VirBiCoin Whitepaper

A Metaverse-Ready Ethereum-Compatible Blockchain

VirBiCoin Development Team

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Abstract

VirBiCoin (VBC) is a Proof-of-Work blockchain designed to power metaverse applications and decentralized economies. Built on proven Ethereum technology with the Ethash algorithm, VBC provides a secure, decentralized platform for virtual world transactions, NFTs, and DeFi applications.

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1. Introduction

The emergence of metaverse platforms has created unprecedented demand for blockchain infrastructure that can handle virtual economies at scale. VirBiCoin addresses this need by providing:

- **EVM Compatibility**: Full support for Solidity smart contracts
- **GPU Mining**: Democratic participation through Ethash PoW
- **Enterprise Infrastructure**: High availability and 24/7 monitoring
- **Metaverse Focus**: Optimized for virtual world use cases

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2. Protocol Architecture

2.1 Technical Specifications

Parameter	Value
Coin Name	VirBiCoin
Symbol	VBC
Chain ID	329
Consensus	Proof of Work (PoW)
Algorithm	Ethash
Block Time	12-14 seconds
Block Reward	8 VBC (gradual reduction to 1 VBC)
Gas Limit	30,000,000
EVM Version	Paris
Decimals	18

2.2 Network Configuration

Parameter	Value
RPC URL	https://rpc.virbicoin.com
WebSocket	wss://ws.virbicoin.com
RPC Port	8329/tcp
WS Port	8330/tcp
P2P Port	28329/tcp, 28329/udp

2.3 Protocol Stack

The VirBiCoin protocol consists of the following layers:

1. **User Layer**: dApps, Smart Contracts, Wallets (MetaMask), Miners (Ethash GPU)
2. **JSON-RPC API**: HTTP/WebSocket (Port 8329/8330)
3. **Execution Layer**: Go VirBiCoin (gvbc) - EVM compatible, Solidity/Vyper
4. **Consensus Layer**: Proof-of-Work (Ethash), Block Time: 12-14 sec, Reward: 8→1 VBC
5. **P2P Network**: DevP2P Protocol (Port 28329)
6. **State & Storage**: LevelDB / Chain ID: 329
7. **Infrastructure**: Enterprise Cloud - Managed by VirBiCoin Foundation
8. **Future Consensus**: Proof-of-Stake (Celestia fork at block 10,500,000)

2.4 Official Services

Service	URL
Block Explorer	https://explorer.virbicoin.com
Network Stats	https://stats.virbicoin.com
Mining Pool	https://pool.virbicoin.com
DEX	https://explorer.virbicoin.com/dex
Faucet	https://pool.virbicoin.com/faucet
Public RPC	https://rpc.virbicoin.com

2.5 Smart Contract Architecture

Contract Hierarchy:

Layer	Component	Description
1	User Interface	Web3 Wallets / dApps
2	SimpleRouterV2	Swap & Liquidity Entry Point
2a	SimpleFactoryV2	Pair Manager
2b	SimplePairV2	Liquidity Pool / LP Token (Token A + Token B)
2c	WVBC	VBC Wrapper
3	MasterChefV2	Yield Farming / Staking (Distributes VBCG Rewards)

2.6 Security Model

Contract Security

- **ReentrancyGuard**: Prevents reentrancy attacks.
- **Ownable**: Clearly defined administrative privileges.
- **Pausable**: Emergency pause functionality.
- **Solidity 0.8.x**: Automatic overflow checks.

Economic Security

- **Minimum Liquidity Lock**: Mitigates flash loan attacks.
- **Fee Checks**: Strict validation of K-value (constant product).
- **Slippage Protection**: Specification of minimum output amounts.

