



TOKENOMICS & WHITEPAPER

CTAG

the trust-backed asset.

The token that powers CheckTag — turning every genuine product scan into verifiable, rewarded, on-chain trust. A demand-anchored, self-throttling design across BSC and Ethereum.

1,000,000,000 max supply

35% to the community

BSC + Ethereum · LayerZero OFT

Confidential cCTAG via Zama FHE

00 Abstract

CheckTag lets anyone verify a product is genuine with a single scan, and rewards them for it. CTAG is the asset that closes the loop: brands pay to protect their goods, consumers earn for authenticating them, and value accrues to a token whose emissions are mathematically bounded and whose price is anchored to real B2B revenue.

This paper specifies the complete tokenomics: a fixed 1 billion supply, a 35% community reward pool released over eight years through a **per-epoch budget** (so emissions can never inflate no matter how many scans occur), a stack of utility sinks led by brand authentication fees, and a buyback-and-burn engine that turns revenue into scarcity. The result is designed to be one of the rare reward tokens that gets *more* deflationary as it grows.

1B	~9%	8 yrs	50/30/20
Hard-capped supply	Circulating at TGE	Reward emission tail	Fee → treasury/burn/rewards

01 The problem & the protocol

Counterfeiting is a multi-trillion-dollar tax on brands and a safety risk for consumers. Trust today is a claim; CheckTag makes it a **verifiable, incentivised action**.

✓ Authenticate

Cryptographic NFC / QR tags let a buyer confirm a product is genuine in seconds — with an admin-vetted “Genuine” standard behind it.

★ Rate & review

AI-scored authenticity reviews turn the crowd into a live sensor network, improving the model with every quality signal.

📌 Earn

Points for genuine scans and quality reviews convert to CTAG — the incentive that bootstraps the data network.

CTAG is not a bolt-on reward coupon. It is the settlement, staking, access and governance layer for the entire authentication economy — earned by consumers, spent by brands.

02 Design principles

1 Bounded emissions

Rewards are capped **per epoch**, never paid per scan. Activity spikes and sybil farms can only dilute each other — never the supply.

2 Revenue-backed

Real brand payments fund buyback-and-burn and a treasury reserve, giving CTAG a cash-flow anchor most reward tokens lack.

3 Two-sided

Consumers earn; brands pay. At maturity brand spend must exceed consumer emissions in value — by design, not by hope.

4 Sinks ≥ faucets

Every emission has a matching reason to hold, stake, spend or burn. Scarcity compounds as usage grows.

03 Token specification

Property	Value
Name / ticker	Checktag / CTAG
Max supply	1,000,000,000 CTAG — hard cap, no infinite mint
Home chain	BNB Smart Chain (main tradeable OFT)
Confidential form	Ethereum via Zama FHE — cCTAG encrypted-balance wrapper
Cross-chain	LayerZero OFT · burn-and-mint canonical supply (no bridge inflation)
Contract	UUPS-upgradeable ERC-20 · owner-gated authorization
Decimals	18 (public) · 6 (confidential)

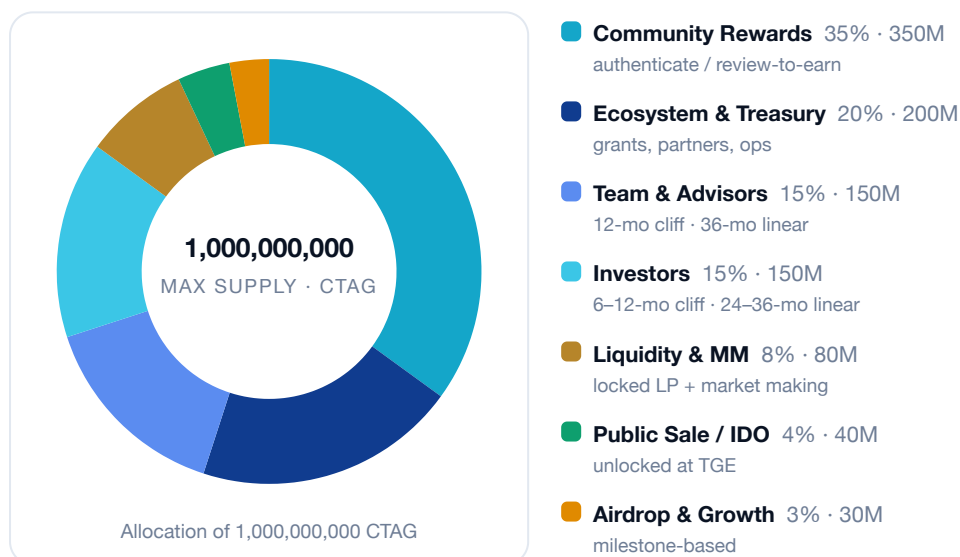
BSC · tradeable

Ethereum · confidential

LayerZero · omnichain

04 Allocation & distribution

Community + Ecosystem control **55%** — the network's value is its users, and the cap table reflects it.



