

Essence Inscription Protocol Whitepaper

Hyperliquid's Native Inscription Standard on HyperEVM

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Executive Summary

Essence is Hyperliquid's first native inscription protocol and standard, built from the ground up on HyperEVM. Unlike traditional NFTs, Essence creates on-chain assets backed by locked tokens such as \$HYPE, \$PURR, or any configured ERC20 token on the Hyperliquid ecosystem.

Essence solves the fundamental problem of NFT value volatility and speculative pricing by introducing inscription-backed assets where the floor price is inherently supported by the locked token value. This creates a new category of digital assets that combine the tradability of NFTs with the intrinsic value backing of locked tokens, establishing true price floors for digital collectibles and utility tokens.

What is Essence?

Essence is Hyperliquid's native inscription protocol—the first of its kind built originally on HyperEVM, not a fork or adaptation of existing standards. As Hyperliquid's pioneering inscription standard, Essence creates on-chain NFTs that are backed by (inscribed with) locked tokens such as \$HYPE, \$PURR, or any other ERC20 token deployed on HyperEVM.

The Meaning Behind "Essence"

The name "Essence" reflects the fundamental philosophy of this protocol:

- **Essence of Art:** Capturing the true artistic and creative value in digital form
- **Real Liquidity Backing:** NFTs backed by real liquidity, not air—providing tangible value foundation
- **New Standard for Inscriptions:** Establishing a revolutionary approach to NFT creation and valuation
- **Essential Value:** The core, essential value that every digital asset should possess

Essence represents the distilled, fundamental nature of what NFTs should be—assets with both artistic merit and intrinsic economic value.

The Problem Essence Solves

Traditional NFTs suffer from several fundamental issues:

- **Speculative Pricing:** No intrinsic value backing, leading to extreme price volatility
- **Zero Floor Price:** Collections can lose all value with no protection for holders
- **Utility Disconnect:** No meaningful connection between NFT ownership and underlying token ecosystems
- **Value Uncertainty:** Difficulty in determining fair market value without tangible backing

How Essence Solves These Problems

Essence introduces inscription-backed NFTs where:

- **Guaranteed Floor Price:** Each NFT has a minimum value equal to the locked token amount
- **Intrinsic Value:** Real token backing provides fundamental value beyond speculation
- **Market Stability:** Secondary market prices reflect both artistic/utility value AND locked token value
- **Value Preservation:** Token value doesn't disappear—it's locked and reflected in marketplace floor prices

Essence vs Traditional NFTs (ERC721)

The Fundamental Value Equation

Traditional NFTs (ERC721):

$$NFT\ Value = Speculative\ Art\ Value\ (highly\ volatile)$$

Essence Inscriptions:

$$Floor\ Price\ of\ Essence\ Inscription = Locked\ Token\ Value + Value\ of\ the\ Art$$

This equation demonstrates Essence's revolutionary approach: every inscription has a guaranteed minimum value (the locked tokens) plus any additional premium for artistic or utility value.

Why We Use the ERC721 Standard

While Essence introduces revolutionary inscription mechanics, we leverage the battle-tested ERC721 standard for critical functionalities:

- **Transfer Operations:** Seamless token transfers between wallets
- **Marketplace Integration:** Native support across all major NFT marketplaces
- **Approval Mechanisms:** Standard approve/disapprove functionality for trading
- **Universal Compatibility:** Open-source, trustless standard supported everywhere

The beauty of this design: Essence inscriptions are natively supported on all marketplaces without requiring custom integration or marketplace modifications. The key difference: Traditional ERC721 tokens have no intrinsic value backing. Essence NFTs require locking a preconfigured amount of tokens during minting—this is the "inscription" process.

The Inscription Process

The Essence inscription mechanism works as follows:

1. **Token Locking:** User locks a predetermined amount of ERC20 tokens (e.g., \$HYPE)
2. **NFT Minting:** The locked tokens become "inscribed" to a new NFT (can be on-chain or off-chain)
3. **Value Binding:** The NFT now has guaranteed floor price equal to locked token value
4. **Trading:** NFT can be traded on any marketplace with built-in value protection

Inscription Economics and Mechanics

- **Set Inscription Price:** Each collection has a preconfigured token lock amount that creators define. You have to inscribe this exact amount of \$HYPER or any other configured ERC20 token.
- **Value Preservation:** The locked token value doesn't disappear—it remains locked and will reflect in the secondary marketplace floor price, creating a stable pricing foundation.
- **Burn-to-Unlock:** If users want to retrieve their locked tokens, the inscribed NFT gets burned, releasing the underlying token value back to the holder.
- **Flexible Implementation:** The inscription mechanism supports fully on-chain art or off-chain art storage.