Operational Security

- Multi-sig wallets (Planned)
- Timelock upgrades (Planned)
- Community audits

2.7 Contract Addresses

Contract	Address
SimpleFactoryV2	`0x663B1b42B79077AaC918515D3f57FED6820Dad63`
SimpleRouterV2	`0xdD1Ae4345252FFEA67fE844296fbd6C973B98c18`
WVBC	`0x52CB9F0d65D9d4De08CF103153C7A1A97567Bb9b`
MasterChefV2	`0x12A656c2DeE0EA2685398d52AcF78974fCD67B27`
TokenFactoryV2	`0xE2008c44Bc077eFc1c6B5A3274ACC805c7F03b73`
VBCG	`0xac7F60af25C5c4E23d1008C46511e265A8c9B6cF`
USDT	`0xdf136683B118E95c04A61FEC091c65736d9de059`

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3. Tokenomics

3.1 Initial Distribution

Total Initial Supply: 180,428 VBC

Allocation	Amount	Percentage
Mining Rewards	75,000 VBC	41.6%
Development Fund	60,000 VBC	33.2%
Foundation Treasury	45,428 VBC	25.2%

3.2 Emission Schedule

- **Block Reward**: 8 VBC initially, reducing by 1 VBC every 2,100,000 blocks
- **Block Time**: ~12-14 seconds
- **Current Fork**: Unity (block 2,100,000, no reward change)
- **First Reduction**: Block 4,200,000 (Quiche fork)
- **Minimum Reward**: 1 VBC (reached at block 16,800,000)
- **PoS Transition**: Block 10,500,000 (Celestia fork)

Reward Reduction Schedule

Fork Name	Block	Reward	Est. Date
Genesis	0	8 VBC	2025
Unity	2,100,000	8 VBC	2026 (current)
Quiche	4,200,000	7 VBC	~2027
Miche	6,300,000	6 VBC	~2027
Rusk	8,400,000	5 VBC	~2028

Fork Name	Block	Reward	Est. Date
Celestia	10,500,000	4 VBC	~2029 (PoS migration)
Mafuyu	12,600,000	3 VBC	~2030
Kipfel	14,700,000	2 VBC	~2031
Lumina	16,800,000	1 VBC	~2031

3.3 Token Distribution Chart

- Mining Rewards: 41.6%
- Development Fund: 33.2%
- Foundation Treasury: 25.2%

3.4 VBCG: VirBiCoin Gold

VBCG is the governance and reward token of the VirBiCoin ecosystem.

Utility

1. **Governance Voting Rights**: Voting on VIPs (VirBiCoin Improvement Proposals).
2. **Farming Rewards**: Rewards for LP providers.
3. **Protocol Fees**: Future fee payments.

Supply

- **Initial Supply**: [X] VBCG
- **Max Supply**: Unlimited (Inflationary)
- **Issuance**: Farming rewards from MasterChef

Value Backing

- Liquidity on DEX (VBCG-VBC pair)
- Governance participation rights
- Linked to ecosystem growth

3.5 WVBC: Wrapped VirBiCoin

WVBC is a wrapped version of native VBC compatible with ERC20.

Purpose

- Enables VBC trading on DEX.
- Ensures compatibility with smart contracts.
- Integration into DeFi protocols.

Features

- **deposit()**: VBC → WVBC (1:1)
- **withdraw()**: WVBC → VBC (1:1)
- **Fully Backed**: Deposited VBC is always held within the contract.

3.6 Stablecoin Integration: Fully-Backed USDT

VirBiCoin provides a **100% fully-backed** USDT stablecoin (vUSDT). Every vUSDT on VirBiCoin is backed 1:1 by real USDT held on Ethereum mainnet.

3.7 Collateral Model: 1:1 Backed Stablecoin

VirBiCoin USDT (vUSDT) is **fully collateralized** by real USDT on Ethereum mainnet, ensuring complete transparency and trust.

Collateral Structure

Component	Network	Description
Bank Wallet	Ethereum Mainnet	Multi-sig wallet holding real USDT collateral
vUSDT Contract	VirBiCoin (Chain ID: 329)	ERC20 token issued 1:1 against collateral

Collateral Ratio Collateral Ratio = Bank Wallet USDT Balance / vUSDT Total Supply = 100%

Item	Value
Bank Wallet (Ethereum)	`0x717ac1A51760Cc7Dc91b7be67c977C0635BDF117`
vUSDT Contract (VirBiCoin)	`0xdf136683B118E95c04A61FEC091c65736d9de059`
Collateral Asset	Tether USD (USDT) on Ethereum
Collateral Ratio	**100% (1:1 Fully Backed)**
Storage Method	Multi-sig Bank Wallet
Audit	On-chain verifiable 24/7