Bucket	%	CTAG	Vesting
Community Rewards	35%	350M	authenticate / review-to-earn
Ecosystem & Treasury	20%	200M	grants, partners, ops
Team & Advisors	15%	150M	12-mo cliff · 36-mo linear
Investors	15%	150M	6–12-mo cliff · 24–36-mo linear
Liquidity & MM	8%	80M	locked LP + market making
Public Sale / IDO	4%	40M	unlocked at TGE
Airdrop & Growth	3%	30M	milestone-based
Total	100%	1,000M	Initial circulating ≈ 90M (~9%)

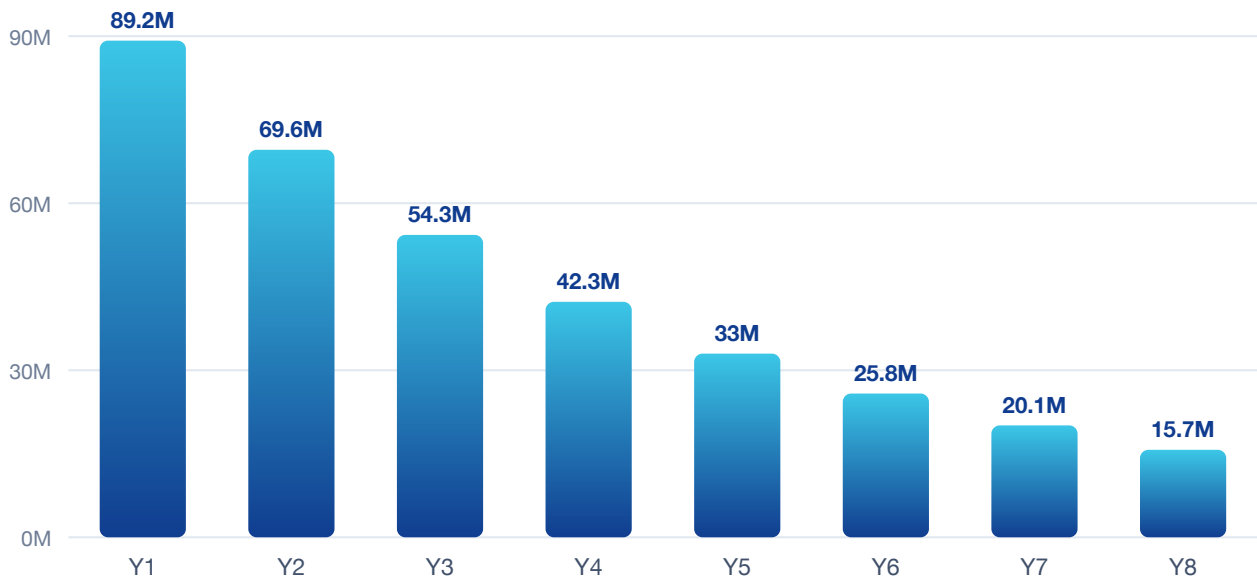
05 The reward engine

The core mechanism — and the reason this design survives. **Never pay a fixed CTAG per scan.**

PER-EPOCH SETTLEMENT (WEEKLY)

$$\text{user CTAG} = B_{\text{epoch}} \times (\text{user points} \div \text{total points})$$

A fixed budget B_{epoch} is released each epoch and split by contribution. Maximum new supply per epoch is capped at B_{epoch} — activity or sybil spikes only dilute each other, never inflate CTAG. Reward-per-scan floats down automatically as usage grows.