Launchpad Control Features

Our Essence Launchpad enables creators to configure:

- **Inscription Lock Price:** Set the required token amount for each NFT mint
- **Maximum Supply:** Define collection size limits
- **Token Selection:** Choose which ERC20 tokens to accept for inscription
- **Custom Parameters:** Additional collection-specific settings and metadata

Protocol Architecture

Core Components

The Essence Inscription Protocol consists of two primary smart contracts:

1. **PurrGraph Contract (Inscription Engine):** Responsible for token locking, metadata management, and provenance tracking.
2. **NFT Contract (Marketplace Interface):** An ERC721-compliant contract that provides marketplace integration and transfer mechanisms.

System Design Philosophy

The dual-contract architecture enables:

- **Separation of Concerns:** Inscription logic separated from NFT marketplace integration
- **Modularity:** Independent upgradeability of core components
- **Compatibility:** Full integration with existing NFT infrastructure
- **Flexibility:** Support for both on-chain and off-chain NFT implementations
- **Extensibility:** Straightforward extensibility of other smart contract modules

Technical Specification

PurrGraph Contract

- **Multi-Token Support:** Supports any ERC20 token inscription with configurable inscription parameters per token type.
- **Metadata Management:** Persistent on-chain inscription data storage with URI-based off-chain metadata integration.
- **Ownership Tracking:** Comprehensive current ownership records.

Transfer Flow

1. **NFT Transfer Initiated:** User initiates transfer through NFT contract
2. **Validation:** NFT contract validates transfer eligibility
3. **PurrGraph Update:** Inscription ownership records updated
4. **Transfer Completion:** NFT ownership transferred
5. **Event Emission:** Transfer events emitted from both contracts

Possible Use Cases and Applications

Primary Use Cases

- **Value-Backed Digital Art:** Art collections with guaranteed minimum value through token backing, enhanced creator royalties, and collector protection.
- **Gaming and Utility NFTs:** In-game assets and utility tokens with guaranteed baseline value.
- **Membership and Access Tokens:** Premium memberships and access passes with inherent token value.
- **Financial Applications:** Collateralized NFT creation, yield-bearing inscription certificates, and token-backed rewards programs.

Genesis Collection: Essential Digits

As Essence's flagship launch, Essential Digits represents the first implementation of Hyperliquid's inscription standard with 100,000 on-chain-generated pixel digits featuring randomized backgrounds and colors. This collection serves multiple strategic purposes:

- **Community Onboarding:** Free mint structure and phased rollout for broad participation.
- **Protocol Validation:** Real-world testing of inscription mechanics and marketplace integration.
- **Economic Foundation:** Demonstrates inscription-backed floor price mechanics and establishes secondary market dynamics.

Roadmap and Future Development

Phase 1: Genesis Collection Launch - "Essential Digits" (Q2 2025)

- **Supply:** 100,000 unique computer-generated pixel digits
- **Art Generation:** Automatically creates SVG art upon mint
- **Pricing Structure:** Base Price: 1 wei; Inscription Fee: \$0.50 USD equivalent in \$HYPE
- **Distribution Strategy:** Phased FCFS mint for HyperEVM power users and public

Phase 2: Launchpad Platform Launch (Q3 2025)

- **Universal Access:** Any user can create individual inscriptions
- **Fee Structure:** Standard \$0.50 USD in \$HYPE per inscription
- **Customizable Parameters:** Adjustable mint prices, token types, and metadata

Phase 3: Essential Marketplace Launch (Q4 2025)

- **Dedicated Marketplace:** Purpose-built platform for Essence collections
- **Enhanced Features:** Inscription-specific filtering, token backing visibility, and advanced trading features

Phase 4: Ecosystem Expansion (Q1 2026)

- Multi-token inscription support
- Advanced inscription mechanics
- Developer SDK and API toolkit

Long-term Vision (2026+)

- Establish Essence as the standard for value-backed NFTs
- Integration with DeFi protocols
- Cross-chain inscription bridge development

Conclusion

Essence represents a paradigm shift in NFT creation and value preservation, establishing itself as Hyperliquid's first native inscription protocol. By solving the fundamental problem of NFT value volatility through inscription-backed assets, Essence creates a new category of digital collectibles with guaranteed floor prices and intrinsic value.

The combination of ERC721 compatibility and innovative inscription mechanics creates unprecedented opportunities for creators, collectors, and the broader Hyperliquid community. Essence is positioned to become the blueprint for value-backed digital assets across the broader blockchain ecosystem.