3.8 vUSDT Technical Specifications

Property	Value
Contract Address	`0xdf136683B118E95c04A61FEC091c65736d9de059`
Token Name	Tether USD
Symbol	USDT
Decimals	6 (Same as Ethereum USDT)
Total Supply	Always matches collateral amount
Standard	ERC20 Compatible

3.9 Issuance and Redemption Process

Issuance (Mint)

Step	Action
1	User sends real USDT to Bank Wallet on Ethereum
2	Deposit confirmation verified on-chain
3	Equal amount of vUSDT minted on VirBiCoin
4	Total supply always matches collateral

Redemption (Burn)

Step	Action
1	User burns vUSDT on VirBiCoin
2	Burn confirmed on-chain
3	Real USDT sent from Bank Wallet to user
4	Total supply always matches collateral

3.10 Security Model

Access Control

Function	Permission
Mint	VirBiCoin Foundation only (Owner)
Burn	Any holder can burn their own vUSDT
Transfer	Standard ERC20 (Anyone)

Security Guarantees

Guarantee	Description
Full Collateral	All issued vUSDT is backed by real USDT
No Fractional Reserve	vUSDT supply never exceeds collateral
On-chain Audit	Bank Wallet balance publicly verifiable
Transparent	All transactions visible on both chains

3.11 Collateral Proof

Bank Wallet (Ethereum Mainnet)

Item	Details
Address	`0x717ac1A51760Cc7Dc91b7be67c977C0635BDF117`
Network	Ethereum Mainnet (Chain ID: 1)
Verification	Etherscan
Availability	24/7 on-chain verification

vUSDT Contract (VirBiCoin)

Item	Details
Address	`0xdf136683B118E95c04A61FEC091c65736d9de059`
Network	VirBiCoin (Chain ID: 329)
Verification	VBC Explorer
Total Supply	Verifiable on-chain

Current Collateral Status

Metric	Value
Bank Wallet USDT Balance	100 USDT
vUSDT Total Supply	100 USDT
Collateral Ratio	**100%**
Status	Fully Collateralized

3.12 Emergency Response

Contingency Procedures

Scenario	Response
Smart Contract Vulnerability	Pause contract, notify users, deploy fix
Collateral Discrepancy	Halt minting, audit, restore ratio
Bridge Failure	Manual verification and settlement

Contact For collateral inquiries: Contact VirBiCoin Foundation through official channels.

3.13 Future Roadmap

Phase	Milestone
Current	100% collateralized vUSDT
Phase 2	Additional USDT collateral deposits

Phase	Milestone
Phase 3	USDC stablecoin support
Phase 4	Multi-signature governance
Phase 5	Regular third-party audits
Phase 6	Decentralized bridge integration

3.14 Token Flow

Flow Diagram:

1. User deposits VBC
2. -> WVBC (Wrapping)
3. -> DEX Pair (Trading/Liquidity)
4. -> LP Tokens (Liquidity Provider)
5. -> MasterChef (Staking)
6. -> VBCG Rewards (Earned by User)

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4. DeFi Ecosystem

4.1 Ecosystem Overview

VirBiCoin Ecosystem Structure:

Category	Component	Function
Governance	VirBiCoin DAO	Protocol governance and voting
Trading	DEX	Token swaps and liquidity
Yield	MasterChef	Farming and staking rewards
Launch	Launchpad	Token IDO platform
Cross-Chain	Bridge	Two-way VBC / BSC transfers

Token Ecosystem:

Token	Type	Purpose
VBC	Native	Gas and transactions
WVBC	Wrapped	ERC20 compatible VBC
VBCG	Governance	Voting and farming rewards
USDT	Stablecoin	Stable medium of exchange
wVBC (BSC)	Bridged BEP-20	VBC on BNB Smart Chain (1:1)

4.2 VirBiCoin DEX: Decentralized Exchange

VirBiCoin provides its own AMM (Automated Market Maker) based decentralized exchange.

Core Features

- **SimplePairV2**: Uniswap V2 compatible ERC20 compliant LP tokens.
- **SimpleFactoryV2**: Anyone can create token pairs.
- **SimpleRouterV2**: Unified interface for swaps and liquidity management.

Technical Specifications

- **Swap Fee**: 0.3%
- **Minimum Liquidity**: 1000 wei (Permanently locked)
- **Constant Product Formula**: x * y = k

Supported Functions

- Token to Token Swaps
- VBC to Token Swaps (Native support)
- Add/Remove Liquidity
- Multi-hop Routing

4.3 Yield Farming: MasterChef V2

Liquidity providers can earn VBCG tokens as additional rewards.

