanding access to the Mexican economy and democratizing access to digital financial services for users of the Mexican peso globally.

Glossary

AML (Anti-Money Laundering): Regulations and procedures designed to prevent individuals from generating income through illegal actions. AML efforts monitor and report suspicious activities to combat money laundering.

Bitso: Bitso is Latin America's leading financial services company powered by crypto. As a company with 10 years of history, Bitso is at the forefront of cross-border payments, leveraging stablecoins and blockchain technology. Bitso International has notably secured a Distributed Ledger Technology (DLT) license from the Gibraltar Financial Services Commission (GFSC), enhancing its operational security and reliability.

Blockchain: A digital ledger technology that records transactions across multiple computers securely and immutably, making it difficult to alter past records. It's the backbone of cryptocurrencies and supports applications like smart contracts and decentralized finance (DeFi).

DeFi (Decentralized Finance): An umbrella term for various financial applications in cryptocurrency or blockchain geared toward disrupting financial intermediaries. DeFi platforms allow people to lend or borrow funds from others, speculate on price movements on a range of assets using derivatives, and earn interest in savings-like accounts.

Distributed Ledger Technology (DLT): A digital system for recording the transaction of assets where the transactions and their details are recorded at multiple places simultaneously. It underpins cryptocurrencies and enables borderless, peer-to-peer transactions.

Exchange: Platforms where assets such as cryptocurrencies, stocks, or commodities are bought and sold. Cryptocurrency exchanges can be either centralized, operated by a single organization, or decentralized, facilitating direct transactions between users.

Fiat: Currency that a government has declared to be legal tender, but it is not backed by a physical commodity. Its value comes from the relationship between supply and demand and the stability of the issuing government.

Fork: A change to the protocol of a blockchain network that results in two branches, one following the original protocol and the other following the new version. This can be a "hard fork," creating two separate blockchains, or a "soft fork," where only one blockchain remains valid.

KYC (Know-Your-Customer): A mandatory process for businesses, especially in the financial sector, to verify the identity of their clients. KYC measures are crucial for preventing fraud, money laundering, and terrorist financing.

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