DustClaim Protocol

A Deterministic On-Chain Distribution Mechanism on Linea

Version: 1.0
Network: Linea
Token: DUST

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Abstract

DustClaim is a permissionless, non-custodial protocol deployed on Linea that enables deterministic, time-based redistribution of value through a daily claim mechanism. The protocol enforces strict supply constraints, wallet-level claim windows, and on-chain anti-Sybil protections without relying on off-chain authorization or discretionary minting.

DUST tokens are distributed exclusively through smart-contract-enforced rules. There are no private allocations, no presales, and no post-deployment mint authority.

1. Introduction

DustClaim introduces a minimalistic, deterministic token distribution primitive designed to fairly redistribute value across the Linea ecosystem. The protocol emphasizes transparency, predictability, and long-term participation over speculative emission models.

2. System Overview

DustClaim is deployed on Linea as a single immutable ERC-20 smart contract. The system architecture eliminates reliance on off-chain authorization, backend servers, or upgradeable minting logic.

3. Token Specification

DUST is an ERC-20 compliant token with 18 decimals. Minting is restricted exclusively to the contract logic governing daily claims. Burning is user-initiated and reduces circulating supply.

4. Distribution Mechanics

Each eligible wallet may claim exactly 5 DUST once every 24 hours. Claims are tracked per wallet and are bounded by a fixed lifetime claim window.

5. Eligibility Conditions

A wallet must satisfy all eligibility conditions simultaneously, including a minimum ETH balance, cooldown period, active claim window, and available remaining supply.

6. Emission Formula

Emission is linear and deterministic. Each wallet may receive up to 900 DUST across a maximum of 180 daily claims, independent of network-wide participation.

7. Supply Constraint

The total token supply is hard-capped and enforced on-chain. Once the cap is reached, minting is permanently disabled, ensuring absolute supply finality.

8. Anti-Sybil Design

Sybil resistance is enforced through economic friction and temporal constraints rather than identity-based verification or centralized approval mechanisms.

9. Security Model

The protocol contains no owner-controlled mint functions, no privileged distribution paths, and no hidden allocations. All critical logic is transparent and verifiable on-chain.

10. Frontend & UX

The DustClaim frontend is a stateless convenience layer. Users may interact directly with the contract using any compatible wallet interface.

11. Liquidity & Market Formation

Liquidity provisioning is external to the protocol and does not affect distribution mechanics. DUST relies on decentralized exchanges for organic price discovery.

12. Governance

DustClaim launches without governance mechanics. Distribution parameters are immutable and cannot be altered post-deployment.

13. Limitations & Trade-offs

The ETH balance requirement and irreversible claim window expiration are intentional design choices that prioritize fairness and abuse resistance over universal accessibility.

14. Conclusion

DustClaim demonstrates that predictable, fair token distribution can be achieved using minimal, deterministic smart contract logic without discretionary control.

15. Contact & Support

For questions, integrations, or security disclosures, please contact support@dutsclaim.xyz.