Reward Mechanism

- **Reward Token**: VBCG (VBC-Gold)
- **Block Reward**: Configurable (Initial: 0.01 VBCG/block)
- **Allocation**: Proportional based on allocPoint per pool.

Pool Management

- Admins can add/modify pools.
- Set name and allocation points for each pool.
- Users stake LP tokens to earn rewards.

Security

- **Transfer-based Rewards**: Distributed from pool balance (not minted).
- **Emergency Withdraw**: Withdraw immediately forfeiting rewards.

4.4 Launchpad: TokenFactoryV2

A platform where anyone can easily create ERC20 tokens.

Features

- Custom Token Name, Symbol, Decimals, Total Supply.
- **Creation Fee: 10 VBC**
- All tokens minted to the creator.

Token Specifications

- OpenZeppelin ERC20 Compliant.
- Standard transfer/approve/transferFrom.
- Instant listing on DEX possible.

4.5 Cross-Chain Bridge: VBC / BNB Smart Chain

VirBiCoin extends beyond its own chain through a trust-minimized lock-and-mint bridge to BNB Smart Chain (BSC), where VBC circulates as **wVBC** — a BEP-20 token listed on PancakeSwap. Note that wVBC (BSC) is distinct from the on-chain WVBC used by the VirBiCoin DEX (§3.5).

Architecture

- **Lock & Mint (VBC → BSC)**: Native VBC is locked in an on-chain vault; an equal amount of wVBC is minted on BSC. The vault balance always equals the wVBC total supply (1:1 backing, auditable on-chain).
- **Burn & Release (BSC → VBC)**: wVBC is burned through the BSC bridge contract; the vault releases the corresponding native VBC.
- **Bridge UI**: Available at explorer.virbicoin.com/bridge.

Security Model

- Every mint and release requires **M-of-N validator signatures** (EIP-712 typed data, currently 2-of-2).
- Validators run on independent infrastructure and **re-verify the source-chain event on-chain** before signing — a compromised relayer cannot forge transfers, alter recipients, or change amounts.
- Replay protection via per-transfer nonces; contracts are pausable for incident response.
- **Governance**: administrative control of the bridge contracts is held by a **multisig with a timelock** (M-of-N owners on both chains); emergency pause executes immediately once the owner threshold is met, while every other change is delayed by the timelock.

One-Transaction Auto-Convert (Lock-and-Swap) A single VBC transaction can bridge **and** convert: the lock-and-swap entry contract records the desired output (BNB or USDT) and a guaranteed minimum on-chain, validators verify this intent, and an executor contract performs the swap on PancakeSwap upon arrival. If the market moves beyond the guaranteed minimum — or the swap cannot execute — the recipient receives wVBC instead, so funds are never stranded.

Bridge Contract Addresses

Contract	Chain	Address
VBCBridgeVault	VirBiCoin (329)	`0xfef896C2f492D663a4cbbD22125203F0a8523C14`
VBCLockAndSwap	VirBiCoin (329)	`0xd716c29D792739786aAC2dd98E95F5358D00C015`
WrappedVBC (wVBC)	BSC (56)	`0x2c9C74E24408416A045C2057b83E22ECC04bA251`
VBCBridgeBSC	BSC (56)	`0x68C3F8fBD60C9EA987fc80CbC3bA4EC5Ac4Fe101`
VBCBridgeSwapExecutor	BSC (56)	`0x511A1deF9335621401032aBfd36bE6d4Ba463Ac1`

5. Governance

5.1 Governance Model

VirBiCoin employs a hybrid governance model combining:

1. **On-chain Governance**: Token-weighted voting for protocol changes
2. **Foundation Oversight**: Strategic direction and fund allocation
3. **Community Proposals**: Open submission process for improvements

5.2 Proposal Process

1. **Draft**: Community discussion on forums
2. **Formal Proposal**: On-chain submission with stake
3. **Voting Period**: 14-day voting window
4. **Implementation**: Development and deployment

5.3 Governance Parameters

Parameter	Value
Proposal Threshold	1,000 VBC
Quorum	10% of circulating supply
Voting Period	14 days
Timelock	48 hours

