tokenwear TKZ Whitepaper

Technical Specification, Tokenomics Architecture, and System Design

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1. Introduction

This whitepaper provides the full technical, economic, and operational design of **TKZ**, the digital token powering the tokenwear ecosystem. It defines how TKZ is created, distributed, secured, transacted, spent, and redeemed — enabling a sustainable, real-world utility model built on wearable interactions.

This document expands on the Blue Paper by detailing: - Tokenomics architecture - Mining mechanism - Whitelisting and ownership verification - Merchant acceptance via tokenwear pay - Treasury model and burn structure - Supply-side sustainability - Future ecosystem extensions

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2. TKZ Token Overview

TKZ is a digital utility token earned from scanning approved tokenwear garments. It has three core functions:

1. **Earn** — Users mine TKZ by scanning their authenticated garments.
2. **Spend** — TKZ can be spent at tokenwear-approved merchants via tokenwear pay.
3. **Redeem** — Merchants can redeem TKZ for fiat; redeemed TKZ is burned.

TKZ is designed as *digital cash with controlled issuance*.

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3. Tokenomics Architecture

3.1 Pegged Value

- TKZ is initially pegged at **1 TKZ = $0.10 USD equivalent**.
- Pegging is maintained by treasury reserves and merchant redemption policy.

3.2 Supply Structure

- TKZ supply is **not inflationary**.
- New TKZ enters circulation *only through mining caps assigned to garments*.
- Once a garment's mining cap is reached, it can no longer produce TKZ.

3.3 Mining Cap: calculated as 10% of the sales price multiplied by the total supply of that garment produced, converted into TKZ at the rate of 0.1 USD per TKZ.

Example: A $50 hoodie with a quantity of 100 earns 10% value back → $5 × 100 = $500 → converted to TKZ = **5000 TKZ**.

Each garment has:

Total TKZ Cap = (Sales Price × 10% × Total Quantity Produced) ÷ 0.1

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4. Mining Mechanism

4.1 Scan-to-Mine Logic

- Each garment contains a one-time **whitelist QR code** that links ownership to a user account.
- After whitelisting, users can scan their garment daily to earn TKZ until the mining cap is reached.
- Mining rate decreases as the garment approaches its cap.

4.2 Anti-Abuse + Fair Distribution

- 24-hour cooldown per garment.
- Geolocation + device fingerprinting to prevent multi-device farming.
- Mining stops automatically once the garment reaches its TKZ cap.

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5. tokenwear Pay (Merchant Acceptance)

5.1 How Merchants Accept TKZ

- Merchants display a **tokenwear Pay QR Code**.
- Users scan the code using the tokenwear app.
- Users select TKZ as their payment method.
- Merchant receives TKZ instantly in their Merchant Wallet.

5.2 Conversion + Redemption

- Merchants can redeem TKZ back to fiat through tokenwear.
- Redemption burn mechanism:
- TKZ redeemed → removed from circulation → reduces supply → increases long-term sustainability.

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6. Treasury + Burn Policy

6.1 Treasury Function

- Holds reserves backing the 0.1 USD peg.
- Manages redemption payouts.
- Manages supply reduction via burns.

6.2 Burn Structure

- 100% of redeemed TKZ is burned.
- Additional discretionary burns can occur during ecosystem upgrades.

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7. Ecosystem Expansion

7.1 Future Features

- TKZ staking for discounts.
- Scan-to-unlock real-world perks.
- Partner brand integrations.
- Offline merchant terminals.

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8. Conclusion

TKZ is designed as a sustainable, real-world utility token backed by physical products, merchant adoption, and transparent mining limits. tokenwear delivers a hybrid digital–physical ecosystem where fashion drives the economy.