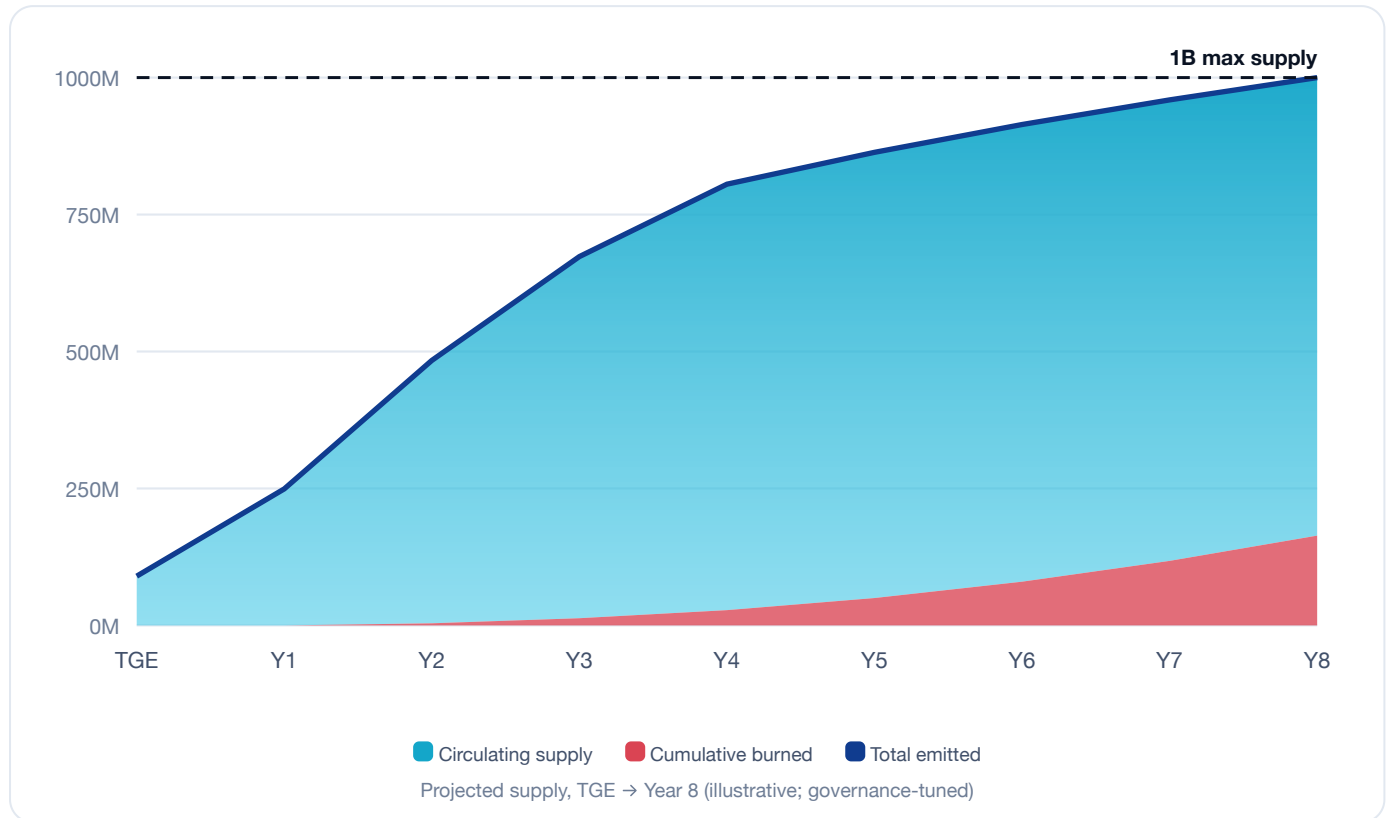
Community reward emission schedule — 350M over 8 years (~22%/yr decay)

Point weighting rewards quality over quantity, leveraging CheckTag's AI review scoring and admin vetting:

Action	Weight
Scan of a genuine, admin-vetted tag	1.0×
First unique scan of a fresh tag	+ bonus
High-quality review that improves the authenticity model	1.5–3×
Staking tier · reputation multiplier	up to 2×
Streaks (status-ring gamification)	small boost
Flagged · duplicate · low-trust device	→ 0

06 Supply projection

Gross unlocks land exactly at the 1B cap by year 8. Buyback-and-burn then bends net circulating supply **downward** — the deflation crossover.



Year	Reward emission	Total emitted	Burned (cum.)	Net circulating
TGE	—	90M	0M	90M
Y1	89.2M	249M	0M	249M
Y2	69.6M	484M	4M	480M
Y3	54.3M	673M	13M	660M
Y4	42.3M	805M	28M	777M
Y5	33M	863M	50M	813M
Y6	25.8M	914M	80M	834M
Y7	20.1M	959M	118M	841M
Y8	15.7M	1000M	164M	836M

From Y7→Y8 net circulating **declines** (841M → 836M) as burns overtake unlocks.

07 Utility & demand sinks

Value lives here. Brands are the payers; consumers and holders are the demand.

B Brands — the revenue anchor

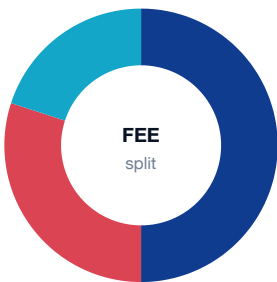
Tag **issuance fees** per authentication tag · **Authentication-as-a-Service** subscriptions (discounted by staking) · **priority “Genuine” vetting** · analytics & gray-market detection · **confidential treasury** (cCTAG) so competitors can't read volumes.