5.4 Governance Flow

Proposal Lifecycle:

1. **Proposal Creation** - VBCG Holder submits VIP
2. **Voting Period** (e.g., 7 days) - VBCG Holders vote (1 Token = 1 Vote)
3. **Quorum Check** - Minimum participation required
4. **Timelock** (e.g., 2 days) - Delay before execution
5. **Execution** - On-chain parameter change

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6. Roadmap

Phase I: Genesis (Year 1-2)

- ☒ PoW Mainnet Launch
- ☒ Block Explorer & Network Stats
- ☒ DEX V2 (Factory, Router, Pair)
- ☒ Yield Farming (MasterChef V2)
- ☒ Token Launchpad (TokenFactoryV2)
- ☒ VBCG Governance Token
- ☒ USDT Stablecoin Integration

Phase II: Cultivation (Year 2-3)

- ☐ VirBiCoin DAO Implementation
- ☐ On-chain Governance Activation
- ☒ Cross-chain Bridge (BNB Smart Chain) with One-Tx Auto-Convert
- ☒ PancakeSwap Listing (wVBC/BNB)
- ☐ Cross-chain Bridge (Ethereum)
- ☐ Advanced Launchpad (IDO)
- ☐ Additional Exchange Listings
- ☒ NFT Marketplace (OsatoNFT / SUGAR)
- ☒ Faucet Service
- ☒ Gradual Reward Reduction (Quiche fork)
- ☐ Grant Program

Phase III: Evolution (Year 3-5)

- ☐ Proof-of-Stake Migration (Celestia fork at block 10,500,000)
- ☐ Beacon Chain / Consensus Layer Development
- ☐ Layer 2 Scaling Solution (Optimistic Rollup)
- ☐ Institutional & Enterprise Partnerships
- ☐ Mobile Wallet Application
- ☐ Hardware Wallet Integration (Ledger/Trezor)

Phase IV: Horizon (Year 5+)

- ☐ Full DAO Authority Transfer
- ☐ ZK-Rollup Implementation for Privacy
- ☐ Multi-chain Bridge (Polygon, BSC, Arbitrum)
- ☐ Metaverse Platform Integration
- ☐ Developer SDK & API Platform
- ☐ VirBiCoin Foundation Establishment

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7. Use Cases

1. Metaverse Economy

- VBC/VBCG as in-game currency
- Trading of NFT assets
- Creator reward systems

2. DeFi Applications

- Passive income through liquidity provision
- Token swaps
- Yield farming

3. Token Launch

- Issuance of project-specific tokens

- Fundraising via IDO
- Community building

4. Governance Participation

- Protocol improvement proposals
- Voting on parameter changes
- Ecosystem fund allocation

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8. Conclusion

VirBiCoin represents a purpose-built blockchain for the metaverse era. By combining proven Ethereum technology with optimizations for virtual world use cases, VBC provides the foundation for the next generation of decentralized applications.

Our commitment to security through Proof-of-Work, combined with enterprise-grade infrastructure and community-driven governance, positions VirBiCoin as a leading platform for metaverse economies.

Official Links

- **Website**: https://www.virbicoin.com
- **Block Explorer**: https://explorer.virbicoin.com
- **Mining Pool (Official)**: https://pool.virbicoin.com
- **Mining Pool (mofumofu.me)**: https://vbc.mofumofu.me
- **Mining Pool (CoolPool PPLNS)**: https://coolpool.top/pool/vbc
- **Mining Pool (CoolPool Solo)**: https://coolpool.top/pool/vbcsolo
- **DEX**: https://explorer.virbicoin.com/dex
- **Faucet**: https://pool.virbicoin.com/faucet
- **GitHub**: https://github.com/virbicoin/go-virbicoin
- **Discord**: https://discord.virbicoin.com
- **X (Twitter)**: https://x.com/VirBiCoin
- **Ask Mona 3.0**: https://web3.askmona.org/23174
- **Bitcointalk**: https://bitcointalk.org/index.php?topic=5546988.0

External Resources

- **DefiLlama**: https://defillama.com/chain/VirBiCoin
- **MiningPoolStats**: https://miningpoolstats.stream/virbicoin
- **ChainID.network**: https://chainid.network/chain/329/
- **Chainlist**: https://chainlist.org/chain/329

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