C Consumers

Provenance passports & resale certificates (mint fee) · premium history & alerts · an **authenticated resale marketplace** with CTAG escrow & fees.

Everyone

Governance (staked) · staking reward multipliers · protocol-fee discounts · access tiers.



Protocol fee split

Every protocol fee is split three ways and a scheduled buyback converts B2B revenue into burns:

- **Treasury reserve** 50%
- **Buyback & burn** 30%
- **Rewards top-up** 20%

Once fee volume exceeds emissions, CTAG becomes net deflationary.

08 The value-accrual flywheel

Brands pay

Tags, SaaS & vetting → revenue in fiat/CTAG



Treasury

Buyback-and-burn ↓ supply · stablecoin reserve = soft floor



Rewards fund scanning

Consumers authenticate & review



Better AI & more trust

Richer data → brands trust more → more brands pay

WHAT ACTUALLY BACKS CTAG

① **Cash flow** — revenue routed to buyback/burn gives a P/E-like anchor · ② **Treasury reserve** in stables/BNB = a transparent on-chain book-value floor per token · ③ **Utility demand** — you must hold & spend to use premium and brand features · ④ **Scarcity** from burns · ⑤ the **authentication data moat**.

09 Staking

Actor	Stake to get
Consumer	Reward multiplier · governance weight · fee discounts
Brand	Lower per-tag fees · higher tag quota · priority vetting · API tiers

veCTAG (vote-escrow): lock longer → more governance weight and the right to direct reward-point weights. A long-term-holder sink.

10 Anti-sybil & integrity

Unique-tag rewards

One reward per unique tag per user, enforced by NFC challenge-response — not a copyable QR for high-value SKUs.

Reputation-weighted

Device attestation + reputation; new/low-trust accounts earn a fraction until trust builds. Diminishing returns per epoch.

Brand stake-slashing

Brands stake CTAG to issue tags; proven counterfeiting slashes the stake — making “Genuine” economically credible, not just a label.

11 Governance

Staked CTAG governs the live levers: epoch budget B_{epoch} , fee rates, burn ratio, treasury spend, the point-weight table, new-chain deployments and vetting standards. Rollout is progressive — multisig-controlled at launch, handing levers to the DAO as usage matures.

12 Phased rollout

Maps directly to what's already built — points are live today and conversion stays gated until TGE.

PHASE 0 · NOW

Bootstrap

- Points only, off-chain
- Conversion gated
- Grow usage & data

PHASE 1 · TGE

Launch

- Checktag ERC-20 on BSC
- Liquidity + IDO
- Points → CTAG on

PHASE 2

Utility

- Brand payments
- Staking live
- Buyback & burn

PHASE 3

Omnichain

- OFT → Ethereum
- Confidential cCTAG
- DAO + marketplace

Path B is built for this: launch **Checktag** as a plain ERC-20 in Phase 1, then upgrade the *same address* into **ChecktagOFT** in Phase 3 — no migration, holders untouched.

13 Recommended starting parameters

Knob	Value
Max supply	1,000,000,000
Reward pool	350M / 8 yrs · ~22% annual decay
Epoch	Weekly · budget-share model
Fee split	50% treasury / 30% burn / 20% rewards
Treasury reserve target	≥ 20% of cumulative revenue in stables/BNB
Brand tag fee	Priced in fiat, settled/bought in CTAG
Team / investor vest	12-mo cliff + 24–36-mo linear
Initial circulating	~9%

Risk	Mitigation (baked in)
Reward hyperinflation	Bounded per-epoch budget — the core mechanism
Emissions with no buyers	Brand B2B spend + buyback/burn as demand anchor
Sybil / scan farming	Cryptographic tags · reputation weighting · diminishing returns
“Genuine” gamed	Brand stake-slashing makes fraud costly
Mercenary TGE dumping	Long vests · decaying emissions · lockups
Regulatory (looks like a security)	Utility/contribution framing · no yield promises · counsel before TGE

Disclaimer. This document describes a proposed token design for the CheckTag protocol. It is not investment advice, an offer, or a solicitation, and does not constitute a legal or securities opinion. All figures — supply, emissions, burns and projections — are illustrative and governance-tunable; actual parameters are subject to change. Obtain qualified legal and tax counsel in every relevant jurisdiction before any token generation event.



Trust, made verifiable.

CTAG turns every genuine scan into on-chain value — bounded by design, backed by revenue, and built to last.